Indiana Rural Broadband Working Group

December 5, 2014

The Broad Challenge

Lieutenant Governor Sue Ellspermann conducted a Listen and Learn Tour of all 92 counties in 2013. The goal of the tour was to learn about the strengths and weaknesses of each county to help state leaders better understand the issues facing the local leaders and citizens. She met with local elected officials as well as business and agricultural leaders. One issue that surfaced in a majority of rural counties was the need for broadband. Many spoke of the need to have fast and reliable broadband to not only maintain a high quality of life, but to also help attract new businesses and industries to these areas.

As a result of that feedback, Lieutenant Governor Ellspermann initiated a Rural Broadband Working Group (RBWG) with Secretary of Commerce Victor Smith. Stakeholders were asked to participate in a series of meetings to identify challenges and issues that hinder the expansion of broadband service into rural areas. Members of the RBWG included service providers, economic developers, rural related associations, and university representatives. The working group met six times from March through September of 2014. These sessions were guided by a problem solving process [See Appendix A] designed to help identify key challenges and then work towards recommendations to help solve the problem.

The overarching issue the RBWG focused on at each meeting was how they might increase broadband connectivity in rural Indiana.

Rural Broadband Working Group Members

Name	Organization
Sue Ellspermann	Lt. Governor of Indiana
Victor Smith	Indiana Secretary of Commerce
Bill Soards	AT&T
Steve Jones	Ball State University
Alan Matsumoto	Century Link
Matt Kelly	Comcast
Pete Nemeth	Comcast
Caryl Auslander	Corydon Group
Matt Norris	Corydon Group
John Lass	Frontier Communications
Justin Hage	IEDC
Eric Shields	IEDC
Joni Hart	Indiana Cable Telecommunications Association
Kenny Franklin	Indiana Department of Transportation
Kristine Lowes	Indiana Department of Transportation
Alan Tio	Indiana Economic Development Association
Matt Randall	Indiana Electric Cooperatives
Bruce Hazelett	Indiana Exchange Carrier Association
Katrina Hall	Indiana Farm Bureau

Kelly Dyer	Indiana Fiber Network
Rob Ramsey	Indiana Fiber Network
Brandt Hershman	Indiana General Assembly
Eric Koch	Indiana General Assembly
Kathy Heuer	Indiana General Assembly
Jim Sparks	Indiana Geographic Information Office
Susan Reed	Indiana Municipal Power Agency
Bill Davis	Indiana Office of Community and Rural Affairs
Geoff Schomacker	Indiana Office of Community and Rural Affairs
Paul Baltzell	Indiana Office of Technology
Allison Orwig	Indiana Rural Health Association
Ted McKinney	Indiana State Department of Agriculture
John Koppin	Indiana Telecommunications Association
Kirk White	Indiana University
Dennis Rosebrough	Lt. Governor's Office
Peggy Welch	Lt. Governor's Office
Ryan Heater	Lt. Governor's Office
Barbara Quandt	National Federation of Independent Business
John Hill	National Rural Education Association
John Sampson	Northeast Indiana Regional Partnership
Jeremy Sowders	Radius Indiana
Darby McCarty	Smithville Communications
Vishal Singh	Union Station Technology Center
Dave Vehslage	Verizon
Neil Krevda	Verizon
Eric Rogers	Wireless Internet Service Providers Association
Steve Barnes	Wireless Internet Service Providers Association

Fact Finding

The initial sessions focused on identifying generally understood and accepted facts regarding broadband service to rural areas. In doing so, the group started with an initial review and discussion of Indiana's Broadband Map, information from the National Telecommunications and Information Administration, and current broadband technologies. The definitions of terms for "broadband," "rural," and "access" were also considered and discussed. The group developed a list of facts and differing perspectives as a foundational basis for future discussions.

Definitions

The RBWG focused on defining three key terms so that ongoing conversations were guided by a reasonable understanding of expectations.

Broadband
Data can be transmitted to and from the internet at speeds of at least 4 megabits per second downstream and greater than 1 megabit per second upstream. (These numbers reflect current Federal Communications Commission definitions, and it was agreed upon that broadband speeds above the definition would better serve the team as a goal)

Rural
An area with a population of 50,000 or less that is not adjacent to or contiguous to an urbanized population of 50,000 or more.

Access
A provider is able to make the broadband service "available" at an address without extraordinary commitment of resources within 90-120 days for a new business or 14 days for residential.

Barriers

The RBWG determined that there are three major categories of broadband barriers: financial, regulatory and process.

