

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) 06-30-2012	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): 08-22-2012
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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 (U of A) System project will integrate isolated community anchor networks to expand broadband capabilities & geographic reach of the Arkansas Telehealth Network (ATN) managed by Arkansas Telehealth Oversight & Management (ATOM) Network-a group of community anchor institutions with limited bandwidth & equipment that offer 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 456 "integrated network" sites. (NOTE: The grant application indicated 474 sites, however, during Q4 2011 we identified seven planned sites that closed. Eleven additional sites were identified in Q1 2012 that have closed or plan to be reassigned bringing the cumulative total of site closures to 18. An Award Action Request (AAR) was submitted 5/25/2012 to the Broadband Infrastructure program office to provide address changes for Community Anchor Institutions (CAIs) that have moved and corrections to addresses previously submitted.

In Quarter 2 2012, the following activities were undertaken or accomplished to meet the mission described above:

Overall Project

The project achieved 71% substantial completion against the benchmark of 67%. Leased broadband facilities were deployed connecting 244 long-term operating leased circuits/facilities at the Telemedicine CAIs and hubs. Installation of 1.98 miles of new conduit & 9.95 miles of new fiber was accomplished. The completion status of fiber lateral construction is 97.17% conduit & 98.28% fiber. Seven new fiber huts were placed.

University of Arkansas for Medical Sciences (UAMS) reports these project accomplishments with regard to the telehealth network:

- Achieved 71% substantial completion against the benchmark of 67%
- Completed deployment of BTOP Telemedicine network connectivity at end-user sites.
- Installed aggregation for the hubs.
- Deployed leased broadband facilities to Telemedicine CAIs resulting in connection of 244 long-term operating leased circuits/facilities.
- Completed approximately 90% of the video infrastructure systems implementation.
- Installed 338 (63%) clinical assessment tools (peripherals) that attach onto clinical interactive video (IAV) carts.
- Installed 299 (63%) IAV management devices that allow for mobility at the CAIs.
- Installed 28 public access PCs at CAIs.
- Delivered electronic intensive care unit equipment & associated software to Baptist Health. These devices will be assigned by Baptist Health
- Hosted Federal Program Officer site visit.
- Started coordination efforts with ASR Analytics, LLC for project's social and economic impact study.

Outreach efforts:

- Presented project overview to Hospital Preparedness Program.
- Presented project update to Office of Health Information Technology (OHIT).
- Program Managers met with staff at 29 Telemedicine CAIs.
- Presented project update & portfolios of estimated benefit from BTOP funds in their respective districts to State Senators/ Representatives.

ARE-ON (sub-recipient) reports these project accomplishments:

- Initial deployment of optical ROADMs is complete in three sites, with preliminary cold staging & inventory of remaining optical equipment completed.
- Procurement of all optical equipment & routers.
- Four IRU providers met 43 of the total 62 milestones, with completion of 5 of the 17 overall fiber routes & approximately 484 of the total 715.89 miles of fiber completed. Note: Previous reports indicated 690.14 miles total of contracted fiber for the four IRUs. However, the route between two cities was re-engineered by our telecommunications vendor which lengthened the distance by 25.49 miles for a total of 715.89 miles.
- Installation of core network routers is complete at two sites.
- Fiber lateral construction is near completion (97.17% conduit & 98.28% fiber).
- Seven (7) new fiber huts were placed (completing 11 of 16 huts).

At the end of the three-year grant period, all 456 planned sites will function on an "integrated network" fusing ATN & ARE-ON sites, benefiting from the following BTOP deliverables:

- Substantial bandwidth upgrades
- Significant network expansion
- Interactive video equipment
- Public computer additions

