Department of Information Systems
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Mark Myers
Director

Asa Hutchinson
Governor

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June 30, 2015

Senator Bill Sample
Representative Stephen Meeks
Joint Committee on Advanced Communications and Information Technology
State Capitol, Room 315
Little Rock, AR 72203

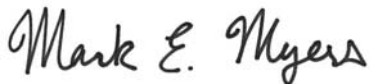Dear Senator Sample and Representative Meeks,

Pursuant to Act 1168 of 2013, I am pleased to submit the Arkansas State Broadband Manager's Report for the reporting period of January 1-June 30, 2015. Broadband is a powerful tool that can be leveraged by the state to improve education, economic development, improve citizen access to state services and Internet resources, and increase efficiency in state government.

A central focus of this report is to monitor where Arkansas currently ranks in broadband speed, technology, providers, and demographics compared to other state and national averages. These rankings help provide a representation of Arkansas's current overall broadband standing that can be used to measure the state's progress toward ensuring that broadband becomes readily available to all Arkansans regardless of geographical location.

This report illustrates the areas of the state where access to broadband exists and areas where expansion is needed. This report also showcases the public, private and legislative initiatives that reflect the commitment and financial investment being made in both the public and private sectors to help close Arkansas's digital divide.
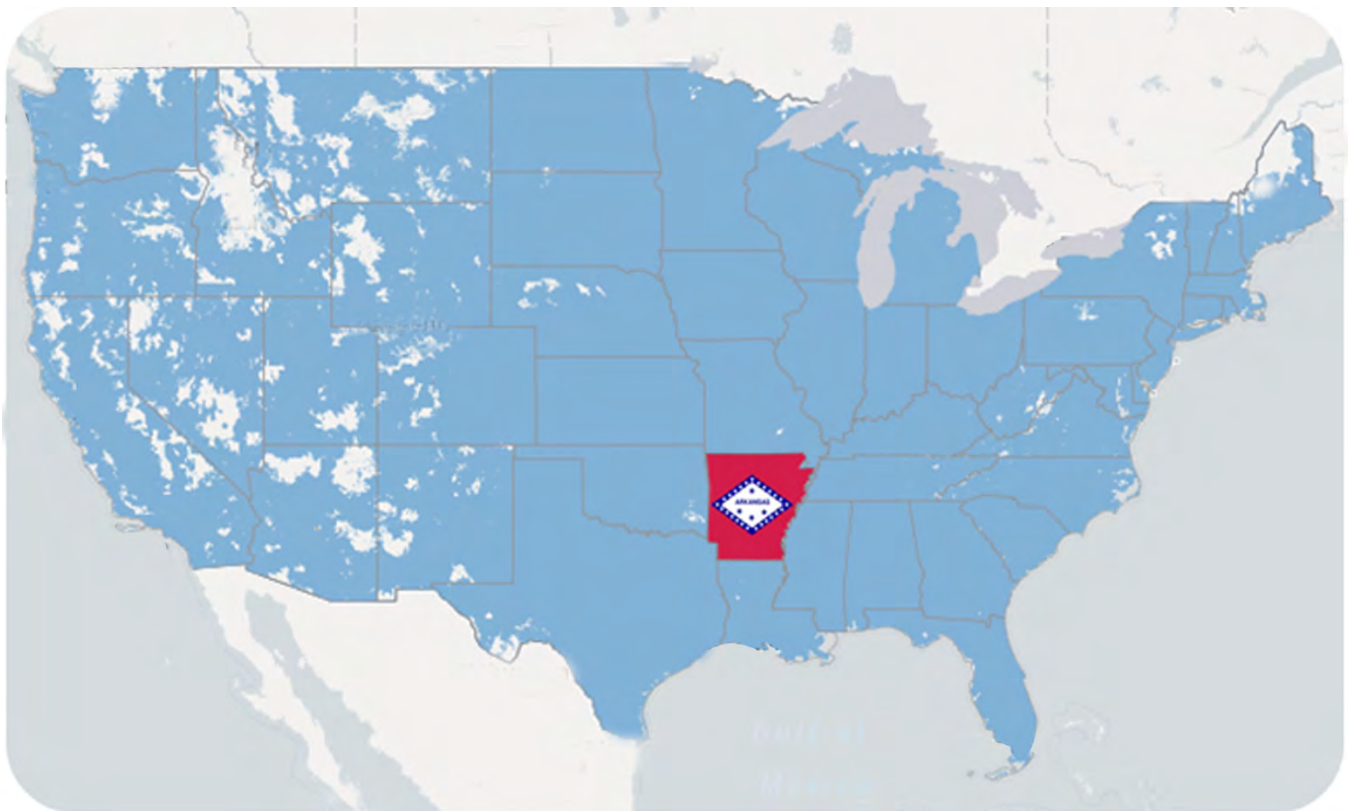
Please contact me personally by email at mark.e.myers@arkansas.gov or by phone at 501-682-2701with any questions or additional information about this report.

Sincerely,

Mark E. Myers
State Broadband Manager
State Chief Technology Officer
Director, Arkansas Department of Information Systems

ARKANSAS STATE BROADBAND MANAGER'S REPORT

PERIOD ENDING JUNE 30, 2015

Table of Contents

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 semiannual 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.

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 kilobits 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 25 megabits/second (Mbps) for downloading and at least 3 Mbps for uploading

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. In its 2015 Broadband Progress Report, the FCC indicated that advances in technology, market offerings by broadband providers and consumer demand prompted updating broadband benchmark speeds to 25 Mbps for downloads and 3 Mbps for uploads. The commission found that speeds established in 2010 were outdated and inadequate for evaluating whether advanced broadband is being efficiently deployed to Americans.

Source: https://www.fcc.gov/reports/2015-broadband-progress-report

What Do You Want/Need To Do Online?	What Speed Do You Need ?					
	1.5 Mbps	3 Mbps	5 Mbps	10 Mbps	20 Mbps	20+ Mbps
Web Surfing / Email / Online Shopping	✓	✓	✓	✓	✓	✓
Internet Phone / Music Streaming / Short Video Clips		✓	✓	✓	✓	✓
SD Video Streaming / Skype / Facetime			✓	✓	✓	✓
Online Video Gaming / HD Video Streaming / Online Education				✓	✓	✓
Multiple Heavy Users / Smart Home / Video Surveillance					✓	✓
Telemedicine / Video Conferencing / Super Computing						✓

Source: http://www.teammidwest.com/wp-content/uploads/2013/10/What-Speed-Do-You-Need.jpg

Key Findings: FCC 2015 Broadband Progress Report

- 17 percent of all Americans (55 million people) lack access to 25 Mbps/3 Mbps service.
- 53 percent of rural Americans (22 million people) lack access to 25 Mbps/3 Mbps.
    - Only 8 percent of urban Americans lack access to 25 Mbps/3 Mbps broadband.
    - Rural America continues to be underserved at all speeds: 20 percent lack access even to service at 4 Mbps/1 Mbps, down only 1 percent from 2011, and 31 percent lack access to 10 Mbps/1 Mbps, down only 4 percent from 2011.
- 63 percent of Americans living on Tribal lands (2.5 million people) lack access to 25 Mbps/3 Mbps broadband
    - 85 percent living in rural areas of Tribal lands (1.7 million people) lack access.
- 63 percent of Americans living in U.S. territories (2.6 million people) lack access to 25 Mbps/3 Mbps broadband.

- o 79 percent of those living in rural territorial areas (880,000 people) lack access.
- Overall, the gap in availability of broadband at 25/3 closed by only three percentage points last year, from 20 percent lacking access in 2012 to 17 percent in 2013
- Overall, the broadband availability gap closed by only three percent last year.
- Americans living in rural and urban areas adopt broadband at similar rates where 25 Mbps/ 3 Mbps service is available, 28 percent in rural areas and 30 percent in urban areas.
- Approximately 35 percent of schools lack access to fiber, and thus likely lack access to broadband at the Commission's shorter term benchmark (adopted in its July 2014 E-rate Modernization Order) of 100 Mbps per 1,000 users, and even fewer have access at the long term goal of 1 Gbps per 1,000 users.

Source: http://www.fcc.gov/reports/2015-broadband-progress-report

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?

The following rankings for Arkansas were compiled from data on the National Broadband Map in June 2015. The National Broadband map can be used to search, analyze and map broadband availability across the United States. This map has been used to generate broadband rankings for Arkansas compared to the rest of the nation. The National Broadband Map is a tool developed and maintained by the NTIA and FCC, in partnership with 50 states, five territories and the District of Columbia.

The following charts analyze broadband availability in Arkansas versus the United States based on speed, technology, number of providers and age demographic. All rankings and statistics are as of June 2015.

Technology
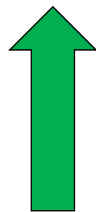
Technology: DSL, Fiber, Cable, Wireless, Other			
Ranking	**As of June '15**	**Ranking**	**As of December '14**
#1	New Jersey	#1	New Jersey
#36	**Arkansas**	**#39**	**Arkansas**
#56	U.S. Virgin Islands	#56	U.S. Virgin Islands

This chart indicates the percent of the state's population with Internet access by the type of technology compared to the percentage of the nation's population. The largest deficit is access to fiber. **Only 6.6 percent of Arkansans have access to fiber compared to 25.4 percent of the nation.**

2015

Technology	Arkansas		Nationwide
DSL	87.7%		90.0%
Fiber	6.6%		25.4%
Cable	74.8%		88.8%
Wireless	99.8%		99.4%
Other	0.0%		0.0%

Source   API Call

2014

Technology	Arkansas		Nation
DSL	86.4%		88.6%
Fiber	5.4%		24.3%
Cable	73.2%		88.1%
Wireless	99.0%		99.1%
Other	0.0%		0.0%

Source   API Call

Wireline Speed
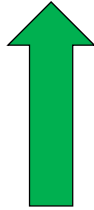
Speed: Download Greater Than 3 Mbps Upload Greater Than 0.768 Mbps			
Ranking	As of June '15	Ranking	As of December '14
#1	New Jersey	#1	New Jersey
#34	**Arkansas**	**#41**	**Arkansas**
#56	U.S. Virgin Islands	#56	U.S. Virgin Islands

This chart indicates the percent of the state's population with access to the listed **wireline** download speeds compared to the percentage of the nation's population.
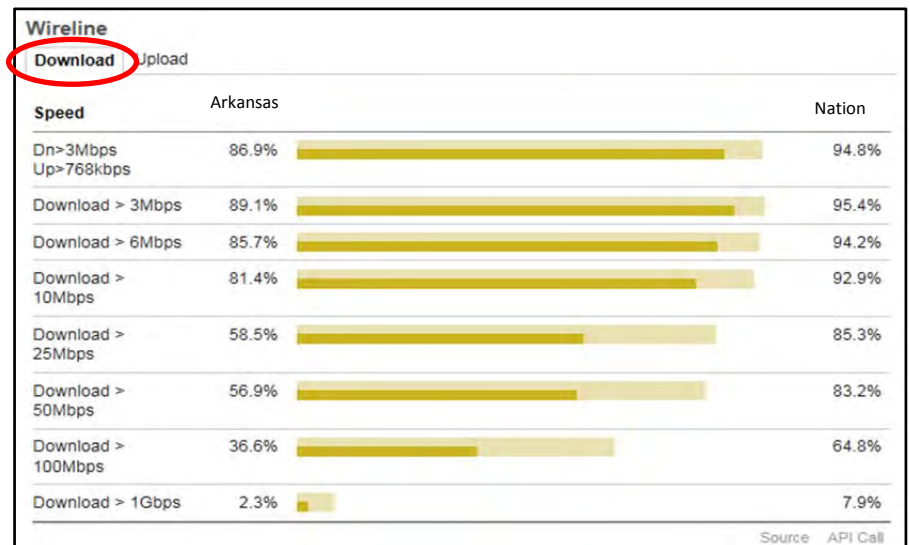
Wireline

Download Upload

Speed	Arkansas		Nation
Dn>3Mbps Up>768kbps	86.9%		94.8%
Download > 3Mbps	89.1%		95.4%
Download > 6Mbps	85.7%		94.2%
Download > 10Mbps	81.4%		92.9%
Download > 25Mbps	58.5%		85.3%
Download > 50Mbps	56.9%		83.2%
Download > 100Mbps	36.6%		64.8%
Download > 1Gbps	2.3%		7.9%

Source   API Call

This chart indicates the percent of the state's population with access to the listed **wireline** upload speeds compared to the percentage of the nation's population.