Financial barriers (taxes and fees)
- Taxes and fees on subscribers
    - Franchise fees
    - 911 fees
    - Telecommunications Relay Services Fees
    - Sales and Use Taxes
- Business taxes and fees
    - Property taxes and personal property taxes
    - Municipal pole attachment fees
    - Zoning and permitting fees
    - Utility receipts tax
- Return on Investment

Regulatory Barriers
- Remove any remaining regulations to build outdated technologies
- Eliminate government funded overbuilding of broadband infrastructure

Process Barriers
- Local and state construction permit fees
- Unusual and extraordinary construction requirements
- Permit approval delays
- Non-uniform county/municipal right of way process
- Process for bridge attachment/railroad/and limited access roads and highways
- Right of way fees
- Facilities requirements

<u>Speed needs</u>

The RBWG spent extensive time discussing the needed speed of broadband service for multiple tasks and functions. Much of that discussion focused on what is currently needed compared to what speeds will be needed in the future. Both personal and business uses were considered.

1. Current speed needs are 20 megabits per second for high definition video and 5 megabits on average
2. We expect a 16% increase per year for speed needs
3. We expect a 40,000% increase in traffic (bits) in the next five years; speed and capacity are both at issue
4. This is consistent with utility connectivity

Challenges

Once the group completed fact finding, it focused on generating specific challenges which the RBWG team might tackle. The team ultimately chose key challenges that had the greatest potential of increasing connectivity in rural Indiana. The group utilized the challenge mapping process [See Appendix B] to identify the major challenges that appeared to have the most potential leverage. As a group, the following four challenges were identified as opportunities for to move forward into solution finding.

1. *How might we streamline permits, zoning, and approval processes?*

2. *How might we ensure return on investment for build out and maintenance? How might we reduce the cost of investment?*

3. *How might we match up service with needs in rural Indiana?*

4. *How might we find common access points in rural areas?*

Recommendations

The group broke out into small teams to work on each of the four challenges. The teams diverged on the multitude of ideas and ultimately chose to move a few forward or in combination. Through this process, each team developed specific recommendations to address those specific challenges to improve broadband service to rural Indiana.

1. **Streamline permit, zoning, and approval process**

   One of the obstacles facing service carriers and providers is the variation and vast differences in permitting, zoning, and approval processes across local counties and communities. In particular, one cited example involved a town that rests on a county line. In one county, the process and zoning ordinances were much easier to adhere to,

while the other county presented many obstacles to install new broadband infrastructure. This difference amongst local units of government creates roadblocks for providers to deploy new broadband infrastructure quickly and efficiently. By adding speed and consistency, each rural project becomes more attractive to providers.

The goal is not to remove home rule and the decisions of local officials, but to simply ask them to make those decisions within certain parameters. Those parameters would be a process where decisions are made in a timely and more uniform manner so businesses know what to expect when working to deploy new infrastructure in a community.

Additionally, forms and documentation requirements could be standardized across the state. The differences across localities is a burden on businesses and more standardized forms will provide the certainty and knowledge businesses need to invest in these local communities.

Fee structure changes are also recommended. Varying fees across multiple layers of local governments cause strain on businesses that are looking to expand in different communities. The RBWG recommends evaluating ways to provide businesses with certainty that their fees would not exceed a specified dollar amount for a certain investment.

Publicly-owned rights of way should also be considered. State and local highway departments' accommodation policies should be reviewed to ensure broadband providers access to public rights of way for infrastructure installations. Additionally, access to rights of way and attaching to bridges should be considered for expansion of rural fiber, cable, and/or conduit.   Improving communication about future road projects will help determine when and where to install broadband facilities to eliminate or minimize unnecessary relocations.   Accurate installation of facilities to permitted locations will, in turn, streamline future road improvements and avoid costly relocations of installed lines.

2. **Increasing Rural Broadband Adoption**

Many providers believe communities and residential users are not fully aware of the need and possibilities of being "online" with a broadband connection. Healthcare, education, and employment opportunities are just three examples of changing online opportunities. Educating non-users about the possibilities associated with broadband access is critical to higher adoption rates of network connectivity. Higher adoption increases the interest of providers to serve a region, increasing quality of life, productivity, and engagement.

The concept is to educate using a delivery method that is relevant to the rural community in our State and vendor neutral (i.e. does not promote a single carrier or methodology over another); resonates with purpose for the non-user (i.e. relevance to their lives and futures); provides examples of education and healthcare outreach that have been improved/enhanced with broadband services; and can be replicated and supported to multiple sites long-term.

The RBWG recommends the development of a Rural Broadband Center in conjunction with a university to collect data and build the appropriate messaging to deploy to the current non-user base. Utilizing the network of a university and its programs, the message would be targeted to communities best suited for development in unserved areas of Indiana.

