Arkansas State Broadband Manager's Report

Period Ending December 31, 2013

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Executive Summary

Background
Act 1168 of 2013 designates the director of the Arkansas Department of Information Systems to serve as the state broadband manager to promote, develop, and coordinate broadband expansion and appropriate broadband infrastructure for all areas of the state. Requirements in the legislation are for the state broadband manager to submit a report on a semi-annual basis to the Arkansas Governor's Office, Arkansas Legislative Council, and Joint Committee on Advanced Communications and Information Technology of the activities and operations of the state broadband manager for the preceding six months. The report is to be submitted on or before January 1 and July 1 of each year. The state broadband manager will also work with an existing strategic plan for broadband created by Connect Arkansas to formulate, update and maintain a state broadband plan.

What is Broadband?
Definitions:
- Arkansas's Definition (Act 947 of 2009)-"Broadband" means any service used to provide Internet access at a minimum speed that is the greater of:
  (A) Seven hundred sixty-eight kilobites per second (768 kbps) in at least one (1) direction; or
  (B) The minimum speed for broadband as defined by regulations of the Federal Communications Commission as of January 1, 2009, or as of a later date if adopted by rule of the Arkansas Broadband Advisory Council
- FCC's Definition - (Federal Communications Commission) categorizes an Internet service as "broadband" if it transmits at a speed of at least 4 megabits/second (Mbps) for downloading and at least 1 Mbps for uploading
- General Definition: High-speed Internet access that is always on (vs. dial-up)
  Broadband speed requirements vary for personal use versus use by institutions

What are the Types of Broadband?
- Digital Subscriber Line (DSL)
- Cable Modem
- Fiber
- Wireless (Wi-Fi, Mobile, and Fixed Wireless)
- Satellite

Why is Broadband Important?
Broadband is fast becoming of primary importance for
- Citizens
- Education
- Public safety
- Health care
- Economic development
- Government
- Business
- Environmental management

All of which are significant enablers to economic growth, delivery of services and quality of life.

How Important Is Broadband Speed?

The FCC definition of broadband speed changes as technologies continue to evolve. Depending on the application, the connection speed will often determine whether it is possible to run the application effectively and how quickly the information can be accessed. The table below shows how much speed is needed to run common applications. Performance issues occur when the service and speed cannot handle the application.

Applications that service different sectors	Speed requirement
Email, Web Browsing, VOIP	768K-1.5 Mbps
Telecommuting, Streaming Music and Video, Remote Surveillance	1.5-3 Mbps
File Sharing, Internet Protocol Television	3-6 Mbps
On-Demand Video, Gaming	6-10 Mbps
Telemedicine, Remote Education, IPTV High Definition	10-25 Mbps
HD Video Surveillance	25-50 Mbps
Video Conferencing, Remote Super Computing	50-100 Mbps
Real-Time Data Collection, Real-Time Medical Image Consultation	>100 Mbps

What are the Areas of Focus for Arkansas?

- **Availability**
  Broadband is available if it is accessible to accomplish all necessary goals regardless of the nature of those goals (business or educational, economic or legislatively mandated). When broadband connectivity is available, it is irrelevant what technology is used to deliver it.

- **Affordability**
  Broadband is affordable if it is both affordable to the consumer to purchase and for the provider to offer.

- **Adequacy**
  Broadband is considered adequate if it provides enough bandwidth to meet the personal, business, educational, and economic development needs of each constituency and is capable of expansion to meet future needs.

How Does Arkansas Compare?

A 2012 TechNet State-by-State Broadband Index ranked Arkansas 50th for broadband utilization. Data to develop the state rankings was based upon three categories: Broadband adoption, network speeds, and economic structure. Also factored into the rankings is a state's approaches to creating an environment for broadband to contribute to its development such as executive and legislative leadership, state funding, stakeholder cooperation (public, private, and non-profit), and planning by states to explore gaps in broadband infrastructure as well as other considerations.

Top 15 States State-by-State Broadband Index	
1	Washington
2	Massachusetts
3	Delaware
4	Maryland
5	California
6	New Jersey
7	Vermont
8	Virginia
9	Utah
10	New York
11	Rhode Island
12	Pennsylvania
13	Oregon
14	New Hampshire
15	Texas
50	Arkansas

Source: TechNet's 2012 State Broadband Index, December 2012
http://www.technet.org/wp-content/uploads/2012/12/TechNet_StateBroadband3a.pdf

The additional rankings for Arkansas below were compiled from data on the National Broadband Map. This map analyzes broadband availability across the United States based on speed, technology, number of providers, and age demographic. This data is created and maintained by the National Telecommunications and Information Administration (NTIA) in collaboration with the Federal Communications Commission (FCC), and in partnership with the 50 states, five territories, and the District of Columbia.

- **Speed: Download Greater Than 3 Mbps Upload Greater Than 0.768 Mbps**
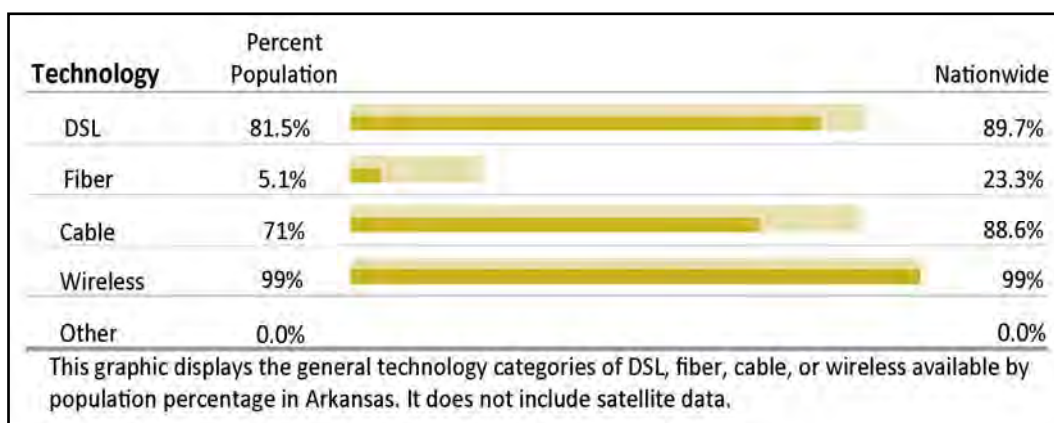
    #1 New Jersey

    #41 Arkansas

    #56 American Samoa

- **Technology: (DSL, Fiber, Cable, Wireless, Other)**

    #1 New Jersey

    #40 Arkansas

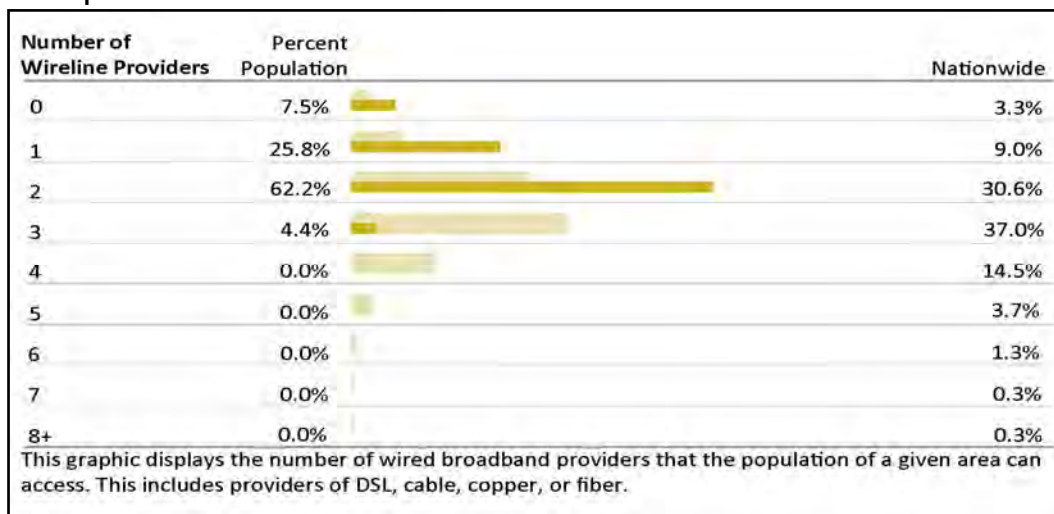   #56 Commonwealth of the Northern Mariana Islands

Technology	Percent Population		Nationwide
DSL	81.5%		89.7%
Fiber	5.1%		23.3%
Cable	71%		88.6%
Wireless	99%		99%
Other	0.0%		0.0%

This graphic displays the general technology categories of DSL, fiber, cable, or wireless available by population percentage in Arkansas. It does not include satellite data.

- **Providers: # of Wireline Providers Greater Than 3**

    #1 Rhode Island

    #50 Arkansas

    #56 Commonwealth of the Northern Mariana Islands

Over 57 percent of the nation's population has access to three or more wireline broadband providers compared to 4.4 percent of Arkansans.

Number of Wireline Providers	Percent Population		Nationwide
0	7.5%		3.3%
1	25.8%		9.0%
2	62.2%		30.6%
3	4.4%		37.0%
4	0.0%		14.5%
5	0.0%		3.7%
6	0.0%		1.3%
7	0.0%		0.3%
8+	0.0%		0.3%

This graphic displays the number of wired broadband providers that the population of a given area can access. This includes providers of DSL, cable, copper, or fiber.

- **Providers: # of Wireless Providers Greater Than 3**
    - #1 District of Columbia
    - **#44 Arkansas**
    - #56 Commonwealth of the Northern Mariana Islands

Over 89 percent of the nation's population has access to three or more wireless broadband providers compared to 64.4 percent of Arkansans.
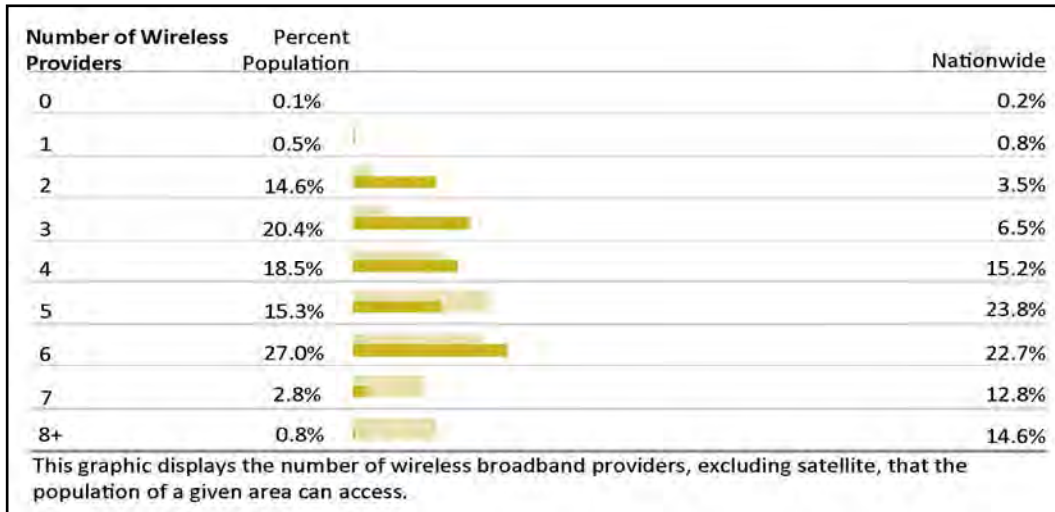
Number of Wireless Providers	Percent Population		Nationwide
0	0.1%		0.2%
1	0.5%		0.8%
2	14.6%		3.5%
3	20.4%		6.5%
4	18.5%		15.2%
5	15.3%		23.8%
6	27.0%		22.7%
7	2.8%		12.8%
8+	0.8%		14.6%

This graphic displays the number of wireless broadband providers, excluding satellite, that the population of a given area can access.

- **Age: Under 5 Demographic**
    - #1 American Samoa
    - **#21 Arkansas**
    - #56 Vermont

- **Age: 5-19 Demographic**
    - #1 American Samoa
    - **#21 Arkansas**
    - #56 District of Columbia

- **Age: 20-34 Demographic**
    - #1 Commonwealth of the Northern Mariana Islands
    - **#22 Arkansas**
    - #56 Florida

- **Age: 35-59 Demographic**
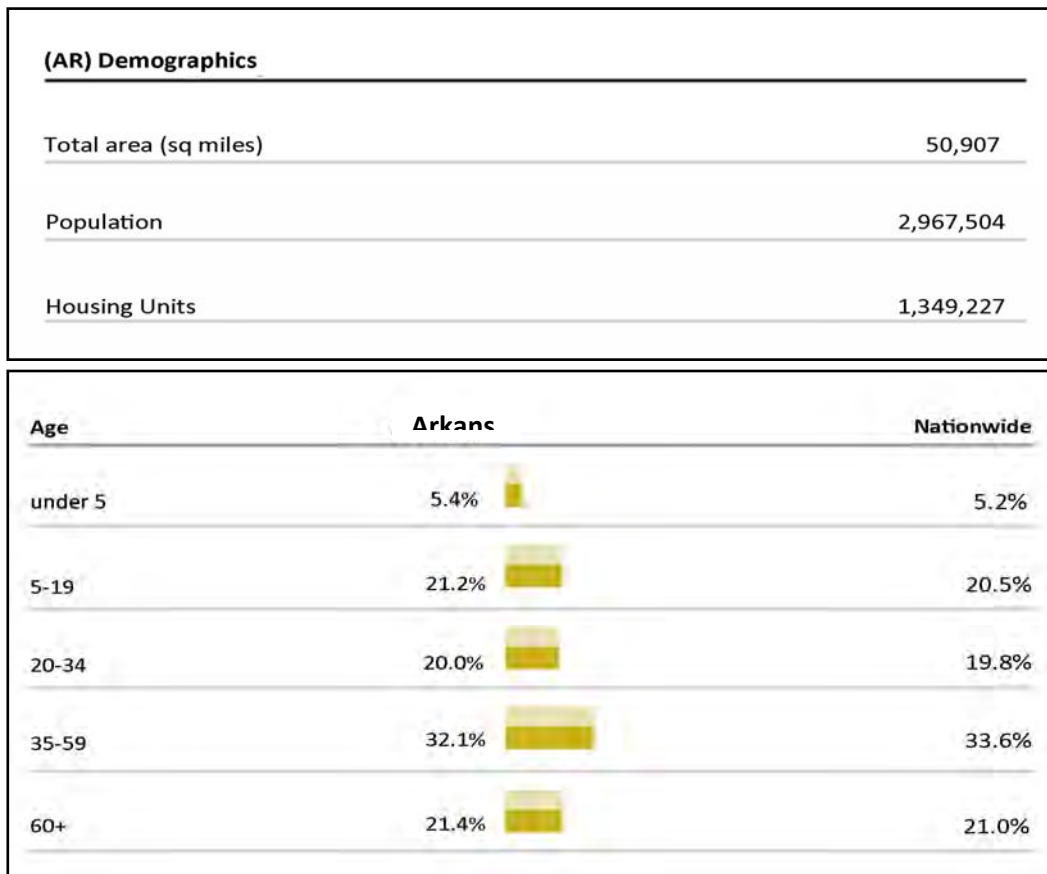   - #1 District of Columbia
    - **#42 Arkansas**
    - #56 American Samoa

- **Age: 60+ Demographic**
  - #1 Florida
  - **#28 Arkansas**
  - #56 Commonwealth of the Northern Mariana Islands

(AR) Demographics

Total area (sq miles)	50,907
Population	2,967,504
Housing Units	1,349,227

Age	Arkans	Nationwide
under 5	5.4%	5.2%
5-19	21.2%	20.5%
20-34	20.0%	19.8%
35-59	32.1%	33.6%
60+	21.4%	21.0%

Age demographics are for a population living in a given area. The National Broadband Map uses demographic statistics from the U.S. Census Bureau, as well as GeoLytics, a private company that provides population and demographic estimates at the block level.

Source: National Broadband Map as of December 31, 2013
http://www.broadbandmap.gov/summarize/state/arkansas

The median age for Arkansas is 37.4 years.

