

Raney Gilliland

From: Carole A. Jordan [cjordan@kansascommerce.com]
Sent: Tuesday, February 08, 2011 2:20 PM
To: Raney Gilliland
Subject: Summary - KS Broadband Activities (3) (2).docx
Attachments: Summary - KS Broadband Activities (3) (2).docx

Raney, here's a fact sheet we put together about our Commerce broadband mapping and planning program. It's important to remember that this is a very specific grant, one to each state, for data development. There is no deployment money in it—that all went to private entities, not states, for build out.

I had given Rep. Tyson some testimony that describes more about what is happening with broadband right now. I will send a copy to you in a couple of minutes.

Carole

Kansas Broadband Data and Development Program
Kansas Department of Commerce

Each state currently has a project enabling it to map broadband availability and plan for future improvements in high speed internet use. In Kansas, the Department of Commerce is working with partner Connected Nation to improve statewide capacity to compete in the digital economy through effective planning for broadband availability and adoption in the following areas:

State broadband planning and capacity building

- Develop plans to support broadband technology growth and adoption
- Conduct gap analysis of availability, adoption and existing capacity of local support organizations
- Convene statewide and regional events to disseminate technical information about broadband
- Improve understanding of and opportunities to enhance broadband in Kansas
- Work to create public-private partnerships to access infrastructure, technical expertise and training
- Broadband task force planning and implementation
- Network deployment cost modeling and analysis
- Business and residential needs assessment and research

Technical assistance support for local and regional communities

- Provide technical expertise to local and regional institutions, non-profits and governments
- Assist with volunteer and non-profits on digital literacy and small business broadband training
- Provide information to communities, businesses and others about efforts to improve access and adoption
- Support capacity building and local regional technology planning team activities by engaging local and state-level surveys of broadband adoption and barriers to adoption
- Develop realistic goals and strategies for broadband deployment and adoption statewide and locally
- Develop an Enterprise Architecture to drive performance improvements in areas such as business processes, use of state assets to drive infrastructure deployment, and cross-collaboration among agencies

Regional technology planning teams

- Benchmark technology use across specified regions and community sectors
- Set goals and develop plans for improved technology use within each sector
- Foster and coordinate local civic and community leaders to improve grassroots technology awareness
- Develop recommendations for web-based applications and demand creation

Data collection, integration and validation

- Broadband inventory, gap analysis and interactive mapping tool to be developed, validated and updated through the year 2014.

No broadband infrastructure, deployment or end-user service provision components are included in any of these efforts. All deployment of broadband services and infrastructure build out is through the private sector. Initiatives are funded through a grant from the U.S. Department of Commerce NTIA program. This initial grant (announced Dec., 2009) provided funding for 18 months. It was later amended through 2014 with additional grant funds.

Approved Grant Summary

Original Award:	\$1,974,083
Supplemental Funding:	\$4,397,431
Total Award:	\$6,371,514 [through 2014]

Budget Allocation Summary

Data collection and mapping	\$3.3M
Planning and capacity building	\$1.5M
Technical Assistance	\$0.5M
Regional planning teams	<u>\$1.1M</u>
	\$6.4M

Senate Utilities Committee
Stanley Adams
Broadband Planning Manager, Rural Development Division
Kansas Department of Commerce
January 12, 2011

Good afternoon Chairman Apple and members of the committee. Thank you for inviting us here today to update you on the Kansas Broadband initiatives. In the past year we have greatly expanded our efforts to address broadband accessibility issues in un-served and under-served communities across the state. Our goal is to foster economic growth in Kansas by leveraging universal broadband (high speed Internet) availability and adoption, and to provide information for policymakers.

Today I will be speaking to you about our Broadband mapping and planning grant; where we have been and where we have plans to go; sharing some of the early data that have been collected; and setting the stage for a technical demonstration of the Broadband map by our mapping designee, Connected Nation.

Where We Have Been

The Department of Commerce has coordinated the state's broadband initiatives since 2009 when we formed planning groups of state agency partners and broadband providers. We began engaging other stakeholders from communities across the state to guide our initial work. Economic development, health care, education and electronic governmental services are key areas of focus.

We received a federal grant under the State Broadband Data Development (SBDD) program in December 2009. This allowed us to accelerate our broadband work. No state dollars have been used to directly fund this effort. Through the federal grant, we began to conduct detailed data collection and research to build an interactive map of broadband service availability. The non-profit organization, Connected Nation, leads our data collection and mapping efforts and has recently launched the interactive map, Broadband Stat. This new tool is highly sophisticated and comes with a wide range of useful features; representatives from Connected Nation will present Broadband Stat to you next week.

The initial SBDD grant also funded other broadband planning efforts. Elements covered under the approved plan include: commissioning a network deployment cost model and analysis that will improve our ability to support our small and independent broadband service providers in identifying additional feasible markets to expand to un-served areas; and creation of a senior-level Broadband Task Force last summer, on which Chairman Apple serves. Mr. Chairman, we appreciate your active engagement in the task force and are looking forward to working with you in 2011. The plan also included funding the recruitment and hiring of a dedicated resource to coordinate the State's broadband efforts and develop an integrated broadband plan – I am pleased to serve in that capacity now and to be able to provide you with this update today.

