

**OFFICIAL OCTOBER 2013 UPDATE SUBMISSION TO  
THE NATIONAL TELECOMMUNICATIONS AND INFORMATION  
ADMINISTRATION UNDER THE  
STATE BROADBAND INITIATIVE GRANT PROGRAM FOR THE  
STATE OF TENNESSEE**

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October 1, 2013

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October 1, 2013

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

Dear Ms. Neville:

Connected Tennessee, in partnership with the Department of Finance and Administration's Office for Information Resources, the Department of Economic and Community Development, and other agencies, please accept Tennessee's State Broadband Initiative (SBI) Grant Program, known as Connected Tennessee.

Truly, now more than ever, the significance of complete and validated data through this effort is impacting lives in communities all across our great country. The Connected Tennessee program and its collective stakeholder community continue to be faithful and energized contributors, and we are proud to play such a part in forging the innovation economy of the twenty-first century.

The artifacts that comprise this submission should be found to be compliant with the October 1, 2013, 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, Connected Tennessee: October 1, 2013***

<u>NOFA Requirement</u>	<u>Data Transfer Model</u>	<u>Data Description</u>
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.xlsx	Worksheets of Contact Information, Record Count, and Provider Summary Table
n/a	n/a	List of Changes and Corrections to the Dataset
n/a	n/a	Non-Participating Provider (NPP) Narratives
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 April 2013 SBI data submission for the Connected Tennessee program. Specifically, these new requirements are:

### **SBI Data Transfer Model**

The submission of the broadband dataset for October 1, 2013, is contained within the SBI Data Transfer Model as provided to SBI Grantees on June 26, 2013. All efforts have been made to comply with formatting, domain, and metadata requirements to include as much information on each provider as possible.

### **Additional Submission Guidance**

On July 8, 2013, the program office released an “unknown broadband speeds” report on school and library Community Anchor Institutions (CAI), identifying the percentage of those CAI types that are missing subscribed download speed data or the federal ID code (CAI ID). The distributed list generated much excitement and support from staff as well as state leaders committed to improving CAI numbers universally. This October 2013 submission has seen an increase in the number of federal ID codes reported.

In collecting broadband service area datasets for inclusion on the National Broadband Map, this October 2013 submission includes business/commercial broadband service areas in addition to the residential datasets that have been collected for the SBI program. Following guidance from the program office, the end user category appropriately delineates the differences in residential service area, business service areas, and combination residential/business service areas. Further, all contacted providers were asked if they

provide broadband services to business customer within their existing coverage areas and, if so, this information was noted.

This submission also includes information regarding the data and coverage estimation of a non-participating provider. While Connected Tennessee continues outreach to all providers prior to each submission period, the need to submit broadband service data for all providers regardless of their participation is evident as the SBI program continues into this seventh round of data submissions. The submission of this estimated broadband service area for providers that have not supplied data to Connected Tennessee is essential in being able to portray a more accurate depiction of the current broadband landscape.

This October 2013 semi-annual data update under the SBI Grant Program continues to demonstrate our dedication to implementing the joint purposes of the Recovery Act and the Broadband Data Improvement Act (BDIA) by gathering comprehensive and accurate state-level broadband mapping data, developing state-level broadband maps, aiding in the development and maintenance of the National Broadband Map, and undertaking statewide initiatives for broadband planning.

### ***Broadband Service Availability — Provider Outreach and Verification***

This data update submission under the SBI program includes datasets for 97.7 percent of the Tennessee provider community, or 85 of 87 total providers. There are 84 participating providers and 1 additional non-participating provider whose estimated coverage areas have been submitted. Of the 84 participating providers, 22 supplied an update to their network or coverage area(s), while 36 have reported no change. The remaining 26 represent providers who previously supplied data but were non-responsive in the October 2013 update effort; therefore, their previous dataset is being put forward as part of this compilation. A complete roster by provider depicting participation status and contact history is contained herein. The 2 providers that are not represented in the attached datasets were non-responsive to multiple contact attempts.

New to this October 2013 submission is reporting on the number of business/commercial providers included in the broadband datasets. Of the 85 residential providers represented in the above section, 21 are providers that do not distinguish between serving primarily residential or primarily non-residential users (end user category 5). Three business-only providers (end user category 2) are also included in this submission.

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

Connected Tennessee has also continued to perform broadband verification activities through several means. In addition to confirmation of service area(s) by each provider, Connected Tennessee conducts field validation efforts. To date, 70 (80.46 percent) providers have been validated through field verification activities. Additional details on verification activities are contained within the Field Validation Methodology.

The Connected Tennessee website ([www.connectedtennessee.org](http://www.connectedtennessee.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.

As an indicator of stakeholder penetration, the Connected Tennessee website encountered 4,608 unique visits during this reporting period (53,905 total to date for the life of the grant awarded on December 9, 2009). Additionally, this pronounced Web activity netted 71 broadband inquiries over this same reporting period (1,640 grant inception to date). The website also provides access to the My ConnectView™ interactive mapping application, which allows consumers and broadband providers to confirm or dispute the coverage represented on the broadband inventory map. These consumer-initiated actions are facilitated through the Connected Tennessee website and the Connected Tennessee interactive mapping tool (My ConnectView™) that offer the stakeholders the vehicles to provide information regarding availability in their respective service area, either in affirmation or contest of the reported data represented in the Connected Tennessee mapping artifacts. Since the initial data collection and release of corresponding maps, feedback in the form of broadband inquiries has allowed Connected Tennessee to identify additional areas that are in need of field validation, which is scheduled as soon as possible.

### ***Community Anchor Institutions***

Connected Tennessee remains committed to gathering data regarding the location and broadband connectivity of Community Anchor Institutions in accordance with the data requirements of the SBI NOFA Technical Appendix. The increased CAI data collection can be directly attributed to the “unknown broadband speeds” report received from the NTIA earlier this year. Multiple agencies and leaders have taken the opportunity to recommit to CAI data collection, reiterating the importance of a relationship-oriented approach with state-level agencies and organizations that generates more responses than local outreach.

In conjunction with the Department of Finance and Administration’s Office for Information Resources and the Department of Economic and Community Development, outreach was conducted during this data update reporting period by Connected Tennessee to continue identification of existing, centralized sources for CAI connectivity data. Additionally, outreach was coordinated to distribute the CAI survey to institutions throughout the state through multiple methods including a customized online survey available on the Connected Tennessee website. Building on the success of past campaigns to generate excitement about CAI outreach, research, and mapping, there have been two campaigns conducted since the previous NTIA data submission: Digital Learning (May 2013) and Education (August 2013). Connected Tennessee has strengthened existing relationships with statewide associations to promote the importance of broadband connectivity at anchor institutions and participation in this data collection process. The value of these relationships continues to impact the entire success of the Grant Program, and the CAI engagement is a logical extension of new and existing relationships. Connected Tennessee will continue to expand on these relationships over the coming months and utilize its contacts throughout the state to collect data and raise awareness of this project.

From our work in Tennessee, as well as other states, we recognize the great value of this data to future collaboration efforts within the state as well as its value to the National Broadband Map. We plan to continue to bring best practices to the Connected Tennessee efforts, along with an investment of both human and technical resources required to reach our goal of increasing the data that is secured and reported as part of this process.

The Connected Tennessee 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 Tennessee, as well as the United States and its territories through contribution to the National Broadband Map. We look forward to the continuing work ahead and improving upon our data collection methods.

Respectfully submitted,



Corey Johns  
Executive Director  
Connected Tennessee

## TENNESSEE COMMUNITY ANCHOR INSTITUTIONS METHODOLOGY

Connected Tennessee remains committed to working with Tennessee to gather data on the location and broadband connectivity of Community Anchor Institutions (CAI), in accordance with the data requirements of the SBI NOFA Technical Appendix. This commitment was further strengthened by the encouragement of NTIA to improve data numbers specifically in the K-12 school and library sectors. This encouragement translated very well with the state client as well as K-12 school and library points of contact. The impact will be seen in this submission as well as the upcoming April 2014 submission.

In addition to the encouragement from NTIA, Connected Tennessee continues to promote sector-specific campaigns every quarter. Information received from these campaign outreaches is processed and compiled with all currently collected CAI data. Physical address information continues to be augmented through manual sourcing and geocoded by Connected Tennessee through Esri ArcGIS software.

Connected Tennessee continues to utilize a customized online survey hosted through SurveyMonkey, with a landing page on the Connected Tennessee website that was developed during the first reporting period. This survey, in combination with a customized data-gathering spreadsheet, was distributed on a regular basis to a targeted list of CAI throughout the state as well as organizations and agencies that work closely with the CAI. The distributions were completed with the support of the state client. Connected Tennessee 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 SBI NOFA.

The survey can be accessed at this link: <http://www.surveymonkey.com/s/RJK59FP>.

Connected Tennessee realizes the value of key relationships, new and old, to promote the importance of broadband connectivity at Community Anchor Institutions and participation in this data collection process. It is apparent that these relationships are beneficial to the entire success of the grant program, and the CAI engagement is a logical extension of new and existing relationships. Connected Tennessee will continue to build upon these relationships over the coming months and utilize its contacts throughout the state to collect data and raise awareness of this project.

In addition to fostering and building relationships with state agencies, associations, and organizations, Connected Tennessee has also developed a sector-specific calendar that supports CAI outreach as well as research and communications efforts. This focused approach allows a corporate commitment to capturing CAI data in addition to developing meaningful sector-specific content. Since the April 2013 submission, the sector-specific approach included two month-long campaigns: Digital Literacy (May 2013) and Education (September 2013). During these campaigns, Connected Tennessee committed to engage key stakeholders to educate them about the importance of our CAI data gathering efforts, distribute survey requests to sector representatives to gather CAI information, and provide campaign-specific education through communications and webinar resources. Continued outreach to and survey of schools, libraries, hospitals, local law enforcement, and fire



stations helps build awareness and establishes a centralized database of key connectivity data for planning.

Connected Tennessee conducts significant 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, Connected Tennessee continues to identify key CAI contacts in an effort to distribute and promote the online survey and raise awareness of the importance of CAI broadband connectivity. Also, when possible, Connected Tennessee works with the Department of Finance and Administration's Office for Information Resources and the Department of Economic and Community Development to identify existing relationships that can support CAI outreach.

