

**OFFICIAL OCTOBER 2011 UPDATE SUBMISSION TO  
THE NATIONAL TELECOMMUNICATIONS AND INFORMATION  
ADMINISTRATION UNDER THE  
STATE BROADBAND INITIATIVE GRANT PROGRAM FOR THE  
STATE OF KANSAS**

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October 1, 2011

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**KANSAS COVER LETTER**

October 1, 2011

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

Dear Ms. Neville:

On September 1, 2011, the Kansas Department of Commerce assumed the role of Designated Entity, pursuant to a change in administrative policy within the state of Kansas. Through mutual planning and commitment to success, Connected Nation and the Kansas Department of Commerce have achieved a seamless transition in order to meet the requirements of the October 1 grant deadline. Therefore, Connected Nation is pleased to present this submission on behalf of the new Designated Entity, the Kansas Department of Commerce, and Kansas' State Broadband Initiative (SBI) Grant Program, known as Connect Kansas.

These artifacts should be found to be compliant with the October 1, 2011, 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 Kansas: October 1, 2011***

<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	n/a DataPackage.xlsx	Accuracy and Verification Report 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 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 2011 SBI data submission for the Connect Kansas program. Specifically, these new requirements are:

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

The submission of the broadband dataset for October 1, 2011, is contained within the SBI Data Transfer Model as released on the Grantee Workspace on June 30, 2011. 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**

This submission also includes a list of changes and corrections made to the dataset between the April 2011 submission and the October 2011 submission. This represents a summary of why data displays and/or supplied speeds, etc. are different from the previous submission. Changes can include upgrades to infrastructure to allow for higher throughput speeds for customers, an expansion of the service area (e.g. additional fixed wireless towers, recently activated DSLAMs, etc.), or a new provider in the marketplace. Corrections can include revisions to speed tier information that was previously reported incorrectly or the addition of a previously existing provider that has not yet been submitted in a semi-annual dataset.

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

This October 2011 semi-annual data update under the State Broadband Initiative 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 91 percent of the Kansas provider community, or 91 of 100 total providers. There are 90 participating providers and 1 additional non-participating provider whose estimated coverage areas have been submitted. Of the 90 participating providers, 38 supplied an update to their network or coverage area(s), while 48 have reported no change. The remaining 4 represent providers who previously supplied data but were non-responsive in the October 2011 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. Of the 9 providers that are not represented in the attached datasets, 7 have refused to participate in the voluntary program or were non-responsive to multiple contact attempts, and 2 providers are currently in some form of progress toward data submission but were not able to submit coverage areas at the time of this submission.

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

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

The Connect Kansas website, [www.connectkansas.org](http://www.connectkansas.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 Kansas website encountered 2,436 unique visits during this reporting period (13,935 total to date for the life of the grant awarded on November 1, 2009). Additionally, this pronounced Web activity netted 15 broadband inquiries over this same reporting period (406 grant inception to date). The website also provides the BroadbandStat application, which allows the consumer to confirm or dispute the coverage represented on the broadband inventory map. These consumer-initiated actions are facilitated through the Connect Kansas website and the Connect Kansas interactive mapping tool (BroadbandStat) that offer the citizens 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 Kansas mapping artifacts. Since the initial data collection and release of corresponding

maps, feedback in the form of broadband inquiries has allowed Connected Nation to identify additional areas that are in need of field validation, which is scheduled as soon as possible.

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

Connect Kansas 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.

In conjunction with the Kansas Department of Commerce, outreach was conducted during this data update reporting period by Connect Kansas to continue identification of existing, centralized sources for CAI connectivity data. Additionally, outreach was coordinated to distribute a CAI survey to institutions throughout the state through multiple methods including a customized online survey available on the Connect Kansas website. During this reporting period Connect Kansas has promoted the importance of broadband connectivity at anchor institutions and encouraged their participation in this data collection process. Connect Kansas 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.

From our work in Kansas, 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 Kansas 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 Kansas 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 Kansas, as well as the United States through contribution to the National Broadband Map. We look forward to the continuing work ahead.

Respectfully submitted,



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

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

In this fourth reporting period of the SBI, Connect Kansas 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. During this reporting period Connect Kansas has continued to focus efforts on conducting outreach and raising awareness of this important project.

Connect Kansas 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 Kansas through ESRI ArcGIS software.

Connect Kansas continues to utilize a customized online survey hosted through SurveyMonkey, with a landing page on the Connect Kansas website that was developed during the first reporting period. This survey, in combination with a customized data-gathering spreadsheet, was distributed to a targeted list of CAI throughout the state. With the transition of the DE status to the Kansas Department of Commerce, Connect Kansas will coordinate the outreach over the next submission with the intention to 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.connectkansas.org/mapping/Community\\_Anchor\\_Institution\\_Data\\_Collection.php](http://www.connectkansas.org/mapping/Community_Anchor_Institution_Data_Collection.php)

During this reporting period, Connect Kansas conducted research as part of an ongoing process to identify existing, centralized sources for CAI connectivity data and contact information specifically focusing on the education sector. Again, with the transition of the DE status to the Kansas Department of Commerce, Connect Kansas will continue to direct the efforts to utilize an extensive database of contact information for K-12 schools, healthcare facilities, higher education institutions, and libraries provided by Kan-ed to distribute and promote the online survey and raise awareness of the importance of CAI broadband.

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

<b>CAI Type</b>	<b>Total</b>	<b>Physical Address</b>	<b>Lat/Long</b>	<b>Technology of Transmission</b>	<b>Download Speed</b>	<b>Upload Speed</b>
<b>K-12</b>	2,148	2,148	2,148	896	1,975	1,976
<b>Libraries</b>	429	429	429	230	326	277
<b>Healthcare</b>	244	244	244	132	196	195
<b>Public Safety</b>	1,678	1,665	1,677	117	113	108
<b>Higher Ed Institutions</b>	104	104	103	77	102	101
<b>Other Government</b>	519	519	519	265	267	266
<b>Other Non-Government</b>	3	3	3	3	3	3
<b>Total</b>	<b>5,125</b>	<b>5,112</b>	<b>5,123</b>	<b>1,720</b>	<b>2,982</b>	<b>2,926</b>

## SBI DATA SUBMISSION METHODOLOGY

The submission of the broadband dataset for October 1, 2011, is contained within the SBI Data Transfer Model and additional components as released on the Grantee Workspace on June 30, 2011. Connected Nation has reviewed all literature that relates to the release and use of this data transfer model and recognizes that it does not replace or dictate how data is stored, processed, or displayed for the state, as it is meant primarily as a means to transfer the broadband data from all states and territories and populate the National Broadband Map in a seamless fashion. Guidance from the Technical Mapping Guide, as released on the Grantee Workspace on March 24, 2011, was also 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.

