

**OFFICIAL OCTOBER 2012 UPDATE SUBMISSION TO  
THE NATIONAL TELECOMMUNICATIONS AND INFORMATION  
ADMINISTRATION UNDER THE  
STATE BROADBAND INITIATIVE GRANT PROGRAM FOR THE  
STATE OF NEVADA**

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**October 1, 2012**

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## TABLE OF CONTENTS

Cover Letter .....	3
Data Acquisition: Nevada Community Anchor Institutions Methodology .....	8
SBI Data Submission Methodology .....	10
Datasets for In-Kind Match .....	11
Nevada Field Validation Methodology .....	12
Data Submission and Coverage Estimation of Non-Participating Provider .....	17
Accuracy and Verification: Provider Validation Methodology .....	18
Wireless Methodology .....	19
Broadband Inquiries Methodology .....	21
My ConnectView Methodology .....	22
Speed Test Methodology .....	23
Providers Deemed Non-Viable .....	23
Appendix A: Estimation of Non-Participating Provider .....	32
Appendix B: Broadband Provider Log .....	39

October 1, 2012

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:

As the State Broadband Designated Entity, in partnership with the Nevada Broadband Task Force, please accept this submission from Connected Nation on behalf of the state of Nevada's State Broadband Initiative (SBI) Grant Program, known as Connect Nevada.

The Connect Nevada program and its collective stakeholder community continue to be faithful and energized contributors to the National Telecommunications and Information Administration's (NTIA) SBI program. Now more than ever, the significance of complete and validated data as compiled through the Federal Communications Commission's (FCC) National Broadband Map is instrumental in forging the innovation economy of the 21<sup>st</sup> century. As the Commission relies upon this unique resource to distribute monies under the Connect America Fund, through the Universal Service Fund reform, the Connect Nevada program equally values this data in informing meaningful program interventions relating to broadband access, adoption, and use initiatives. Truly, this coordination embodies the spirit of the SBI and demonstrates the joint effort of the NTIA, FCC, state governments, industry, and non-profits like Connected Nation as it continues to serve as a key tool for the American public and policymakers. We are proud of the role that Connect Nevada has played in creating and maintaining such a powerful tool that has benefitted and surely will continue to benefit broadband providers, consumers, and businesses nationwide.

The artifacts that comprise this submission should be found to be compliant with the October 1, 2012, deadline for the semi-annual data update and in accordance with the terms of the July 1, 2009, Notice of Funds Availability (NOFA) and all subsequent clarifications pertaining to delivery of state-level mapping of broadband service availability. This packet includes:

***Inventory of Deliverables, Connect Nevada: October 1, 2012***

<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

Appendix A: 1(a)(ii)	BB_Service_RoadSegment	Census Blocks of No Greater Than Two Square Miles in Area
Appendix A: 1(b)	BB_Service_Wireless	Broadband Service Availability of Facilities-Based Providers by Road Segment in Census Blocks Larger in Area Than Two Square Miles
Appendix A: 3(b)	BB_ConnectionPoint_MiddleMile	Broadband Service Availability of Wireless Services Not Provided to a Specific Address
Appendix A: 4	BB_Service_CAInstitutions	Broadband Service Infrastructure Middle-Mile and Backbone Interconnection Points
Appendix A: 4	n/a	Community Anchor Institutions-Listing
VII.A.1(a)	n/a	Community Anchor Institutions-Narratives
n/a	DataPackage.xlsx	Accuracy and Verification Report
n/a	n/a	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 2012 SBI data submission for the Connect Nevada program. Specifically, these new requirements are:

#### **SBI Data Transfer Model**

The submission of the broadband dataset for October 1, 2012, is contained within the SBI Data Transfer Model as released on the Grantee Workspace on August 9, 2012. 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**

New to the semi-annual submission for October 2012 is a more robust version of the ReadMe text file. As per the template released on the Grantee Workspace on May 18, 2012, this file contains a high-level summary of the items contained within the submission, including the exact file deliverables, a description of the errors and warnings from the Check Submission report, and extraneous information of which the NTIA and other users of the dataset should be made aware.

This submission continues to follow the speed technology guidance released by the Program Office on August 9, 2012, to review speed tier codes in correspondence with technology of transmission codes. In the April 2012 submission, descriptions were provided in the methodology paper that offered an explanation for any submitted technology of transmission and speed combinations that were outside of the expected value range. That practice continues in this submission as technology and speed combinations are reviewed and scrutinized; any questionable information supplied by providers is reviewed more in depth with the provider to ensure the information is accurately captured or a proper explanation is provided as to why the speed information should be submitted as supplied even if it falls outside the expected value range.

Also in this submission is a narrative describing the data and coverage estimation of a non-participating provider. While Connect Nevada 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 sixth round of data submissions. The submission of this estimated broadband service area for providers that have not supplied data to Connect Nevada is essential in being able to portray a more accurate depiction of the current broadband landscape.

In addition to the requirements mentioned above, please find this methodology paper to be inclusive of the ongoing section pertaining to industry mergers and acquisitions – specifically this section details any and all mergers or acquisitions that have taken place in Nevada since the April 2012 submission. The intent of this updated section is to provide a better understanding of how the broadband provider landscape has changed since the last submission cycle.

This October 2012 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 approximately 98.21 percent of the Nevada provider community, or 55 of 56 total providers. There are 54 participating providers and one additional non-participating provider whose estimated coverage areas have been submitted. Of the 54 participating providers, 21 supplied an update to their network or coverage area(s), while 28 have reported no change. The remaining 5 represent providers who previously supplied data but were non-responsive in the October 2012 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 record is contained herein. The provider that is not represented in the attached datasets was non-responsive to multiple contact attempts.

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

Connect Nevada has also continued to perform broadband verification activities through several means. In addition to confirmation of service area(s) by each provider, Connect Nevada conducts field validation efforts. To date, 39(69.64 percent) providers have been validated through field verification activities. Additional details on verification activities are contained within the Field Validation Methodology.

The Connect Nevada website, ([www.connectnv.org](http://www.connectnv.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 Connect Nevada website encountered 4,426 unique visits during this reporting period (14,436 total to date for the life of the grant awarded on December 20, 2009). Additionally, this pronounced Web activity netted 4 broadband inquiries over this same reporting period (44 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 Connect Nevada website and the Connect Nevada 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 Connect Nevada mapping artifacts. Since the initial data collection and release of corresponding maps, feedback in the form of broadband inquiries has allowed Connect Nevada to identify additional areas that are in need of field validation, which is scheduled as soon as possible.

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

Connect Nevada has established an ongoing mechanism for gathering data on the location and broadband connectivity of Community Anchor Institutions (CAI), in accordance with the data requirements of the SBI NOFA Technical Appendix. Since the April 2012 data submission, the CAI outreach process method has been modified to improve data collection. Specifically, the outreach process is a more focused sector-specific and relationship-oriented approach that generates more responses than general contact.

Outreach was conducted during this data update reporting period by Connect Nevada 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 Connect Nevada website. During this reporting period Connect Nevada has developed a number of new relationships with statewide associations such as the University of Nevada, Reno Raggio Research Center for STEM Education

and the State of Nevada Department of Public Safety State Fire Marshal Administration, to promote the importance of broadband connectivity at anchor institutions and participation in this data collection process. It became 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. Connect Nevada will continue to build upon these new relationships over the coming months and utilize its contacts throughout the state to collect data and raise awareness of this project.

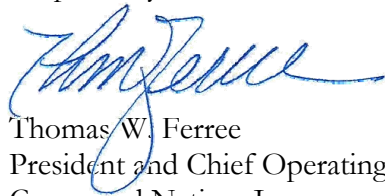
In addition to fostering and building relationships with state agencies, associations, and organizations, Connect Nevada has also developed a sector-specific calendar that supports CAI outreach as well as research and communications efforts. This focused approach allows a corporate commitment to capturing CAI data in addition to developing meaningful sector-specific content.

Connect Nevada is also working hard to clarify CAI information associated with wireless broadband. NTIA has requested in-depth questioning of CAI listing a wireless broadband service as their sole form of connectivity. This follow-up allows us to better understand the reason for adopting the wireless broadband service.

From our work in Nevada, 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 Connect Nevada 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 Connect Nevada 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 Nevada, 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,

A handwritten signature in blue ink, appearing to read 'Tom Ferree'.

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



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## **DATA ACQUISITION: NEVADA COMMUNITY ANCHOR INSTITUTIONS METHODOLOGY**

In this sixth reporting period of the SBI, Connect Nevada, working in close coordination with the state of Nevada, has established an ongoing mechanism for gathering data on the location and broadband connectivity of Community Anchor Institutions (CAI), in accordance with the data requirements of the SBI NOFA Technical Appendix. Since the April 2012 data submission, the CAI outreach process method has been modified to improve data collection. Specifically, the outreach process is a more focused sector-specific and relationship-oriented approach that generates more responses than general contact.

