

QUARTERLY PERFORMANCE PROGRESS REPORT FOR BROADBAND INFRASTRUCTURE PROJECTS

General Information

1. Federal Agency and Organizational Element to Which Report is Submitted Department of Commerce, National Telecommunications and Information Administration	2. Award Identification Number NT10BIX5570102	3. DUNS Number 122452563
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4. Recipient Organization

University of Arkansas System 4301 W. Markham St, ST63, Little Rock, AR 72205-7101

5. Current Reporting Period End Date (MM/DD/YYYY) 06-30-2013	6. Is this the last Report of the Award Period? <input type="radio"/> Yes <input checked="" type="radio"/> No
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7. Certification: I certify to the best of my knowledge and belief that this report is correct and complete for performance of activities for the purposes set forth in the award documents.

7a. Typed or Printed Name and Title of Certifying Official Suzanne Alstadt	7c. Telephone (area code, number and extension) X
	7d. Email Address sealstadt@uams.edu

7b. Signature of Certifying Official Submitted Electronically	7e. Date Report Submitted (MM/DD/YYYY): 08-15-2013
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Project Indicators (This Quarter)

1. Please describe significant project accomplishments completed during this quarter (600 words or less).

The University of Arkansas System (UAS) project will integrate isolated community anchor networks to expand broadband capabilities and geographic reach of the Arkansas Telehealth Network (ATN) managed by Arkansas Telehealth Oversight & Management (ATOM) Network - a group of community anchor institutions (CAIs) with limited bandwidth & equipment that offers healthcare, higher education, public safety, & research services, and the Arkansas Research & Education Optical Network (ARE-ON), the state's only public-owned fiber optic network currently serving four-year universities. This project will permit high-speed delivery & transmission at 454 "integrated network" sites. NOTE: The grant application indicated 474 sites, however, we anticipate net closures of sites to be 20.

In Quarter 2 2013, the following activities were undertaken or accomplished to meet the mission described above:

Overall Project

Outreach to CAIs and sustainability of this telehealth project continued to be the primary focus during Q2 2013. Seven (7) regional seminars were held targeting community/civic leaders, business leaders, educators, physicians and staff, hospital administrators and other healthcare providers. Construction of all conduit, fiber laterals and huts stands at 100% completed with the exception of working through final punch lists for the last two (2) hut sites (North Little Rock, Fayetteville). All IRU fiber (716 miles) has been delivered and tested, and of that fiber 584 miles has been lit, a portion of which is now in production. Optical equipment has been installed at 31 of 36 sites, and three (3) of the nine (9) Juniper backbone routers have been installed. 100Mbps MPLS circuits are operational at two (2) community colleges, and equipment for the UAMS e-Link network has been installed at all nine (9) hub sites and operational at six (6) sites.

University of Arkansas (UAS) reports these project accomplishments with regard to the telehealth network:

- Resolved installation issues at three (3) CAIs reducing outstanding issues to two (2) remaining sites.
- Completed MVP/Public Safety project installation and assessment.
- Outreach activities: Project overview presented at seven (7) regional seminars targeting community/civic leaders, business leaders, educators, physicians and staff, hospital administrators and other healthcare providers; Project Director presented, "Broadband in Rural Arkansas", at 2013 Arkansas Rural Development Conference.
- Continued media events for regional outreach and public relations (television and newspapers). Two (2) events included legislators joining via interactive video from the State Capitol and from CAI located in their district.
- Continued to work toward completing development of operations for sustainability and working with CAIs to develop their own telemedicine applications.
- Program managers met with approximately 447 staff at 90 community anchor institutions (CAIs).
- Deployed remaining equipment intended for CAIs that have closed to other approved CAIs to enrich their network.
- Piloted self-scheduling software and verified assigned video schedulers for each CAI.
- Submitted an AAR to NTIA for approval of "no cost extension" to 9/30/2013.
- Continued contract extension work with telecom companies.

ARE-ON, the program's sub-recipient, reports these project accomplishments:

- Placed final two (2) huts.
- Completed approved fiber lateral build.
- Completed hut punch lists for all but two huts.
- Completed electrical wiring at huts.
- Installed optical equipment at 31 of 36 sites.
- Lit southern fiber path (Monticello to Hope) enabling it to carry production traffic.
- Lit northern fiber path (Fayetteville to Jonesboro).
- Installed two (2) community colleges (having leased circuits) enabling them to carry production traffic.
- Began installation of new 10G e-Link waves.

