APPENDIX B - MUNICIPAL BROADBAND SUCCESS STORIES
Published on Muninetworks.org by David Collado



---

**Glasgow EPB Helps Community Hospital Expand**
Tue, August 13, 2013 | Posted by dcollado
http://www.muninetworks.org/content/glasgow-epb-helps-community-hospital-expand

When a local hospital saw an opportunity to deliver services from an abandoned big box store, the community broadband network sealed the deal with connectivity both advanced and affordable. That store had been an anchor for nearby businesses; allowing it to remain empty put them at risk.

In 2011, officials from T.J. Samson Community Hospital approached the Glasgow Electric Plant Board (EPB) to inquire about the feasibility of connecting the hospital and other facilities to an abandoned shopping plaza which once housed a Wal-mart. The officials were interested in converting the old shopping plaza into a state-of-the-art healthcare facility. But that would only be possible if the the abandoned shopping plaza could be connected to existing facilities with an advanced fiber optic network, including multiple diverse routes to assure the necessary level of reliability.

Hospital officials ultimately asked EPB to provide a redundant 10-gigabit network interconnecting all of their facilities with the abandoned shopping plaza and EPB's network operating center. The hospital needed advanced connectivity for advanced telemedicine practices, such as sharing high-resolution images and transferring large data patient files. The hospital also needed a collocation deal with EPB in order to install mirrored servers in a safe, storm-hardened facility.

Asked about the decision to meet the hospital's request, Billy Ray, CEO of the EPB said

"We knew it was us or nobody. It would've been cost prohibitive for the private sector to do the job, if they would bother at all."

The converted shopping plaza, now known as the T.J. Samson Health Pavilion, added 126,000 square feet to its capacity that houses 30 new physicians' offices, advanced diagnostics, preventative treatment and educational services. The $36-million project also created administration and healthcare related jobs while reinforcing the basic infrastructure of the community. And it was all made possible by Glasgow's public utility having the flexibility and public interest mandate to serve the community first, rather than focusing on short term profits.

---

**Community Network Services (CNS) Brings STEM Education and More to Rural Southwest Georgia**

Thu, August 15, 2013 | Posted by dcollado

http://www.muninetworks.org/content/community-network-services-cns-brings-stem-education-and-more-rural-southwest-georgia

"With agriculture being the number one industry in the state, we are looking to inspire students to learn globally and live and produce locally. Agriculture and STEM education are a natural fit. With GPS-guided equipment and variable-rate irrigation and fertilizer applicators to better manage natural resources, education is key." These are the words of Beau Sherman, Regional Distant Learning and Video Coordinator for Education serving schools connected by Community Network Services (CNS) in Georgia.

CNS was formed in 1997 when several towns in rural southwest Georgia got together to form a public telecom utility. They started by connecting local schools and libraries with a fiber broadband network. While CNS has since grown into a full-service telecommunications provider - offering phone, video and internet access to business and residential customers - its impact on local education is a shining example of how community broadband networks can improve local education. CNS now serves 65 schools across 3,278 rural square miles including the cities of Cairo, Camilla, Moultrie, Pelham and Thomasville.

To help realize the network's full educational potential, the school districts served by CNS teamed up to hire Beau Sherman. Mr. Sherman had long been a strong advocate for pushing STEM (Science, Technology, Engineering, Math) education in rural southwest Georgia. So he was the perfect fit for the role of helping the schools harness their new state-of-the-art broadband network.

One way Mr. Sherman is leveraging CNS's high-speed fiber network is bringing live interactive science demonstrations into classrooms via Georgia Tech's Direct 2 Discovery (D2D) program. With CNS and D2D, students in rural southwest Georgia enjoy live interactions with research scientists demonstrating principles of science in fields including astronomy,

high-energy physics and nanotechnology. Students see in HD exactly what the scientists see and can ask questions as if they were all in the same room. Having worked with schools lacking high-speed fiber connectivity, Sherman attests that these two-way HD interactions would not be possible for his students without CNS's fiber network.