Under 5-years		5-19 years		20-34 years		35-59 years		65 years and over	
Number	%	Number	%	Number	%	Number	%	Number	%
160,245	5.4	629,110	21.2	593,500	20.0	952,568	32.1	635,045	21.4

Source: U.S. Census as of 2010
http://www.census.gov/prod/cen2010/briefs/c2010br-03.pdf

Broadband Availability
Arkansas Mobile-Wireless & Satellite
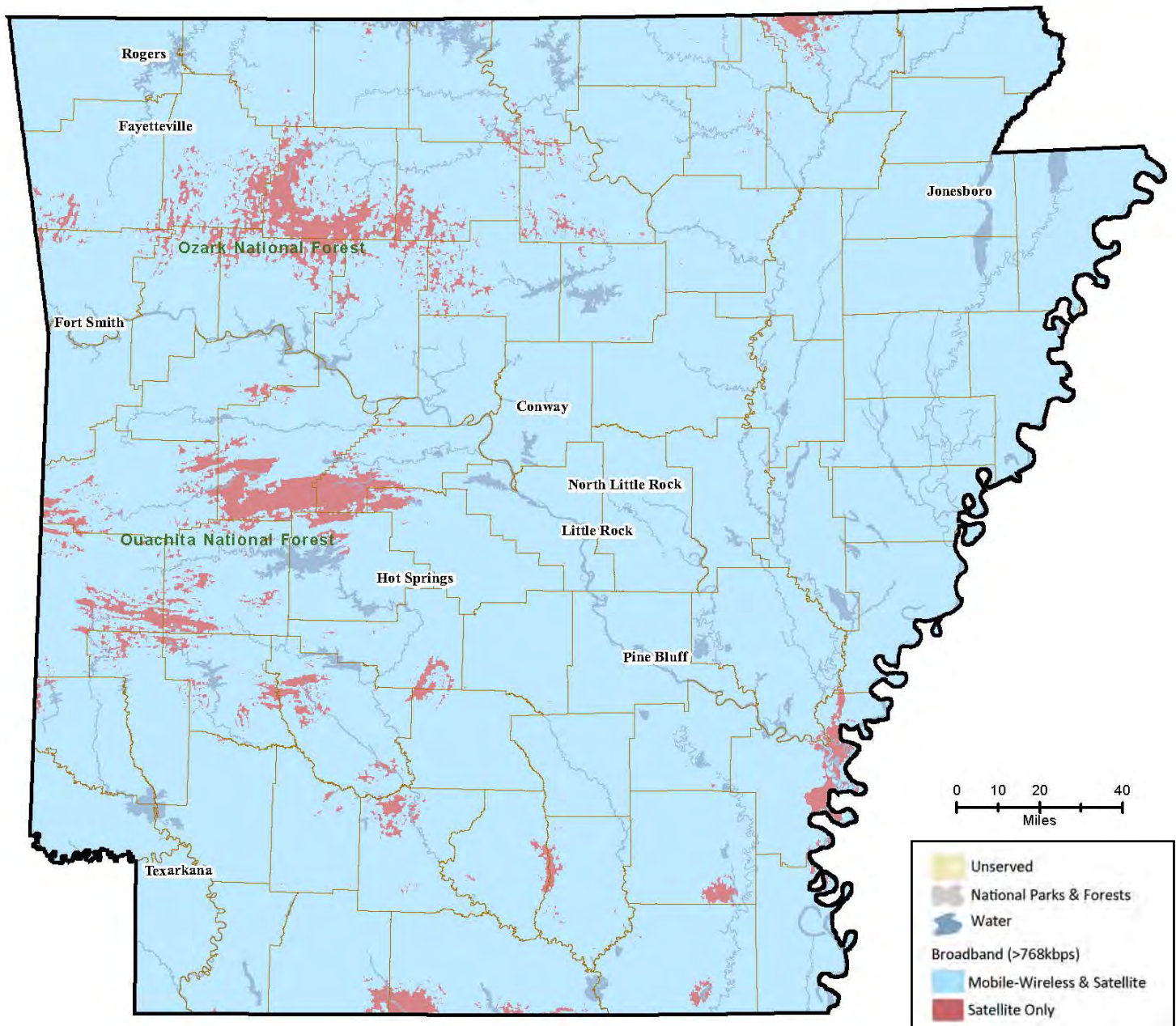
Connect Arkansas
A Project of The Arkansas Capital Corporation Group

Legend:
- Unserved
- National Parks & Forests
- Water

Broadband (>768kbps)
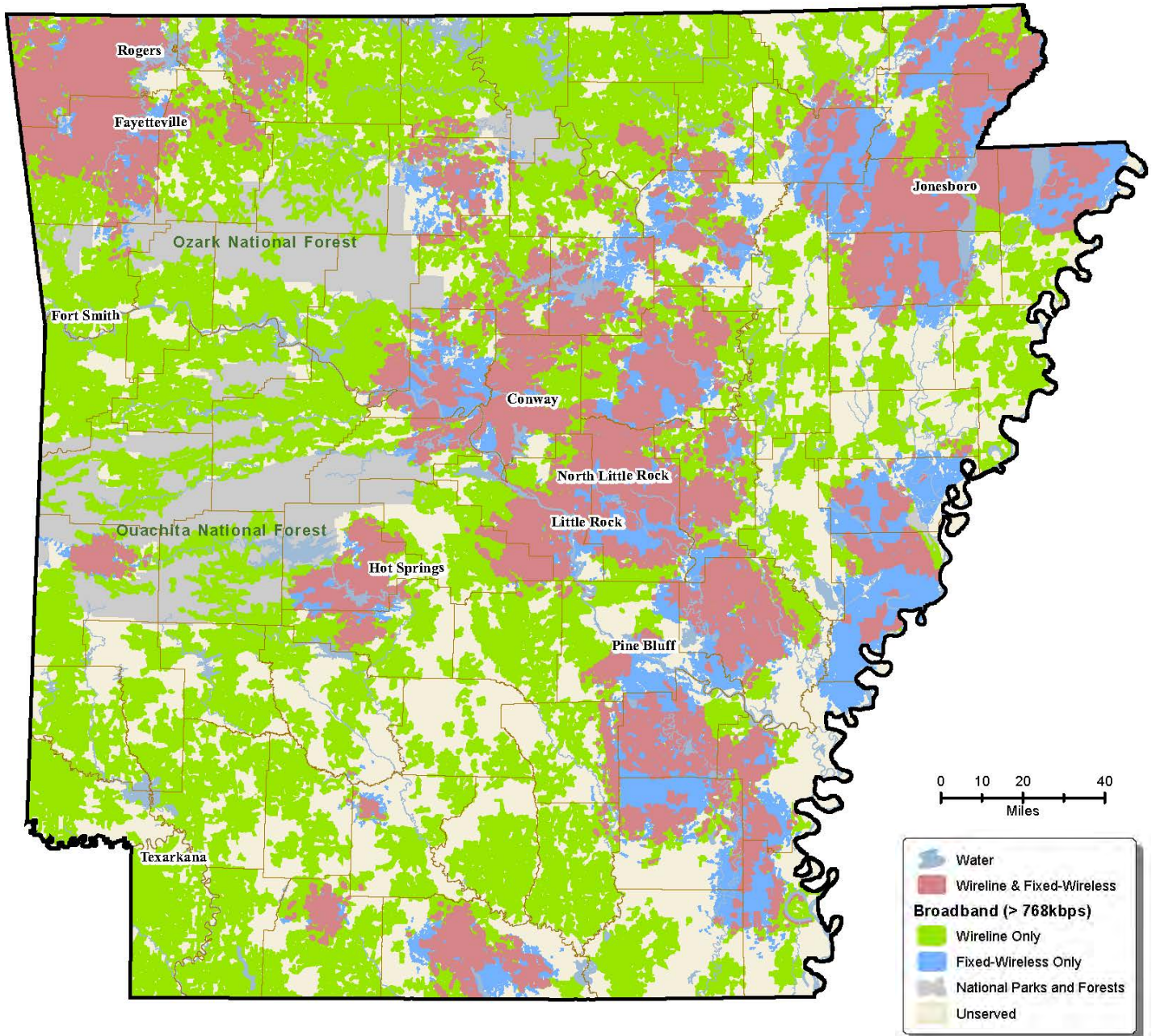- Mobile-Wireless & Satellite
- Satellite Only

Source: Connect Arkansas, Arkansas broadband providers, GeoStor, November 7, 2013.
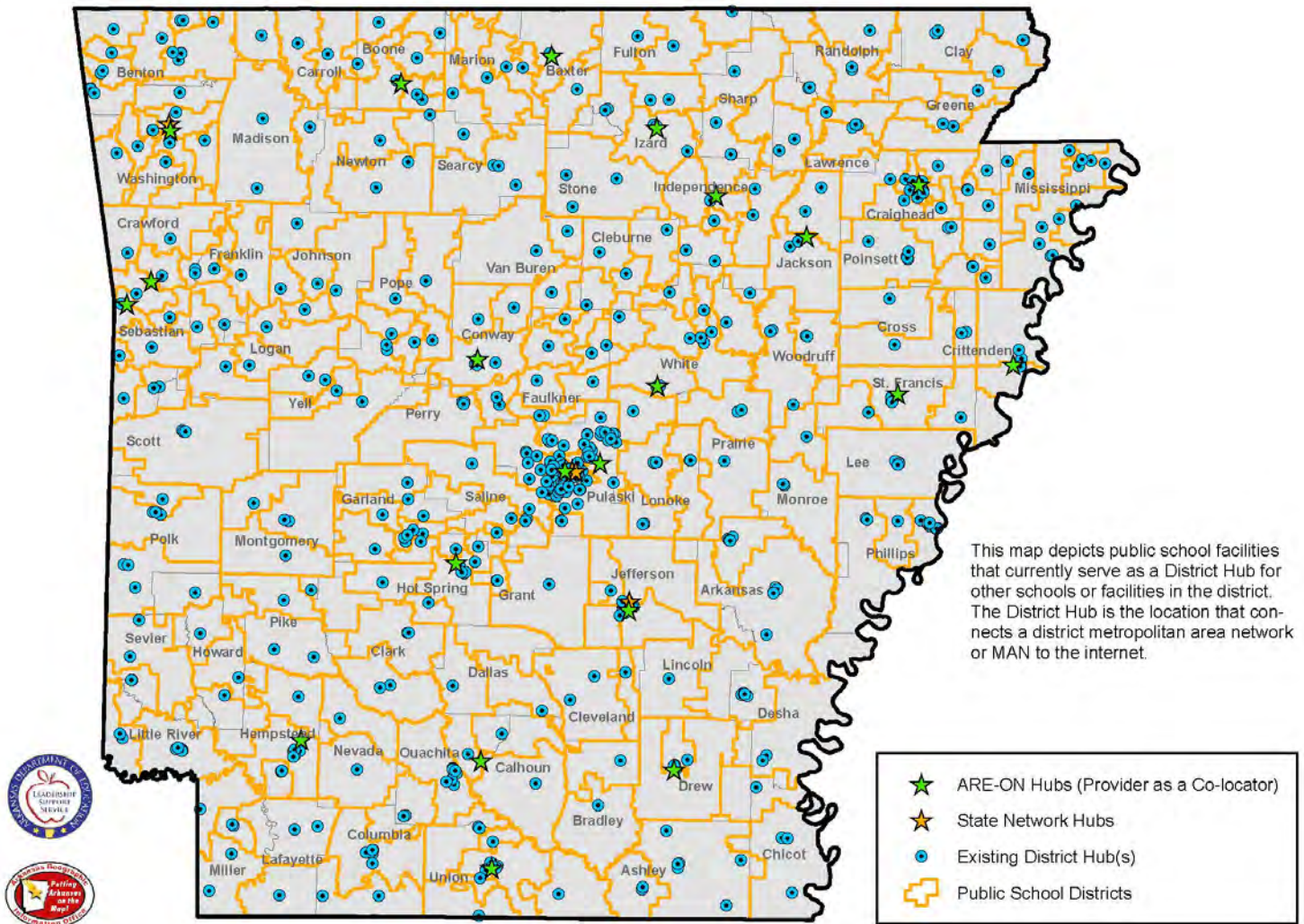To search for coverage by address on an interactive map or to conduct a speed test to check performance, visit the Connect Arkansas website, http://www.connect-arkansas.org/.
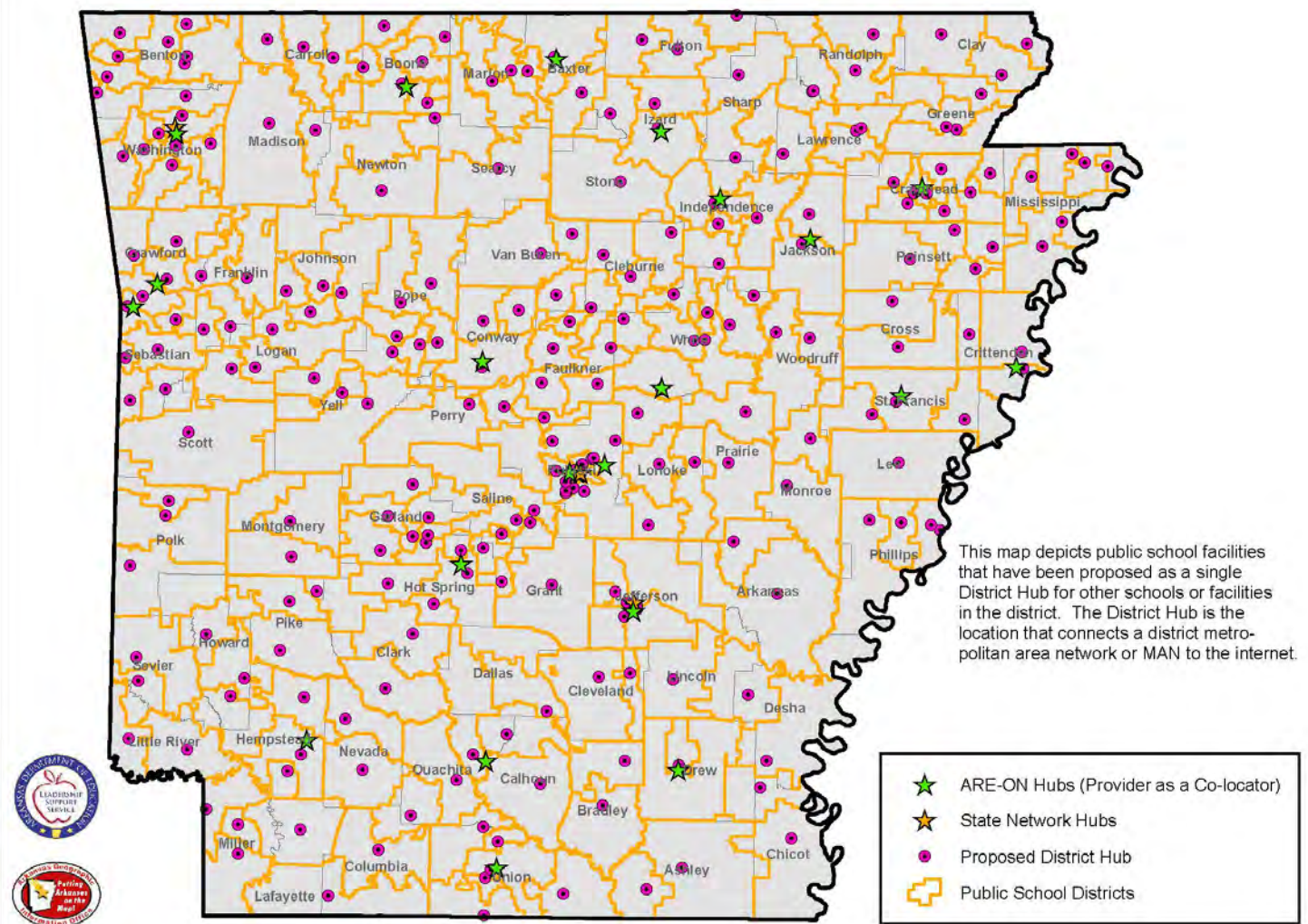
Broadband Availability
Arkansas Wireline & Fixed-Wireless

Water

Wireline & Fixed-Wireless

Broadband (> 768kbps)

Wireline Only

Fixed-Wireless Only

National Parks and Forests

Unserved

Source: Connect Arkansas, Arkansas broadband providers, GeoStor, November 7, 2013.
To search for coverage by address on an interactive map or to conduct a speed test to check performance, visit the Connect Arkansas website, http://www.connect-arkansas.org/.