2. Please provide the percent complete for the following key milestones in your project. Write "0" in the Percent Complete column and "N/A" in the Narrative column if your project does not include this activity. If you provided additional milestones in your baseline plan, please insert them at the bottom of the table. Unless otherwise indicated in the instructions, figures should be reported cumulatively from award inception to the end of the most recent reporting quarter. Please provide a narrative description if the percent complete is different from the target provided in your baseline plan (300 words or less).

	Milestone	Percent Complete	Narrative (describe reasons for any variance from baseline plan or subsequent written updates provided to your program officer)
2a.	Overall Project	84	As projected in our last PPR, this section compares actual expenditures through Q2, 2013 to the original baseline milestones. The project milestone timing was extended as a result of the budget modifications submitted in March 2013. In compliance with the NTIA guidelines, the budget modification does not exceed 10% variance and there is no change in the scope of work. The timing issue led to the request for a no cost extension through September 30, 2013. NTIA has approved the

	Milestone	Percent Complete	Narrative (describe reasons for any variance from baseline plan or subsequent written updates provided to your program officer)
			<p>extension.</p> <p>The budget modification in March 2013 and project extension resulted in a variance of -16% compared to the original baseline projections.</p>
2b.	Environmental Assessment	100	---
2c.	Network Design	98	<p>Due to a revision, additional purchases were required during Q1 2013. Installation of all network equipment is in final stages of completion.</p> <p>The approved budget modification of March 2013 and project extension resulted in a variance of -2% to the original baseline projections.</p>
2d.	Rights of Way	0	N/A
2e.	Construction Permits and Other Approvals	100	---
2f.	Site Preparation	0	N/A
2g.	Equipment Procurement	98	All optical network equipment has been procured, however, the approved budget modification of March 2013 and project extension resulted in a variance of -2% to the original baseline projections.
2h.	Network Build (all components - owned, leased, IRU, etc)	79	<p>Construction is completed, including 34.31 miles of conduit with *49.32 miles of fiber optic cable. IRU fiber providers have completed and invoiced for 100% (715.89 miles) of fiber optic cable. The totals of both bring the project to 765 miles of fiber optic cable deployed during the project.</p> <p>*Upon review of numbers, it was found that the original (total) 47 miles omitted one of the routes from Malvern, which corrected to approximately 1.2 miles. It is emphasized that this was not a new route, but a factual inconsistency (the field in the calculation was "zero" when it should have been "1.2"). Hence, the correct number was 48.4 miles rather than 47.2 miles as originally estimated. Secondly, the project's engineering firm reconciled field records collected during construction and counts for feet of fiber and conduit with units placed during construction. Reconciliation of these records resulted in the correction of +0.75 mile to the overall length. These circumstances resulted in a final route total of 49.32 miles.</p> <p>The approved budget modification of March 2013 and project extension resulted in a variance of -21% to the original baseline projections.</p>
2i.	Equipment Deployment	83	<p>Optical equipment has been deployed at 31 of 36 sites, backbone routers at 3 of 9 sites, and other equipment staged and/or awaiting power at all remaining sites.</p> <p>The approved budget modification of March 2013 and project extension resulted in a variance of -17% to the original baseline projections.</p>
2j.	Network Testing	100	---
2k.	Indirects, huts, Other (please specify): easements, project management costs	81	<p>Sixteen (16) of 16 total huts have been placed. Renovations were completed at one existing hut site.</p> <p>The approved budget modification of March 2013 and project extension resulted in a variance of -19% to the original baseline projections.</p>

3. To the extent not covered above, please describe any challenges or issues faced during this past quarter in achieving planned progress against the project milestones listed above. In particular, please identify any areas or issues where technical assistance from the BTOP program may be useful (600 words or less).

UAS is near completion on work at CAIs that require various additional efforts toward full installation of non-BTOP funded equipment to the network; and, finalizing leased circuit contract extensions pending budget approval from NTIA.

Our sub-recipient, ARE-ON hired additional contractors to reduce the impact of the work stoppage ordered last year. However, it continued to be challenging to re-gain the momentum necessary for timely completion of project goals for Q2 2013.

4. Please report the following information regarding network build progress. Write "0" in the Total column and "N/A" in the Narrative column if your project does not include this activity. Unless otherwise indicated in the instructions, figures should be reported cumulatively from award inception to the end of the most recent reporting quarter. Please provide a narrative description if the total is different from the target provided in your baseline plan (600 words or less).

