U.S. DEPARTMENT OF COMMERCE	2. Award Or Grant Number
Performance Progress Report	42-50-M09065
	4. Report Date (MM/DD/YYYY)
	01-11-2011

1. Recipient Name	6. Designated Entity On Behalf Of:
Executive Office of the Commonwealth of Pennsylvania	N/A

3. Street Address	8. Final Report?	9. Report Frequency
Commonwealth Avenue, 207 Finance Building,	○ Yes ◉ No	◉ Quarterly ○ Semi Annual ○ Annual ○ Final

5. City, State, Zip Code		
Harrisburg, PA 17120		

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:
01-01-2010	12-31-2014	12-31-2010	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

While the Pennsylvania Broadband Mapping team has been quite successful in reaching agreements with and securing complete data from 87 of the 116 (75%) broadband providers operating within the state, the project team has also encountered some challenges in obtaining the full cooperation of the remaining 29 (25%) providers. More specifically, as of December 31, 2010:

• 7 of 116 (6%) broadband providers contacted explicitly indicated to the outreach staff that they would not participate in the program.

• 9 of 116 (8%) broadband providers contacted had not responded to repeated contacts by the project team. The project team will continue to outreach to each of them in preparation for the April 2011 update cycle.

• 6 of 116 (5%) broadband providers contacted during the initial delivery cycle had indicated that they would supply their data, but have not yet done so and did not respond during the October 2010 data delivery request. The project team will continue to outreach to each of them in preparation for the April 2011 update cycle.

• 6 of 116 (5%) broadband providers contacted have submitted partial data sets, but have yet to submit complete data. The project team will continue to outreach to each of them n preparation for the April 2011 update cycle.

• 1 of 116 (1%) broadband providers contacted just recently established a NDA with the project team, but will not provide data until the April 2011 delivery cycle.

For more details, please refer to the Q4 Supplemental Answers Document.

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

The Pennsylvania broadband mapping project is collecting source data directly from broadband service providers and community anchor institutions. Where the source data for community anchor institutions is lacking, the project team is leveraging data elements from other sources. For example, for K-12 Schools, current and historical data from the Pennsylvania Technology Inventory (PATI), a survey administered annually by the Pennsylvania Department of Education, which includes detailed Internet connectivity information, was used to populate Pennsylvania's community anchor institution database.

The project continues to work closely with the Commonwealth's Geospatial Technologies Steering Committee, relevant state agencies/offices (e.g. Department of Community and Economic Development, Governor's Office of Administration, Department of Health, Department of Education, Pennsylvania Emergency Management Agency, Governor's Center for Local Governor Services, State System of Higher Education, Public Utility Commission, etc.), and other external partners (e.g. Economic Development Districts, Pennsylvania Commission for Community Colleges, public safety organizations and associations, etc.) to seek out additional data sources and partners to augment the data collection and verification efforts.

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

PA's project employs a multi-prong approach to ensure the provider data is accurate and complete.

Quality Assurance/Quality Control: Screens and compares the data received from providers against the requirements set forth in the NOFA's Technical Appendix and subsequent clarification.

Data Validation via Market Intelligence Sources: Utilizes Telogical/Centris (wireline) and American Roamer (wireless) market intelligence data as independent sources to conduct analysis against Provider data.

Data Validation Using State Supplied Data Points: data collected by Pennsylvania state government, relative to Act 183 of 2004's requirement to build and maintain an Inventory of Broadband Services, is used as an additional source to validate provider data.

Field Validation: Broadband technicians visited designated locations to perform site verification.

Wireless Coverage Analysis: Utilizing the existing PAMAP LiDAR to generate an effective terrain model, fixed Wireless coverage is evaluated using line-of-sight methods, with key inputs being transmitter location and data on spectrum power levels and other transmission factors provided by carriers and public web sites.

Automated Validation Processing: All of the above verification data sources are integrated into a GIS utilized to auto-compare the validation layers against the Provider data and areas of discrepancy are flagged for reporting the data confidence level.

