OFFICIAL OCTOBER 2010 UPDATE SUBMISSION TO THE NATIONAL TELECOMMUNICATIONS AND INFORMATION ADMINISTRATION UNDER THE STATE BROADBAND DATA AND DEVELOPMENT GRANT PROGRAM FOR THE STATE OF MICHIGAN

October 1, 2010

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COVER LETTER

September 28, 2010

Ms. Anne W. Neville
SBDD Grant Program Director
National Telecommunications and Information Administration
U.S. Department of Commerce
1401 Constitution Avenue, NW Room 4716
Washington, DC 20230

Dear Ms. Neville:

As the Designated Entity, and in partnership with the Michigan Public Service Commission (MPSC), please accept this submission from Connected Nation on behalf of the state of Michigan's State Broadband Data and Development (SBDD) Grant Program, Connect Michigan.

These artifacts should be found to be compliant with the October 1, 2010, deadline for the semi-annual data update and in accordance with the terms of the July 1, 2009, Notice of Funds Availability (NOFA) and all subsequent clarifications pertaining to delivery of State-Level Mapping of Broadband Service Availability. This packet includes:

Inventory of Deliverables, Connect Michigan: October 1, 2010

NOFA Requirement	Data Transfer Model	Data Description
Appendix A: 1(a)(i)	BB_Service_CensusBlock	Broadband Service Availability of Facilities-Based Providers in Census Blocks of No Greater Than Two Square Miles in Area
Appendix A: 1(a)(ii)	BB_Service_RoadSegment	Broadband Service Availability of Facilities-Based Providers by Road Segment in Census Blocks Larger in Area Than Two Square Miles
Appendix A: 1(b)	BB_Service_Wireless	Broadband Service Availability of Wireless Services Not Provided to a Specific Address
Appendix A: 3(b)	BB_ConnectionPoint_MiddleMile	Broadband Service Infrastructure Middle-Mile and Backbone Interconnection Points
Appendix A: 4	BB_Service_CAInstitutions	Community Anchor Institutions-Listing
Appendix A: 4	n/a	Community Anchor Institutions-Narratives
VII.A.1(a)	n/a	Accuracy and Verification Report

n/a	DataPackage.xls	Worksheets of Contact Information, Data Dictionary, and Provider Summary Table
n/a	n/a	Broadband Provider Roster and Participation Status

In addition, this data update submission should be found to be compliant with the additional program requirements instituted by the National Telecommunications and Information Administration since the time of the initial SBDD data submission for the Connect Michigan program, on April 30, 2010. Specifically, these new requirements are:

Census Blocks
This dataset should be found to be in full compliance with the request to use Census 2000 geography with the availability of wireline broadband services in census blocks with an area of no greater than two square miles.

SBDD Data Transfer Model
The submission of the broadband dataset for October 1, 2010, is contained within the SBDD Data Transfer Model as released on the Grantee Workspace on September 9, 2010. All efforts have been made to comply with formatting, domain, and metadata requirements to include as much information on each provider as possible.

It is therefore with great pleasure that the Connect Michigan program submits this first, semi-annual data update under the State Broadband Data and Development Grant Program. We will continue in partnership with MPSC to implement the joint purposes of the Recovery Act and the BDIA by the gathering of comprehensive and accurate state-level broadband mapping data, developing state-level broadband maps, aiding in the development and maintenance of a national broadband map, and undertaking statewide initiatives for broadband planning.

As the submission of this semi-annual data update is concentrated on the delivery of Broadband Service Availability and Community Anchor Institutions (CAI) data, we provide the following insight into the compilation of these datasets contained herein.

Broadband Service Availability — Provider Outreach
This data update submission under the SBDD includes the participation of approximately 78.6% of the Michigan provider community, or 99 of 126 total providers. Of the 99 participating providers, 21 supplied an update to their network or coverage area(s), while 55 have reported no change. The remaining 23 represents providers who supplied initial submission data but were non-responsive in the October 2010 update effort or could not verify coverage areas at the time of this submission; therefore their initial dataset is being put forward as part of this compilation. A complete roster by provider depicting participation status and contact record is contained herein. Of the 27 providers that are not represented in the attached datasets, 3 have refused to participate in the voluntary program. The remaining 24 providers are currently in some form of progress toward data submission but were not able to either submit or verify coverage areas at the time of this submission.

As the aforementioned roster and attached methodology documentation will attest, it is the collective opinion of the Connect Michigan principals that all commercially reasonable efforts were made to account for 100% of the known Michigan broadband provider community, pursuant to this semi-annual data update submission.

At the program's inception, Connect Michigan launched a website to create awareness about the initiative. Connectmi.org continues to serve a prominent role in the outreach and data collection effort. This program asset provides a way for the general public to participate in the process by offering interactive tools for users to test their connection speed, submit broadband inquiries, or contact a program representative. These program stakeholders are an essential component in the larger Connect Michigan data validation methodology.

As an indicator of stakeholder penetration, the Connect Michigan website encountered 8,805 unique visits during this reporting period (10,721 total to date for the life of the grant which was awarded on December 20, 2009). Additionally, this pronounced Web activity netted 667 broadband inquiries over the same reporting period (776 grant inception to date). The website also provides the BroadbandStat application, which allows the consumer to confirm or dispute the coverage represented on the broadband inventory map. These consumer initiated actions are facilitated through the Connect Michigan website and offer the citizens a vehicle to provide information regarding availability in their respective service area, either in affirmation or contest of the reported data represented in the Connect Michigan mapping artifacts. Since the initial data collection and release of corresponding maps, feedback in the form of broadband inquiries has allowed Connected Nation to identify additional areas that are in need of field validation, which is scheduled as soon as possible. Additional information on field validation can be found in the Field Validation Narrative.