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	71	<p>This section of the Performance Project Report compares actual expenditures to the Quarter 2 2012 figures on the revised Baseline submitted to the project's Federal Program Officer on May 24, 2011.</p> <p>ARE-ON, the program's sub-recipient, has contracted for Indefeasible Rights of Use (IRUs) from four providers over 17 intercity fiber routes. Most of the IRU contracts have milestone payments based on completion of various tasks, with the final milestone payment planned once the fiber has been delivered and tested. The final milestone payment for all IRUs is expected to be reached Q4 2012.</p> <p>Note: Previous reports indicated 690.14 miles total of contracted fiber for the four IRUs. However, the route between two cities was re-engineered by our telecommunications vendor which lengthened the distance by 25.49 miles for a total of 715.89 miles.</p> <p>Additionally, the telemedicine portion of the project experienced delays in contract negotiations for Mobile Virtual Physician (MVP) and delays in installation and testing of video infrastructure management equipment. We expect the contract to be finalized and complete installation of the video infrastructure management equipment to occur by the end of the next reporting quarter.</p> <p>Collectively, these circumstances resulted in a -1% variance.</p>
2b.	Environmental Assessment	100	No additional charges are anticipated for Environmental Assessment resulting in a +5% variance against the revised Baseline projections.
2c.	Network Design	98	Although these fees have been paid in full, the invoice total cost varied from projections in the revised Baseline, resulting in a -2% variance. We anticipate no additional charges for Network Design.
2d.	Rights of Way	0	N/A
2e.	Construction Permits and Other Approvals	9	Because more IRUs are being used than originally projected, there are fewer railroad crossings and, thus, fewer required permits. However, other permit fees may be incurred in coming quarters for fiber connectivity. Cost savings from this budget item will be applied in other areas where costs are higher than anticipated. We anticipate no additional charges for permits. The variance for this reporting quarter is -91%.
2f.	Site Preparation	0	N/A
2g.	Equipment Procurement	81	Procurement of clinical assessment tools (peripherals), IAV management devices, and video infrastructure systems required more time than anticipated. Procurement of these items are expected to be complete by the end of the next reporting quarter. The variance for Q2 2012 is -12%.
2h.	Network Build (all components - owned, leased, IRU, etc)	63	<p>ARE-ON, the sub-recipient, placed 46.36 of 47.05 total route miles of fiber optic cable. Local approvals and weather-related conditions delayed these efforts somewhat. IRU providers have completed 483.95 of 715.89 miles of fiber. The totals of ARE-ON fiber and IRU fiber bring the project total to 516.25 of 749.13 miles.</p> <p>The variance for Q2 2012 is -4%. Significant progress and near completion is expected by the end of Q3 2012.</p>

	Milestone	Percent Complete	Narrative (describe reasons for any variance from baseline plan or subsequent written updates provided to your program officer)
2i.	Equipment Deployment	99	The project contributes a large amount of in-kind equipment toward its match amount. The revised Baseline reflected this match contribution proportional to the grant funds expected to be expended within each quarter. Since more funds were expended than anticipated, more equipment matching funds were contributed resulting in a +6% variance.
2j.	Network Testing	40	<p>The revised Baseline assumed that video infrastructure management equipment would have been installed and tested, however contract negotiations were protracted longer than expected causing delays in procurement and installation. We expect the contract to be finalized and installation of the video infrastructure management equipment completed by the end of the next reporting quarter.</p> <p>Additionally, fiber network testing cannot begin until the optical network is completed. The remaining optical and router equipment is expected to be deployed over the next two quarters as lateral construction, hut construction, and IRU routes are completed.</p> <p>Overall, these circumstances resulted in a -42% variance.</p>
2k.	Other (please specify): Indirects, huts, easements, project management costs	52	The revised baseline was conservative in projecting progress of hut construction during Q2 2012. Five new fiber huts were placed and four existing huts were upgraded, resulting in a +12% variance.

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).

The project achieved 71% substantial completion against the benchmark of 67%. To meet (exceed) this goal we focused our resources on Telemedicine telecommunications and equipment deployment. To meet substantial completion requirements, it was necessary for our team to intensely manage telecommunication vendors in the circuit installations at the Telemedicine CAIs. It was challenging to manage such a large scope against the amount of time given to accomplish this task. This quarter also included planning and hosting the Federal Program Officer (FPO) visit. Other challenges included delays in installation and testing of video infrastructure management equipment which we project will be operational by the end of the next reporting quarter. Contract negotiations continued for Mobile Virtual Physician (MVP) during Q2 2012 and are expected to be completed by the end of Q3 2012.