Provider Validation: Maps of completed provider service areas and data are supplied back to the providers for validation of the processed information or any questionable data.

Stakeholder Validation: Interactive broadband coverage maps are published online for individuals to query and provide feedback on accuracy. Further aggregated coverage maps will be provided to regional Economic Development Districts for review relative to their jurisdictions.

*NOTE: A white paper describing PA's DATA DEVELOPMENT & VALIDATION METHODOLOGIES was provided on 10/08/2010.

10g. Have you initiated verification activities? ⦿Yes   ◯No
10h. If yes, please describe the status of your activities

All of the verification activities listed above in 10f were performed on the October 2010 data submission, with the exception of the two components discussed below in 10i.

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

As described in the previous item 10h, rigorous verification activities were conducted for the October 2010 data submittal to the NTIA. In addition, the following

**Confidence Level/Statistical Modeling: Pennsylvania's consultant recently deployed a process called SEAS (System for Evaluation and Assessment Statistics) to automate the validation processes and calculate confidence level and statistical modeling of the data per provider at the census block and road segment level. - Full implementation of this component is planned for the April 2011 delivery and will continue for subsequent update cycles.

**Stakeholder Validation: Aggregated broadband coverage maps will be provided to the 10 regional Economic Development Districts for review relative to their jurisdictions and the interactive coverage maps. Additional outreach will occur to solicit input from individuals and other relevant stakeholders on their accuracy. Full implementation of this component is planned for the April 2011 delivery and will continue for subsequent update cycles.

Staffing

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

The staffing on the project declined during the 4th Quarter 2010 to 3.09 FTEs, comprised of 16 unique individuals working on this project during the quarter. All of these personnel were retained staff.

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

N/A

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

The project peaked at full staffing during 2nd Quarter 2010 at 9.88 FTEs due to project ramp up, and development/validation of the May 2010 initial data submittal to the NTIA. A cumulative total of 70 unique individuals have worked on the project since inception.

10n. Staffing Table

Job Title	FTE %	Date of Hire
State Project Manager	100	01/01/2010
Program Manager	37	01/27/2010
Administrative Manager	0	01/27/2010
Collaboration Manager	5	01/27/2010
IT Manager	0	01/27/2010
Data/Mapping Manager	0	01/27/2010
GIS Specialist	23	02/18/2010
GIS Specialist	8	02/24/2010
GIS Specialist	9	02/16/2010
GIS Specialist	6	02/18/2010
GIS Specialist	0	11/05/2010
Software Developer	17	01/28/2010
Software Developer	11	04/14/2010
Field Manager	1	01/27/2010
Outreach Associate	1	01/27/2010
Sub - Field Technician	0	03/03/2010
Sub - Software Developer	91	05/03/2010
Sub - Telecom Consultant	0	02/18/2010
Sub - Sr. GIS Analyst	0	04/12/2010
Sub - GIS Programmer	0	03/08/2010
Sub - GIS Technician	0	
Sub - Sr. Consultant	0	02/01/2010
Sub - Plan/Collaboration	0	02/01/2010

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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
Michael Baker Jr. Inc.	Outreach, data collection, integration, analysis, verification, website development and hosting, and other broadband mapping-related services over the term of the 2-year broadband mapping project	Y	Y	01/27/2010	12/31/2011	1,547,700	0

Add Row	Remove Row

Funding

10p. How much Federal funding has been expended as of the end of the last quarter? $1,501,559   10q. How much Remains? $5,854,742

10r. How much matching funds have been expended as of the end of last quarter? $561,450   10s. How much Remains? $1,606,950