Another way CNS is enabling new educational opportunities is by offering telepresence capabilities to a Certified Nursing Assistant (CNA) program set to launch at Mitchell County High School inCamilla, Georgia. Telepresence will allow students to complete their practicum requirements with supervising instructors who cannot physically be in Camilla. Due to low numbers of medical professionals in rural areas, it is difficult to provide consistent supervision for medical training programs. But thanks to CNS's high-speed fiber network, medical supervisors can be much more efficient with their time - treating patients in one town while training nursing students in another, without hours of driving in between.

Thanks to CNS and Beau Sherman, students in some of Georgia's most rural stretches are enjoying high-tech educational opportunities available only through advanced broadband networks. And as we see time and time again, municipalities are very well suited to solve these problems locally with their own investments at a far lower cost than they would pay to lease inferior services.

---

**Morristown Network Creates Cost Savings and Spurs Job Growth**
Thu, August 29, 2013 | Posted by dcollado
http://www.muninetworks.org/content/morristown-network-creates-cost-savings-and-spurs-job-growth

Located in the northeast corner of Tennessee, Morristown Utility Systems (MUS) offers gigabit broadband throughout a region that covers 30,000 residents and businesses. I recently spoke with MUS General Manager and CEO, Jody Wigington, about FiberNET's progress and he had much to report, starting with over $5 million in cost savings for local businesses, residents, and the local government itself.

Asked about cost savings to Morristown's city government, Wigington pointed to $840,000 in total savings from a smart meter program - a combination of lower annual power consumption and operational efficiencies. Another $20,000 in annual savings is due to the county not having to pay out-of-town IT contractors to maintain its network because the required expertise can now be found locally thanks to MUS's dedicated network specialists. Morristown businesses and residents are also saving, to the tune of $3.4-million annually thanks to FiberNET's introduction of lower prices in the local broadband market. That's $3.4-million, every year, which can be spent locally rather than being siphoned out of the community to corporate shareholders.

In terms of revenue, FiberNET generated $8.6-million during the most recent fiscal year and is projected to generate $8.8-million during the current one. FiberNET's solid financials have translated into increases in MUS's payments in lieu of taxes (PILOT) to the city, which now amount to $350,000 per year, up from $150,000 in 2010. FiberNET's strong financial performance resulted in MUS becoming cash flow positive just two years after launch, and net income positive after five years. Both of these key milestones were reached significantly quicker than initially projected.

MUS FiberNET's impact on economic development is also notable. Oddello Industries, a contract furniture manufacturer that relies on FiberNET for its communications, recently announced a $4-million expansion in Morristown, resulting in 228 new jobs. Oddello CEO, Tom Roberts, cited "reliable utilities" among the reasons for investing in Morristown. This growth is part of a larger trend for Oddello, which has grown its Morristown presence from 35 to 415 employees in just the past year.

Another sign of FiberNET's impact on economic development is the recent decision by Molecular Pathology Laboratory Network (MPLN), a global leader in personalized laboratory medicine, to locate its primary backup facility in Morristown. As a global provider of diagnostics to hospitals, medical labs and physician groups, MPLN requires ultra-reliable data replication and disaster recovery services, which FiberNET enables.

---

**Mudd Advertising and Cedar Falls Utility Talk Gigabit Broadband**
Mon, August 12, 2013 | Posted by dcollado
http://www.muninetworks.org/content/mudd-advertising-and-cedar-falls-utility-talk-gigabit-broadband

As we reported back in May, Cedar Falls Utilities (CFU) now offers citywide gigabit broadband. Mudd Advertising is one local company poised to take full advantage of the new blazing speeds. Mudd invited officials from CFU into its studio for a live panel discussion about the new gigabit service and what it means for the community. The video is embedded below and is available via MuddTV - look for the 6/19/2013 archived show.
When asked what gigabit service means for the community, CFU's Director of Business Management Rob Houlihan said "We have a lot of businesses that transfer huge files to and from their customers and this enables them to do even more of that activity." Houlihan elaborated by saying that gigabit broadband opens up "a whole new host of opportunities for them to innovate."

The panel was moderated by Mudd's Gary Kroeger and consisted of Steve Bernard, Director of Business Development, Robert Houlihan, CFU's Network Services Manager, and Rob Mudd, President of Digital Media and Chief Futurist of Research and Development for Mudd Advertising.