Connected Tennessee 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 National Broadband Map.

The greatest challenge with collecting CAI data continues to be educating the CAI about the Connected Tennessee project as well as self-awareness of their own broadband connectivity (specifically upload and download speeds). Connected Tennessee will continue to research key CAI organizations and agency contacts in an effort to raise awareness of this project among CAI. When applicable, the Department of Finance and Administration's Office for Information Resources and the Department of Economic and Community Development will continue to be briefed on the current CAI data and provided information so it can assist with outreach and promotion within the state.

A CAI summary of all processed and submitted data is provided below:

CAI Type	Total	Physical Address	Lat/Long	Technology of Transmission	Download Speed	Upload Speed
<b>K-12 Schools</b>	2,330	2,330	2,330	1,146	1,146	1,144
<b>Libraries</b>	315	315	315	223	223	223
<b>Healthcare</b>	897	897	897	219	218	218
<b>Public Safety</b>	763	763	761	148	126	126
<b>Higher Ed Institutions</b>	406	406	406	175	178	123
<b>Other Government</b>	1,286	1,286	1,281	1,125	1,109	1,109
<b>Other Non-Government</b>	167	167	166	129	127	127
<b>Total</b>	6,164	6,164	6,156	3,165	3,127	3,070

Additionally, efforts were made to increase the number of CAI IDs, or federal ID codes, submitted for K-12 school and library records. The K-12 schools now have 83.86% of the CAI IDs accounted for in the records, an increase of 541 since the April 2013 submission. Library records now have 91.11% of the CAI IDs accounted for in the records, an increase of 56 since the April 2013

submission; additional work will be completed prior to the April 2014 submission to further increase the number of CAI IDs submitted.

During the coming months, CAI data collection will be supported by regular reporting to the Connected Tennessee team. The CAI data is proving an invaluable resource to all components of the Connected Tennessee effort. The data identifies potential local champions, sector trends, and opportunities for improvement as well as opportunities to educate CAI not familiar with their current connectivity.

## **SBI DATA SUBMISSION METHODOLOGY**

The submission of the broadband dataset for October 1, 2013, is contained within the SBI Data Transfer Model and additional components as provided to SBI Grantees on June 26, 2013. Connected Nation (CN) 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.

Connected Nation has complied with the following guidance documents published by NTIA:

- Technical Mapping Guide, as released on the Grantee Workspace on March 24, 2011, was followed to ensure the completeness and validity of the submission through completion steps and checklists, completing the DataPackage spreadsheet, uploading broadband datasets into the Data Transfer Model, and checking the dataset using the SBDD\_CheckSubmission receipt process.
- Naming Conventions and Category of End User, as released on the Grantee Workspace on March 26, 2012, was followed to ensure the consistency of individual file and zip package naming.
- Wireless Data Processing Guidance, as sent to SBI grantees on February 8, 2013, was followed to ensure that all fixed and mobile wireless provider coverage records are submitted to NTIA as separate, closed polygons whenever there is a variation in any of the required fields.

In addition to the methodologies contained herein, the Changes and Corrections documentation, 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 SBI Data Transfer Model for the State of Tennessee.

### ***Inventory of Deliverables, Connected Tennessee: October 1, 2013***

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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.

The provider data collected by CN on behalf of the State of Tennessee have been formatted per the given specifications and uploaded into the appropriate feature classes of the SBI Data Transfer Model. Wireline availability is contained within census blocks and road segments, wireless availability is contained as polygons of coverage areas, and middle-mile connections and Community Anchor Institutions are contained as point data. 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.

In collecting broadband service area datasets for inclusion on the National Broadband Map, this October 2013 submission includes business/commercial broadband service areas in addition to the residential datasets that have been collected for the SBI program. Following guidance from the program office, the end user category appropriately delineates the differences in residential service area, business service areas, and combination residential/business service areas.

Connected Nation has continued outreach to satellite providers on their availability, technology, and speed information, but granular coverage is not yet available. Submitted within the wireless feature class are the satellite companies providing service to Tennessee as a polygon of the state boundary. Efforts will continue to collect, process, or otherwise create more granular satellite data based on availability analyses and guidance received from NTIA. Process development continues as well to be able to create more granular satellite coverage based on satellite equipment positioning and geographic inputs; more granular satellite service areas should appear in the April 2014 submission.

## **TENNESSEE FIELD VALIDATION METHODOLOGY**

CN focused a portion of its time on specific validation processes such as:

- conducting random spectrum analysis studies throughout the state using an Avcom PSA-37-XP spectrum analyzer;
- conducting mobile speed tests throughout the state using an iPhone, Android (or other smart phone) as well as provider-specific aircards (Sprint 3G/4G, Clearwire et al);

- identifying pre-selected, provider-submitted wireless transmit tower sites and cross-referencing data about that tower against the Federal Communications Commission (FCC) databases such as Antenna Structure Registration and/or the Universal Licensing System;
- cross-referencing Federal Registration Number data against available FCC Form 477 data as well as the FCC **CO**mmission **RE**gistration **S**ystem (CORES);
- validating provider submitted data (for example: latitude/longitude) using a handheld Garmin eTrex Summit GPS unit or GPS enabled software such as Microsoft *Streets & Trips*;
- locating physical wire-line attributes (such as Central Offices, Remote Terminals, CATV plant, etc.) and comparing them against provider submitted data; and
- conducting on-net and off-net speed tests using the FCC portal at <http://www.broadband.gov/qualitytest/about/> or using the Ookla Net Metrics enabled speed test utility located on each of CN's program specific websites.

Additionally, CN cross-referenced numerous public documents in order to ensure that all known broadband providers were located and contacted. This included searching membership logs from trade associations (WISPA, WCAI, PCIA, etc.), the Cable Television Fact Book, Public Utility Commission records, Public Service Commission records, Chamber of Commerce, etc.

To date, Connected Nation's staff conducted on-site validation tests in Tennessee on the following providers: Access Cable Television, Inc.; Ardmore Telephone Company Inc.; Athena Broadband (also d.b.a. HotShot Wireless); AT&T; Aurora Cable TV; Beasley Wireless; Ben Lomand Rural Telephone Cooperative Inc.; Bledsoe Telephone Cooperative, Inc.; BreezeAir.Net; Bristol Tennessee Essential Services; Cable ONE; Celina Cable Communications, Inc.; Cellular South Inc.; CenturyLink; Charter Communications; Clarksville Department of Electricity (d.b.a. CDE Lightband); Clearwire Corporation; Columbia Power & Water Systems; Comcast; Conterra Ultra Broadband, LLC; CRU Enterprises; DeKalb Telephone Cooperative Inc.; DeltaCom, Inc.; ECSIS.Net; FiberNet; Frontier Communications Corporation; High Country Online; Highland Telephone Cooperative, Inc.; InfoEd Wireless; Infostructure Cable; Iris Networks; Jackson Energy Authority; James Cable; Ken-Tenn Wireless LLC; Leap Wireless International Inc.; Level 3 Communications; Loretto Telephone Company Inc.; Mediacom Southeast LLC (d.b.a. Mediacom Communications Corporation; Rapid Communications LLC and Mediacom); Millington Telephone Company (also d.b.a. Big River); Monster Broadband (also d.b.a. DotSpot Wireless; Morristown Utilities; NetEase; North Central Telephone; Planet Connect Internet; QuickRelay Wireless Communications; Skyline Telephone Membership Cooperative; Softek; Spirit Broadband; Sprint Nextel Corporation; Surfmore; TDS Telecom; TEC of Jackson Inc.; Tele-Page, Inc.; Tennessee Wireless (also d.b.a. Orb Wireless); Time Warner Cable (formerly New Wave Communications); T-Mobile USA Inc.; TNWeb; Trenton Cable TV Company; Twin Lakes Telephone; U.S. Cellular; Ultra High Speed Internet; UltraNet; United Telephone Company; Verizon Communications Inc.; West Kentucky Rural Telephone; Wide Open West (formerly d.b.a. Knology of Tennessee); Windstream Communications; Wisper LLC; XO; and Zito Media.

In addition to the field verification tests that have been conducted, Connected Nation has also conducted work in the field to collect information for the non-participating provider Trinity Cable, LLC, which, by nature of the methodology required for this collection, is also included in the above list.

From program initiation through this reporting period, CN has completed in-the-field validation testing against 70 companies (out of a universe of 87 viable providers) totaling 80.46 percent within the State of Tennessee. This percentage also considers the non-participating provider record submitted to NTIA as may be contained herein (see “Data Submission and Coverage Estimation of Non-Participating Provider” below).

CN has also continued to review provider datasets for accurate speed information, platform listings, and other intricacies that may fall outside of the standard SBI Data Transfer Model parameters, as included with the submission materials provided to grantees on June 26, 2013. Any providers whose submitted coverage and attributes are anticipated to come into question have been further reviewed and confirmed; details on a case-by-case basis are presented below.

### **Columbia Power & Water Systems**

Issue: Technology of transmission code 41 with maximum advertised download speed in tier 8, higher than expected value range for the technology.

Resolution: Provider website advertises up to 50 Mbps service, which requires DOCSIS 3.0 modem, however, most of the system is still on DOCSIS 2.0; screenshot below.

#### **Residential Service Packages for Cable TV Subscribers**

<b>PowerNet Basic</b>	<b>\$ 24.95</b>
<i>Up to 3.0 Mbps download/384 kbps upload</i>	
<b>PowerNet 5.0</b>	<b>\$ 29.95</b>
<i>Up to 5.0 Mbps download/512 kbps upload</i>	
<b>PowerNet 8.0</b>	<b>\$ 34.95</b>
<i>Up to 8.0 Mbps download/896 kbps upload</i>	
<b>PowerNet 12.0</b>	<b>\$ 42.50</b>
<i>Up to 12.0 Mbps download/1.2 Mbps upload</i>	
<b>PowerNet 18.0</b>	<b>\$ 52.95</b>
<i>Up to 18.0 Mbps download/1.8 Mbps upload</i>	
<b>PowerNet 50.0</b>	<b>\$ 60.00</b>
<i>Up to 50.0 Mbps download/5.0 Mbps upload</i>	
<i>(Requires DOCSIS 3.0 modem.)</i>	

### **Comcast Cable Communications, LLC**






Issue: Technology of transmission code 40 with maximum advertised download speed in tier 7, lower than expected value range for the technology.