As part of the ongoing review and analysis process, NTIA has requested further information in the submission of the DataPackage spreadsheet. In addition to the information on providers whose coverage and accompanying attributes are submitted in the SBI Data Transfer Model, information on other providers that are considered to be non-viable is also included in the DataPackage. Providers deemed non-viable that have been excluded from continued outreach may have been eliminated for reasons such as (i) the company offers Internet service but at speeds below the current definition of broadband; (ii) the company was listed in advertisements as a broadband provider, but is actually a network solution or consulting firm, etc.; (iii) the company may build or install network infrastructure, but does not actually provide the broadband service to consumers; and (iv) the company has gone out of business. The submitted DataPackage includes any relevant information that has been obtained through the course of due diligence and/or direct provider outreach, such as a Federal Registration Number (if applicable), the company’s URL, the existence of an executed Nondisclosure Agreement, and brief notations regarding the status of the company.

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

### *Inventory of Deliverables, Connect Kansas: October 1, 2011*

<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\_CAIstitutions

Community Anchor Institutions-  
Listing.

The provider data collected by Connected Nation on behalf of the state of Kansas 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 Kansas 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.

## PROVIDER CHANGES AND CORRECTIONS FOR OCTOBER 2011

As requested by the SBI Program Office, a listing of the changes and/or corrections to the datasets between the April 2011 and October 2011 submissions is included in this narrative. This information is presented in this section as well as in the Broadband Provider Log. Changes to the data include expansion of service area(s), activation of new wireless towers, and upgrades to the network to provide higher download speeds to consumers. Corrections to the dataset include the addition of previously existing providers whose coverage has never been submitted, revision of coverage or speed information that was incorrect, and any other items that were misrepresented in the April 2011 dataset.

### Changes

- American Broadband Acquisition Corporation (fiber): New provider in the fiber residential market for October 2011 submission.
- AT&T (mobile wireless): Provider greatly expanded mobile territory throughout the state.
- Blue Valley Tele-Communications, Inc. (fiber): Provider expanded fiber territory into two exchanges.
- Clearwire Corporation (mobile wireless): Provider expanded mobile territory.
- Craw-Kan Telephone Cooperative, Inc. (DSL): Provider upgraded infrastructure to higher speeds.
- Craw-Kan Telephone Cooperative, Inc. (fiber): Provider expanded fiber territory into Girard.
- Cunningham Communications, Inc. (fiber): Provider expanded fiber territory into two other exchanges that were previously DSL.
- Eagle Communications, Inc. (fiber): Provider expanded fiber territory.

- Fairpoint Communications, Inc. (DSL): Provider expanded DSL territory in one area in western KS.
- Golden Belt Telephone Association, Inc. (cable): Provider no longer offers cable service in Schoenchen. Increased advertised upload speeds in all the cable towns.
- Golden Belt Telephone Association, Inc. (DSL, fiber): Provider converted some DSL infrastructure to fiber and upgraded infrastructure to higher speeds.
- Home Communications, Inc. (cable): Provider upgraded download and upload speed capabilities.
- Home Communications, Inc. (DSL, fiber): Provider converted DSL infrastructure to fiber in two exchanges.
- JBN Telephone Company, Inc. (fixed wireless): Provider added additional transmission points in 3650 spectrum.
- JBN Telephone Company, Inc. (cable): New platform from provider. May have been in existence during prior submissions, but there is not any confirmation that this was in service previously.
- Knology of Kansas (fixed wireless): After purchase of Sunflower Broadband, provider altered wireless infrastructure to provide slightly more coverage.
- Knology of Kansas (cable): Provider expanded cable territory.
- Knology of Kansas (fiber): New provider in the fiber residential market for October 2011 submission.
- Pioneer Telephone Association, Inc. (cable): Provider upgraded infrastructure to higher speeds.
- Pioneer Telephone Association, Inc. (fiber): New provider offering fiber services for the October 2011 submission.
- Rainbow Telecommunications Association, Inc. (cable, fiber): Reduction in cable coverage as all cable towns in ILEC area are now fiber.
- Rural Telephone Service Company (DSL, fiber): Provider converted some DSL infrastructure to fiber.
- Southern Kansas Telephone Company, Inc. (cable): Provider expanded cable territory north of Clearwater along with changing coverage in Clearwater.
- Southern Kansas Telephone Company, Inc. (DSL): Provider upgraded infrastructure to higher speeds.
- T-Mobile USA, Inc. (mobile wireless): Provider expanded mobile territory in eastern KS. Upgraded speed capabilities with HSPA+ 42.
- United Communications Association, Inc. (mobile wireless): Provider upgraded infrastructure to allow for higher download speeds.
- Valnet Holdings LLC (fixed wireless): Provider added additional transmission points.
- Verizon Communications, Inc. (mobile wireless): Provider expanded mobile territory. Upgraded speeds in 700 MHz spectrum.
- Wheatland Broadband Services (fixed wireless): Provider added an additional transmission point near Sharon Springs.
- Wilson Telephone Company, Inc. (fiber): Provider expanded fiber territory into Lucas exchange.

### Corrections

- City of Coffeyville (fixed wireless): New provider for October 2011 submission that was previously gathering data, but had never submitted anything.
- DISH Network Corporation (satellite): Satellite data is being submitted and was not included in the April 2011 submission. While coverage is currently the entire state boundary, work continues on having more granular data available.
- Eagle Communications, Inc. (cable): Maximum advertised speeds in 6 towns were corrected to portray the 9 speed tier.
- Eagle Communications, Inc. (fiber): Provider corrected speeds to speed tier 9.
- Fairpoint Communications, Inc. (DSL): Provider corrected some coverage areas.
- Hughes Network Systems, LLC (satellite): Satellite data is being submitted and was not included in the April 2011 submission. While coverage is currently the entire state boundary, work continues on having more granular data available.
- Southeast Nebraska Communications (DSL): New provider for October 2011 submission that previously refused to participate due to small presence in state.
- Southern Kansas Telephone Company, Inc. (fiber): Provider provided corrections that reduced its fiber territory.
- Stelera Wireless, LLC (mobile wireless): Provider service area is now a real-world propagation unlike prior submissions.
- Stouffer Communications (fixed wireless): New provider for October 2011 submission that was previously unresponsive.
- SwiftLink Communications (fixed wireless): New provider for October 2011 submission that is still unresponsive. Connected Nation estimated coverage for this provider.
- Totah Communications, Inc. (DSL): Maximum upload speed tier was corrected to speed tier 3. Incorrectly reported as speed tier 2 in past submissions.
- Valnet Holdings LLC (fixed wireless): Provider requested d.b.a name change.
- WildBlue Communications, Inc. (satellite): Satellite data is being submitted and was not included in the April 2011 submission. While coverage is currently the entire state boundary, work continues on having more granular data available.
- Windjammer Communications, LLC (cable): New provider for October 2011 submission that was previously unresponsive.

### Changes and/or Corrections – Entirely New Dataset Submitted

- AT&T (DSL)
- Cable ONC Inc. (cable)
- CenturyLink (DSL)
- Cequel Communications (cable)
- Comcast Cable Communications, LLC (cable)
- CoxCom Inc. (cable)
- Leap Wireless International, Inc. (mobile wireless): Also of note, provider reduced outskirt coverage around Kansas City.
- Sprint Nextel Corporation (mobile wireless): Also of note, the coverage is very comparable to prior submission besides some minor spectrum 5 differences.