Mr. Mudd followed Houlihan's lead by explaining what gigabit broadband means to Mudd Advertising: "Anytime that you can communicate to the world via video, live, with no buffering, nolatency, anywhere in the world that you pick, that gives an advertising agency, or anybody that has a message to tell people, a leg up." He went on to explain how the live panel itself, along with similar demonstrations they recently conducted from Bangkok, Moscow and Shanghai, are examples of what gigabit connectivity brings his company.

CFU's Steve Bernard made a telling remark when asked how to explain the seeming anomaly of a small town in Iowa having such world-class infrastructure on par with only a few major global cities. The simplicity of his answer was telling:

> "We're a municipally owned utility, so we're owned by the citizens in town. And that's who we answer to and that's our job, to try to be with them and stay ahead of them. You've mentioned the Mudd Group is a very innovative organization, it's folks like that we're trying to serve and stay ahead of."

In other words, CFU's focus on meeting the needs of local stakeholders, as opposed to absentee shareholders, is what led it to bring world-class communications infrastructure to its small-town community in Iowa. Bernard went on to note that CFU's decision to provide high-speed broadband is a "natural progression" from providing water to the community back in 1888. Houlihan jumped in to add that high-speed broadband is an "essential service" that the community relies on.

Pushed for more examples of how gigabit connectivity can be useful, Bernard pointed to a local assisted living center developing in-home diagnostic and sensor technology to monitor resident health and safety around the clock. He also pointed out that such critical applications require the highest level of network reliability, a criteria easily met by CFU's citywide fiber-to-the-premises.

I was pointed to this video by Jim Sartorius, Mudd's Chief Information Officer, when I interviewed him about what CFU's fiber network meant to his company. When I asked him specifically whether CFU helped Mudd save money, he chuckled and then explained Mudd's efforts to establish an office in Chicago with similar live production and distribution capabilities as its Cedar Falls headquarters. After identifying what seemed like the perfect location in one of Chicago's suburbs, their plans were foiled by the prohibitive cost of connecting the facility with fiber. After many months of searching, they were forced into a much more expensive space in downtown Chicago with the necessary fiber capability. Sartorius concluded by pointing out how easy and affordable it is for a business in Cedar Falls to obtain the type of high-speed broadband it took him months to locate in the greater Chicago area at much greater cost. And he thanked CFU for that fact.

---

**Indianola's Community Network Spurs Entrepreneurship**

Thu, September 26, 2013 | Posted by dcollado

http://www.muninetworks.org/content/indianolas-community-network-spurs-entrepreneurship

When Indianola decided to invest in a municipal fiber network, the decision was part of a larger economic development plan that included a startup incubator in partnership with Simpson College - which we wrote about earlier this year. Located near Des Moines in Iowa, Indianola is one of a few communities that has partnered with a local trusted provider, MCG in this case, that offers services over a publicly owned network.

According to Chris Draper, Director of Indianola + Simpson College Entrepreneurial Development Initiative (EMERGE), his program would not exist if the city did not decide to invest in economic development and municipal broadband as a package deal. Less than a year after launch, EMERGE has nine active startups, some of which are already seeing significant growth and seizing new opportunities. Collective Labor (collectivelabor.com) has created an online platform to facilitate collective bargaining negotiations.

By centralizing the process of calculating proposals and editing contract terms, Collective Labor decreases negotiation time, reduces errors and ultimately makes the negotiation process more efficient. In Iowa alone, Collective Labor believes it can save schools upwards of $35-million a year by streamlining their collective bargaining efforts, freeing up budgets to hire more teachers and improve schools.

Even more promising, the platform can handle all collective bargaining scenarios from teachers to municipal workers, and trade unions to public safety professionals. The demand for Collective Labor's service is proving solid. Less than a year after launching (in February), Collective Labor has signed up five school districts and has thirteen contractor requests pending. In fact, Collective Labor President, David Gaus, just announced on Twitter that a Colorado firm has agreed to invest cash and expertise that will result in a new office and additional staff to support a nationwide expansion. Not bad for a startup that's barely seven months old.