Resolution: Confirmed use of DOCSIS 3.0 with speed tier 7. Speeds are kept lower currently to be backwards compatible.

## Mediacom Southeast LLC

Issue: Technology of transmission code 40 with maximum advertised download speed in tier 8, lower than expected value range for the technology.

Resolution: Provider website advertises up to 50 Mbps service with DOCSIS 3.0 modem; screenshot below.

 <p>3 Mbps</p>	<p><b>Launch*</b></p> <p>Download speed: up to 3 Mbps Upload speed: up to 512 KB Monthly Usage Allowance: 150 GB*</p>	<p>No dial-up, no waiting, only an instant connection to the Internet. It's the fast and easy way to watch YouTube®, search for directions on Mapquest®, and Google® search, quickly. Just the speed you need to send emails or quickly download photos.</p>
 <p>15 Mbps</p>	<p><b>Prime*</b></p> <p>Download speed: up to 15 Mbps Upload speed: up to 1 Mbps Monthly Usage Allowance: 250 GB*</p>	<p>Prime offers a great speed at a great price for multi-users households. That means it is simple and easy for kids to play games, adults to pay bills or shop and other family members to surf their favorite sites – all at the same time.</p>
 <p>30 Mbps</p>	<p><b>Prime Plus*</b></p> <p>Download speed: up to 30 Mbps* Upload speed: up to 2 Mbps Monthly Usage Allowance: 350 GB*</p>	<p>Prime Plus is a super speedway for multiple tasks that require speed and more broadband capacity. It's the ideal speed for gamers who need to respond fast, and households with multiple users and multiple devices. Prime Plus 30 Mbps is available in Mediacom digital markets, and consists of download speeds of up to 20 Mbps in other areas.</p>
 <p>50 Mbps</p>	<p><b>Ultra*</b></p> <p>Download speed: up to 50 Mbps Upload speed: up to 5 Mbps Monthly Usage Allowance: 999 GB*</p>	<p>21st century speed that uses the new and faster DOCSIS – 3.0 modem! It's ideal for running multiple media streams, reducing lag time, and improving delivery of mega data.</p>
 <p>105 Mbps</p>	<p><b>Ultra Plus*</b></p> <p>Download speed: up to 105 Mbps Upload speed: up to 10 Mbps Monthly Usage Allowance: 999 GB*</p>	<p>Get on the Internet with super speeds that allow you and others in your home to simultaneously use the Internet to download full-length movies or watch streaming HD shows without lag time. Mediacom is the first to introduce this residential speed in our service areas.</p>

## WideOpenWest Finance, LLC.

Issue: Technology of transmission code 40 with maximum advertised download speed in tier 8, lower than expected value range for the technology.

Resolution: Provider website advertises 25 Mbps service; screenshot below.

**25/30 Mbps**

The optimal choice for multi-user households, frequent gaming, regular video streaming and file sharing. (5 Mbps upload)

## DATA SUBMISSION AND COVERAGE ESTIMATION OF NON-PARTICIPATING PROVIDERS (NPP)

As part of its ongoing broadband mapping efforts, CN has developed a series of processes with the goal of submitting coverage estimation mapping data to NTIA for every known and qualifying last-mile broadband provider, regardless of platform type (cable modem, DSL, fixed wireless, etc.).

Appendix A presents full report(s) on the estimated broadband service territory for the providers in this state that have either been non-responsive or that have refused to participate in the SBI mapping initiative as of October 2013. These coverage estimation reports are for non-participating providers whose data has not been previously submitted to NTIA in past mapping cycles.



The section below provides a summary of the status of CN's outreach and findings on all non-participating provider coverage for the October 2013 SBI submission.

**TNWeb**

The coverage estimation for TNWeb was not updated from the previous submission in April 2013. The full white paper containing the most recent coverage estimation for this provider can be found within the October 2012 submission to NTIA.

**Trinity Cable, LLC**

Coverage for this NPP is being submitted for the first time; please find white paper on provider outreach and coverage estimation in Appendix A.

**PROVIDER VALIDATION METHODOLOGY**

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, CN 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 CN, 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; CN 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. However, if approval is not received from a provider in time for the submission, but CN believes the new/updated service area to be accurate, then the coverage will be submitted to NTIA without final provider approval with a note regarding the situation made in the provider log.

Once the data collection has been aggregated at 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, My ConnectView, 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 CN 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 CN 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 CN to resolve inaccuracies as they are identified to ensure that only the highest quality information is provided to stakeholders.

Additionally, non-participating provider narratives that were submitted in previous mapping cycles are subjected to the same level of scrutiny. Occasionally, a provider may elect to voluntarily participate (thus eliminating the need for future data estimation activities in the field). However, more often than not, the NPP narrative is updated with a combination of data gleaned from the provider's website, data obtained through FCC research, and/or data collected/verified in the field by a CN staff engineer.

Estimates derived from provider-validated data indicate that approximately 3.51 percent of Tennessee households do not have terrestrial fixed broadband service available, and approximately 0.21 percent of Tennessee households have neither mobile nor fixed broadband service available.

Within rural areas of the state, results derived from provider-validated data indicate that approximately 6.06 percent of rural Tennessee households do not have terrestrial fixed broadband service available, and approximately 0.40 percent of rural Tennessee households have neither mobile nor fixed broadband service available. Please note that the availability estimates presented are based on Census 2010 household information.

The estimates above, in accordance with NTIA's definition of available broadband service as specified in the SBI NOFA, include broadband service with download speeds of at least 768 Kbps and upload speeds greater than 200 Kbps.

In addition, due to the nature of the SBI 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.

## **WIRELESS METHODOLOGY**

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

Data solicited from a fixed wireless provider to create propagation models include, but are not limited to:

1. The name of the structure.
2. Whether the transmitting device is operational or proposed.
3. The maximum advertised downstream speed, the maximum advertised upstream speed.



4. The typical downstream speed, the typical upstream speed (peak periods for both).
5. The frequency range of spectrum being used (as prescribed by NTIA). This may include (but is not limited to) spectrum authorizations identified within the Federal Communications Commission (FCC) Universal Licensing System (ULS) database or located on the FCC's Spectrum Dashboard. This research often proves to be exceptionally effective when estimating the coverage area of an NPP.
6. The primary population center(s) being served (for geopolitical boundary reference).
7. 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).
8. Latitude in either Degrees, Minutes, and Seconds and/or in Decimal Degrees (typically received as NAD 27 or NAD 83).
9. Longitude in either Degrees, Minutes and Seconds and/or in Decimal Degrees (typically received as NAD 27 or NAD 83).
10. Antenna pattern (e.g. omnidirectional, 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 manufacturer's specification sheet).
18. Power output of the transmitting device (if unknown, FCC standards or manufacturer specifications are 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 in rural areas to account for foliage and in metropolitan areas to account for types and heights of buildings if known).
23. Average gain of receive antenna.
24. Receive antenna is estimated at height above average terrain (HAAT) of 6.2 meters/20 feet.
25. Federal Registration Numbers (if applicable) which may allow opportunities to cross-reference and/or obtain additional data from the FCC's ULS and the **COMmission REGistration System**.

Propagation modeling combines scientific data and empirical mathematical formulation for the characterization of radio wave propagation as a function of frequency, distance, and other

conditions. Propagation software(s) typically use 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 model, 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).

After converting propagation models into a geospatial format, additional processing is completed to remove the small pixels representing service present in the resulting dataset. These areas are initially created based on the parameters entered in the software from the provider equipment information, the underlying data parameters of elevation, hill shade, etc., and the limitations of the software itself to display a broadband service area as accurately as possible. Generally, these random pixel striations appear as a result of signal levels reaching the highest elevated points within the prescribed radius. Typically, while this pixilation anomaly shows legitimate areas where signals can be received, these highly elevated points may have exceedingly sparse populations or are entirely void of population. As a result, and congruent to the *Wireless Technology Methodologies and Business Logic* white paper submitted to NTIA on January 20, 2011, all independent pixels representing service that are less than 0.125 square miles in area have been removed from the geospatial representation of each wireless provider.

## **BROADBAND INQUIRIES METHODOLOGY**

CN collects consumer feedback in the form of broadband inquiries (BBIs). These inquiries represent any type of communication received from the public regarding broadband service. Once BBIs are received across the state, this information is overlaid with the broadband availability information which was collected through the SBI program. This allows for a real-world comparison of the broadband landscape to the information received from broadband inquiries. Consumers submitting these inbound comments and/or inquiries are able to provide information regarding five categories: 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; 4) residents who have broadband but want a faster connection speed; and 5) residents who have broadband but want a less expensive service option.

BBIs are submitted frequently by consumers via the Connected Tennessee website. Inquiries often seek help to identify local broadband provider options, or to learn when a specific provider may be able to provide service to that consumer. Consumer comments also provide information which may help modify maps with actual service area information. The primary objectives of CN regarding these inquiries are 1) to improve the accuracy of the state maps with submitted consumer information and follow-up field research; 2) to provide broadband options to consumers through cooperation with mapped providers and by facilitating new broadband service options; and 3) to

map and analyze information from consumers about areas of unmet broadband demand and alternatives to currently mapped services. A prime example of the second option is the utilization of the Rural Utility Service satellite eligibility tool. By simply entering the consumer's address, the CN engineer can quickly determine if the consumer meets the initial qualification status for BIP satellite subsidies.

New BBIs are assigned to either the GIS department or the Engineering & Technical Services (ETS) team depending on the category entered by the consumer on the website submission form. The GIS or ETS team members respond to each inquiry according to the information entered by the consumer. Many BBIs can be resolved through desktop research; however, if a BBI requires research in the field, the assigned ETS team member conducts such research when performing field validations in the area of the inquiry, or at another such time as is practical and appropriate. GIS and ETS team members respond to and conclude BBIs via telephone contact and/or e-mail communication.

The broadband inquiry process has been implemented in each of the CN state programs with successful results. Altogether CN has received over 18,996 broadband inquiries since 2007, allowing the state programs to evaluate each inquiry for broadband demand and data verification. These inquiries are continuously examined against current broadband availability, updated every six months, to determine if previously unserved households have been expanded to and can now receive broadband at their residence. This database of broadband inquiries has also allowed the CN state programs 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 states 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 the state programs have 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 these states has been altered to create a more accurate map based on the inquiries submitted by the public.