- Time Warner Cable LLC (cable): Also of note, provider upgraded almost entire infrastructure with higher speed capabilities.
- United States Cellular Corporation (mobile wireless): Also of note, there are minor changes throughout coverage area.

## KANSAS FIELD VALIDATION METHODOLOGY

Connected Nation 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 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 Connected Nation's state specific websites.

Additionally, Connected Nation cross-referenced numerous public documents in order to ensure that all known broadband providers were located and contacted. This included searching membership logs from the 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 Kansas on the following providers: Ace Computer; Allegiance Communications; AT&T, Inc.; Atwood Cable Systems, Inc.; Benson Telephone Service; BlueValley Telecommunications, Inc.; BroadBand Wireless (d.b.a. Benkleman Telephone); Cable ONE, Inc.; CenturyLink; City of Chanute; City of Coffeyville; Clearwire Corporation; Columbus Telephone Company; Cox Communications, Inc.; Craw-Kan refccTelephone Cooperative, Inc.; CTC Wireless Internet; Cyber Lodge Wireless; Eagle Communications, Inc.; Elkhart Telephone Company, Inc.; Fairpoint Communications, Inc.; Golden Belt Telephone Association, Inc.; H & B Cable Services, Inc.; Haviland Telephone Company; IdeaTek Systems, Inc.; J.B.N. Telephone Company; JMZ Corporation (d.b.a. Kwikom); Kanola Telephone; Kansas Broadband Internet, Inc.; LaHarpe Telephone Company, Inc.; Lawrence

FreeNet; Madison Telephone Company LLC; Mediacom Communications Corporation; Mercury Wireless; Mid-Kansas Cable Services; Midwest Connections, Inc.; Mobill.net; Moundridge Telephone Company, Inc.; Pioneer Telephone Association, Inc.; Pixius Communications LLC; Rainbow Telecommunications Association, Inc.; Rebeltec Communications; Rural Telephone Service Company; S & A Telephone Company, Inc.; S&T Telephone Cooperative Association; SCI Cable, Inc.; Seamlessnet; SKT, Inc.; South Central Telephone Association; Southeast Nebraska Communications; Sprint Nextel Corporation; St. Joe Wireless; Stelera Wireless; Sumner Communications; Sunflower Broadband; SWKO (d.b.a. SouthWest Kansas online); The Computer Generation; Time Warner Cable; Totah Communications, Inc.; Tri-County Telephone Association, Inc.; Tri-Rivers; Twin Valley Communications; U.S. Cellular; United Telephone Association; Valnet LLC; Verizon Communications, Inc.; Wamego Telecommunications Company, Inc.; Wave Wireless; Wheat State Telephone, Inc.; and Wheatland Electric Cooperative.

From program initiation through this reporting period, Connected Nation has completed in-the-field validation testing against 70 companies (out of a universe of 100 viable providers) totaling 70 percent within the state of Kansas.

Connected Nation 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. 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.

### CenturyLink

Issue: DSL platform with maximum advertised download speed in tier 9, higher than expected value range for the technology.

Resolution: Provider representative indicated that tier 9 DSL service is indeed available, but to less than 10% of its customers, which is why it is not widely advertised.

### Comcast

Issue: Technology of transmission 41 with maximum advertised download speed in tier 10, higher than expected value range for the technology.

Resolution: Provider website advertises 105 Mbps; screenshot available below. However, additional input from provider on the technology listings and corresponding speed tiers was not received prior to the submission; dataset submitted as-is and work will continue to provide more accurate dataset in April 2012.



**Extreme 105**

Downloads up to 105Mbps, uploads up to 10Mbps.

- The fastest download speeds around – incredible speeds for households with several computers, hard-core gamers, downloading HD movies and more.
- Constant Guard™ - a \$300 value of top-rated security software, including the Norton™ Security Suite and much more.
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- ESPN3.com on Comcastnet.

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**Giant Communications**

Issue: Technology of transmission 40 with maximum advertised download speed in tier 6, lower than expected value range for the technology.

Resolution: Provider representative indicated that it utilizes both DOCSIS 2.0 and 3.0, with the DOCSIS 3.0 CMTS being backwards compatible and used on speed tier 6 areas.

**Haviland Telephone**

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

Resolution: Provider representative confirmed the availability of 12 Mbps service and ensured that it currently has customers subscribing to that speed.

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

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 SBI mapping initiative.

The following narrative provides detail regarding the recent data collection activities related to SwiftLink Communications, a wireless Internet service provider (WISP), located in Falls City, Nebraska, with a service area around Hiawatha, Kansas. 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 continued trying to obtain the participation of SwiftLink with 9 instances of communication via telephone and e-mail sessions since October 29, 2010, through August 2, 2011. No communication reply was received from a company representative. Additionally, a CN staff member visited the SwiftLink Communications office on August 2, 2011, to discuss the broadband mapping project in person with SwiftLink Communications staff. Staff was aware of the project; however, they were unable to provide relevant data and deferred to a company representative who was not in the office.

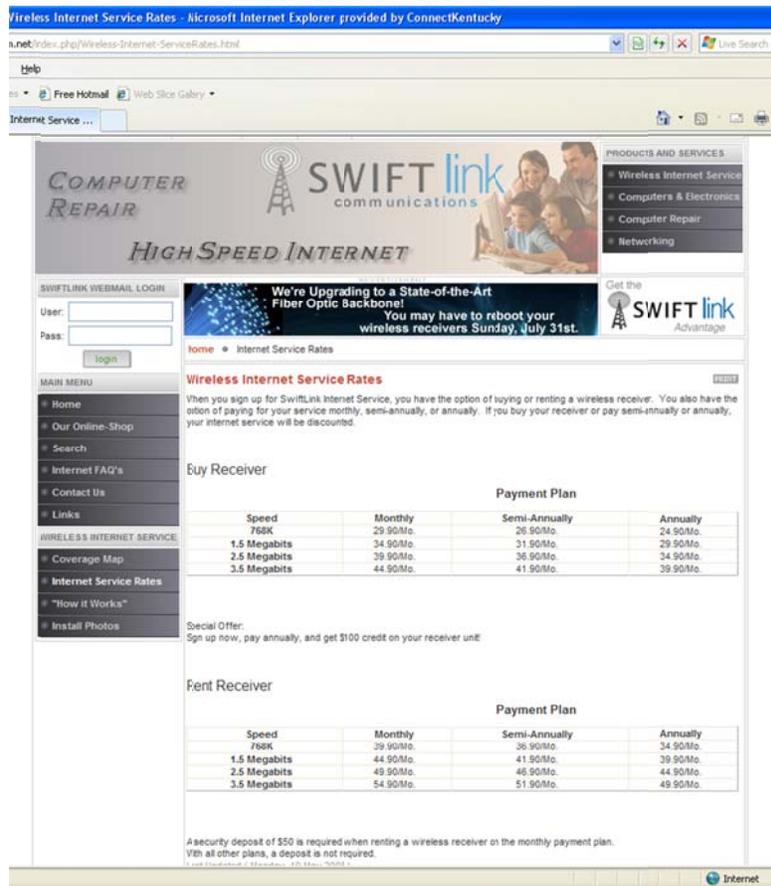
**The Issue**

SwiftLink Communications, by its lack of responsiveness since October 29, 2010, has predicated its unwillingness to participate in the Kansas 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. For example, CN reviewed the provider’s website (<http://www.slinkcom.net>) 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 yielded an FRN of 0018595439 (**Exhibit C**) with contact information relative to the owner of the company. Also, to support field validation of wireless access points, the FRN was referenced to the FCC Universal Licensing System (ULS) to identify any licenses the provider may hold which could possibly enhance locating active access points for the service area. This process yielded no licenses in the name of SwiftLink Communications (**Exhibit D**).

