

**U.S. DEPARTMENT OF COMMERCE**

**Performance Progress Report**

2. Award Or Grant Number

46-50-M09053

4. Report Date (MM/DD/YYYY)

06-25-2012

1. Recipient Name

South Dakota Bureau of Information & Telecommunications

6. Designated Entity On Behalf Of:

State of SD/BIT

3. Street Address

700 Governor's Drive,

8. Final Report?

Yes

No

9. Report Frequency

Quarterly

Semi Annual

Annual

Final

5. City, State, Zip Code

Pierre, SD 57501-2291

7. Project / Grant Period

Start Date: (MM/DD/YYYY)

12-20-2009

7a.

End Date: (MM/DD/YYYY)

12-19-2014

7b.

Reporting Period End Date:

06-30-2012

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
49	49	36	0	47	47

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

N/A

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

N/A

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

Verification activities in progress. See 10h.

10g. Have you initiated verification activities?  Yes  No

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

1. Collecting data from our hosted speedtest.sd.gov site, FCC Consumer Broadband Test, and several individuals performing "drive-testing", as well as data from licensed data sets from Ookla for Android and iOS devices.

2. Driven over ~48,500 miles testing cellular signal and speeds, collecting over 24,000 cellular speed tests and 1.85 million cellular signal tests.

3. Gathered over 19,750 Speed tests from our portal at SpeedTest.sd.gov.

4. We have a combined total of over 148,600 speed tests from wireless /cellular and wireline services.

5. Continue to utilize internal government resources for data collection and verification (Statewide I/T newsletter, state I/T organization, others to come.)

6. Sent a press release announcing the speedtest.sd.gov site.

7. Collected 415 WiFi hot spots from the public and will continue to improve.

8. Researched and contacted FCC Form 477 filers for inclusion in Data Collection activities, and will continue to do so in new submissions.

9. Completed migration of our provider verification portal to South Dakota data center and servers.

10. We are re-evaluating the success of using our K12 and Higher Education contacts to determine whether using them has been effective for our speed test efforts.

11. Began utilizing wireless propagation modeling for mobile wireless verification. Continuing to do so for fixed wireless providers.

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

Verification activities have begun, and continue with each submission.

**Staffing**

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

5.32 FTE

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

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

3 FTE

10n. Staffing Table

Job Title	FTE %	Date of Hire
Broadband Capacity Manager	100	12/20/2009
Technology Planning Assistant	100	06/01/2011
Network Architect	45	12/20/2009
Project Manager	22	12/20/2009
Technology Planning Manager	100	12/20/2009
Interns	97	06/01/2011
Broadband Administration	61	12/20/2009
Finance	7	12/20/2009

**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
Broadmap	GIS Mapping	Y	Y	12/01/2010	12/28/2014	1,326,407	0
Dakota State University	Broadband Planning	N	Y	09/20/2010	12/28/2014	446,815	0
SD Public Broadcasting	Broadband Planning	N	Y	01/03/2011	12/28/2014	101,885	0
Bureau of Information & Telecommunications	Broadband Planning	N	N	01/01/2011	12/28/2014	115,000	0

**Funding**

10p. How much Federal funding has been expended as of the end of the last quarter? \$1,888,505      10q. How much Remains? \$3,840,910

10r. How much matching funds have been expended as of the end of last quarter? \$1,245,867      10s. How much Remains? \$186,474

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	\$1,740,143	\$450,000	\$2,190,143	\$404,321	\$307,143	\$711,464
Personnel Fringe Benefits	\$565,231	\$150,000	\$715,231	\$67,190	\$79,350	\$146,540
Travel	\$143,254	\$0	\$143,254	\$30,516	\$0	\$30,516
Equipment	\$790,680	\$0	\$790,680	\$113,084	\$0	\$113,084
Materials / Supplies	\$5,000	\$0	\$5,000	\$498	\$0	\$498
Subcontracts Total	\$1,990,107	\$0	\$1,990,107	\$1,146,891	\$0	\$1,146,891
Subcontract #1	\$1,326,407	\$0	\$1,326,407	\$966,787	\$0	\$966,787
Subcontract #2	\$446,815	\$0	\$446,815	\$13,388	\$0	\$13,388
Subcontract #3	\$101,885	\$0	\$101,885	\$51,716	\$0	\$51,716
Subcontract #4	\$115,000	\$0	\$115,000	\$115,000	\$0	\$115,000
Subcontract #5	\$0	\$0	\$0	\$0	\$0	\$0
Construction	\$0	\$0	\$0	\$0	\$0	\$0
Other	\$495,000	\$832,341	\$1,327,341	\$126,005	\$859,374	\$985,379
Total Direct Costs	\$5,729,415	\$1,432,341	\$7,161,756	\$1,888,505	\$1,245,867	\$3,134,372
Total Indirect Costs	\$0	\$0	\$0	\$0	\$0	\$0
Total Costs	\$5,729,415	\$1,432,341	\$7,161,756	\$1,888,505	\$1,245,867	\$3,134,372
% Of Total	80	20	100	60	40	100