FASTER Arkansas Current Broadband Hub Analysis

Source: Arkansas Geographic Information Office (AGIO), December 27, 2013.
http://agio.maps.arcgis.com/apps/OnePane/basicviewer/index.html?appid=5743d73a30b84430a633a
d3e11facb55

FASTER Arkansas Proposed Broadband Hub Analysis

This map depicts public school facilities that have been proposed as a single District Hub for other schools or facilities in the district. The District Hub is the location that connects a district metropolitan area network or MAN to the internet.

Legend:
- ★ ARE-ON Hubs (Provider as a Co-locator)
- ☆ State Network Hubs
- ● Proposed District Hub
- ▱ Public School Districts

Source: Arkansas Geographic Information Office (AGIO), December 27, 2013.
http://agio.maps.arcgis.com/apps/OnePane/basicviewer/index.html?appid=5743d73a30b84430a63
3ad3e11facb55

Public Access Points in Academic and Public Library Locations

Libraries are often a valuable resource for online connectivity utilized by job seekers, retired individuals, and Internet users who lack home Internet access. Data from Connect Arkansas indicates 297 public access points at city and county libraries as well as libraries on university or college campuses.


Numbers indicate the number of public access points in academic and public libraries within each county.
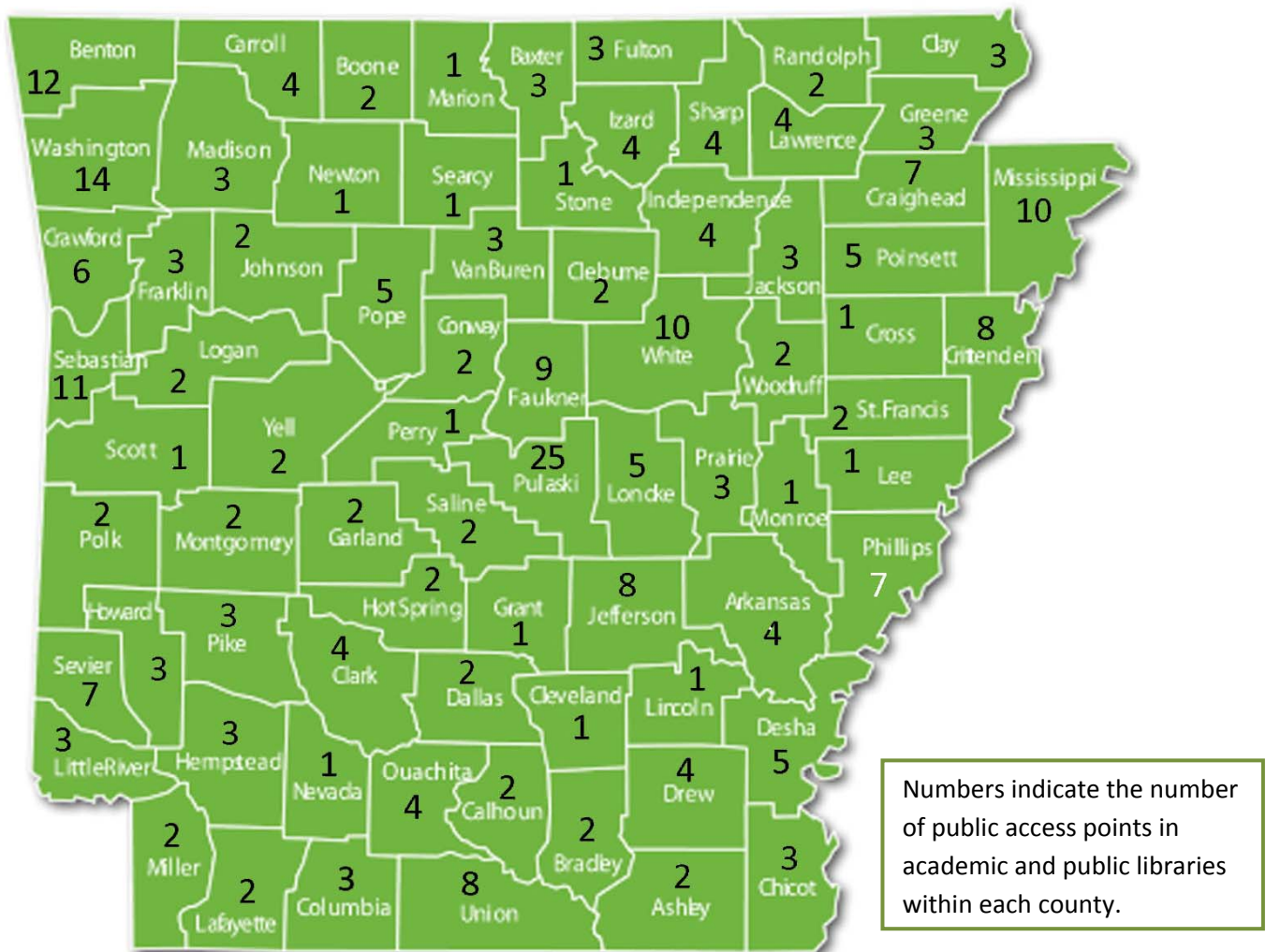
Source: Arkansas State Library and Connect Arkansas, December 27, 2013.
http://www.library.arkansas.gov/Pages/stateMap.aspx

Broadband Adoption

Broadband adoption in Arkansas – Closing the Gap
Source: NTIA – % households with broadband

Year	Arkansas	United States
2007	38	51
2009	51	63.5
2010	52.4	68.3
2011	59.9	69
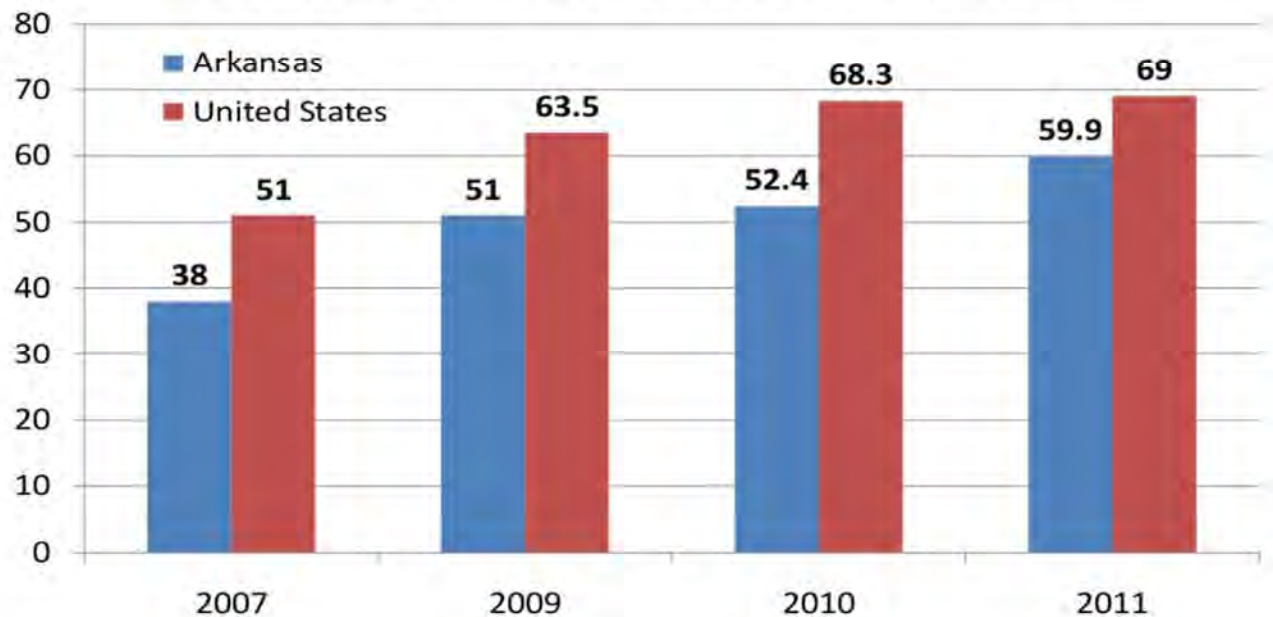
As of NTIA refers to the National Telecommunications and Information Administration

Source: NTIA presentation at Connecting Arkansas Internet Conference, September 26, 2013.

	Arkansas	Nation
Use the Internet	78%	71.7%*
Have broadband in their home	71%	78%**

Source:
Connect Arkansas Broadband Survey, December 2012
http://www.connect-arkansas.org/sites/default/files/executive_summary.pdf

*U.S. Census Bureau: Computer and Internet Use in the United States, May 2013
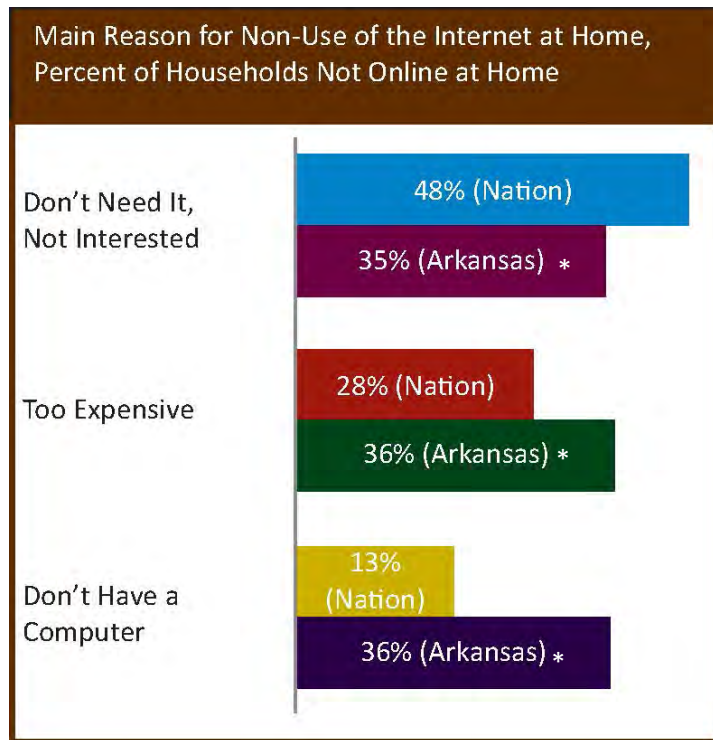http://www.census.gov/prod/2013pubs/p20-569.pdf

**Leichtman Research Group, Inc., third quarter 2013
http://www.leichtmanresearch.com/research/notes09_2013.pdf

What are the Common Barriers for Broadband?

Barriers for the Consumer

Main Reason for Non-Use of the Internet at Home, Percent of Households Not Online at Home

- Don't Need It, Not Interested — 48% (Nation), 35% (Arkansas) *
- Too Expensive — 28% (Nation), 36% (Arkansas) *
- Don't Have a Computer — 13% (Nation), 36% (Arkansas) *

- **Lack of Interest or Need**
  Households whose members have never used the Internet and households without children under 18 living at home were most likely to say they had no interest in or need for such service. Households without school-aged children at home were twice as likely as to cite this reason.
- **Too Expensive**
  The percentage of households reporting that home Internet service was "too expensive" may reflect some consumers' concern about their personal financial circumstances during a period of slow economic recovery.
- **Don't Have a Computer**
  A majority of households citing this reason for not using the Internet in their homes earned less than $25,000 annually.
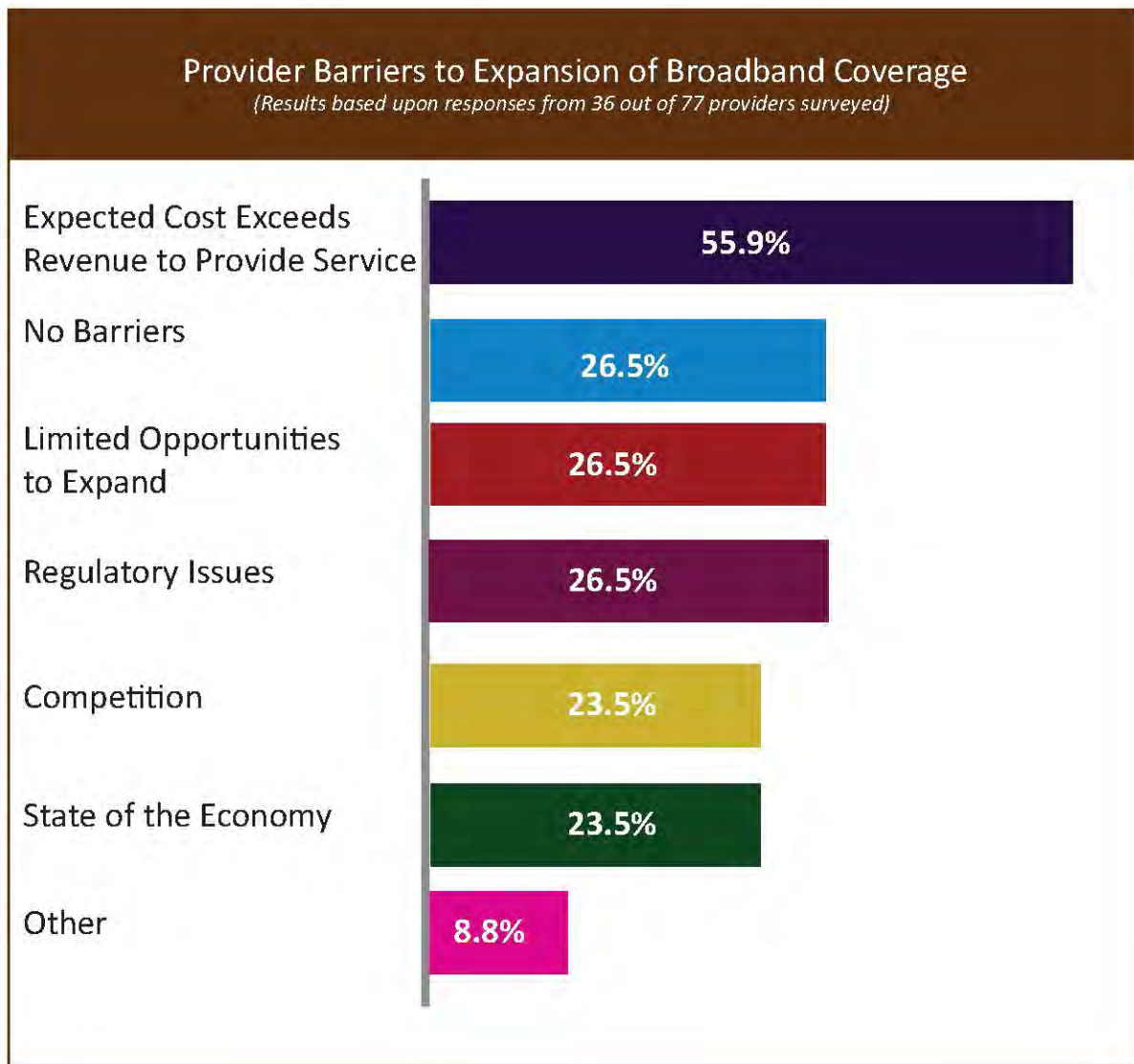
Source:
Exploring the Digital Nation: America's Emerging Online Experience National Telecommunications and Information Administration (NTIA) and Economics and Statistics Administration U.S. Department of Commerce, June 2013
http://www.ntia.doc.gov/files/ntia/publications/exploring_the_digital_nation_-_americas_emerging_online_experience.pdf

*Connect Arkansas Broadband Survey, December 2012
http://www.connect-arkansas.org/sites/default/files/executive_summary.pdf

Barriers for the Provider

Provider Barriers to Expansion of Broadband Coverage
(Results based upon responses from 36 out of 77 providers surveyed)

Barrier	Percentage
Expected Cost Exceeds Revenue to Provide Service	55.9%
No Barriers	26.5%
Limited Opportunities to Expand	26.5%
Regulatory Issues	26.5%
Competition	23.5%
State of the Economy	23.5%
Other	8.8%

Other Barriers for Providers

Broadband Service Provider	If Other, Please Describe
Cox Communications	Access to poles at reasonable cost, terms and conditions
Yelcot Telephone Company	Electrical co-ops attempting to charge excessive pole-attachment fees (Up to $29.40/pole).
The Computer Works	The only barrier is cash to buy equipment for new areas.
Centurylink	Pole Attachments

Source: Arkansas Telecommunications Provider Survey, December 2013

(See Appendix page 40 for other provider survey data)

Initiatives to Expand and Improve Broadband Capacity and Adoption

Funding made available to Arkansas through the American Recovery and Reinvestment Act (ARRA) was aimed toward investment in projects and initiatives including the expansion of broadband Internet access that laid the groundwork for future economic growth in Arkansas.

