

**U.S. DEPARTMENT OF COMMERCE**

**Performance Progress Report**

2. Award Or Grant Number

29-50-M09022

4. Report Date (MM/DD/YYYY)

05-01-2012

1. Recipient Name

Missouri Office of Administration

6. Designated Entity On Behalf Of:

Missouri

3. Street Address

301 West High Street, HST Room 280, P.O. Box 809,

8. Final Report?

Yes  
 No

9. Report Frequency

Quarterly  
 Semi Annual  
 Annual  
 Final

5. City, State, Zip Code

Jefferson City, MO 65102-0809

7. Project / Grant Period  
Start Date: (MM/DD/YYYY)

11-01-2009

7a. End Date: (MM/DD/YYYY)

10-30-2014

7b. Reporting Period End Date:

03-31-2012

9a. If Other, please describe:

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

At this point we have fourteen (14) providers that are non-responsive to our requests.

We have three (3) working toward a signed NDA

We have three (3) with a signed NDA but no data submitted

We have five (5) stating they do not need and NDA but have not submitted any data

We have four that have either compiled data or are compiling data but have not submitted and do not require an NDA to do so.

Finally we have six (6) providers that have refused to sign an NDA and are not participating at this time. They are:

Birch Telecom of Missouri Inc. Will not cooperate until mandated by FCC. Too costly

Pixius Communications Will not cooperate. They claim information is available on ID Insight

Ionex Communications, Inc. Affiliated with Birch Telecom above

Poplar Bluff Internet, Inc (SEMO). Will not cooperate until mandated by FCC.

SEMO Communications Inc. Will not cooperate until mandated by FCC.

St. Louis Broadband - Does not see the benefit

We have asked their respective associations to aid in gaining their cooperation as well as pursuing publicly available maps of their service area and representing their service delivery in that manner.

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 continue our public-based search and collection of provider information. All mapped resources are being geo-registered and heads-up digitized. We continue analysis of wireless boundaries and their representation within the mapping. We continue to integrate census data (housing units, population, demographics, etc.) to start the transition to adoption-based mapping and to support our Regional Technology Planning Teams and work toward strategic planning for these regions. Interviews and surveys continue to be used in field work elements to collect detail in selected blocks about service provision. We continue to encourage Missouri residents to visit the Missouri Ookla speed test site. We moving forward on an investigation of price data from Telogical to see how it would help inform our approach to adoption issues in Missouri. We are also discussing using other events to collect information and conduct surveys as well as using various state level associations to target certain groups (i.e. just completed a survey of Future Farmers of America (FFA) with 580 surveys completed by high school aged rural youth).

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

We continue using a convergence of evidence approach to both determine coverage consistency as well as provide a measure of confidence for these areas and boundaries. The actual verification activities can be broken down as follows:

1. Provider validation – provider review of mapping established boundaries. The April 1, 2011 submission had 101 providers mapped with only 30 of those making significant changes to their data submission.

2. Lab-based verification – Using publicly available data and maps; tower locations and service parameters; Continue to work on receiving Form 477 information; marketing materials of providers; web crawling results; new 2010 Census data at the block level; Ramping up the structures project for locations of residential, commercial, and other built sites.

3. Field verification – field-based observation, interviews, and measures; Community Anchor Institution evolving into a more collaborative relationship with statewide groups and associations (i.e. Fire Marshal; State Police Chiefs Association; State Sheriffs Association, Missouri Municipal League) Towards this end we have created a packet approach to aid in the distribution of both educational information as well as data collection materials.

4. Surveys - Starting to target specific groups for obtaining key sector information on areas that we do not have good information on.

5. Consumer feedback – Feedback on broadband coverage through web-mapping portal continues; the Missouri 'Speed Test' Ookla site as well as the FCC Speed Test site continue to collect hits for Missouri.

10g. Have you initiated verification activities?  Yes  No

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

1. Provider validation – feedback from provider review of submitted areas and boundaries for the April 1, 2012 submission is underway and will be integrated into the final October 1, 2012 submission. The next planned data call will be out in early August.

2. Lab-based verification – Continues to be independently completed by GeoDecisions / CBG and the University of Missouri. These are then compared and fed back into each others systems to cross-validate information on individual providers.

3. Field verification – As we continue to move forward with each submission, our field verification efforts, as with all other aspects of the project, continue to advance. Providers are now categorized from prior verification rounds as unverified, high, medium or low priority. 'Unverified' are new providers or ones not able to be verified in previous attempts. 'High' are providers with minimal verification in previous attempts. 'Medium' are providers fairly thoroughly verified in previous verification and 'Low' are providers heavily verified in prior verification. Provider data is loaded on laptops or Garmin units for use by field verification personnel.