The biggest challenges for our sub-recipient, ARE-ON, have been related to placement of the prefabricated telecommunication huts. Site preparation for hut placement at one site was delayed by approximately two months due to excessive underground water that eventually was traced to a broken water main at a nearby property. Other delays were due to hut manufacturing problems that continued to require in-the-field remediation. It is speculated that these errors are due to the manufacturer's workload in fulfilling a very large volume of orders from other customers for cellular network expansions and other fiber projects.

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	46	The PIP revised Baseline (February 2012) assumed there would be a cumulative total of 40 new network miles deployed this quarter. However, we exceeded the projection resulting in a positive variance of 6 miles.
New network miles leased	484	<p>The PIP revised Baseline (February 2012) projected 456 new network miles leased thru Q2 2012. This is a positive variance of 28 miles leased.</p> <p>In addition, there was a total of 17,857 network miles of leased facilities (inclusive of 100,10 and 1.5 mbps circuits) for Telemedicine CAIs.</p>
Existing network miles upgraded	0	N/A

Indicator	Total	Narrative (describe your reasons for any variance from the baseline plan or any other relevant information)
Existing network miles leased	0	---
Number of miles of new fiber (aerial or underground)	46	The PIP revised Baseline (February 2012) assumed 40 miles of fiber would be installed. We show a cumulative 46 miles of new fiber at the end of this reporting quarter resulting in a positive variance of 6 miles. This calculation is based on the guidance given by NTIA that this is the length of conduit containing fiber. This number (46) includes approximately 7 miles of slack loops. Slack loops include slack fiber stored in handholes or manholes to accommodate fiber damage repairs.
Number of new wireless links	0	N/A
Number of new towers	0	N/A
Number of new and/or upgraded interconnection points	9	The PIP revised Baseline (February 2012) projected 0 new and/or upgraded interconnection points would be completed. However, five (5) new interconnection points (new fiber huts) were placed and four (4) existing interconnection points were upgraded resulting in a +9 variance.

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).

UAMS 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)
Michael D. Abbiatti, Executive Director
155 S. Razorback Road
Fayetteville, AR 72101
479-575-3901

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
Community Anchor Institutions (including Government institutions)	Total subscribers served	244	The revised Baseline assumed that 87 (cumulative) subscribers of Telemedicine CAIs would be served. We were able to accelerate our implementation which resulted in an excess of calculated variance (+157).
	Subscribers receiving new access	0	N/A
	Subscribers receiving improved access	244	The revised Baseline assumed that 87 subscribers of Telemedicine CAIs would receive improved access. We were able to accelerate our implementation which resulted in an excess of calculated variance (+157).
	Please identify the speed tiers that are available and the number of subscribers for each	0	The (actual) speed tiers and number of subscribers for each include the following: 100 mbps–5 subscribers; 10 mbps–72 subscribers; 1.5 mbps–167 subscribers.
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).

N/A

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
0	0	0	0	Please see attached addendum

Project Indicators (Next Quarter)

1. Please describe significant project accomplishments planned for completion during the next quarter (600 words or less).

UAMS plans deployment of the majority (if not all) interactive video equipment to remaining 141 Telemedicine CAIs. Program managers will facilitate training to Emergency Directors and/or Clinic Managers on Telemedicine peripherals at 210 sites. By the end of Q3 2012, we anticipate that broadband at all Telemedicine CAIs will be connected and operational.

ARE-ON, the program's sub-recipient, reports these project accomplishments are planned for completion during the next quarter: Fiber construction and installation of prefabricated telecommunication huts are expected to be 100% complete. Installation of optical and core network router equipment is expected to be at 50% completion during the next reporting quarter. ARE-ON's IRU providers have projected that 95% of the IRU milestones will be met, which represents approximately 80% of the overall completed fiber route miles. ARE-ON's engineers will initiate the major portion of equipment installation tasks, including staging and burn-in, racking & stacking, provisioning, and turn-up. We optimistically believe that we can complete about 50% of the equipment installation work by the end of the next reporting quarter.