**Exhibit A: Service Plans**



The screenshot shows the SwiftLink website's 'Wireless Internet Service Rates' page. It features a navigation menu on the left, a main content area with a 'Wireless Internet Service Rates' heading, and two tables detailing pricing for 'Every Receiver' and 'Rent Receiver' across different speeds and payment plans. A 'Social Offer' is also highlighted.

**Wireless Internet Service Rates**

When you sign up for SwiftLink Internet Service, you have the option of buying or renting a wireless receiver. You also have the option of paying for your service monthly, semi-annually, or annually. If you buy your receiver or pay semi-annually or annually, your internet service will be discounted.

**Every Receiver**

Speed	Payment Plan		
	Monthly	Semi-Annually	Annually
768K	29.90/Mo.	26.90/Mo.	24.90/Mo.
1.5 Megabits	34.90/Mo.	31.90/Mo.	29.90/Mo.
2.5 Megabits	39.90/Mo.	36.90/Mo.	34.90/Mo.
3.5 Megabits	44.90/Mo.	41.90/Mo.	39.90/Mo.

**Social Offer:**  
Sign up now, pay annually, and get \$100 credit on your receiver unit!

**Rent Receiver**

Speed	Payment Plan		
	Monthly	Semi-Annually	Annually
768K	39.90/Mo.	36.90/Mo.	34.90/Mo.
1.5 Megabits	44.90/Mo.	41.90/Mo.	39.90/Mo.
2.5 Megabits	49.90/Mo.	46.90/Mo.	44.90/Mo.
3.5 Megabits	54.90/Mo.	51.90/Mo.	49.90/Mo.

A security deposit of \$50 is required when renting a wireless receiver on the monthly payment plan. With all other plans, a deposit is not required.

### Exhibit B: Service Area



### Exhibit C: Federal Registration Number

FCC Registration System - Microsoft Internet Explorer provided by ConnectKentucky

https://fys/floss/fcc.gov/coresWk... Identified by Veri... Live Search

File Edit View Favorites Tools Help

Favorites Suggested Sites: Free Hotmail Web Slice Gallery

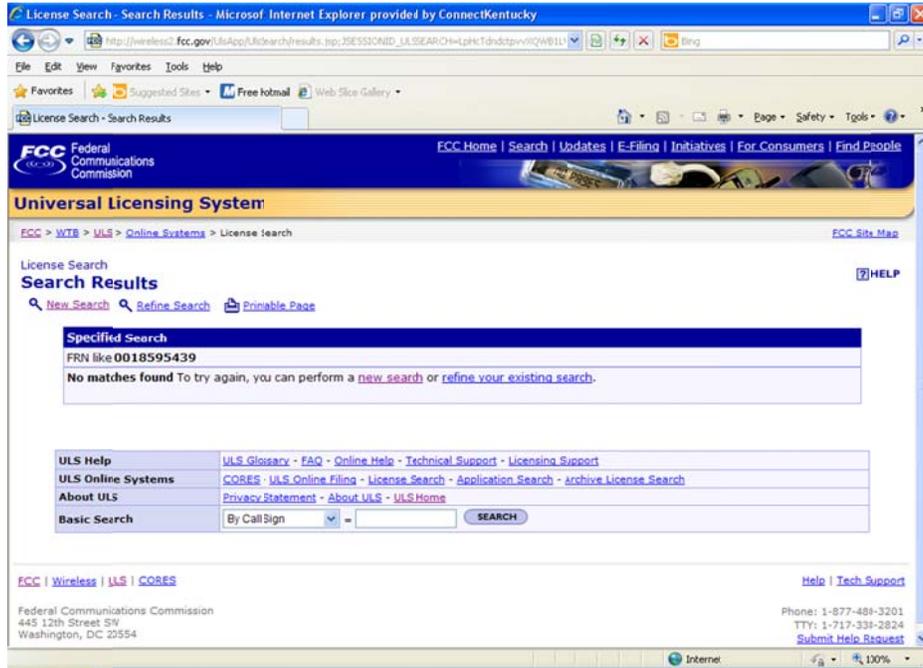
FCC Registration System Page Safety Tools

[Close Window](#)

Registration Detail	
FRN:	0018595439
Registration Date:	03/13/2009 02:18:00 AM
Last Updated:	
Business Name:	SwiftLink Communications
Business Type:	Private Sector_Sole Proprietor
Contact Organization:	SwiftLink Communications
Contact Position:	Owner
Contact Name:	Mr Andrew T Strasil
Contact Address:	1721 Stone Street Falls City, NE 68355 United States
Contact Email:	andy@slinkcom.net
ContactPhone:	(402) 245-2878
ContactFax:	

Done Internet 100%

### Exhibit D: License Reference



### Preliminary Identification of Provider’s Coverage Area

Connected Nation extracted the SwiftLink Communications service area map from its website. The website service area was utilized to create a Google Earth image overlay (**Exhibit E**). The image overlay was positioned to match the Google Earth base map’s roadways, county boundaries, and water bodies. The degree of accuracy of the image overlay was maintained at less than .2 miles (1,058 ft.) to establish a minimum search criteria of a given access point. The provider’s service area depiction is represented by polygons as shown in Exhibit B. Using the coordinates determined to be center coordinates, a search ring was created with the image overlay to determine the feasibility of locating the towers to identifying coordinates of the locations. The two locations’ center coordinates were geocoded through Google Earth and examined utilizing the zoom option of the aerial imagery. The two transmitting location structures were not identified. This required a means of establishing coordinates for the access point locations. A site validation trip was planned and executed to the area. Both locations were entered into a GPS-enabled version of Microsoft *Streets and Trips* software (**Exhibit F**) to develop a route for the validation process.