While not fully developed, the RBWG believes there may be value in the following:
   1) Engaging outside entities to better understand current and planned programs that could benefit the overall goal (i.e. Military, VA, Education, FCC).
   2) Assist companies looking to develop broadband adoption programs for employees and creating broadband-dependent jobs for rural Hoosiers to telecommute.

3. **Return on Investment of The Last Mile**

Over the last five years, the Indiana Geographic Information Office and Office of Technology have worked together with over 150 Internet Service Providers (ISPs) to map high-speed services available to Hoosiers. The Indiana Broadband map demonstrates that more than 96% of our state has access to one or several services. However, there remain "last miles" which are unserved and underserved.

Federal funding for the Indiana Broadband Map will sunset in 2014. The RBWG believes that this information is fundamental to the working group's continued efforts and recommends evaluating ways to ensure that it remains accurate and timely.

The RBWG recommends the Indiana Office of Community and Rural Affairs (OCRA) work with local officials and the broadband providers to develop comprehensive data regarding the "last mile blocks." Activities could include gathering information on the demand for the services by counting the number of households and businesses within the census block, and working with local officials to send out a request for information (RFI) to all service providers to examine their existing infrastructure and facilities and determine their level of interest in extending service. OCRA liaisons could subsequently help facilitate conversations between providers and local communities.

A goal of 50% reduced unserved areas over the next 3 years and a 10 year goal of all of Indiana having at least 10 Mbps service should be considered.

The group agreed to use the current FCC definition of broadband which is 4 Mbps download and 1 Mbps upload. Currently the FCC is considering updating this definition to 10 Mbps. The data that is collected for the Broadband Map shows ranges of service with 3 to 6 Mbps as the lowest range. Therefore, the agreed definition of unserved are census blocks with no wireline or fixed wireless provider reporting service of at least 3 to 6 Mbps downstream.

4. Carrier Neutral Access Point Approach

Indiana competes in a digital economy that is now affecting all sectors, including education, healthcare, agriculture and manufacturing as well as rural Indiana's ability to compete for jobs related to information technology. Portions of Indiana seem to be "disconnected" from high bandwidth broadband connectivity. This challenge hinders economic development and impacts community sustainability, which suggests an opportunity for innovative, statewide solutions for connectivity issues to enable all Hoosiers to compete for 21st century jobs.

The RBWG discussed a carrier neutral point of presence in underserved (or "difficult to serve") portions of rural Indiana counties. There are communities that have a high level of interest in broadband connectivity, but no provider has demonstrated interest in serving these areas (i.e. no Request for Proposal (RFP) responses to extend service to the community because of the lack of ROI for a carrier). In these circumstances, consideration of creative approaches, such as developing a carrier-neutral point of delivery "pod" from which providers can build-out broadband service may be warranted.

A pilot program may be considered that utilizes the pods to reach high growth potential sites like rural shovel-ready certified sites and technology parks and that tests strategies to connect emerging, underserved rural areas. Funding may be an issue, and therefore a pursuit of local funds including public private partnerships should be explored. Ideally, a pilot project could start with 2-3 interested counties pursuing the pod concept for their own local initiatives to see how the model might work.

How and whether the carrier neutral point of delivery concept is deployed will depend greatly on information gathered by the "ROI of the Last Mile" efforts. In addition, a Rural Broadband Center may assist local innovation and collaboration that can be cataloged as best practices to encourage local deployment and adoption of broadband service.
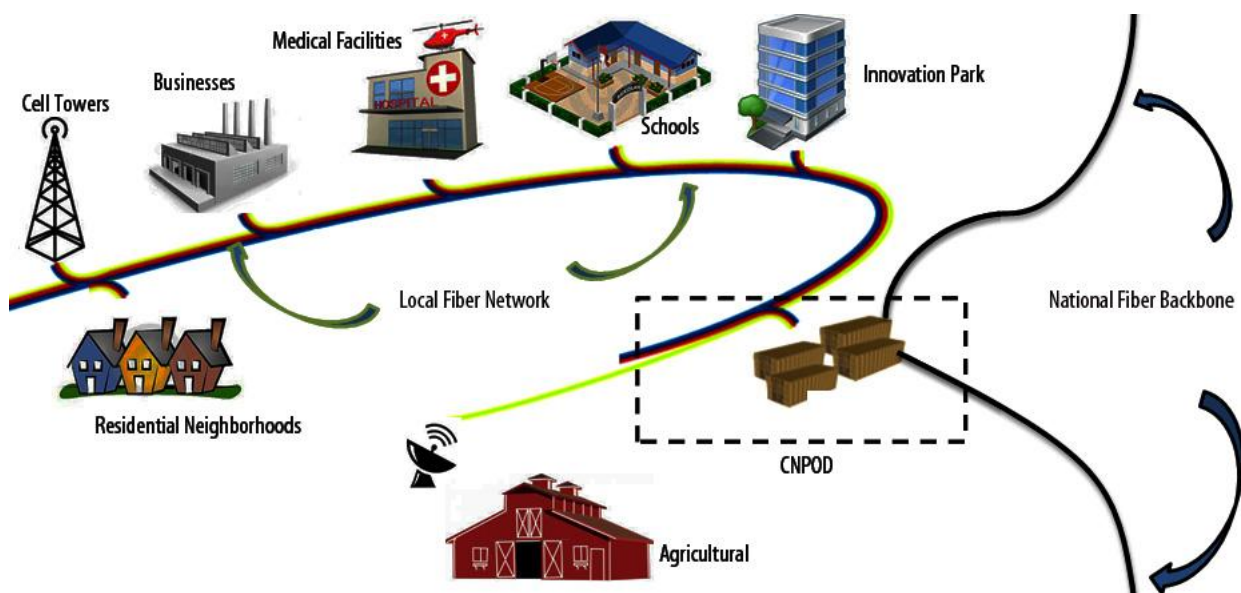
5. Rural Broadband Center