Initiatives Funded by the American Recovery and Reinvestment Act (ARRA)			
	Grantee	Total Award	Type
Arkansas	Connect Arkansas	$6,175,366	Broadband Data & Development
	Connect Arkansas Inc.	$3,702,738	Sustainable Adoption
	University Corporation for Advanced Internet Development (UCAID)**	$62,540,162	Infrastructure
	University of Arkansas System (e-Link)	$102,131,393	Infrastructure

Source: Broadband USA: Connecting America's Communities, Grants Awarded Map, December 27, 2013
http://www2.ntia.doc.gov/arkansas
**UCAID is a multi-state award. UCAIC, also known as Internet 2, has provided advanced network services to anchor institutions across the U.S. since 1997.

Act 442 of the Regular Session of the 89th General Assembly

An act to ensure continued broadband expansion in rural areas within the state of Arkansas; to provide 911 emergency service to rural areas within the state; to enhance the 911 emergency system and assist its funding; to declare an emergency; and for other purposes.

Source: Act 442 of the 89th General Assembly

http://www.arkleg.state.ar.us/assembly/2013/2013R/Acts/Act442.pdf

## Act 1280 of the Regular Session of the 89th General Assembly

An act to provide digital learning opportunities in public schools; defining digital learning as a digital technology or Internet-based educational delivery model that does not rely exclusively on compressed interactive video. Beginning in the 2013-2014 school year, all public school districts and public charter schools participating in a pilot program shall provide at least one (1) digital learning course to their students as either a primary or supplementary method of instruction. Beginning in the 2014-2015 school year, all public school districts and public charter schools shall provide at least one (1) digital learning course to their students as either a primary or supplementary method of instruction.

Source: Act 1280 of the 89th General Assembly

http://www.arkleg.state.ar.us/assembly/2013/2013R/Acts/Act1280.pdf

Connect America Fund-Federal Communications Commission

The Connect America Fund aims to connect seven million unserved rural Americans to broadband in six years, and puts the nation on a path to connect all 19 million unserved rural residents by 2020. The Federal Communications Commission launched this unprecedented broadband expansion last year when it reformed and modernized the Universal Service Fund, which connected rural America to the telephone network in the 20th century. In the first phase, about $115 million of public funding will be coupled with tens of millions more in private investment to quickly expand broadband infrastructure to rural communities in every region of the nation.
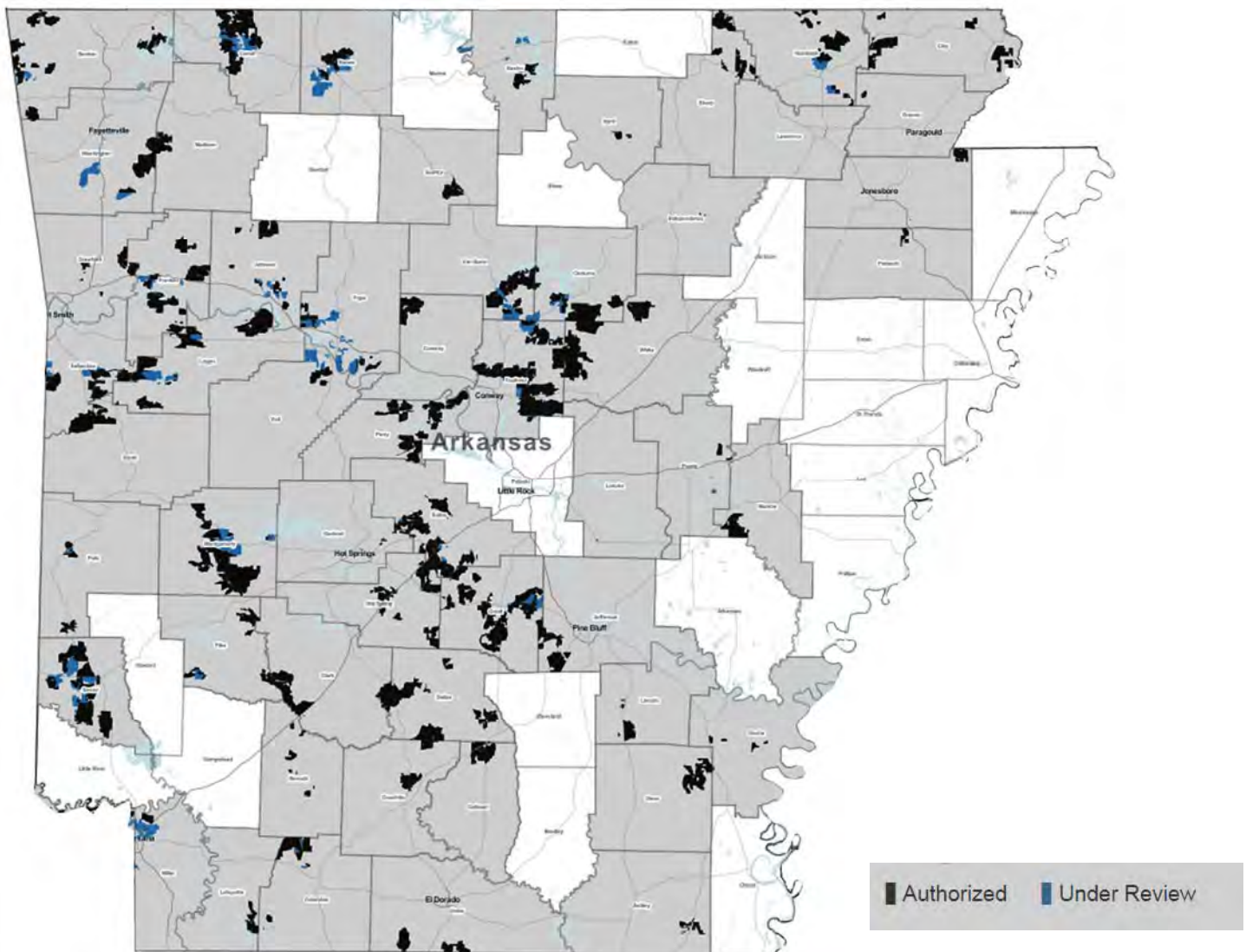
Source: Connect America Fund (CAF) Phase I Round Two, September 4, 2013
http://www.fcc.gov/maps/connect-america-fund-phase-i-round-two

Arkansas Research Educational Optical Network (ARE-ON)

ARE-ON provides a high-speed fiber optic backbone network throughout the state with 1Gb and 10Gb Ethernet connections to its members, affiliates, national research and education networks, regional optical networks, and commercial service providers. The network consists of approximately 2,200 miles of long-haul fiber optic cable and about 85 miles of metro fiber in 24 cities in Arkansas and four neighboring states. ARE-ON's extensive reach allows institutions to connect, collaborate, and innovate within the organization's core agendas: education, telemedicine, research, and emergency preparedness. In addition, the ARE-ON backbone provides transport between regions for the Arkansas e-Link network, a network of over 450 healthcare institutions statewide.

Source: Arkansas Research and Educational Optical Network, December 27, 2013

http://areon.net/about/

Arkansas Broadband Advisory Council

The Arkansas Broadband Advisory Council was created to monitor the broadband-based development efforts of other states and nations in areas such as business, education and health. The council also advises the governor and the General Assembly on policies related to making affordable broadband available to every Arkansas home and business.

> Source: Connect Arkansas
>
> http://www.connect-arkansas.org/about-us/arkansas-broadband-advisory-council

Connect Arkansas

Connect Arkansas, a project of the Arkansas Capital Corporation Group (ACCG), is a private, nonprofit corporation dedicated to increasing high-speed Internet subscription and improving and sustaining Internet adoption throughout Arkansas. The Connect Arkansas Broadband Act was signed into law by Arkansas Governor Mike Beebe on March 28, 2007, with the goal of improving personal lives and creating economic opportunity for Arkansans. Connect Arkansas seeks to advance that goal through community-based initiatives. Act 604, of the 86th General Assembly, in 2007, states that Connect Arkansas's mission is to "prepare the people and businesses of Arkansas to secure the economic, educational, health, social, and other benefits available via broadband use."

Delta Technology Education Center

Delta Technology Education Center's main building has 24 computer stations for public access as well as total wireless usage. Full service support has been committed by the Department of Arkansas Workforce Services. Facilities are also available for entrepreneurial development and student internships in technology. The education building has two large interactive classrooms that are being used by area colleges, public school students, industry, business, agriculture, and medical fields.


> Source: Delta Technology Education Center
>
> http://www.delta-tech.org/index.html

e-Link

Arkansas e-Link completed a $102 million expansion of two existing networks: Arkansas Telehealth Network (ATN) overseen by the Arkansas Telehealth Oversight and Management group (ATOM) and the Arkansas Research and Education Optical Network (ARE-ON). This grant-funded project led by UAMS, is designed to increase broadband capacities and/or telemedicine equipment at over 450 planned community anchor institutions in Arkansas. Aligning partners from across Arkansas, this project aims to improve broadband resources for health care, higher education, public safety and research entities in all 75 Arkansas counties.
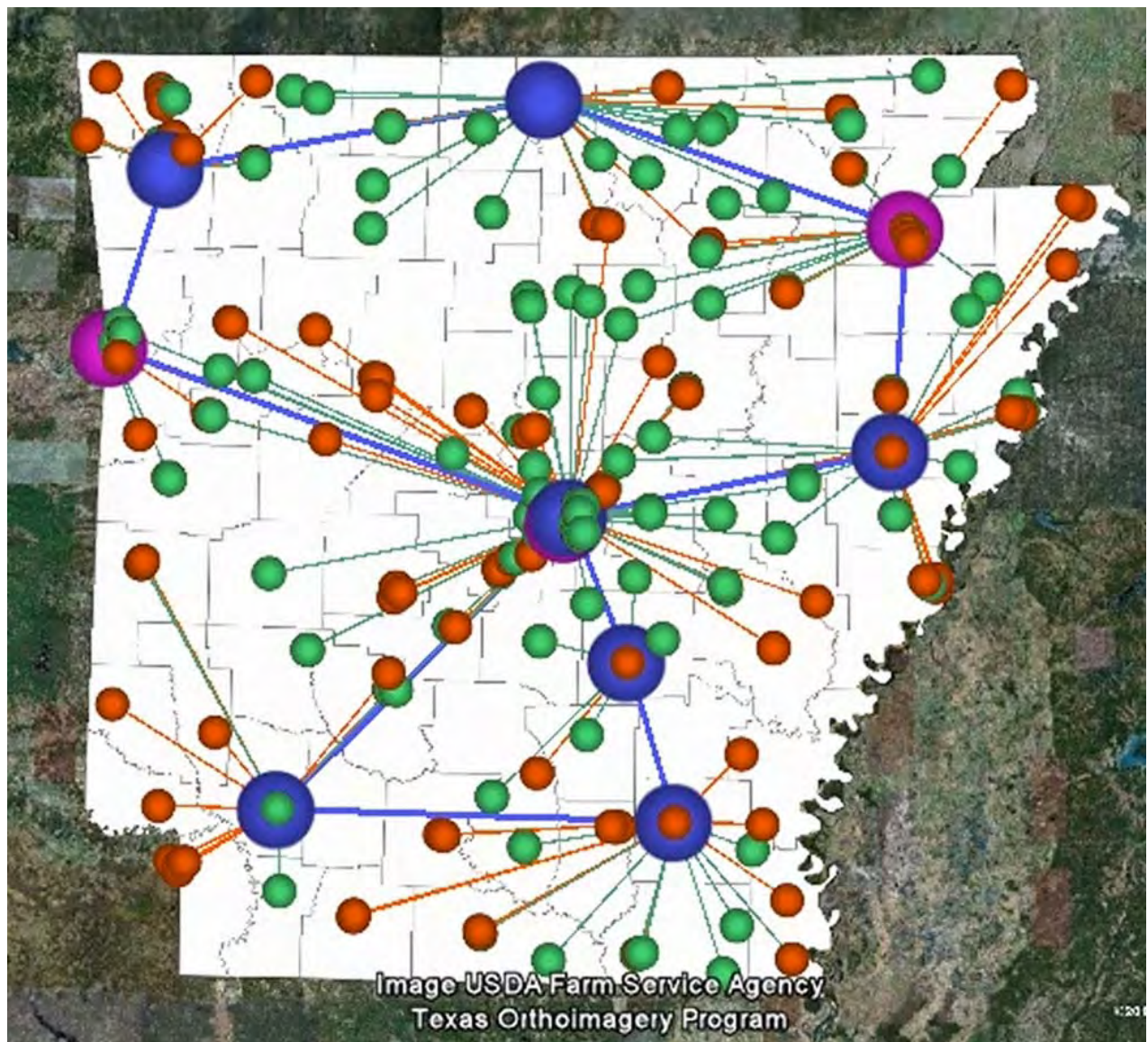
Source: Arkansas e-Link, December 27, 2013

http://www.arkansaselink.com/

E-rate

The Universal Service Schools and Libraries Program, commonly known as "E-rate," provides discounts of up to 90 percent to help eligible schools and libraries in Arkansas and the United States obtain affordable telecommunications and Internet access. The program is intended to ensure that schools and libraries have access to affordable telecommunications and information services. Program participants may request funding in five categories of service: Telecommunications, telecommunications services, Internet access, internal connections, and basic maintenance of internal connections. Discounts for support depend on the level of poverty and the urban/rural status of the population served and range from 20 percent to 90 percent of the costs of eligible services.

FASTER

Fast Access for Students, Teachers and Economic Results (FASTER) Arkansas was tasked by Governor Beebe to explore potential solutions to accelerate broadband activation where it exists and finding alternatives in areas that lack infrastructure.

FirstNet

FirstNet will provide emergency responders with the first nationwide, high-speed network dedicated to public safety. FirstNet will be a force multiplier, increasing collaboration to help emergency responders save more lives, solve more crimes and keep our communities safer.

The broadband data network fulfills a fundamental need of the public safety community and a key recommendation of the 9/11 Commission. Creating FirstNet will require an unprecedented level of public-private partnership, collaboration and shared commitment to the well-being of all Americans.

Source: National Telecommunications and Information Administration

http://www.ntia.doc.gov/page/about-firstnet

Next Generation State Network

To amplify the state's network performance, increase network capacity, and maximize efficiency, migration toward a high-speed network is in progress known as Next Generation State Network (NGN). NGN will ultimately provide a solution offering more cost effective bandwidth to the Arkansas public education system and state agencies. NGN will connect over 2,100 Arkansas public entity sites, including K-12 school districts.

Quality Digital Learning Study Committee

A 2012 state analysis by the Digital Learning Council gave Arkansas an overall grade of F for its lack of the 10 elements of high quality digital learning. The 89th Arkansas General Assembly formed the Quality Digital Learning Study Committee to "establish and maintain the necessary infrastructure and bandwidth to sufficiently facilitate and deliver a quality digital learning environment in each school district and public charter school."

In conjunction with key stakeholders, the Quality Digital Learning Study Committee will:

1. Study the deployment of high-speed broadband to schools, classrooms, and communities sufficient to meeting the evolving needs of teaching and learning in a digital age

2. Research the technology to improve teaching and learning through professional development and provide access to affordable, effective digital learning tools, and applications in all schools

3. Identify the short and long-term infrastructure, broadband and digital learning needs of Arkansas public schools

4. Devise methods to establish and maintain sufficient broadband capacity to provide quality digital learning opportunities in Arkansas public schools

   Source:

   Arkansas Department of Education

   http://www.arkansased.org/divisions/policy/quality-digital-learning-study

   http://www.arkansased.org/public/userfiles/Legislative_Services/Quality%20Digital%20Learning%20Study/Reports/AR_Digital_Learning_Now.pdf

   Act 1280 of the 89th General Assembly

   http://www.arkleg.state.ar.us/assembly/2013/2013R/Acts/Act1280.pdf

Rural Health Care Program

The Rural Health Care Program is one of the four support programs funded by the Universal Service Fund providing reduced rates for telecommunications and Internet services to eligible rural health care providers. Discounts for basic telephone services, Internet access, advanced telecom services, and wireless services are provided to help ensure that rural providers do not pay more than their urban counterparts for the same or similar services. On January 8, 2013, the FCC announced up to $400 million for the Healthcare Connect Fund to create and expand telemedicine networks and to provide increased access to medical specialists.

