U.S. DEPARTMENT OF COMMERCE	2. Award Or Grant Number
	34-50-M09066
Performance Progress Report	4. Report Date (MM/DD/YYYY)
	01-30-2012

1. Recipient Name	6. Designated Entity On Behalf Of:
State of New Jersey	NJ Office of Information Technology

3. Street Address	8. Final Report?	9. Report Frequency
300 Riverview Plaza,	○ Yes	⦿ Quarterly
	⦿ No	○ Semi Annual
5. City, State, Zip Code		○ Annual
Trenton, NJ 08625-0212		○ Final

7. Project / Grant Period Start Date: (MM/DD/YYYY)	7a. End Date: (MM/DD/YYYY)	7b. Reporting Period End Date:	9a. If Other, please describe:
02-01-2010	01-31-2015	12-31-2011	N/A

10. Broadband Mapping   10a. Provider Table

Number of Providers Identified	Number of Providers Contacted	Number of Agreements Reached for Data Sharing	Number of Partial Data Sets Received	Number of Complete Data Sets	Number of Data Sets Verified
0	0	0	0	0	0

10b. Are you submitting the required PROVIDER DATA by using the Excel spreadsheet provided by the SBDD grants office? ○ Yes ⦿ No

10c. Have you encountered challenges with any providers that indicate they may refuse to participate in this project? ⦿ Yes ○ No

10d. If so, describe the discussions to date with each of these providers and the current status

Hotwire Communications, a provider who meets the NOFA definition of a facilities-based broadband provider, declined to participate in this program due to the burden of collecting data.   We will reach out to Hotwire again in January 2012, and request their participation for the April 2012 deliverable.

We have had discussions with several providers who do not meet the NOFA definition -- some are resellers, others cannot meet the 7-10 service window, etc.   We do not designate any such provider as a non-participant since they are not strictly in scope for this program, hence this would be inappropriately pejorative.

10e. If you are collecting data through other means (e.g. data extraction, extrapolation, etc), please describe your progress to date and the relevant activities to be undertaken in the future

We have provided a summary of the various data sources we have used both for collection and to support our validation activities. Cogent Communications did not submit data; instead they referred us to the data available on their public web site. The current broadband service availability data from Cogent was collected from that site in the July-August, 2011, timeframe.

We have used web-based sources and aggregators to get information on potential broadband service providers and resellers, such as, the Broadband Internet Directory (http://broadband.theispguide.com/), www.dslone.net/nj, www.globalspec.com, www.broadbandinfo. com, etc.

We completed a consumer phone survey of 3,101 NJ residents including an oversample of 1,241 non-adopters and have used the survey data for verification.

We have collected Community Anchor institution (CAI) data, including reference data, broadband data from institutions via our website, and data from NJEDge, the NJ Hospital Association, the NJ Department of Health and Senior Services and NJ applications to the federal e-Rate program.

We use NH placenames data from the following sources: State of NJ geographic information (https://njgin.state.nj.us/ NJ_NJGINExplorer/DataDownloads.jsp), Federal Government placename information (http://geonames.usgs.gov/domestic/ download_data.htm), and US Postal Service data (available for a fee).

We have analyzed FCC speed test data and dead zone data and developed rules and processes for ensuring a sufficient quantity of reliable data before using in validation.

10f. Please describe the verification activities you plan to implement

The following list includes verification activities that we have already implemented:

1. Verify Provider Name & FRN vs.FCC data by checking the (dbaname, provname, frn)-tuple against our FRN reference table.

2. Verify coverage area and other data elements are within NJ: This verification differs depends on the specific data element and includes checking latitude range, longitude range, valid census block id within NJ, and valid zip code in NJ.

3. Address verification via geo-coding: We use several geo-coding capabilities to verify specific data elements.

4. Validate data in all fields: We review all data elements for uniqueness and validity; i.e., census block ids, TIGERLine street segments, speed tier codes, etc.

5. Technology and speed consistency checks vs. known provider capabilities and/or Web site advertisements. We also review

technical specifications from standards.