Indicator	Total	Narrative (describe your reasons for any variance from the baseline plan or any other relevant information)
New network miles deployed	49	<p>Upon review of numbers, it was found that the original (total) 47 miles omitted one of the routes from Malvern, which corrected to approximately 1.2 miles. It is emphasized that this was not a new route, but a factual inconsistency (the field in the calculation was "zero" when it should have been "1.2"). Hence, the correct number was 48.4 miles rather than 47.2 miles as originally estimated. Secondly, the project's engineering firm reconciled field records collected during construction and counts for feet of fiber and conduit with units placed during construction. Reconciliation of these records resulted in the correction of +0.75 mile to the overall length.</p> <p>These circumstances resulted in a final route total of 49.32 miles resulting in a +2 mile variance. There were no route modifications resulting from these corrections.</p>
New network miles leased	716	---
Existing network miles upgraded	0	N/A
Existing network miles leased	1,488	There was a factual inconsistency in previous PPRs. The total for this metric was (and is) 1,488. These fiber miles existed before BTOP and are being used as part of the network.
Number of miles of new fiber (aerial or underground)	49	<p>Upon review of numbers, it was found that the original (total) 47 miles omitted one of the routes from Malvern, which corrected to approximately 1.2 miles. It is emphasized that this was not a new route, but a factual inconsistency (the field in the calculation was "zero" when it should have been "1.2"). Hence, the correct number was 48.4 miles rather than 47.2 miles as originally estimated. Secondly, the project's engineering firm reconciled field records collected during construction and counts for feet of fiber and conduit with units placed during construction. Reconciliation of these records resulted in the correction of +0.75 mile to the overall length.</p> <p>These circumstances resulted in a final route total of 49.32 miles resulting in a +2 mile variance. There were no route modifications resulting from these corrections.</p>
Number of new wireless links	0	N/A
Number of new towers	0	N/A
Number of new and/or upgraded interconnection points	23	---

For questions 5 and 6 please include information relating to agreements that you are negotiating or have entered into, or that your sub recipient, contractor or subcontractor is negotiating or entered into.

5a. If applicable, please provide the following information with regard to agreements with broadband wholesalers and/or last mile providers as a result of your project.

Indicators	
Number of signed agreements with broadband wholesalers or last mile providers	0
Number of agreements currently being negotiated with broadband wholesalers or last mile providers	0
Average term of signed agreements (in quarters)	0

5b. Please list the names of the wholesale and last mile providers with whom you have signed agreements (100 words or less). Providers:

N/A

5c. What wholesale services are being provided by this project? Please describe below. As an attachment to this report, please provide pricing plans (in \$ per month) associated with each wholesale service provided by your product (100 words or less). Wholesale services description:

N/A

5d. If you have designated a third party to operate all or a portion of your network, please provide the name and contact information for this third party, indicate if this entity is a sub recipient, contractor, and/or subcontractor, and describe with specificity the portion of your network this this third party operates (600 words or less).

UAS has one sub-recipient that will operate a portion of the BTOP-funded network: the Arkansas Research and Education Optical Network. This portion includes the publicly owned fiber network connecting the state's four-year universities and two-year colleges to high speed fiber optic services, including 33 total sites. ARE-ON is a state-supported entity. The sub-recipient's contact information appears below:

Arkansas Research and Education Optical Network (ARE-ON)
David Merrifield, Executive Director
155 S. Razorback Road
Fayetteville, AR 72101
479-575-5829

6. Please provide the data according to the type of subscriber. Write "0" in the Total column and "N/A" in the Narrative column if your project does not pass or serve a particular subscriber type. Unless otherwise indicated in the instructions, figures should be reported cumulatively from award inception to the end of the most recent reporting quarter. Please provide a narrative description if the total is different from the target provided in your baseline plan (300 words or less).