Community Anchor Institutions

Connect Michigan has established an ongoing mechanism for gathering data on the location and broadband connectivity of Community Anchor Institutions (CAI), in accordance with the data requirements of the SBDD NOFA Technical Appendix.

In conjunction with the MPSC significant additional research and outreach was conducted during this data update reporting period by Connect Michigan to continue identification of existing, centralized sources for CAI connectivity data. Outreach was coordinated with the MPSC to distribute the CAI survey to institutions throughout the state. The MPSC assisted in the outreach effort by providing their contact information for their CAI partners. Connect Michigan has identified and processed a list of CAI through a combination of datasets including publicly available and privately held datasets from online sources, including:

- The National Public Safety Information Bureau
  http://www.safetysource.com
- American Hospital Association
  http://www.hospitalconnect.com/hospitalconnect_app/hospitalfinder

- National Center for Education Statistics
  Public Schools: http://nces.ed.gov/ccd/schoolsearch/
  Private Schools: http://nces.ed.gov/surveys/pss/privateschoolsearch/
  Colleges: http://nces.ed.gov/collegenavigator
  Libraries: http://nces.ed.gov/surveys/libraries/librarysearch/
- United States Fire Administration
  http://www.usfa.dhs.gov/applications/census/search.cfm

As of this semi-annual reporting period, a total of 99.9% Michigan CAI were identified, addressed, and geocoded. As is evident in the datasets being conveyed, while we were able to document institutions and the related addresses, the connectivity data collected in most categories remains less than complete. From our work in Michigan, as well as other states, we recognize the great value of this data to future collaboration efforts within the state, and to the accomplishment of the purposes in the recently released National Broadband Plan. We plan to continue to bring best practices to the Michigan efforts, along with an investment of both human and technical resources required to reach these goals in advance of the submission of the semi-annual update of this data due in April 2011.

In acquiring both broadband availability and CAI data within the state of Michigan, Connected Nation made special effort to engage all federally recognized tribal lands in the area covered by the Michigan SBDD grant. According to the U.S. Department of the Interior — Bureau of Indian Affairs, there are 12 Native-American lands in this area:

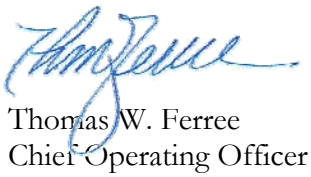
1. Bay Mills Indian Community of the Sault Ste. Marie Band of Chippewa Indians
2. Grand Traverse Band of Ottawa and Chippewa Indians
3. Hannahville Indian Community
4. Huron Potawatomi, Inc.
5. Keweenaw Bay Indian Community
6. Lac Vieux Desert Band of Lake Superior Chippewa Indians
7. Little River Band of Ottawa Indians
8. Little Traverse Bay Bands of Odawa Indians
9. Match-e-be-nash-she-wish Band of Pottawatomi Indians of Michigan
10. Pokagon Band of Potawatomi Indians (Michigan and Indiana)
11. Saginaw Chippewa Indian Tribe of Michigan
12. Sault Ste. Marie Tribe of Chippewa Indians of Michigan

Connected Nation has successfully contacted 10 of the 12 tribes as part of the SBDD program and is accounting for the resulting data in the creation of the artifacts for this submission.

The Connect Michigan program exists to improve data on the deployment and adoption of broadband services and to assist in the extension of broadband technology across all regions of the great state of Michigan, as well as the United States through contribution to the National Broadband Map. Please accept this submission by Connected Nation and on behalf of Robin Ancona, Director

of the Telecommunications Division of the Michigan Public Service Commission. It is through the partnership that we have formed that we have been able to accomplish this valuable undertaking together. We look forward to the remaining work ahead.

Respectfully submitted,



Thomas W. Ferree
Chief Operating Officer
Connected Nation, Inc.

DATA ACQUISITION: MICHIGAN COMMUNITY ANCHOR INSTITUTIONS

In this second reporting period of the SBDD, Connect Michigan, working in coordination with the Michigan Public Service Commission (MPSC), has established an ongoing mechanism for gathering data on the location and broadband connectivity of Community Anchor Institutions (CAI), in accordance with the data requirements of the SBDD NOFA Technical Appendix. Connect Michigan has focused efforts during this reporting period on conducting outreach and raising awareness of this important project.

In conjunction with the MPSC, Connect Michigan has continued to identify and process CAI data obtained through an ongoing statewide outreach campaign. Physical address information continues to be augmented through manual sourcing and geocoded by Connect Michigan through ESRI ArcGIS software.

Connect Michigan continues to utilize a customized online survey hosted through SurveyMonkey, with a landing page on the Connect Michigan website, that was developed during the first reporting period. This survey in combination with a customized data-gathering spreadsheet was distributed to a targeted list of CAI throughout the state. Connect Michigan will continue to use these data-gathering tools for future targeted outreach efforts throughout the coming months leading up to the next reporting period. These materials are customized to fit the CAI categories as defined in the SBDD NOFA.