Connect Nevada has continued to identify and process CAI data obtained through an ongoing statewide outreach campaign. Physical address information continues to be augmented through manual sourcing and geocoded by Connect Nevada through Esri ArcGIS software.

Connect Nevada continues to utilize a customized online survey hosted through SurveyMonkey, with a landing page on the Connect Nevada 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. Connect Nevada 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/7RSHPBS>

In addition to the survey, Connect Nevada has developed a number of new relationships with statewide associations such as University of Nevada, Reno Raggio Research Center for STEM Education, and State of Nevada Department of Public Safety State Fire Marshal Administration 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. Connect Nevada will continue to build upon these new 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, Connect Nevada 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.

Connect Nevada 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, Connect Nevada 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, Connect Nevada works with the Nevada Broadband Task Force to identify existing relationships that can support CAI outreach.

Connect Nevada 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 Connect Nevada project as well as self-awareness of their own CAI connectivity (specifically upload and download speeds). Connect Nevada will continue to research key CAI organizations and agency contacts in an effort to raise awareness of this project among CAI. When applicable, the Nevada Broadband Task Force 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>	881	881	818	158	156	152
<b>Libraries</b>	108	108	100	61	64	64
<b>Healthcare</b>	5,045	5,045	4,684	27	4,888	4,888
<b>Public Safety</b>	127	127	119	10	11	11
<b>Higher Ed Institutions</b>	81	81	72	38	39	39
<b>Other Government</b>	881	881	847	71	117	117
<b>Other Non-Government</b>	907	907	845	20	59	61
<b>Total</b>	8,030	8,030	7,485	385	5,334	5,332

Since the last reporting period, Connect Nevada identified and deleted 665 Community Anchor Institutions. Several business (i.e. pharmacies, grocery stores, Target, Sam's Club, etc.) that were listed in the nongovernment category were removed; these businesses are not considered anchor institutions. In addition, 50 CAIs were incorrectly assigned to the nongovernment category. These CAIs were reassigned to the appropriate category.

During the coming months, CAI data collection will be supported by regular reporting to the Connect Nevada team. The CAI data is proving an invaluable resource to all components of the Connect Nevada 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, 2012, is contained within the SBI Data Transfer Model and additional components as released on the Grantee Workspace on August 9, 2012. 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.

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 Nevada.

### *Inventory of Deliverables, Connect Nevada: October 1, 2012*

<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.

The provider data collected by CN on behalf of the state of Nevada 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.

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 Nevada 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 is underway at CN as well to be able to create more granular satellite coverage based on satellite equipment positioning and geographic inputs.

## **DATASETS FOR IN-KIND MATCH**

Connect Nevada received an in-kind match contribution to assist with SBI mapping goals which has been beneficial to the program in the following ways:

As part of an in-kind contribution, Connect Nevada received a dataset from the Lyon County School District containing Lyon County student records. This dataset provides statistics illustrating the number of parents who have checked on their child's progress via an online system set-up and maintained by the school. - \$100.

Connect Nevada received a dataset from the state containing total population for counties, cities, and towns as part of an in-kind contribution that will be utilized by the project to assist with its mapping and planning goals. - \$10,592.

Connect Nevada received a dataset from the state, containing age, sex, race, and Hispanic origin estimates and projections for 2010-2030 as part of an in-kind match contribution to assist the project with its mapping and planning goals. - \$29,332.

Connect Nevada obtained a dataset containing Nevada healthcare Community Anchor Institution (CAI) data. Since the dataset was developed using federal funds, it was not valued nor was it counted as match toward the program.

As part of an in-kind contribution from the Nevada Department of Transportation, Connect Nevada received a dataset containing 2011 road segments. This was instrumental in processing the 2010 Census road data. Since the dataset was developed using federal funds, it was not valued nor was it counted as match toward the program.

As part of an in-kind contribution from the Nevada Department of Taxation, Connect Nevada received a dataset that contained all registered business locations with a sales or use tax account in the state. Connect Nevada used this dataset to create an in-depth analysis of business locations by sector and by rural/non-rural counties. This dataset will continue to be used to inform future Connect Nevada surveys and research reports. - \$125,339.

## NEVADA 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 and 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 Nevada on the following providers: Above All Communications (d.b.a. Express Internet); Air-Internet, Inc.; Arizona Nevada Tower Corporation; AT&T Inc.; Avant Wireless LLC; Baja Broadband LLC; Beehive Telephone Company Inc.; CalNeva Broadband LLC; CC Communications; CenturyLink; Charter Communications; Citizens Telecommunications Company of Nevada (d.b.a. Frontier Communications of Nevada); Clearwire Corporation; Cox Communications; ETAN Industries (d.b.a. Clark Cablevision and CMA Cablevision); EZZnet, Inc.; Great Basin Internet Services; High Desert Internet Services; Highlands Wireless Inc.; Hot Spot Broadband Inc.; InfoWest (d.b.a. A & J Hardy Enterprises, Inc.; Comnett Computer Services, and Peak Internet Services); JAB Wireless

(formerly d.b.a. KeyOn Wireless and Wells Rural Electric Telephone); Las Vegas Net; Leap Wireless (d.b.a. Cricket License Company LLC); Lincoln County Telephone; Moapa Valley Telephone Company; Mt. Wheeler Power; Oasis Online Inc.; Performance Computing Internet; Reliance Connects (d.b.a. Rio Virgin Telephone & Cablevision); Robinson Communication Corporation (d.b.a. Oregon-Idaho Utilities, Inc. and Humboldt Telephone Company); Schatnet Internet LLC; Sprint Nextel; TelePacific Communications (d.b.a. Nextweb and Covad); T-Mobile USA Inc.; Vegas Wi-Fi Communications LLC; Verizon Wireless; WENR Corporation (f.k.a. Satview Broadband, Ltd.); and Yonder Media.

In addition to the field verification tests that have been conducted, Connect Nevada has also conducted work in the field to collect information for the non-participating provider, Avant Wireless, 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 39 companies (out of a universe of 56 viable providers) totaling 69.64 percent within the state of Nevada. This percentage also considers the non-participating provider (NPP) records 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 published on the NTIA Grantee Workspace on August 9, 2012. 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.

#### AT&T Inc.

Issue: DSL platform with maximum advertised download speed in tier 7, higher than expected value range for the technology.

Resolution: Provider website advertises 24 Mbps service; screenshot below.

Compare Internet Packages

	Pro	Elite	Max	Max Plus	Max Turbo
Standard Monthly Rate	\$38*	\$43*	\$48*	\$53*	\$63*
Downstream Speed	Up to 3 Mbps	Up to 6 Mbps	Up to 12 Mbps	Up to 18 Mbps	Up to 24 Mbps

#### AT&T Inc.

Issue: Mobile wireless platform with maximum advertised download speed in tier 7, higher than expected value range for the technology.

Resolution: Provider confirmed that tier 7 service is available.

**CalNeva Broadband, LLC**

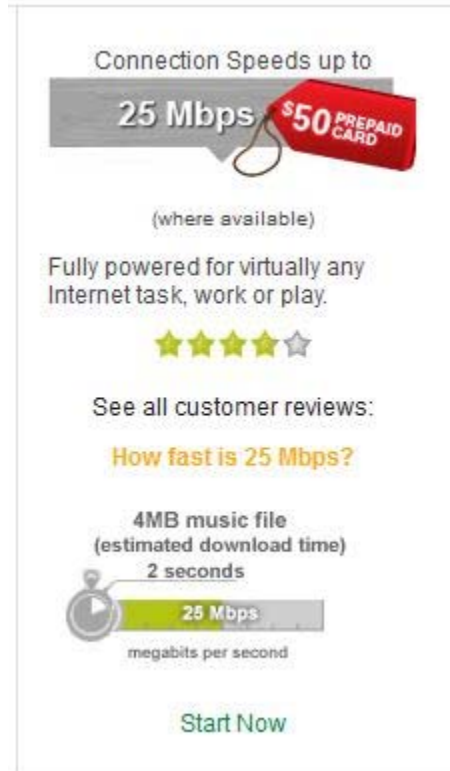
Issue: Technology of transmission code 40 with maximum advertised download speed in tier 4, lower than expected value range for the technology.

Resolution: Provider representative confirmed that service area is DOCSIS 3.0, but lower speeds are still in use.

**CenturyLink**

Issue: DSL platform with maximum advertised download speed in tier 7, higher than expected value range for the technology.

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

A screenshot of a CenturyLink website advertisement. At the top, it says 'Connection Speeds up to' followed by '25 Mbps' in a large font. To the right of '25 Mbps' is a red tag that says '\$50 PREPAID CARD'. Below this, it says '(where available)'. Then, it says 'Fully powered for virtually any Internet task, work or play.' followed by five yellow stars. Below the stars, it says 'See all customer reviews:'. Then, it says 'How fast is 25 Mbps?' in orange. Below that, it says '4MB music file (estimated download time)' followed by '2 seconds'. To the left of '2 seconds' is a stopwatch icon. Below '2 seconds' is a green progress bar that is partially filled, with '25 Mbps' written inside it. Below the progress bar, it says 'megabits per second'. At the bottom, there is a green button that says 'Start Now'.