With other ventures ranging from biofuels trading to book publishing, EMERGE has successfully engaged a wide cross section of the community, from English students to professional engineers. Another startup seeing early success is LNR, which has developed an innovative way of "painting" stripes and other road marks. Instead of using actual paint, which eventually wears off, LNR has developed a colorable quick-setting concrete and application device that produces road markings which last 20 times longer than paint. Having just launched in April, LNR has already secured a $100,000 loan from the Iowa Innovation Acceleration Fund for market development.

Chris Draper says the key to the program is the combination of resources it brings together for the benefit of local entrepreneurs. Before the program, a member of the community with an idea would have to seek advice on diverse topics from various individuals - a daunting task that hinders untold numbers of would-be entrepreneurs. Now, EMERGE offers all of the

necessary expertise in one place. And with a community fiber network at its disposal, the expertise offered by EMERGE is in-tune with the most advanced communications technology available.

Collective Labor is a good example of EMERGE's ability to quickly enable high-tech ventures. Collective Labor's founder, David Gaus, previously used Excel spreadsheets to manage the collective bargaining process as a school business official. When he brought the idea and spreadsheets to Draper's team at EMERGE, they converted it into an online cloud-based platform in a matter of months. This is the type of expertise seen in high-profile big-city startup incubators, but it's now available in a small-town community of 15,000 people in Iowa.

---

**Thomasville Removes Local Tax, Citing Strong Broadband Revenues**
Wed, November 20, 2013 | Posted by dcollado
http://www.muninetworks.org/content/thomasville-removes-local-tax-citing-strong-broadband-revenues

Thomasville is one of six cities served byCommunity Network Services (CNS) in rural southwest Georgia. We've covered Thomasvilleand CNS in the past, highlighting the benefits of reliable high-speed broadband in these remote rural communities. But one benefit we haven't covered yet is quite remarkable - Thomasville residents have been paying zero fire tax thanks in large part to revenues from CNS. The City's fire tax first hit zero in 2012 and was recently maintained there by a Thomasville City Council vote in September.

Thomasville feeds its General Fund with net income (what the private sector would call profit) from its utility services. For 2013, this net income is estimated to reach $8.5 million. What's more, Thomasville residents enjoy utility prices below the state average. So nobody can complain the City is taking advantage of utility customers by charging excessive rates. According to a recent Public Service Commission survey, Thomasville residents pay $3.32 per month below the state average per 1,000 kilowatt hours of electricity. And CNS customers who bundle services see annual savings of up to $420. It's a true win-win - residents get affordable utilities and the City applies the net income to running public services like the police and fire departments, lowering property taxes in the process.

The result is millions in tax savings for Thomasville residents since 2009, when the City set its sights on phasing out the fire tax. In that year, the City collected $1.7-million in fire taxes. In 2010, the City dropped the rate to bring in $995,000. And in 2011, the last year a fire tax was levied, $610,000 was taxed. Based on the 2009 fire tax collection, Thomasville residents have been spared almost $5.2-million in fire taxes since 2010. Speaking about the zero fire tax accomplishment in 2012, Thomasville Mayor, Max Beverly, said "Without the City's enterprise funds like Electric and CNS, we would not have been able to meet this goal."

CNS is remarkable for another reason. It represents a high degree of collaboration among multiple cities in different counties - a model which could help more rural communities build successful networks. Thomasville could have built a network on its own, but it saw greater benefit in combining forces with nearby municipalities, despite the extra coordination effort involved. The added scale and cost sharing afforded by this model likely played a big role in the benefits Thomasville has reaped from CNS. Rural communities, take note.

---

**Danville Continues to Attract Jobs to Region After Building Fiber Network**
Fri, November 22, 2013 | Posted by dcollado
http://www.muninetworks.org/content/danville-continues-attract-jobs-region-after-building-fiber-network

Danville's open access network has fueled economic development in the Virginia community's resurgence after tobacco's demise and job losses from a once thriving textile industry put a hurt on the local economy. Danville's technological prowess is now attracting companies from China, in addition to other economic development gains we covered previously.

Jason Grey, nDanville's Network Manager, told us that Zeyuan Flooring International, a Chinese wood floor manufacturer, is locating its first U.S. facility in Danville. Zeyuan CEO, Sindy Cui, said the company initially thought about locating in Los Angeles, but was eventually swayed by the hospitality and resources available in Danville. Zeyuan plans to invest $15-million in a 40,000 square foot manufacturing plant that will employ 100 people within three years.

