QUARTERLY PERFORMANCE PROGRESS REPORT FOR BROADBAND INFRASTRUCTURE PROJECTS

General Information

1. Federal Agency and Organizational Element to Which Report is Submitted	2. Award Identification Number	3. DUNS Number
Department of Commerce, National Telecommunications and Information Administration	NT10BIX5570075	969524214

4. Recipient Organization

University Corporation For Advanced Internet Development 1150 18th Street, NW, #1020, Washington, DC 20036-3825

5. Current Reporting Period End Date (MM/DD/YYYY)	6. Is this the last Report of the Award Period?
12-31-2012	◯ Yes ◉ No

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	7c. Telephone (area code, number and extension)
Nili Tannenbaum	X
	7d. Email Address ntannen@internet2.edu

7b. Signature of Certifying Official	7e. Date Report Submitted (MM/DD/YYYY):
Submitted Electronically	02-26-2013

Project Indicators (This Quarter)

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

Internet2 fully transitioned all of its pre-existing 10G services off its legacy optical system and onto the BTOP-funded Ciena infrastructure in Q4 2012. In addition, Internet2 placed colocation orders for two additional Layer2/Layer3 locations to be installed in Q1 2013 that had been included in the approved application. Internet2 also began logistics planning and pre-deployment activity for the replacement of the legacy Layer3 equipment in Q1 2013. Internet2 received indications of preliminary approval of the Northern Tier portion of the BTOP footprint and began pre-planning discussions with Zayo communications.

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	92	Internet2 met the baseline for this metric.
2b.	Environmental Assessment	0	NA
2c.	Network Design	100	Network design was completed Year 1, Quarter 1.
2d.	Rights of Way	0	NA
2e.	Construction Permits and Other Approvals	0	NA
2f.	Site Preparation	0	NA
2g.	Equipment Procurement	98	The Internet2 project is substantially complete. Expenditures are slightly lagging behind the baseline.
2h.	Network Build (all components - owned, leased, IRU, etc)	100	Internet2 met the baseline for this metric.
2i.	Equipment Deployment	98	The Internet2 project is substantially complete. Expenditures are slightly lagging behind the baseline.
2j.	Network Testing	0	NA
2k.	Other (please specify):	0	NA

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).

Internet2 has been continuing to work on a route change to implement the Northern Tier portion of the network and has been collaborating with the NTIA since July to determine the proper procedure to allow the work to go forward.

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	0	NA
New network miles leased	14,314	The fiber route that was initially planned for Nashville to Dallas was altered to a Nashville to Houston path that passed through Jackson, Mississippi, adding 187 miles. The remainder is a true-up of the straight line fiber distances initially provided by Level3 as compared to tested results, which include maintenance slack coiled in a manhole along the path. A

Indicator	Total	Narrative (describe your reasons for any variance from the baseline plan or any other relevant information)
		retroactive route modification document was submitted on 12/20/2012 for this route change.
Existing network miles upgraded	0	Internet2's network project for July, 2011 through October, 2012 does not include any upgraded mileage. The build has been based on new activation of existing IRUs and no operating infrastructure has been upgraded. Between October, 2012 and June, 2013, 2463 miles of existing network in the Northern Tier are slated to be upgraded.
Existing network miles leased	0	NA
Number of miles of new fiber (aerial or underground)	0	NA
Number of new wireless links	0	NA
Number of new towers	0	NA
Number of new and/or upgraded interconnection points	52	Internet2 met the baseline for this metric.

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	22
Number of agreements currently being negotiated with broadband wholesalers or last mile providers	0
Average term of signed agreements (in quarters)	4

5b. Please list the names of the wholesale and last mile providers with whom you have signed agreements (100 words or less). Providers:
3ROX/Drexel; CENIC; CIC OmniPoP; FLR/SoX; GPN (Great Plains Network); Indiana GigaPoP; KyRON; LEARN (Lonestar Education and Research Network); LONI (Louisiana Optical Network Initiative); MAGPI; MAX (Mid-Atlantic Crossroads); MCNC/C-Light; OARnet; MREN (Metropolitan Research and Education Network); NOX (The Northern Crossroads); NYSERNet, Inc.; Oregon GigaPoP; Pacific Northwest GigaPoP; University of Memphis; Utah/Montana; Mississippi Institutions of Higher Learning; MissION (Mississippi Optical Network); MARIA (Mid-Atlantic Research Infrastructure Alliance)

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:
Two 5 gigabit network connects $32,500/mo
One 10 gigabit network connection $41,600/mo
Two 10 gigabit network connections $45,500/mo

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).
The Indiana University Global Research Network Operations Center, a contractor, operates the network on behalf of Internet2. Their contact information is:
Dave Jent
Associate Vice President for Networks
Global Research Network Operations Center
535 W. Michigan Street
Indianapolis, IN 46202, USA
Phone: (317) 274-7788
Email: globalnoc@iu.edu

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)