Exhibit E: Google Earth - Provider's Service Area Image Overlay

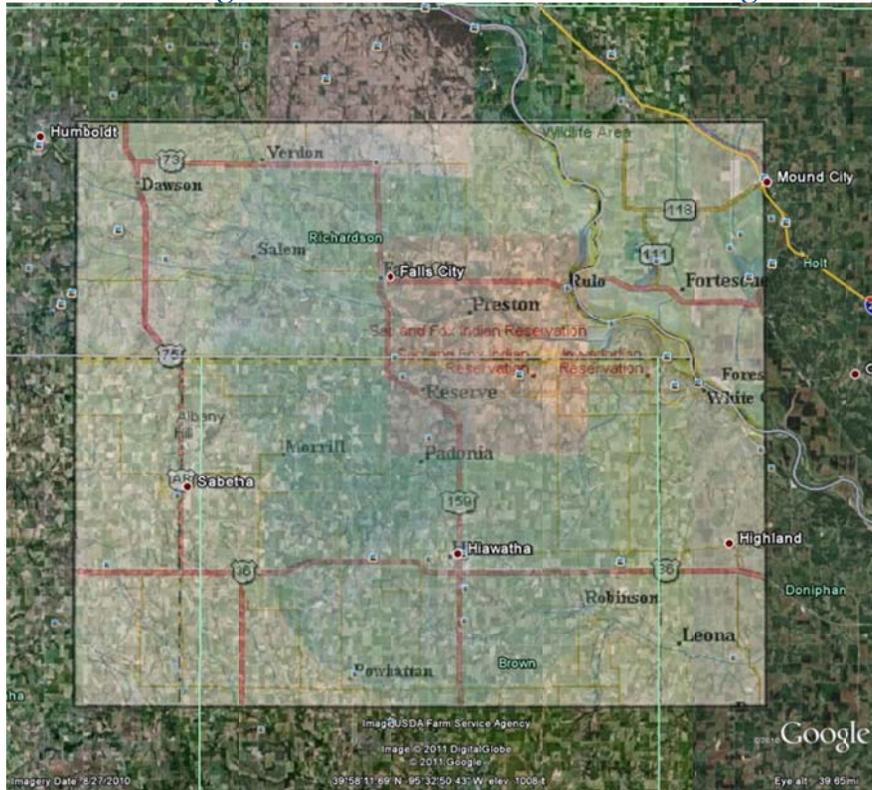
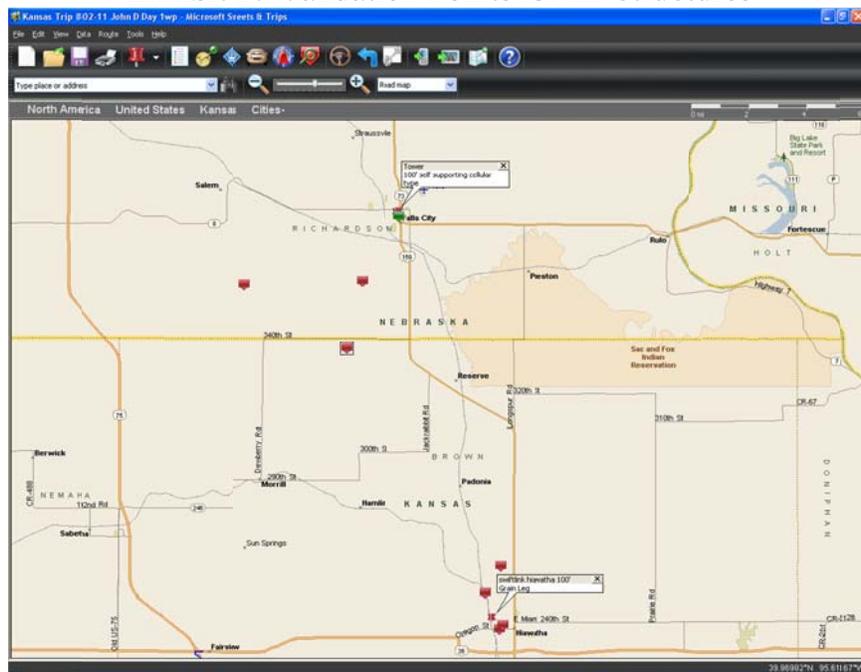


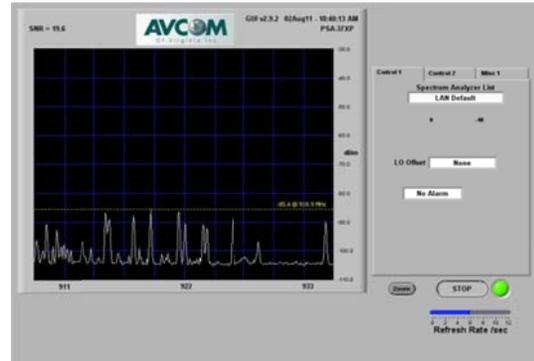
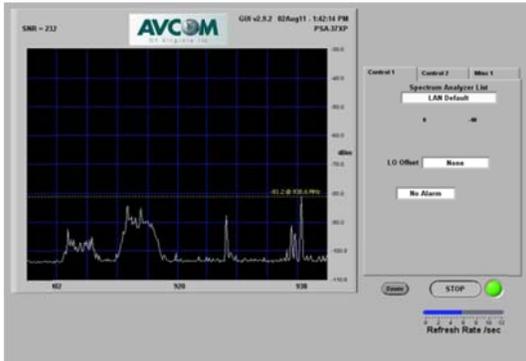
Exhibit F: Validation Points for AP Structures



### **Testing Techniques**

Connected Nation staff developed a site validation route based on data established with the Google Earth image overlay. The CN wireless engineer was equipped with an AVCOM PSA-37XP spectrum 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 (**Exhibit G**). Each validation point was scrutinized for frequency of operation. A screen image of the operating frequency (or frequencies) was captured; general notes were recorded for each location - approximate antenna height, frequency of operation, antenna type (omni or sectored), and photographs were taken of the access points. See Exhibit G on the following page.

Exhibit G: Field Data for SwiftLink Communications Office/Hub Location



The CN engineer determined that SwiftLink's wireless services are transmitted, at a minimum, on the unlicensed 900 MHz band (see spectrum analyzer screen shots above).