During this reporting period, the Connected Tennessee project has received a total of 71 inquiries (1,640 grant inception to date). As more inquiries are submitted to Connected Tennessee, 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.

## **MY CONNECTVIEW METHODOLOGY**

My ConnectView is an interactive online mapping tool for viewing, analyzing, and validating broadband data. Developed using Esri's ArcGIS for Server and Adobe's Flex Framework and hosted and maintained by Connected Nation, My ConnectView 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, My ConnectView 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 several coverage analysis layers, speed analyses, Community Anchor Institutions, and tools to search and export household demographic information, as well as extract data in GIS, spreadsheet, and/or PDF formats.

My ConnectView also features more interactive data layers and additional tools than ever before to allow the consumer to explore the broadband data. My ConnectView provides consumers with the ability to print, e-mail, and provide feedback on the broadband data displayed on the interactive map. Through the collection of this feedback, a visual demand for broadband is presented. This visualization allows the CN state programs the ability to validate the broadband availability for accuracy. If residents within a region state they are without broadband, but the interactive map shows otherwise, this allows CN 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.

The Connected Tennessee project launched My ConnectView on April 2, 2012, and has received 972 visits this reporting period; to date the interactive mapping application has received 10,743 visits.

## **SPEED TEST METHODOLOGY**

The 3,394 speed tests that are represented in the Connected Tennessee Speed Test Report during this reporting period (19,947 grant inception to date) are the result of a partnership between CN 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 Connected Tennessee speed test website, for partners around the world. This network of sites that is developed and run on its 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 Connected Tennessee 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. The benefit of this collection of speed information is two-tiered. First, it allows for a comprehensive dataset of speeds, while also providing Connected Tennessee with the information on where broadband services are available. Second, unlike theoretical speed information which may be 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 Tennessee.

## PROVIDERS DEEMED NON-VIABLE

The following list of companies represents the remainder of the broadband provider universe that was originally identified as complete for outreach to begin for the State Broadband Initiative. These providers are not included in the Data Package for the October 2013 submission because they have been deemed non-eligible under the parameters and guidance of the SBI grant program. This list of companies includes, but is not limited to: providers offering service but below the current definition of broadband, those that have gone out of business, technology consulting firms, infrastructure or network construction companies, non-facilities based general resellers that have not provided sufficient mapping information, etc.

	Company Name	URL	Comments
1	21Globe, Inc.	<a href="http://www.21globe.com">www.21globe.com</a>	Does not offer broadband services; not a broadband provider. Website works but not updated since December 2012.
2	A 007 Access	<a href="http://www.a007.com">www.a007.com</a>	General reseller of Quest DSL and mobile wireless; DSL does not qualify as the max advertised speed is 768 kbps x 128 kbps.
3	Aaccess Network Communications	<a href="http://www.aaccess.net">www.aaccess.net</a>	URL no longer in service, not a broadband provider.
4	ACERX.NET	<a href="http://www.acerx.net">www.acerx.net</a>	Nonfacilities-based reseller of national and regional broadband companies with cable, DSL, and mobile wireless applications.
5	Adelphia	n/a	No longer in business; assets liquidated.
6	Aeneas Communications, LLC	<a href="http://www.aeneas.com">www.aeneas.com</a>	Facilities-based CLEC that resells dial-up, DSL, and VoIP to consumers and business accounts.
7	Airespring, Inc.	<a href="http://www.airespring.com">www.airespring.com</a>	General reseller of VOIP, long distance and data circuits (non residential).
8	Airewaves Broadband, LLC	<a href="http://www.airewaves.com">www.airewaves.com</a>	Airewaves website is an audio-based web service and domain is listed as for sale.

9	Airmail247.com	<a href="http://www.airmail247.com">www.airmail247.com</a>	Business mailing list search site; not a broadband provider.
10	Antioch Wireless Broadband	<a href="http://www.antiochwirelessbroadband.com">www.antiochwirelessbroadband.com</a>	Resells DSL and cellular service in Antioch, IL only.
11	Arrowheadnet.com	<a href="http://www.arrowheadnet.com">www.arrowheadnet.com</a>	Domain registration and web hosting company.
12	Atris	<a href="http://www.atris.biz">www.atris.biz</a>	Offers VoIP, data, and softphone services to business accounts.
13	bargainisp.net	<a href="http://www.bargainisp.net">www.bargainisp.net</a>	Generic web directory site, forum for third-party broadband advertising; company does not offer broadband.
14	BeaDun Communications	<a href="http://www.beasleywireless.net">www.beasleywireless.net</a>	Subsidiary of Beasley Wireless; services offered to business accounts fall below NTIA's definition of "broadband."
15	Broadband National	<a href="http://www.broadbandnational.com">www.broadbandnational.com</a>	Nonfacilities-based reseller of national and regional broadband companies offering residential/business cable and DSL services.
16	Broadcore, Inc.	<a href="http://www.broadcore.com">www.broadcore.com</a>	Provides business solutions such as VOIP and network integration services.
17	Broadview Networks Holdings, Inc.	<a href="http://www.broadviewnet.com">www.broadviewnet.com</a>	Wholesale reseller of partners' communication products and services; company is nonfacilities-based.
18	Broadwing Communications	<a href="http://www.level3.com">www.level3.com</a>	Acquired by Level 3.
19	Business Telecom, Inc. (DeltaComm)	<a href="http://www.earthlinkbusiness.com">www.earthlinkbusiness.com</a>	B2B services only. Reseller.
20	Camino-Net Internet Services	<a href="http://www.camino-net.com">www.camino-net.com</a>	Website is redirected to <a href="http://www.mytechproservices.com/">http://www.mytechproservices.com/</a> offering ancillary (not broadband) services.
21	CCIS.net	<a href="http://www.ccis.net">www.ccis.net</a>	Now owned by Beacon Technologies; offers dial-up and is general reseller of DSL in Pennsylvania.
22	Cebridge Connections	<a href="http://suddenlink.net">suddenlink.net</a>	Acquired by SuddenLink.



23	Celito Communications	<a href="http://www.celito.net">www.celito.net</a>	Offers dial-up and wireless in North Carolina.
24	Cinergy Communications Company	n/a	Acquired by Windstream.
25	Cleartouch.Com	<a href="http://www.cleartouch.com">www.cleartouch.com</a>	Inactive URL; out of business.
26	Cognisurf	<a href="http://www.cognisurf.com">www.cognisurf.com</a>	Offers dial-up only.
27	Deltaforce	<a href="http://www.deltaforce.net">www.deltaforce.net</a>	Dial-up and webhosting services only.
28	deluxehost.com	<a href="http://deluxe-host.com">deluxe-host.com</a>	Company delivers web hosting services.
29	DGUI	<a href="http://www.dgui.com">www.dgui.com</a>	No longer in business; domain name for sale.
30	Dial National	<a href="http://www.dialnational.com">www.dialnational.com</a>	Inactive URL; out of business.
31	Dialer.net	<a href="http://www.dialer.net">www.dialer.net</a>	England-based, international pay-as-you-go mobile wireless and hot spot reseller.
32	DIECA Communications, Inc.	n/a	Acquired by Covad; then acquired by MegaPath.
33	Dixie-Net, Incorporated	<a href="http://www.dixie-net.com/wireless">www.dixie-net.com/wireless</a>	Offers fixed wireless and DSL in Mississippi only.
34	Dresden Cable	n/a	Provider does not offer broadband; limited to CATV and satellite services only.
35	DSL @ Interlync	<a href="http://www.interlync.com">www.interlync.com</a>	General reseller of DSL, wireless, VoIP, dial-up, web hosting etc.
36	Eagle One Wireless	<a href="http://www.e1w.com">www.e1w.com</a>	Offers direct connect wireless internet services to businesses in northeast Mississippi, south central Tennessee, and northwest Alabama.
37	Endless Sphere Technology	<a href="http://www.endless-sphere.com">www.endless-sphere.com</a>	Electric Vehicle Technology Forums.

38	EnterSource	<a href="http://www.entersource.co">http://www.entersource.co</a>	General Reseller of HughesNet, Athena Broadband, Charter, AT&T and DishNetwork.
39	Enventis Telecom Inc.	<a href="http://www.enventis.com">www.enventis.com</a>	Doing business as Hickory Tech; general reseller in Iowa and Minnesota area; local agent claimed they do not offer broadband services.
40	ETI - Connecting Your World	<a href="http://www.cyberenet.net">www.cyberenet.net</a>	General reseller of DSL services from infrastructure owned by Verizon, AT&T, and Covad.
41	Fast Dependable Access	<a href="http://www.fda.net">www.fda.net</a>	Not a broadband provider.
42	Gainesboro CATV	n/a	Does not offer broadband, CATV only.
43	Global Crossing Telecommunications, Inc.	<a href="http://www.globalcrossing.com">http://www.globalcrossing.com</a>	Acquired by another company.
44	Haywood Cablevision	<a href="http://www.cbvnol.com">www.cbvnol.com</a>	Out-of-state provider; offers service in the Carolina Mountain area.
45	Highertech.Net	<a href="http://www.highertech.net">www.highertech.net</a>	Appears to have been acquired by Chattanooga Net.
46	Hubwest Protected Networks LLC	<a href="http://www.hubwest.com">www.hubwest.com</a>	Dial-up and web hosting only recently merged with Southwest Cyberport.
47	iGiles.net (d.b.a. DotSpot Wireless)	<a href="http://www.dotspot.net">http://www.dotspot.net</a>	Acquired by Monster Broadband.
48	IMGISP.NET	<a href="http://www.imgisp.net">www.imgisp.net</a>	Search engine, generic web solutions and ad forum.
49	Incredible Networks	n/a	Incredible Networks is an independent network engineering services business based in Adelaide Australia.
50	Inercom Communications Inc.	<a href="http://www.inercom.com">www.inercom.com</a>	Inactive URL; out of business, url for sale.
51	Interactiveinfo.com Inc.	<a href="http://www.rocketbroadband.com">www.rocketbroadband.com</a>	Offers cable television services in NY only.



