Gigabit Comes to Rural Western North Carolina

Posted by Brandon McBride, Administrator, Rural Utilities Service in Initiatives, Rural
Feb 19, 2016

At the foot of Mount Mitchell, highest peak east of the Mississippi River, sits the quiet town of Burnsville, North Carolina. People come and go from the textile factory, hikers visit to climb the mountain, and a colorful art scene adds flavor to the community. But in 2009 in the wake of the stock market crash, unemployment in the county rose to 11.9 percent. Burnsville’s problems were compounded by the lack of broadband Internet outside of the town-center, which limited its potential growth.

When USDA announced broadband funding as part of the American Recovery and Reinvestment Act, Burnsville-based Country Cablevision saw an opportunity to expand and upgrade their existing Internet service in Mitchell and Yancey Counties.

The rewards are great. Country Cablevision’s broadband service brings people off the mountain so they can use newly connected facilities in an old library, helps troops overseas watch their kids play baseball via a ballfield with Internet access, and makes it easier to virtually visit family members at the local nursing home.

Through the program, 2,000 Western North Carolina homes now have fiber broadband access and can receive speeds from 25 up to 100 megabytes per second service. Businesses connected through the program can receive up to 1 gigabit per second. Nationwide, USDA’s Recovery Act broadband program has expanded broadband access to nearly six million rural Americans.

The impact of this project has been felt throughout the region. Jake Blood, the director of the Yancey Economic Development Commission, told me, “It used to be that you had to be in Burnsville or on Highway 29 to get fast broadband” but now broadband will be available to “all our family businesses located throughout the county allowing us all to compete globally.” Sherry McCuller of the broadband task force notes, “We now have a powerful new tool in our economic development toolbox, and our citizens and their children will have access to broadband connectivity equal to or even better than metro areas of the state.” Investments like these by USDA Rural Development are helping build and strengthen the rural communities throughout our country.
SciREN to hold networking event aquarium

BY MIKE SHUTAK
NEWS-TIMES

PINE KNOLL SHORES — Educators and local scientists looking to connect have a chance to get together at a networking event on Thursday, Feb. 16, at the N.C. Aquarium.

The Scientific Research and Education Network, a student organization at the UNC Institute of Marine Sciences in Morehead City, is holding its fifth annual networking event this year at the aquarium.

Alex Hounshell, a member of SciREN who is helping organize the event, said scientists will present classroom-ready lesson plans, based on research that adheres to local and national education standards.

"At the networking event, educators mingle and interact with these scientists, learning about the scientists' lesson plans and how these plans can be adapted to individual classrooms," Ms. Hounshell said. "Lesson plans are available for elementary, middle and high school curriculum, with most lesson plans adaptable enough to be applied outside of their designated grade level."

Ms. Hounshell said SciREN encourages local educators to sign up and participate in the event. Online registration is available at the SciREN website www.thesciren.org/educators/edu-registration/scirencost-educator-registrati/.

The event is free, with food and drink provided. Ms. Hounshell said that in recognition of SciREN's fifth anniversary, door prizes would be given to participants, including a drone donated by the Duke University Marine Lab on Pivers Island in Beaufort.

Other door prizes include a classroom field trip to tour UNC-IMS and a field drip to see a sea turtle necropsy performed by Dr. Matthew Godfrey of the N.C. Wildlife Resources Commission.

SciREN was started in 2012 by UNC-IMS grad students Ethan Theuerkauf and Justin Ridge, "both of whom had parents who were teachers and understood, firsthand, the importance of science in the classroom," Ms. Hounshell said. "Since then, the event has grown larger each year, with more than 130 educators coming from all over Eastern North Carolina to last year's event."

She said SciREN members estimate that more than 1,251 students have been impacted by lesson plans generated through the SciREN networking event.

Contact Mike Shutak at 252-726-7081 ext. 206, email mike@thenewtimes.com; or follow on Twitter at @mikescncnt.
RESEARCH TRIANGLE PARK, N.C. — Editor's note: Long before there was the "cloud" or "big data," leaders in North Carolina helped establish what was then called grid computing to form the "North Carolina Bioinformatics Grid." It was a "moonshot." Backers conceded in January 2002. But their efforts helped researchers collaborate in new ways. Here's a look back at the launch of that pioneering effort as WRAL TechWire observes the 15th anniversary of its launch in 2002.

Genomics Consortium Sees Building Its BioGrid as a Colossal "Moon Shot" Effort

RESEARCH TRIANGLE PARK — Researchers and administrators from academia, industry, and government met with the North Carolina Genomics Consortium to hear about its plans to create a super-fast distributed computing grid for life sciences research on Thursday.