Zeyuan is the second Chinese company to locate in Danville in the past year. Last September, Chinese furniture assembler GOK International announced it will invest $12.5-million to establish its U.S. headquarters and showroom in Danville. GOK International plans to employ 300 people within three years.

Not coincidentally, both companies are locating in Cane Creek Centre, one of Danville's five industrial parks connected to nDanville's fiber network. Serving businesses was a high priority in building the network. As the first fully automated open-access network in the country, nDanville passes more than 1,000 businesses including every parcel in each of the industrial parks. Many businesses take 100-Mbps fiber connections, some take advantage of 1-Gbps connections.

These recent additions to Danville's thriving commercial sector are just the latest in a steady string of economic development successes for the area that include the likes of Goodyear and IKEA. And it's not just manufacturing.

Danville is home to one of the first non-government sponsored next generation Cray supercomputers. The Cray XMT2 supercomputer is part of the Noblis Center for Applied High

Performance Computing which is located in a former tobacco processing plant in Danville's River District. Noblis uses the computer to crunch data for clients in fields such as computational biology, DNA sequencing, air traffic management, fraud detection, and counterterrorism. "This [center] screams loudly and clearly that we are making a transition from the old to the new economy," said Danville Mayor Sherman Saunders at the 2012 ribbon-cutting ceremony.

Perhaps one drawback of Danville's economic development success is that nDanville's residential rollout has been slower than expected due to overwhelming demand from the commercial sector. Network Manager Jason Grey revealed there is a waiting list of businesses eager to connect to the network which is pushing residential connections back. Grey says it's a problem he's more than happy to deal with.

---

**GRUCom Gives Gainesville Gigabit Broadband**
Mon, November 25, 2013 | Posted by dcollado
http://www.muninetworks.org/content/grucom-gives-gainesville-gigabit-broadband

Gainesville Regional Utilities (GRU) has been deploying fiber in the north-central Florida home to the University of Florida (UF) since the late 1990s. We briefly mentioned them last year when Gig.U teamed up with GRUCom, GRU's telecom division, to connect neighborhoods and businesses surrounding the University with fiber broadband. We've since taken a deeper look at GRUCom's work and like what we see.

GRUCom was born after the FCC reclaimed the spectrum GRU used for microwave control of its SCADA systems. GRU naturally switched to fiber, and in the process of running lines for its utilities, it ran into crews doing the same for Shands Hospital, part of the University. Realizing the substantial demand for fiber broadband across the county, GRU created GRUCom to serve that demand more efficiently.

GRUCom Director, Ted Kellerman, points out that, as an enterprise division of GRU, GRUCom has a mandate to generate profit. This essentially means that the network only expands on a business case basis, so prices can vary across customers depending on connection costs. Despite this constraint, GRUCom manages to provide reliable high-speed data services at reasonable prices.

GRUCom connects 100 public facilities including government, fire department, utilities and Alachua County Schools and Libraries. All facilities are on redundant fiber rings with route diversity and 10-Gbps capacity. Seven locations receive 1 Gbps service while the rest take either 10 or 100 Mbps. The average cost for 10 Mbps connections is $400 and $900 for the 100-Mbps links.

While GRUCom doesn't serve residential customers directly (with a few exceptions), it does offer bulk Internet access to apartment complexes where many students live. As Mr. Kellerman explained it, GRUCom strives to fill growing demand for high-speed broadband from students who come to Gainesville, a Tier 2 market , from homes in Tier 1 markets where high-speed options are more readily available. GRUCom's response is GATORNET, a 50 Mbps Internet access package that retails for $29.95 per month. This beats most Tier 1 market prices for comparable services, many of which advertise "up to 50 Mbps" over crowded cable networks but deliver only a fraction of that speed most of the time.

GRUCom brings another key benefit of community networks to Gainesville - local control accommodating local needs. When the music streaming service Grooveshark, started by two UF students, took off, its need for bandwidth exploded. Director Ted Kellerman recalls having regular discussions with Grooveshark's founders during those times and making arrangements to get them the bandwidth they needed without breaking their startup budget. That's what a community network is all about - meeting local needs.

