Leveling the E-Field: Local Development Districts Promote Forward-Thinking Investments in Appalachia's Broadband Communications

Until recent decades, the Appalachian counties covering the 13-state mountainous region stretching from the southern tier of New York to the northern reaches of Mississippi were often isolated and cut off from the rest of the nation due to an antiquated, unsafe and deficient roadway system. With the leadership of the Appalachian Regional Commission (ARC) – a unique federal, state and local partnership – the vast majority of the region's 410 counties have become increasingly connected to the nation and the world through a modern and safe 3,090 mile interstate development highway system.

As the Internet exploded into the mainstream in the 1990s, the leadership of ARC and its network of 72 multi-county Local Development Districts (LDDs) realized that the region faced the same dangers of falling behind the nation with respect to advanced and affordable telecommunications and broadband services. As recently as 2002, only 59 percent of the Appalachian region had at least one high-speed Internet provider compared to 88 percent for the rest of the nation.[1]

Similar to the challenges with developing a state-of-the-art transportation system, Appalachian leaders knew they had to overcome rugged terrain and technological barriers, low-population density, smaller economic markets for private providers and a shortage of technology training entities.

To combat these and other challenges, many LDDs across the region either assumed the leadership mantel or became involved in strategic partnerships with governmental, business, healthcare, education, utility and other industries to ensure Appalachia citizens and businesses have the access, applications and technical proficiency necessary to leverage the advantages of modern broadband services.

Building on the four pillars of ARC's telecommunications initiative of access and infrastructure, education and training, e-commerce, and technology-sector job creation, LDDs in various states have provided invaluable organizational leadership and technical assistance for their local govern-

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1 Oden, Michael and Sharon Strover, *2004 Update: Links to the Future*, Appalachian Regional Commission, June 2004

ments and communities. These activities range from actually deploying fiber optic cables and wireless antennas to hosting educational workshops for entrepreneurs and local officials to conducting comprehensive inventories of regional telecommunications infrastructure.

Southwest Virginia: Coalfields, Tobacco Country and High-Tech Parks

In southwest Virginia, the deployment of a world-class broadband backbone by two ARC LDDs has yielded results as new industries are replacing those tied to the declining economic sectors of coal and tobacco. The **Cumberland Plateau Planning District Commission** (PDC) and the **Lenowisco PDC**, with significant financial assistance from the U.S. Economic Development Administration (EDA) and Virginia Tobacco Commission (VTC) since 2004, have developed regional broadband systems that form the backbone of two high-speed telecommunications networks.

Southwest Virginia's rural broadband program is "a renaissance of hope, especially for young people. They no longer have to move away from home in search of job opportunities."

- Andrew Chafin, CEO of the Cumberland Plateau Planning District Commission

Within the four-county region served by Cumberland Plateau, the PDC's efforts have already helped locate two computer software technology powerhouses. According to PDC CEO Andrew Chafin, the region needed to look beyond tobacco and coal into the cyber-business arena for economic growth. "The region lost its tobacco quotas and we had to invest in economic development in other areas. People needed options," said Chafin.

The Cumberland Plateau PDC network serves four counties and includes about 300 miles of cable, while the Lenowisco PDC system serves three counties and has approximately 200 miles of cable. The two networks are interfaced at multiple points.

The investment has certainly paid off. Two new businesses – defense and technology services contractor Northrop Grumman and Canadian computer software giant CGI – have generated an estimated 700 new jobs with salaries averaging $50,000, or about $22,000 more than the prevailing regional average, within the Cumberland Plateau region.

Overall, the Lenowisco PDC can point to over 1,200 new jobs created and served by its system. That has meant about $55 million in new private investments and about $35 million annually in new payroll. Cumberland Plateau reports 1,100 new jobs, $60 million in private investment and $40 million in new payroll.

Chafin says the program is "a renaissance of hope, especially for young people. They no longer have to move away from home in search of job opportunities." Network users also benefit from the PDC investment because the PDC can provide better broadband services at lower rates than open market competitors within these highly rural regions.