Our grant also called for convening a statewide Broadband Summit with a goal of building increased awareness of broadband services and the efforts underway, and engaging stakeholders in dialogue across key private and public sectors (i.e., health care, education, government and economic development). The summit was this past October in Wichita and was attended by more than 200 people. Presentations addressed the key areas of focus previously identified and built on our ability to engage at the regional and local community level. We had a wide range of local, regional and national presenters to take up key broadband issues important to Kansans.

Some of the sessions included:

- Kansas Broadband Landscape and Mapping
- The Way Forward: Connecting Kansas
- Harnessing Bandwidth to Spur Economic Development
- Telemedicine, HIT and Future Broadband Implications
- Digital Accessibility in a Fully Connected Kansas
- National Broadband Plan and Implications for Kansas
- Driving Productivity through Broadband Speed
- Broadband and Government Services
- Building a Sustainable Broadband State Focus

Other components of our plan include development of an Enterprise Architecture program, additional research and surveys to understand the needs of local business and residents, and identification of and promotion of best practices in addressing un-served and under-served communities. These are only some of the specific elements of our initial broadband planning program and, as you can tell, we are advancing our efforts on multiple fronts.

Where We Are Going

The initial grant request, approved for \$2 million, was to cover a period of approximately two years (some elements of the program started immediately, others did not, so the actual window of funding varies slightly). Last fall, the NTIA approved our supplemental grant request for an additional \$4 million. This secondary award, in part, covered the extension of funding programs from the initial grant through 2014. For example, this included additional data collection required to refresh the interactive mapping tool, and provides funding for the broadband manager position.

The approved supplemental grant request also created the opportunity to build a more robust program that will allow us to more aggressively engage and support local community efforts to improve broadband service. Our plans call for deployment of seven regional technology teams, focused on identifying key people in under-served or un-served areas and providing technical assistance needed to access and use broadband services.

Summary of key funded initiatives that will be implemented through 2014:

- Network deployment costs model
- Task force establishment and composition
- Dedicated broadband staff coordinating efforts
- Broadband summit
- Regional technology planning team implementation
- Technical assistance support for local and regional efforts
- Enterprise architecture development

Digital literacy and demand generation pilot programs
Business and residential level research

Kansas Broadband Landscape

Today, broadband service is available to approximately 95 percent of households, nationwide. It seems an impressive figure, but it masks wide geographic, economic and demographic disparities. Here in Kansas, much work is yet to be done to develop and implement actionable plans to ensure broadband service is available – in a manner no different than is the case with electricity or basic landline telephone service. On the whole, Kansas compares favorably in many key respects to national averages. Our research shows that 72 percent of Kansas households surveyed access broadband services at home, compared to the national average of 65 percent.

There are many varieties of broadband, and the range of differences in quality, accessibility and affordability are considerable. Generally, to be considered broadband, a minimum download connectivity speed of 768 Kbps is required. However, data used in developing the National Broadband Plan identified that the median connectivity speed in 2009 was much higher, at 4 Mbps.

Broadband services are typically provided by cable, wireline and wireless telephone, and satellite providers, among others. In order to ensure all Kansans are able to have the benefits of broadband, it's likely that the solution will take the form of a combination of technologies; time and technological innovation will tell. There is no one-size-fits-all solution for the variety of un-served and under-served issues present throughout the state.

There are a great many implications involved in ensuring a fully connected Kansas. Broadband represents one of the greatest competitive game changers since the jet age – effective deployment and adoption of Internet technologies will allow Kansas business to compete globally on a whole new level.

Two core underlying issues are being addressed by our broadband initiative:

- 1) Availability – ensuring there is adequate **supply** of quality, affordable broadband service that can be accessed statewide by Kansans, especially in rural communities, often last to benefit from commerce and innovation driven by high density population centers.
- 2) Adoption – where broadband services are currently available (approximately 95 percent of Kansas households), but not subscribed to, fostering a higher rate or percentage of households actually with broadband service (**demand**).

To address these two core underlying issues, two major programs were launched last year by the Federal government: the Broadband Improvements Program (BIP) and the Broadband Technology Opportunities Program (BTOP). These two, much larger programs (compared to SBDD) funded the majority of broadband grants and are targeted to the private sector to improve infrastructure and availability.

The USDA's Rural Utilities Service (RUS) administers BIP, which extends loans, grants, and loan/grant combinations to facilitate broadband deployment in rural areas. Grants are used to fund applications proposing to exclusively serve remote, un-served, rural areas. Applications that would serve non-remote or under-served areas would be funded by loans or loan/grant combinations. RUS favored applications

that proposed a higher percentage of loan funds, and applicants could request 100 percent loan funding if desired.