Subscriber Type	Access Type	Total	Narrative (describe your reasons for any variance from the baseline plan or any other relevant information)
Broadband Wholesalers or Last Mile Providers	Providers with signed agreements receiving new access	0	N/A
	Providers with signed agreements receiving improved access	0	N/A
	Providers with signed agreements receiving access to dark fiber	0	N/A
	Please identify the speed tiers that are available and the number of subscribers for each	0	N/A
Community Anchor Institutions (including Government institutions)	Total subscribers served	420	The revised baseline assumed that 266 subscribers of Telemedicine and Higher Ed CAls would receive improved access. We were able to accelerate our implementation which resulted in an excess of calculated variance (+154). It is noted that 244 Telemedicine and 3 Higher-Ed subscribers are BTOP-funded. 129 subscribers' circuits are FCC-funded (with access made possible by use of BTOP-funded telemedicine equipment). 44 sites are improved utilizing BTOP-funded equipment.
	Subscribers receiving new access	0	---
	Subscribers receiving improved access	420	The revised baseline assumed that 266 subscribers of Telemedicine and Higher Ed CAls would receive improved access. We were able to accelerate our implementation which resulted in an excess of calculated variance (+154).
	Please identify the speed tiers that are available and the number or subscribers for each	0	The (actual) speed tiers and number of subscribers for each include the following: 1Gbps-1 subscriber; 100Mbps-7 subscribers; 10Mbps-77 subscribers; 1.5Mbps-291 subscribers.

Subscriber Type	Access Type	Total	Narrative (describe your reasons for any variance from the baseline plan or any other relevant information)
Residential / Households	Entities passed	0	N/A
	Total subscribers served	0	N/A
	Subscribers receiving new access	0	N/A
	Subscribers receiving improved access	0	N/A
	Please identify the speed tiers that are available and the number of subscribers for each	0	N/A
Businesses	Entities passed	0	N/A
	Total subscribers served	0	N/A
	Subscribers receiving new access	0	N/A
	Subscribers receiving improved access	0	N/A
	Please identify the speed tiers that are available and the number of subscribers for each	0	N/A

7. Please describe any special offerings you may provide (600 words or less).
Co-location space and power is available at network fiber huts.

8a. Have your network management practices changed over the last quarter? Yes No

8b. If so, please describe the changes (300 words or less).
N/A

9. Community Anchor Institutions:
Using the table below, please provide a list by service area of the community anchor institutions (including Government institutions) connected to your network as a result of BTOP funds. Figures should be reported for the most recent reporting quarter only (NOT cumulatively). Also indicate whether your organization is currently providing broadband service to the anchor institution. Finally, provide a short narrative description with examples of how institutions are using BTOP-funded infrastructure (300 words or less).

Institution Name	Service Area (town or county)	Type of Anchor Institution (as defined in your baseline)	Are you also the broadband service provider for this institution? (Yes / No)	Narrative description of how anchor institutions are using BTOP-funded infrastructure
Cossatot Community College of the UA	De Queen	CAI	Yes	CCCUA is connected via a single 100 mbps MPLS leased circuit from which it receives Internet and research network services.
Rich Mountain Community College	Mena	CAI	Yes	RMCC is connected via a single 100 mbps MPLS leased circuit from which it receives Internet and research network services.

Project Indicators (Next Quarter)

1. Please describe significant project accomplishments planned for completion during the next quarter (600 words or less).
These projections for Q3 2013 are calculated using the modified budget of March 2013.
UAS Telehealth plans to:

- Resolve outstanding installation issues at remaining two (2) CAIs.
- Complete implementation of video-conference scheduling system for all CAIs.
- Initiate interactive video utilization reporting to CAIs.
- Finalize the contract extension with telecom providers.
- Host interactive video town hall sessions with CAIs to encourage collaboration and utilization of telehealth resources.

ARE-ON, the program's sub-recipient, reports these accomplishments are planned for completion during Q3 2013:

- Complete backbone network, with all fiber routes lit and operational.
- Provide network configuration workshop during which CAI technicians will directly configure their border routers and firewalls in preparation for the ARE-ON service.
- Work with each community college to complete the final connection to the campus border router and cut over to the new service by the end of Q3 2013.

ARE-ON does not plan to be a broadband wholesaler or provider for last mile providers. This project is planned for middle mile deployment for integrating and expanding two existing networks (ARE-ON and ATN/ATOM). Therefore, there will be 0 broadband wholesaler/last mile agreements.

In summary:

- 5 = Number of Telemedicine CAIs projected to be connected.
- 29 = Number of Higher Ed CAIs projected to be connected.
- 0 = Estimated number of broadband wholesaler/last mile provider agreements planned through the end of the next quarter.

2. Please provide the percent complete for the following key milestones in your project. Write "0" in the Planned Percent Complete column and "N/A" in the Narrative column if your project does not include this activity. If you provided additional milestones in your baseline plan, please insert them at the bottom of the table. Unless otherwise indicated in the instructions, figures should be reported cumulatively from award inception to the end of the next reporting quarter. Please provide a narrative description if the percent complete is different from the target provided in your baseline plan (300 words or less).