6. Visual inspection of individual provider coverage maps for outlier detection.

7. Data consistency across tables via basic cross-table consistency checks.

8. NTIA validation rule set. We perform all rules in the NTIA check_submission rules; i.e., speed codes versus technology, overview versus detail consistency, etc.

9. Compare cable data to cable franchise municipality data: For cable providers we check coverage areas against municipalities in their franchise area.

10. Survey of 3100 NJ households: Householders who responded that they were broadband users were asked who their service provider was and this data was compared against service provider serving areas for verification.

11. Longitudinal study from scraper data: We have been conducting a limited longitudinal study of service plan offerings and prices from major providers using a panel survey design. We will be expanding and automating this study with the supplemental funding in 2012.

There are three verification activities not yet implemented which are discussed in the responses to Question 10h and 10i.

10g. Have you initiated verification activities? ⦿Yes   ◯No

10h. If yes, please describe the status of your activities

Activities 1 through 10 in the response to Question 10f have been implemented and are in use for verification. Activity 11 from the response to Question 10f has also been implemented. It is to be extended and automated by our subcontractor as soon as we provide work authorization to them and will then be used for verification.

There are three verification activities which we have not yet implemented:

12. Verify against cell tower location data from NJ OIT emergency communications office.

13. Crowd sourcing applications for speed tests

14. Crowd sourced methods and incentives for collecting data on wireless availability

10i. If verification activities have not been initiated please provide a projected time line for beginning and completing such activities

There are three verification activities which are not yet implemented.

12. Verify against cell tower data from NJ OIT emergency communications office: We are exploring the feasibility of obtaining data on cell tower locations and capabilities from the OIT emergency communications office. If we can obtain this data, we will then analyze it to determine if it has the requisite accuracy and quality to be used for validation. The timeline for beginning and completing this work is dependent on whether and when the data is available. If preliminary data arrives by mid-February, we will use it for cursory validation for the April 1 Deliverable, if possible. If the data arrives later, we will use it for the October 1 Deliverable to the appropriate degree depending on its quality and value.

13. Crowd sourcing applications for speed tests: This work was funded on the supplemental funding and will begin when we get the requisite Purchase Order to our subcontractor.

14. Crowd sourced methods and incentives for collecting data on wireless availability.

Staffing

10j. How many jobs have been created or retained as a result of this project?

2.8 positions were retained as a result of the Broadband Mapping program. In addition, we are posting for two additional positions to carry out the work as described in the supplemental award.

10k. Is the project currently fully staffed?   ◯Yes ⦿No

10l. If no, please explain how any lack of staffing may impact the project's time line and when the project will be fully staffed

The State of New Jersey was under a hiring freeze. Although OIT received funding to hire two positions, we are required to obtain a waiver from the Civil Service Commission. Given the current situation, OIT is actively seeking qualified consultants to fill the positions.

10m. When fully staffed, how many full-time equivalent (FTE) jobs do you expect to create or retain as a result of this project?

An additional two FTEs will be created.

10n. Staffing Table

Job Title	FTE %	Date of Hire
Executive Director/Senior Principal Engineer	30	03/01/2010
Principal Engineer	100	03/01/2010
Senior Systems Engineer	100	03/01/2010
Senior Systems Engineer	10	03/01/2010

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Sub Contracts

10o. Subcontracts Table

Name of Subcontractor	Purpose of Subcontract	RFP Issued (Y/N)	Contract Executed (Y/N)	Start Date	End Date	Federal Funds	In-Kind Funds
Telcordia Technologies	Perform data collection and planning activities	Y	Y	05/25/2010	01/01/2015	3,637,387	818,000

Add Row	Remove Row

Funding

10p. How much Federal funding has been expended as of the end of the last quarter? $1,327,488   10q. How much Remains? $3,598,617

10r. How much matching funds have been expended as of the end of last quarter? $461,472   10s. How much Remains? $856,101