52	iRadical	n/a	Could not locate any information on company.
53	ISPartner.net	n/a	Could not locate any information on company.
54	Jenco Speed Web	<a href="http://www.jencospeed.net">www.jencospeed.net</a>	Offers wireless service in Ohio only.
55	Knology of Tennessee, Inc.	<a href="http://www.knology.com">http://www.knology.com</a>	Acquired by Wide Open West Finance, LLC (WOW).
56	LARIAT.NET	<a href="http://www.lariat.net">www.lariat.net</a>	Offers fixed wireless services in Wyoming only.
57	LCSisp.com	<a href="http://www.lcsisp.com">www.lcsisp.com</a>	Website no longer in service.
58	Lightyear Network Solutions, LLC	<a href="http://www.lightyear.net">www.lightyear.net</a>	Nonfacilities-based general reseller of backhaul and mobile wireless services.
59	LinkAmerica.Net	<a href="http://www.linkamerica.net">www.linkamerica.net</a>	Inactive URL; out of business.
60	MacWebTown.Net Works	<a href="http://www.macwebtown.net">www.macwebtown.net</a>	McIntosh web services and technical assistance.
61	MainBoard	<a href="http://www.mainboard.cc">www.mainboard.cc</a>	Website no longer in service.
62	Maine Cable and Wireless	<a href="http://www.maineableandwireless.com">www.maineableandwireless.com</a>	Could not locate any information on company. Redirects to a "coming soon" website for Maine Culinary Workshop.
63	Marcin Company	n/a	No longer in business; phone and website are both inactive.
64	Metropolitan Telecommunication s Holding Company	<a href="http://www.mettel.net">www.mettel.net</a>	MetTel provides facilities-based and resold services (certified CLEC in some states). The company provides a variety of voice, including wireless, and data services to commercial customers.
65	Millenicom Inc.	<a href="http://www.millenicom.com">www.millenicom.com</a>	Reseller of 3G and 4G mobile wireless services.
66	MYWEBSTAR	<a href="http://www.mywebstar.com">www.mywebstar.com</a>	Inactive URL.

67	Nanomega.Com	<a href="http://www.nanomega.com">www.nanomega.com</a>	Website is listed on Go-Daddy as for sale.
68	NetAccess, Inc.	<a href="http://www.nas.net">www.nas.net</a>	Canadian based ISP; does not offer service in U.S.
69	NetFire	n/a	No longer in business.
70	NetSpeed Online	<a href="http://www.netspeed-online.net">www.netspeed-online.net</a>	Website no longer in service.
71	NetStar Communications	n/a	Offers virtual ISP services and web hosting.
72	New Edge Network, Inc.	<a href="http://www.newedgenetworks.com">www.newedgenetworks.com</a>	Company has no residential service and re-sells backhaul; acquired by Earthlink.
73	NewWave Communications	<a href="http://www.newwaveco.com/">http://www.newwaveco.com/</a>	Acquired by another company.
74	Northwest ISP	<a href="http://www.northwestisp.com">www.northwestisp.com</a>	Inactive URL; out of business.
75	NTCH, Inc.	<a href="http://www.cleartalkwireless.net">www.cleartalkwireless.net</a>	Acquired by Cleartalk Wireless.
76	NuVox, Inc.	<a href="http://www.windstream.com">www.windstream.com</a>	Acquired by Windstream.
77	OnWav, Inc.	<a href="http://www.onwav.com/">www.onwav.com/</a>	Acquired by Twin Lakes Telephone Cooperative.
78	OrbWireless.net	<a href="http://www.orbwireless.net">http://www.orbwireless.net</a>	Acquired by Tennessee Wireless.
79	Overarch Broadband	n/a	Offers services in Idaho only.
80	Pacific Internet Exchange	<a href="http://www.pie.us">www.pie.us</a>	Website is for sale.
81	PAETEC Communications, Inc.	<a href="http://www.paetec.com/">http://www.paetec.com/</a>	Acquired by another company.
82	Paknet Limited	<a href="http://www.ptcl.com.pk">www.ptcl.com.pk</a>	Subsidiary of Pakistan Telephone Company; no services offered in the U.S.
83	Planet Online	<a href="http://www.planetonline.net">www.planetonline.net</a>	Offers website hosting services.

84	Point2Point	<a href="http://www.p2p-innovations.com">www.p2p-innovations.com</a>	Out of business.
85	PremoWeb	<a href="http://www.premoweb.com">www.premoweb.com</a>	Website no longer in service.
86	Qwest Communications Company, LLC	<a href="http://www.centurylink.com">www.centurylink.com</a>	Provider acquired by CenturyLink.
87	Rapid Communications, LLC	n/a	Acquired by Mediacom; subsequently acquired by Comcast.
88	Renaissance Networks	<a href="http://www.renaissancenetworks.com">www.renaissancenetworks.com</a>	Offers IT support to small businesses in New Mexico.
89	Rural Tennessee Wireless Broadband (RTWB)	<a href="http://www.rtwb.net/">http://www.rtwb.net/</a>	No longer in business.
90	Scott County Telephone Cooperative	<a href="http://www.sctc.org">www.sctc.org</a>	CLEC offering business class services only.
91	Shentel Converged Services, Inc.	<a href="http://www.shentel.com">www.shentel.com</a>	Shentel Converged Services is classified as a Private Cable Operator and offers service to MDU housing facilities.
92	SI Wireless	<a href="http://www.siwirelessco.com">www.siwirelessco.com</a>	Resells Sprint 3G services.
93	Simply Dialup A Metrogeek Company	<a href="http://www.simplydialup.com">www.simplydialup.com</a>	Dial-up services and general reseller of DSL, satellite and cable modem.
94	Sling Broadband	<a href="http://www.slingbroadband.com">www.slingbroadband.com</a>	Out-of-state provider; offers DSL and wireless services to business accounts in Florida.
95	Smartresort Co, LLC	<a href="http://www.baldwincountyinternet.com">www.baldwincountyinternet.com</a>	General reseller of local ISP services.
96	Solavei, LLC (Solavei)	<a href="http://www.solavei.com/">http://www.solavei.com/</a>	Reseller of mobile services on T-Mobile network.
97	Solutions IT Consulting, LLC	<a href="http://www.solutionsitc.com">www.solutionsitc.com</a>	Technology consulting firm.
98	Sparkplug Chicago, Inc.	<a href="http://www.airband.com">www.airband.com</a>	Offers point-to-point wireless and business solutions in Illinois.

99	Spring City Cable	n/a	Out-of-state provider; offers services in Utah only.
100	Surferz.Net	<a href="http://www.surferz.net">www.surferz.net</a>	Website manager and developer.
101	T1 Shopper	<a href="http://www.t1shopper.com">www.t1shopper.com</a>	Search engine for general reseller.
102	Talk America Inc.	<a href="http://www.cavtel.com">www.cavtel.com</a>	Acquired by Cavalier Business Communications.
103	Telovations, Inc.	<a href="http://www.telovations.com">www.telovations.com</a>	IT and IP solutions consultant.
104	The Nexus Group, Inc.	<a href="http://www.nxs.net">www.nxs.net</a>	General reseller of AT&T DSL.
105	Total Access Networks, Inc.	<a href="http://www.totalaccess.net">www.totalaccess.net</a>	Website no longer in service.
106	TSISP.NET	<a href="http://www.tsisp.net">www.tsisp.net</a>	Website no longer in service.
107	Two Rivers Media	n/a	Inactive URL; acquired by MediaCom.
108	University Corporation for Advanced Internet Development	<a href="http://www2.ntia.doc.gov/grantee/university-corporation-for-advanced-internet-development">www2.ntia.doc.gov/grantee/university-corporation-for-advanced-internet-development</a>	Currently ineligible under the parameters and guidance of the SBI grant program.
109	UNUM Telecommunications, Inc.	<a href="http://www.utinet.net">www.utinet.net</a>	Inactive URL; out of business.
110	VOLstate, Inc.	<a href="http://www.volstate.net">www.volstate.net</a>	Offers Internet solutions and technical support to business accounts.
111	Waypoint Wireless	n/a	Consulting firm.
112	WilTel Communications, LLC.	<a href="http://www.level3.com">www.level3.com</a>	Acquired by Level 3.
113	Wireless Roanoke, Inc.	<a href="http://www.wirelessroanoke.com">www.wirelessroanoke.com</a>	Inactive URL; out of business.
114	wisbin	<a href="http://www.wisbin.com">www.wisbin.com</a>	Reseller of DSL Internet service in Wisconsin.

115	WorldCom Broadband	n/a	Acquired by Verizon.
116	Worldspice.net	<a href="http://www.worldspice.net">www.worldspice.net</a>	Offers web hosting and connectivity to business accounts.
117	www.AmericanAngel.us	<a href="http://www.americanangel.us">www.americanangel.us</a>	Website no longer in service.
118	Xpansion Network	n/a	No longer in business.
119	XTN	<a href="http://www.xtn.net">www.xtn.net</a>	URL redirects to Jones Media.
120	YEEZOO.NET	<a href="http://www.yeyzoo.net">www.yeyzoo.net</a>	Provider appears to no longer be in business.
121	YLISP (Your Local ISP)	<a href="http://www.itsyournet.com">www.itsyournet.com</a>	Redirects to <a href="https://www.securepaynet.net">https://www.securepaynet.net</a> - website indicates for sale.
122	YourT1Wifi.com	<a href="http://yourt1wifi.com">yourt1wifi.com</a>	Offers wireless service in Idaho only.
123	ZOOM Internet Services, LLC	n/a	Michigan-based dial-up provider and web hosting company.
124	Birch Communications	<a href="http://www.birch.com">www.birch.com</a>	Serves small/medium B2B in 40 states, facilities-based wholesale telecommunications provider to Competitive Local Exchange Carriers (CLECs), Internet Service Providers (ISPs), VoIP Providers, and Resellers.
125	Crystal Clear Technologies	<a href="http://www.crystalcleartechologies.net/index.html">http://www.crystalcleartechologies.net/index.html</a>	Reseller of VOIP, FTTH, Neighborhood Hotspots and commercial fiber in one residential housing development.
126	DataWave Wireless Solutions	<a href="http://www.dwstn.com">http://www.dwstn.com</a>	No longer in business; domain name for sale.