Survey Link:
http://www.connectmi.org/mapping/Community_Anchor_Institution_Data_Collection.php

Connect Michigan continues to conduct research as part of an ongoing process to identify existing, centralized sources for CAI connectivity data. In tandem with these efforts to identify existing data, Connect Michigan and the MPSC are working together to identify key CAI contacts among all CAI categories in an effort to distribute and promote the online survey and raise awareness of the importance of CAI broadband connectivity. This coordination has resulted in the identification of key contacts at numerous statewide organizations and the location of several key databases of information including a comprehensive database from the Michigan Department of Corrections. Connect Michigan also continues to operate a CAI hotline to answer questions related to the survey tools and CAI data collection.

Connect Michigan has an ongoing mission to educate CAI throughout the state on the importance of participating in the project. Participation by these institutions will raise awareness about the importance of broadband connectivity and the need to report the requested data for inclusion on the Connect Michigan interactive map.

The greatest challenge faced in both reporting periods continues to be the difficulty in securing CAI broadband connectivity data. Connect Michigan will continue its ongoing work with Michigan's CAI contacts in an effort to raise awareness of this project. Future efforts will involve targeted planning with representatives from each of the CAI categories, as well as a structured outreach to each category, supported by messaging and meetings showcasing the value of these data for planning

and collaboration purposes. Targeted outreach efforts will be conducted through phone calls and industry/trade association meetings and newsletters, among other methods.

SBDD Data Transfer Model Methodology

The submission of the broadband dataset for October 1, 2010, is contained within the SBDD Data Transfer Model as released on the Grantee Workspace on September 9, 2010. Connected Nation has reviewed all literature that relates to the release and use of this data transfer model and recognizes that it does not replace or dictate how data is stored, processed, or displayed for the state, as it is meant primarily as a means to transfer the broadband data from all states and territories and populate the National Broadband Map in a seamless fashion.

In addition to the narratives and methodologies contained herein, as well as the DataPackage.xls containing contact information, the data dictionary, and a provider summary table, the following feature classes are submitted within the SBDD Data Transfer Model for the state of Michigan.

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The provider data collected by Connected Nation on behalf of the state of Michigan have been formatted per the given specifications and uploaded into the appropriate feature classes of the SBDD Data Transfer Model. Wireline availability is contained within census blocks and road segments, wireless availability is contained as polygons of coverage areas, middle-mile connections and community anchor institutions are contained as point data, and the subscriber weighted nominal speed (if available) is contained within the overview feature class. All speed data is contained at the census block, road segment, or wireless polygon level of availability. All efforts have been made to comply with formatting, domain, and metadata requirements to include as much information as possible.

MICHIGAN FIELD VALIDATION NARRATIVE

The Connected Nation team of Terry Holmes, Cassie Ruhlman, Layne Wagner, and Chip Spann focused a portion of their time on certain validation processes such as (a) conducting random spectrum analysis studies throughout the state, (b) identifying pre-selected vertical assets and cross-referencing provider submitted data against the Federal Communications Commission databases such as Antenna Structure Registration and/or the Universal Licensing System, (c) validating site information against data collection such as the physical coordinates (in DMS NAD83 format) using a handheld Garmin eTrex Summit GPS unit; and (d) locating physical wire-line attributes (such as remote terminals, CATV plant, etc.).

Additionally, Connected Nation cross-referenced numerous public documents in order to ensure that all known broadband providers were located and contacted. This included review of the Federal Communications Commission Form 477 data, searching membership logs from the trade associations (Telecommunications Association of Michigan, WCAI, Michigan Cable Telecommunications Association, etc.), the Cable Television Fact Book, Public Utility Commission records, and Public Service Commission records.

While in Michigan, Connected Nation's staff conducted on-site validation visits, met with providers, searched for wireless transmit sites, identified households subscribing to wireless services, conducted signal and speed tests for mobile broadband services, and completed random signal testing using an AVCOM spectrum analyzer.

On-site meetings with the Michigan Cable Telecommunications Association, Michigan Department of IT, Telecommunications Association of Michigan, and the Michigan Public Service Commission were held. Chip Spann and Cassie Ruhlman testified before the House Telecommunications & Energy Subcommittee; Brent Legg and Cassie Ruhlman testified before the Senate Energy Policy and Public Utilities Committee; and Chip Spann served as a guest speaker at PoliTech, Compulse2010, and other trade association venues.

Michigan has presented unique opportunities for Connected Nation such as participating in an on-site field validation visit with Cherry Capital Connection, which also included attendance from members of the Michigan Public Service Commission so that they could gain a better understanding of Connected Nation's field validation techniques.

Site validation visits occurred in Ann Arbor, Lansing, Whitmore Lake, Sylvan Township, and Jackson, as well as other randomly selected locations, resulting in validation activities for 19 companies representing a completion and validation rate of 19.84% of the broadband provider universe within the state. To date, Connected Nation has conducted field validation tests on: AT&T, AT&T Mobility, Waldron Telephone, Sister Lakes CATV, Comcast, Bloomingdale Communications, Winn Telephone, Allendale Communications, TDS Telecom, Alzustar, Metalink, Town & Country CATV, Verizon Wireless, Michwave, Charter Communications, D&P Communications, CenturyLink, Hidden Lakes Wireless, Cogent Communications, Ogden

Telephone Company, SpeedNet, Boardmand River, Wyandotte Municipal Services, Peninsula Telephone, and Cherry Capital Connection. Connected Nation has assisted 2 previously unserved households in an effort to expand wireless broadband coverage – not only to their homes – but to nearby neighbors which can also benefit from the broadband expansion efforts of a dedicated broadband provider.