James O'Neill, corporate vice president and president of Northrop Grumman's IT sector, sees the Cumberland Plateau region as an excellent investment opportunity for the expansion of his company. "This new facility is part of our overall plan to make Virginia Northrop Grumman's East Coast technology hub," says O'Neill. "We intend to grow our business in this region, particularly as we pursue other IT managed services business."[2]

Cumberland Plateau is now in the final phase of the three-part project to complete the broadband network. The four-county high-speed Internet loop is set for completion in the spring of 2008. And the volume of calls Chafin's office receives regarding the timeline for service extension into communities confirms the need for increased Internet access.

Incorporating Broadband Technology into Economic Development Strategies

The **Northwest Pennsylvania Regional Planning and Development Commission**, an LDD serving eight counties, looks at broadband technology as one of many fundamental building blocks for a sustainable regional economy, not simply an immediate cure-all for overcoming persistent distress and more recent economic dislocations and plant closings.

The strategic and sustained investments in broadband networks and capacity must be tied to a broader set of economic development strategies within a region. These involve training businesses and entrepreneurs about the potential usages and benefits, making government services and information more readily accessible to citizens, and building the workforce skills necessary to attract and maintain technology-related jobs.

2 "Northrop Grumman Breaks Ground at New High-Tech Facility in Russell County, VA," Northrop Grumman, October 27, 2006, it.northropgrumman.com

What is an LDD?

Local development districts are multi-jurisdictional planning and economic development organizations that provide administrative, professional and technical assistance to local governments and citizens throughout Appalachia.

LDDs have accomplished a range of tasks that benefit their regions:

- Between 1990 and 2005, LDDs administered almost 7,700 grants and projects totaling more than $5.5 billion in pass-through and programmatic funds
- LDDs' combined business development loan portfolio invested more than $368 million in gap financing for businesses and entrepreneurs from 1995 to 2005
- LDDs made more than 2,550 business loans and leveraged an additional $1.1 billion from the private sector in underserved regions and for companies and entrepreneurs struggling to secure financing
- Almost 60,000 jobs have been created or retained, and 96,000 workforce clients were prepared to contribute to the region's economy, as a result of LDD programs from the mid 1990s to 2004
- During the same time period, 2.3 million seniors benefited from aging programs funded at $425 million and administered by LDDs in parts of the region
- Since their inception, LDDs have helped thousands of citizens and hundreds of businesses recover from natural disasters across the region

Meeting Demand in Rural Pennsylvania

Pennsylvania Governor Edward Rendell revolutionized the state's approach to broadband when he signed Act 183 and created the Bona Fide Retail Request (BFRR) program.

The program "allows communities to aggregate potential broadband customers and offer that aggregated demand to the telephone companies. The BFRR program provides that if a community is able to collect a certain number of petitions the phone company is then required to install DSL service within 365 days. The number of petitions required is a total of fifty or twenty-five percent of the residential customers within the community, whichever is less."

Presently, the Northwest Commission is working with over 60 communities in its region on BFRR efforts.

Source: www.nwcommission.org/broadband.html

Northwest Commission Executive Director Denise McCloskey reports that the Commission "offers telecommunications planning and broadband deployment assistance to local counties and communities." McCloskey adds, "Our goals include expanding broadband availability, enhancing competition and reducing the number of areas without affordable service."

To achieve the goal of 100 percent broadband availability throughout the region, the Northwest Commission has established a process to evaluate and respond to the technology needs of the region through programs aimed at educating consumers, businesses and community leaders about technology.

McCloskey says, "The Commission aggregates demand for data, video and voice services in underserved communities and promotes local, state and federal programs for expansion of existing service. We also strive to develop affordable and comprehensive access to technologies that will drive sustainable economic development, business attraction and retention, and innovative community development."

The Northwest Commission's Technology Advisory Group (TAG) oversees their broadband efforts. The volunteer group consists of elected officials, private businesses and representatives from education, planning, economic development and utilities. Meeting on a bi-monthly basis, the TAG reviews the region's broadband and technology objectives and has overseen the installation of broadband technology in all of the counties of the region.