### Filer Mutual


Issue: DSL platform with maximum advertised download speed in tier 7, higher than expected value range for the technology.

Resolution: Provider website advertises 12 Mbps service; screenshot below.

#### DSL - 12Mbps

The ultimate package built to meet the heaviest demands - this package is built for gaming, multiple Netflix streams or Netflix HD, a home office, and several device hookups. With all of this speed you will meet the needs of anything that comes your way! Along side this we'll be there every step of the way if you need support!

- Gaming
- Netflix HD
- Streaming Media
- Home Office
- Multiple Devices



## \$79.95

### Great Basin Internet Services

Issue: Fixed wireless platform with maximum advertised download speed in tier 7, higher than expected value range for the technology.

Resolution: Provider website advertises 12 Mbps service; screenshot below.

STARTER	<b>1 x 1</b> (down vs. up mbps speed)	<b>\$24.95</b> (monthly)
	<b>2 x 1</b> (down vs. up mbps speed)	<b>\$29.95</b> (monthly)
	<b>4 x 2</b> (down vs. up mbps speed)	<b>\$39.95</b> (monthly)
	<b>8 x 2</b> (down vs. up mbps speed)	<b>\$49.95</b> (monthly)
	<b>12 x 3</b> (down vs. up mbps speed)	<b>\$69.95</b> (monthly)



### Hot Spot Broadband

Issue: Fixed wireless platform with maximum advertised download speed in tiers 7 and 10, higher than expected value range for the technology.

Resolution: Provider confirmed that most areas have up to 20 Mbps download and upload service and some areas in Reno and Sparks have 100 Mbps download and upload service.

### Lincoln Communications, Inc.

Issue: DSL platform with maximum advertised download speed in tier 7, higher than expected value range for the technology.

Resolution: Provider representative confirmed that tier 7 service is indeed available.

### MegaPath

Issue: DSL platform with maximum advertised download speed in tier 7, higher than expected value range for the technology.

Resolution: Provider website advertises 20 Mbps service; screenshot below.

DSL service provides download speeds up to 20 Mbps over a nationwide, multi-redundant private network that optimizes performance and security. DSL is an ideal broadband solution for small and medium-sized businesses that download large files or use the Internet extensively.

### Moapa Valley Telephone

Issue: DSL platform with maximum advertised download speed in tier 7, higher than expected value range for the technology.

Resolution: Provider website advertises 15 Mbps service; screenshot below.

Bundle	Description	Pricing
1	6 Mb Internet	\$59.95
2	10 Mb Internet	\$69.95
3	15 Mb Internet	\$79.95

### Rio Virgin Telephone

Issue: DSL platform with maximum advertised download speed in tier 7, higher than expected value range for the technology.

Resolution: Provider website advertises 12 Mbps service; screenshot below.

Nevada	ADSL				
Introductory DSL Pricing	3.0Mb down/1.0Mb up	6.0Mb down/1.0Mb up	9.0Mb down/1.0Mb up	12.0Mb down/1.0Mb up	768Kb down/768Kb up
Total DSL/Internet Recurring Charge	\$34.95	\$39.95	\$47.95	\$54.95	\$24.95
*DSL Activation Service Order Charge	\$185.00	\$185.00	\$185.00	\$185.00	\$185.00

**T-Mobile USA, Inc.**

Issue: Mobile wireless platform with maximum advertised download speed in tier 7, higher than expected value range for the technology.

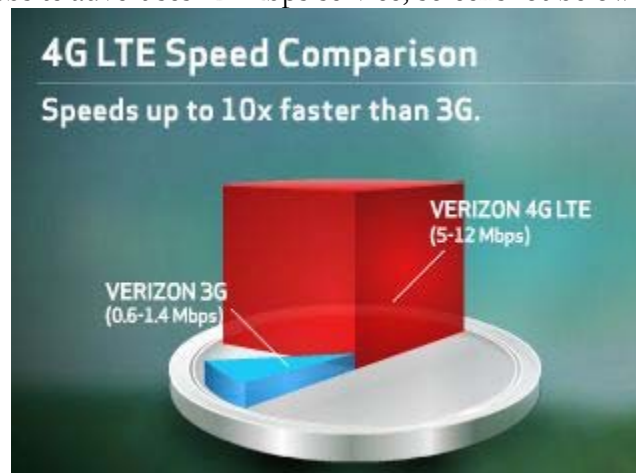
Resolution: Provider website advertises download speed greater than tier 6; screenshot below.

T-Mobile customers with 4G phones are already experiencing data speeds that are comparable to or faster than the speed of a home broadband network. And with recent improvements to our 4G network-doubling our theoretical download speeds-we're giving our customers enhanced 4G data speeds. We've seen average download speeds on our HSPA+ 42 Mbps-capable data stick approaching 10 Mbps with peak speeds of 27 Mbps, and download speeds approaching 8 Mbps with peak speeds of 20 Mbps on our upcoming HSPA+ 42 Mbps-capable smartphones.

**Verizon**

Issue: Mobile wireless platform with maximum advertised download speed in tier 7, higher than expected value range for the technology.

Resolution: Provider website advertises 12 Mbps service; screenshot below.

**DATA SUBMISSION AND COVERAGE ESTIMATION OF NON-PARTICIPATING PROVIDER**

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.). This state specific collection of coverage estimation methodology papers (see Appendix A) demonstrates 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.

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## **ACCURACY AND VERIFICATION: 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.

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 0.93 percent of Nevada households do not have terrestrial fixed broadband service available, and approximately 0.36 percent of Nevada households have neither mobile nor fixed broadband service available.

Within rural areas of the state, results derived from provider-validated data indicate that approximately 3.53 percent of rural Nevada households do not have terrestrial fixed broadband service available, and approximately 0.87 percent of rural Nevada 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. omni-directional, 180°, 120°, 90°, etc.).
11. Azimuth of antenna (e.g. 360° with magnetic declination if known).
12. Approximate transmit radius (in feet, miles, or kilometers).
13. Polarity of transmit antenna (Vertical or Horizontal).
14. Transmit antenna gain (in dBi).
15. Line loss (applicable only to providers using coax, heliax, waveguide or other forms of cabling – excludes power-over-Ethernet devices).
16. Mechanical and/or Electrical beam tilt (if applicable).
17. Equipment Manufacturer (allows easy cross-reference against 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 **CO**mmission **RE**gistration **S**ystem.

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, hillshade, 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 Connect Nevada 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 requested 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 other 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 18,600 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 Connect Nevada project has received a total of 4 inquiries (44 grant inception to date). As more inquiries are submitted to Connect Nevada, 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 online, interactive 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 Connect Nevada project launched My ConnectView on April 2, 2012, and has received 692 visits this reporting period; to date the interactive mapping applications have received 2,744 visits.

## **SPEED TEST METHODOLOGY**

The 265 speed tests that are represented in the Connect Nevada Speed Test Report during this reporting period (1,210 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 Connect Nevada 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 Connect Nevada 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 Connect Nevada with the information on where broadband services are available. Second, unlike theoretical speed information which was received through the data collection process, the use of speed tests provide real-world information on the speeds that currently exist within the state of Nevada.

## **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 2012 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, etc.

	Company Name	URL	Comments
1	21Globe, Inc.	<a href="http://www.21globe.com/is/access/">www.21globe.com/is/access/</a>	General Reseller of DSL and backhaul.
2	360networks	<a href="http://www.360networks.com/">http://www.360networks.com/</a>	Acquired by another company.
3	650Net	<a href="http://www.650net.net/">www.650net.net/</a>	Dial-up only except CA DSL Reseller.
4	A & J Hardy Enterprises, Inc.	<a href="http://comnett.net">http://comnett.net</a>	Acquired by InfoWest.
5	A 007 Access	<a href="http://www.a007.com/">www.a007.com/</a>	D.B.A. of Cyberonic Communications Inc. reselling DSL and mobile wireless; general reseller of Quest DSL and mobile wireless; DSL does not qualify as the max advertised speed is 768 kbps x 128 kbps.
6	A-1 Vegas.com	<a href="http://www.zekes.com">www.zekes.com</a>	d.b.a. Zeke's Internet Service resells Qwest DSL.
7	AAA Internet Service	n/a	No longer in business.
8	Aaccess Network Communications	<a href="http://www.aaccess.net/">www.aaccess.net/</a>	Not a broadband provider; provides services for business IT, home computer, web design.
9	Access123.net	n/a	No longer in business.
10	ACERX.NET	<a href="http://www.acerx.net/">www.acerx.net/</a>	General reseller of cable, DSL, and satellite broadband access.
11	ACI, Inc.	<a href="http://www.aci.net">http://www.aci.net</a>	Reseller; unresponsive to multiple attempts to gather data.
12	ACS Wireless	n/a	No longer in business.
13	Advanced Communications Integration	<a href="http://www.aci.net/">http://www.aci.net/</a>	Company is currently not a viable provider.
14	Airewaves Broadband, LLC	n/a	No longer in business.
15	Airmail247.com	<a href="http://www.airmail247.com/">www.airmail247.com/</a>	Business mailing list search site; not an ISP.