Wireline

Download **Upload**

Speed	Arkansas		Nation
Upload > 768kbps	88.4%		95.1%
Upload > 1.5Mbps	67.4%		90.7%
Upload > 3Mbps	48.9%		86.0%
Upload > 6Mbps	39.6%		64.2%
Upload > 10Mbps	39.0%		62.1%
Upload > 25Mbps	3.9%		27.5%
Upload > 50Mbps	3.7%		20.9%
Upload > 100Mbps	3.7%		18.3%
Upload > 1Gbps	2.3%		7.2%

Source   API Call
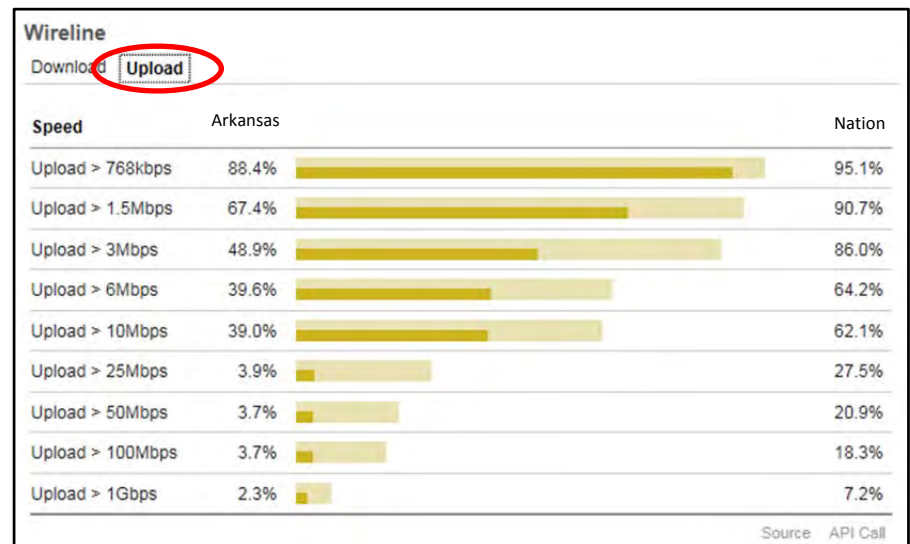
Wireless Speed

This chart indicates the percent of the state's population with access to the listed **wireless** download speeds compared to the percentage of the nation's population.

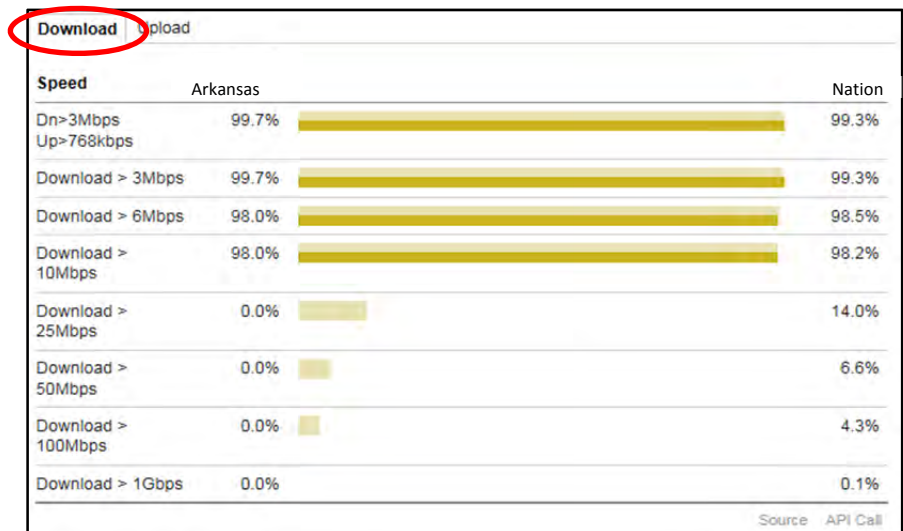| Speed	Arkansas		Nation
Download Upload			
Dn>3Mbps Up>768kbps	99.7%		99.3%
Download > 3Mbps	99.7%		99.3%
Download > 6Mbps	98.0%		98.5%
Download > 10Mbps	98.0%		98.2%
Download > 25Mbps	0.0%		14.0%
Download > 50Mbps	0.0%		6.6%
Download > 100Mbps	0.0%		4.3%
Download > 1Gbps	0.0%		0.1%

Source   API Call

This chart indicates the percent of the state's population with access to the listed **wireless** upload speeds compared to the percentage of the nation's population.

Speed	Arkansas		Nation
Download **Upload**			
Upload > 768kbps	99.7%		99.4%
Upload > 1.5Mbps	99.7%		99.3%
Upload > 3Mbps	98.0%		98.3%
Upload > 6Mbps	33.5%		75.5%
Upload > 10Mbps	0.0%		16.6%
Upload > 25Mbps	0.0%		9.3%
Upload > 50Mbps	0.0%		5.7%
Upload > 100Mbps	0.0%		3.9%
Upload > 1Gbps	0.0%		0.1%

Source   API Call
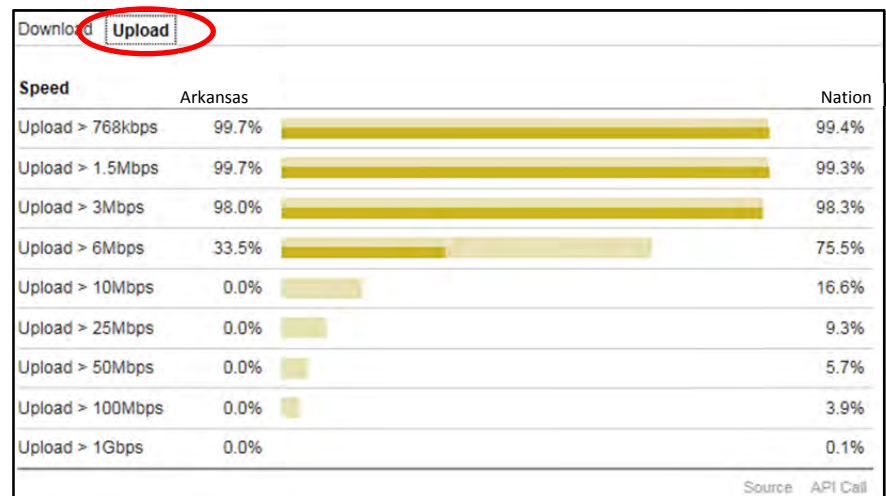
Median Download/Upload Broadband Speeds in Arkansas

Broadband Speed Test (Mbps)

Download Upload ▮ median speed (Mbps)

Location	Cumulative Tests			
Home	4,373	1.5	**4.8 Mbps**	10.4
Schools, Libraries, Community Centers	100	1.9	**7.6 Mbps**	17.7
Medium/Large Business	157	2.7	**10.1 Mbps**	17.5
Small Business	312	1.5	**4.2 Mbps**	10.4
Mobile	16,244	0.7	**2.0 Mbps**	5.6
Other	27	1.4	**3.2 Mbps**	17.2

Source   API Call

As of June 2015   0   17.7

Broadband Speed Test (Mbps)

Download **Upload** ▮ median speed (Mbps)

Location	Cumulative Tests			
Home	4,373	0.4	**0.7 Mbps**	2.6
Schools, Libraries, Community Centers	100	1.8	**7.2 Mbps**	14.2
Medium/Large Business	157	2.0	**6.3 Mbps**	11.8
Small Business	312	0.5	**1.0 Mbps**	3.8
Mobile	16,244	0.3	**0.7 Mbps**	1.8
Other	27	0.5	**0.9 Mbps**	4.7

Source   API Call

As of June 2015   0   17.7

Wireline Providers

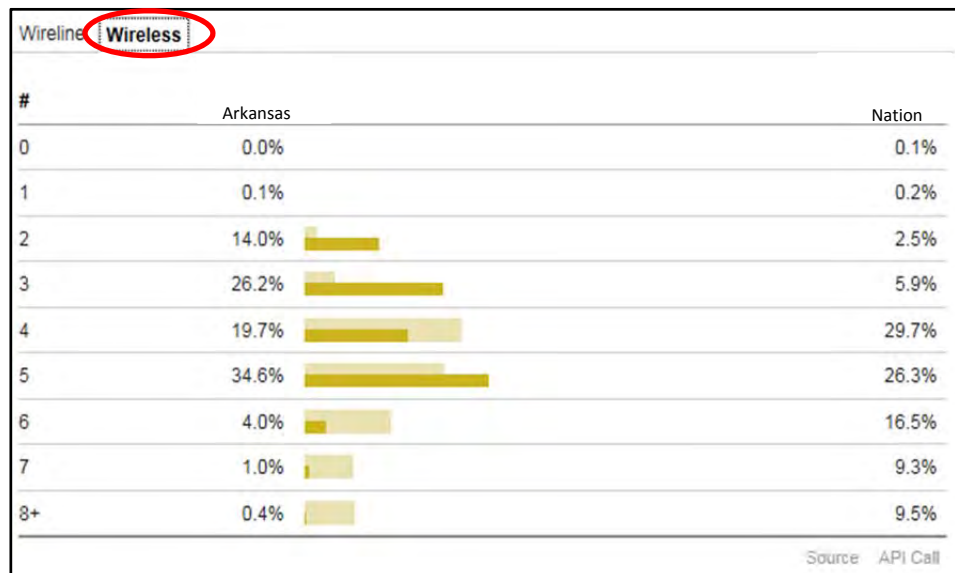| Providers: # of Wireline Providers Greater Than 3			
Ranking	**As of June '15**	**Ranking**	**As of December '14**
#1	Rhode Island	#1	Rhode Island
#50	**Arkansas**	**#50**	**Arkansas**
#56	Commonwealth of the Northern Mariana Islands	#56	Commonwealth of the Northern Mariana Islands

This chart shows how many **wireline** Internet service providers are available to the percentage of the state's population compared to the national percentages.