The Commission is also engaged in the physical development and expansion of the fiber optic cable and wireless infrastructure throughout the region, an investment they estimate will cost $820 million to extend the broadband network to 100 percent of the homes, businesses and public institutions. While the cost projections seem enormous, potential financial gains for the region are staggering. The Commission estimates that the revenue generated from this telecommunications infrastructure, coupled with human innovation, could reach $3.2 billion over a 30-year period.

Because few businesses thrive today without using the Internet to reach out to new clients and maintain relationships with current ones, the Commission frames every broadband initiative around the question, "What do we need to support industry 10 – 15 years from now?"
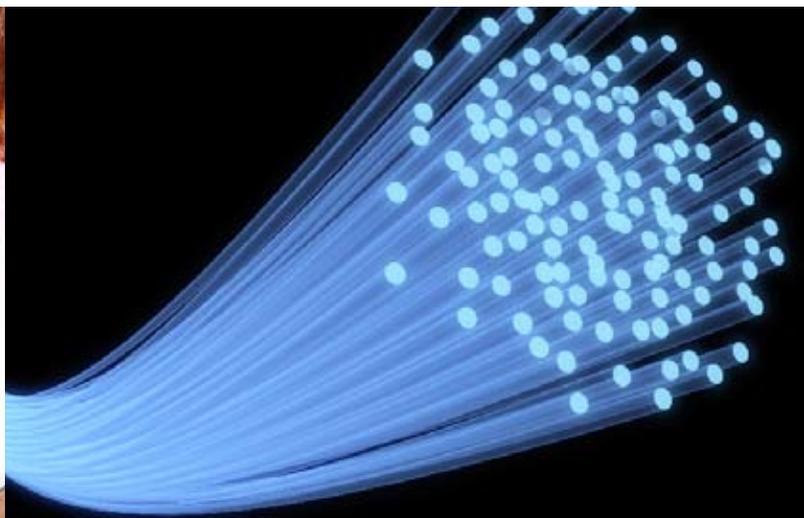
Businesses are not the only ones concerned about broadband access in the region. New and potential residents often want homes wired for broadband. The Northwest Commission recognizes these demands and has undertaken a multi-phased campaign to educate consumers, businesses and community leaders about the benefits of broadband technology. The Commission feels this education is crucial to maximize the investment of time and money. The staff provides training so that citizens and businesses are knowledgeable about what this technology means and how it can drastically improve daily tasks and business functions.

Planning for the Future

The Appalachian region can use broadband to bridge the digital divide, educate their population, and compete in today's workforce. Nationally, job opportunities generated from broadband communications nationwide grew from 4.4 million in 1996 to 6.8 million in 2000, a 53 percent increase. In Appalachia, job growth attributed to telecommunications technology also increased, from 200,569 in 1996 to 291,980 in 2000, a 46 percent increase.[3]

At the request of local businesses seeking to reduce costs, the **North Central Pennsylvania Regional Planning and Development Commission** began offering dial-up Internet service through a toll-free number nearly 15 years ago. Shifting to DSL and, more recently, wireless, North Central is continually looking to the future, installing new fiber and wireless towers to improve access for businesses, residents and visitors to the six-county region.

North Central sees Internet access as central to the region's economic strategy. "Without good broadband Internet connections, I don't think there is going to be any economic development in any region, especially a rural area. There's just no way that people can stay in business and communicate with everyone they need to with anything other than a high speed connection," says Terri Klein, North Central's director of multimedia and telecommunications systems.

As part of their comprehensive economic development strategies, ARC LDDs enhance economic development and quality of life in their regions. With such significant economic growth stimulated by telecommunications, broadband fits well into the work that LDDs complete.