10t. Budget Worksheet

Mapping Budget Element	Federal Funds Granted	Proposed In-Kind	Total Budget	Federal Funds Expended	Matching Funds Expended	Total Funds Expended
Personal Salaries	$840,000	$358,286	$1,198,286	$0	$286,276	$286,276
Personnel Fringe Benefits	$292,656	$128,983	$421,639	$0	$100,196	$100,196
Travel	$30,927	$0	$30,927	$0	$0	$0
Equipment	$0	$0	$0	$0	$0	$0
Materials / Supplies	$125,136	$350,000	$475,136	$0	$75,000	$75,000
Subcontracts Total	$3,637,387	$480,304	$3,642,748	$1,327,488	$0	$1,327,488
Subcontract #1	$3,637,387	$480,304	$3,642,748	$0	$0	$0
Subcontract #2	$0	$0	$0	$0	$0	$0
Subcontract #3	$0	$0	$0	$0	$0	$0
Subcontract #4	$0	$0	$0	$0	$0	$0
Subcontract #5	$0	$0	$0	$0	$0	$0
Construction	$0	$0	$0	$0	$0	$0
Other	$0	$0	$0	$0	$0	$0
Total Direct Costs	$4,926,106	$0	$6,243,679	$1,327,488	$461,472	$0
Total Indirect Costs	$0	$0	$0	$0	$0	$0
Total Costs	$4,926,106	$1,317,573	$6,243,679	$1,327,488	$461,472	$0
% Of Total	79	21	100	78	35	100

Hardware / Software

10u. Has the project team purchased the software / hardware described in the application?   ●Yes ○No

10v. If yes, please list

We have purchased the following hardware and software.
PowerEdge T110 Server at a price of $1229.26, purchased on July 2010.
TerraGo Publisher for ArcGIS at a price of $2,295.00 July, purchased on July 2011.
TerraGo Publisher for ArcGIS Support Subscription at a price of $459.00 purchased on July 2011

10w. Please note any software / hardware that has yet to be purchased and explain why it has not been purchased

N/A

10x. Has the project team purchased or used any data sets?　⦿Yes　○No

10y. If yes, please list
We have purchased two sets of data as listed below:
First, the USPS AISVIEW DVD, at a price of $176.57, was purchased in May 2010
Second, we have purchased two annual licenses to ESRI.
We purchased FESRI StreetMap Premium Mapping/Display NAVTEQ State (New Jersey) (1 Year) Term License for $400.00 in September 2010.
We purchased ESRI StreetMap Premium Geocode NAVTEQ State (New Jersey) (1 Year) Term License for $600.00 in September 2010.

10z. Are there any additional project milestones or information that has not been included?　○Yes　⦿No

10aa. If yes, please list

N/A

10bb. Please describe any challenge or obstacle that you have encountered and detail the mitigation strategies the project team is employing
1. Alignment of Tiger Lines and 2010 Census Blocks (CBs): When a 2010 CB has a Tiger Line road segment as part of its boundary, misalignment ma make the road segment appear to be within a CB. . To address this problem, we performed the spatial join between 2010 Census blocks and TIGER lines with a 2 meter buffer on either side of the Tiger line. The 2 meter is an empirical number: we started with a smaller buffer and kept increasing it until we did not see any problems with the line segment.
2. The time required for outreach and technical interaction with service providers continues to be extensive as we work to include Resellers and others.   We continue to allocate effort and resources to this activity.
3. CAI identification and outreach is time-consuming and response rates are low. We implemented a web-based data submission capability on our website and performed outreach through the 21 counties in the state.
3. The CAI transfer model requires a street number and some CAIs use a cross street for directions, a PO box for paper mail, etc. We dropped entries that did not meet the NTIA requirements.
4. Some CAIs have multiple connections to the internet. We submit a single entry for each institution, using the highest available download speed.
5. All but one provider submitted 2010 Census Blocks (CBs). For that provider, we mapped their coverage to 2010 CBs which results in a modest overstatement as we show availability for all 2010 CBs for which there is overlap with a 2000 CB in their serving territory.
6.Speeds associated with address data sometimes represent the price plan chosen by the customer and are neither max advertised speed nor typical speed. We keep the max speed encountered in the census block and report it as max advertised and report typical as null. If customers' selections in neighboring CBs are vastly different, we use the highest speed in a (subjectively defined) area as max advertised.