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	$785,498	$539,365	$1,324,863	$67,427	$103,401	$170,828
Personnel Fringe Benefits	$308,071	$211,540	$519,611	$23,715	$40,554	$64,269
Travel	$0	$0	$0	$0	$0	$0
Equipment	$16,664	$0	$16,664	$0	$0	$0
Materials / Supplies	$159,823	$0	$159,823	$0	$0	$0
Subcontracts Total	$6,082,245	$1,000,000	$7,082,245	$1,410,385	$0	$1,410,385
Subcontract #1	$1,547,700	$0	$1,547,700	$1,410,385	$0	$1,410,385
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	$4,000	$417,495	$421,495	$32	$417,495	$417,526
Total Direct Costs	$7,356,301	$2,168,400	$9,524,701	$1,501,559	$561,450	$2,063,009
Total Indirect Costs	$0	$0	$0	$0	$0	$0
Total Costs	$7,356,301	$2,168,400	$9,524,701	$1,501,559	$561,450	$2,063,009
% Of Total	77	23	100	73	27	100

Hardware / Software

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

10v. If yes, please list

N/A

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

**Telogical/Centris Wireline Market Intelligence Database: This data set was developed using a methodology that incorporates deep web crawling and additional means, including direct mail harvesting and advertising collaterals (including door to door) to gather cable and telecommunication provider information, and is commercially available. This data set is used as a validation source for provider service area coverage, Technology of Transmission, and Speed. - $50,000

**American Roamer Wireless Market Intelligence Data: Commercially available data set used as an independent source to verify information submitted by Providers of wireless broadband service. This data set is used as a validation source for provider service area coverage. - $12,773

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

**Provider Resistance: As indicated in response to 10d, the project team has encountered several broadband providers who have refused to participate or have not responded to continued outreach attempts. Mitigation: For those companies that have indicated that they are resource-constrained, Pennsylvania, acting through its vendor, Michael Baker Jr., Inc., will continue to identify ways to partner with providers and provide the resources, expertise, and hands-on assistance necessary to produce acceptable maps of their service areas from the data/format the provider has available.

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

Pennsylvania's broadband map is live and available at: www.broadbandinpa.com. This map accomplishes the parallel objectives of PA state Act 183 of 2004 and the federal SBDD program.

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

During the quarter ending 12/31/2010, the Commonwealth of Pennsylvania made progress against several aspects of the planning effort:

BROADBAND SUMMIT FOLLOW-UP - The commonwealth's project team reviewed the outcomes and feedback from the first statewide Broadband Summit, held on September 20-21, 2010, which brought together over 300 stakeholders to learn about and discuss policy developments, success stories and best practices, technical demonstrations, partnership building surrounding broadband in Pennsylvania. The outcomes of this event will help guide future planning efforts.

PROCUREMENT PREPARATIONS - The commonwealth's project team undertook numerous internal steps primarily related to the future issuance of a state procurement to secure the services of outside vendor(s) to assist with broadband adoption and utilization surveying, formation and management of Regional Broadband Working Groups, and Cost Model development. Steps included the preparation of a draft Request for Qualified (RFQ) vendors and registration of potential qualified interested bidders. These anticipatory steps are necessary and have been accomplished in anticipation of the NTIA's approval of the commonwealth revised SBDD work plan submitted on 01/03/2011.

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

No serious or substantial issues encountered. Availability of SBDD program staff, periodic webinars, and the updates communicated through the PBWorks SBDD project portal have mitigated the occurrence of challenges or obstacles.

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

Minor adjustments to Pennsylvania's Broadband Planning budget were proposed in the commonwealth's detailed SBDD work plan submitted to NTIA on 01/03/2011. Specifically, the commonwealth requested authorization to reprogram $66,802 in federal funds, which were originally budgeted for but were not needed to accomplish the Broadband Summit (due to greater than expected event sponsorship support), to support travel, consumable supplies, and other associated administrative costs, as well as a contingency reserve for future planning activities, which are not reflected in the current project budget. It is important to note that the requested modifications are less than 10% of the overall grant amount and will have no impact on the project scope of work or outcomes.

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
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	$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 Sue Suleski	12c. Telephone (area code, number, and extension) 717-787-5440
	12d. Email Address ssuleski@state.pa.us
12b. Signature of Authorized Certifying Official Submitted Electronically	12e. Date Report Submitted (Month, Day, Year) 01-30-2011