## **APPENDIX A: BROADBAND PROVIDER LOG**

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## Broadband Provider Log

Complete	110
Non-Responsive/Refused	2
In Progress	2
Reseller Providing Data	0
Count of Datasets by Status	114
Total Unique Providers Represented	87

Provider Name	Platform	Status	NDA Execution Date	Notes
Ardmore Telephone Company Inc	DSL	Data Added to Statewide Inventory	2/16/2010	[AUG-19-13 Frank Aryee] Correction: The different service area speed levels were revised and realigned.
AT&T Inc.	DSL	Data Added to Statewide Inventory	12/16/2009	[SEP-05-13 Frank Aryee] Changes and/or Corrections: Possible service expansion or corrections to previous dataset; entirely new dataset provided for October 2013 submission.
AT&T Inc.	Mobile Wireless	Data Added to Statewide Inventory	12/16/2009	[SEP-05-13 Frank Aryee] Changes and/or Corrections: Possible service expansion or corrections to previous dataset; entirely new dataset provided for October 2013 submission.
Athena Broadband	Fixed Wireless	Data Added to Statewide Inventory		[SEP-05-12 Frank Aryee] Change: Provider activated three new towers.
Ben Lomand Rural Telephone Coop., Inc.	DSL	Data Added to Statewide Inventory	10/21/2009	[AUG-19-13 Frank Aryee] Change: Provider expanded DSL coverage in Coffee and Dekalb Counties.
Ben Lomand Rural Telephone Coop., Inc.	Fiber	Data Added to Statewide Inventory	10/21/2009	[AUG-22-13 Frank Aryee] Change: Provider expanded service to additional areas in Coffee, Warren, and White Counties.
CenturyLink	DSL	Data Added to Statewide Inventory	12/4/2009	[AUG-16-13 Frank Aryee] Changes and/or Corrections: Possible service expansion or corrections to previous dataset; entirely new dataset provided for October 2013 submission.
Clearwire Corporation	Mobile Wireless	Data Added to Statewide Inventory	3/3/2010	[SEP-06-13 Frank Aryee] Change: Provider added marginal coverage around the Mount Juliet area.
Comcast Cable Communications, LLC	Cable	Data Added to Statewide Inventory	12/7/2009	[AUG-28-13 Frank Aryee] Changes and/or Corrections: Possible service expansion or corrections to previous dataset; entirely new dataset provided for October 2013 submission. Provider also upgraded infrastructure and can now offer tier 10 download speeds in additional areas.
Electric Power Board for the City of Chattanooga	Fiber	Data Added to Statewide Inventory		[SEP-05-13 Frank Aryee] Changes/Corrections: Provider removed some coverage on the southeast edge of the map in Bradley County.
Frontier Communications Corporation	DSL	Data Added to Statewide Inventory	1/22/2010	[AUG-21-13 Frank Aryee] Change: Provider activated new DSLAMs.
JTM Broadband, LLC	Fixed Wireless	Data Added to Statewide Inventory		[AUG-27-13 Frank Aryee] Change: Provider activated two new towers. Also, the spectrum for an existing tower was changed.
Leap Wireless International, Inc.	Mobile Wireless	Data Added to Statewide Inventory	4/6/2010	[AUG-15-13 Frank Aryee] Changes and/or Corrections: Possible service expansion or corrections to previous dataset; entirely new dataset provided for October 2013 submission.
Monster Broadband, Inc.	Fixed Wireless	Data Added to Statewide Inventory	11/6/2009	[SEP-06-13 Frank Aryee] Change: Provider activated new tower.
Sprint Nextel Corporation	Mobile Wireless	Data Added to Statewide Inventory	1/14/2010	[AUG-15-13 Frank Aryee] Changes and/or Corrections: Possible service expansion or corrections to previous dataset; entirely new dataset provided for October 2013 submission.
T-Mobile USA, Inc.	Mobile Wireless	Data Added to Statewide Inventory	1/8/2010	[SEP-05-13 Frank Aryee] Changes and/or Corrections: Possible service expansion or corrections to previous dataset; entirely new dataset provided for October 2013 submission.
TDS Telecommunications Corporation	DSL	Data Added to Statewide Inventory	1/27/2010	[SEP-05-13 Frank Aryee] Changes and/or Corrections: Possible service expansion or corrections to previous dataset; entirely new dataset provided for October 2013 submission.

TDS Telecommunications Corporation	Fiber	Data Added to Statewide Inventory	1/27/2010	[SEP-05-13 Frank Aryee] Changes and/or Corrections: Possible service expansion or corrections to previous dataset; entirely new dataset provided for October 2013 submission. Provider also upgraded download speeds to tier 10.
TEC of Jackson, Inc	DSL	Data Added to Statewide Inventory	7/29/2010	[JUL-22-13 Frank Aryee] Change: Provider removed an existing terminal and replaced with a new one which is also fiber fed. Also, provider upgraded infrastructure and can now offer tier 7 download speeds in select areas.
TEC of Jackson, Inc	DSL	Data Added to Statewide Inventory	7/29/2010	[JUL-22-13 Frank Aryee] Change: Provider indicated that a terminal is now fiber fed. Also, provider upgraded infrastructure on multiple terminals and can now offer tier 5 and tier 7 download speeds in those areas.
TEC of Jackson, Inc	DSL	Data Added to Statewide Inventory	7/29/2010	[SEP-05-13 Frank Aryee] Change: Provider indicated that a terminal is now fiber fed. Also, provider upgraded infrastructure on multiple terminals and can now offer tier 5 and tier 7 download speeds in those areas.
Verizon Communications, Inc.	Mobile Wireless	Data Added to Statewide Inventory	12/14/2009	[JUL-26-13 Frank Aryee] Changes and/or Corrections: Possible service expansion or corrections to previous dataset; entirely new dataset provided for October 2013 submission.
West Kentucky and Tennessee Telecommunications	Fiber	Data Added to Statewide Inventory	2/8/2013	[JUL-11-13 Frank Aryee] Change: Provider added new coverage in Dyer, Gibson, and Obion Counties.
Wisper, LLC	Fixed Wireless	Data Added to Statewide Inventory	2/22/2011	[SEP-06-13 Frank Aryee] Change: Provider activated new towers.
Zito Midwest, LLC	Cable	Data Added to Statewide Inventory	2/17/2011	[AUG-16-13 Frank Aryee] Change: Provider expanded coverage in Henry County and established new service in Hancock County. Also, provider upgraded infrastructure and can now offer tier 7 download speeds.
Conterra Ultra Broadband, LLC	Backhaul	Backhaul Provider Only Processing Complete		
Level 3 Communications, LLC	Backhaul	Backhaul Provider Only Processing Complete	12/14/2009	
Sprint Nextel Corporation	Backhaul	Backhaul Provider Only Processing Complete	1/14/2010	
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	
Trinity Communications LLC	Cable	Estimated Coverage Submitted for Non-Participating Provider		[SEP-06-13 Frank Aryee] Correction: Provider has not participated to date; coverage submitted was estimated by CN.
Access Cable Television, Inc.	Cable	No Update to Provide		
Ardmore Telephone Company Inc	Backhaul	No Update to Provide	2/16/2010	
AT&T Inc.	Backhaul	No Update to Provide	12/16/2009	
Athena Broadband	Backhaul	No Update to Provide		
Bristol Tennessee Essential Services	Fiber	No Update to Provide	9/1/2010	
Cable ONE Inc.	Cable	No Update to Provide	12/7/2009	
Capshaw Enterprises, LLC	Fixed Wireless	No Update to Provide	10/20/2011	
Celina Cable Communications, Inc.	Cable	No Update to Provide	1/15/2010	
CenturyLink	Backhaul	No Update to Provide	12/4/2009	
Charter Communications, Inc.	Cable	No Update to Provide	12/15/2009	
Clarksville Department of Electricity	Fiber	No Update to Provide		
Columbia Power & Water Systems	Cable	No Update to Provide		
DeKalb Telephone Cooperative, Inc.	DSL	No Update to Provide	2/24/2010	
DeKalb Telephone Cooperative, Inc.	Fiber	No Update to Provide	2/24/2010	
ECSIS.NET	Fixed Wireless	No Update to Provide	10/29/2009	
ETC Communications, LLC	Cable	No Update to Provide	10/14/2009	
High Country Online LLC	Fixed Wireless	No Update to Provide	3/4/2010	
Highland Telephone Cooperative, Inc.	DSL	No Update to Provide	3/14/2010	
Hughes Network Systems, LLC	Satellite	No Update to Provide	2/5/2010	
Info-Ed Inc	Fixed Wireless	No Update to Provide	2/9/2010	
Jackson Energy Authority	Fiber	No Update to Provide	3/17/2010	
James Cable LLC	Cable	No Update to Provide	1/11/2010	
Ken-Tenn Wireless, L.L.C.	Fixed Wireless	No Update to Provide	1/25/2010	
Loretto Telephone Company, Inc.	DSL	No Update to Provide	3/16/2010	
Mediacom Southeast LLC	Cable	No Update to Provide	1/12/2010	
MegaPath Corporation	Backhaul	No Update to Provide	2/15/2010	
Morristown Utilities Commission	Fiber	No Update to Provide	3/25/2010	
North Central Communications	DSL	No Update to Provide	2/5/2010	
North Central Communications	Fiber	No Update to Provide	2/5/2010	
Skycasters	Satellite	No Update to Provide	10/16/2012	
Skyline Telephone Membership Corporation	Backhaul	No Update to Provide	2/2/2010	
Skyline Telephone Membership Corporation	Fiber	No Update to Provide	2/2/2010	
Spacenet, Inc.	Satellite	No Update to Provide		
TEC of Jackson, Inc	Backhaul	No Update to Provide	7/29/2010	
TEC of Jackson, Inc	Backhaul	No Update to Provide	7/29/2010	
TEC of Jackson, Inc	Backhaul	No Update to Provide	7/29/2010	
TEC of Jackson, Inc	Fiber	No Update to Provide	7/29/2010	
TEC of Jackson, Inc	Fiber	No Update to Provide	7/29/2010	
TELE-PAGE Inc.	Fixed Wireless	No Update to Provide	1/26/2010	
Time Warner Cable Inc.	Cable	No Update to Provide	12/21/2009	
Tulahoma Utilities Board	Fiber	No Update to Provide		
tw telecom of tennessee, llc	Backhaul	No Update to Provide	3/31/2010	
Ultrahet High-Speed Internet	Fixed Wireless	No Update to Provide	2/23/2010	
United States Cellular Corporation	Mobile Wireless	No Update to Provide	2/15/2011	