#	Arkansas	Nation
0	4.9%	3.0%
1	20.9%	8.8%
2	68.3%	32.4%
3	5.8%	36.9%
4	0.1%	13.7%
5	0.0%	3.6%
6	0.0%	1.3%
7	0.0%	0.4%
8+	0.0%	0.1%

Source   API Call
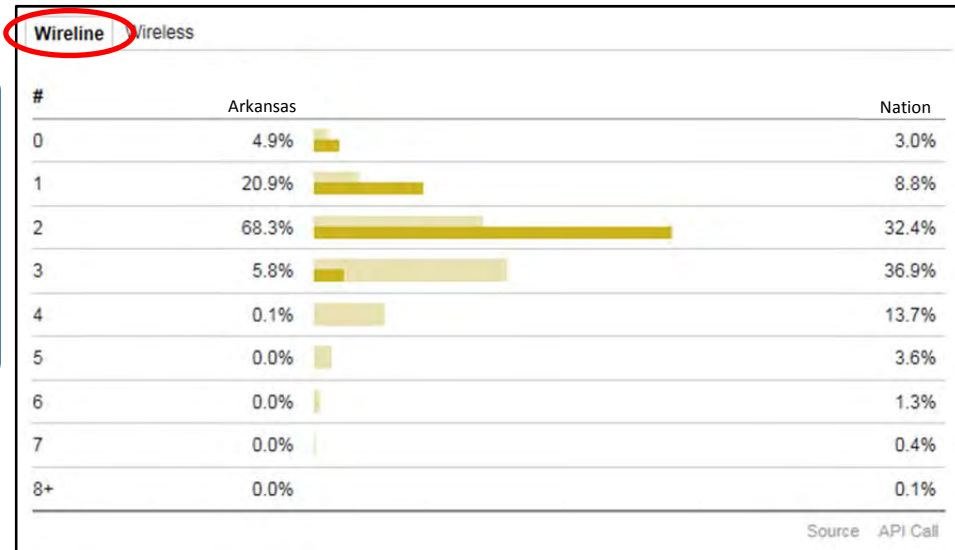
Wireless Providers

Providers: # of Wireless Providers Greater Than 3			
Ranking	As of June '15	Ranking	As of December '14
#1	District of Columbia	#1	District of Columbia
#47	**Arkansas**	**#46**	**Arkansas**
#56	Commonwealth of the Northern Mariana Islands	#56	Commonwealth of the Northern Mariana Islands

This chart shows how many **wireless** Internet service providers are available to the percentage of the state's population compared to the national percentages.
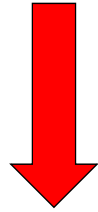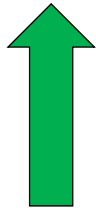
| #	Arkansas	Nation
0	0.0%	0.1%
1	0.1%	0.2%
2	14.0%	2.5%
3	26.2%	5.9%
4	19.7%	29.7%
5	34.6%	26.3%
6	4.0%	16.5%
7	1.0%	9.3%
8+	0.4%	9.5%

Source   API Call

Age Demographics

Age: Under 5			
Ranking	As of June '15	Ranking	As of December '14
#1	American Samoa	#1	American Samoa
#21	**Arkansas**	**#19**	**Arkansas**
#56	Vermont	#56	Vermont

Age: 5-19			
Ranking	As of June '15	Ranking	As of December '14
#1	American Samoa	#1	American Samoa
#17	**Arkansas**	**#19**	**Arkansas**
#56	District of Columbia	#56	District of Columbia
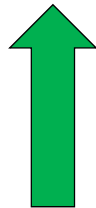
Age: 20-34			
Ranking	As of June '15	Ranking	As of December '14
#1	Commonwealth of the Northern Mariana Islands	#1	Commonwealth of the Northern Mariana Islands
#23	**Arkansas**	**#24**	**Arkansas**
#56	Florida	#56	Florida
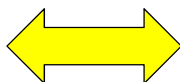
Age: 35-59			
Ranking	As of June '15	Ranking	As of December '14
#1	District of Columbia	#1	District of Columbia
#42	**Arkansas**	**#42**	**Arkansas**
#56	American Samoa	#56	American Samoa

Age: 60+			
Ranking	As of June '15	Ranking	As of December '14
#1	Florida	#1	Florida
#32	**Arkansas**	#31	**Arkansas**
#56	Commonwealth of the Northern Mariana Islands	#56	Commonwealth of the Northern Mariana Islands

The Federal Communications Commission released a report January 30, 2015, entitled Broadband Availability in America. According to report data, Americans residing in the states with the lowest population density are 10 times more likely to lack access to broadband than Americans residing in the states with the highest density.

Source: https://apps.fcc.gov/edocs_public/attachmatch/DOC-331734A1.pdf

FCC 25 Mbps/3 Mbps Broadband Deployment Map
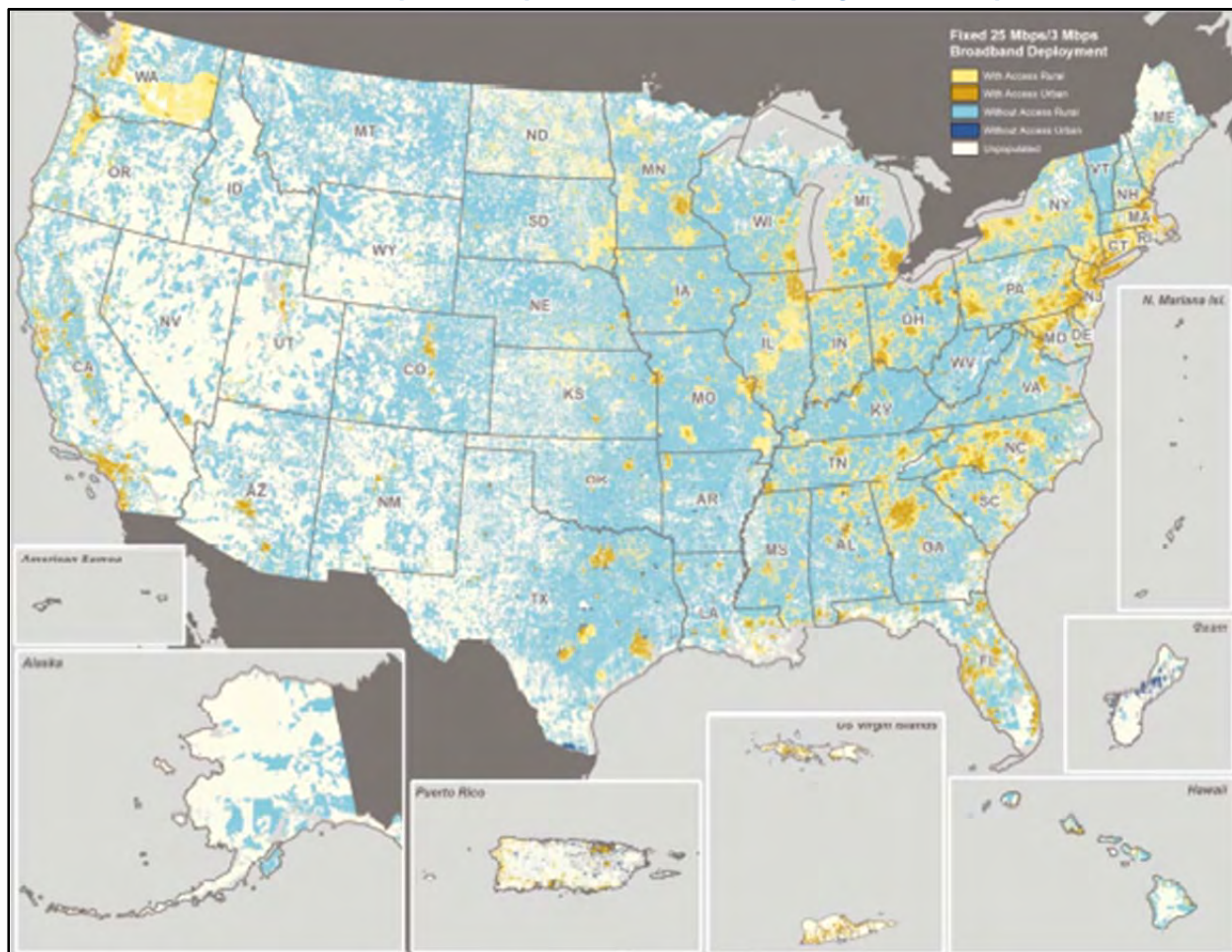
This chart from the report compares the population of Arkansans in rural areas without access to 25 Mbps/3 Mbps Broadband compared to the nation's population. (Population in millions)

	All Areas			Urban Areas			Rural Areas		
	Pop.	Pop. Without Access	% of Pop.	Pop.	Pop. Without Access	% of Pop.	Pop.	Pop. Without Access	% of Pop.
United States	321.325	54.560	17%	260.007	21.932	8%	61.318	32.628	53%
All States & the District of Columbia	317.264	51.988	16%	257.061	20.240	8%	60.203	31.748	53%
Arkansas	2.992	1.751	59%	1.704	0.668	39%	1.288	1.084	84%

Source: https://apps.fcc.gov/edocs_public/attachmatch/DOC-331734A1.pdf

Appendix I: Arkansans in rural areas without access to 25 Mbps/3 Mbps Broadband compared to the nation's population.
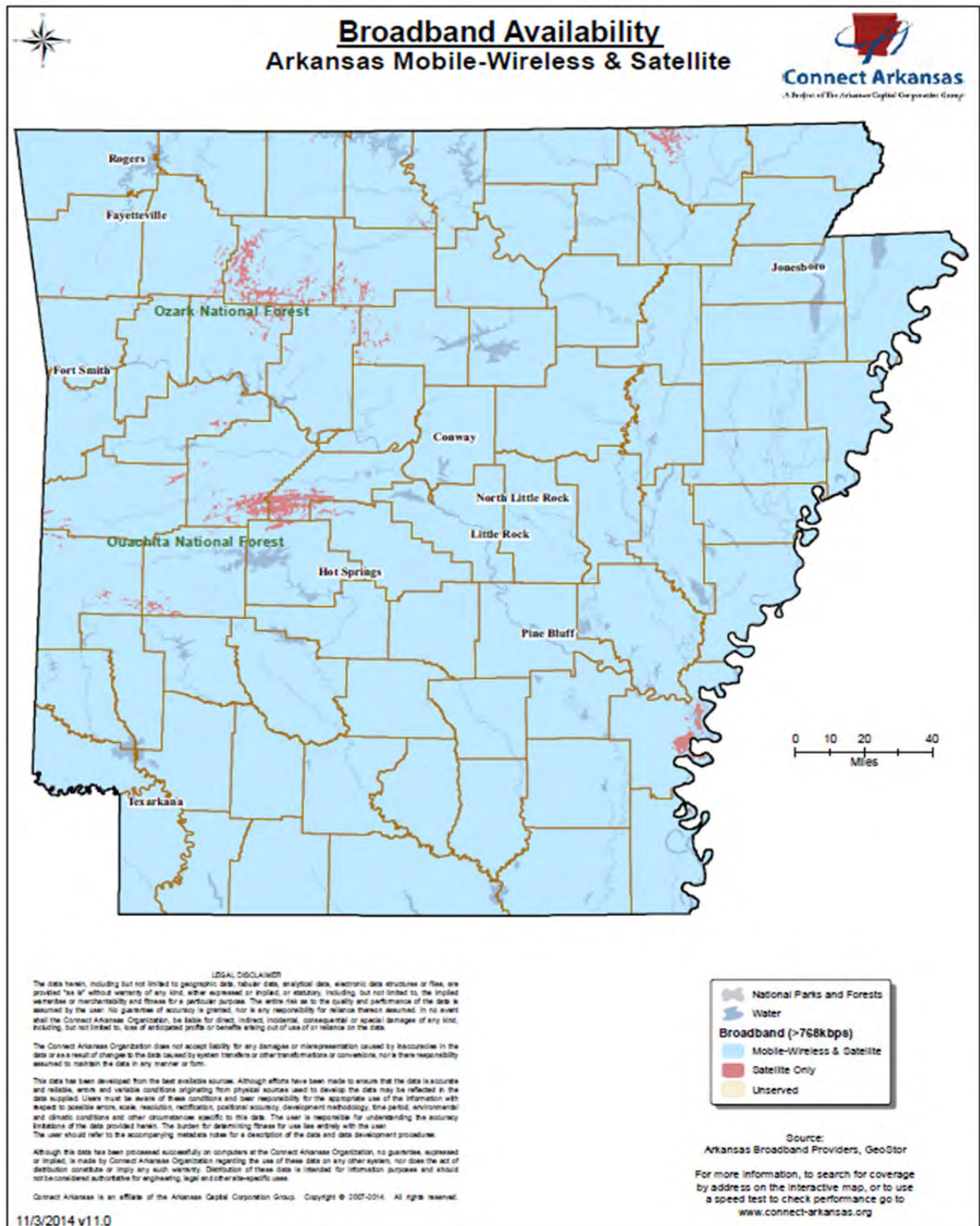
This chart from the FCC's Broadband Progress report compares the population of Arkansans without access to 3 Mbps/768 kbps or 10 Mbps/768 kbps services compared to the nation's population. (Population in millions)