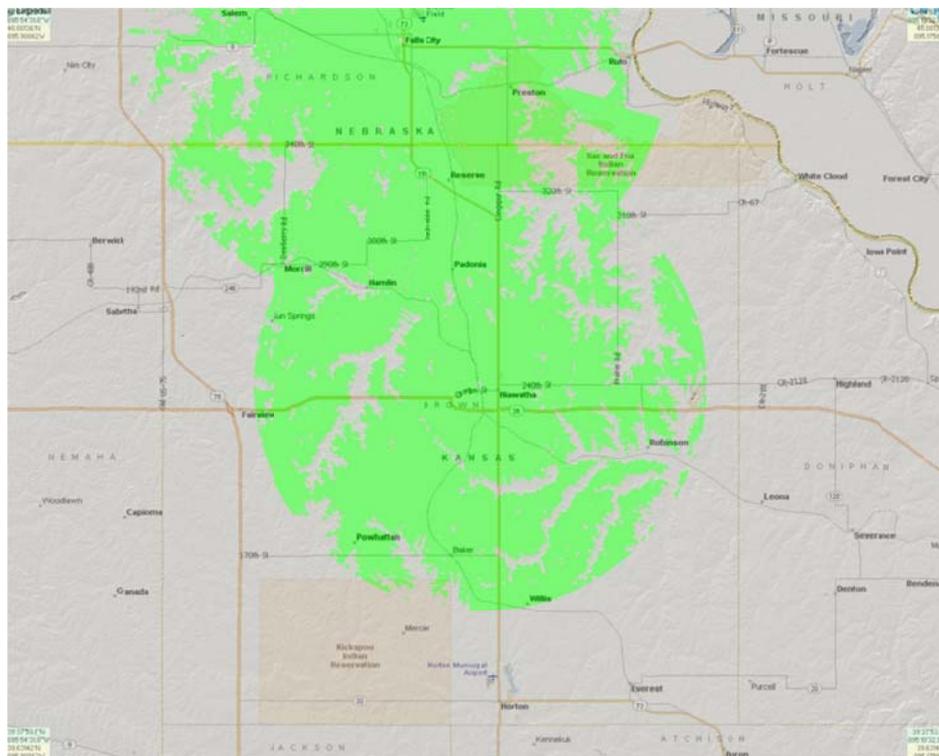
**Results and Submission for October 2011**

Of the 8 locations visited during the field assessment route, 2 wireless access points were identified and relative information was logged into the SwiftLink Communications field validation notes file (**Exhibit H**). The field data and the publicly available data were transferred to the Connected Nation Provider Information file. A composite propagation study was completed based on the field data (**Exhibit I**). Both documents were forwarded to SwiftLink Communications and advised the information will be submitted to Connect Kansas and the NTIA broadband mapping project for processing if there are no discrepancies of the estimated coverage received from the provider within a 48-hour period.

**Exhibit H: Field Validation Notes**

(N) Lat Decimal	(-)(W) Long Decimal	Peak Freq	Peak Sig Strength	Spectrum Analyzer	Time
40.0625	-95.6042	918	-79	Avcom PSA-37XP	10:40 AM
40.0286	-95.7047	950	-94	Avcom PSA-37XP	11:30 AM

**Exhibit I: SwiftLink Communications Composite Coverage**



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

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

Estimates derived from provider-validated data indicate that approximately 2.24 percent of Kansas households do not have terrestrial fixed broadband service available, and approximately 0.08 percent<sup>1</sup> of Kansas households have neither mobile nor fixed broadband service available.<sup>2</sup>

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

<sup>2</sup> 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

Within rural areas of the state, results derived from provider-validated data indicate that approximately 4.66 percent of rural Kansas households do not have terrestrial fixed broadband service available, and approximately 0.18 percent<sup>3</sup> of rural Kansas households have neither mobile nor fixed broadband service available.<sup>4</sup> Please note that the availability estimates presented are based on Census 2000 household information; these figures will be updated in the near future with Census 2010 household information.

## 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)
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)

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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.

<sup>3</sup> See footnote 1.

<sup>4</sup> See footnote 2.

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 Federal Communications Commission Universal Licensing System and the **CO**mmission **RE**gistration **S**ystem.

Propagation modeling is an empirical mathematical formulation for the characterization of radio wave propagation as a function of frequency, distance, and other conditions. Propagation software(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**

Connected Nation 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 three categories: 1) residents who do not have broadband but want it; 2) residents who have broadband but want a different provider; and 3) residents who do not have broadband, but the broadband inventory maps indicate that they do.

BBIs are submitted frequently by consumers via the Connect Kansas 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 Connected Nation 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.

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 Connected Nation state programs with successful results. Altogether Connected Nation has received over 17,000 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 Connected Nation 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 Kansas project has received a total of 15 inquiries (406 grant inception to date). As more inquiries are submitted to Connect Kansas, 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.

## BROADBAND INVENTORY MAPS

The Broadband Inventory Maps are printer-friendly maps that include broadband coverage, cities, and towns, county boundaries, and detailed road information across the state of Kansas. The accuracy of these maps is critical to the future of broadband infrastructure planning in Kansas. The purpose of the maps is two-fold:

- **Data Verification** – Broadband providers and the public should use the map to ensure the current service area is accurately reflected.
- **Broadband Expansion Plans** – Broadband providers can use the inventory maps and unserved household density maps to learn where there are currently unserved areas that are densely populated. These maps can aid providers in identifying potential areas of expansion that could yield a high return on investment.

To date, the Connect Kansas Broadband Inventory Maps have received a total of 11,916 downloads. Of those 11,916 downloads, the Statewide Broadband Inventory Maps received 1,409 downloads, the County Broadband Inventory Maps received 8,245 downloads, and the census block level data received 2,262 downloads.

## BROADBANDSTAT METHODOLOGY

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

First and foremost, BroadbandStat allows consumers to locate their residence and identify providers that offer broadband Internet service to that location. The interactive platform allows for users to build and evaluate broadband expansion scenarios using a wealth of data, including education and population demographics, broadband availability, and research about the barriers to adoption.

New functionality in BroadbandStat allows the consumer to 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 Connected Nation 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 Connected Nation to approach the

providers within that area in an effort to trim down their coverage to more accurately represent real-world availability on the ground.

The Connect Kansas project launched BroadbandStat on September 23, 2010, and has received a total of 1,507 visits to date, of which 557 occurred this reporting period.

## **SPEED TEST METHODOLOGY**

The 985 speed tests that are represented in the Connect Kansas Speed Test Report during this reporting period (3,003 grant inception to date) are the result of a partnership between Connected Nation and Ookla Net Metrics. Utilizing this relationship increases the level of confidence in the data being collected and provides for a far greater sample size than could be collected by a single testing site.

Ookla owns and operates Speedtest.net, as well as develops and deploys speed tests, such as the Connect Kansas 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 Kansas 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 Kansas 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 Kansas.