About 140 people attended the Consortium overview of its plans for the "North Carolina Bioinformatics Grid," which would be one of the first such networks in the nation. The event was held at the NC Biotechnology Center in Research Triangle Park. Attendees hailed from California, Virginia, Tennessee, Washington State and Washington, D.C., as well as North Carolina universities, industries and agencies.

The Grid is to offer computing, data storage and networking resources for life sciences research necessary to help scientists, companies, and government keep up with a flood of new genomics data, a round of experts said.

Thomas Dunning, vice president of high-performance computing and communications at MCNC, which is seed funding development of the NC BioGrid, noted that in the just first 21 days this year scientists added three billion [DNA] base pairs to the GenBank, a database of genetic information.

Other speakers pointed out that genomics data is only one of the "omics" creating a data storage and analysis crunch.

The Moon shot in biology

"Bioinformatics is a cross-discipline field if ever there was one," said Bruno Sobral, director of the Virginia Bioinformatics Institute. "There's genomics, proteomics, pharmacogenomics, metabolomics, every day there's a new omics."

He said one of the best definitions of bioinformatics comes from German theoretical biologists of the last century who said it is "the quest to mathematically describe the human organism."

"Right now we can barely describe three or four complete reactions, but I think this is the moon shot in biology," he said.

"We need biogrids to compute these mathematical descriptions and to predict the behavior and performance" of genes, proteins, chemical compounds and so on, he said.

Because data in the "omics" is doubling faster than computer processing speed, aggregating the power of many computers through a BioGrid may be the only way to store, analyze and develop applications from the information, he said.

"It's about sharing"

He summed up the purpose of the BioGrid simply: "It's about sharing information and if you can't share, you're not going to be able to solve problems on this scale," he said.

Other speakers explained how the Grid could advance life sciences research in the state. From aiding the Fungal Genomics Lab at NC State University to allowing researchers to use advanced scientific instruments via "telescience."

In the next 12 to 18 months, MCNC officials said, the Genomics Consortium study groups will evaluate how to fund the BioGrid, software and hardware considerations, and develop a prototype test-bed BioGrid.

In November last year, MCNC announced an alliance with IBM to develop the test bed BioGrid. IBM is providing one of its most powerful servers, the eServer p690, which features self-healing technologies that help provide uninterrupted operation even through power outages.
IBM will also provide a high-end storage server and manager to support a storage area network that can hold a petabyte of data, equivalent to one billion books of 400 pages each.

The company’s Discovery Link data integration technology will allow researchers to integrate data from many different sources, formats and types.

Phil Emer, hired this month as the BioGrid architect, said much of the early planning is “funding related.” Currently, MCNC and the NC Biotechnology Center fund Consortium activities, including BioGrid development. Both are state supported.

Emer said he foresees numerous opportunities to apply for government grants. “At some point, we won’t be able to live entirely on grants,” he admitted, but said at this point the Consortium is not sure where it will get additional money.

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Statewide NC gigabit Internet event to highlight fast-net solutions

By MONICA DOSS and CHRISTA WAGNER VINSON

Editors note: North Carolina's long tradition of building networked local economies enters the digital age with the Smart Gigabit Communities Reverse Pitch competition on Feb. 28. The US ignite event included RIOT and the North Carolina Next Generation Network with support from North State Communications. Here's a preview plus details about where you can tune in remotely.

GREENSBORO, N.C. - Gigabit-speed fiber, ubiquitous digital networks, big data and the Internet of Things are driving the pace of innovation ever faster in many cities around the globe.

But for those communities not connected with high-capacity fiber networks, the opportunity to participate in the new economy's innovation potential will not be equally shared. While the large capital investments required to build these networks have

hindered their deployment, it is increasingly evident that they're part of the basic communication infrastructure that's essential to staying competitive in whatever you do.

Moreover, advanced technologies, with their extraordinary computing power capable of producing a deluge of data, from real-time traffic reports to cardiac monitoring units to environmental sensors, will require a robust infrastructure backbone. It's the adoption of ultra-fast broadband, together with these next-generation applications, that will help us solve our most basic - and urgent - civic problems.

Enter US Ignite, a five-year-old, National Science Foundation-funded non-profit.

Together with their community partners, US Ignite is demonstrating how a fast, reliable and widely-available Internet will have practical, commercial and economic development value to businesses, education and healthcare institutions, the scientific community and governments.

Next week, US Ignite, in partnership with NC Next Generation Network, will bring its expertise - and cash - to North Carolina for the $40,000 Smart Gigabit Communities Reverse Pitch competition. With a matching sponsorship from Telecommunications Service Provider North State Communications, the competition will identify, fund and mentor two ventures whose solutions fully leverage gigabit networks to solve big problems faced by communities across the nation.