The U.S. Commerce Department's National Telecommunications Information Administration (NTIA) administers BTOP, which made grants available for broadband infrastructure deployment in un-served and under-served areas. The three primary categories were:

- Broadband Infrastructure – projects that deliver broadband through last mile or middle mile facilities.
- Public Computer Centers – projects that expand publicly accessible computer centers, such as community centers, community colleges and public universities.
- Sustainable Broadband Adoption – projects that promote broadband demand, including broadband education, awareness, training, access, etc.

Several BIP and BTOP awards were made to Kansas-based companies. The administering federal agencies made final evaluation of applications from the private sector and determination of their actual grants and loans.

Highlights of broadband private sector BIP and BTOP grants and loans in Kansas:

	Grant	Loans	Private Inv.	Total
H&B Communications, Holyrood	\$4.6M	\$1.97M	\$1.6M	\$8.19M
JBN Telephone Company, Holton	\$7.8M	\$6.5M	\$3.7M	\$16.9M
South Central Wireless, Medicine Lodge	\$558K	\$560K	\$576K	\$1.7M
South Central Tele. Assoc., Medicine Lodge	\$871K	-	\$3.6M	\$4.4M
Rural Telephone, Hays	\$49.6M	\$51.6M	-	\$101.2M

In total, when considering all the broadband projects, grants, loans and private investments, the total projected broadband investments in Kansas is approximately \$245 million.

Increasingly, state and local governments are able to save costs and deliver improved services to those utilizing broadband connections. We are in the midst of a dramatic shift in how commerce is conducted, with more business being transacted via the Internet.

Our preliminary research shows several key factors particularly relevant to understanding broadband adoption in Kansas. There is a correlation between adoption and computer ownership. Generally, households that invest in a computer recognize its value in accessing the Internet. In the future, we expect this correlation to lessen with the rapid emergence of mobile device connectivity.

Kansas adoption rates are also positively correlated to higher income levels and higher education. For example, 91 percent of households with income over \$75,000, and 88 percent of households with college graduates, subscribe to broadband services in Kansas.

As one might expect, our research also shows a sharp drop off in adoption rates when looking at senior citizen households; only 34 percent ages 65+ compared to 85 percent ages 18 – 34.

Many factors go into determining why households don't subscribe to broadband service. In fact, it is more complicated than it may seem at first. Research shows that the primary reason for low adoption rates among residential respondents relate to not understanding the value of having it. Like other new technologies, initially broadband has not yet become fully recognized as a necessity (41%). Another

reason closely related to the awareness issue is the lack of a computer in the home (37%). Interestingly, cost came in a distant third as the reason respondents did not have home broadband service (25%).

Broadband initiatives are sprouting up at the local level in several communities across the state. Typically, the challenges faced are a combination of limited or no availability and quality of service (speed). Kansas is fortunate in that a wide range of independent rural broadband providers are aggressively working to build out their markets with high quality broadband services. In Emporia, business and education leaders have formed their own task force to develop a strategy to bring affordable, quality broadband service to their entire community. They are looking at what can be done so that businesses, suppliers, as well as some of the nearby rural areas have access where currently it is still limited or not available at all. A common theme we are hearing is that people who are living in relatively populated areas (like Emporia, or even here in Topeka) have limited or no reliable broadband service.

In Chanute, there is a strong grassroots effort to create an innovative broadband solution for the community, leveraging fiber technology, and they are promoting their efforts to Google in hopes of bringing in their expertise and funding for high speed Internet.

As we continue our efforts to build awareness of the various broadband initiatives, we are learning about other local efforts underway, and about areas that have great need of support in developing broadband technical solutions for their individual communities. We have taken this into consideration as we developed our broadband plans.

In addition to preliminary research conducted on residential issues, we have also been able to quantify some key indicators for how broadband service (or lack thereof) is affecting the Kansas business community.

For example, broadband availability issues for *rural* businesses track closely to the *general* business community in Kansas; 93 and 94 percent respectively, report available service. Also, our research shows that businesses are increasingly accessing Kansas state websites for services and information; 30 percent reported visiting state websites several times per month. This information is preliminary, but it does confirm that, just as we are seeing in the residential sector, the business community appears to have similar trends in terms of both availability and adoption. Additional work will be done to ensure we are forward-thinking about the needs of the business community, especially our small businesses in rural areas. We anticipate that, as new innovations and trends develop online, Kansas businesses will need to be in an environment that fosters growth through connectivity.

We still have much work to do as we assess the precise nature of gaps in availability and adoption across the state. What we do know, however, is that too many Kansans, especially in rural communities, still rely on slow, narrowband Internet access or do not use the internet at all. The Kansas Department of Commerce has been proactive in setting the stage for a fully connected Kansas. Our efforts are dedicated to ensuring that all Kansans have quality, affordable access to broadband Internet services.

As Governor Brownback has stated, it is critical that we ensure all Kansans have access to quality, affordable broadband service, especially in our rural communities.

We look forward to working with you in the future, and to answering any questions you might have.