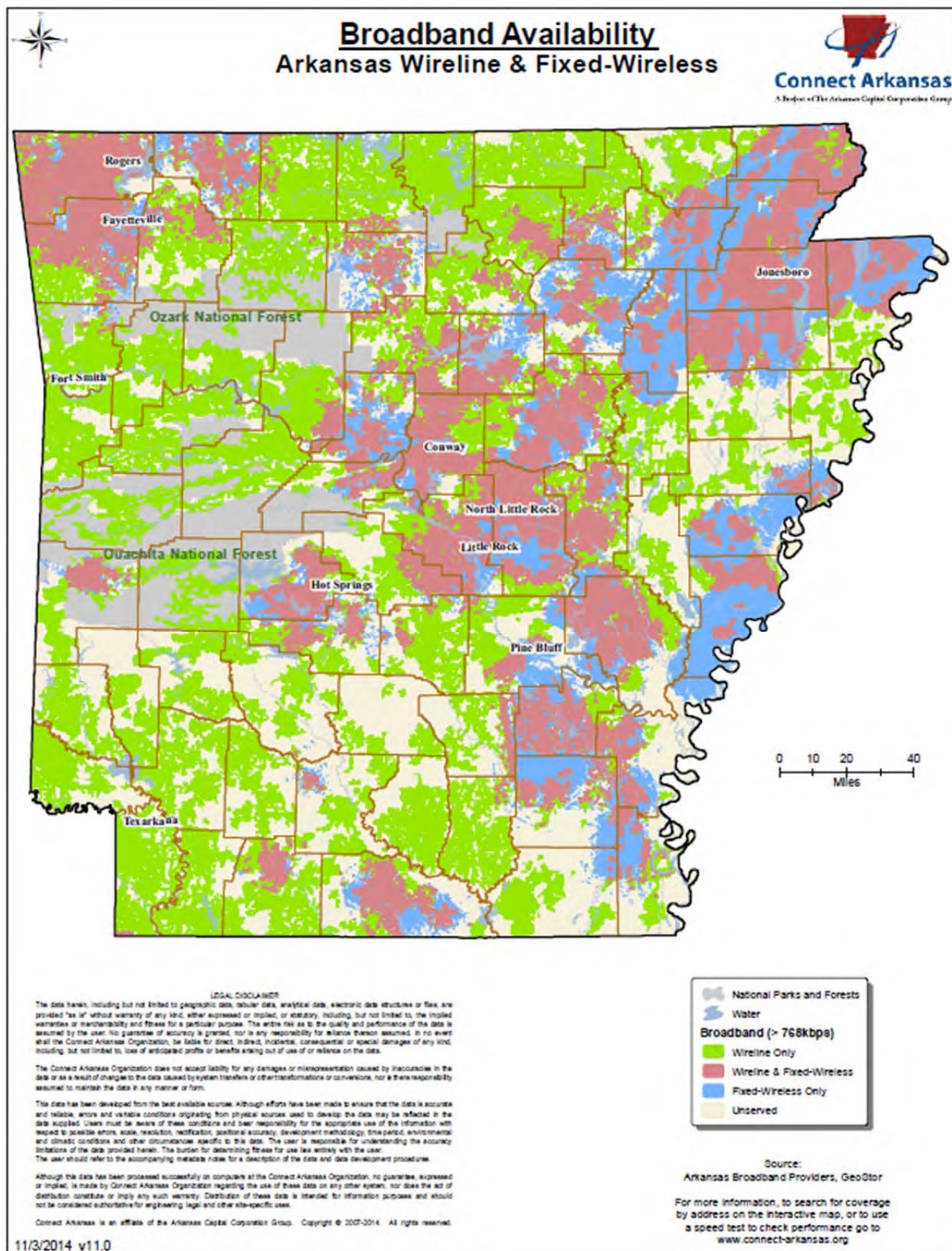| Area	Pop. Without Access to 3 Mbps/768 kbps	% of Pop.	Pop. Without Access to 10 Mbps/768 kbps	% of Pop.
United States	13.844	4%	22.64	7%
Arkansas	0.401	13%	0.669	22%

Source: https://apps.fcc.gov/edocs_public/attachmatch/FCC-15-10A1.pdf

Appendix II: Arkansans without access to 3 Mbps/768 kbps or 10 Mbps/768 kbps services compared to the nation's population.

Source: Connect Arkansas, Arkansas broadband providers, GeoStor, Nov. 2014. Source website has been deactivated and is no longer available.

Broadband Availability
Arkansas Wireline & Fixed-Wireless

Connect Arkansas
A Project of The Arkansas Capital Corporation Group

Legend:
- National Parks and Forests
- Water

Broadband (> 768kbps)
- Wireline Only
- Wireline & Fixed-Wireless
- Fixed-Wireless Only
- Unserved

Source:
Arkansas Broadband Providers, GeoStor

For more information, to search for coverage by address on the interactive map, or to use a speed test to check performance go to www.connect-arkansas.org

11/3/2014 v11.0

Source: Connect Arkansas, Arkansas broadband providers, GeoStor, Nov. 2014. Source website has been deactivated and is no longer available.

Public, Private and Legislative Initiatives to Expand and Improve Broadband Availability, Affordability and Adequacy during the January 1-June 30, 2015, Reporting Period.

Public Initiatives

Arkansas Broadband Council

Arkansas Department of Education

Arkansas Public School Computer Network (APSCN-Department of Information Systems)

Arkansas Research Education Optical Network (ARE-ON)

Arkansas State Broadband Manager (Department of Information Systems)

Connect America Fund (FCC)

Connect Arkansas

> Statewide Broadband Survey
>
> Adult Digital Literacy Classes
>
> Job Skills Boot Camps
>
> Discount Computer Program
>
> Computers 4 Kids
>
> County Website Development
>
> Senior Digital Literacy

E-Rate: Arkansas Department of Education and Department of Information Systems

E-Rate: FCC

FASTERArkansas

Federal Broadband Opportunity Council

Federal Communications Commission (FCC)

National Telecommunications and Information Administration (NTIA)-BroadbandUSA

Next Generation State Network

Public Safety Broadband (Federal and State)

UAMS Center for Distance Health and Arkansas e-Link

USDA Community Connect Grants

Arkansas Broadband Council

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

January 2015: ABC released its regular report on deployment in the state, limiting factors to expansion, and recommendations for the executive and legislative branches.

Arkansas Department of Education

Arkansas Department of Education (ADE) assisted the Department of Information Systems (DIS) in its process of issuing an Invitation for Bids (IFB) and thereafter procuring services from a number of vendors to upgrade the Arkansas Public School Computer Network (APSCN) between July 1, 2015 and June 30, 2017. Following these upgrades, APSCN will function as an aggregated network and will be able to bring bandwidth of no less than 100Kbps/user for every school district on the network (with a minimum of 100Mbps, cumulatively, for each school district on the network). The minimum level of bandwidth will be paid by ADE.

October 2014-June 2015: Broadband Facilities Grant
More than $4 million of $5 million in available funds was awarded through the Broadband Facilities Grant Program to school districts across the state for E-rate eligible services that increase access to broadband. Preference was given for new metropolitan area networks (MANs) and upgrades to existing MANs. A tiered system was used to determine funding priority:

     Tier 1 – E-rate eligible new MANs (Local Loops)
     Tier 2 – E-rate eligible upgrades to existing MANs (Local Loops)
     Tier 3 – E-rate eligible network charges that Increase broadband access

There is a need for further funding of this program in order to aid school districts that must have a completed MAN in place as a prerequisite to joining the improved APSCN.

March 17, 2015: ADE issued a Commissioner's Memo transitioning the procurement of broadband on behalf of the state's public schools back to DIS and announcing an invitation for bids by DIS to provide pricing for broadband services.
Appendix III: ADE Commissioner's Memos

April 23, 2015: ADE issued a Commissioner's Memo announcing the project to upgrade APSCN to provide high speed broadband to K-12 public school.
Appendix III : ADE Commissioner's Memos

April 23, 2015: The ADE commissioner and DIS director co-authored a guest column in the Arkansas Democrat Gazette announcing the project to upgrade the Arkansas Public School Computer Network (APSCN).

Source: http://www.arkansasonline.com/news/2015/apr/23/top-of-the-class-20150423/

Arkansas Public School Computer Network (APSCN-Department of Information Systems)

The Arkansas Public School Computer Network (APSCN) is the statewide computer network linking the administrative functions (financial and student data) and digital learning tools of Arkansas public school districts to a central computer in Little Rock.

February 20, 2015: DIS issued an invitation for bids for K-12 high bandwidth transport and Internet through the Office of State Procurement.
http://www.arkansas.gov/dfa/procurement/bids/bid_info.php?bid_number=SP-15-0068

March 9, 2015: Bid opening date with 17 vendor bids received. DIS normally receives 5 - 6 responses to a statewide bid.

March 25, 2015: Met with the executive director of ARE-ON to discuss how APSCN could be connected to Internet2.

April 9, 2015: Bid SP-15-0068 was awarded to12 bidders.

April 2, 2015: DIS issued a solicitation DIS-15-0068 to give providers an opportunity to bid on the K-12 broadband project for where the state was not successful in the bid issued on February 20, 2015.

April 10, 2015: Solicitation opening date with 19 bids received.

April 14, 2015: Solicitation was awarded to16 bidders (total of 21 vendors between the bid and the solicitation).

April 20, 2015: The DIS APSCN LAN support personnel a started a two week process of calling all the school district tech coordinators to get updated information on their current networks including their dedicated Internet contract end dates and termination clauses. This included answering school district questions on the process to move their Internet access to the new Improved APSCN network and how they could get their served school buildings connected to their district hubs. Many vendor calls were also held so that DIS could answer their questions.

May 20, 2015: Met with the executive director of ARE-ON to discuss what DIS needs to do to move forward an agreement for the use of rack space and power in seven ARE-ON huts.

May 2015: Work to upgrade the APSCN infrastructure from copper to fiber optic cable began.

Arkansas Research Education Optical Network (ARE-ON)

ARE-ON continues to work to provide a quality and reliable networking service to its member institutions in support of their research, education, healthcare, emergency preparedness, and public service missions. During the first half of calendar year 2015, ARE-ON officially adopted an uncapped bandwidth model for all of its members' network transit services, including commodity Internet service and access to national and regional research and education networks. In addition, ARE-ON has launched an initiative to install and

Network Map

implement a new Tier 1 help desk and network monitoring service that will provide a higher level of service to its members in its efforts to improve response time to problems and reduce downtime. Additional new caching services were also installed in February 2015 to bring network content closer to ARE-ON's members in order to reduce latency and improve network response.

ARE-ON's member institutions continue to use the ARE-ON backbone network to implement disaster recovery backup and continuity of operations plans. Typical uses have been to place network storage and servers at data centers located at ARE-ON member institutions elsewhere in the state and to use the capacity of the ARE-ON network to backup data and applications in the event the production services are lost due to network failure or should the physical facility be rendered inoperable.

In its efforts with the University of Arkansas, Fayetteville, and a grant funded through the National Science Foundation, ARE-ON has continued a project to bring 100G connectivity to the U of A campus, with implementation scheduled in the latter half of 2015. This project is anticipated to be the lead-in to additional 100G connectivity within the ARE-ON backbone to support network-intensive research and computing throughout ARE-ON's member institutions.

Arkansas State Broadband Manager (Department of Information Systems)

The role of the Arkansas state broadband manager is to promote, develop, and coordinate broadband expansion and appropriate broadband infrastructure for all areas of the state.

January 2015: State broadband manager, ADE commissioner, Governor Hutchinson, telecommunications providers participated in a series of meetings to formulate a plan to address bandwidth needs for K-12 broadband to meet federal and state education bandwidth requirements.

January 28, 2015: Broadband planning and coordinating staff of the state broadband manager participated in a webinar introducing the BroadbandUSA initiative and to hear more about the support BroadbandUSA can offer to promote public-private partnerships to expand broadband.

February 4, 2015: Broadband planning and coordinating staff of the state broadband manager attended a regional broadband workshop in Jackson, MS, that featured successful community broadband projects from across the Gulf Region and explored ways to continue building local broadband adoption and capacity. The workshop encompassed local and state leaders, federal officials, industry representatives, community advocates and others working to close the digital divide in the southern region.

April 22, 2015: The state broadband manager delivered a presentation about plans to upgrade APSCN to provide all K-12 public school districts access to high speed broadband connectivity.

April 23, 2015: The state broadband manager/DIS director and ADE commissioner co-authored a guest column in the Arkansas Democrat Gazette announcing the project to upgrade the Arkansas Public School Computer Network (APSCN).