Source: State of Arkansas Strategic Plan for Information Technology
http://stc.arkansas.gov/Documents/StateStrategicPlan2014.pdf

Provider Initiatives

To gauge the state of broadband in Arkansas from the provider perspective, a survey was distributed to 70 telecommunications providers. In addition to the barriers for broadband expansion cited on page 15, some providers also included current initiatives to extend broadband coverage to Arkansans.

Broadband Service Provider	Initiatives
Cable South	Within the next year we plan on going to Docsis 3 in Crossett.
G5 Internet	In the last year, we installed a 100% off grid solar powered site, which now feeds broadband to around 40 subscribers, who have no alternative option for fixed broadband. In the coming year, we have plans to build a new tower to expand our coverage to another potential 100 or so customers who have no viable alternative for fixed broadband. This new tower will use new technology to allow us to offer faster speeds, possibly up to 25Mbps per subscriber. We have also just ordered a second fiber optic connection which doubles our capacity to feed our network, and provides us with redundancy, should one of our upstream providers experience an outage.
Pinnacle Communications	Replaced electronics at customer premise which limited broadband to 20M, can now achieve 50M+. Upgrade for 100% of customers.
The Computer Works	We have been working with Connect Arkansas since the beginning. Our primary focus is providing broadband to the rural communities. We have partnered with many local city and water districts in nine counties.
Ozark Telephone Company, Inc.	We currently offer 1, 5 and 10 Mb/s download and 1 Mb/s upload over ADSL2+. Most customers opt for the 5/1 service as most are rural, non-business service requests.
Clinton Cablevision Services	75% complete addition of new fiber nodes
Arkansas Cable	Our investments in Arkansas included creating redundancies in every market served, as well as connecting all markets together.
Windstream	Consistent with our commitment to improving broadband service availability and speeds, Windstream currently is in the midst of a company network improvement initiative that will result in enhanced broadband services in 26 Arkansas communities (60% complete). The maximum available speeds will double for many Windstream residential customers in these communities – with many more consumers able to access Windstream's 12 Mbps and 24 Mbps service offerings. In addition, Windstream is partnering with federal government entities to make further improvements in rural areas where a feasible economic case for further deployment cannot be made absent government support. In particular, with stimulus grants that Windstream was awarded from the U.S. Agriculture's Rural Utility Service, we have been working to expand services in 13 Arkansas communities (91% complete).

	This month Windstream also was awarded funding from the Federal Communications Commission's Connect America Fund ("CAF") to enable new rural broadband deployments and upgrades in Arkansas. These CAF projects will begin in 2014. Complementing these residential service efforts, Windstream continues to make advancements in providing broadband to schools, healthcare providers, and businesses throughout the state. This year, for example, Windstream expanded its broadband services to the Cabot School District and the Vilonia School District. With respect to healthcare providers, Windstream, in particular, built a data network that links rural doctors' offices and hospitals with the University of Arkansas for Medical Sciences (UAMS). This project was funded through a federal broadband stimulus grant that was awarded to UAMS and enables rural physicians and their patients to consult with specialists at UAMS through real-time video conferencing.

Source: Arkansas Telecommunications Provider Survey, December 2013

For more provider survey data, see Appendix page 40.

Initiative Activities/Operations for Current Reporting Period

The following tables include the activities and operations toward the state's efforts to expand and improve broadband capacity and availability in Arkansas to improve education, economic development, citizen access to state services, and increase efficiency in state government through the use of broadband technology during the six months preceding January 1, 2014.

Stakeholders:
- State agencies, boards and commissions
- Governor's Office and constitutional officers
- Private business, enterprises, and broadband providers
- Nonprofit organizations
- Governmental entities and organizations organized under federal law or the law of another state
- Other individual and entities
- Citizens of Arkansas

Initiative & Date of Activity or Operation	Arkansas Broadband Advisory Council (page 19) July-December, 2013
Details of Activity or Operation	

The council met three times during the current reporting period. Topics addressed included:
- General discussions about recent legislation
- Broadband manager (ABC has recommended a "broadband manager" in past reports to governor and Legislature.)
- Distance learning bill
- Formed committee for Annual Report
- General discussions on FASTER and QDLS

Initiative & Date of Activity or Operation	ARE-ON (page 18) July-December, 2013
Details of Activity or Operation	

ARE-ON completed a three-year ARRA-funded project as a part of the NTIA Broadband Technology Opportunities Program (BTOP) to extend its fiber backbone to connect additional higher education and healthcare sites statewide. As a result, ARE-ON obtained 716 miles of new long-haul fiber optic cable and constructed 49 miles of new metro laterals to connect 21 two-year colleges and one four-year university (Southern Arkansas University, Magnolia). New telecommunications huts were built at 16 locations, many of which serve as network aggregation points for the Arkansas e-Link network, a private network of over 450 health care institutions installed and managed by the University of Arkansas for Medical Sciences as its part of the overall Arkansas BTOP project. The ARE-ON backbone provides 10Gb transit between regional hubs for the Arkansas e-Link Network and 1Gb and 10Gb Ethernet connections to its member institutions. Three two-year colleges that did not have dark fiber connections received 100Mb VPLS circuits as a part of the project. The federal funding for the BTOP project completed in September 2013.

Initiative & Date of Activity or Operation	Connect America Fund (page 17) December 5, 2013

Details of Activity or Operation

By Public Notice, the Wireline Competition Bureau (Bureau) authorized $255,723,850 (nationwide) in second round of Connect America Phase I incremental support for certain census blocks in response to elections from five price cap carriers: AT&T, CenturyLink, FairPoint Communications (FairPoint), Frontier Communications (Frontier), and Windstream Corporation (Windstream). In total, these carriers elected to serve 563,767 locations spread throughout 84,097 census blocks. 73,015 of those census blocks were reported as unserved with fixed broadband with speeds of 3 Mbps/768 kbps or higher on the National Broadband Map.

Source: http://transition.fcc.gov/Daily_Releases/Daily_Business/2013/db1205/DA-13-2329A1.pdf

Initiative & Date of Activity or Operation	Connect Arkansas (page 19) Adult Digital Literacy Classes July-December, 2013

Details of Activity or Operation

Free adult digital literacy classes are one hour and are offered at multiple locations throughout the state, primarily in libraries. Classes are limited to three-five students for each one hour class, and each student is provided with a laptop computer to use during the class. Course offerings vary, from Computer Basics and FAQs to Setting up Email, Facebook, Excel and Word. Courses have now been expanded to the entire state and are held in several locations weekly. Since inception, over 800 adults in 45 counties have participated.

Arkansas County: July 2; Aug. 6

Baxter County: Nov. 26

Boone County: Nov. 14

Bradley County: Sept. 30; Nov. 21

Calhoun County: July 3; Aug. 21; Sept. 11; Oct. 23; Dec. 4

Chicot County: Oct. 1, 2; Nov. 4; Dec. 10

Clark County: Nov. 7

Clay County: Dec. 5

Cleburne County: Oct. 24

Columbia County: Aug. 15

Crawford County: Oct. 29

Crittenden County: Nov. 13; Dec. 18

Cross County: Nov. 6

Desha County: July 16; Aug. 27; Sept. 19, 25; Oct. 8, 16; Nov. 13

Drew County: July 31; Aug. 28; Oct. 14; Dec. 3

Faulkner County: July 9,10,17, 29; Aug. 7, 13, 14, 26; Sept. 9, 12, 25; Oct, 2, 16, 17, 28; Dec. 9, 19

Fulton County: Oct. 9; Nov. 25

Garland County: Oct. 15

Grant County: Nov. 18

Greene County: Dec. 5

Hempstead County: Nov. 5

Initiative & Date of Activity or Operation	Connect Arkansas (page 19) Adult Digital Literacy Classes (continued) July-October 2013

Details of Activity or Operation

Hot Spring County: Oct. 29; Hot Spring 16
Izard County: Nov. 21
Jackson County: Nov. 7
Jefferson County: Oct. 24; Dec. 12
Lawrence County: Dec. 17
Lincoln County: July 23; Oct. 30; Dec. 19
Marion County: Nov. 19
Miller County: Nov. 20
Mississippi County: Sept 11, 24; Oct. 9; Dec. 6
Monroe County: Nov. 19; Dec. 18
Montgomery County: Oct. 9; Dec. 2
Nevada County: Nov 6
Newton County: Dec. 12
Phillips County: July 11; July 18; July 24-25; Aug. 8, 22; Sept. 5, 24; Oct. 3, 10; Dec. 5, 9
Pike County: Nov. 11
Poinsett County: Oct. 31
Pope County: Nov. 5
Randolph County: Dec. 4
Searcy County: Nov. 20
Sharp County: Aug. 20; Sept. 17; Oct. 1,15
Stone County: Dec. 3
Union County: Sept 12; Oct. 17; Dec. 17
Van Buren County: Dec. 16
Woodruff County: Aug. 19; Sept. 23; Oct. 21; Nov. 18; Dec. 30

Initiative & Date of Activity or Operation	Connect Arkansas (page 19) Connecting Arkansas Internet Conference September 25-26, 2013 Marriott Hotel, Little Rock, AR

Details of Activity or Operation

The event brought together over 240 state business, education, and policy leaders to discuss strategies for deploying more broadband throughout Arkansas and to provide a big-picture look at high-speed Internet in Arkansas and how it impacts local communities. The conference looked at the challenges of delivering high-speed Internet to all Arkansans and how local, regional, and state leaders from both the public and private sectors are working to address them. Arkansas Governor Mike Beebe provided the opening remarks, and was joined by more than fifty speakers and panelists from across the state and nation in three general sessions and eight breakout sessions.

Initiative & Date of Activity or Operation	Connect Arkansas (page 19) Senior Digital Literacy July-December, 2013

Details of Activity or Operation

The statewide Senior Digital Literacy Program targets seniors, those citizens identified as more in need of computer training and Internet access than any other population in the state. Courses are led by instructors from the University of Arkansas at Monticello and were initiated Summer 2013. To date, 84 classes have been held primarily at senior centers, serving 656 individuals in 57 counties. Each class is three hours in length and may seat up to twelve students, utilizing laptops provided by instructors. Each session concludes with students locating their homes on Connect Arkansas' interactive map to determine local Internet service provider options. Surveys indicate a desire on the part of participants to attend multiple classes.

Arkansas County: Oct. 15

Ashley County: Dec. 11

Bradley County: Sep. 9; Nov. 4

Calhoun County: Aug. 9; Oct. 18

Carroll County: Nov. 15

Chicot County: Aug. 2; Nov. 8

Clark County: July 9

Clay County: Aug. 4

Cleveland County: Sep. 12

Columbia County: Aug. 1

Conway County: Aug. 8

Craighead County: Sep. 25

Crittenden County: July 1; Aug. 5

Cross County: Aug. 8

Dallas County: Aug. 21; Nov. 12

Desha County: July 31; Aug. 30

Drew County: Oct. 25; Nov. 14, 18; Dec. 16

Faulkner County: Aug. 6; Nov. 11

Franklin County: Nov. 12

Fulton County: Oct. 8

Hempstead County: Oct. 22

Howard County: July 23

Izard County: Oct. 8

Jackson County: Aug. 6

Jefferson County: July 20; Oct. 30

Johnson County: Sep. 9

Lafayette County: Sep. 10

Lawrence County: Oct. 9

Lee County: Sep. 18

Little River County: July 11

Initiative & Date of Activity or Operation	Connect Arkansas (page 19) Senior Digital Literacy (continued) July-December, 2013

Details of Activity or Operation

Logan County: Dec. 3
Madison County: Nov. 22
Marion County: Sep. 16
Miller County: July 19
Mississippi County: Aug. 7
Monroe County: July 12
Montgomery County: Aug. 14, 15
Nevada County: Nov. 21
Newton County: Sep. 5
Ouachita County: Oct. 24
Phillips County: Sep. 17
Pike County: Oct. 3
Polk County: July 10
Poinsett County: Sep. 26
Pope County: Oct. 21
Prairie County: Sep. 24
Randolph County: Sep. 4
Scott County: July 11
Searcy County: Oct. 14
Sevier County: Oct. 10
Sharp County: Sep. 3
St. Francis County: Aug. 20
Stone County: Oct. 7
Union County: Nov. 18
White County: Aug. 5
Woodruff County: Oct. 23
Yell County: Oct. 21

Initiative & Date of Activity or Operation	Connect Arkansas (page 19) Computers 4 Kids July-December 2013 (For program status see map in Appendix on page 37)

Details of Activity or Operation

Computers for Kids is a program for families and students in kindergarten through 12th grade which provides donations of refurbished Internet-ready computers to families completing three technology training classes. The program is open to students qualifying for free or reduced lunch, and has been expanded to cover all of Arkansas. To date, over 1,600 computers have been donated, with pre and post class surveys indicating high satisfaction and a willingness to subscribe to Internet access as a result of the program. In December 2013, Connect Arkansas began working with an Arkansas-based computer recycler to provide the computers utilized for this program.

July 1: 24 Internet-ready computers donated to families in Madison and Carroll Counties

July 10: 25 Internet-ready computers donated to families in Marion County

Sept. 9: 31 Internet-ready computers donated to families in Lincoln County

Oct. 9: 22 Internet-ready computers donated to families in Fulton County

Oct 23: 29 Internet-ready computers donated to families in Benton County

Oct. 30: 29 Internet-ready computers donated to families in Drew County

Nov. 20: 35 Internet-ready computers donated to families in Marion County

Nov. 21: 32 Internet-ready computers donated to families in White County

Dec. 4: 30 Internet-ready computers donated to families in Poinsett County

Dec. 12: 34 Internet-ready computers donated to families in St. Francis County

Dec. 18: 35 Internet-ready computers donated to families in Johnson County

Initiative & Date of Activity or Operation	Connect Arkansas (page 19) Distance Health Training July-December, 2013

Details of Activity or Operation

In partnership with the University of Arkansas for Medical Sciences (UAMS), Connect Arkansas has engaged in distance health education across the state. The program encourages the growth of telemedicine, providing distance learning to medical professionals on a variety of topics. Education is provided through online resources, interactive modules, equipment training, blogs, tools and guides. This program was successfully completed during the second half of 2013. The website LearnTelehealth http://LearnTelehealth.org provides telehealth-focused education and resources and continues the work begun through this project.

Initiative & Date of Activity or Operation	Connect Arkansas (page 19) County Website Development July-December, 2013

Details of Activity or Operation

Connect Arkansas, working with the Information Network of Arkansas (INA), offers support to county governments desiring to establish an effective, attractive website. Originally targeting 17 counties, the program has recently been expanded to include an additional 10 counties, with INA providing not only website design and training of county administrators, but support of the websites for a two-year period after launch. Counties have seen good traffic, tourism promotion, and through use of on-line payment processes, an increase in tax receipts.

Websites completed to date include:

Ashley County: http://ashleycounty.arkansas.gov/

Chicot County: http://chicotcounty.arkansas.gov/

Desha County: http://deshacounty.arkansas.gov/

Drew County: http://drewcounty.arkansas.gov/

Fulton County: http://fultoncounty.arkansas.gov/

Jefferson County: http://jeffersoncounty.arkansas.gov/

Marion County: http://marioncounty.arkansas.gov/

Monroe County: http://monroecounty.arkansas.gov/

Phillips County: http://phillipscounty.arkansas.gov/

Prairie County: http://prairiecounty.arkansas.gov/

Woodruff County: http://woodruffcounty.arkansas.gov/

Initiative & Date of Activity or Operation	Connect Arkansas (page 19) Small Business Technology Training October-November, 2013

Details of Activity or Operation

Connect Arkansas partnered with the Arkansas Small Business Technology Development Center (ASBTDC) to host a series of website development and marketing workshops. These workshops teach business owners, potential business owners, and employees how to quickly design and set up a five page website and how to market those businesses through social media.