16	American Wireless Networks, Inc.	n/a	American Wireless does not provide broadband access in Nevada. The company is out of business.
17	Amigo.Net	<a href="http://www.amigo.net/cms/">www.amigo.net/cms/</a>	Qwest reseller in Alamosa, CO offering fixed wireless in CO and NM.
18	Antioch Wireless Broadband	n/a	Resells DSL and cellular service in Antioch, IL only.
19	Arrowheadnet.com	<a href="http://www.arrowheadnet.com/">www.arrowheadnet.com/</a>	Domain registration and web-hosting company.
20	ATEK Communications	<a href="http://www.atekcommunications.com">www.atekcommunications.com</a>	Not an ISP; ATEK is a national data contractor specializing in structured data cabling and fiber optic distribution designs and installations.
21	bargainisp.net	<a href="http://www.bargainisp.net/">www.bargainisp.net/</a>	Generic web directory site; company does not offer broadband.
22	Big Kahuna Network	n/a	No longer in business.
23	Broadband National	<a href="http://www.broadbandnational.com">www.broadbandnational.com</a>	Nonfacilities-based general reseller of DSL and satellite for 36 companies (e.g. ACC Business, HughesNet, et al.).
24	CAC MediaNet, Inc.	<a href="http://www.cac.net/">www.cac.net/</a>	DSL reseller; d.b.a. First Step
25	California Broadband Cooperative, Inc.	<a href="http://www2.ntia.doc.gov/grantee/california-broadband-cooperative-inc">www2.ntia.doc.gov/grantee/california-broadband-cooperative-inc</a>	\$81 million BIP/BTOP grant to construct 10 Gbps middle mile fiber network that would mainly follow U.S. Route 395 from Carson City to Topaz Lake; project 5% done as of 8/11 report.
26	Camino-Net Internet Services	<a href="http://www.camino-net.com">www.camino-net.com</a>	Reseller; no longer in business; was dial-up only.
27	CCIS.net	<a href="http://www.ccis.net">www.ccis.net</a>	Verizon reseller in DE and NJ.
28	Celito Communications	<a href="http://www.celito.net/">www.celito.net/</a>	Raleigh, NC company supplying tech services to businesses (networks, VoIP, and broadband access) in North Carolina.
29	Cheetah Wireless Technologies, Inc.	<a href="http://www.cwti.us/cheeweb/homepage/">www.cwti.us/cheeweb/homepage/</a>	LV.Net has assumed CWTP's assets and is operating its networks.

30	Cleartouch.Com	<a href="http://www.cleartouch.com/">www.cleartouch.com/</a>	Reseller of DSL and cable and mobile wireless broadband for various national providers.
31	Clover Cable	n/a	Not an ISP; cable television line construction in Las Vegas, NV.
32	Colorado River Internet	n/a	No longer in business.
33	Comtech Communications Systems	<a href="http://www.comtechlv.com">www.comtechlv.com</a>	Not an ISP; business telephone systems.
34	Connecting America	<a href="http://www.coam.net/">www.coam.net/</a>	Dial-up ISP.
35	Corridor Communications	<a href="http://www.corridorcomms.ca">www.corridorcomms.ca</a>	<a href="http://www.cciwireless.ca/">URL redirects to http://www.cciwireless.ca/</a> , CCI Wireless, a Canadian company providing broadband access to Alberta.
36	Cyberonic Internet Communications, Inc.	<a href="http://www.cyberonic.com/">http://www.cyberonic.com/</a>	Reseller; A 007 Access (above) is d.b.a. of Cyberonic.
37	Deltaforce	<a href="http://www.deltaforce.net">www.deltaforce.net</a>	Dial-up provider located in Raleigh, NC.
38	deluxehost.com	<a href="http://www.deluxe-host.com">www.deluxe-host.com</a>	Offers web hosting only.
39	DGUI	<a href="http://www.dgui.com/">www.dgui.com/</a>	No longer in business; domain name for sale.
40	Dial National	<a href="http://www.dialnational.com/">www.dialnational.com/</a>	Inactive URL; out of business.
41	Dialer.net	<a href="http://www.dialer.net/internet_access/United_States.html">www.dialer.net/internet_access/United_States.html</a>	International reseller of dial-up and 3G wireless reseller.
42	DSL @ Interlync	<a href="http://www.interlync.com">www.interlync.com</a>	Reseller of business DSL, T-1 and wireless.
43	DTS-NET.COM	<a href="http://www.dts-net.com/">www.dts-net.com/</a>	Reseller; provides wholesale and retail telecommunications services.
44	Elko Broadband	n/a	No URL found; no info.
45	estream Wireless	<a href="http://www.estreamwireless.net/">www.estreamwireless.net/</a>	Reseller; no longer in business.
46	ETI LLC	<a href="http://www.cyberenet.net/">www.cyberenet.net/</a>	General reseller of DSL services from infrastructure owned by Verizon, AT&T, and Covad.

47	Exwire	<a href="http://www.exwire.com/">www.exwire.com/</a>	Wi-Fi hotspot network where Exwire customers can easily access the Internet at several cafes, ski resorts, and other convenient public locations throughout Truckee and Lake Tahoe with Wi-Fi enabled devices.
48	Fast Dependable Access	<a href="http://www.fda.net/">www.fda.net/</a>	No longer in business.
49	Go Mango Technologies	n/a	Can find no evidence that Go Mango is a company providing broadband in Nevada.
50	Hubwest Protected Networks LLC	<a href="http://www.hubwest.com">www.hubwest.com</a>	Dial-up and web hosting only; not a WISP; merged with Southwest Cyberport.
51	Imbris, Inc.	<a href="http://www.imbris.com">www.imbris.com</a>	Broadband referral site.
52	IMGISP.NET	<a href="http://www.imgisp.net/">www.imgisp.net/</a>	Broadband referral site.
53	In the Air Data	n/a	No URL found; no info.
54	Incredible Networks	n/a	No URL found; no info.
55	Inercom Communications Inc.	<a href="http://www.inercom.com">www.inercom.com</a>	No longer in business.
56	Integra Telecom	<a href="http://www.integratelecom.com">http://www.integratelecom.com</a>	Facilities-based B2B provider of communication and networking services in the western United States.
57	Interactiveinfo.com Inc.	<a href="http://www.rocketbroadband.com">www.rocketbroadband.com</a>	Redirects to drumbeatnetworks.com, a Buffalo, NY company designing, developing, and managing the network infrastructure; offers cable television services in NY only.
58	iRadical	n/a	No URL found.
59	Ironwood Communications	<a href="http://www.ironwoodcommunications.com">www.ironwoodcommunications.com</a>	Direct TV.
60	ISPartner.net	n/a	No URL found.
61	Jenco Speed Web	<a href="http://www.jencospeed.net">www.jencospeed.net</a>	Ohio WISP only.
62	Jetstream Wireless	n/a	No URL found.
63	LANwaves	n/a	No longer in business.
64	LARIAT.NET	<a href="http://www.lariat.net/">www.lariat.net/</a>	WISP in Wyoming only.

65	LCSisp.com	<a href="http://www.lcsisp.com/index.cfm">www.lcsisp.com/index.cfm</a>	National dial-up only.
66	Light Link Broadband	<a href="http://www.light-link.net/">www.light-link.net/</a>	Redirects to www.digis.net, a provider of fixed wireless broadband internet in Utah.
67	Lightyear Network Solutions, LLC	<a href="http://www.lightyear.net/">www.lightyear.net/</a>	Telecommunications network company.
68	LinkAmerica.Net	<a href="http://www.linkamerica.net/">www.linkamerica.net/</a>	Shopping site.
69	MainBoard	<a href="http://www.mainboard.cc/internet.htm">www.mainboard.cc/internet.htm</a>	VA-based computer store; general reseller; not a WISP
70	Maine Cable and Wireless	<a href="http://www.mainecableandwireless.com">www.mainecableandwireless.com</a>	Broadband referral site
71	Marcin Company	n/a	No URL found; no info
72	Millenicom Inc.	<a href="http://www.millenicom.com/internet_access.html">www.millenicom.com/internet_access.html</a>	Resells mobile wireless on Sprint network EVDO cards.
73	Nanomega.Com	<a href="http://www.nanomega.com">www.nanomega.com</a>	Redirects to GoDaddy; out of business.
74	Nanosecond, Inc.	<a href="http://www.nanosecond.com">www.nanosecond.com</a>	Provides computer repair, website design, website hosting, SEO, e-mail, and technology consulting.
75	Net Nevada	<a href="http://www.netnevada.net/">www.netnevada.net/</a>	D.B.A. Intuitive Logic, providing IT management and consulting and solutions including colocation, remote network backup and monitoring, shared server hosting, and bandwidth aggregation
76	NetAccess, Inc.	<a href="http://www.nas.net/">www.nas.net/</a>	Not a WISP; business portal site
77	Netriplex	<a href="http://www.netriplex.com/">www.netriplex.com/</a>	Data center.
78	NetSpeed Online	<a href="http://www.netspeed-online.net">www.netspeed-online.net</a>	No URL found; no info.
79	NetVoice	<a href="http://www.netvoice.net/">www.netvoice.net/</a>	VoIP search site.
80	Nevada Comstock Communications, LLC	<a href="http://nevadacomstock.com">nevadacomstock.com</a>	Phone systems.
81	Nevada Hospital Association	<a href="http://www.nvha.net/">www.nvha.net/</a>	Not a broadband provider.
82	Nevada Telecommunications Association	<a href="http://www.nevtelassn.org">www.nevtelassn.org</a>	Not a broadband provider.
83	Nextlink Wireless, Inc.	<a href="http://www.nextlink.com">www.nextlink.com</a>	Acquired by XO Communications.