## Broadband Provider Log

Complete	152
Non-Responsive/Refused	10
In Progress	6
Count of Datasets by Status	168
Total Unique Providers Represented	100

Provider Name	Platform	Status	NDA Execution Date	Notes
American Broadband Acquisition Corporation	Fiber	Data Added to Statewide Inventory	11/20/2009	[SEP-8-11 Brian Dudek] Change: New provider in the fiber residential market for October 2011 submission.
AT&T Communications of Texas, Inc.	DSL	Data Added to Statewide Inventory	12/16/2009	[AUG-26-11 Brian Dudek] Change/Correction: possible service expansion or corrections to previous dataset; entirely new dataset for October 2011 submission.
AT&T Communications of Texas, Inc.	Mobile Wireless	Data Added to Statewide Inventory	12/16/2009	[AUG-19-11 Brian Dudek] Change: Provider greatly expanded mobile territory throughout the state.
Blue Valley Tele-Communications, Inc.	Fiber	Data Added to Statewide Inventory	11/17/2009	[SEP-8-11 Brian Dudek] Change: Provider expanded fiber territory into two exchanges.
Cable ONE Inc.	Cable	Data Added to Statewide Inventory	12/7/2009	[SEP-1-11 Brian Dudek] Change/Correction: possible service expansion or corrections to previous dataset; entirely new dataset for October 2011 submission. Coverage change likely primarily a result of the 2000-2010 census change.
CenturyLink	DSL	Data Added to Statewide Inventory	12/4/2009	[SEP-1-11 Brian Dudek] Change/Correction: possible service expansion or corrections to previous dataset; entirely new dataset for October 2011 submission.
Cequel Communications	Cable	Data Added to Statewide Inventory	12/15/2009	[SEP-1-11 Brian Dudek] Change/Correction: possible service expansion or corrections to previous dataset; entirely new dataset for October 2011 submission. Coverage change likely primarily a result of the 2000-2010 census change.
City of Coffeyville	Fixed Wireless	Data Added to Statewide Inventory		[AUG-24-11 Brian Dudek] Correction: New provider for October 2011 submission that was previously gathering data, but had never submitted anything.
Clearwire Corporation	Mobile Wireless	Data Added to Statewide Inventory	3/17/2011	[SEP-1-11 Brian Dudek] Change: Provider expanded mobile territory.
Comcast Cable Communications, LLC	Cable	Data Added to Statewide Inventory	12/7/2009	[AUG-23-11 Brian Dudek] Change/Correction: possible service expansion or corrections to previous dataset; entirely new dataset for October 2011 submission. Coverage change likely primarily a result of the 2000-2010 census change.
CoxCom Inc.	Cable	Data Added to Statewide Inventory	1/29/2010	[AUG-26-11 Brian Dudek] Change/Correction: possible service expansion or corrections to previous dataset; entirely new dataset for October 2011 submission. Coverage change likely primarily a result of the 2000-2010 census change.
Craw-Kan Telephone Cooperative, Inc.	DSL	Data Added to Statewide Inventory	12/7/2009	[SEP-1-11 Brian Dudek] Change: Provider upgraded infrastructure to higher speeds.
Craw-Kan Telephone Cooperative, Inc.	Fiber	Data Added to Statewide Inventory	12/7/2009	[SEP-1-11 Brian Dudek] Change: Provider expanded fiber territory into Girard.
Cunningham Communications, Inc.	Fiber	Data Added to Statewide Inventory	9/8/2009	[SEP-7-11 Brian Dudek] Change: Provider expanded fiber territory into two other exchanges that were previously DSL.
Eagle Communications, Inc.	Cable	Data Added to Statewide Inventory		[SEP-1-11 Brian Dudek] Correction: Maximum advertised speeds in 6 towns were corrected to portray the 9 speed tier.

Eagle Communications, Inc.	Fiber	Data Added to Statewide Inventory		[SEP-1-11 Brian Dudek] Change/Correction: Provider expanded fiber territory and corrected speeds to speed tier 9.
Fairpoint Communications, Inc.	DSL	Data Added to Statewide Inventory	1/22/2010	[AUG-26-11 Brian Dudek] Change/Correction: Provider expanded DSL territory in one area in western KS and corrected some coverage areas.
Golden Belt Telephone Association, Inc.	Cable	Data Added to Statewide Inventory		[SEP-1-11 Brian Dudek] Change: Provider no longer offers cable service in Schoenchen anymore. Increased advertised upload speeds in all the cable towns.
Golden Belt Telephone Association, Inc.	DSL	Data Added to Statewide Inventory		[SEP-1-11 Brian Dudek] Change: Provider converted some DSL infrastructure to fiber and upgraded infrastructure to higher speeds.
Golden Belt Telephone Association, Inc.	Fiber	Data Added to Statewide Inventory		[SEP-1-11 Brian Dudek] Change: Provider expanded fiber territory.
Home Communications, Inc.	Cable	Data Added to Statewide Inventory	11/5/2009	[SEP-6-11 Brian Dudek] Change: Provider upgraded download and upload speed capabilities.
Home Communications, Inc.	Fiber	Data Added to Statewide Inventory	11/5/2009	[SEP-8-11 Brian Dudek] Change: Provider expanded fiber territory into two exchanges.
Home Communications, Inc.	DSL	Data Added to Statewide Inventory	11/5/2009	[SEP-8-11 Brian Dudek] Change: Provider converted DSL infrastructure in two exchanges to fiber.
JBN Telephone Company, Inc.	Fixed Wireless	Data Added to Statewide Inventory	12/14/2009	[SEP-9-11 Brian Dudek] Change: Provider added additional transmission points in 3650 spectrum.
JBN Telephone Company, Inc.	Cable	Data Added to Statewide Inventory	12/14/2009	[SEP-6-11 Brian Dudek] Change/Correction: New platform from provider. May have been in existence during prior submissions, but there is not any confirmation that this was in service previously.
Knology of Kansas	Fixed Wireless	Data Added to Statewide Inventory	7/13/2011	[AUG-22-11 Brian Dudek] Change: After purchase of Sunflower Broadband, provider altered wireless infrastructure to provide slightly more coverage.
Knology of Kansas	Cable	Data Added to Statewide Inventory	7/13/2011	[AUG-22-11 Brian Dudek] Change: Provider expanded cable territory.
Knology of Kansas	Fiber	Data Added to Statewide Inventory	7/13/2011	[AUG-22-11 Brian Dudek] Change: New provider in the fiber residential market for October 2011 submission.
Leap Wireless International, Inc.	Mobile Wireless	Data Added to Statewide Inventory	4/6/2010	[AUG-19-11 Brian Dudek] Change/Correction: Entire new dataset submitted for October 2011 submission. Reduced outskirt coverage around Kansas City.
Pioneer Telephone Association, Inc.	Cable	Data Added to Statewide Inventory	12/7/2009	[SEP-6-11 Brian Dudek] Change: Provider upgraded infrastructure to higher speeds.
Pioneer Telephone Association, Inc.	Fiber	Data Added to Statewide Inventory	12/7/2009	[SEP-8-11 Brian Dudek] Change: New provider offering fiber services for the October 2011 submission.
Rainbow Telecommunications Association, Inc.	Cable	Data Added to Statewide Inventory	12/9/2009	[SEP-6-11 Brian Dudek] Change: Reduction in cable coverage as all cable towns in ILEC area are now fiber.
Rainbow Telecommunications Association, Inc.	Fiber	Data Added to Statewide Inventory	12/9/2009	[SEP-6-11 Brian Dudek] Change: Provider expanded fiber territory to entire exchange.
Rural Telephone Service Company, Inc.	Fiber	Data Added to Statewide Inventory	11/16/2009	[AUG-16-11 Brian Dudek] Change: Provider expanded fiber territory.
Rural Telephone Service Company, Inc.	DSL	Data Added to Statewide Inventory	11/16/2009	[AUG-16-11 Brian Dudek] Change: Provider converted some DSL infrastructure to fiber.
Southeast Nebraska Communications	DSL	Data Added to Statewide Inventory		[SEP-1-11 Brian Dudek] Correction: New provider for October 2011 submission that previously refused to participate due to small presence in state.
Southern Kansas Telephone Company, Inc.	Cable	Data Added to Statewide Inventory	12/31/2009	[SEP-6-11 Brian Dudek] Change: Provider expanded cable territory north of Clearwater along with changing coverage in Clearwater.
Southern Kansas Telephone Company, Inc.	DSL	Data Added to Statewide Inventory	12/31/2009	[SEP-8-11 Brian Dudek] Change: Provider upgraded infrastructure to higher speeds.
Southern Kansas Telephone Company, Inc.	Fiber	Data Added to Statewide Inventory	12/31/2009	[SEP-8-11 Brian Dudek] Correction: Provider provided corrections that reduced their fiber territory.