Oct. 1: Website in a Day offered in Bradley County

Oct. 24: Get Listed Locally/Facebook offered in Bradley County

Nov. 4: Website in a Day offered in Lincoln County

Nov. 20: Get Listed Locally/Facebook offered in Lincoln County

Initiative & Date of Activity or Operation	Connect Arkansas (page 19)
	Discount Computer Program
	July-December, 2013

Details of Activity or Operation

Connect Arkansas's website features refurbished computers for sale directly from recycling companies at a significantly reduced rate and shipped directly to the consumer. Recently the computers offered has been upgraded to include multiple levels of features and options on desktops and to include laptops.
http://www.connect-arkansas.org/computer

Initiative & Date of Activity or Operation	Connect Arkansas (page 19)
	Broadband Mapping
	July-December, 2013

Details of Activity or Operation

Connect Arkansas works with the Arkansas Geographic Information Office (AGIO) to compile Geographic Information System (GIS) data for analysis of broadband at the address level. An ongoing project, the benefits will be governmental for tax purposes, educational for bus routing and resultant fuel savings, staffing for governmental agencies, vital for public safety purposes, and important in economic development and decision-making for broadband service providers. During the last six months, address point mapping has been completed for Lafayette and Cleveland counties, bringing the statewide county total to 22. In addition, the 8th submission of broadband data including community anchor information, library data, and public schools information was submitted October 1 to the National Telecommunications and Information Administration (NTIA) from 72 of the 80 identified providers. Engineering assessments to determine existing wireline infrastructure in Arkansas are underway and have been completed in 15 counties.

Initiative & Date of Activity or Operation	Connect Arkansas (page 19)
	Broadband Awareness Campaign
	July-December, 2013

Details of Activity or Operation

An Internet awareness advertising campaign was developed and conducted from November 2012 through September 2013 and again beginning summer 2013 with a goal to increase awareness of uses for high-speed Internet service and resulting expansion of broadband usage. Featuring print, radio and television spots, the advertisements appeared in markets across the state. The first campaign featured the theme, "Get Connected" and the second features "Connect to Life". In addition, a monthly e-newsletter and active social media presence has garnered good response and increased traffic on the http://connect-arkansas.org/ website.

Initiative & Date of Activity or Operation	Delta Technology Education Center (DTEC) (page 19) DTEC in Action Implementation Kickoff October 14, 2013

Details of Activity or Operation

The kickoff event provided an opportunity for DTEC in Action Steering Committee members to set priorities and identify the strategies for implementation that are likely to have the greatest impact. The three strategic goals identified as highest priority are:

1. Creating a workforce development system to meet the changing needs of local businesses and employers,
2. Using DTEC as a vehicle to engage, equip, and inspire youth in the community, and
3. Marketing DTEC as a launching pad for career development, tapping outside resources, and creating new initiatives.

   Source: http://www.uaex.edu/news/october2013/1017ArkDTECKickoff.html

Initiative & Date of Activity or Operation	e-Link (page 20) Grant funding ended Sept. 30, 2013 Grant Closeout Completion December 29, 2013

Details of Activity or Operation

Project Results

Bandwidth tiers ranging from 1.5mbps– 10G

e-Link telemedicine member sites broadband will be funded through June 30, 2016

458 sites benefiting from the grant

HIPAA compliant interactive video system infrastructure as part of the grant

290 public access personal computers deployed as part of the grant

530 telemedicine units deployed as part of the grant

641 clinical assessment tools deployed as part of the grant

716 miles of leased fiber - ARE-ON network expansion from the grant

49 new fiber miles constructed – ARE-ON network expansion from the grant

16 new fiber huts added and 7 exiting improved - ARE-ON network expansion part of the grant

 9 co-locations to fiber backbone for supporting telemedicine

 417 leased broadband circuits

Migration planned July, 2014 of approved e-link members to FCC Healthcare Connect Funding for eligible discounted expenses as part of the Arkansas e-Link consortium – led by UAMS.

Initiative & Date of Activity or Operation	E-rate (page 21) July-September, 2013

Details of Activity or Operation

Application review currently in progress. Request for Proposals posted for broadband bid.

July 19: The FCC launched a modernization of the E-rate program to deliver students and teachers access to high-capacity broadband nationwide. The revitalized E-rate program will focus on 21st century broadband needs of schools and libraries.
The number of applicants increased to 345 with 1463 funding requested in funding year 2013. The total requested funding in 2012/13 is over $36.9 million. This information includes public and private K-12 districts/schools, public libraries, and the state's applications.
Source: State of Arkansas Strategic Plan for Information Technology FY 2014-2015
http://stc.arkansas.gov/Documents/StateStrategicPlan2014.pdf

August 22: A document was prepared by the state E-rate coordinator entitled "E-rate 2.0 The Future of the Schools and Libraries E-rate Program
Source: Arkansas Department of Information Systems
http://www.arkansas.gov/dis/newsroom/files/show.php?filename=what_is_the_future_of_erate.pdf

September 16: Arkansas submitted comments to the Federal Communications Commission in the matter of modernizing the E-rate Program for Schools and Libraries.
Source: Federal Communications Commission
http://apps.fcc.gov/ecfs/document/view?id=7520944019

Initiative & Date of Activity or Operation	FASTER (page 21)

Details of Activity or Operation

FASTER Arkansas created an Engineering/Infrastructure Task Force Report to review technology solutions for broadband expansion and recommend one or more network engineering solutions for Arkansas public schools. The scope of the report included 1) reviewing bandwidth specifications 2) reviewing bandwidth growth projections 3) developing network standards and an operational framework, and 4) ensuring security and managed content filtering. FASTER Arkansas and the Quality Digital Learning Study Group adopted the following Task Force recommendations: 1) connect school districts with a robust fiber-optic network, 2) adopt the State Educational Technology Directors Association recommendations for K12 bandwidth as minimum targets, 3) centralize management for statewide network support services, and 4) efficiently aggregate statewide demand.

Initiative & Date of Activity or Operation	Arkansas Interoperability Conference (FirstNet page 21) October 9-11, 2013 Crowne Plaza, Little Rock, AR
Details of Activity or Operation	

This annual event encompassed a statewide audience of law enforcement, fire fighters, emergency managers, and other public safety departments. Among the keynote speakers was Edward Parkinson, director of Gov't Affairs for FirstNet who provided a status update on the creation of a nationwide interoperable broadband network that will help police, firefighters, emergency medical service professionals and other public safety officials stay safe and do their jobs. The law's governing framework for the deployment and operation of this network is the "First Responder Network Authority" (FirstNet). FirstNet is charged with taking "all actions necessary" to build, deploy, and operate the network, in consultation with federal, state, tribal and local public safety entities, and other key stakeholders.

Initiative & Date of Activity or Operation	Arkansas Public Safety Broadband Network Working Group (FirstNet) November, 2012-August, 2013
Details of Activity or Operation	

August 14: Arkansas Public Safety Broadband Requirements Workshop that included public safety personnel as well as IT personnel to discuss preliminary requirements for broadband services for first responders.

May 14: Arkansas Rural Development Conference – Broadband in Arkansas ––Discussion of the broadband needs of rural Arkansas.

December 9, 2012, December 11 – 14, 2012: Public Safety Communications Town Hall Meetings –– Series of town hall meetings to brief users on the effort to build out the National Public Safety Broadband Network and the Arkansas strategy.

November 8, 2012: Arkansas Public Safety Broadband Network Working Group meeting to review preliminary Arkansas Public Safety Broadband strategy document.

| Initiative & Date of Activity or Operation	Next Generation State Network (NGN) (page 21) As of December, 30, 2013
Details of Activity or Operation	

The state data network consists of 2,060 circuits serving K-12 schools, state agencies, boards and commissions. All but 299 circuits have been migrated to the new Next Generation State Network (NGN) with an expected completion of Jan. 31, 2014 for the remainder. All but 1 of the 560 K-12 schools has already been migrated. This project will increase the capacity of the state network from approximately 6.5Gbps to 16.5Gbps.

Initiative & Date of Activity or Operation	Quality Digital Learning Study (page 22) August-December 2013

Details of Activity or Operation

December 3: QDLS Committee meeting held. Minutes not yet available.

November 21: Claire Bailey, director of the Arkansas Department of Information Systems, gave a presentation about DIS. Full version of meeting minutes:
http://www.arkansased.org/public/userfiles/Legislative_Services/Quality%20Digital%20Learning%20Study/Agendas%20and%20Minutes/QDLS_Minutes_112113.pdf

October 9: James Werle, director of the Internet2 K20 initiative gave a presentation via conference call. Full version of meeting minutes:
http://www.arkansased.org/public/userfiles/Legislative_Services/Quality%20Digital%20Learning%20Study/Agendas%20and%20Minutes/QDLS_Minutes_100913.pdf

September 11: Chair Franklin gave introductions of two speakers joining the meeting via conference call: Mark Johnson, chief technology officer and vice president of Applications Architecture at Microelectronics Center of North Carolina and Brady Kraft, technical director at the Idaho Education Network were both on hand to discuss successful solutions used in their states. Full version of meeting minutes:
http://www.arkansased.org/public/userfiles/Legislative_Services/Quality%20Digital%20Learning%20Study/Agendas%20and%20Minutes/QDLS_minutes_091113.pdf

August 14: Cody Decker provided a report from ADE Research and Technology. Mr. Decker outlined the ADE Bandwidth survey, which was posted on August 6. The survey featured several questions designed to ascertain, among other things, the current bandwidth capacity and method of procurement of bandwidth at each Arkansas school district. To date, 78 districts have responded to the survey. Mr. Decker explained that the survey was designed to be built upon, and future questions would be open for discussion. He pointed out that the survey has generated a lot of excitement. Full version of meeting minutes:
http://www.arkansased.org/public/userfiles/Legislative_Services/Quality%20Digital%20Learning%20Study/Agendas%20and%20Minutes/QDLS_minutes_081413.pdf

Other Activities

Initiative & Date of Activity or Operation	Telecommunications Provider Survey December 2013

Details of Activity or Operation

A survey, initiated by the state broadband manager, was sent to broadband providers in December with results reflected on page 15, 23, 40-47.
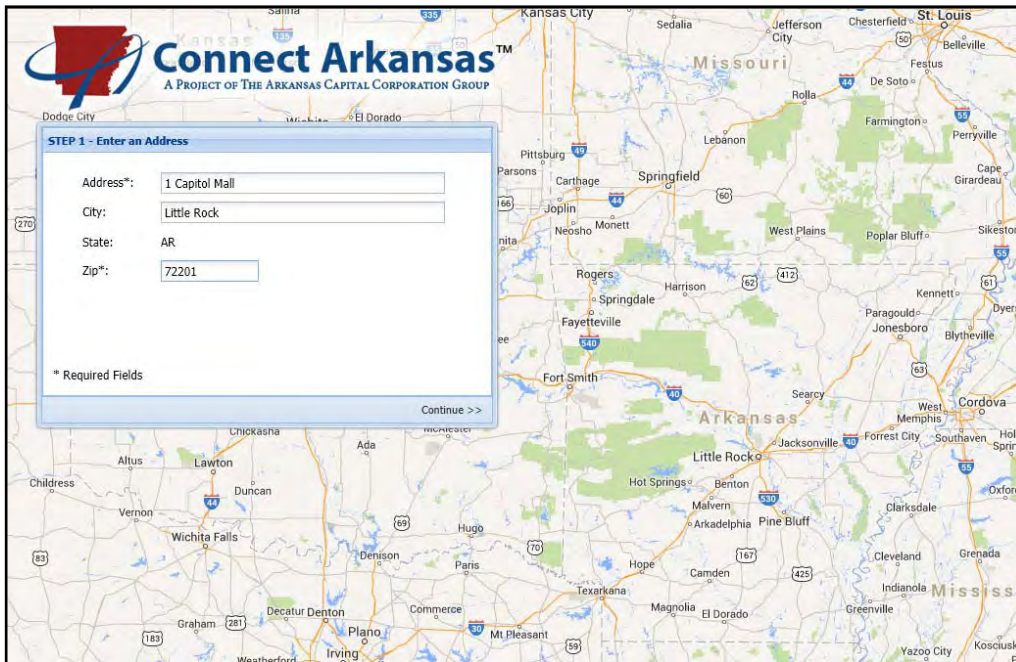
Appendix

Connect Arkansas-Computers for Kids


**Connect Arkansas
Computers for Kids Status**
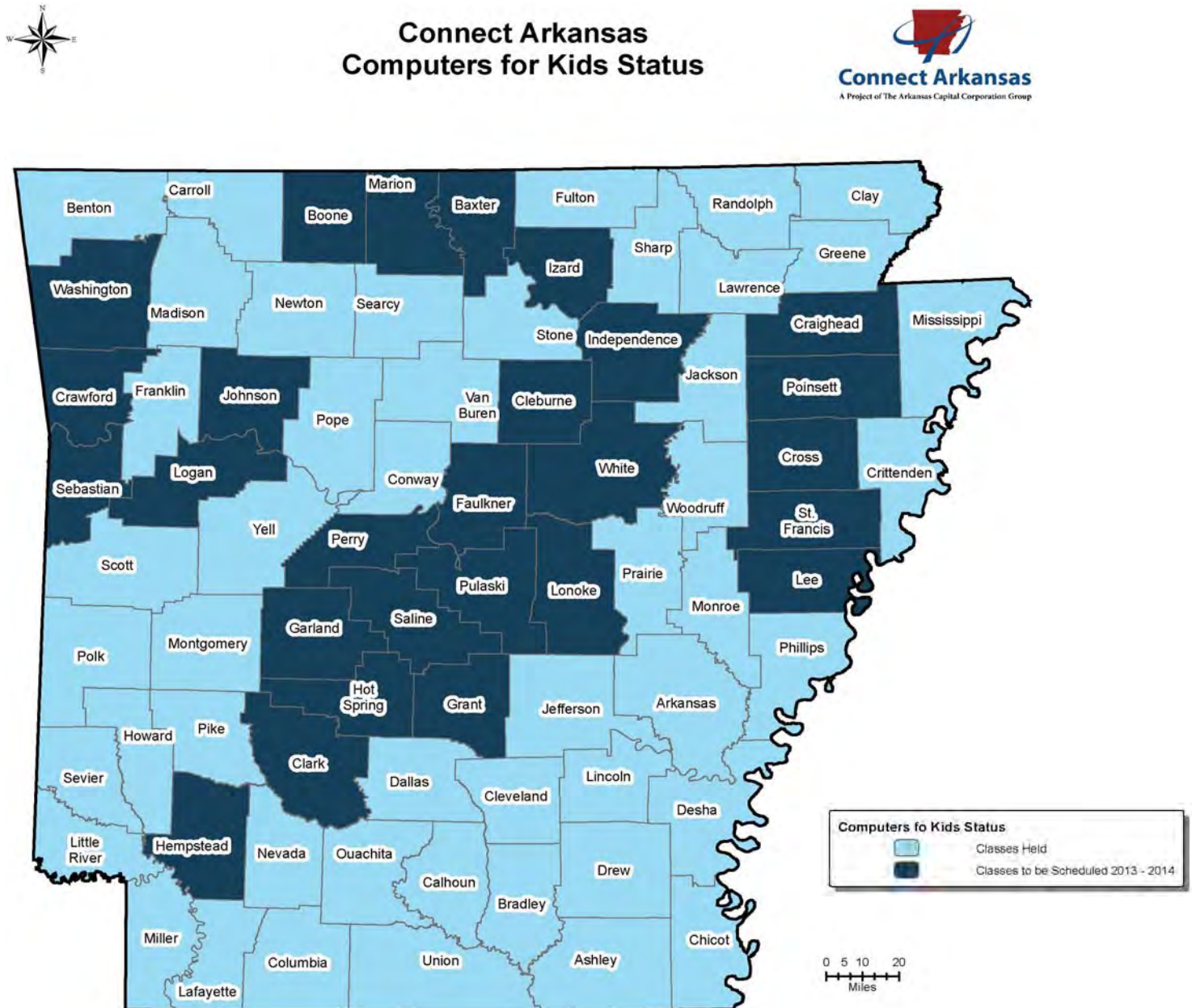
Source: Connect Arkansas as of December 27, 2013.