ACCURACY AND VERIFICATION: METHODOLOGY - PROVIDER VALIDATION

Broadband providers maintain their service area data in many different formats, all in varying levels of complexity and granularity. In order to ensure that the data required by the NTIA is standardized across all providers and that it is as accurate as possible, Connected Nation translates and formats the data that providers are able to supply into a GIS shapefile and produces maps for the provider to review. The resulting map(s) and review process allow for providers to see their service area in a geographic format – for some providers, this is the first time they have seen maps of their broadband service area. Having the mapped service area allows providers to quickly identify any issues that appear in the data representation, whether the issue is in the data translation into a GIS format or from the original data collection and submission. Often data is provided from various sources and through the review and revision process, local engineers who operate the networks and work in the field are able to ensure that the tabular data that has been submitted is accurate and represents the real-world network extent. Any issues in how the service area is represented on the map(s) are remedied by Connected Nation, whether they are additions, removal of service, or any other revisions. Revised maps of service area representations are sent to the provider for review and approval; Connected Nation will revise data and return maps as many times as necessary until the provider is in agreement that the map represents their service area as accurately as possible. Once the review process has been completed and final approval of the data is provided, the data is deemed ready for NTIA submission.

Once the data collection has been aggregated to a statewide level, static maps of statewide and county-level availability are produced and made publicly available. In addition, consumers can visit the interactive online tool, BroadbandStat, to create customized views of broadband service areas and analyze corresponding demographic information. Leveraging broadband service data on various platforms allows for public users, providers, and other stakeholders to review, scrutinize, and provide feedback on the represented data. This feedback becomes a validation method in itself as consumers submit inquiries to Connected Nation either affirming where service is not available or identifying areas where broadband service is shown on the map, but in actuality is not available. This allows for a follow-up to providers regarding revisions to the data as it is represented; it also allows for Connected Nation to identify locations where on-site visits may be necessary to complete field validation of available services. Public feedback on all forms of mapping products serves as a localized validation method for provider-supplied information and allows Connected Nation to resolve inaccuracies as they are identified to ensure that only the highest quality information is provided to stakeholders.

DATA VALIDATION: SURVEY RESEARCH

Between June and July 2010, Connect Michigan conducted a statistically significant telephone survey of 801 Michigan businesses, to offer as a comparison against the provider-validated statewide broadband inventory. The survey provides an estimate of the percentage of all Michigan businesses and a subset percentage of all *rural* Michigan businesses that report that they are unaware of available broadband service at their location. These figures are then compared against broadband availability estimates derived from provider-supplied data to provide a macro-level comparison to the provider-validated data. This test measures how state businesses' awareness of broadband availability compares to provider-validated availability information. Results are reported below.

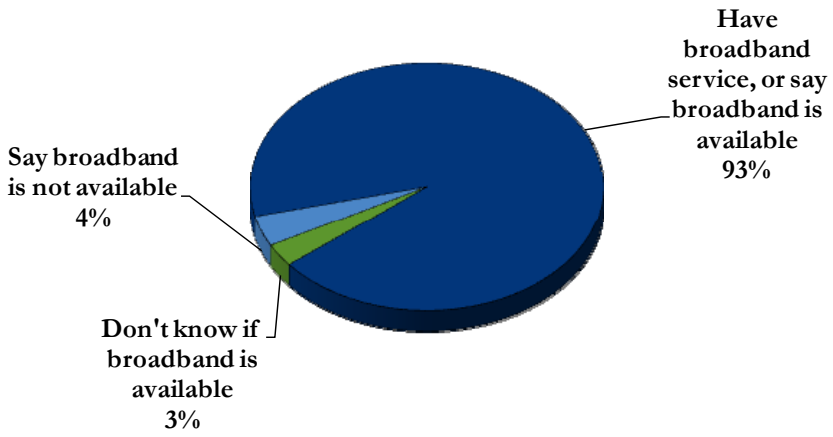
DATA VALIDATION: METHODOLOGY

Connect Michigan conducted a random digit dial (RDD) survey of 801 businesses contacted between June 23 and July 21, 2010. Data were collected by telephone through live, computer-assisted interviews, with quotas set by business size and industry sector to ensure adequate representation of all businesses across the state. Weights were applied to correct for minor variations and ensure that the sample matched U.S. Census estimates of the state's business establishments, as reported in their County Business Patterns Report. The statewide full sample (n=801) provides a margin of error of $\pm$ 4.9% at the 95% level of confidence. The full sample of rural businesses (n=206 businesses located in rural counties) provides a margin of error of $\pm$ 9.6% at the 95% level of confidence. These sample errors account for sample weighting, using the effective sample size. For the purposes of this survey, broadband is defined as "an Internet connection with speeds of 768 kilobits per second or higher in at least one direction."

Results

Statewide, 4% of businesses report that broadband service is not available at their location, 3% don't know if broadband is available, and 93% report with certainty that broadband is available (Figure 1).

Figure 1.
Awareness of broadband availability among Michigan businesses



Taking into account the survey's margin of error, the results estimate that between 0% and 8.9% of Michigan businesses do not have broadband service available.