Greensboro-based New City Ventures and the RIOT network (formerly known as the NC Regional Internet of Things), through its Raleigh headquarters and Charlotte chapter, have joined forces to reach out to communities across North Carolina to promote the initiative. We approach the Reverse Pitch competition with the knowledge that all communities, from states' metros to their rural neighbors, grapple with the same issues: supporting public safety, providing affordable healthcare, and delivering high-quality, educational opportunities.

In that spirit, we're digitally linking Greensboro, Charlotte and Raleigh co-working venues for a public video-simulcast to open the competition on Feb. 28. The networking of the three cities will demonstrate how advanced technology can support the development of new products, new ventures and new collaborations. We also want to amplify a shared commitment to all of North Carolina to benefit from the technology solutions that arise.

In many ways, the Smart Gigabit Communities initiative reflects North Carolina's long tradition of building prosperity through networked local economies and collaboration. It reminds us that it takes public investment, public-private partnerships, and seamless connection between universities, industry and government to activate cutting-edge technology into economic advantage. Let us explain.

Tune in the event

The event will be simulcast from 6-8 p.m. at three locations:

- In the Triangle:
  HQ Raleigh
  310 S Harriottton St.
  Raleigh
  TICKETS: https://www.eventb.org/NC-RIOT-Regional-Internet-of-Things/events/23722041

- In the Triad:
  HQ Greensboro
  111 West Lewis St.
  Greensboro
  TICKETS: https://www.eventb.org/NC-RIOT-Regional-Internet-of-Things/events/23722041


2/24/2017
Decades ago, North Carolina committed to an industrial policy designed to transform low-wage, regional economies based in tobacco, textiles and furniture, to knowledge economies that would eventually attract and proliferate new technology-driven industries including information technology and the life sciences.

One of the most compelling features of this strategy, which has been celebrated (and imitated) around the globe, was to set up industry support engines that could strengthen the ties between universities, industry and government to further the new technology-based sectors.

Guided by the state’s Board of Science and Technology, North Carolina made significant and visionary financial investments to underpin this strategy, among them funding the Microelectronics Center of North Carolina (MCNC), incorporated in 1989, and the North Carolina Biotechnology Center, in 1984.

These institutions fueled a major transformation of the region’s economy that had begun with the construction of the Research Triangle Park beginning in the 1950’s. MCNC and the NC Biotech Center’s presence and mission gave way to still other transformational organizations like the Council for Entrepreneurial Development (CED), the first new-venture catalyst of its kind in the country.

In recent years, the Triangle has seen its approach embraced by its in-state neighbors. As economic development leaders in Charlotte and Greensboro, we can attest to the inspiration the Triangle has provided to a burgeoning statewide culture of innovation and entrepreneurship in our communities and in Winston-Salem, Asheville, Wilson-Salem and far beyond — including promising local efforts in Gaston County, Holly Springs, Wilson, and Star, North Carolina.

Ever since IBM announced its intention to build its Research Triangle facility in 1945, North Carolina leaders have focused on what the digital revolution means for job creation in our state. While pundits predict the fourth industrial revolution will give rise to job-killing automation, North Carolina’s competitive leadership in next-generation technologies can guarantee, again, that the best new products, services and jobs will be created.

And this is the reason we’re excited about bringing the US Ignite Smart Gigabit Communities initiative to North Carolina. It comes down to our belief that at the moment we can again make, to paraphrase Gov. Jim Hunt at MCNC’s grand opening in 1981, a once-in-a-lifetime investment in our future.

About the authors
Christa Wagner Vinson was formerly an analyst with the North Carolina Department of Commerce and part of the founding staff of the Research Triangle Cleantech Cluster. She is currently an economic development consultant and NCOT advisor based in Charlotte.

Monica Das was the founding President of Research Triangle-based CED (Council for Entrepreneurial Development) and was formerly Director of Entrepreneurship and Advancing Innovation at the Kauffman Foundation. She is a Principal at New City Ventures.

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First North Carolina education institutions test Federated Identity Program

Published: Feb 28, 2017 11:30 a.m. ET

Technology nonprofit helps register Davie, Rockingham County Schools, Davidson County Community College as first K-14 institutions in NC to join InCommon Steward Program

RESEARCH TRIANGLE PARK, N.C., Feb. 28, 2017 /PRNewswire-USNewswire/ -- MCNC, the non-profit operator of the North Carolina Research and Education Network (NCREN), today announced that Davie County Schools, Rockingham County Schools and Davidson County Community College have become the first registered constituents for K-14 education in North Carolina to join the InCommon Steward Program.