84	NextWeb, Inc.	n/a	Acquired by another company.
85	Northwest ISP	<a href="http://www.northwestisp.com/">www.northwestisp.com/</a>	No longer in business.
86	NuTel Broadband Corporation	<a href="http://www.nutelbroadband.com/">www.nutelbroadband.com/</a>	No evidence that this company offers broadband services in Nevada; it appears that this company was extremely vocal in 2006 then disappeared.
87	Overarch Broadband	<a href="http://www.overarch.com/">www.overarch.com/</a>	Broadband access in Idaho.
88	Pacific Internet Exchange	<a href="http://www.pie.us/">www.pie.us/</a> , <a href="http://www.pacificinternetexchange.com">www.pacificinternetexchange.com</a>	URLs not active; no longer in business.
89	Paknet Limited	<a href="http://www.ptcl.com.pk/pd_content.php?pd_id=279">www.ptcl.com.pk/pd_content.php?pd_id=279</a>	Subsidiary of Pakistan Telephone Company; no USA services.
90	Planet Online	<a href="http://www.planetonline.net/">www.planetonline.net/</a>	Offers website hosting services.
91	PremoWeb	<a href="http://www.premoweb.com/about_us/contact_us.html">www.premoweb.com/about_us/contact_us.html</a>	URL inactive, out of business.
92	PrimeVision Communications, LLC	<a href="http://www.myprimevision.net">www.myprimevision.net</a>	URL inactive, out of business.
93	Priority Wire & Cable	<a href="http://www.prioritywire.com">www.prioritywire.com</a>	Not an ISP; priority wire and cable is a distributor of wire and cable serving electrical, utility, telecommunications, mining, and welding wholesale distributors.
94	Pyramid Lake Paiute Tribe	n/a	Not operational, BIP/BTOP funded project to deploy fiber-optic middle mile network across 742 square mile reservation.
95	Pyramid Net	<a href="http://www.pyramid.net/">http://www.pyramid.net/</a>	Offers service, but below broadband threshold.
96	Rapid Cable	n/a	Rapid Cable was recently acquired by CalNeva Broadband in December 2008.
97	Renaissance Networks	<a href="http://www.renaissancenetworks.com/">www.renaissancenetworks.com/</a>	IT support company based in New Mexico; not a WISP.
98	Sierra Internet Services, Corp.	<a href="http://www.sierranv.net/">http://www.sierranv.net/</a>	Reseller of DSL services.
99	Silver State Internet	<a href="http://www.ssinternet.net">www.ssinternet.net</a>	URL inactive; out of business.



100	Simply Dialup A Metrogeek Company	<a href="http://www.simplydialup.com/">www.simplydialup.com/</a>	Dial-up only; not a broadband supplier.
101	Sky Technologies, Inc.	<a href="http://www.skyforall.com">www.skyforall.com</a>	Dish network reseller.
102	SkyBridge Wireless	n/a	Not an ISP; renamed SkyBridge Technology Group; acquired aviation business.
103	Sling Broadband	<a href="http://www.slingbroadband.com/">www.slingbroadband.com/</a>	Florida WISP.
104	SONNET Networking, LLC	<a href="http://www.sonnet.com/">www.sonnet.com/</a>	California WISP.
105	Sparkplug Las Vegas, Inc.	<a href="http://www.airband.com/">www.airband.com/</a>	Provides fixed wireless broadband to businesses.
106	Speakeasy, Inc.	<a href="http://www.speakeasy.net/">www.speakeasy.net/</a>	Business phone systems; not an ISP.
107	Spring Creek Wireless	<a href="http://www.springcreekwireless.com/index.htm">www.springcreekwireless.com/index.htm</a>	WiFi access for mobile home court in Spring Creek.
108	StarNetWX	<a href="http://www.starnetinc.com/">www.starnetinc.com/</a>	Dial-up and VoIP.
109	Surferz.Net	<a href="http://www.surferz.net/">www.surferz.net/</a>	Dial-up in upstate NY only; not a WISP.
110	Switch Communications Group LLC	<a href="http://www.switchnap.com/">www.switchnap.com/</a>	Colocation; NOC services.
111	T1 Shopper	<a href="http://www.t1shopper.com/">www.t1shopper.com/</a>	Search engine for general reseller.
112	The-OnRamp.Net	<a href="http://www.the-onramp.net/">www.the-onramp.net/</a>	Access provider below NTIA definition.
113	Total Access Networks, Inc.	<a href="http://www.totalaccess.net">www.totalaccess.net</a>	Fixed wireless provider in Elgin, TX.
114	TSISP.NET	<a href="http://www.tsisp.net">www.tsisp.net</a>	Shopping site.
115	U.S. TELEPACIFIC CORP	<a href="http://www.telepacific.com">www.telepacific.com</a>	Acquired by MegaPath.
116	UNEV Communications, Inc.	n/a	UNEV (Lovelock) does not offer Internet Access.
117	United Cable Management, Inc.	n/a	Out of business March 2011.
118	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.

119	UNUM Telecommunications, Inc.	<a href="http://www.utinet.net/">www.utinet.net/</a>	URL inactive; out of business.
120	USA Airnet, Inc.	<a href="http://www.usairnet.com">www.usairnet.com</a>	URL inactive; out of business.
121	Velocitus	<a href="http://www.velocitus.net">www.velocitus.net</a>	URL inactive; out of business.
122	Verde Communications	<a href="http://www.sparkplug.net/">www.sparkplug.net/</a>	Acquired by Sparkplug in July 2007.
123	Washoe Weblinks	<a href="http://www.washoewebblink.com">www.washoewebblink.com</a>	URL inactive; out of business.
124	Wireless Roanoke, Inc.	<a href="http://www.wirelessroanoke.com/">www.wirelessroanoke.com/</a>	URL inactive; out of business.
125	Wireless TelCorp, Inc.	<a href="http://www.wirelesstelcorp.com/">www.wirelesstelcorp.com/</a>	Fixed wireless provider with offices in TX, NV, and NC.
126	Wireless Think Tank	<a href="http://www.wirelessthinktank.com/">www.wirelessthinktank.com/</a>	URL inactive; out of business.
127	wisbin	<a href="http://www.wisbin.com/">www.wisbin.com/</a>	Wisconsin ISP resells DSL.
128	WUE Inc.	<a href="http://www.lctsys.com/index.php?page=home">www.lctsys.com/index.php?page=home</a>	WUE provides mobile cellular and wireless services.
129	www.AmericanAngel.us	<a href="http://www.americanangel.us/">www.americanangel.us/</a>	URL inactive; out of business.
130	YEEZOO.NET	<a href="http://www.yeyzoo.net/">www.yeyzoo.net/</a>	URL inactive; out of business.
131	YLISP ( Your Local ISP)	<a href="http://www.itsyournet.com">www.itsyournet.com</a>	Provider inactive; no longer in business.
132	YourT1Wifi.com	<a href="http://www.yourt1wifi.com/">www.yourt1wifi.com/</a>	Providing service In Idaho, Washington, and Alaska.
133	ZOOM Internet Services, LLC	n/a	Acquired by another company.

**APPENDIX A: ESTIMATION OF NON-PARTICIPATING PROVIDER:  
AVANT WIRELESS, LLC**

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## **AVANT WIRELESS, LLC**

As part of its ongoing broadband mapping efforts, Connected Nation has developed a series of processes with the goal of submitting mapping data to NTIA for every known and qualifying last-mile broadband provider, regardless of whether the provider has chosen to support and participate in the State Broadband Initiative (SBI) mapping program.