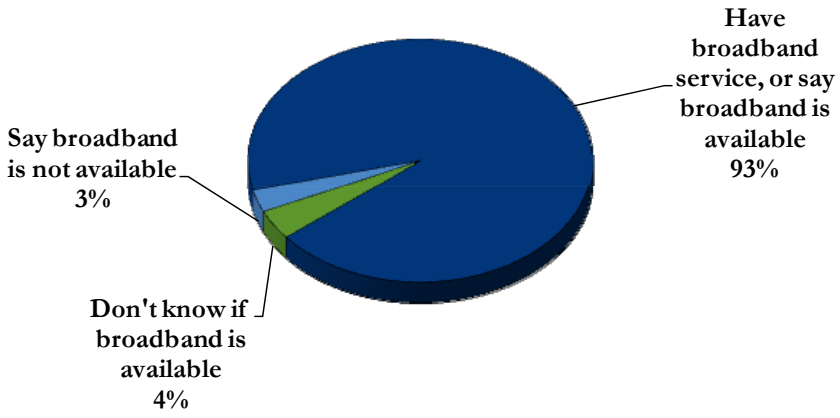
Estimates derived from provider-validated data indicate that approximately 3.21% of Michigan households do not have terrestrial fixed broadband service available, and approximately 0.3%[1] of Michigan households have neither mobile nor fixed broadband service available.[2]

Among rural businesses, 3% of respondents report that broadband service is not available to them, 4% do not know if broadband is available, and 93% report with certainty that broadband is available (Figure 2).

[1] In accordance with NTIA's definition of available broadband service as specified in the SBDD NOFA, this estimate includes both terrestrial fixed *and* mobile broadband service, if the service offers download speeds of at least 768 Kbps and upload speeds greater than 200 Kbps.

[2] Due to the nature of the SBDD data collection methodology as defined by the NTIA and based on both census block geographic units and street segment data, the estimates of broadband availability derived from provider-validated data may include an overstatement of the actual number of households with broadband availability. Under the census block-based data collection method, a provider will typically report broadband availability for an entire census block whether its network is present across the whole or only a subset of that census block. This potential overestimation at the census block level can be amplified as the data is aggregated across the entire state.

Figure 2.
Awareness of broadband availability among rural Michigan businesses



Taking into account the survey's margin of error, the results estimate that between 0% and 12.6% of rural Michigan businesses do not have broadband service available.

Results derived from provider-validated data indicate that approximately 6.54% of rural Michigan households do not have terrestrial fixed broadband service available, and approximately 0.64%[3] of rural Michigan households have neither mobile nor fixed broadband service available.[4]

WIRELESS METHODOLOGY

Broadband Service Availability in Provider's Service Area
Wireless Services Not Provided to a Specific Address

Data is solicited from the wireless provider to include, but is not limited to:

1. The name of the structure
2. Whether the transmitting device is operational or proposed
3. The maximum advertised downstream speed and the maximum advertised upstream speed
4. The typical downstream speed and the typical upstream speed (peak periods for both)
5. The frequency range of spectrum being used (as prescribed by NTIA)
6. The primary population center(s) being served (for geopolitical boundary reference)
7. Latitude in either Degrees, Minutes and Seconds and/or in Decimal Degrees (typically received as NAD 27 or NAD 83)
8. Longitude in either Degrees, Minutes and Seconds and/or in Decimal Degrees (typically received as NAD 27 or NAD 83)

[3] Ibid.
[4] Ibid.

9. The physical address of the transmit site (in the event latitude/longitude is unavailable from the provider this allows a quick reference point for geocoding)
10. Antenna pattern (e.g. omni-directional, 180°, 120°, 90°, etc.)
11. Azimuth of antenna (e.g. 360° with magnetic declination if known)
12. Approximate transmit radius (in feet, miles or kilometers)
13. Polarity of transmit antenna (Vertical or Horizontal)
14. Transmit antenna gain (in dBi)
15. Line loss (applicable only to providers using coax, heliax, waveguide or other forms of cabling – excludes power-over-Ethernet devices)
16. Mechanical and/or electrical beam tilt (if applicable)
17. Equipment manufacturer (allows easy cross-reference against manufacturers' specification sheet)
18. Power output of the transmitting device (if unknown FCC standards applied)
19. AMSL at base of tower site
20. Antenna centerline AGL (height of antenna above ground level measured at the centerline of the actual antenna)
21. Foliage factors (evergreens/deciduous and percent of ground cover)
22. Ground clutter (primarily used only in metropolitan areas – accounts for types and heights of buildings)

Propagation modeling is an empirical mathematical formulation for the characterization of radio wave propagation as a function of frequency, distance, and other conditions. Propagation software typically uses the Irregular Terrain Model (also known as Longley-Rice) of radio propagation for frequencies between 20 MHz and 20 GHz. This model is based on electromagnetic theory and statistical analyses of the combination of terrain features and radio measurements, then predicting the median attenuation of a radio signal as a function of distance and the variability of the signal in time and in space. For metropolitan areas, the software can typically be adjusted to use the Okumura-Hata, which accounts for predicting the behavior of cellular transmissions in areas where buildings are the primary obstructions.

The resulting product from either model depicts a graphical illustration of the theoretical propagation characteristics of a selected frequency range based on defined variables (receiver sensitivity of the home/mobile device, foliage factor, and digital elevation terrain input).