United Telephone Company, Inc.	DSL	No Update to Provide	2/25/2010	
United Telephone Company, Inc.	Fiber	No Update to Provide	2/25/2010	
ViaSat, Inc.	Satellite	No Update to Provide	1/8/2010	
West Kentucky and Tennessee Telecommunications	DSL	No Update to Provide	2/8/2013	
XO Communications, LLC	Backhaul	No Update to Provide	2/12/2010	
Zayo Group, LLC	Backhaul	No Update to Provide		
Aurora Cable TV	Cable	No Update Provided – Use Last Submission Data	3/12/2010	
Beasley Wireless	Fixed Wireless	No Update Provided – Use Last Submission Data	1/19/2010	
Bledsoe Telephone Cooperative Inc	DSL	No Update Provided – Use Last Submission Data	1/20/2010	
BreezeAir.net	Fixed Wireless	No Update Provided – Use Last Submission Data	8/17/2010	
Cellular South Licenses, LLC	Mobile Wireless	No Update Provided – Use Last Submission Data	4/12/2010	
CRU Enterprises, Inc.	Fixed Wireless	No Update Provided – Use Last Submission Data	2/4/2010	
DeltaCom, Inc.	Backhaul	No Update Provided – Use Last Submission Data	2/16/2010	
Fayetteville Public Utilities	Cable	No Update Provided – Use Last Submission Data		
InfoStructure Inc.	Cable	No Update Provided – Use Last Submission Data	10/2/2009	
Iris Networks	Backhaul	No Update Provided – Use Last Submission Data	1/5/2010	
Millington CATV, Inc.	Cable	No Update Provided – Use Last Submission Data	10/19/2009	
Millington CATV, Inc.	DSL	No Update Provided – Use Last Submission Data	10/19/2009	
NetEase	Fixed Wireless	No Update Provided – Use Last Submission Data	2/3/2010	
Pickwick Cablevision, Inc.	Cable	No Update Provided – Use Last Submission Data		
Planet Connect Internet	Fixed Wireless	No Update Provided – Use Last Submission Data		
Pulaski Electric System	Fiber	No Update Provided – Use Last Submission Data	12/30/2009	
QuickRelay Wireless Communications	Fixed Wireless	No Update Provided – Use Last Submission Data		
Softek, Inc.	Fixed Wireless	No Update Provided – Use Last Submission Data	1/14/2010	
Spirit Broadband	Cable	No Update Provided – Use Last Submission Data	3/29/2010	
Surfmore.Net, Inc.	Fixed Wireless	No Update Provided – Use Last Submission Data	1/25/2010	
Tennessee Wireless, LLC	Fixed Wireless	No Update Provided – Use Last Submission Data		
TNWEB, LLC	Fixed Wireless	No Update Provided – Use Last Submission Data		[SEP-12-13 Frank Aryee] Provider now declines to participate in mapping program, so previous dataset is being submitted.
Trenton TV Cable Company	Cable	No Update Provided – Use Last Submission Data		
Twin Lakes Telephone Cooperative Corporation	DSL	No Update Provided – Use Last Submission Data	1/14/2010	
Twin Lakes Telephone Cooperative Corporation	Fixed Wireless	No Update Provided – Use Last Submission Data	1/14/2010	
Twin Lakes Telephone Cooperative Corporation	Fiber	No Update Provided – Use Last Submission Data	1/14/2010	
Wave2Wave Communications Inc.	Backhaul	No Update Provided – Use Last Submission Data	4/28/2010	
WideOpenWest Finance, LLC	Cable	No Update Provided – Use Last Submission Data		
Windstream Communications	Backhaul	No Update Provided – Use Last Submission Data		
Aurora Cable TV	Fixed Wireless	Solicited Initial Data	3/12/2010	
Windstream Communications	Backhaul	Solicited Initial Data		
America Internet & Communications	Fixed Wireless	Non-Responsive to Multiple Attempts	2/15/2010	In addition to multiple contact attempts made during the previous mapping submission period, 6 contact attempts were made this period.
Sunset Digital Communications, INC	Backhaul	Non-Responsive to Multiple Attempts		5 contact attempts were made this submission period.

## **APPENDIX B: NON-PARTICIPATING PROVIDER TRINITY CABLE, LLC**

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## TRINITY CABLE, LLC

As part of its ongoing broadband mapping efforts, Connected Nation (CN) has developed a series of processes with the goal of submitting mapping data to NTIA for every known and qualifying broadband provider, regardless of whether the provider has chosen to support and participate in the SBDD mapping initiative.

The following narrative provides detail regarding the recent data collection activities related to Trinity Cable, LLC (d/b/a: Trinity Communications), a Cable Internet service provider located in South Pittsburg, Tennessee. The narrative will include information regarding how and where CN obtained publicly available data, and the on-the-ground validation techniques that support the underlying data.

### **Background**

CN staff members have attempted to obtain the participation of the provider with at least thirty-five (35) recorded instances of outreach communication via telephone and e-mail from March 12, 2010, through August 14, 2013.

During the site visit to South Pittsburg, Tennessee, in May 2013, Connected Nation staff members visited the Trinity Cable, LLC office and spoke to an administrative representative. They were informed that the provider was unavailable for the remainder of the afternoon. Trinity Cable, LLC remains non-responsive to all requests for confirmation of CN's outreach and field validation efforts.

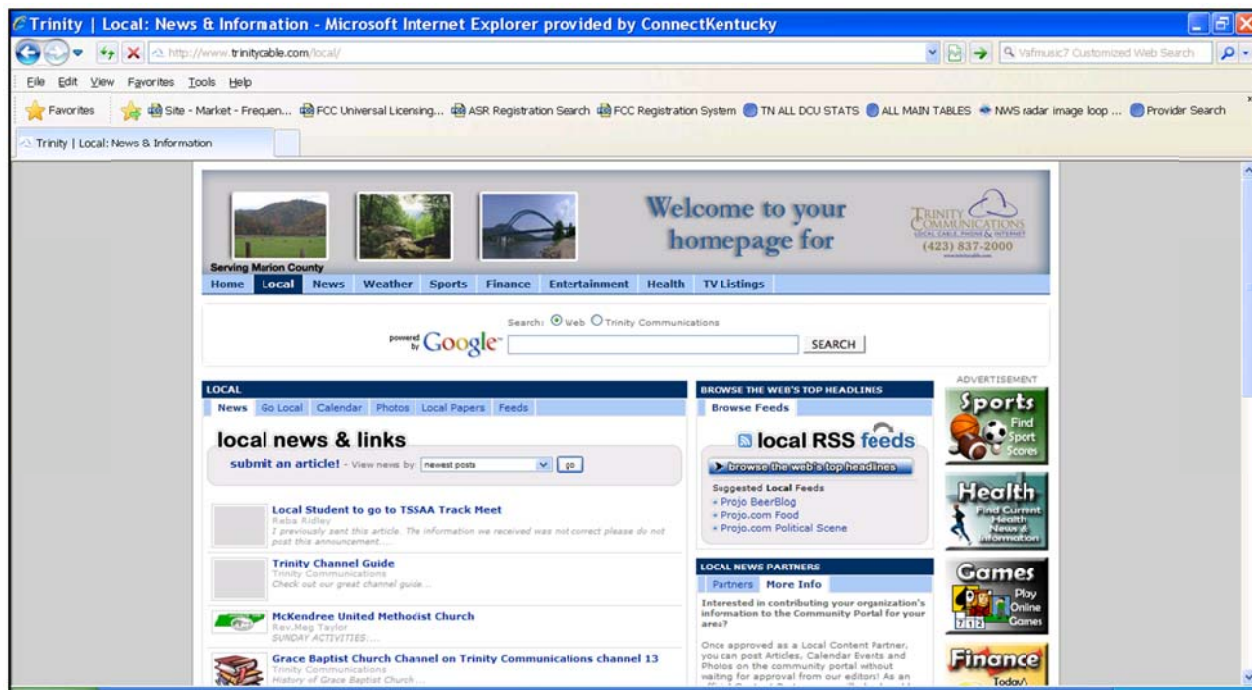
### **The Issue**

Connected Nation has been unable to obtain this provider's broadband coverage information through typical outreach efforts. Trinity Cable, LLC has, since March 12, 2010, indicated they do not have time for this project and has not participated in the Connected Tennessee broadband mapping initiative.

### **Identification of Provider's Service Plans, Service Area, Legal Name, d.b.a., FRN, and Licensing**

CN began building a file based on research information and, as time progressed, enriched the file with information obtained through the public domain. As a first step, CN reviewed the provider's website (<http://www.trinitycable.com/>) (**Exhibit A**) to determine the residential service plans and information pertaining to cable service areas advertised for the provider's cable network. While as recently as August 29, 2013, the provider's website appears not to have been updated since 2008, the site is solely comprised of local content feeds and blogs from other sources. Information regarding Trinity Cable, LLC's subscriber offerings is extremely difficult to obtain due to a lack of provided brochures during Connected Nation's site visit. Additionally, while the provider's Facebook page appears to be up-to-date, there is information accounting for speed and pricing of Triple Play plan located on the social networking page.

## Exhibit A: Provider Website



A search for a Federal Registration Number (FRN) on the FCC **CO**mmission **RE**gistration **S**ystem (CORES) system using the business name resulted in the information in **Exhibit B**. Three FRNs are thought to be associated with Trinity Cable, LLC, while d/b/a according to Trinity Cable's website is "Trinity Communications." Trinity Cable's Facebook page (**Exhibit C**) references new ownership and details surrounding an upcoming contest to select the new provider's name while providing details about the provider's Triple Play package, which includes "expanded basic cable (88 channels), 10 Mb internet and unlimited local and long distance calling. (Approximate value: \$1,300.00/year)."