In November, MCNC introduced a first-in-the-nation, proof of concept to extend InCommon Federated Identity Management (FIM) technologies beyond universities, to now include K-12 education and community colleges in North Carolina -- eleving

In January, MCNC registered Davie County Schools as the first K-14 institution under the InCommon Steward Program. This month, Davidson County Community College and Rockingham County Schools also were on-boarded in the program.

"MCNC provides the high-speed broadband foundation for higher education at Davidson County Community College, which allows us to continue opening the doors to education, improving the lives of individuals in our community and beyond," said Donald Beck, Director of ITS at Davidson County Community College. "The InCommon Steward Program at Davidson County Community College creates additional opportunities for sharing services and applications, access to national and international resources, and offers a seamless transition from one educational level to the next. We're proud to be a part of a program that can serve as a model for others across the state and nation as to what is possible."

Owners of shared online services and resources, accessed by users from different institutions, trust that credentials are kept up to date by their home institutions. There is also an underlying trust (acknowledged by member/federation agreements) that users and service owners will act responsibly.

Think of a federated login like an ATM. Thousands of banks are federated, each with millions of users. The username is the ATM card, and the password is the Personal Identification Number (PIN) maintained by the user's home institution, or bank. Other institutions give access to remote users based on trusting their username and password. Many North Carolina education institutions desire this kind of access to remote and protected web-based services. But, it must be efficient, cost-effective, quick, secure, and user friendly. FIM technologies enable such access on the Internet and can be especially beneficial in North Carolina.
Survey to focus on broadband

BY DALE HEBERRIG
Staff Writer

A Broadband Task Force representing Washington County and nine other counties in Eastern North Carolina needs input from the public to determine the need for improvement to high speed Internet access.

Organized through the Albemarle Commission, the task force has posted an online survey (at accog.crowdfiber.com) to gauge how well the 10-county region is served and what opportunities are available. Because it’s unclear how many residents are unserved or underserved by broadband service, the survey is also available at county seats, municipal offices, schools and libraries.

The campaign includes a short survey and an online speed test. Residential and commercial users are urged to respond.

Washington County Commissioners and their staff have scouted the market for better broadband service for months. “Lack of available and/or affordable Internet options in Washington County is a constant complaint that we have heard from multiple sources including private businesses, residents and the school system, which has students that rely on Internet access for educational purposes,” said interim county manager Curtis Potter. “There are many areas of the county without any current service options at all.”

Potter says representatives from the State Broadband Infrastructure Office reached out to Washington County late last year and met with former Chairman Cole Phelps and county management to start a dialogue about the possible advantages of reviewing existing levels of access, and potentially partnering with the Broadband Infrastructure Office to increase those levels of access if they were determined to be insufficient.

Cathy Davison, executive director of Albemarle Commission, says results of the survey could provide demand for expanded service.

“We’re evaluating the level of access and services for Internet which citizens currently have, as well as evaluating the potential demand that might exist for additional services if they were offered, in order to hopefully use that information to negotiate with additional Internet service providers to offer additional services in our county to address the needs that are determined to exist,” Davison says.

“The most likely additional resource this might bring to the county would be additional options for receiving wireless Internet services from tower mounted equipment, but all options will be considered, and technology in this area changes rapidly which may open up additional options.”

Findings could also impact existing cost of high-speed service.

Potter says, “The county is interested in making sure that any and all available options for procuring affordable high speed Internet services are made available to our citizens, who stand to receive the ultimate benefit of this either directly by receiving a new service that we might be able to bring here through this effort, or indirectly, by receiving a lower price on current services if competition from any additional services that might be offered ends up driving current prices down.”

Washington County School Superintendent Delilah Jackson says there is ample room for enhanced broadband service.

“Any upgrades would benefit the school district and the families it touches,” she said.

Jackson called current costs, “pretty substantial,” even though they work in partnership with the NCNC North Carolina Research Education Network (NCREN) that provides free, high-speed Internet service to all participating districts.

While there is no district wide data about coverage available, Jackson says, “Informal talks with students and parents reveal to us that many households do not currently have high-speed Internet service. In some places, it is because of a lack of providers.”

She says North Carolina is requiring all school districts to begin working on a “Digital Learning Plan,” that shifts the way teaching and learning is happening in the state to incorporate more digital access to resources and instruction. With this access, more avenues are available to resources not attainable
otherwise.

"Just think about it," Jackson says. "If every home in Washington County had access to high-speed Internet, this would eliminate the need for make-up of inclement weather days. Instructors would simply post all classwork online (through video lessons and digital resources), have a safe platform for communication with students, and parents would assist students when it's convenient for them. The residual affect is that the county saves money in several key areas, families are safer, and the school district meets the legal requirements for schooling without encroaching on parents' very precious summer vacation. Also, the recent investment of the Board of Education in technology would be maximized since technology devices purchased for students could be taken home."