Source: http://www.arkansasonline.com/news/2015/apr/23/top-of-the-class-20150423/

April 24, 2015: The state broadband manager/DIS director issued a news release to the media about the APSCN upgrade project.

Source: http://www.arkansas.gov/dis/newsroom/index.php?do:newsDetail=1&news_id=162

June 17, 2015: The state broadband manager/DIS director announced that the upgraded APSCN will provide 200 Kbps per user instead of 100 Kbps per user as originally planned.

Connect America Fund (FCC)

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 FCC 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.

April 29, 2015: Taking a major step to close the rural broadband gap, the Connect America Fund offered carriers nearly $1.7 billion to expand and support broadband service in rural areas where market forces alone cannot support deployment.

The offer to the rural operations of the largest telecom providers – known as price cap carriers – would provide ongoing support for networks that can deliver broadband at speeds of at least 10 Mbps for downloads and 1 Mbps uploads to nearly nine million rural residents nationwide. The funding represents a 71 percent increase from current funding for these areas, but is accomplished without increasing the size of the Universal Service Fund – or increasing ratepayer fees.

Source: https://www.fcc.gov/document/model-based-support-offers-pn

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 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."**

> ** Connect Arkansas was supported by two federal American Recovery and Reinvestment Act (ARRA) grants, several grants from other sources and most recently two state grants through the Arkansas Science and Technology Authority and the Arkansas Economic Development Commission. Connect did not receive funding in the 2015 legislative session and will be closing operations effective June 30, 2015.

December 2014-February 2015: Statewide Broadband Survey
Connect Arkansas partnered with Strategic Networks Group (SNG) (the world's leading broadband economists) to survey 1,532 businesses across the state to gain an understanding of the importance of broadband to economic development in Arkansas. The findings are significant:
- Broadband is key to both attracting & retaining businesses.

Two in five (39.6 percent) Arkansas businesses say that broadband service was "essential" in selecting their current business location and nearly three in five (58.3 percent) say broadband is "essential" for remaining in their current location.

- Broadband is currently responsible for three in 10 new Arkansas jobs and a quarter of Arkansas business' revenues. In Arkansas, total job impact from broadband represents 29.4 percent of all new jobs. Current level of Internet application utilization accounts for 24.7 percent of overall revenues and cost savings averaging 6.6 percent.

  Smaller, rural businesses need help in how to use the Internet and broadband to effectively benefit from the digital economy. The smaller a business, the lower the Internet application utilization. The more rural an organization, regardless of connection speed, the lower the level of utilization.

- Only 40.3 percent of businesses sell goods and services online and just over 36.8 percent deliver services and content online. Barriers are evident as nearly half (46.4 percent) of surveyed Arkansas businesses state that they are not taking full/better advantage of broadband and its solutions because of a lack of in-house knowledge while 31.4 percent are not utilizing the Internet because they don't fully understand the benefits.

SNG provided Arkansas with an eStrategy report containing multiple recommendations. One key recommendation from the report is to focus on helping to drive Internet utilization within the small-to-medium enterprise segment (less than 100 employees) to drive competitiveness, revenues, and job creation with additional effort placed on businesses in non-metropolitan areas. Smaller businesses generally have lower utilization of Internet applications than larger businesses; meaning small businesses could potentially make the greatest gains.

SNG also delivered 100 small businesses within Arkansas with Internet Utilization Scorecards to show the potential economic impact and financial benefits that can be realized through Internet applications. By taking a random sampling of 100 businesses across the state, including 49 in Faulkner County, SNG and Connect Arkansas provided recommendations for most businesses. Over 90 percent had at least one recommendation for increasing utilization based on their current activities. The Utilization Scorecard contains up to three recommendations along with the average ROI received by the business' peers from implementing the same Internet application.

January 1-June 30, 2015: Adult Digital Literacy Classes
Free adult digital literacy classes are each 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 and Using Email Effectively, Facebook, Pinterest, Excel and Word. The program averages 175 participants per month, with approximately 61 hours of classes each month.

January: Conducted 42 classes serving 110 people in the following locations and/or counties: Marvell in Phillips County, Mt. Ida in Montgomery County, Rison in Cleveland County, Dumas in Desha County, Prescott in Nevada County, Helena in Phillips County, Beebe in White County, Russellville in

Pope County twice, Forrest City in St. Francis County, Bradford in White County, and Charleston in Franklin County.

February: Conducted 30 classes serving 81 people in the following locations/counties:
Lake Village in Chicot County, Mena in Polk County, El Dorado in Union County, De Queen in Sevier County, Pine Bluff in Jefferson County, McCrory in Woodruff County twice, Jasper in Newton County, Wynne in Cross County, Wilson in Mississippi County twice, Piggott in Clay County, Pocahontas in Randolph County, Dover in Pope County, and Atkins in Pope County.

March: Conducted 95 classes serving 342 people in the following locations/counties:
Marvell in Phillips County, Helena in Phillips County, Ashdown in Little River County, Nashville in Howard County, Warren in Bradley County, Prescott in Nevada County, Dumas in Desha County, Monticello in Drew County, Murfreesboro in Pike County, McCrory in Woodruff County, Russellville in Pope County three times, Wynne in Cross County, Wilson in Mississippi County twice, Bradford in White County, Piggott in Clay County, Pocahontas in Randolph County, and Dardanelle in Yell County.

April: Conducted 93 classes serving 363 participants in the following locations/counties:
Magnolia in Columbia County, DeQueen in Sevier County, Lake Village in Chicot County, Mt. Ida in Columbia County, Mena in Polk County, Pine Bluff in Jefferson County, Monticello in Drew County, Murfreesboro in Pike County, Searcy in White County, Dover in Pope County, Russellville in Pope County, Batesville in Independence County, Searcy in White County, Charleston in Franklin County, Marshall in Searcy County, Highland in Sharp County, Woolfolk in Crittenden County, Salem in Fulton County, Blytheville in Mississippi County, Paris in Logan County twice.

May: Conducted 40 classes serving 147 people in the following locations/counties:
Helena in Phillips County three times, Nashville in Howard County, Ashdown in Little River County, Marvell in Phillips County, Stuttgart in Arkansas County, Prescott in Nevada County, Russellville in Pope County three times, Batesville in Independence County, Jasper in Newton County.

January-June 2015: Job Skills Boot Camps
This quarter also saw Connect Arkansas institute Job Skills Boot Camps in Russellville and Helena.
Appendix V: Connect Arkansas institute Job Skills Boot Camps Curriculum

January 1-June 20, 2015: Discount Computer Program
Connect Arkansas continues to work with PCRR (PC Rebuilders and Recyclers, Inc.) on the Discount Computer program which offers refurbished computers for sale directly from a Microsoft approved recycling companies at a reduced rate and shipped directly to the consumer. The computers offered have been upgraded to include multiple levels of options on desktops and to include laptops, for a total of five options available to consumers at a discounted rate.

Those purchasing computers use the Connect Arkansas discount code to receive the special rate.

We have featured the discount program in our e-newsletters and in advertising that continued from the holiday season through the spring. Calls went up markedly and PCRR has reported increased sales. An additional feature targeted to non-profits, schools and libraries expanded the program as well. Sales went

from only 7 purchases in a six month period to over 32 in a four month period, a nearly 500percent increase.

January 1-June 30, 2015: Computers 4 Kids

Computers for Kids is a program for families with 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. By the end of May 2015, nearly 2,800 computers had been donated to families statewide. Pre and post class surveys indicate high satisfaction with the classes and a willingness to subscribe to Internet access as a result of the program, with 65 percent of program graduates currently using broadband in the home.

January: 39 computers donated to families in Sebastian County February: 32 computers donated to families in Montgomery County

March: 23 computers donated to families in Pope County

April: 18 computers donated to families in Franklin County, 33 computers donated to families in St. Francis County

May: 44 computers donated to families in White County

June: up to 50 computers will be donated to families in Drew County.

January 1-June 30, 2015: County Website Development

Connect Arkansas, working with the Information Network of Arkansas (INA), offers support to county governments desiring to establish an effective, interactive website. A full third of Arkansas' counties have websites made possible through this program. INA provides 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, business and tourism promotion, and through use of online payment processes, an increase in tax receipts. All 26 county websites sponsored by Connect Arkansas are up and on-line. Some of those recently engaged have limited content, however. County government staff has been trained and are working on content entry. Hot Spring and Randolph Counties were the most recent website to complete their full content development at http://randolphcounty.arkansas.gov and http://hotspringcounty.arkansas.gov. Of the remaining three incomplete websites, Clark has information posted on some departments, with Dallas and Conway counties still accumulating data.

The full list of Connect Arkansas-sponsored interactive county government websites include: Ashley, Calhoun, Chicot, Clark, Clay, Cleveland, Conway, Crittenden, Dallas, Desha, Drew, Fulton, Hot Spring, Howard, Jefferson, Johnson, Lee, Lincoln, Marion, Monroe, Nevada, Phillips, Prairie, Randolph, Sharp, and Woodruff.

January 1-June 30, 2015: Senior Digital Literacy

The Senior Digital Literacy program provides computer training targeted specifically to senior citizens, a population identified as least likely to be Internet proficient. However, the senior population has seen a 6percent growth nationally in Internet use in the past year, and many areas of the state are clamoring for senior training. These classes are three hours in length and are most often held at senior

centers or libraries. Instructors and curriculum come to us from the University of Arkansas at Monticello. We have continued to run Senior Digital Literacy classes, Adult Digital Literacy classes and Computers for Kids (C4K) classes in a geo-targeting pattern whenever practical. Classes have been split into *Beginner* and *Advanced* in some high attendance areas.

The following classes were held in January to complete the program:
1. West Memphis in Crittenden County, beginner and advanced
2. Rison in Cleveland County, beginner and advanced
3. Batesville in Independence County scheduled in conjunction with Computers 4 Kids.

E-Rate: Arkansas Department of Education and Department of Information Systems

October 2014-June 2015: Broadband Facilities Grant

More than $4 million of $5 million in available funds was awarded through the Broadband Facilities Grant Program to school districts across the state for E-rate eligible services that increase access to broadband. Preference was given for new metropolitan area networks (MANs) and upgrades to existing MANs. A tiered system was used to determine funding priority:

Tier 1 – E-rate eligible new MANs (Local Loops)

Tier 2 – E-rate eligible upgrades to existing MANs (Local Loops)

Tier 3 – E-rate eligible network charges that Increase broadband access

There is a need for further funding of this program in order to aid school districts that must have a completed MAN in place as a prerequisite to joining the improved APSCN.

March 11, 2015: The Department of Information Systems submitted a waiver to an FCC rule requiring E-rate applicants to have a signed contract in place prior to filing an application for E-rate support with respect to its funding requests seeking E-rate support for priority one services in funding years 2012, 2013 and 2014.

April 29, 2015: The FCC granted the March 11, 2015, waiver request by the Department of Information Systems to have a signed contract in place prior to filing an application for E-rate support with respect to its funding requests seeking E-rate support for priority one services in funding years 2012, 2013 and 2014.

E-Rate: Federal Communications Commission (FCC)

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.

April 8, 2015: The Wireline Competition Bureau and the Office of Strategic Planning & Policy Analysis announce that a public workshop will be held to provide schools, libraries, providers, and state and local policy makers with information and tools for planning fiber build projects under the new E-rate

rules. The workshop will be held on May 20, 2015 starting at 1 p.m., at FCC headquarters in Washington, DC.

Source: https://www.fcc.gov/document/public-workshop-e-rate-funded-fiber-builds-be-held-may-20-2015

FASTERArkansas

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.

All broadband-related activities by this initiative appear to have been indefinitely suspended. There has been no activity on the FASTERArkansas website since the previous reporting period. FASTERArkansas's social media sites have also been deactivated.

Federal Broadband Opportunity Council

The Broadband Opportunity Council was established by President Barack Obama, March 23, 2015. The function of the Broadband Opportunity Council is to consult with state, local, tribal, and territorial governments, as well as telecommunications companies, utilities, trade associations, philanthropic entities, policy experts, and other interested parties to identify and assess regulatory barriers and opportunities to determine possible actions. The council is made up of 25 federal agencies co-chaired by the Departments of Agriculture and Commerce.