Connect Arkansas Interactive Search Map by Address

1. Enter your address and zip code in the fields provided and a map will appear with an icon of a home at the address.

2. You will be asked to confirm if the address entered is in the correct location, after which the map will allow you to select the different technologies to show whether or not high-speed Internet is available at that address.
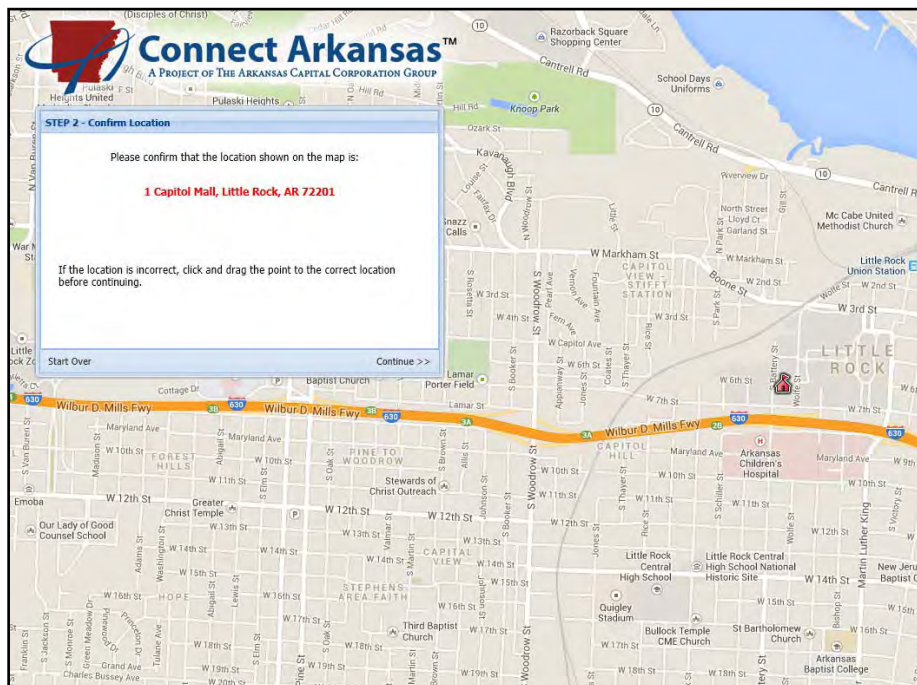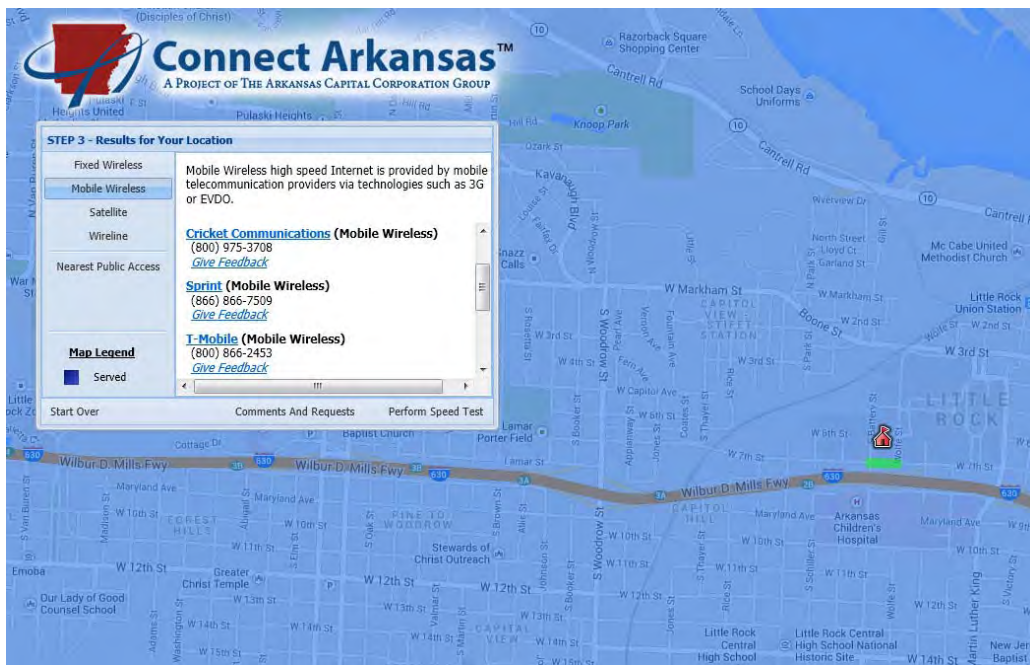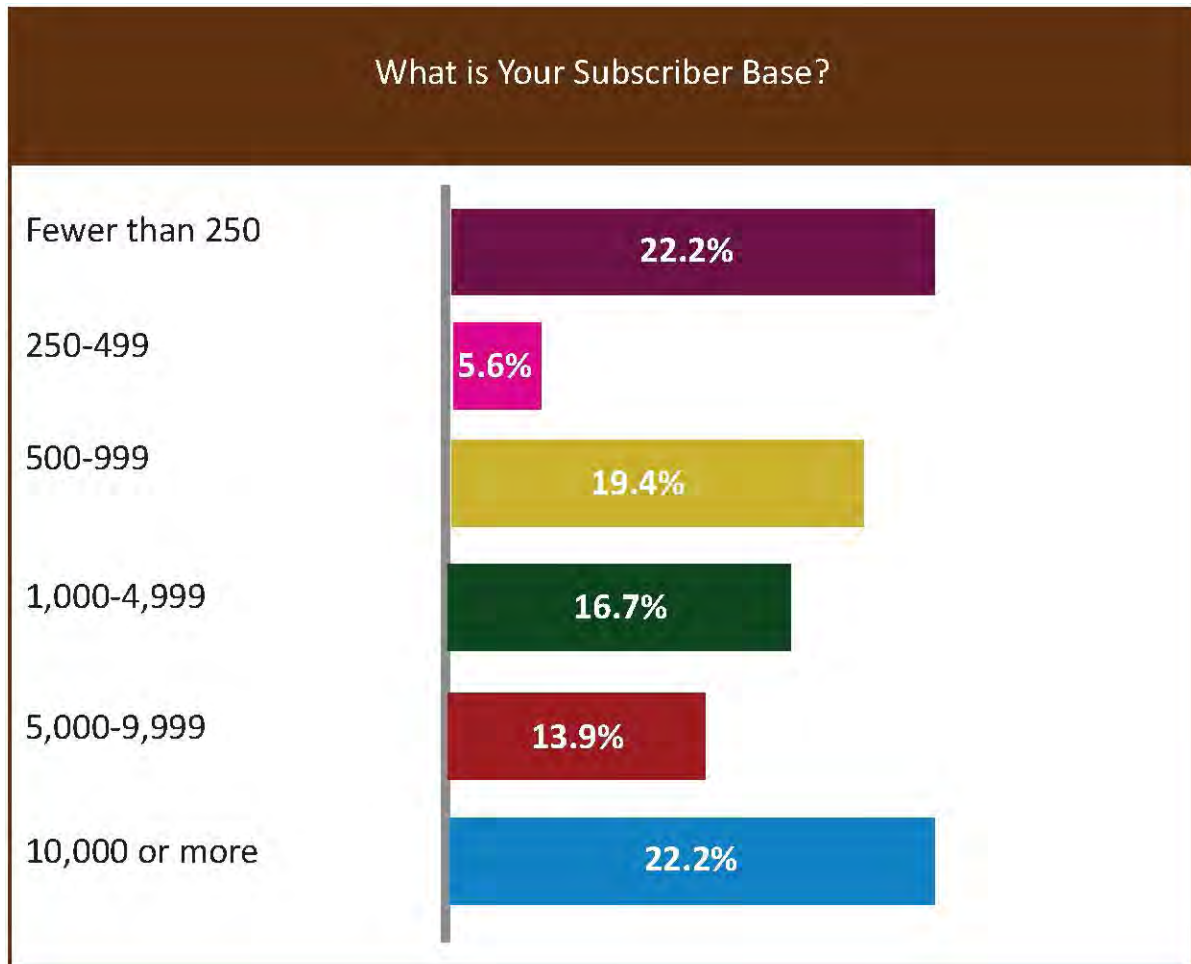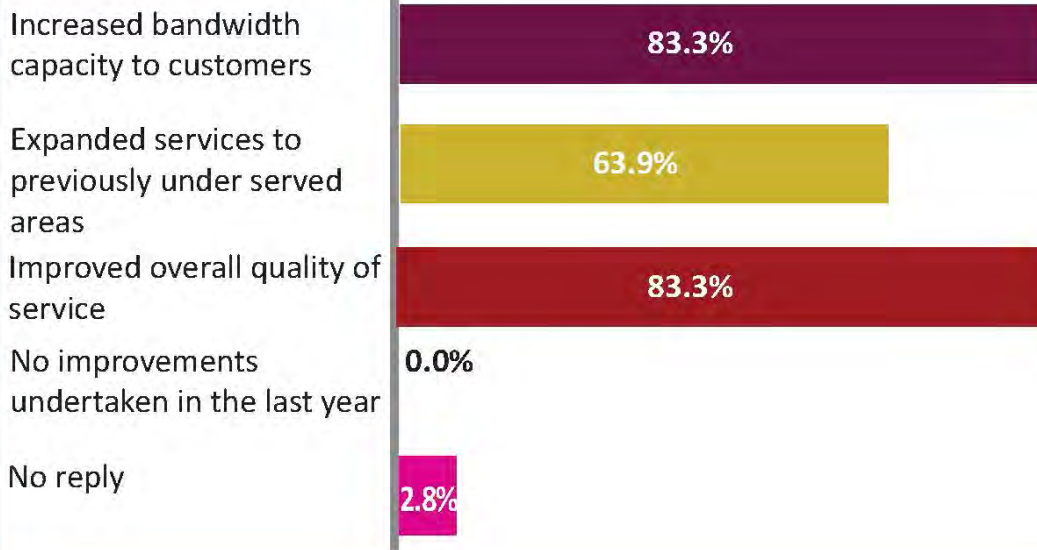
3. If high-speed Internet is available, a list will appear with the names of the providers once you have selected a technology type (fixed wireless, mobile wireless, satellite, wireline).

4. If the map says Internet is available, but you know it is not, or the type, service or provider listed is incorrect, you will be able to leave feedback for the providers listed.

5. If high-speed Internet is not available for the selected technology, the nearest location with availability of the selected technology, within five miles, will be displayed.

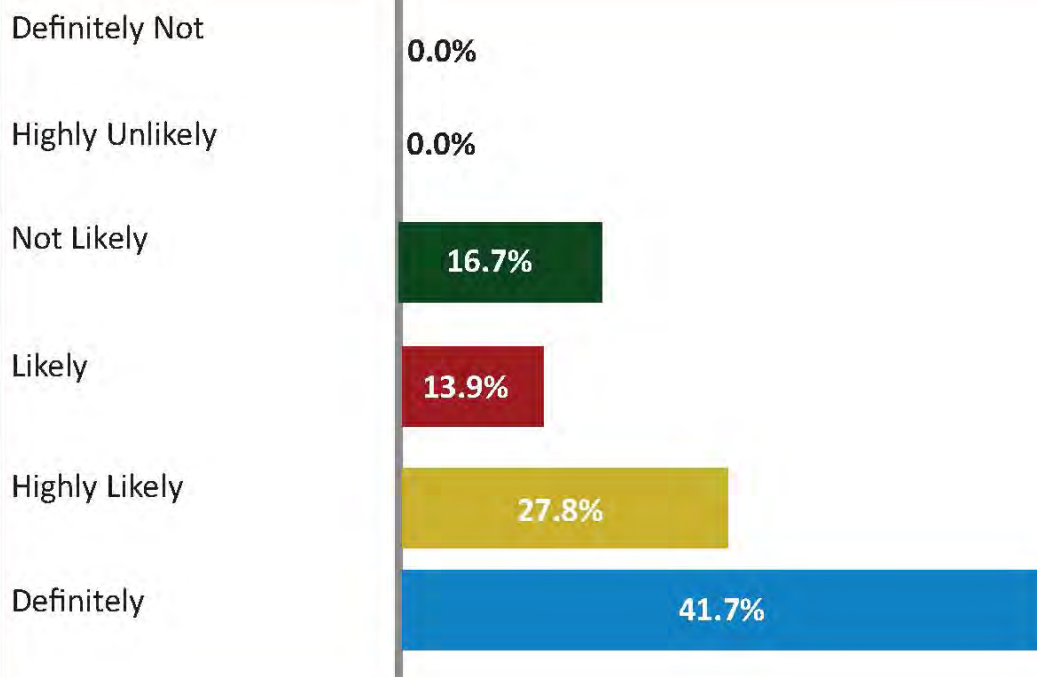## Arkansas Telecommunications Provider Survey Data (December 2013)

A survey was sent to 77 Arkansas telecommunications providers to help provide a representation of Arkansas's current overall broadband standing, to create a guide for ensuring that broadband becomes readily available to all Arkansans regardless of geographical location, and to establish important benchmarks that can be used to measure progress toward moving the broadband needle for Arkansas. Survey responses were received from 36 providers while 41 did not issue a response (see comprehensive list on page 46).


What is Your Subscriber Base?

Fewer than 250	22.2%
250-499	5.6%
500-999	19.4%
1,000-4,999	16.7%
5,000-9,999	13.9%
10,000 or more	22.2%

Within the past year, what broadband improvement efforts have you undertaken within your service area?

Increased bandwidth capacity to customers	83.3%
Expanded services to previously under served areas	63.9%
Improved overall quality of service	83.3%
No improvements undertaken in the last year	0.0%
No reply	2.8%

What is the Likelihood of Expanding Your Broadband Coverage?

Definitely Not	0.0%
Highly Unlikely	0.0%
Not Likely	16.7%
Likely	13.9%
Highly Likely	27.8%
Definitely	41.7%

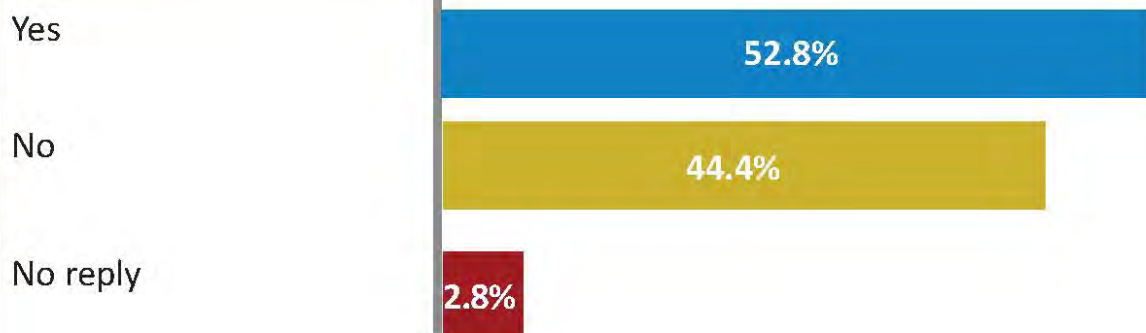## If you are planning on expanding in the next 6 months, approximately how many new customers are you hoping to serve?