The following narrative provides detail regarding the recent data collection and coverage estimation activities related to Avant Wireless LLC (Avant), a wireless Internet service provider (WISP), located in Carson, Nevada with a service area around Reno, Washoe Valley, Spanish Springs, Palomino Valley, Pleasant Valley, and Stead Airport. The narrative will include information regarding how and where CN obtained publicly available data.

### **Background**

Avant was initially contacted on February 11, 2010, and was less than courteous at the time. Although the provider representative voluntarily provided a contact e-mail address, the next telephonic contact attempt on February 25, 2012, ended abruptly when the provider hung-up the phone. On April 17, 2011, the provider responded to an e-mail effectively refusing to participate in the Connect Nevada and SBI project. This pattern was repeated on August 4, 2011, thus prompting CN to flag this provider for the development of a future coverage estimation document for submission to NTIA.

On December 8, 2011, a CN staff member completed desktop research and conducted on-the-ground site verification and data collection activities. Subsequently, on March 5, 2012, this data was used to create a wireless propagation model for submission during the April 2012 mapping submission to NTIA.

During this submission period, 2 additional contact attempts were made (July 11 and August 1, 2012) soliciting updated data and approval or rebuttal of the previously created coverage estimation document. On August 4, 2012, the provider responded by e-mail indicating that they continue to decline to participate.

### **The Issue**


Despite 3 additional contact attempts with Avant, the provider has predicated its unwillingness to participate in the Nevada broadband mapping initiative.

CN has continued to closely monitor the provider's website to identify any changes in the coverage area or maximum advertised speeds but, as of this submission, has not located any new evidence of recent changes to either the coverage area or the maximum advertised speeds. To that end, CN is resubmitting this coverage estimation narrative, substantially in its original format, and will continue to monitor the provider's website as well as ensure ongoing outreach until either the expiration of the SBI grant or until such time as the provider voluntarily contributes data.

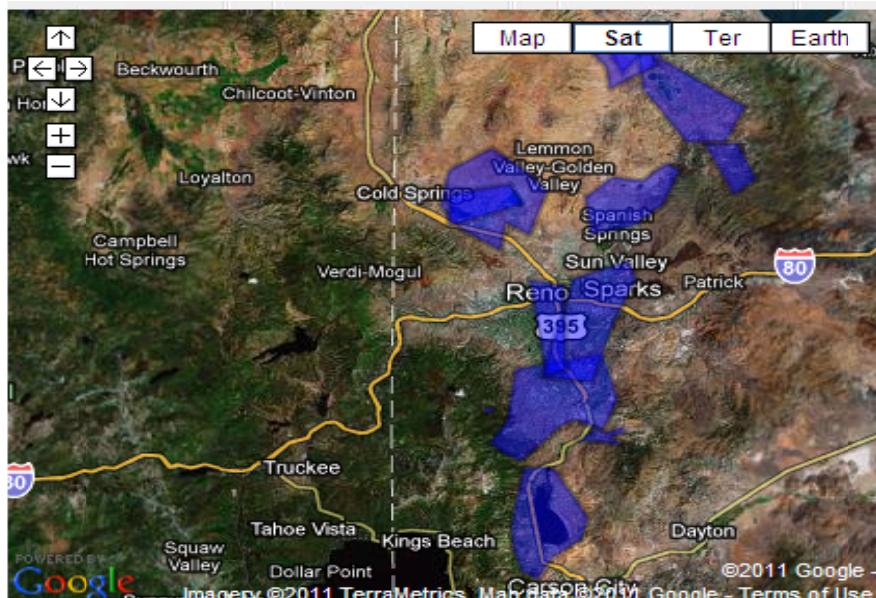
## **Identification of Provider's Service Plans, Service Area, Legal Name, d.b.a., FRN, and Licensing**

CN has built a file based on research information and, as time progressed, enriched the file with information obtained through the public domain and (as previously mentioned) through on-the-ground data extraction and site verification activities. For example, CN reviewed the provider's website ([www.avantwireless.com](http://www.avantwireless.com)) to determine the residential service plans (**Exhibit A**) and the service area (**Exhibit B**) of the provider's wireless network. A search for a Federal Registration Number (FRN) on the FCC **CO**mmission **RE**gistration **S**ystem (CORES) system for Avant Wireless LLC, Avant Wireless and Avant \* (where \* indicates wildcard search) yielded no FRN (**Exhibit C**).

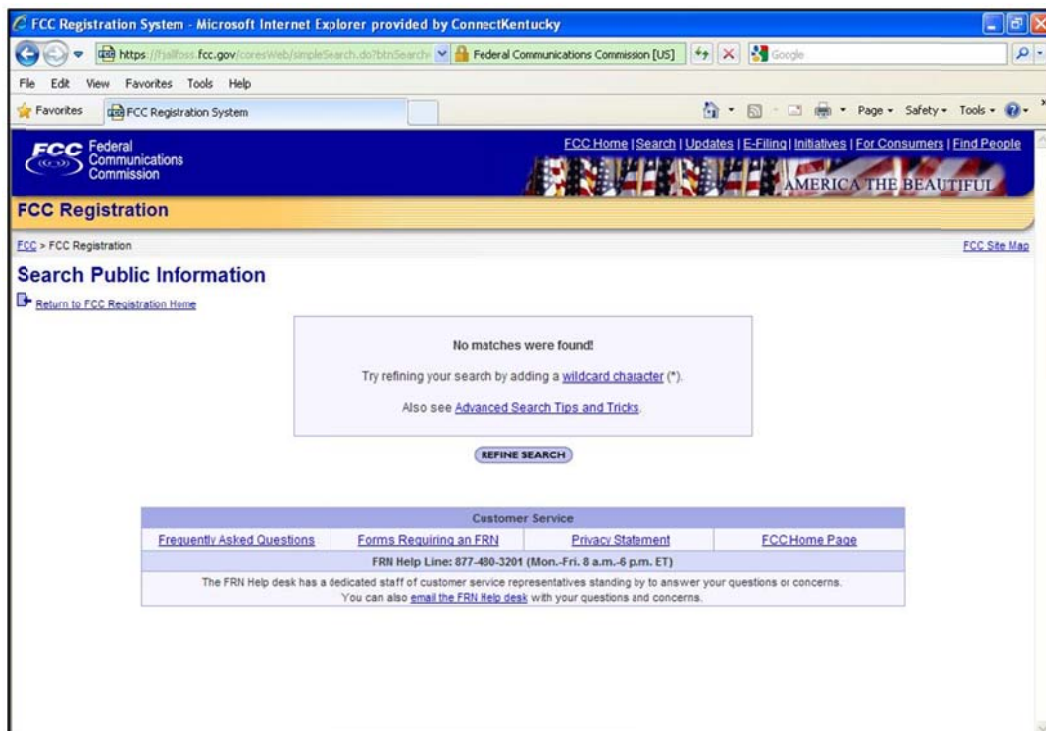
### **Exhibit A: Service Plans**

 <span style="float: right;">800-859-9121</span>	
<p style="text-align: center;"><b>Wireless Broadband Internet Access</b></p> <p style="text-align: right;"><i>Super Reliable, Super Connected Super Service</i></p>	
<b><u>Typical Residential service is \$45.95/month and \$150 Installation fee</u></b>	
<b><u>1 Install Rate</u></b>	
Basic One-time Installation \$150 standard \$200-\$400 for special/business installations, \$300 typical <ul style="list-style-type: none"> <li>• If customer purchases equipment ( not recommended* ) installation is free</li> <li>• If customer purchases equipment monthly, one time installation fee is \$75</li> <li>• Beyond Basic Installation contact us for details</li> </ul>	
<b><u>2 Equipment Purchase Price</u></b> ( Not Recommended* )	
<ul style="list-style-type: none"> <li>• Radio, antenna, power supply and cable \$249.99 + tax</li> </ul>	
<b><u>3 Equipment Lease Price</u></b>	
<ul style="list-style-type: none"> <li>• Radio, antenna, power supply and cable \$17 + tax for 12 months</li> </ul>	
<b>Choose Only One of the above 3 options</b>	
<b><u>Monthly Service Fees</u></b> (Residential) this is guaranteed rate, speed will typically be around Max speed.	
128 kilobits/sec min rate - <b>7</b> megabits/sec Max <ul style="list-style-type: none"> <li>• \$45.95/month</li> <li>• \$60/month Mt Rose area</li> </ul>	
2. 1 megabit/sec min rate - <b>10</b> megabits/sec Max <ul style="list-style-type: none"> <li>• \$60/month</li> </ul>	
*We do not recommend customer purchase or lease of equipment as the customer will not be covered for equipment failure after 3 months. The option is provided for customers who have special requirements for ownership of equipment on their property.	

## Exhibit B: Service Area as Presented on Provider's Website



## Exhibit C: Federal Registration Number Search Results



### Preliminary Identification of Provider's Coverage Area

During the October 2011 mapping cycle, CN extracted the Avant service area polygons from the provider's website (Exhibit B) and submitted the polygons to NTIA. Information from that website was utilized to create a spectrum analysis testing route.