Elizabeth City State University's Chancellor, Thomas Conway, a task force member, agrees with the potential for this project to better the region overall.

"These 10 counties, which are part of the university's 21-county service area, rely on slow Internet speeds that simply can't meet 21st century technological requirements -- if they have Internet at all," he says.
Career Readiness Initiatives Having an Impact in North Carolina

By Robyn Kinsey Mooring

Published: February 24, 2017

When Raleigh eighth-grader Alex Bender gushes, “They showed us what they do at their jobs and how it all works, and how they plan out roads and maps and stuff — and I just thought it was really cool,” he isn’t describing a fantastic summer camp. He’s describing what he and his classmates at the Wake Young Men’s Leadership Academy learned last year when the North Carolina Department of Transportation visited their school. This experience helped him realize that being a civil engineer and designing roads was an actual job and “might be something that I want to do.”

Alex’s excitement exemplifies why NCDOT and hundreds of businesses and schools throughout the state take part in the North Carolina Business Committee for Education’s Students@Work program every year. NCBCF is a nonprofit housed in the Office of the Governor that is made up of businesses that support workforce development in North Carolina. NCBCF Board of Directors Chairman and Deputy General Counsel for Duke Energy Bo Somers says the collaboration between businesses and schools is needed because many employers are seeing a gap between the skills they need their employees to have and the skills their employees actually possess.
Students@Work and its cousin program, Teachers@Work, are career readiness initiatives sponsored by NCBCE in partnership with the North Carolina Department of Public Instruction that are helping to address this gap by connecting businesses throughout the state to their future employees and the teachers who influence those students in the classroom.

“Many students and teachers in the school setting know what it takes to succeed academically,” Somers says, “but they don’t always have a true line of sight into how that academic learning translates into a career.”

**Students@Work**

Students@Work focuses on exposing primarily middle school students to what Somers calls “the real-world of work” through job shadowing programs or in-school visits.

“The goal of the program is to expose students to the many varied careers that are available in North Carolina businesses and the skills and education requirements that are necessary in order to be successful,” Somers says.

While Students@Work programs can be implemented any time during the school year, the designated Students@Work Week for 2017 is March 20-30. Andrew Warren was an eighth-grader last spring at Belmont Middle School in Gaston County when he and his classmates participated in a PSNC Energy job shadowing experience. “We got to hear speakers and see demonstrations and pump natural gas into cars and see the fire pit and all this different stuff,” he says. Most importantly to PSNC, Andrew says the experience “got me thinking about engineering and management.”

PSNC Energy Public Affairs Specialist Persida Montanez says this is precisely what her company wants to hear. “It’s a great opportunity to take students behind the scenes and expose them to career options they may not have known about or considered before,” she says.

Lenovo participates in the program by bringing students from Wake, Durham, Orange and Guilford counties to its Morrisville campus. Students learn about the company, tour labs, ask engineers questions and then, in partnership with the Kraden Institute, refurbish computers that are later given to students who don’t have a computer at home.

“They learn about all the different parts of the computer, replace hard drives, screw the tops back on, and get them cleaned up and in great condition to give to other individuals,” says Lenovo Community Engagement Manager Suzie Koonce. “While all this is happening, each student and a Lenovo employee are having informal conversations about career paths, and it’s very much like mini-mentoring sessions.”

**Teachers@Work**

Teachers@Work addresses the other end of the educational spectrum by inviting teachers to businesses across the state for a week during the summer. The teachers are asked to develop a lesson plan based on their experiences that incorporates hard and soft skills being used in the workplace.

At least two teachers from each of the state’s eight education regions will participate in the 2017 Teachers@Work program, bringing the total to at least 45 teachers and 30 businesses.
participating throughout the state. The lesson plans developed as a result of Teachers@Work are uploaded to NCDPI’s Schoolnet system so they can be shared with teachers across the state to extend the program’s impact.

Rob Leichner, a secondary math professional development curriculum specialist for Charlotte-Mecklenburg Schools, taught math at West Mecklenburg High School when he partnered with architectural and engineering firm LaBella Associates as part of Teachers@Work. He says one of his favorite experiences involved seeing how math is used in the workplace — something he could go back and share with his students to answer the age-old question, “When am I going to use this?”

Leichner says of the LaBella Associates employees he got to work with for the week, “Every single one of them had a graphing calculator on their desk, and you could see the formulas they were using, and you could see how they applied them. They really do use math every day.”

Orange High School career and technical education teacher Kentellia Wingate partnered with technology nonprofit MCNC in Durham. She believes Teachers@Work is especially beneficial for those who have taught their entire career because it “allows them to get a firsthand view of another workplace environment,” she says, which offers knowledge teachers can then transfer to their students.