### Hardware / Software

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

10v. If yes, please list

2nd Quarter 2012:

\$10,040.00 - EDX Wireless - Wireless Propagation Software

\$400.00 - Digital River - eSurveysPro.com - 3/21/12 - 3/21/13

\$1,950.00 - QOS Solutions - QMapper Annual Support - 6/15/12 - 6/14/13

\$2,591.16 - Century Link (QWest) - 911 ADE Database Extract (Master Street Address Guide (MSAG))

1st Quarter 2012:

\$1,528 - Hewlett Packard - B85609 Notebook computer

\$220.50 - Software House - Acrobat Pro

\$4,840 - Syntech - 1,000 2GB Flash Drives

4th Quarter 2011:

\$495 - Ookla - Custom Speed Test License

\$113.54 - 2 USB Drives

\$504.00 - 3 CONTRIBUTE CS5 WIN FULL LICENSE

3rd Quarter 2011:

\$1,026.71 - I-pad and accessories-AT&T- 8/12/11

2nd Quarter 2011:

\$8,760 - (10) Qmapper software

\$759 - printer

\$137.52 - (2) USB flash drives

1st Quarter 2011:

\$43 keyboard  
\$318-desktop MS Office software  
\$1,495-Ookla software  
\$69 - USB flash drive  
\$840 - (2) monitors

4th Quarter 2010:

\$11,895-visual studio 2010 application developer software  
\$2,475-laptop computer  
\$109-blackberry  
\$69-keyboard & mouse

2nd Quarter 2010:

\$21,959-virtualization software  
\$23,152-servers to host web sites & mapping data  
\$6,027-server operating systems

1st Quarter 2010:

\$20,011-ArcGIS license

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

Additional upcoming purchases may include a couple of iPads (\$1,500), iPhone (\$300), replacement drive testing phones (\$2,500) and accessories (\$200) and GPS units (\$4,000) for the address file project.

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

10y. If yes, please list

We have purchased the Master Street Address Guide (MSAG) from CenturyLink (\$2,591), per suggestion from a Broadband Advisory Team member. This still won't cover all counties but it is a text file of addresses of individuals having phones in their homes. The data is not as good as anticipated, yet we will use because we want to compare our data to CenturyLink's to help the 911 system.

Data sets from Pitney Bowes, American Roamer, ComSearch, MediaPrints, and infoUSA were purchased for Year 1 but were not renewed for Year 2. We are continuing to evaluate another source for addressing assistance and verification.

We have purchased a 3rd party data set from Ookla - a 12 month subscription to Speedtest.net Application Mobile Results-All Android/iOS, Cellular/Wifi Results - South Dakota. We also licensed 3 months of historical data, same data set. The cost is \$15,040. This data is used in wireless verification.

In an effort to validate counties that didn't provide their data - we have obtained a data set from the South Dakota Secretary of State, at no cost, of the physical addresses of 500,000 SD registered voters.

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

10aa. If yes, please list

\*April Mapping Data Collection Preparation, Submission & Display

Notify Providers (complete)

Gather Data (complete)

Process & Ingest Data (complete)

Provider Verification (complete)

Submission (complete)

Mapping display update (complete)

\*Address Files

33 counties have submitted data

Continue work with 911 Governance Board regarding county contacts and their participation

Built web and mobile apps for address validation being used by 2 summer interns

Continue to normalize the dataset of SD registered voters from the SD Secretary of State

**\*Broadband Advisory Team (BAT)**

BAT quarterly meeting held in April - updated group on all facets of the program  
Timely updates sent to members via e-mail  
BAT members providing contacts for Technology Assessments, ideas and contacts for additional videos  
Three BAT members providing Public Service Announcements on various cable networks - slowed till after elections  
BAT members continually provide relevant information to fellow team members

**\*Technology Planning (formally Technical Assistance) / Computer Ownership Program**

Performed 9 Technology Assessments across the state to a wide variety of CAI's  
User education and best practice recommendations have been valuable and well received  
Statewide press coverage and presentations have been continual and very helpful to spread the word and explain the program  
Governmental and organizational contacts used to promote the program  
Added content on grant application to the state broadband website  
SDBI Grant Application opened in May. Seventeen grant applications were received and were reviewed

**\*Community Anchor Institutions (CAI)**

Continue to reach out to CAI's with CEO's, Directors and leaders of organizations within CAI classification  
Added multi-site CAI's such as County Extension offices to contact list

10bb. Please describe any challenge or obstacle that you have encountered and detail the mitigation strategies the project team is employing

\*We continue to struggle with effective methods of comparing and analyzing data. We have employed the efforts of the state demographer for additional perspectives on how to best display and compare the data. We have also contacted a Sociology PHD at the South Dakota School of Mines and Technology for similar input.