	Milestone	Planned Percent Complete	Narrative (describe reasons for any variance from baseline plan or any other relevant information)
2a.	Overall Project	100	---
2b.	Environmental Assessment	100	---
2c.	Network Design	100	---
2d.	Rights of Way	0	N/A
2e.	Construction Permits and Other Approvals	100	---
2f.	Site Preparation	0	N/A
2g.	Equipment Procurement	100	---
2h.	Network Build (all components - owned, leased, IRU, etc.)	100	---
2i.	Equipment Deployment	100	---
2j.	Network Testing	100	---
2k.	Other (please specify): Indirects, huts, easements, project management costs	100	---

3. Please describe any challenges or issues anticipated during the next quarter that may impact planned progress against the project milestones listed above. In particular, please identify any areas or issues where technical assistance from the BTOP program may be useful (600 words or less).

UAS Telehealth projects the following challenges: CAIs adapting operations for telemedicine; implementing operations for sustainability; finalizing contract extensions with telecom providers for leased circuit facilities; and, completing the project with a staff reduction of 27%.

The most significant challenge for our sub-recipient, ARE-ON is coordinating time with community college IT staff to get their network connected and migrated to the new service. Plans are to use a "workshop" approach that brings community college networking staff together into one facility to collectively train them to configure their border router and firewall. It is unknown how well this workshop will be attended, thereby creating necessity to travel to several community colleges to do the configuration for them.

Infrastructure Budget Execution Details

Activity Based Expenditures (Infrastructure)

1. Please provide details below on your total budget, cumulative actual expenditures (for the period ending the current quarter), and cumulative anticipated expenditures (for the period ending next quarter) for each line item, including detailed disbursements of both matching funds and federal funds from project inception through end of this quarter (actual) or next quarter (anticipated). Actual and anticipated figures should be reported cumulatively from award inception to the end of the applicable reporting quarter.

Budget for Entire Project				Actuals from Project Inception through End of Current Reporting Period			Anticipated Actuals from Project Inception through End of Next Reporting Period		
Cost Classification	Total Cost (plan)	Matching Funds (plan)	Federal Funds (plan)	Total Cost	Matching Funds	Federal Funds	Total Costs	Matching Funds	Federal Funds
a. Administrative and legal expenses	\$10,709,094	\$88,400	\$10,620,694	\$8,423,884	\$0	\$8,423,884	\$10,625,418	\$88,400	\$10,537,018
b. Land, structures, right-of-ways, appraisals, etc.	\$10,711,692	\$9,851,632	\$860,060	\$11,039,861	\$5,961,348	\$5,078,513	\$15,274,159	\$10,195,596	\$5,078,563
c. Relocation expenses and payments	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
d. Architectural and engineering fees	\$2,172,357	\$0	\$2,172,357	\$3,130,545	\$0	\$3,130,545	\$3,647,999	\$0	\$3,647,999
e. Other architectural and engineering fees	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
f. Project inspection fees	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
g. Site work	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
h. Demolition and removal	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
i. Construction	\$28,195,212	\$0	\$28,195,212	\$24,549,072	\$0	\$24,549,073	\$25,225,336	\$0	\$25,225,336
j. Equipment	\$43,605,098	\$15,998,347	\$27,606,751	\$42,375,446	\$15,697,330	\$26,678,115	\$43,791,782	\$15,697,331	\$28,094,451
k. Miscellaneous	\$33,188,367	\$512,048	\$32,676,319	\$18,049,588	\$469,100	\$17,580,488	\$30,017,126	\$469,100	\$29,548,026
l. SUBTOTAL (add a through k)	\$128,581,820	\$26,450,427	\$102,131,393	\$107,568,396	\$22,127,778	\$85,440,618	\$128,581,820	\$26,450,427	\$102,131,393
m. Contingencies									
n. TOTALS (sum of l and m)	\$128,581,820	\$26,450,427	\$102,131,393	\$107,568,396	\$22,127,778	\$85,440,618	\$128,581,820	\$26,450,427	\$102,131,393

2. Program Income: Please provide the program income you listed in your application budget and actuals to date through the end of the reporting period.

a. Application Budget Program Income: \$0	b. Program Income to Date: \$0
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