MCNC President and CEO Jean Davis says these far-reaching impacts are why her company participates in Students@Work and Teachers@Work. “The more we can start early, helping kids understand the modern workplace and the fantastic opportunities that exist here, the better off our business and our economy and our society will be,” she says.

Learn more about Students@Work and Teachers@work at ncbce.org.

Robyn Kinsey Mooring is a Durham-based writer and the mother of two boys.
Education Guide
The 2016-17 Education Guide offers 649 education resources in the Triangle, including area preschools, private schools, public school systems, charter schools, boarding schools and academic resources.

The Triangle Go-To Guide
The Triangle Go-To Guide will replace the GPS in 2017 and continue to connect you to family fun resources across the Triangle. Plus, find out what our 2017 Readers' Favorites are.
City eyes deal for cheaper internet

City in talks with Cape Charles, Va.-based company

BY JON HAWLEY
Staff Writer

In a shot across the bow to Time Warner and Centurylink, Elizabeth City officials plan to soon strike a deal with a new internet service provider who will offer lower prices and much-needed competition.

On Friday, City Manager Rich Olson reported to city council on the city's talks with Eastern Shore Communications, a Cape Charles, Va.-based company looking to sell wireless internet service citywide. The city would lease space on its water towers for the company's equipment, helping reduce its costs and thereby prices.

The city has been working with Eastern Shore for about a year, and had hoped to get a contract approved before now. The contract was delayed last summer because Eastern Shore encountered unexpected costs in trying to exist "middle mile" broadband fiber owned by MCNC. Olson said MCNC is a Research Triangle-based technology nonprofit that has built broadband internet infrastructure that serves public schools, public colleges and universities and nonprofit health care institutions.

Also adding to the delay, Olson said, was the fact Eastern Shore thought the city owned more "dark fiber," or unused fiber available for expanding service, than it did. The city will pay to install that extra fiber, he told council.

The city has resolved those issues and Olson said Friday he hopes to bring a water tower agreement to the council during its Feb. 27 meeting. That agreement would provide for space for Eastern Shore Communications on the city's towers and define the city's revenue-sharing with the company. A major boon of the project, Olson said, is that Eastern Shore will pay the city 10 percent of its gross receipts.

The city will also have to adopt a public-private partnership agreement with Eastern Shore as well, which would define who owns what. Olson said that would be coming to council within the next four months. It will also take Eastern Shore several months to set up before it can offer service, he noted.

According to Olson, the residential internet packages on Eastern Shore's Elizabeth City Broadband Network would range in price from $20 to $50. The $20 package would provide 10 megabit-per-second download speeds — enough for basic internet surfing, Olson said — while the $50 package would offer 50 mbps download speeds that could accommodate online gaming and high-definition video streaming.

Commercial packages will also be available, with the fastest offering download speeds of 100 mbps for $120 a month, according to a city memo.

Olson said the new service would be a big benefit to the community. The city can market it to businesses that increasingly need fast internet, he said.

It could also be a boon to city residents. During Friday's meeting, Councilor Johnnie Walton asked how the city would promote the service's adoption to lower-income city residents, including schoolchildren.

Olson said he's been discussing the service with Elizabeth City-Pascoquann Public Schools Superintendent Larry Carter.

"He's very interested in getting in on this, because the speed they have in schools will increase dramatically," Olson said.

Currently, many schools still rely on slow T1 lines for service, he said. The new service could help speed up internet-based classroom instruction, he noted.

Olson also said many local school students have no internet service at home, making it harder for them to do their homework. The $20 package should be an affordable solution, he said.

Olson also said that Eastern Shore, by offering lower prices, would spur the city's "legacy providers" to lower their costs — meaning the service would even help residents who don't switch providers.

Olson also noted that, if another company wanted to compete with Eastern Shore, the city could offer them the same deal Eastern Shore is getting. That includes collecting 10 percent of their revenues, he noted.

Two city councilors said they were tired of their high internet and cable bills.
"Sign me up (with Eastern Shore), I just had a long discussion with Time Warner Cable," Councilor Tony Stimatz said.

Stimatz said his bundled package has risen to $190 a month over the years, adding the company continues regular charges for modems that should be one-time expenses.

Councilor Michael Brooks similarly expressed frustration with the $170-a-month bill he said he receives from Time Warner. He may drop the service soon, he said.

"The problem is you have nowhere to go," Stimatz said, claiming Centurylink would charge about the same.
First North Carolina education institutions test Federated Identity Program

RESEARCH TRIANGLE PARK, N.C., Feb. 28, 2017 /PRNewswire-USNewswire/ -- MCNC, the non-profit operator of the North Carolina Research and Education Network (NCREN), today announced that Davie County Schools, Rockingham County Schools and Davidson County Community College have become the first registered constituents for K-14 education in North Carolina to join the InCommon Steward Program.