BROADBAND INQUIRIES METHODOLOGY

Connected Nation collects consumer feedback in the form of broadband inquiries. These inquiries represent any type of communication received from the public regarding broadband service. Once broadband inquiries are received across the state, this information is overlaid with the broadband availability information which was collected through the SBDD program. This allows for a real-world comparison of the broadband landscape to the information received from broadband inquiries. Broadband inquiries are able to provide three types of information: 1) Residents who do not have broadband but want it. 2) Residents who have broadband but want a different provider. 3) Residents who do not have broadband, but the broadband inventory maps indicate that they do.

Through the collection of broadband inquiries, a visual demand for broadband is presented. This visualization allows Connected Nation the ability to validate broadband availability maps for accuracy. If residents within a region state that they are without broadband, but the broadband inventory maps show otherwise, this allows Connected Nation to approach the providers within that area in an effort to trim down their coverage to more accurately represent real-world availability on the ground. On the other hand, if there is a region in the state in which broadband is not available, broadband inquiries allow providers close to that region to see where they can successfully expand their broadband networks, leading to a high return on investment. In short, the higher number of inquiries leads to a higher level of certainty in regard to the broadband availability maps. Since the initial data collection and release of corresponding maps, feedback in the form of broadband inquiries has allowed Connected Nation to identify additional areas that are in need of field validation, which are scheduled as soon as possible. Additional information on field validation can be found in the Field Validation Narrative.

The broadband inquiry process has been implemented in several other Connected Nation state programs with successful results. Citizens in the State of Tennessee have submitted over 10,000 broadband inquiries since 2007, allowing the Connected Tennessee program to evaluate each inquiry for broadband demand and data verification. These inquiries are continuously examined against current broadband availability, updated every three months, to determine if previously unserved households have been expanded to and can now received broadband access at their residence. This database of broadband inquiries has also allowed Connected Tennessee to aggregate demand in concentrated areas to show providers the exact locations where the population has made it clear that they would purchase broadband if it was made available to them. Providers in the state have responded to this process and have expanded to areas knowing that their investment will be worthwhile. Data verification methods have also proven successful, as Connected Tennessee has been able to show those inquiries that indicate the broadband service areas are misrepresented on the map to providers, who then verify where service cannot reach in regard to that residence(s). The broadband coverage in Tennessee has been altered to create a more accurate map based on the inquiries submitted by the public.

During this reporting period, the Connect Michigan project has received a total of 667 inquiries (776 grant inception to date). As more inquiries are submitted to Connect Michigan, a more thorough validation of the broadband landscape can be performed, while also allowing providers to see which areas have a high demand for broadband adoption.

BroadbandStat Methodology

BroadbandStat is an online, interactive mapping tool for viewing, analyzing, and validating broadband data. Developed through a partnership with ESRI, the market leader in geographic information system (GIS) software, BroadbandStat is a multi-functional, user-friendly way for local leaders, policymakers, consumers, and technology providers to devise a plan for the expansion and adoption of broadband.

First and foremost, BroadbandStat allows consumers to locate their residence and identify providers that offer broadband Internet service to that location. The interactive platform allows for users to

build and evaluate broadband expansion scenarios using a wealth of data, including education and population demographics, broadband availability, and research about the barriers to adoption.

The Connect Michigan project launched BroadbandStat on May 20, 2010, and has received a total of 3,193 visits to date.

SPEED TEST METHODOLOGY

The 1,892 speed tests that are represented in the Connect Michigan Speed Test Report during this reporting period (2,298 grant inception to date) are the result of a partnership between Connected Nation and Ookla Net Metrics. Utilizing this relationship increases the level of confidence in the data being collected and provides for a far greater sample size than could be collected by a single testing site.

Ookla owns and operates Speedtest.net, as well as develops and deploys speed tests, such as the Connect Michigan speed test website, for partners around the world. This network of sites that is developed and run on their testing technology provides Ookla with a vast dataset that, due to the variability of geographic information collected across the varying speed test sites, is geocoded utilizing Geo-IP technology. This technology allows for tests to be geocoded to points of aggregation, typically larger nodes across provider networks. While there are hundreds of thousands of tests that have been conducted, the level of aggregation is only sufficient for county-level detail due to the test results being located at these larger nodes and not at an absolute location for each speed test.

In an effort to validate broadband data from the Connect Michigan project, speed test information is collected throughout the state. Speed tests provide speed information on the path taken through all networks (a provider's network as well as additional networks) a local machine must connect to in order to reach the host test. This collection of speed information is two tiered. First, it allows for a comprehensive dataset of speeds, while also providing Connect Michigan with the information on where broadband services are available. Second, unlike theoretical speed information which was received through the data collection process, the use of speed tests provide real world information on the speeds that currently exist within the state of Michigan.