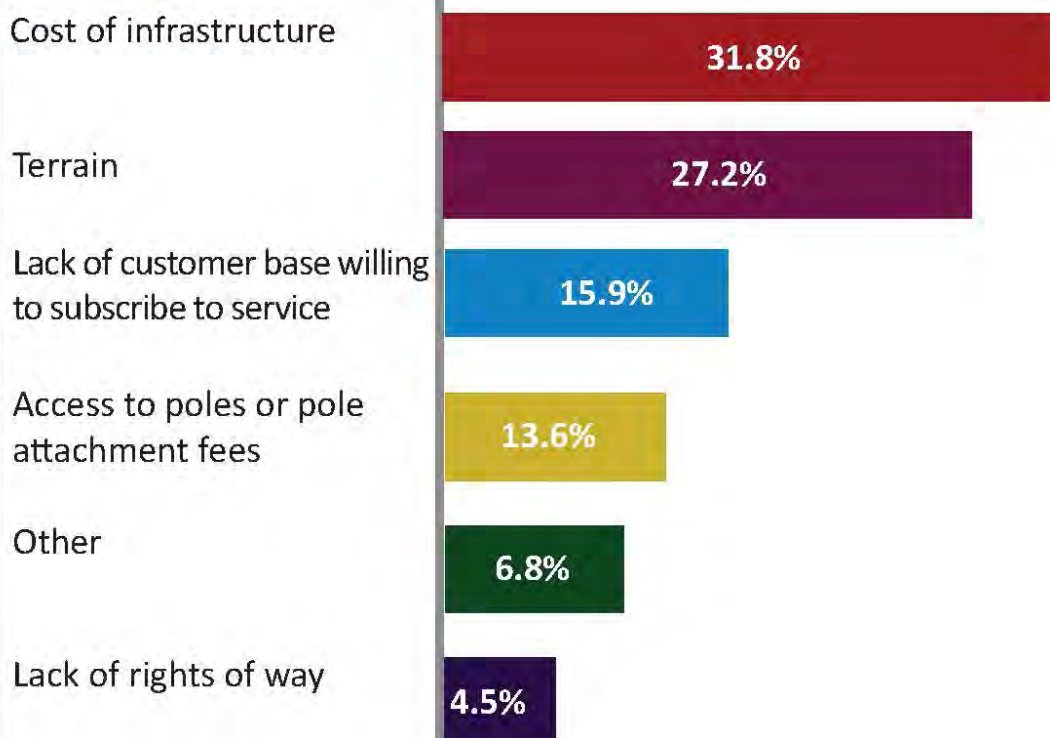|	
Fewer than 500	55.6%
501-1,000	8.3%
1,001-2,000	5.6%
More than 2,000	5.6%
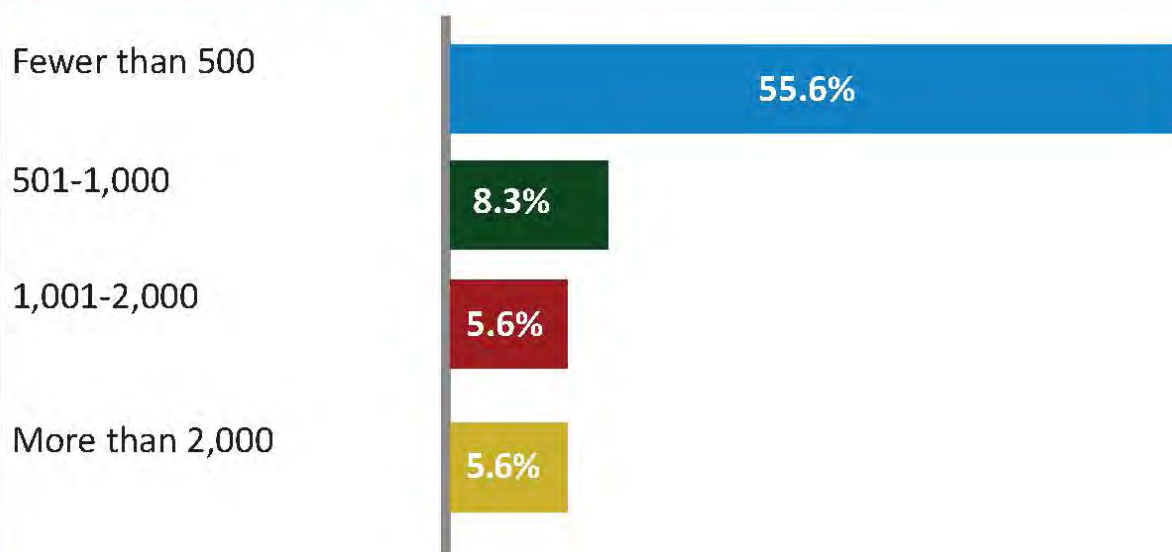
Are you focusing more on improving and expanding wired broadband or utilizing wireless?

Improving/expanding wired line service	61.1%
Improving/expanding fixed wireless service	41.7%
Through emerging technology	11.1%
No reply	5.6%
Improving/expanding mobile wireless service	2.8%
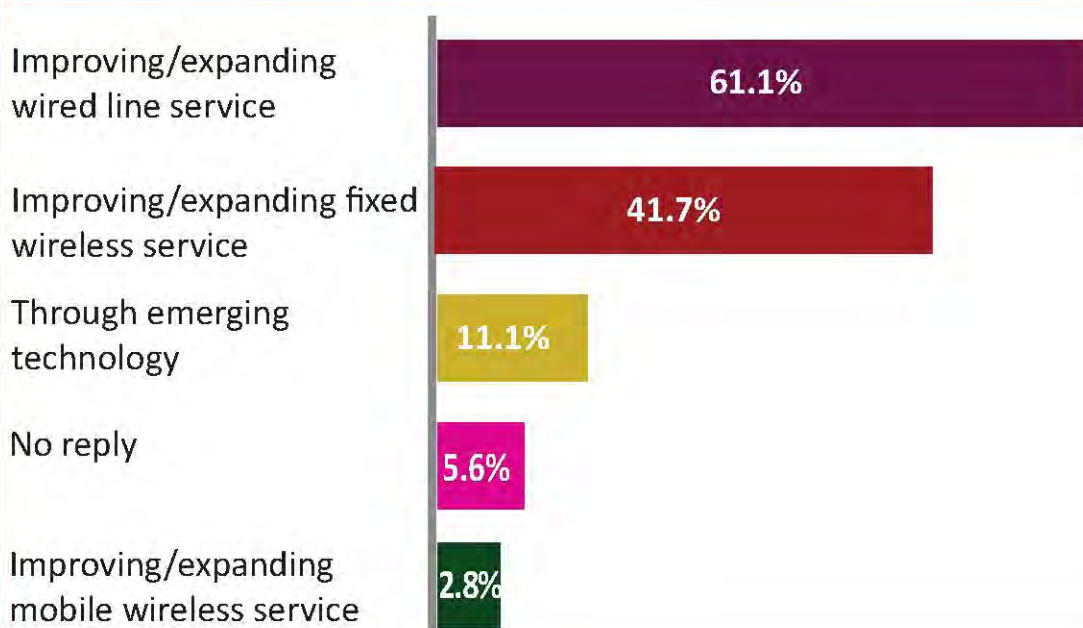
Are there locations within your service area to which you cannot provide coverage?

Yes	52.8%
No	44.4%
No reply	2.8%

If yes, why?

Cost of infrastructure	31.8%
Terrain	27.2%
Lack of customer base willing to subscribe to service	15.9%
Access to poles or pole attachment fees	13.6%
Other	6.8%
Lack of rights of way	4.5%

What percentage of customers within your service area are you unable to serve?

Answer	Percentage
Fewer than 10%	47.2%
More than 30%	16.7%
No reply	16.7%
21%-30%	11.1%
11%-20%	8.3%
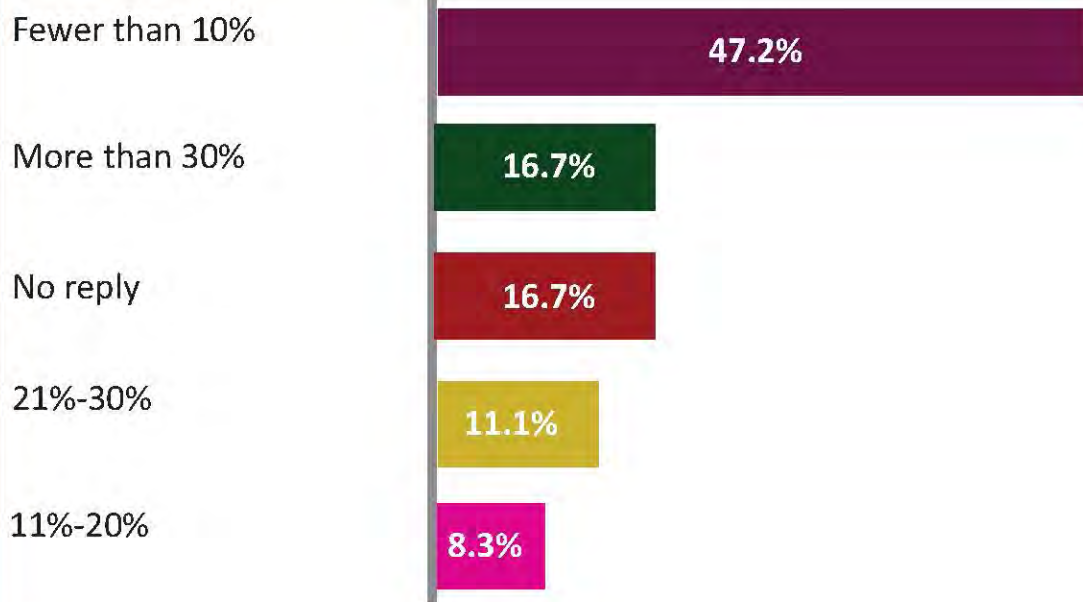
Broadband service provider	What are the best ways to expand service to those who are...
Prairie Grove Telephone Company; Inc.	Plow fiber optic cable to the area and set a broadband loop carrier system then connect the existing copper loops to it. We are currently offering broadband to approximately 99.9% of our customer base. We have about 9 customers living in South Washington and Northern Crawford Counties that are unable to get wireline broadband form us. We have offered them Exede satellite broadband which we sell and maintain but they said the $50 per month cost was too much. This area doesn't have any cell phone service either. This area is very remote and did not have land line voice service until 1988 when we agreed to expand our service area and take them in, at the request of the Arkansas Public Commission.
G5 Internet	Gain access to existing towers - water towers preferred. If we could have access to cities and water department's water towers to mount equipment, it would allow for much faster growth into new areas. Often we offer free access to the cities in order to mount our equipment and provide service to the communities. It's a win-win situation, but sometimes cities see dollar signs and try to charge us as if we were a big cell carrier or something, which our budget will not allow.
Dlux	Drone Antenna Systems
HillBilly Wireless	Wireless
Conway Corporation	We serve the entire city limits with broadband. Any expansion would be related to new residences/businesses
RCC Wireless	more infrastructure (more tower sites)
Nexus Systems; Inc.	microwave links
HighTower Communication	Wireless Acces
Yelcot Telephone Company	Use of existing Arkansas Extension of Facilities fund for broadband.
The Computer Works	We have been focused on providing broadband to the rural communities through Fixed Wireless. It is less expensive than fiber and installs can be achieved in a couple of days not years.
Batesville Computing	reduce malicious interference by other providers, obtain licensed frequencies for providing internet service
Aristotle Internet Services	Additional antennas.
Ozark Telephone Company; Inc.	we can currently provide ADSL2+ bro0adband services to 100% of our customers, if service is requested. The only limitation may be that we have to add some equipment to our office and/or remote DLC cabinets should 100% request service.
South Ark	Extension of our infrastructure to the remote areas.
Arkwest Communications	Fiber build out
Clinton Cablevision Services	fiber
NewWave Communications	Government grants to expand into rural areas of service foot print.
Velocity Broadband Inc.	Less expensive bandwidth to purchase for use in distribution. Locations to setup additional backhaul towers.
Arkansas Cable%	We are constantly evaluating the needs of the consumers and the opportunities available for implementation in each market.
Windstream	Windstream recommends that the Department of Information Systems focus on addressing barriers that private sector broadband providers clearly cannot resolve on their own. Accordingly, Windstream urges the department to focus on: (1) high-cost areas where it is economically unfeasible for a broadband provider to offer robust services at reasonable rates; (2) instances when end users do not purchase available broadband service due to affordability concerns; and (3) rights-of-way fees and restrictions that unduly inhibit broadband deployment. Addressing these three issue areas would efficiently build upon private sector entities' efforts to increase broadband access, adoption and use across the state.
Arkansas Telephone Company	Would like to consider wireless but because of the terrain in the area, it's probably not a practical solution.

Are there any promotional rates?

Yes	47.1%
No	50%
No Reply	2.9%
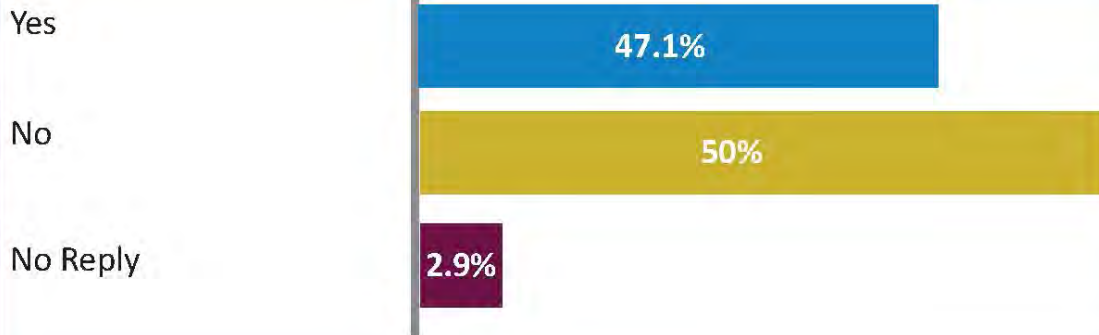
Do you have reduced rates based on income?

Yes	20.6%
No	79.4%
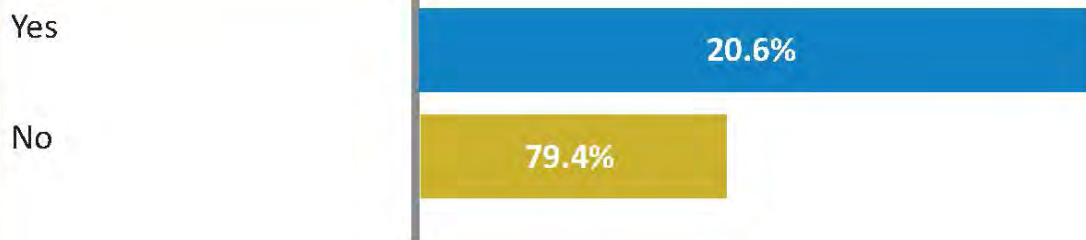
Connect2Compete (C2C) is a national non-profit organization bringing together leaders from communities, the private sector, and leading foundations with a goal of connecting every last American to the power of the Internet. C2C will help Americans access technology through digital literacy training, discounted high-speed Internet, and low-cost computers. Do you partner with or are you willing to partner with C2C?

Currently Partner	5.9%
Willing to Partner	52.9%
No	29.4%
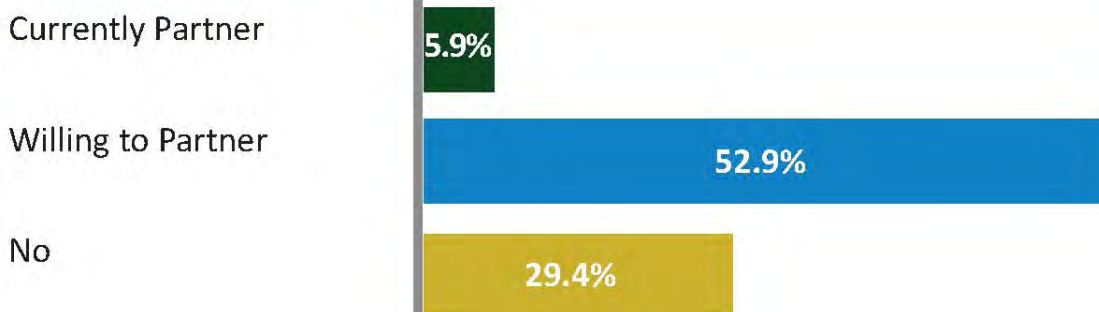
Arkansas Telecommunications Provider Response/Non-Response to Survey

Responded To Survey	Did Not Respond to Survey
Aristotle.Net	Allegiance Communications
Arkansas Airwaves	Bayou Cable
Arkansas Cable	Cable One
Arkansas Telephone Company	Cam Telco
ArkWest	Central Arkansas Telephone Cooperative
AT&T	City Wireless
Batesville Computing	Comcast
CableSouth Media III	Community Communications Company
CenturyLink	Cricket Communications
Clinton Cable	Data Technology ISP
Conway Corporation	Direct Connect 1
Cox Communications	East AR Video
Dlux Information Systems	Fusion Media
Fidelity Communications	HBE Internet
G5 Internet	Hope Community TV
Hightower Communications	Horton TV & Electronics
HillBilly Wireless	HughesNet
Madison County Telephone Company	Indco.net
Magazine Telephone Company	Level 3 Communications
Mo-Ark Communications	Lonoke Broadband
Newwave Communications	Mid-South Communications
Nexuss Systems	NATCO
Ozark Telephone Company	PC Solutions
Paragould Light Water & Cable	Pine Bluff Cable TV
Prairie Grove Telephone & Internet	Resort TV
Pinnacle Communications	Rice Belt Telephone Co
RCC Wireless	Ritter Communications
South Arkansas Telephone Company	Scott County Telephone Company
Southwest Arkansas Telephone Cooperative	Skycasters
TDS Telecom	SkyNet DataCom
The Computer Works	Sprint
Velocity Broadband	Starband
Vue Wireless	Suddenlink Communications
Windstream	Townes Telecommunications
Wehco Video	T-Mobile
Yelcot Telephone Company	Verizon Wireless
	ViaSat
	Vineyard Media
	Walnut Hill Telephone Company
	WestWeb
	White County Cable TV