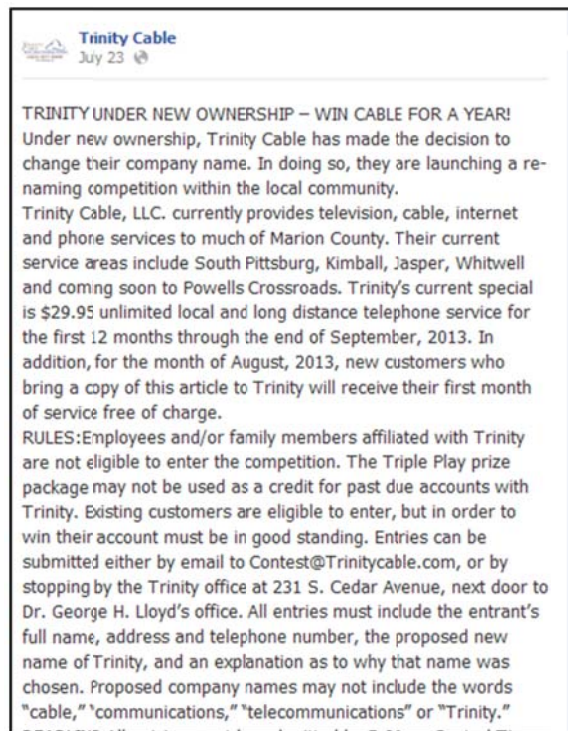
## Exhibit B: Federal Registration Numbers

Registration Detail	
FRN:	0021785399
Registration Date:	05/22/2012 11:19:00 AM
Last Updated:	08/20/2012 02:48:08 PM
Business Name:	TRINITY CABLE, LLC
Business Type:	Private Sector , Limited Liability Corporation
Contact Organization:	TRINITY CABLE, LLC
Contact Position:	GENERAL MANAGER
Contact Name:	Mr JAMES L HUNTER
Contact Address:	231 S CEDAR AVE SOUTH PITTSBURG, TN 37380 United States
Contact Email:	jhunter@trinitycable.com
ContactPhone:	(423) 837-2000
ContactFax:	(423) 558-0802

Registration Detail	
FRN:	0007414717
Registration Date:	07/17/2002 02:15:17 PM
Last Updated:	
Business Name:	Trinity Communications LLC
Business Type:	Private Sector , Limited Liability Corporation
Contact Organization:	Trinity Communications LLC
Contact Position:	ManagingMember
Contact Name:	Mr James Gee
Contact Address:	Orme Mountain Road South Pittsburgh, TN 37380 United States
Contact Email:	
ContactPhone:	(706) 398-2100
ContactFax:	(706) 657-8034

Registration Detail	
FRN:	0007414709
Registration Date:	07/17/2002 02:15:17 PM
Last Updated:	
Business Name:	Trinity Communications LLC
Business Type:	Private Sector , Limited Liability Corporation
Contact Organization:	Trinity Communications LLC
Contact Position:	ManagingMember
Contact Name:	Mr James Gee
Contact Address:	Orme Mountain Road South Pittsburgh, TN 37380 United States
Contact Email:	
ContactPhone:	(706) 398-2100
ContactFax:	(706) 657-8034

## Exhibit C: Provider Facebook Webpage and Name Contest





### **Identification of Provider's Coverage Area**

Connected Nation identified central/sales office locations via FCC resources and was able to obtain information from South Pittsburg, Tennessee City Hall to determine city boundary locations (**Exhibit D**). CN was advised by City officials that the cable provider offers service to all areas within the city municipal boundaries and provided CN employees with a map indicating as much. A route was then established to determine end points by driving the city limits for visual confirmation as well as local Wi-Fi signal verification.

#### **Exhibit D: South Pittsburg Anchor Institution Served by Provider**



South Pittsburg, TN City Hall



South Pittsburg City Hall Official Boundary Map  
Included Cable Coverage

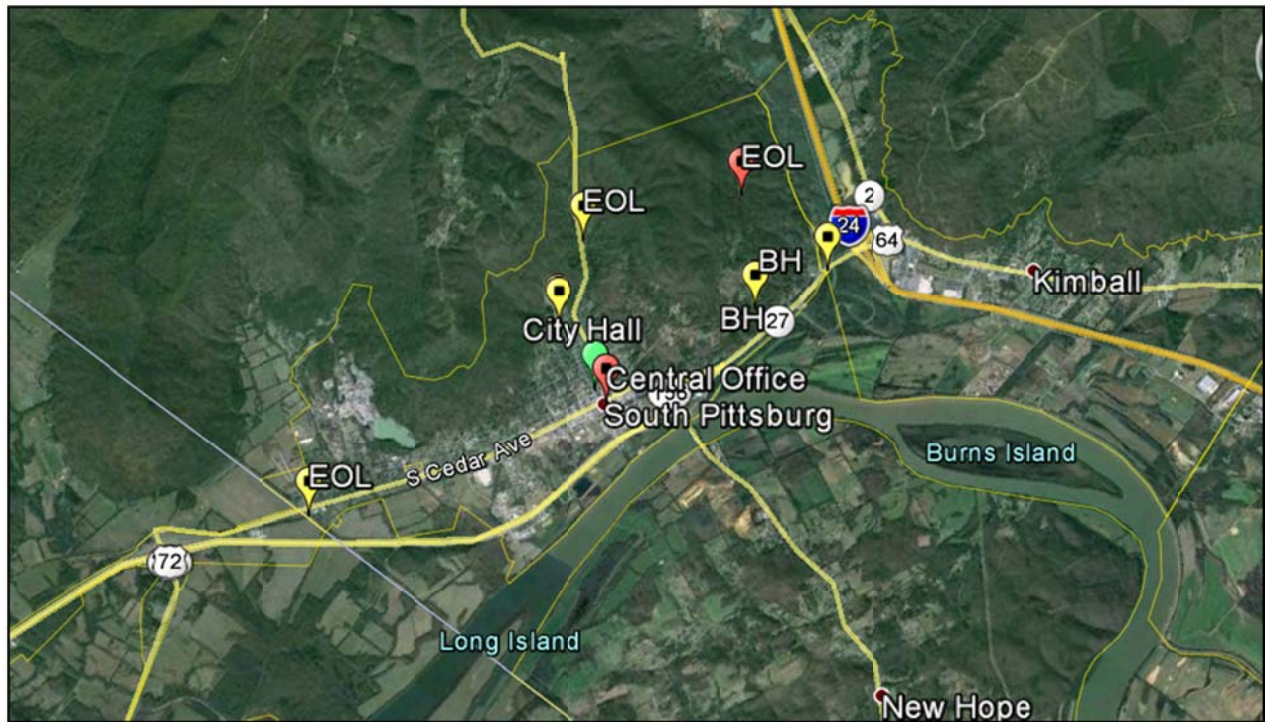
## Field Research and Testing Techniques

CN Staff used visual identification to pinpoint the end of line (EOL) and termination points. Municipal boundaries, where a second South Pittsburg, Tennessee cable registered CLEC maintains its equipment, were identified and registered into data submission spreadsheets as well as waypoints in Google Earth and ArcGIS, with corresponding latitude/longitude coordinates, photographs and Wi-Fi utility tests where, in this case, no open networks were identified to conduct speed testing. The identification of the community periphery was thoroughly examined and driven to establish possible visual end of line (termination points) of the cable network (**Exhibit E**).

During the visit to South Pittsburg, the CN technicians were able to stop by Trinity Cable, LLC offices to introduce themselves and provide a detailed account of the validation findings. The provider was unable to meet with CN staff; however, technicians were able to gather additional visual confirmation of provider's business status and office location (**Exhibit F, Exhibit G**).

**Exhibit E: Documentation of Visual Findings**

Provider		Test Site Info			Coordinates NAD 83 REQUIRED						Platform Type		Test Data		Visual Confirmation	
Provider	FRN Validation	Test City	Test State	Physical Address	Lat Deg	Lat Min	Lat Sec	(-)	Long Min	Long Sec	Type	Presence Confirmed	Type	Pass or Fail?	Type	Images
Trinity Cable, LLC	Yes	South Pittsburg TN		204 west 3rd street	35	0	47	-85	42	23.09	Cable	Yes	Visual	Pass	Wi-Fi/AF	Yes
Trinity Cable, LLC	Yes	South Pittsburg TN		231 South Cedar Avenue	35	0	45.44	-85	42	15.72	Cable	Yes	Visual	Pass	Central Office	Yes
Trinity Cable, LLC	Yes	South Pittsburg TN		2237 Tennessee Hwy 27	34	59	12.66	-85	43	33.31	Cable	Yes	Visual	Pass	Pole Mount	Yes
Trinity Cable, LLC	Yes	South Pittsburg TN		1197 Second Street	35	1	27.74	-85	43	5.14	Cable	Yes	Visual	Pass	Pole Mount	Yes
Trinity Cable, LLC	Yes	South Pittsburg TN		3rd street and Birch Avenue	35	0	58.56	-85	42	53.33	Cable	Yes	Visual	Pass	Pole Mount	Yes
Trinity Cable, LLC	Yes	South Pittsburg TN		972 3rd Street	35	0	57.78	-85	42	52.25	Cable	Yes	Visual	Pass	Pole Mount	Yes
Trinity Cable, LLC	Yes	South Pittsburg TN		Lee Hwy intersects 3rd Street	35	0	39.21	-85	42	5.15	Cable	Yes	Visual	Pass	Pole Mount	Yes

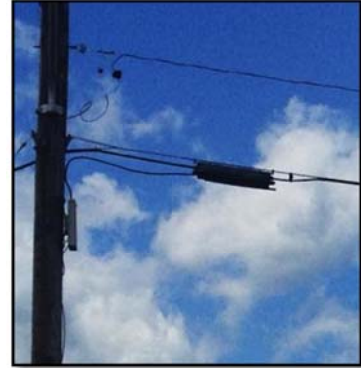




**Exhibit F: Provider Sales Office**



## Exhibit G: Cable Components and Asset Locations





End of Line



Dual Cable Equipment



### **Results and Submission for October 2013**

This desktop and field research was performed using publicly available data as shown. The cable analysis fairly represents the cable broadband coverage area for Trinity Cable, LLC, as developed by Connected Nation staff (**Exhibit H**). This coverage estimation has been forwarded to Trinity Cable, LLC at least 48 hours prior to its submission, and the provider was advised that the information will be submitted to Connected Tennessee and the NTIA broadband mapping project. Trinity Cable, LLC has not reported any discrepancies with CN's aforementioned coverage estimation as yet.



Exhibit H: Cable Boundary Map for the City of South Pittsburg, Tennessee