Broadband Provider Log

Complete	107
Non-Responsive/Refused	3
In Progress	24
Count of Datasets by Status	**134**
Total Unique Providers Represented	**126**

Provider Name	Platform	Status	NDA Execution Date	Notes
AT&T Inc.	Mobile Wireless	Data Added to Statewide Inventory	12/16/2009	
AT&T Inc.	ILEC/CLEC	Data Added to Statewide Inventory	12/16/2009	
Barry County Telephone Company	Fiber	Data Added to Statewide Inventory		
CenturyLink	ILEC/CLEC	Data Added to Statewide Inventory	12/4/2009	
Charter Communications	Cable	Data Added to Statewide Inventory	12/15/2009	
Comcast Cable Communications, Inc.	Cable	Data Added to Statewide Inventory	12/7/2009	
Frontier Communications Corporation	ILEC/CLEC	Data Added to Statewide Inventory	1/22/2010	
I-2000, Inc.	Fixed Wireless	Data Added to Statewide Inventory		
Iron River Cooperative TV Antenna Corp	Cable	Data Added to Statewide Inventory	7/27/2010	
KEPS Technologies, Inc.	Fixed Wireless	Data Added to Statewide Inventory		
KEPS Technologies, Inc.	ILEC/CLEC	Data Added to Statewide Inventory		
Michwave Technologies, Inc.	Fixed Wireless	Data Added to Statewide Inventory	3/12/2010	
Newaygo County Advanced Technology Services	Fixed Wireless	Data Added to Statewide Inventory		
Sand Creek Communications Company	ILEC/CLEC	Data Added to Statewide Inventory	3/2/2010	
Springcom Inc.	Cable	Data Added to Statewide Inventory	2/25/2010	
Springcom Inc.	ILEC/CLEC	Data Added to Statewide Inventory	2/25/2010	
Sprint Nextel Corporation	Mobile Wireless	Data Added to Statewide Inventory	1/14/2010	
T-Mobile USA, Inc.	Mobile Wireless	Data Added to Statewide Inventory	1/8/2010	
TDS Telecommunications Corporation	ILEC/CLEC	Data Added to Statewide Inventory	1/27/2010	
The Iserv Company, LLC	ILEC/CLEC	Data Added to Statewide Inventory	6/21/2010	
Verizon North Inc.	Mobile Wireless	Data Added to Statewide Inventory	12/14/2009	
CenturyLink	Backhaul	Backhaul Provider Only Processing Complete	12/4/2009	
DIECA Communications, Inc.	Backhaul	Backhaul Provider Only Processing Complete	1/19/2010	
T-Mobile USA, Inc.	Backhaul	Backhaul Provider Only Processing Complete	1/8/2010	
TDS Telecommunications Corporation	Backhaul	Backhaul Provider Only Processing Complete	1/27/2010	
US Signal Company, LLC	Backhaul	Backhaul Provider Only Processing Complete	2/25/2010	
Zayo Group, LLC	Backhaul	Backhaul Provider Only Processing Complete		
Bright House Networks, LLC	Cable	Multiple Revisions Awaiting Approval	4/26/2010	
McLeodUSA Telecommunications Services, Inc.	ILEC/CLEC	All Data Received		
2125 Cable Company, LLC		No Update to Provide	3/22/2010	
Ace Telephone Company of Michigan Inc.		No Update to Provide	1/12/2010	
Agri-Valley Communications, Inc.		No Update to Provide	1/22/2010	
Allendale Telephone Company		No Update to Provide	2/4/2010	
AT&T Inc.		No Update to Provide	12/16/2009	
Azulstar, Inc.		No Update to Provide	1/27/2010	
Baraga Telephone Company		No Update to Provide	1/14/2010	
BigTube Wireless		No Update to Provide	6/17/2010	
Blanchard Telephone Association, Inc.		No Update to Provide	6/17/2010	
Bloomingdale Communications, Inc.,		No Update to Provide	1/25/2010	
Boardman River Communications, LLC		No Update to Provide	2/10/2010	
Broadstripe LLC		No Update to Provide	3/5/2010	
Buckeye Cablevision, Inc.		No Update to Provide	4/12/2010	
Cable America Michigan, LLC		No Update to Provide		
Carr Telephone Company		No Update to Provide	1/15/2010	
CCI Systems		No Update to Provide	6/29/2010	
Cherry Capital Connection, LLC		No Update to Provide	12/28/2009	
City of Norway		No Update to Provide		
Climax Telephone Company		No Update to Provide	1/14/2010	
CMS Inter.net LLC		No Update to Provide	3/11/2010	
Coldwater Board of Public Utilities		No Update to Provide	3/1/2010	
CSInet Internet Access Corp.		No Update to Provide	3/31/2010	
Custom Software Inc.		No Update to Provide	2/3/2010	
Drenthe Telephone Company		No Update to Provide	2/4/2010	
Farmers Mutual Telephone Company		No Update to Provide		
Great Lakes Comnet, Inc.		No Update to Provide		
Hiawatha Communications, Inc.		No Update to Provide	2/2/2010	
Hidden Lake Wireless, Inc.		No Update to Provide	3/12/2010	
Interlink Computers Technology, Inc.		No Update to Provide	3/12/2010	
Iron Bay Computer & Design		No Update to Provide	1/14/2010	
ISP Management, Inc.		No Update to Provide	3/22/2010	
Kaltelco, LLC		No Update to Provide	3/5/2010	
Leap Wireless International, Inc.		No Update to Provide	4/5/2010	
LigTel Communications		No Update to Provide	3/31/2010	
Mercury Network Corporation		No Update to Provide		
Merit Network, Inc		No Update to Provide	6/21/2010	
MetaLINK Technologies, Inc.		No Update to Provide	3/22/2010	
Michigan Cable Partners Inc.		No Update to Provide	6/18/2010	
Michigan Online Group, Inc.		No Update to Provide		
Nodin Communications, LLC		No Update to Provide	4/22/2010	
Northside TV Corporation		No Update to Provide		
Ogden Communications Inc.		No Update to Provide	1/19/2010	
One Communications Corporation		No Update to Provide	3/18/2010	
Parish Communications		No Update to Provide	7/1/2010	
Peninsula Telephone Company		No Update to Provide	2/22/2010	
Sister Lakes Cable TV		No Update to Provide		
SpeedNet, LLC		No Update to Provide	1/7/2010	
Sprint Nextel Corporation		No Update to Provide	1/14/2010	
Summit Digital Holdings, Inc.		No Update to Provide		
Talk America Inc.		No Update to Provide		
Town & Country Cable and Telecommunications, LLC		No Update to Provide	6/18/2010	
Upper Peninsula Telephone Company		No Update to Provide	1/11/2010	