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3 Oden, Michael, and Strover, Sharon, *Links to the Future: The Role of information and Telecommunications Technology in Appalachian Economic Development*, University of Texas, June 2002

Throughout Appalachia, LDDs are working vigorously to promote and advance broadband technology

• In Allegany County, Maryland, the **Tri-County Council for Western Maryland** and ARC joined forces to create AllCoNet II, which provides wireless telecommunications service to over 90 percent of the business market in Allegany County. AllCoNet II utilizes wireless technology and licensed carrier networks to provide broadband with minimal financial resources and rapid deployment capability. This infrastructure allows local ISPs to market high speed, wide bandwidth to areas in the county that had no prior coverage, now instantly connecting citizens to services and information provided by local and state governments. By aggregating this demand, the project also attracted a tier one provider to locate a point of presence in the county, cutting telecommunications costs to local companies by enormous amounts. AllCoNet II saves customers across the county an estimated $70,000 a month.

• The **Southern Tier West Regional Planning and Development Board** (NY) is currently involved in a broadband project that will provide improved Internet access across its entire three-county region. The planning board has partnered with various providers within their three county area to bury 150 miles of fiber optic cable to complete a loop that would connect with eastern and central New York State. Southern Tier West has been instrumental in identifying $2.8 million in grants to complete this project. The publicly funded broadband loop will reduce service costs for the entire region and will create redundant systems to prevent gaps in coverage.

• The **Central Shenandoah PDC** (VA) has prioritized planning and enhancement of telecommunications infrastructure throughout its region and supported the plans of a local university and member governments. One impact is already coming to light: based on the region's existing broadband access and infrastructure, the not-for-profit research firm SRI International broke ground in December 2007 for its new East Coast research and technology branch at Rockingham County's Research and Technology Park. Initially, SRI will employ a small number of people, but the organization expects to develop new technologies and innovations, then market them commercially through spin-off for-profit ventures, as it has in its other locations. The economic impact of SRI and its future developments could affect not only Rockingham County, but the entire Shenandoah Valley region.

• Recognizing the economic impact of high speed Internet connections, **Lake Cumberland Area Development District** (KY) is working to ensure that broadband service will be available to all residents by 2010. This will be a major investment, since in one county alone, the estimated cost of developing the broadband infrastructure is $8.6 million, but broadband along with other infrastructure will build a stronger foundation for future economic and cultural development.

• As a first step, **Southern Tier Central Regional Planning and Development Board** (STC) conducted a telecommunications study to inventory current service and infrastructure in its three-county region in south central New York. Based on that study, STC has created GIS maps of fiber optic cabling, wireless towers, and provider territories and services and developed site profiles for 10 economic focus sites in each county. Fiber optic cabling has already been installed throughout much of the region, but STC identified disparities between the population centers and rural areas. In 2007, STC staff testified before a committee of the New York State Legislature on the significance of expanding broadband in rural areas.

• The **New River Valley PDC** (VA) is leading the initiative to bring advanced and affordable broadband for everyone in its four-county region. The PDC has designed and deployed a public regional fiber optic network consisting of inter-county, intra-county, and local access points that greatly minimizes gaps in coverage.

• In Central Pennsylvania, **SEDA-COG** has secured various grants for broadband technology, allocating small fractions of those grants to help area small businesses invest in broadband technology. They are also using grants to help local governments build and maintain websites and on-line databases. SEDA-COG's GIS service maps, forms and assistance have allowed local citizens and rural businesses to take advantage of Pennsylvania's Act 183 (*see sidebar on page 3*) and secure commitments from Verizon to install a broadband network in their region.

• **Northeastern Pennsylvania Alliance** (NEPA), in cooperation with six other Pennsylvania LDDs, developed the eCOMMonwealth Project for Rural Broadband Access to research the existing state of broadband in the Commonwealth, examine connectivity technologies, and create models to increase access to broadband. NEPA is currently using this extensive study to determine affordable ways of extending broadband technology to unserviced businesses and residences, in order to enhance economic development activities and assist in investment and decisionmaking.

Development District Association of Appalachia

The Development District Association of Appalachia (DDAA) is a membership organization of the 72 local development districts (LDDs) serving the 410 counties of the Appalachian Region. The DDAA works to strengthen LDDs and their member governments and to provide leadership to support the Appalachian Regional Commission's (ARC's) federal-state-local partnership.

Learn more at www.ddaa-ldd.org.

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