April 28, 2015: Broadband Opportunity Council announced it is seeking public comment on how federal agencies can promote broadband deployment, adoption and competition. In a request for comment (RFC), the BOC is asking public for input in helping to identify regulations and other barriers that are hampering deployment of broadband. The RFC also is seeking recommendations on ways to promote public and private investment in broadband and get a better understanding of the challenges facing areas that lack access to broadband.

May 20, 2015: To explain the request for comment's purpose and objectives and to allow an opportunity for members of the public to pose questions regarding the RFC, the Rural Utilities Service (RUS) and National Telecommunications and Information Administration (NTIA) hosted a webinar.

Federal Communications Commission (FCC)

January 30, 2015: The FCC released its Broadband Availability in America report.
Source: https://apps.fcc.gov/edocs_public/attachmatch/DOC-331734A1.pdf

February 2015: The FCC released its 2015 Broadband Progress Report for broadband deployment in the United States.
Source: https://apps.fcc.gov/edocs_public/attachmatch/FCC-15-10A1.pdf

February 26, 2015: The FCC Grants Petitions to Preempt State Laws Restricting Community Broadband in North Carolina, Tennessee
Source: https://apps.fcc.gov/edocs_public/attachmatch/FCC-15-10A1.pdf

May 28, 2015: The FCC chairman shared a proposal to restructure the commission's Lifeline program to help low-income consumers afford essential communications services, including broadband.
Source: http://transition.fcc.gov/Daily_Releases/Daily_Business/2015/db0528/DOC-333686A1.pdf

National Telecommunications and Information Administration (NTIA)-BroadbandUSA

The BroadbandUSA initiative by the NTIA is aimed at finding new ways to assist communities seeking to ensure their citizens have the broadband capacity they need to advance economic development, education, health care, and public safety.

January 14, 2015: BroadbandUSA initiative launched by NTIA.
Source: http://www2.ntia.doc.gov/ntia_announces_broadbandusa_effort

March 23, 2015: NTIA's State Broadband Initiative (SBI), which funded grants to collect the data used in the Broadband Map, is coming to a close. NTIA is transitioning the broadband map to our long-standing partner, the FCC, which will collect data as part of its 477 data collection program.
Source: http://www2.ntia.doc.gov/national-broadband-map-has-helped-chart-broadband-evolution

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.

This project has been completed and is fully implemented. Further activities for this report are not anticipated.

Public Safety Broadband (Federal and State)

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

March 23, 2015: The U.S. Commerce Department's National Telecommunications and Information Administration (NTIA) announced it will be releasing the second phase of previously-awarded grant funding for states and territories to begin collecting data necessary to plan for the nationwide public safety broadband network being developed by the First Responder Network Authority (FirstNet).

Arkansas will utilize its existing Arkansas Interoperable Communications Committee (AICC), Arkansas Interoperable Communications Executive Committee (AICEC), and the recently established Arkansas Public Safety Broadband Network (APSBN) Working Group to implement the State and Local Implementation Grant Program (SLIGP). The State plans to update its Statewide Communication Interoperability Plan as part of the program, and will use the AICC, APSBN

Working Group, and Rural Leadership Council as primary vehicles for education and outreach to local jurisdictions.

SLIGP Grant Award	$1,595,711
Non-Federal Match	$506,763
Total Project	$2,102,474
Single Point of Contact	David Maxwell Director **Arkansas Department of Emergency Management**

January 1-June 30, 2015: Arkansas Public Safety Broadband Network (APSBN) engaged in social media activities with the following analytics for the first half of 2015.

Facebook: 204 new likes for Q1 (521 followers total)

      Jan – 33 new likes

      Feb – 43 new likes

      March – 128 new likes

Twitter: 57 new followers, 166 profile visits for Q1 (152 followers total)

      Jan – 20 new followers, 80 profile visits

      Feb – 15 new followers, 39 profile visits

      March – 22 new followers, 47 profile visits

APSBN Webpage: Approx. 350 total visits

LinkedIn:

      Total = 3 new members for Q1 (81 members total)

January 1-June 30, 2015: Meetings
1. Communications Tabletop Exercise for Central Arkansas at Jacksonville Police Department
2. APSBN Presentation at ADEM Mid-Year Conference
3. APSBN Presentation at North Central Preparedness Drill/Tabletop Exercise, Ozark Folk Center, Mountain View, Stone County – 127 people from approx. 8 North Central Arkansas Counties
4. Arkansas Initial Consultation with FirstNet (approx. 93 public safety & government representatives from the State of Arkansas)

January 1-June 30, 2015: Conferences & Other
1. Texas/FirstNet Consultation Meeting in Austin, TX
2. FirstNet State Point of Contact meeting in Reston, VA
3. APCO Public Safety Broadband Summit in Washington, DC

4. Public Safety Research Council Public Safety Broadband Stakeholder Conference in San Diego, CA

January 1-June 30, 2015: Media & Other Materials Created
- Use Case Videos: Interviewed responders & created four videos to present to FirstNet during Initial Consultation representing public safety events in Arkansas. These videos will be uploaded to our website for reference after the Initial Consultation.
- Conference Booklet: Created a 38-page consultation booklet outlining public safety broadband efforts in the state of Arkansas, as well as areas of concern and other information – presented to FirstNet representatives & Arkansas attendees during the Initial Consultation Meeting May 14
- Constant Contact: Established an account with Constant Contact beginning February 2015 to use as a repository of over 2,000 APSBN contacts across the state of Arkansas. This service will be used to create event invitations & online registrations, as well as newsletters and surveys relating to public safety broadband.
- Intuit Quickbase: Established an account with Intuit Quickbase beginning April 2015 to create a database to document potential public safety entities & users in the state of Arkansas, as well as their information about employee counts & mobile data usage, in order to compile data collection elements requested by FirstNet.

UAMS Center for Distance Health and Arkansas e-Link
The UAMS Center for Distance Health continues to work with facilities around the state. Since the completion of the Broadband Technologies Opportunity Program grant, we have been working with each eligible site to sign them up for broadband assistance through the FCC Health Care Connect Fund, creating the Arkansas e-Link Consortium. As a member of the consortium and a participant in the Health Care Connect Fund, sites receive financial assistance for broadband connectivity and/or network equipment costs. Currently, there are 416 member sites that participate in the Arkansas e-Link Consortium. Since December 1, 2014, 28 new sites have been added to the network bringing our total to 439. From December 1, 2014– May 1, 2015 the eLink Network has facilitated over 75,000 hours of video calls with over 98,000 individual calls being placed on the network for clinical and educational activities.
Appendix IV: Details of Telehealth Activities and/or Operations Provided by UAMS

USDA Community Connect Grants
The Community Connect broadband grant program helps fund broadband deployment into rural communities where it is not yet economically viable for private sector providers to deliver service. Eligible applicants include most state and local governments; federally recognized tribes; non – profits; for profit corporations.

February 17, 2015: The FY2015 application window closed. Applications submitted are under review.
Source: http://www.rd.usda.gov/programs-services/community-connect-grants

March 23, 2015: The USDA announced that it funded a rural telecommunications infrastructure project in Arkansas to improve broadband service in a portion of rural Arkansas.
Source: http://www.usda.gov/wps/portal/usda/usdahome?contentidonly=true&contentid=2015/03/0073.xml

Private Initiatives

January 30, 2015: The Texarkana Chamber of Commerce hosted a broadband stakeholders meeting to advance the region's goal to bring 1 gigabit broadband Internet service to every home and business within the next five years.

March 23, 2015: Southwest Arkansas Telephone Company was approved to receive a $25 million USDA loan to upgrade portions of a fiber network and convert the remaining portions of a copper system to fiber to improve service to subscribers.

Legislative Initiatives (Federal and State)

January 22, 2015: Sen. Cory Booker (D-New Jersey) introduced the Community Broadband Act of 2015 to promote competition, to preserve the ability of local governments to provide broadband capacity and services.

February 20, 2015: Act 628 of the 2015 regular session of the Arkansas General Assembly. An act to make an appropriation to the Department of Education for grants and personal services and operating expenses for empowering students in Arkansas to understand entrepreneurship and leverage broadband technologies.
Source: http://www.arkleg.state.ar.us/assembly/2015/2015R/Acts/Act628.pdf

March 23, 2015: Presidential Memorandum—Expanding Broadband Deployment and Adoption by Addressing Regulatory Barriers and Encouraging Investment and Training. Established the Broadband Opportunity Council and outlined its functions.
Source: https://www.whitehouse.gov/the-press-office/2015/03/23/presidential-memorandum-expanding-broadband-deployment-and-adoption-addr

April 2, 2015: Act 987 of the 2015 regular session of the Arkansas General Assembly. An act for the Department of Education for grants and aid to local school districts and special programs for the 2015-2016 fiscal year.

(10)	BROADBAND FACILITIES MATCHING GRANT PROGRAM	5,000,000

Source: http://www.arkleg.state.ar.us/assembly/2015/2015R/Acts/Act987.pdf

April 6, 2015: Act 1118 of the 2015 regular session of the Arkansas General Assembly. An act to create the Arkansas Broadband Infrastructure Incentive Act; to amend the valuation methods and taxation of certain intangible personal property.
Source: http://www.arkleg.state.ar.us/assembly/2015/2015R/Acts/Act1118.pdf

April 2015: Act 887 of the 2015 regular session of the Arkansas General Assembly. This legislation was signed into law by Governor Hutchinson to encourage the use of telemedicine and to authorize reimbursement and regulation of services provided through telemedicine. The new law will go into effect immediately with parity provisions going into effect July 1, 2016, for Medicaid and January 1,

2016, for all other health benefit plans. The new law requires that all health care plans cover telemedicine provided physician services and reimburse physicians on the same basis as in-person services. The UAMS Center for Distance Health is working with providers around the state to make sure they have adequate training on the use of equipment provided under the Arkansas e-Link grant. For groups and programs utilizing telehealth as a way to deliver health care to rural Arkansas, see activities for UAMS Center for Distance Health and Arkansas e-Link.

Source: http://www.arkleg.state.ar.us/assembly/2015/2015R/Acts/Act887.pdf

Appendix

Appendix I: Arkansans in rural areas without access to 25 Mbps/3 Mbps Broadband compared to the nation's population.

**Americans in Urban and Rural Areas Without Access to
25 Mbps/3 Mbps Broadband by State & U.S. Territory
(population in millions)**

	All Areas			Urban Areas			Rural Areas		
	Pop.	Pop. Without Access	% of Pop.	Pop.	Pop. Without Access	% of Pop.	Pop.	Pop. Without Access	% of Pop.
United States	321.325	54.560	17%	260.007	21.932	8%	61.318	32.628	53%
All States & the District of Columbia	317.264	51.988	16%	257.061	20.240	8%	60.203	31.748	53%
Alabama	4.880	1.701	35%	2.898	0.588	20%	1.982	1.113	56%
Alaska	0.740	0.285	38%	0.493	0.086	17%	0.247	0.199	81%
Arizona	6.751	1.162	17%	6.079	0.622	10%	0.671	0.540	80%
Arkansas	2.992	1.751	59%	1.704	0.668	39%	1.288	1.084	84%
California	38.338	2.601	7%	36.451	1.335	4%	1.888	1.266	67%
Colorado	5.262	0.943	18%	4.553	0.438	10%	0.709	0.504	71%
Connecticut	3.619	0.050	1%	3.184	0.029	1%	0.435	0.021	5%
Delaware	0.931	0.030	3%	0.775	0.010	1%	0.156	0.020	13%
District of Columbia	0.622	0.009	2%	0.622	0.009	2%			
Florida	19.631	1.278	7%	17.903	0.571	3%	1.728	0.708	41%
Georgia	10.129	1.403	14%	7.632	0.303	4%	2.497	1.100	44%
Hawaii	1.406	0.057	4%	1.295	0.007	1%	0.111	0.050	45%
Idaho	1.645	0.820	50%	1.174	0.446	38%	0.472	0.374	79%
Illinois	12.958	0.710	5%	11.499	0.139	1%	1.459	0.570	39%
Indiana	6.606	0.947	14%	4.816	0.160	3%	1.790	0.787	44%
Iowa	3.090	0.761	25%	2.009	0.109	5%	1.081	0.652	60%
Kansas	2.908	0.794	27%	2.190	0.282	13%	0.718	0.512	71%
Kentucky	4.435	1.767	40%	2.616	0.445	17%	1.819	1.322	73%
Louisiana	4.584	1.325	29%	3.348	0.531	16%	1.237	0.793	64%
Maine	1.340	0.291	22%	0.511	0.033	6%	0.829	0.258	31%
Maryland	5.925	0.418	7%	5.168	0.216	4%	0.757	0.202	27%