In November, MCNC introduced a first-in-the-nation, proof of concept to extend InCommon Federated Identity Management (FIM) technologies beyond universities, to now include K-12 education and community colleges in North Carolina – giving participating institutions the ability to use a secure local credential to safely access a wide array of online educational resources. MCNC acts as the Steward for North Carolina institutions in the program, managing and supporting organizational trust to facilitate participation in the national FIM system.

In January, MCNC registered Davie County Schools as the first K-14 institution under the InCommon Steward Program. This month, Davidson County Community College and Rockingham County Schools also were on-boarded in the program.

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"First North Carolina education institutions test Federated Identity Program"
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February 28, 2017 at 11:30 AM EST RESEARCH TRIANGLE PARK, [N.C]., Feb. 28, 2017
/PRNewswire-USNewswire/ -- MCNC, the non-profit operator...

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Highlights: NC, NORTH CAROLINA, North_Carolina, North Carolina, N.C, MCNC, Research and Education Network, NCREN, North Carolina, Research and Education Network, mcnc.org, research and education network, research and education network, north-carolina
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RESEARCH TRIANGLE PARK, N.C., Feb. 28, 2017
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In November, MCNC introduced a first-in-the-nation, proof of concept to extend InCommon Federated Identity Management (FIM) technologies beyond universities, to now include K-12 education and community colleges in North Carolina giving participating institutions the ability to use a secure local credential to safely access a wide array of online educational resources. MCNC acts as the Steward for North Carolina institutions in the program, managing and supporting organizational trust to facilitate participation in the national FIM system.

In January, MCNC registered Davie County Schools as the first K-14 institution under the InCommon Steward Program. This month, Davidson County Community College and Rockingham County Schools also were on-boarded in the program.

MCNC provides the high-speed broadband foundation for higher education at Davidson County Community College, which allows us to continue opening the doors to education, improving the lives of individuals in our community and beyond, said Donald Beck, Director of ITS at Davidson County Community College. The InCommon Steward Program at Davidson County Community College creates additional opportunities for sharing services and applications, access to national and international resources, and offers a seamless transition from one educational level to the next. We’re proud to be part of a program that can serve as a model for others across the state and nation as to what is possible.

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Think of a federated login like an ATM. Thousands of banks are federated, each with millions of users. The username is the ATM card, and the password is the Personal Identification Number (PIN) maintained by the user’s home institution, or bank. Other institutions give access to remote users based on trusting their username and password. Many North Carolina education institutions desire this kind of access to remote and protected web-based services.

But, it must be efficient, cost-effective, quick, secure, and user friendly. FIM technologies enable such access on the Internet and can be especially beneficial in North Carolina.

We could be the first state to successfully leverage a regional network and the existing InCommon infrastructure to create new possibilities with FIM technologies, said MCNC Chief Technology Strategist Mark Johnson. This is a great first step for North Carolina. This summer MCNC and InCommon will report out to our various stakeholders on the progress, challenges, and next steps for this program. We hope other regional networks will continue to express interest like they have already as we collaborate to find a functional and scalable solution for everyone.
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The InCommon Federation has its origins with research universities and has seen significant growth throughout higher education over the last decade, said Ann West, Associate Vice President for Trust and Identity at Internet2. This collaboration with MCNC allows the extension of these secure and privacy-preserving single sign-on benefits to K-12 and community colleges in North Carolina and throughout the country.

MCNC and InCommon completed the required legal agreements last year to begin this work, and it currently serves as a model for what is expected to be important software infrastructure for education in the years to come. For more information, view this fact sheet: Partnering for K-14: the InCommon Steward Program.

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SOURCE MCNC

Technology nonprofit helps register Davie, Rockingham County Schools, Davidson County Community College as first K-14 institutions in NC to join InCommon Steward Program

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First North Carolina education institutions test Federated Identity program

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InCommon Steward Program, which is currently a proof of concept only happening in the InCommon Federation for 14 institution under the InCommon Steward Program. This month, the non-governmental organization (NGO) is expanding its reach beyond research universities to include K-12 schools and a growing list of colleges and universities.

Recommended by MCNC Communications, on behalf of MCNC: (252) 423.1277 or Donald Beck, PR Newswire for Professionals, Inc., 1-800-424-1881, ext. 1277 or dbuck@prnewswire.com.

Davidson County Community College, Davie County Community College, Rockingham County Community College, and Davie County High School in North Carolina are among the first in the nation to test Federated Identity Program (FIM) technologies as of February 28, 2017 at 11:30 AM EST. The same technology also powers Internet2, the non-profit advanced research and education network for more than 500 research institutions across North America.