### **Testing Techniques**

CN staff then developed a spectrum analysis data collection and site validation plan (**Exhibit D**), based on information derived from Avant's coverage depiction from its website. Once in the field, the CN engineer measured signal strength at 33 different locations throughout South Reno, Washoe Valley, along Mt Rose Highway, parts of downtown Reno, Sparks, Spanish Springs, and Palomino Valley. The CN wireless engineer was equipped with an AVCOM PSA-37XP analyzer with RF detection from 1 MHz to 6 GHz and an array of antennas tuned specifically for the 900 MHz, 2.4 GHz, 3.65 GHz, and 5 GHz frequency bands. Each validation point was scrutinized for frequency of operation to ascertain if multiple frequencies were being utilized by the provider. A screen image of the operating frequency (or frequencies) was captured and general notes were recorded for each location (**Exhibit E**).

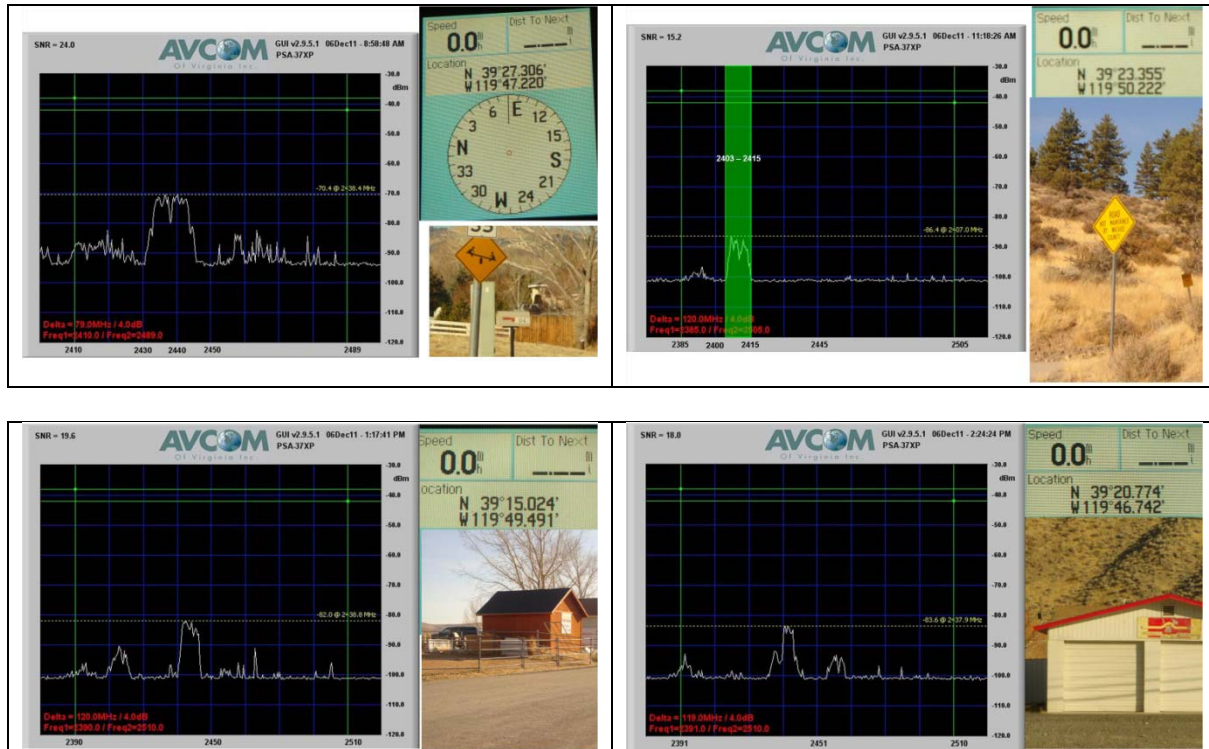
**Exhibit D: Avant Spectrum Analysis Survey Locations**





## Exhibit E: Avant Field Verification Tests and Notes

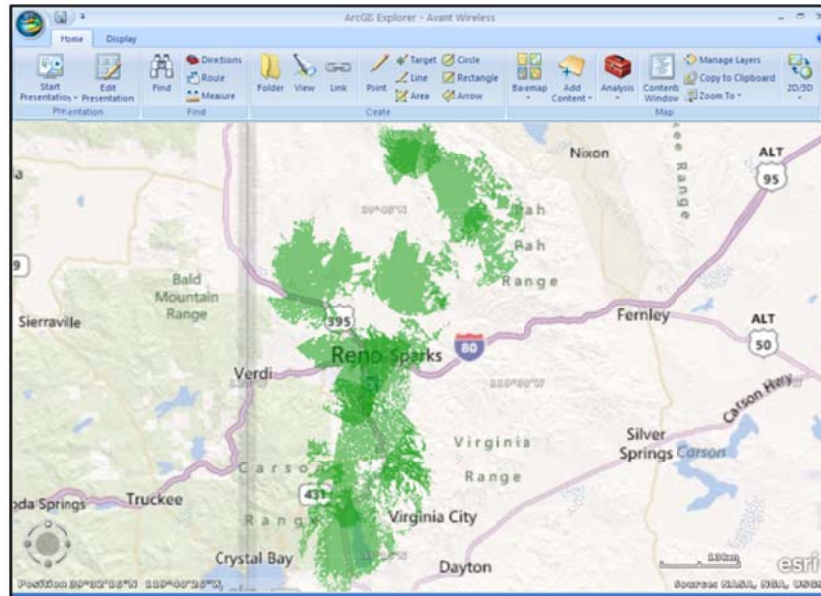
Site #	Date	Provider	(N) Lat Decimal	(-)(W) Long Decimal	Peak Freq	Peak Sig Strength	Spectrum Analyzer	Time	Images
21	12/6/11	Avant Wireless	39.379217	-119.836500	2424.4	-63.6	Avcom PSA	11:32 AM	Yes
22	12/6/11	Avant Wireless	39.377800	-119.836483	2434.3	-65.6	Avcom PSA	11:37 AM	Yes
23	12/6/11	Avant Wireless	39.391817	-119.767400	2431.9	-60.4	Avcom PSA	12:19 PM	Yes
24	12/6/11	Avant Wireless	39.364617	-119.732750	2436.4	-88.0	Avcom PSA	12:41 PM	Yes
25	12/6/11	Avant Wireless	39.250400	-119.824850	2438.8	-82.0	Avcom PSA	1:17 PM	Yes
26	12/6/11	Avant Wireless	39.277433	-119.756767	2410.2	-89.6	Avcom PSA	1:32 PM	Yes
27	12/6/11	Avant Wireless	39.276467	-119.787233	2462.5	-95.0	Avcom PSA	1:56 PM	Yes
28	12/6/11	Avant Wireless	39.289083	-119.784600	2410.2	-80.8	Avcom PSA	2:02 PM	Yes
29	12/6/11	Avant Wireless	39.302933	-119.783950	2452.9	-80.8	Avcom PSA	2:04 PM	Yes
30	12/6/11	Avant Wireless	39.315150	-119.785633	2442.5	-83.6	Avcom PSA	2:12 PM	Yes
31	12/6/11	Avant Wireless	39.346233	-119.779033	2437.9	-83.6	Avcom PSA	2:24 PM	Yes
32	12/6/11	Avant Wireless	39.319800	-119.809800	2414.3	-78.8	Avcom PSA	2:38 PM	Yes
33	12/7/11	Avant Wireless	39.520183	-119.780017	2421.9	-53.2	Avcom PSA	11:09 AM	Yes



## Results and Submission for October 2012

The publicly available data was transferred to the CN Provider Information file. A composite propagation study was completed (**Exhibit F**) based on the service area map polygons extracted from the provider's website and based on the field verification data established during the data collection exercise.