Americans in Urban and Rural Areas Without Access to 25 Mbps/3 Mbps Broadband by State & U.S. Territory
(population in millions)

	All Areas			Urban Areas			Rural Areas		
	Pop.	Pop. Without Access	% of Pop.	Pop.	Pop. Without Access	% of Pop.	Pop.	Pop. Without Access	% of Pop.
Utah	2.931	0.149	5%	2.662	0.044	2%	0.268	0.105	39%
Vermont	0.630	0.502	80%	0.247	0.157	63%	0.383	0.346	90%
Virginia	8.290	1.734	21%	6.295	0.453	7%	1.995	1.281	64%
Washington	6.998	0.277	4%	5.887	0.039	1%	1.111	0.238	21%
West Virginia	1.869	1.042	56%	0.909	0.328	36%	0.960	0.714	74%
Wisconsin	5.783	0.962	17%	4.071	0.052	1%	1.712	0.910	53%
Wyoming	0.585	0.175	30%	0.378	0.023	6%	0.207	0.152	74%
U.S. Territories	4.061	2.572	63%	2.946	1.692	57%	1.116	0.880	79%
American Samoa	0.055	0.055	100%	0.042	0.042	100%	0.013	0.013	100%
Guam	0.160	0.160	100%	0.108	0.108	100%	0.052	0.052	100%
Northern Mariana Islands	0.051	0.051	100%	0.034	0.034	100%	0.018	0.018	100%
Puerto Rico	3.690	2.259	61%	2.719	1.506	55%	0.970	0.752	78%
U.S. Virgin Islands	0.105	0.047	45%	0.043	0.002	5%	0.062	0.045	72%

Appendix II: Arkansans without access to 3 Mbps/768 kbps or 10 Mbps/768 kbps services compared to the nation's population.

Americans Without Access to Fixed 3 Mbps/768 kbps or 10 Mbps/768 kbps Services by State & U.S. Territory

Area	Pop. Without Access to 3 Mbps/768 kbps	% of Pop.	Pop. Without Access to 10 Mbps/768 kbps	% of Pop.
United States	13.844	4%	22.64	7%
Alabama	0.641	13%	0.762	16%
Alaska	0.1	13%	0.148	20%
Arizona	0.268	4%	0.527	8%
Arkansas	0.401	13%	0.669	22%
California	0.5	1%	1.351	4%
Colorado	0.08	2%	0.129	2%
Connecticut	0.031	1%	0.038	1%
Delaware	0.02	2%	0.025	3%
District of Columbia	0.007	1%	0.009	2%
Florida	0.585	3%	0.744	4%
Georgia	0.7	7%	0.874	9%
Hawaii	0.045	3%	0.046	3%
Idaho	0.061	4%	0.165	10%
Illinois	0.106	1%	0.344	3%
Indiana	0.258	4%	0.545	8%
Iowa	0.181	6%	0.379	12%
Kansas	0.144	5%	0.308	11%
Kentucky	0.55	12%	0.713	16%
Louisiana	0.572	12%	0.687	15%
Maine	0.122	9%	0.172	13%
Maryland	0.125	2%	0.193	3%
Massachusetts	0.064	1%	0.13	2%
Michigan	0.204	2%	0.612	6%
Minnesota	0.212	4%	0.406	7%
Mississippi	0.583	19%	0.686	23%
Missouri	0.399	7%	0.579	9%
Montana	0.137	14%	0.223	22%
Nebraska	0.021	1%	0.106	6%
Nevada	0.042	1%	0.077	3%
New Hampshire	0.078	6%	0.105	8%
New Jersey	0.068	1%	0.105	1%
New Mexico	0.177	8%	0.427	20%
New York	0.331	2%	0.393	2%
North Carolina	0.661	7%	0.787	8%
North Dakota	0.038	5%	0.083	12%
Ohio	0.307	3%	0.696	6%
Oklahoma	0.269	7%	0.77	20%
Oregon	0.077	2%	0.114	3%
Pennsylvania	0.288	2%	0.598	5%
Rhode Island	0.005	0%	0.007	1%

Arkansas State Broadband Manager's Report

Americans Without Access to Fixed 3 Mbps/768 kbps or 10 Mbps/768 kbps Services by State & U.S. Territory

Area	Pop. Without Access to 3 Mbps/768 kbps	% of Pop.	Pop. Without Access to 10 Mbps/768 kbps	% of Pop.
South Carolina	0.336	7%	0.48	10%
South Dakota	0.085	10%	0.121	15%
Tennessee	0.524	8%	0.723	11%
Texas	0.879	3%	1.855	7%
Utah	0.027	1%	0.043	1%
Vermont	0.138	22%	0.162	26%
Virginia	0.589	7%	0.907	11%
Washington	0.116	2%	0.163	2%
West Virginia	0.281	15%	0.459	25%
Wisconsin	0.284	5%	0.574	10%
Wyoming	0.058	10%	0.1	17%
U.S. Territories	1.068	26%	1.316	32%
American Samoa	0.014	26%	0.055	100%
Guam	0.002	1%	0.006	4%
Northern Mariana Islands	0.019	38%	0.019	38%
Puerto Rico	0.988	27%	1.19	32%
U.S. Virgin Islands	0.045	43%	0.046	44%
Population in millions.				

Appendix III: ADE Commissioner's Memos

ARKANSAS
DEPARTMENT
OF EDUCATION

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Version History

Title	Broadband Services
Memo Number	COM-15-059
Memo Date	3/17/2015
Attention	Co-op Directors; Superintendents; Technology Coordinators
Memo Type	Informational
Response Required	No
Section	Central Administration
Regulatory Authority	§
Contact Person	Mike Hernandez
Phone Number	(501) 682-4205
E-Mail	mike.hernandez@arkansas.gov
Memo Text	The Arkansas Department of Education has been working closely over the last several weeks with the Department of Information Systems (DIS) to transition responsibility for procuring affordable broadband on behalf of the State of Arkansas and our public schools back to DIS. Last month, DIS issued an Invitation for Bids (IFB) to provide pricing for broadband services. This IFB built upon the work of many over the last two years and was informed by input collected from Arkansas's public schools during that time. Moreover, the network design contained in the IFB reflects the vision of the Arkansas State Board of Education "that all public schools are connected to a robust broadband infrastructure necessary for instructional Internet access and student participation in a world-class online learning experience."
	DIS has prepared documents that describe the network design, plans for its implementation, and what effect that will have on school districts. These documents will be distributed via DIS distribution lists soon. Some of this information is included in the memo as an attachment.
	Network implementation will occur in a manner that maximizes federal E-rate funding for Arkansas. Administration of the E-rate program at the state level will also be handled by DIS moving forward.
	Though ADE will, of course, continue to serve as a resource for school districts throughout the state, questions about this process should be referred to DIS customer account representatives at (501) 682-4357 or dis.callcenter@arkansas.gov.

ARKANSAS DEPARTMENT OF EDUCATION

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Version History

Title	Broadband Services
Memo Number	COM-15-073
Memo Date	4/22/2015
Attention	Charter Directors; Co-op Directors; Elementary Principals; Middle School Principals; High School Principals; Superintendents; Teacher Center Coordinators; Technology Coordinators
Memo Type	Informational
Response Required	No
Section	Central Administration
Regulatory Authority	None
Contact Person	Don McDaniel
Phone Number	501-682-5027
E-Mail	don.mcdaniel@arkansas.gov
Memo Text	Mark Myers, the director of the Arkansas Department of Information Systems, addressed the 2015 ARKSTE Spring Conference on Wednesday, April 22, and provided details about the ADE/DIS partnership for improving the Arkansas Public School Computer Network (APSCN).

As many are aware, numerous groups thoroughly analyzed the state's K-12 broadband landscape. We weighed the costs and benefits in those groups' reports of the main options for improving the state's network: 1) direct Internet procured independently by each district from providers; or 2) improvements to the statewide aggregated network, APSCN.

Based on recommendations from the national nonprofit EducationSuperHighway, Governor Asa Hutchinson directed the departments to build a statewide aggregated network. Improving APSCN will achieve several objectives:

1. School districts will receive a minimum of 100kbps/per user of ADE funded bandwidth;

2. The bandwidth will be E-rate eligible;

3. DIS will be responsible for managing the network security and support to include content filtering;

4. APSCN will meet ConnectED, FCC and SETDA Internet access targets;

5. It will be structured in a way that remains cost effective as demand continues to grow beyond 2018; |

Appendix IV: Details of Telehealth Activities and/or Operations Provided by UAMS

- **Corrections Telehealth** is another area where expansion is occurring. Correct Care Solutions (based in Nashville, TN) has signed a contract with UAMS to expand OB services to the Department of Community Corrections facility in Pine Bluff. While only one facility has been utilizing telehealth, training is underway for a second facility to come online by July 1, 2015.

- **Pulaski County Detention** Center is also seeking Telemedicine programs to provide improved women's health services with the possibility of expanding to emergency triage for all inmates at the facility. As demonstrated by the pilot conducted with the Jefferson County Detention Center, the Pulaski County Detention Center is also hoping to decrease costs related to travel and security concerns while transporting inmates for medical management.

- **mHealth Postpartum Monitoring** On May 1, 2014 UAMS ANGELS program began monitoring women participating in a mHealth (Mobile Health) Postpartum Monitoring study who, during pregnancy, were diagnosed as having pre-eclampsia, a condition of extreme hypertension. Project development involved researching available technology and selecting products that would meet the desired project goals and also be cost effective. Five sets of mHealth equipment were purchased which included Bluetooth-enabled devices that measured blood pressure, oxygen saturation and weight. Protocols were developed and ANGELS call center nurses were trained in usage of the mHealth equipment, procedures for enrolling participants, and the protocols for monitoring incoming patient data. Using the mHealth devices they took home, the participants collected data regarding their health status. Through a wireless connection, the data is transmitted to the ANGELS Call Center, where it is monitored by triage nurses. If the readings exceeded certain parameters, an alert sounds and a nurse is called to evaluate the participant's health and give advice ranging from rest to instructions to go to an Emergency Department for evaluation. Ten postpartum women completed the two week pilot monitoring period in 2014. Since December 2014 there have been 28 patient encounters with 26 patients completing the program.

- **Sickle Cell** – UAMS has created a statewide system of support for patients with sickle cell disease and the physicians who care for them. The Sickle Cell Call Center is staffed by experienced registered nurses 24 hours a day, seven days a week. Beginning FY2016, plans are underway to offer Telemedicine consults with patients and physicians who have access to telemedicine equipment and will offer:
  • Tele-Education about sickle cell disease-related health problems
  • A qualified nurse to talk to and get advice about health concerns
  • Information about joining the Arkansas Sickle Cell Registry
  • Advice about when to change from pediatric care to adult care
  • Assistance in finding a local doctor
  • Scheduling a yearly appointment to the UAMS Sickle Cell Multidisciplinary Clinic
  From December 2014 – April 2015, the Sickle Cell Call Center received 129 calls (7 from physicians, 33 requiring triage, and 89 seeking information - resulting in 212 scheduled appointments. In addition to the calls there were 18 education events with 875 education encounters, 539 social worker interactions and 232 infusions.