The need for an organization dedicated to rural broadband and related issues has developed as an important part of continuing the discussion for increasing rural broadband. Subsequently, a Rural Broadband Center (RBC) has been proposed to help serve as a neutral party for gathering and disseminating information related to broadband access, adoption, and speeds.

The RBC would serve as a clearinghouse of information. Many communities and providers have different levels of available information and knowledge. Creating a place where that information can be concentrated and obtainable would provide local officials, businesses, and economic development leaders with information they need to analyze their broadband options, including options for expanding and increasing broadband in rural areas. This information empowers those faced with communication needs to be educated consumers and partners with service providers. Additionally, the RBC could identify best practices, foster partnerships between providers and communities, and provide input for those looking for a qualified neutral party. The RBC could also play a role in promoting the importance of broadband across the state of Indiana as well as the impact of broadband adoption on a community and an individual's quality of life.

The RBC would ideally be housed within a state university where it could maintain its neutral positions and provide unbiased advice to providers and communities. Funding for the RBC could be provided from interested stakeholders such as providers, local economic developers, local community officials, and maybe even through state grant dollars. The RBC could also include an advisory group of Rural Broadband Working Group (RBWG) members to provide continuous input and ensure the RBC remains focused on being a neutral resource. The RBWG can provide guidance and information to the RBC to ensure that its direction serves ever-evolving needs and that it has direct access to on the ground information from both consumers and service providers.

The RBWG used a creative problem solving methodology, which included a structured process known as Simplex as well as the application of creative and analytical thinking skills and tools of applied creativity to address the important problem of increasing broadband connectivity in rural Indiana. This creative problem solving methodology stresses collaboration, learning and possibilities.

Over the course of six meetings, the working group used the step by step process (demonstrated below) to navigate through this complex problem. The creative problem solving methods stimulated the team to develop insights, define and formulate key challenges to focus on and to create potential solutions to move forward. The meetings were structured to insure the diverse team continued to make forward progress, achieve alignment on best direction to take within the complex problem and finally, make informed recommendations for implementation.

Appendix B

Challenge Map

Why…?

How might we increase broadband connectivity in rural Indiana?

How might we define other's models for providing broadband infrastructure

How might we ensure ROI for build out and maintenance

How might we ensure investment of build out will be utilized

How might we reduce the 90-120 day wait period?

How might we reduce the cost of build out?

How might we ensure every Hoosier and Hoosier enterprise knows what broadband options they have

How might we reduce cost of investment

How might we improve adoption of broadband in rural Indiana

How might we increase the intensity of demand for broadband

How might we streamline permits, zoning, approval process?

How might we find a common access point in rural areas?

How might we create a single address level database

How might we strengthen the message for ways to find out carrier

How might we create and educational outreach for learning what access will do for customers

How might we match up services with needs in rural Indiana

How might we get partnerships between public and private to build out

How might we connect outliers in rural Indiana

How might we standardize submission for permitting system?

How might we encourage uniform adoption of zoning and permitting?

How might we create community buy-in for streamlining?

How might we provide a template model for approval for municipalities?

How might we create an incentive for streamlining?

How might we create a state checklist for shovel ready?

How might we provide resources to help communities streamline?

PARKING LOT

What's stopping us…?

How might we encourage communities to move from "revenue stream" thought process to "how can we help"?

How might we encourage econ. dev. to look at providers not as barriers but as the companies they are trying to lure?

How might we leverage external organizations to educate the community?

= Green were selected as Key Challenges to Move Forward

= Outlined challenges were added during May 15th Meeting

GettoGroup
Innovation | Collaboration | Acceleration

Rural IN Broadband Working Group | May 15, 2014