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**	2	This number includes: Mississippi Institutions of Higher Learning and MARIA (Mid-Atlantic Research Infrastructure Alliance).
	Providers with signed agreements receiving improved access	20	3ROX/Drexel; CENIC; CIC OmniPoP; FLR/SoX; GPN (Great Plains Network); Indiana GigaPoP; KyRON; LEARN (Lonestar Education and Research Network); LONI (Louisiana Optical Network Initiative); MAGPI; MAX (Mid-Atlantic Crossroads); MCNC/C-Light; OARnet; MREN (Metropolitan Research and Education Network); NOX (The Northern Crossroads); NYSERNet, Inc.; Oregon GigaPoP; Pacific Northwest GigaPoP; University of Memphis; Utah/Montana; MissION (Mississippi Optical Network)
	Providers with signed agreements receiving access to dark fiber	0	NA
	Please identify the speed tiers that are available and the number of subscribers for each	3	7 subscribers of two 5 gigabit network connections 5 subscribers of one 10 gigabit network connections 10 subscribers of two 10 gigabit network connections
Community Anchor Institutions (including Government institutions)	**Total subscribers served**	0	NA
	Subscribers receiving new access	0	NA
	Subscribers receiving improved access	0	NA
	Please identify the speed tiers that are available and the number or subscribers for each	0	NA
Residential / Households	**Entities passed**	0	NA
	Total subscribers served	0	NA
	Subscribers receiving new access	0	NA
	Subscribers receiving improved access	0	NA
	Please identify the speed tiers that are available and the number of subscribers for each	0	NA
Businesses	**Entities passed**	0	NA
	Total subscribers served	0	NA
	Subscribers receiving new access	0	NA
	Subscribers receiving improved access	0	NA
	Please identify the speed tiers that are available and the number of subscribers for each	0	NA

7. Please describe any special offerings you may provide (600 words or less).

The project offers native IPv6 and IP multicast in addition to the normal IPv4 connectivity. In addition the project is adding support for Software Defined Networking (SDN) and OpenFlow.

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

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

NA

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
NA	**NA**	**NA**	**NA**	**NA**

Project Indicators (Next Quarter)

1. Please describe significant project accomplishments planned for completion during the next quarter (600 words or less).
Internet2 expects to deploy two more Layer2/Layer3 aggregation nodes in Q1 2013. In addition, Internet2 plans to have completed logistics planning and pre-deployment tasks for an additional seven Layer2/Layer3 aggregation nodes to be deployed in Q2 2013. Internet2 also expects to replace the majority of its Layer3 routing equipment by the end of March. Assuming NTIA approval of the route change along the Northern Tier, Internet2 and Zayo expect to have a large portion of the optical build between Seattle and Chicago complete.

a. New Network Miles Leased:14,314
b. Number of Signed Agreements with Middle Mile Carriers: 22

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**	96	Internet2 expects to exceed the baseline for this metric in Year 3, Quarter 2.
2b.	**Environmental Assessment**	0	NA
2c.	**Network Design**	100	Network design was completed Year 1, Quarter 1.
2d.	**Rights of Way**	0	NA
2e.	**Construction Permits and Other Approvals**	0	NA
2f.	**Site Preparation**	0	NA
2g.	**Equipment Procurement**	100	Internet2 expects to exceed the baseline for this metric in Year 3, Quarter 2.
2h.	**Network Build (all components - owned, leased, IRU, etc.)**	100	Internet2 expects to meet the baseline for this metric in Year 3, Quarter 2.
2i.	**Equipment Deployment**	100	Internet2 expects to exceed the baseline for this metric in Year 3, Quarter 2.
2j.	**Network Testing**	0	NA
2k.	**Other (please specify):**	0	NA

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).
Internet2 has been continuing to work on a route change to implement the Northern Tier portion of the network and has been collaborating with the NTIA since July to determine the proper procedure to allow the work to go forward. In order to achieve planned progress against the remaining project milestones listed above, Internet2 needs approval of all documents submitted to date in regards to the route change.

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.

Cost Classification	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		
	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	$1,024,497	$1,024,497	$0	$699,428	$699,428	$0	$699,428	$699,428	$0
b. Land, structures, right-of-ways, appraisals, etc.	$0	$0	$0	$0	$0	$0	$0	$0	$0
c. Relocation expenses and payments	$0	$0	$0	$0	$0	$0	$0	$0	$0
d. Architectural and engineering fees	$0	$0	$0	$0	$0	$0	$0	$0	$0
e. Other architectural and engineering fees	$9,113,965	$5,170,096	$3,943,869	$3,170,031	$3,170,031	$0	$3,170,031	$3,170,031	$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	$0	$0	$0	$0	$0	$0	$0	$0	$0
j. Equipment	$86,655,145	$28,058,852	$58,596,293	$85,027,327	$25,139,664	$59,887,664	$89,040,000	$26,500,000	$62,540,000
k. Miscellaneous	$0	$0	$0	$0	$0	$0	$0	$0	$0
l. SUBTOTAL (add a through k)	$96,793,607	$34,253,445	$62,540,162	$88,896,786	$29,009,123	$59,887,664	$92,909,459	$30,369,459	$62,540,000
m. Contingencies	$0	$0	$0	$0	$0	$0	$0	$0	$0
n. TOTALS (sum of l and m)	$96,793,607	$34,253,445	$62,540,162	$88,896,786	$29,009,123	$59,887,664	$92,909,459	$30,369,459	$62,540,000

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