Waldron Telephone Company		No Update to Provide	1/12/2010	
Westphalia Telephone Company		No Update to Provide	1/20/2010	
Winn Telephone Company		No Update to Provide	6/28/2010	
Wyandotte Municipal Services		No Update to Provide	3/23/2010	
XO Communications, LLC		No Update to Provide	2/12/2010	
Air Advantage, LLC		No Update Provided - Use Initial Data	3/15/2010	
Allband Communications Cooperative		No Update Provided - Use Initial Data	2/2/2010	
Borderland Communications, LLC		No Update Provided - Use Initial Data	1/22/2010	
Camp Communication Services, Inc.		No Update Provided - Use Initial Data		
Cogent Communications, Inc.		No Update Provided - Use Initial Data		
COLI, Inc.		No Update Provided - Use Initial Data		
Crystal Automation Systems, Inc		No Update Provided - Use Initial Data	6/25/2010	
D & P Communications, Inc.		No Update Provided - Use Initial Data		
DMCI Broadband, LLC		No Update Provided - Use Initial Data	2/3/2010	
FNW, LLC		No Update Provided - Use Initial Data	2/12/2010	
Fourway Computer Products, Inc.		No Update Provided - Use Initial Data		
Great Lakes Internet, Inc.		No Update Provided - Use Initial Data	3/11/2010	
Ideal Wireless, Inc.		No Update Provided - Use Initial Data		
Invisalink Wireless Enterprises LLC		No Update Provided - Use Initial Data	4/13/2010	
ITWifi, Inc.		No Update Provided - Use Initial Data		
Lennon Telephone Company		No Update Provided - Use Initial Data	1/25/2010	
Level 3 Communications, LLC		No Update Provided - Use Initial Data	12/14/2009	
Pasty.Net, Inc.		No Update Provided - Use Initial Data	1/6/2010	
Peninsula Fiber Network, LLC		No Update Provided - Use Initial Data	1/14/2010	
Small Business Solutions Group L.L.C.		No Update Provided - Use Initial Data	7/20/2010	
T2 Communications, LLC		No Update Provided - Use Initial Data	3/10/2010	
The Computer Care Company, Inc.		No Update Provided - Use Initial Data		
Time Warner Cable Inc.		No Update Provided - Use Initial Data	12/21/2009	
Airbaud, Inc.		Solicited Initial Data		
Arialink Telecom LLC		Solicited Initial Data		
Banyan OnLine Services, LLC.		Solicited Initial Data		
Endless Journey, Inc.		Solicited Initial Data		
First Communications, LLC		Solicited Initial Data		
Lewiston Communications		Solicited Initial Data		
Lighthouse.Net		Solicited Initial Data		
M55 WiFi Wireless Internet Service		Solicited Initial Data		
Microtech Services, Inc.		Solicited Initial Data		
Mutual Data Servics, Inc.		Solicited Initial Data		
Raser, Inc.		Solicited Initial Data		
Reliable Internet, LLC		Solicited Initial Data		
Rural Communications, Inc.		Solicited Initial Data		
Sky Web Network, Inc		Solicited Initial Data		
SkyWay USA, LLC		Solicited Initial Data		
Tri-County Wireless, Inc.		Solicited Initial Data		
West Michigan Broadband		Solicited Initial Data		
Wireless Technology Solutions		Solicited Initial Data		
Kentucky Data Link, Inc.		Refused to Participate		[JUL-22-10 Ira Dye] A provider representative replied back stating that they are "electing not to contribute at this time."
M3 Wireless		Refused to Participate		[JUL-28-10 Terry Holmes] Spoke with a project manager for the provider. He liked the BBStat map, but feels the program is a waste of money and they do not want to participate.
Wide Open West Michigan LLC		Refused to Participate		[AUG-11-10 Wes Kerr] WOW responded to e-mail outreach requesting if they would be participating in the October Data submission and responded "No we are not, thank you for the opportunity."
DISH Network Corporation		Other	1/27/2010	[SEPT-16-10 Sarah Finne] Satellite data will not be submitted due to additional information being necessary to show where service is available in the state, rather than submitting the entire state boundary as serviceable area.
Global Crossing Telecommunications, Inc.		Other		[JUL-26-10 Ira Dye] Global Crossing responded to follow-up and, due to legal constraints, they are unable to participate at this time.
Hughes Network Systems, LLC		Other	2/5/2010	[SEPT-16-10 Sarah Finne] Satellite data will not be submitted due to additional information being necessary to show where service is available in the state, rather than submitting the entire state boundary as serviceable area.
WildBlue Communications, Inc.		Other	1/8/2010	[SEPT-16-10 Sarah Finne] Satellite data will not be submitted due to additional information being necessary to show where service is available in the state, rather than submitting the entire state boundary as serviceable area.