**Exhibit F: Avant Coverage Estimation (Propagation Model)**



## **APPENDIX B: BROADBAND PROVIDER LOG**

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## Broadband Provider Log

Complete	76
Non-Responsive/Refused	1
In Progress	0
Count of Datasets by Status	77
Total Unique Providers Represented	56

Provider Name	Platform	Status	NDA Execution Date	Notes
Absolute Best Communications, LLC	Fixed Wireless	Data Added to Statewide Inventory		[AUG-27-12 Jess Cary] Correction: Initial submission of provider's coverage, but they were in service previously.
Air-Internet, Inc.	Fixed Wireless	Data Added to Statewide Inventory		[AUG-27-12 Jess Cary] Correction: Initial submission of provider's coverage, but they were in service previously.
Arizona Nevada Tower Corporation	Fixed Wireless	Data Added to Statewide Inventory	3/8/2010	[AUG-27-12 Jess Cary] Change: Provider added tower.
AT&T Inc.	DSL	Data Added to Statewide Inventory	12/16/2009	[AUG-27-12 Jess Cary] Changes and/or Corrections: Possible service expansion or corrections to previous dataset; entirely new dataset provided for October 2012 submission.
AT&T Inc.	Mobile Wireless	Data Added to Statewide Inventory	12/16/2009	[AUG-27-12 Jess Cary] Changes and/or Corrections: Possible service expansion or corrections to previous dataset; entirely new dataset provided for October 2012 submission.
CenturyLink	DSL	Data Added to Statewide Inventory	12/4/2009	[AUG-27-12 Jess Cary] Changes and/or Corrections: Possible service expansion or corrections to previous dataset; entirely new dataset provided for October 2012 submission.
Charter Communications, Inc.	Cable	Data Added to Statewide Inventory	12/15/2009	[AUG-10-12 Jess Cary] Changes and/or Corrections: Possible service expansion or corrections to previous dataset; entirely new dataset provided for October 2012 submission.
Citizens Telecommunications Company of Nevada	DSL	Data Added to Statewide Inventory	1/22/2010	[AUG-12-12 Jess Cary] Changes and/or Corrections: Possible service expansion or corrections to previous dataset; partially new dataset provided for October 2012 submission.
CoxCom, Inc.	Cable	Data Added to Statewide Inventory	2/3/2010	[AUG-27-12 Jess Cary] Changes and/or Corrections: Possible service expansion or corrections to previous dataset; entirely new dataset provided for October 2012 submission.
Great Basin Internet Services, Inc.	Fixed Wireless	Data Added to Statewide Inventory	4/6/2010	[AUG-27-12 Jess Cary] Change: Provider added additional tower.
Leap Wireless International, Inc.	Mobile Wireless	Data Added to Statewide Inventory	4/6/2010	[AUG-27-12 Jess Cary] Change: Provider expanded coverage area.
MegaPath Inc.	DSL	Data Added to Statewide Inventory	2/15/2010	[AUG-30-12 Jess Cary] Correction: Submitting data for the first time, but service was offered previously.
MetroPCS Wireless, Inc.	Mobile Wireless	Data Added to Statewide Inventory	2/10/2012	[AUG-27-12 Jess Cary] Change: Provider expanded coverage area.
Schatnet Internet LLC	Fixed Wireless	Data Added to Statewide Inventory		[AUG-27-12 Jess Cary] Change: Provider added additional tower.
Spacenet Inc.	Satellite	Data Added to Statewide Inventory		[SEP-6-12 Jess Cary] Correction: Initial submission of provider's coverage, but they were in service previously.
Sprint Nextel Corporation	Mobile Wireless	Data Added to Statewide Inventory	1/14/2010	[AUG-27-12 Jess Cary] Changes and/or Corrections: Possible service expansion or corrections to previous dataset; entirely new dataset provided for October 2012 submission.
T-Mobile USA, Inc.	Mobile Wireless	Data Added to Statewide Inventory	1/8/2010	[AUG-27-12 Jess Cary] Changes and/or Corrections: Possible service expansion or corrections to previous dataset; entirely new dataset provided for October 2012 submission.
Vegas Wifi Communications LLC	Fixed Wireless	Data Added to Statewide Inventory	4/7/2010	[AUG-27-12 Jess Cary] Change/Correction: Provider added additional tower and decreased overall speed down to tier 5.
Verizon Communications, Inc.	Mobile Wireless	Data Added to Statewide Inventory	12/14/2009	[AUG-27-12 Jess Cary] Changes and/or Corrections: Possible service expansion or corrections to previous dataset; entirely new dataset provided for October 2012 submission.

ViaSat, Inc.	Satellite	Data Added to Statewide Inventory	1/8/2010	[AUG-17-12 Jess Cary] Correction: Coverage area remained the same, but tier 5 download/3 upload was reduced while tier 4 download/2 upload was increased.
WaveDirect Telecommunications, LLC	Fixed Wireless	Data Added to Statewide Inventory		[AUG-20-12 Jess Cary] Correction: Initial coverage submission for provider that has previously been in service.
CoxCom, Inc.	Backhaul	Backhaul Provider Only Processing Complete	2/3/2010	
MegaPath Inc.	Backhaul	Backhaul Provider Only Processing Complete	2/15/2010	
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	
Hot Spot Broadband, Inc.	Fixed Wireless	Speed Only Update; Data Processing Complete		[AUG-27-12 Jess Cary] Change: Provider upgraded infrastructure and can now offer tier 9 download speeds and tier 8 upload speeds.
Avant Wireless LLC	Fixed Wireless	No Update-Estimated Coverage Submitted for Non-Participating Provider		
Above All Communications, LLC	DSL	No Update to Provide		
Above All Communications, LLC	Fixed Wireless	No Update to Provide		
Arizona Nevada Tower Corporation	Fixed Wireless	No Update to Provide	3/8/2010	
Baja Broadband Holding Company, LLC	Cable	No Update to Provide	2/22/2010	
CalNeva Broadband, LLC	Cable	No Update to Provide	4/8/2010	
CC Communications	DSL	No Update to Provide	6/11/2010	
CC Communications	Fiber	No Update to Provide	6/11/2010	
CenturyLink	Backhaul	No Update to Provide	12/4/2009	
CenturyLink	Backhaul	No Update to Provide	12/4/2009	
Citizens Telecommunications Company of Ne	Backhaul	No Update to Provide	1/22/2010	
Cleanwire Corporation	Fixed Wireless	No Update to Provide	3/3/2010	
Cleanwire Corporation	Mobile Wireless	No Update to Provide	3/3/2010	
ETAN Industries	Cable	No Update to Provide		
Ezznet, Inc.	Fixed Wireless	No Update to Provide		
Filer Mutual Telephone Company	DSL	No Update to Provide	2/9/2010	
Fort Mojave Telecommunications, Inc.	DSL	No Update to Provide		
Fort Mojave Telecommunications, Inc.	Fiber	No Update to Provide		
High Desert Internet Services	Fixed Wireless	No Update to Provide		
Highlands Wireless Inc.	Fixed Wireless	No Update to Provide		
Hughes Network Systems, LLC	Satellite	No Update to Provide	2/5/2010	
InfoWest, Inc.	Fixed Wireless	No Update to Provide		
Jab Wireless, Inc.	Fixed Wireless	No Update to Provide	6/14/2010	[JUL-10-12 Dwayne Goodman] Jab Wireless acquired all KeyOn Communications, Inc. assets; now becoming a broadband provider for the state.
LasVegas.Net LLC	Fixed Wireless	No Update to Provide		
Lincoln Communications, Inc.	DSL	No Update to Provide	3/5/2010	
Lincoln Communications, Inc.	Fiber	No Update to Provide	3/5/2010	
Martell Telecommunications	DSL	No Update to Provide	3/23/2010	
Moapa Valley Telephone	DSL	No Update to Provide	2/22/2010	
Moapa Valley Telephone	Fiber	No Update to Provide	2/22/2010	
Mt. Wheeler Power	DSL	No Update to Provide	4/5/2010	
Mt. Wheeler Power	Fixed Wireless	No Update to Provide	4/5/2010	
Oasis Online, Inc.	Fixed Wireless	No Update to Provide		
Rio Virgin Telephone Company	DSL	No Update to Provide		
Rio Virgin Telephone Company	Fiber	No Update to Provide		
SMS Computing, Inc.	Fixed Wireless	No Update to Provide	3/19/2010	
Tele-NET.net LLC	Fixed Wireless	No Update to Provide		
tw telecom of nevada, llc	Backhaul	No Update to Provide	4/27/2010	
Verizon Communications, Inc.	Backhaul	No Update to Provide	12/14/2009	
WENR Corporation	Cable	No Update to Provide	1/11/2010	
Wireless Beehive, LLC	DSL	No Update to Provide	4/5/2010	
Wireless Beehive, LLC	Fixed Wireless	No Update to Provide	4/5/2010	
XO Communications, LLC	Backhaul	No Update to Provide	6/2/2010	
Yonder Media	Fixed Wireless	No Update to Provide		
Yonder Media	Fixed Wireless	No Update to Provide		
Charter Communications, Inc.	Backhaul	No Update Provided - Use Last Submission Data	12/15/2009	
Cogent Communications, Inc.	Backhaul	No Update Provided - Use Last Submission Data		
Level 3 Communications, Inc.	Backhaul	No Update Provided - Use Last Submission Data	12/14/2009	
Nevada System of Higher Education	Backhaul	No Update Provided - Use Last Submission Data		
Robinson Communications Corporation	DSL	No Update Provided - Use Last Submission Data	2/25/2010	
Zayo Bandwidth, LLC	Backhaul	No Update Provided - Use Last Submission Data		
Mason Valley Quicknet, LLC	Fixed Wireless	Non-Responsive to Multiple Attempts		8 contact attempts were made this period between July 7, 2012 and August 14, 2012.