4. Consumer feedback – Citizen residential sampling and survey strategy continues.

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

N/A

## Staffing

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

12.54 FTE are currently funded with federal dollars

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

We had another staff person leave for another job. We will be filling that position this summer. It should not affect the project's time line as we have temporarily pushed these duties to other internal staff in this interim.

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

Fully staffed we will have 15.26 FTE. This number is expected to vary due to work loads within the University, subcontractors, field effort timing, billing cycles of the University and State, as well as Regional Technology Planning Team coordinators and Regional Planning Council staff working on the project.

10n. Staffing Table

Job Title	FTE %	Date of Hire
Project Director - MU	29	12/01/2009
Administrative Assistant Mapping - MU	23	12/01/2009
Temporary Technical - MU	75	12/01/2009
Undergraduate Student Assistant Technical - MU (n=3)	75	12/01/2009
Graduate Research Assistant - MU	50	08/22/2011
Program Manager - Research Specialist Senior Mapping - MU	75	12/01/2009
Research Specialist Mapping - MU	50	12/01/2009
Post-Doc Fellow - MU	100	10/03/2011
MoBroadbandNow Director	100	12/01/2010
MoBroadbandNow Assistant	34	03/01/2012
Regional Planning Commissions / Councils - RTPT Coordinators	92	10/01/2010

Office of Administration - ITSD	1	12/01/2009
Project Director - GeoDecisions	25	03/01/2010
Project Manager - GeoDecisions	50	03/01/2010
Developer - GeoDecisions	45	03/01/2010
Senior Developer - GeoDecisions	50	03/01/2010
Senior Technical - GeoDecisions	30	03/01/2010
Geographic Information System Specialist - MU	54	12/01/2009
Research Specialist Mapping - MU	66	12/01/2009
Research Specialist Mapping - MU	50	01/01/2011
Undergraduate Student Assistant Technical - MU (n=3)	25	05/17/2010
Undergraduate Student Assistant Technical - MU (n=3)	75	05/17/2010
Technical Assistant - GeoDecisions	30	03/01/2010
Technical Assistant - GeoDecisions	50	03/01/2010

Add Row

Remove Row

**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
University of Missouri	Mapping: Support to the State of Missouri to include public source data collection, integration, mapping, database construction for community anchor points, independent quality control, communications, field verification, lab verification, and maintenance	N	Y	12/01/2009	10/30/2014	1,726,465	292,207
GeoDecisions and CBG Team	Mapping: Support to the State of Missouri to include NDA work, data collection, integration, mapping, database construction, quality control, communications, field verification, lab verification, website development and transfer, and maintenance; Planning	N	Y	03/01/2010	10/30/2014	2,229,724	0
Environmental Systems Research Institute (ESRI)	Architecture and support for Web Mapping applications and services; Installation of Web Mapping Services for Broadband Map	N	Y	05/02/2011	05/02/2012	0	65,000

Regional Planning Councils	Aid in the hosting and facilitation of regional technology planning teams and sector development as well as residential survey and business survey support.	N	Y	10/01/2010	05/31/2012	647,000	0
Not Selected	State-based Structure Points Mapping	N	N	06/01/2012	10/30/2014	340,000	529,067

Add Row

Remove Row

**Funding**

10p. How much Federal funding has been expended as of the end of the last quarter? \$1,164,183      10q. How much Remains? \$5,409,199

10r. How much matching funds have been expended as of the end of last quarter? \$1,643,346      10s. How much Remains? \$0

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	\$1,466,615	\$623,726	\$2,090,341	\$113,524	\$43,193	\$156,717
Personnel Fringe Benefits	\$6,648	\$100,746	\$107,394	\$39,484	\$8,226	\$47,710
Travel	\$0	\$0	\$0	\$5,728	\$5,059	\$10,787
Equipment	\$0	\$32,600	\$32,600	\$0	\$1,750	\$1,750
Materials / Supplies	\$0	\$0	\$0	\$71,135	\$8,218	\$79,353
Subcontracts Total	\$4,943,189	\$886,274	\$5,829,463	\$933,309	\$1,576,900	\$2,510,209
Subcontract #1	\$1,726,465	\$292,207	\$2,018,672	\$327,419	\$564,067	\$891,486
Subcontract #2	\$2,229,724	\$0	\$2,229,724	\$426,090	\$909,633	\$1,335,723
Subcontract #3	\$0	\$65,000	\$65,000	\$0	\$65,000	\$65,000
Subcontract #4	\$647,000	\$0	\$647,000	\$179,800	\$38,200	\$218,000
Subcontract #5	\$340,000	\$529,067	\$869,067	\$0	\$0	\$0
Construction	\$0	\$0	\$0	\$0	\$0	\$0
Other	\$156,930	\$0	\$156,930	\$1,003	\$0	\$1,003
Total Direct Costs	\$6,573,382	\$1,643,346	\$8,216,728	\$1,164,183	\$1,643,346	\$2,807,529
Total Indirect Costs	\$0	\$0	\$0	\$0	\$0	\$0
Total Costs	\$6,573,382	\$1,643,346	\$8,216,728	\$1,164,183	\$1,643,346	\$2,807,529
% Of Total	80	20	100	41	59	100

**Hardware / Software**

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

10v. If yes, please list

Servers and other hardware for support of the state's Broadband Mapping portal has been purchased. A budget amendment with the State has moved this budget item line from the State to the University. The determination of where to host the services changed in mid-stream when the State decided to move all image services and many map services to the University's geospatial data clearinghouse. Software was also acquired (ArcGIS10, ArcServer10, etc.).