About Internet2
Internet2 is a non-profit advanced technology community founded by the nation’s leading higher education institutions in 1996. Internet2 is dedicated to fostering the development of new and innovative networking technologies and services, to promote a global advanced networking infrastructure for research and education, and to achieve expanded access to national and international resources, and offers a seamless transition from one educational level to the next. We’re proud to be part of a program that can serve as a model for others across the state and nation as to what is possible.

“Federated identity management allows each institution to only manage its users and trust that the information about users from other institutions is accurate. If one password is compromised, it only affects that individual’s credentials,” said MCNC Chief Technology Strategist Mark Johnson. "This is a great first step for a wider adoption of FIM technologies. By testing FIM in North Carolina, we can serve as a model for others across the state and nation as to what is possible.""
The InCommon Steward Program at Internet2, Director of ITS at Davidson County Community College and throughout the country.


Schools also were on board in February 28, 2017 at 11:30 AM EST.

Recommended for education institutions desire this kind of access to remote and protected web services. In 2013, education and technology leaders in eight states began collaborating with InCommon to extend advanced trust and identity solutions used at the Universities of Michigan and Illinois. "We could be the first state to successfully leverage a regional network and the existing InCommon infrastructure to create new possibilities with FIM technologies," said MCNC Chief Technology Strategist Mark Johnson. "This is a great first step for us as we collaborate to find a functional and scalable solution for everyone."

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MCNC, the non-profit organization that serves as the state’s single point of contact for high-speed networking, today announced that 14 education institutions, including all K-12 education and community colleges in North Carolina, are the first K-12 education institutions in the program, managing and supporting organizational trust to facilitate participation in the national FIM system.

InCommon Steward Program, which is currently a proof of concept only happening in nation’s top universities to K-12 education in North Carolina. In 2013, education and technology leaders in eight states began collaborating with InCommon to extend advanced trust and identity solutions used at the nation’s top universities to K-12 education and community colleges in North Carolina. Through the support of the National Science Foundation’s Community Cyberinfrastructure for Support of Education and Research (NSF-CyberSEER) Program, the InCommon Steward Program at Emory University, initially started as a proof of concept for the FIM (Federated Identity Management), was piloted. The InCommon Steward Program, which is part of the National Science Foundation's (NSF) National Science Digital Library (NSDL) Program, was established to develop a trust framework for the sharing of resources and services across institutions of higher education and other community institutions.

By: Donald Beck, Senior Director, Public Information, MCNC

Over time, those pilots evolved to build the InCommon Steward Program. This month, owners of shared online services and resources, accessed by users from different institutions, trust that credentials are kept up to date by their home institution. One of the most effective, quick, secure, and user-friendly ways to accomplish this is through the use of a Personal Identification Number (PIN) maintained by the user’s home institution, or bank. Other institutions give access to remote users based on trusting their home institution’s authentication methods. As the Internet becomes more pervasive in society, access to national and international resources, and offers a seamless transition from one educational level to the next. We’re proud to be part of a program that allows us to continue opening access to remote and protected web resources and services. The InCommon Steward Program at Emory University, initially started as a proof of concept for the FIM Toolkits, was piloted.

MCNC provides the high-speed networking that allows access to national and international resources, and offers a seamless transition from one educational level to the next. We’re proud to be part of a program that allows us to continue opening access to remote and protected web resources and services. The InCommon Steward Program at Emory University, initially started as a proof of concept for the FIM Toolkits, was piloted.

MCNC leverages high-speed networking to deliver cutting-edge technologies and services to the state’s educational institutions, employers, and research institutions. MCNC is the state’s single point of contact for high-speed networking, and works closely with the North Carolina Research and Education Network (NCREN), today announced that 14 education institutions in North Carolina are the first K-12 education institutions in the program, managing and supporting organizational trust to facilitate participation in the national FIM system.

MCNC delivers a diverse portfolio of technology solutions that leverages, integrates, and amplifies the strengths of its members and helps support their educational, research and community service missions. Internet2's core infrastructure components include the nation's largest and fastest research and education network that was built to deliver advanced, effective, quick, secure, and user-friendly FIM technologies enable such access on the Internet and can be especially beneficial in educational, research and community service missions. Internet2 delivers a diverse portfolio of technology solutions that leverages, integrates, and amplifies the strengths of its members and helps support their educational, research and community service missions. Internet2's core infrastructure components include the nation's largest and fastest research and education network that was built to deliver advanced, effective, quick, secure, and user-friendly FIM technologies enable such access on the Internet and can be especially beneficial in educational, research and community service missions.