- **ER-DOCS** (Emergency Room Doctors on Call) is a UAMS pilot program that began with Chicot Memorial Hospital in Lake Village. Currently, UAMS is in negotiations with Piggott Community Hospital to expand this program to Clay County. ER-DOCS provides physicians in rural areas access to timely consults with UAMS Emergency Department faculty 24/7. The goal is to use Telemedicine consultations to decrease the unnecessary transfer of patients while ensuring best practices through the implementation of proven clinical protocols and guidelines across the HIPAA-compliant Arkansas e-Link Network. Telemedicine consultations provide immediate access to skilled specialists, improving the quality of patient care while increasing the confidence of physicians, nursing and ancillary staff in rural hospitals. For patients in need of transport for a higher level of care, this program will expedite the transfer process, giving the patient the most comprehensive and timely care available.

- **Tele-Cardiology** UAMS is currently working with Magnolia Regional Medical Center and the UAMS Regional Centers in Magnolia and Texarkana to offer Tele-Cardiology consults with patients in these rural communities to increase accessibility to specialty care.

- **HIV Rural Health Telemedicine Program** In partnership with the Arkansas Department of Health and UAMS, Infectious Diseases Specialists are working with local health units in rural locations to help them better manage and treat HIV patients.   In the past four years, hundreds of patients have received telemedicine consultations on how to manage their disease. By utilizing the UAMS infectious disease clinicians, practitioners and patients in Arkansas have access and support via telephone and video conferencing to help keep them current. In addition to providing clinical support, Infectious Disease Specialists provide HIV/AIDS telehealth based education to rural providers in Arkansas through the HIV Heart Program (Health, Education, Assessment, Research, Telehealth) Evidence-based practices are utilized to address topics regarding diverse themes that are relevant to rural healthcare providers in the Delta.

- **Education** is a large component of Telehealth and Obstetrical Neonatal Exchange (ONE Team) is one of many weekly teleconferences. ONE Team focuses on education for nurses and health educators working in the obstetrical, neonatal, pediatric and women's health fields. Participants can attend in person, via interactive video or webinar. Presentations are posted at a later date on LearnOnDemand.org for healthcare professionals who are unable to attend the live conference. While the number of attendees varies from week to week, two presentations in April had particularly high attendance via webinar. The Telehealth for Women and Children presentation had 33 webinar attendees and the Pediatric Diabetes presentation had 27 webinar attendees. Broadcasting this information in different formats provides nurses and health educators the opportunity to tap into resources that may not be available at their local site. ONE Team is available free of charge to Arkansas clinicians.

- **mTechnology** The Arkansas eLink Network and UAMS are currently beta testing a new line of products that will make Telehealth more cost effective and easier to access for patients and providers wishing to utilize telehealth for clinical or educational opportunities. Advances in technology are allowing us to utilize Mobile Technology devices such as iPhones or Android devices to offer face-to-face communication available from a web-based platform while remaining HIPAA compliant. While physicians with the Hand Trauma Program are currently utilizing iPads and Jabber software to screen patients from any location, we anticipate the web- based platform will allow for further expansion by allowing physicians to utilize existing devices. The new platform will be more cost effective and easier to use than existing software/hardware modalities. The anticipated launch of this new line of products is fall of 2015.

Baptist Health has been a leading partner in the use of telehealth around the state. They currently have 9 hospitals and 45 clinics wired for telehealth utilizing the Arkansas e-Link Network and the Baptist Health network. Kourtney Matlock has been promoted to AVP of patient services with an emphasis on telehealth.   Baptist is currently expanding its telehealth services to offer consults in its rural hospital emergency departments. Currently, cardiology is the only service being offered, but it is planned to offer multiple disciplines by the end of the year. In addition to expanding services to ED's around the state, they are planning on offering these services to all of the Baptist Health Clinics and other clinics as well.

The eICU program is currently operational in 17 hospital facilities around the state and has recently expanded to several facilities outside the state. Baptist is also utilizing the networks to offer Lactation Consultations to new mothers around the state as part of its education program.   Negotiations are currently underway to provide behavioral health and orthopedic screenings at all clinic locations.

Arkansas Children's Hospital has named Dr. Tamara Perry as medical director over its telemedicine program. ACH has been utilizing telemedicine for several years as part of the ANGELS network and other initiatives. Currently they are providing remote consults for Burn, Audiology, Genetics in Arkansas as well as other states, Asthma Education, NICU, Fetal Echocardiograms, Remote reading of Echo's, and Urology.   Dr. Perry says there are plans in the works to expand current programs and start new programs in the near future. One project is to open a school based telehealth clinic at Franklin elementary in the Little Rock School District which they currently run with an APN on site. They hope to replicate telehealth clinics at other area schools.

ACH is planning on expanding into all specialties and to open a diagnostic clinic for screenings and triage of patients via telehealth. In addition to services they currently offer, they are working to include behavioral health, and expand cardiology, endocrinology, pulmonary and neurosciences.

Program Utilizing the Arkansas e-Link Network
Below are some of the UAMS telehealth initiatives that are currently utilizing the Arkansas e-Link Network along with number of locations and patients being served since December 2014 – May 1, 2015 unless otherwise noted:
ANGELS 30 locations, 955 patient encounters 1/15-3/15 (3,465 encounters 1/14-12/14)
Angels Call Center (Numbers based on completed call records 12/1/14 – 5/1/15)
      OB calls 8,855
      Psych TLC 76 (7/1/14-5/15/15)
      Sickle Cell 129
      TRIUMPH 22
Physician Call Center – 4,881 calls
      PCC 4,193
      ARSAVES 688
Angel Eye -2014 Results 559 users, 217 families, 26 cameras online
Arkansas e-Link 439 Locations, 75,860 hours of calls, 98,750 individual calls
ARSAVES 47 Locations, 255 consults, 75 TPA, 557 educational events, and 133,247 attendees
CDH LIVE 33 locations, 2,667 patient encounters
Center for Rural Health, 60 locations, access to all LOD material.
FAIM 5 locations, 15 patient encounters per month.
Follow Baby Back Home 4 regions, 57 patient encounters/588 home visits
High Risk Obstetrical Teleconferences – 11/14-4/15 7 locations, 771 attendees, 21 teleconferences.
HIV – 23 telemedicine clinics, 68 phone consults, seven lectures/presentations with 103 attendees. (Nov 2014-April 2015)

Learn on Demand 3,690 continuing education members, 193 new users, 540 active events on site.

Obstetrical Tele-Psychiatry 10 locations, 27 patient encounters

Postpartum home monitoring 28 patients monitored

Prison OB/GYN one location, 188 patient encounters

RSPMI 154 locations, 18,810 estimated patient encounters

SCTRC 3,282 total interactions (Web, face-to-face, conferences, trainings) 9-1-14-2/28/15.

Sickle Cell two locations, 212 patient encounters, 875 education encounters, 232 infusions, 18 outreach events.

Telecoloposcopy eight locations, 491 patient encounters

TRIUMPH 11 locations, 22 calls / 19 telehealth patient encounters

Tele-Nursery 26 locations, four patient encounters

Tele-Retinal screening (newborn) one location, 12 patient encounters

Trauma hand program 82 locations, 163 patient encounters   12/14-4/15

Trauma image repository 82 locations, 1,645 patient encounters 12/14-4/15

Appendix V: Connect Arkansas institute Job Skills Boot Camps Curriculum

TOPIC	CLASS	AUDIENCE	CLASS DESCRIPTION
Computers & Operating Systems	Computer Basics	ECU	Beginners learn what different computers and identify different pieces of hardware, as well as how to turn a computer on, use a mouse, open and save documents and more.
	Computer Basics EXTENDED	ECU	Two-hour version of Computer Basics means more in-depth review and repetition in skills like saving and opening documents as well as the dreaded copy/paste.
	Windows 8	CCU	For those who know how to get around on a computer but are perplexed by Windows 8 / 8.1.
	Computer Basics & Windows 8 EXTENDED	ECU	Computer Basics and Windows 8 in a two-hour class.
	Using and Installing Linux	Staff, PCU	Hands-on exploration and downloading of Linux's most popular free operating system, Ubuntu, Open Source Libraries recommended before taking this class.
Internet	Internet Basics	ECU	Learn how to open a web browser, use a search engine, navigate a website, use Google images and Google maps.
	Computer & Internet Basics EXTENDED	ECU	Computer Basics and Internet Basics in a two-hour class.
	Advanced Google Research	PCU	Become a Google Ninja by mastering 10 easy tricks.
	Libraries as Internet Public Servants	Staff	Understand the different types of Internet services and use Connect Arkansas's ISP map to help patrons understand their Internet options. Also, learn how to keep your Wi-Fi safe.
Tablets	Tablet Computer FAQ	All Levels	Exploratory learning of tablet computers. Largely group discussion and learning by trying based.
	*Introduction to a specific tablet computer	All Levels	A more focused take on the Tablet Computer FAQ for first time and early users of one *specific* type of tablet computer. E.g. iPad Basics, Android Basics, Kindle eReader Basics, Kindle Fire Basics.
	Overdrive FAQ	All Levels	Exploratory learning using the Overdrive app for tablet computers. It seems that Overdrive works differently for each type of tablet so this class remains flexible for introducing new users to the app and exploring solutions to problems experienced by returning users.
Microsoft Office	Word 1	ECU, CCU	Learn how to use the basic tools in Microsoft Word and how to save and open a document.
	Word 1 + Resume EXTENDED	ECU, CCU	Word 1 class that moves into creating a resume. Class is two-hours long.
	Resume	CCU, PCU	For those who are comfortable using Word but are struggling to create a resume.
	Word 2	CCU, PCU	Learn how to insert, edit images, and format your document.
	Excel 1	CCU, PCU	Learn how to make a budget and use basic formulas.
	Excel 2	CCU, PCU	Make a small database and then learn how to make charts and graphs.
	PowerPoint	CCU, PCU	Put together a short PPT presentation on your dream career by learning how to create, design, and edit slides, insert images from the Internet, and put on a slide show.
	Open Source Libraries	Staff, PCU	How to use free operating systems and productivity programs like Ubuntu and Libre Office and make these resources available to the public.
	Google Drive	PCU	Use Google's version of Microsoft Office. Free, online and collaborative way to create and upload existing documents in the Cloud.

Email and Facebook	Create an Email Account	ECU, CCU	Create an email account and learn how to send and read emails.
	Using your Email	CCU, PCU	Send attachments, organize your email and block spam.
	Facebook for Beginners	CCU, PCU	Create a Facebook account, set-up your profile, and learn how to write messages and find friends.
	Intermediate Facebook	CCU, PCU	Understand privacy settings, edit your profile, and address questions about getting the most from Facebook.
Career	Searching for Jobs Online	PCU	Explore different SAFE places online to look for and apply for jobs and create an account on Indeed.com. We will also look at ways to avoid scams.
	LinkedIn	PCU	Learn how to maintain and expend your professional network and even look for jobs using the world's largest professional social network.
Security	Staying Safe Online	All Levels	Understand what makes a good password, how to avoid scams, and how to use anti-virus, antispyware, and firewall programs.
	Web Browser Security Extentions	CCU, PCU	Keep your computer safe by preventing pop-ups, keep your browsing encrypted, and utilize a password management tool. Also learn about clearing you cache, cookies and browsing history.
Coding	Scratch	PCU	Learn about coding concepts in a fun and creative way using Scratch. Great for ages 4 - 104!
	HTML	PCU	Introduction to writing code. Also learn how you can learn and practice coding for free.
	Understanding Coding	All Levels	What is coding? Why does it matter? Why should you learn / teach it? Find out the answers to these questions as we find ways learn and practice coding.
	Teach Coding	Staff	Empower your patrons to understand coding concepts and basic coding skills. IT'S A LOT EASIER AND MORE FUN THAN YOU THINK!
Education	Stuff You can Learn Online for Free	PCU	There are many great options for taking free classes and picking up new skills. From Khan Academy to Digital Learn to TED Talks find out what you've been missing!
	Utilizing Free Online Education & Digital Literacy Training on a Public Computer	Staff	Make your public computers into centers of online training and education by making these key websites and apps easily accessible on your desktop.
	Teach Digital Literacy Classes	Staff	Take our basic curriculum and learn how to easily find and edit new curriculum based on Connect Arkansas's digital literacy training best practices.
	Create a FabLab!	Staff	Make your library into a center of learning for the 21st century by using hands-on programming. Make, share and learn!