10cc. Please provide any other information that you think would be useful to NTIA as it assesses your Broadband Mapping Project

N/A

11. Broadband Planning

11a. Please describe progress made against all goals, objectives, and milestones detailed in the approved Project Plan. Be sure to include a description of each major activity / milestone that you plan to complete and your current status
There are four activities in the original planning award, all of which are on track.
Activity 1, "Understanding and Addressing Barriers to the Adoption of Broadband and Information Technology Services," focuses on analyzing the survey data to document household-level barriers to broadband adoption and model the bases of non-adoption. A manuscript titled "Consider the Non-Adopter: Developing a Prediction Model for the Adoption of Household-Level Broadband Access" is under peer review during 4Q2011.
Activity 2, "Addressing Gaps, Developing Programs and Assessing Progress in Improving Broadband Penetration," focuses on both better understanding the reasons that traditionally underserved communities are not adopting the Internet and on identifying programs that have been successful in addressing the extant socio-economic and cultural barriers to bridge the digital divide in specific communities across New Jersey. In 4Q2011 the report "Summary of Some Broadband Adoption Programs in the State of New Jersey" was delivered.
Activities 3 and 4 on "Analysis of the Impact of the Spread of Broadband on New Jersey's Economy" and "Collecting, Analyzing and Sharing Detailed Market Data Concerning Use Concerning Use and Demand for Broadband Service between Public and Private Sectors" address state-level econometric analysis and related analytics. During 4Q2011 the report "Status and Next Directions Report on R/ECON Modeling Efforts Including Collection and Analysis of Broadband Market Data" was delivered. Activity 3 will end on 3/31/12 and Activity 4 will continue.

11b. Please describe any challenge or obstacle that you have encountered and detail the mitigation strategies the project team is employing

N/A

11c. Does the Project Team anticipate any changes to the project plan for Broadband Planning? ○ Yes ● No

11d. If yes, please describe these anticipated changes. Please note that NTIA will need to approve changes to the Project Plan before they can be implemented

N/A

Funding

11e. How much Federal funding has been expended as of the end of the last quarter? $0   11f. How much Remains? $0

11g. How much matching funds have been expended as of the end of last quarter? $0   11h. How much Remains? $0

11i. Planning Worksheet						
Personal Salaries	$0	$0	$0	$0	$0	$0
Personnel Fringe Benefits	$0	$0	$0	$0	$0	$0
Travel	$0	$0	$0	$0	$0	$0
Equipment	$0	$0	$0	$0	$0	$0
Materials / Supplies	$0	$0	$0	$0	$0	$0
Subcontracts Total	$0	$0	$0	$0	$0	$0
Subcontract #1	$0	$0	$0	$0	$0	$0
Subcontract #2	$0	$0	$0	$0	$0	$0
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Subcontract #4	$0	$0	$0	$0	$0	$0
Subcontract #5	$0	$0	$0	$0	$0	$0
Construction	$0	$0	$0	$0	$0	$0
Other	$0	$0	$0	$0	$0	$0
Total Direct Costs	$0	$0	$0	$0	$0	$0
Total Indirect Costs	$0	$0	$0	$0	$0	$0
Total Costs	$0	$0	$0	$0	$0	$0
% Of Total	0	0	0	0	0	0

Additional Planning Information

11j. Are there any additional project milestones or information that has not been included?

N/A

11k. Please describe any challenge or obstacle that you have encountered and detail the mitigation strategies the Project Team is employing

N/A

11l. Please provide any other information that you think would be useful to NTIA as it assesses your Broadband Mapping Project

N/A

12. Certification: I certify to the best of my knowledge and belief that this report is correct and complete for performance of activities for the purpose set forth in the award documents.	
12a. Typed or Printed Name and Title of Authorized Certifying Official Shelley Bates	12c. Telephone (area code, number, and extension) X
	12d. Email Address shelley.bates@oit.state.nj.us
12b. Signature of Authorized Certifying Official Submitted Electronically	12e. Date Report Submitted (Month, Day, Year) 01-30-2012