---

**Palm Coast's FiberNET Produces Dramatic Savings Locally**
Tue, December 10, 2013 | Posted by dcollado
http://www.muninetworks.org/content/palm-coasts-fibernet-produces-dramatic-savings-locally

We last took a look at Palm Coast's FiberNET over two years ago when Broadband Communities featured the open access fiber network along Florida's upper east coast. Due to its initial focus on community anchor institutions and incremental build out, FiberNET serves as an outstanding example of how to justify a network investment with cost savings. We recently spoke with Courtney Violette who created the initial business plan for FiberNET under his previous role as Palm Coast's CIO; he is now a Managing Partner with Magellan Advisors, an international broadband planning firm.

A presentation on the Palm Coast government website shows how FiberNET generates hundreds of thousands of dollars in annual cost savings for the City of Palm Coast, Flagler County School Districtand Florida Hospital. The data is impressive. The City of Palm Coast alone saves around $160,000 per year by switching to FiberNET for its networking needs.

Flagler County School District is likely the biggest beneficiary of cost savings in the community. Before FiberNET came onto the scene, the District paid Bright House Networks more than $500,000 per year for network services over a hybrid fiber-cable network. Now Flagler County School District pays around $300,000 for faster, more reliable services over FiberNET's all-fiber network. These savings paid for the schools' initial cost of connection after just one year.

Florida Hospital and its affiliates are also saving big. Affiliated doctors' offices and clinics are required to maintain a 10-Mbps (minimum) connection with the hospital. Before FiberNET,

these connections cost around $900 per month from the local incumbent. FiberNET now offers them for $250 per month. Similarly, the Hospital itself saves tens of thousands on its annual networking costs by switching to FiberNET.

It is worth noting these initial figures are conservative by not accounting for growing internal demand for high-speed networking. In other words, as these entities ramp up usage of faster network services available through FiberNET, their savings will grow accordingly. In fact, their savings will actually accelerate as they use services only available over fiber which the incumbent could not offer without incurring major upgrade costs.

With the network mostly built, expanding incrementally on a business case basis, FiberNET is now paying for itself in cost savings to the City and revenue from anchor institutions and businesses that previously paid much higher prices for slower services from the incumbent. Revenue has nearly doubled each year since 2010, reaching $522,940 in 2012, against expenses of $161,260. At this rate, FiberNET is expected to break even in less than six years.

---

**SpringNet Continues Driving Jobs and Revenue for Local Community**
Wed, December 04, 2013 | Posted by dcollado
http://www.muninetworks.org/content/springnet-continues-driving-jobs-and-revenue-local-community

A year has passed since we covered SpringNet in Springfield, Missouri, and its remarkable impact on local businesses and economic development. We recently spoke with SpringNet Director, Todd Murren, and Network Architecture Manager, Todd Christell, to get an update on how the network is progressing.

Demand for SpringNet's high-speed data services continues to grow steadily. Financial statements for City Utilities of Springfield show the network generated $16.4-million in operating revenue last year against costs of $13.2-million. Better yet, revenues have increased around 3% per year while cost increases are closer to 0.5%. The end result is close to $3 million in annual net income for SpringNet. And all of this comes from a network that only serves commercial and public sector clients because Missouri state law restricts municipal network provision to only "Internet service," meaning SpringNet cannot offer triple-play packages to compete with incumbent providers.

One of the highlights of SpringNet's economic development success has been the attraction and retention of travel giant Expedia. After a large national provider failed to deliver on negotiations with the company, SpringNet stepped in to make sure Expedia brought its call center to Springfield. That effort has paid off handsomely for SpringNet and the local community. Expedia now employs close to 900 in the area after announcing in July that it was hiring another 100 employees in Springfield.

Up next for SpringNet is an effort to leverage its fiber infrastructure to create even more jobs. Believing that future job growth will revolve around the advancements enabled by gigabit networks, SpringNet is working with the Mid-America Technology Alliance (MATA) to host a hackathon with partners in Kansas City to explore what is possible between gigabit cities.

As Murren and Christell tell it, someone in Springfield can now send data to Kansas City with a 5-millisecond delay. It's like they are in same building despite being hundreds of miles apart. This capability spells opportunity for new ways of doing business and delivering services. SpringNet wants to help the gigabit community develop these opportunities.