\*Struggling to develop more detailed wireless signal radiation maps for internal use that deliver highly localized accuracy. Finding an accepted, repeatable model to develop reliable, locally accurate signal strength maps has been a challenge.  
We evaluated and purchased EDX software. Our contractor, BroadMap, has created a propagation model for the SW portion of South Dakota to generate useful predictive radio frequency models for the verification of mobile broadband coverage and power.

\*Counties have not participated to the extent we expected for submitting address data. We are going to purchase another data set in addition to our own field verification efforts.

\*Continue working on a budget revision proposal for the NTIA. Lessons learned and experiences gained indicate we need to make financial adjustments to improve our success.

10cc. Please provide any other information that you think would be useful to NTIA as it assesses your Broadband Mapping Project  
Data collection with our providers was very successful due to the great participation from the telecommunications providers in supplying their broadband data. We have continued our correspondence with providers since the last submission by way of providing them with PDF files containing maps of their coverage areas (to help in their verification).

Verification efforts made an enormous improvement over previous submissions as we continue to build upon lessons learned. We were able to extensively scrutinize the accuracy and relevancy of the data collected from the providers as well as speed tests performed in workplaces, homes and on the highways across the state. Several verification analysis processes were used. We have documented these processes and procedures for our future use.

The SBI Grant Application has been a big focus with the first round opening in May. Thus, the number of technology assessments was scaled back somewhat to create documentation, processes and procedures for the first round. We received 17 completed applications this first round - great response. Non-respondents cited lack of time or resources to complete, but most plan to apply the next grant period.

CAIs across the state are continuing to register for technical assessments. Assessments have taken place in schools, libraries, city offices, YMCAs and non-profits in large and small communities.

## **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

Statewide Broadband Portal - [broadband.sd.gov](http://broadband.sd.gov) updates:

Interactive map and all static maps updated using 12/31/11 data (5th data submission)

Advertised speed vs. actual speed test results maps are in progress and prototype has been created with a data subset

Sent high resolution coverage maps to each provider to better depict their coverage areas

Continue to make the website more interactive and engaging (broadband stories, WiFi hot spots, Social Media)

Generated a propagation map of a state park - used at SBI Grantee Workshop

Adding a timestamp and notification of when individuals fill out an Unserved Area form on the website

Online Mapping Provider Portal has been moved to SD data center for hosting on state infrastructure. The Provider Portal was previously hosted by our mapping partner BroadMap.

**Outreach:**

Continue to meet with new groups, trade associations, organizations & conferences - some include SD Department of Agriculture, Governors Office of Economic Development State Conference, SD Municipal League, SD Technology in Education (TIE) Conference, Horizon Healthcare, Inc., and others

Promotional videos - uploaded to iPads for use at tradeshow and conferences

Other videos/stories in various stages of completion include topics of healthcare, economic development, agriculture and more

Monitor broadband stories including other states' social media accounts and re-tweet/Facebook meaningful data

Continue to receive consumer feedback and promote awareness

Online agriculture, residential and business surveys continue

Agriculture survey - data is being analyzed, working on county numbers and reporting

Press releases continue to generate statewide coverage on television, radio and in newspapers

Peer discussions with other states produced a day long meeting (setup by NTIA) with SBI planners to learn from each other - planned and provided presentations

Broadband report is progressing and a draft is being reviewed internally

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
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

11i. Planning Worksheet

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  
 We recently worked through award documentation and an agreement for our Community Anchor Institutions. That process was very easy and productive. We have been trying to get a budget revision approved since February 2012 so we can make in-project adjustments to improve the success of the SBI. That approved has not yet occurred.

Note for item 10t: Q1 reported \$3,526 in materials/supplies; Q2 reported \$498 in materials/supplies. The difference of \$3,028 was reported inappropriately in Q1 and has been corrected to be included in travel in Q2.

Proposed In-kind Budget Column: In-kind figures were updated to original approved budget. A budget amendment has been submitted which should more appropriately show the current status of our grant.

Matching Funds Expended Column: Subcontract matching funds expended were added to other matching funds expended. This line items is now \$27,033 over the approved proposed in-kind budget. We have submitted a budget amendment which will reallocate the proposed in-kind budget and will eliminate this discrepancy.

Federal Funds expended - subcontract # 4 - revised to \$115,000 which is the total approved. The \$15,873 was included in subcontract # 3 line item. We have submitted a budget amendment which will reallocate the federal funds granted and will eliminate this discrepancy.

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

Deb Larson

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

605-677-6411

12d. Email Address

Deb.Larson@state.sd.us

12b. Signature of Authorized Certifying Official

Submitted Electronically

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

08-22-2012