Estimated number of miles planned for deployment next quarter:

Construction Miles: 0.94 Miles of Conduit, 2.03 Miles of Fiber
 IRU Contracted Miles: 696.78 of 715.89 Miles projected by providers for delivery Q3 2012
 Total Miles: 743.83 Miles (47.05 Lateral Fiber Miles + 696.78 IRU Fiber Miles)

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).

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	87	We have successfully managed the project and have over-achieved. We expect this to continue resulting in a +3 variance for planned completion by Q3 2012.
2b. Environmental Assessment	100	No additional charges are anticipated for Environmental Assessment resulting in a +3% variance against the revised Baseline projections.
2c. Network Design	100	---
2d. Rights of Way	0	N/A
2e. Construction Permits and Other Approvals	9	The Revised Baseline Report assumed that permits would be at 100% by Q3 2012. Because of the use of IRUs there is a lesser need for railroad crossings and, thus, fewer required permits. We anticipate a -91% variance throughout the end of the project.
2f. Site Preparation	0	N/A
2g. Equipment Procurement	97	---
2h. Network Build (all components - owned, leased, IRU, etc.)	81	---
2i. Equipment Deployment	94	---

	Milestone	Planned Percent Complete	Narrative (describe reasons for any variance from baseline plan or any other relevant information)
2j.	Network Testing	66	We anticipate the optical network to be completed over the next two quarters. Therefore, since network testing cannot occur until completion of the optical network itself, testing will fall short of the revised Baseline figure resulting in a variance of -34% for Q3 2012.
2k.	Other (please specify): Indirects, huts, easements, project management costs	71	Fiber hut placement has progressed faster than projected resulting in variance of +7%.

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).

Challenges anticipated could include possible CAIs that move or close prior to or during deployment of leased broadband facilities. These shifts influence several changes to deployment plans. Any unforeseen delays by vendors could preclude our projections of CAIs connected via broadband.

Our sub-recipient, ARE-ON, anticipates challenges in equipment deployment in the next quarter. Final phases will begin, including production of punch lists for each site and fiber route, remediation of any problems, completion of red-line drawings, certification of fiber by Arkansas OneCall, final splicing and testing of lateral to long-haul fiber, and production of as-built prints. Concurrently, ARE-ON's engineers will begin racking & stacking equipment, doing burn-in testing, configuring equipment, provisioning networks, and conducting a final inventory. The enormous amount of travel necessary to do both of these tasks may present challenges. We are working to negate this by doing more pre-staging of equipment and burn-in at the Fayetteville offices of ARE-ON.

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	\$7,114,310	\$0	\$7,114,310	\$7,748,859	\$0	\$7,748,859
b. Land, structures, right-of-ways, appraisals, etc.	\$10,711,692	\$9,851,632	\$860,060	\$4,790,229	\$1,389,108	\$3,401,121	\$9,979,639	\$5,778,836	\$4,200,803
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	\$2,360,448	\$0	\$2,360,448	\$3,105,327	\$0	\$3,105,327
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	\$20,043,544	\$0	\$20,043,544	\$27,300,579	\$0	\$27,300,579
j. Equipment	\$43,605,098	\$15,998,347	\$27,606,751	\$39,255,851	\$16,826,106	\$22,429,745	\$43,502,827	\$16,826,106	\$26,676,721
k. Miscellaneous	\$33,188,367	\$512,048	\$32,676,319	\$17,473,295	\$512,048	\$16,961,247	\$20,739,957	\$512,048	\$20,227,909
l. SUBTOTAL (add a through k)	\$128,581,820	\$26,450,427	\$102,131,393	\$91,037,677	\$18,727,262	\$72,310,415	\$112,377,188	\$23,116,990	\$89,260,198
m. Contingencies									
n. TOTALS (sum of l and m)	\$128,581,820	\$26,450,427	\$102,131,393	\$91,037,677	\$18,727,262	\$72,310,415	\$112,377,188	\$23,116,990	\$89,260,198

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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