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

The Year 3 through 5 contracting amendment with the University has been finalized. Currently evaluating the Broadband Mapping application, services, and MoBroadbandNow website.

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

10y. If yes, please list

N/A

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

We are creating a new map series that looks at speed breaks. These do not line up with the current FCC breaks for Broadband (4M/1M) so it is always difficult to provide the answers to the questions that the public is asking. Is the data model going to change to reflect FCC breaks at 4M-1M?

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

We had over 80 of the 101 broadband providers cooperating with the Missouri mapping program respond to our last data call (#5). However, only 30 of the 80 that responded had any significant changes to their maps. We are going to be looking into these changes to get a feel for the percent change in service area versus technology type, versus speed tiers to get a better idea of the changes here in Missouri. Our initial thoughts are that the smaller service providers (and to an extent the larger ones as well) may be finding it hard to reinvest their capital in extending service area since so many current clients are requesting / requiring even more bandwidth. We feel this may cause and even greater digital divide within the state and cause currently unserved areas to face an even greater hurdle to both provision and adoption.

We are drafting a 'best practices' submission for work related in part to Telogicals 'pricing' data and the use of that data in examining adoption issues and parity in Missouri. We had hoped to have the formal request to NTIA in the Q1 2012 as that is when the 1st increment in Missouri's best practices funding is available but the submission of this request will happen in Q2 2012.

Missouri is still considering hosting a National Broadband Mapping meeting as we feel the need for this type of event has been growing since the initial meeting in Texas. We would be interested in NTIA view of this activity and if there is already a plan in place for another National Meeting of the SBDD group.

## 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

All Regional Technology Planning Teams are in place with the state association under contract to gather information for the one RPC that could not participate.

All RTPT's have now assembled and drafted their Strengths, Weaknesses, Opportunities, and Challenges regional assessment. These have been distributed early in Q1 2012 for final review. Comments have been received, and draft Strategic Plans for each region are in the process of being drafted, distributed for comment. Target dates for the final regional strategic plans is mid-June Q2 2012.

We continue analysis and publication of reports from the Residential surveys (n=9,984) and Business surveys (n=1,154). We have created a second report titled "Dissecting Missouri's Digital Divide: An analysis of broadband adoption." This will be presented during an on-line webinar / video tape that will be made available to the SBDD group and NTIA if they choose to listen in.

We are at work on several other such reports (Medical and another Agricultural based report)

11b. Please describe any challenge or obstacle that you have encountered and detail the mitigation strategies the project team is employing  
Rural Addressing: In the many conversations that have been held to date regarding rural addressing and the magnitude of the need in Missouri we have come to the conclusion that with the funds available we could only support 4-6 counties at the funding levels they would need to complete a rural addressing project. That number is not sufficient to really be of good purpose for the broadband mapping and planning. We have now turned our attention to supplementing an ongoing project that is a structures inventory where all built structures (residential, commercial, industrial, agricultural, etc) are labeled by a point (or if large enough a polygon) for an entire county. To date over 21 counties have been collected totaling 488,486 points and 14,849 footprints. In talking to the project leads they believe that over a three year time period they can complete the rest of the 94 counties through their process. It is our belief that this type of information will greatly aid our evaluation of implementation plans and allow us to move forward with some measure of statewide confidence. An amendment reflecting this change in scope is being drafted for NTIA's consideration and will be delivered in Q2 2012.

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
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?

The MoBroadbandNow office has continued participation in the RTPT activities. As well, they have engaged many state associations in order to make presentations at meetings and conferences so that we can take the message to them in a more proactive manner. The state's counties are pursuing the development of web presence for each and every county (57 currently do not have a web site) through a cooperation of state, extension, and university personnel. As part of this development a mapping portal for each county is planned and as part of that deployment - the broadband map service is under consideration.

The graduate student employed is continuing to research the fragility of the broadband deployment to both technological change as well as company failures and natural disasters.

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

N/A

11I. 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

Tim Haithcoat

12c. Telephone  
(area code, number, and extension)

12d. Email Address

Tim.Haithcoat@oa.mo.gov

12b. Signature of Authorized Certifying Official

Submitted Electronically

12e. Date Report Submitted  
(Month, Day, Year)

06-13-2012