Sprint Nextel Corporation	Mobile Wireless	Data Added to Statewide Inventory	1/14/2010	[SEP-1-11 Brian Dudek] Change/Correction: possible service expansion or corrections to previous dataset; entirely new dataset for April 2011 submission. Very comparable to prior submission besides some minor spectrum 5 differences.
Stouffer Communications	Fixed Wireless	Data Added to Statewide Inventory	8/17/2011	[SEP-1-11 Brian Dudek] Correction: New provider for October 2011 submission that was previously unresponsive.
T-Mobile USA, Inc.	Mobile Wireless	Data Added to Statewide Inventory	1/8/2010	[SEP-1-11 Brian Dudek] Change: Provider expanded mobile territory eastern KS. Upgraded speed capabilities with HSPA+ 42.
Time Warner Cable LLC	Cable	Data Added to Statewide Inventory	12/21/2009	[SEP-1-11 Brian Dudek] Change/Correction: possible service expansion or corrections to previous dataset; entirely new dataset for October 2011 submission. Coverage change likely primarily a result of the 2000-2010 census change. Provider upgraded almost entire infrastructure with higher speed capabilities.
Totah Communications, Inc.	DSL	Data Added to Statewide Inventory	9/8/2009	[SEP-1-11 Brian Dudek] Correction: Maximum upload speed tier was corrected to speed tier 3. Incorrectly reported as speed tier 2 in past submissions.
United Communications Association, Inc.	Mobile Wireless	Data Added to Statewide Inventory	11/23/2009	[SEP-9-11 Brian Dudek] Change: Provider upgraded infrastructure to allow for higher download speeds.
United States Cellular Corporation	Mobile Wireless	Data Added to Statewide Inventory	2/15/2011	[SEP-1-11 Brian Dudek] Change/Correction: possible service expansion or corrections to previous dataset; entirely new dataset for April 2011 submission. Minor changes throughout coverage area.
Valnet Holdings LLC	Fixed Wireless	Data Added to Statewide Inventory		[SEP-9-11 Brian Dudek] Change/Correction: Provider added additional transmission points and requested DBA name change.
Verizon Communications, Inc.	Mobile Wireless	Data Added to Statewide Inventory	12/14/2009	[SEP-1-11 Brian Dudek] Change: Provider expanded mobile territory. Upgraded speeds in 700 mhz spectrum.
Wheatland Broadband Services	Fixed Wireless	Data Added to Statewide Inventory	6/17/2010	[SEP-1-11 Brian Dudek] Change: Provider added an additional transmission point near Sharon Springs.
Wilson Telephone Company, Inc.	Fiber	Data Added to Statewide Inventory	9/29/2009	[SEP-7-11 Brian Dudek] Change: Provider expanded fiber territory into Lucas exchange.
Windjammer Communications, LLC	Cable	Data Added to Statewide Inventory	11/16/2009	[AUG-15-11 Brian Dudek] Correction: New provider for October 2011 submission that was previously unresponsive.
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	
Verizon Communications, Inc.	Backhaul	Backhaul Provider Only Processing Complete	12/14/2009	
Zayo Group, LLC	Backhaul	Backhaul Provider Only Processing Complete		
SwiftLink Communications	Fixed Wireless	Estimated Coverage Submitted for Non-Participating Provider		[SEP-1-11 Brian Dudek] Correction: New provider for October 2011 submission that is still unresponsive. Connected Nation estimated coverage for this provider.
Allegiance Communications Holdings, Inc.	Cable	No Update to Provide	2/4/2010	
American Broadband Acquisition Corporation	DSL	No Update to Provide	11/20/2009	
Atwood Cable Systems, Inc.	Cable	No Update to Provide		
Benson Tel Service Inc.	Fixed Wireless	No Update to Provide	12/15/2009	
Blue Valley Tele-Communications, Inc.	Cable	No Update to Provide	11/17/2009	
Blue Valley Tele-Communications, Inc.	Fixed Wireless	No Update to Provide	11/17/2009	
BWTelecom	DSL	No Update to Provide	1/12/2010	
BWTelecom	Fiber	No Update to Provide	1/12/2010	
CenturyLink	Backhaul	No Update to Provide	12/4/2009	
City of Chanute	Fiber	No Update to Provide		
City of Chanute	Backhaul	No Update to Provide		
Columbus Telephone Company	Fiber	No Update to Provide	10/2/2009	
CoxCom Inc.	Backhaul	No Update to Provide	1/29/2010	
Craw-Kan Telephone Cooperative, Inc.	Fixed Wireless	No Update to Provide	12/7/2009	
CTC Wireless Internet	Backhaul	No Update to Provide	11/20/2009	
Cunningham Communications, Inc.	Cable	No Update to Provide	9/8/2009	
Cyber Lodge Internet Services, Inc.	Fixed Wireless	No Update to Provide	1/6/2010	
Diller Telephone Company	DSL	No Update to Provide		

				[SEP-16-11 Brian Dudek] Correction: Satellite data is being submitted and was not included in the April 2011 submission. While coverage is currently the entire state boundary, work continues on having more granular data available.
DISH Network Corporation	Satellite	No Update to Provide	1/27/2010	
Eagle Communications, Inc.	Backhaul	No Update to Provide		
Eagle Communications, Inc.	Fixed Wireless	No Update to Provide		
Elkhart Telephone Company, Inc.	Backhaul	No Update to Provide		
Elkhart Telephone Company, Inc.	Fiber	No Update to Provide	3/23/2010	
Elkhart Telephone Company, Inc.	Fixed Wireless	No Update to Provide	3/23/2010	
Fairpoint Communications, Inc.	Fixed Wireless	No Update to Provide	1/22/2010	
Golden Belt Telephone Association, Inc.	Fixed Wireless	No Update to Provide		
Gorham Communications, Inc.	DSL	No Update to Provide	9/30/2009	
Gorham Communications, Inc.	Fiber	No Update to Provide	9/30/2009	
H&B Communications, Inc.	Cable	No Update to Provide	10/13/2009	
H&B Communications, Inc.	DSL	No Update to Provide	10/13/2009	
H&B Communications, Inc.	Fiber	No Update to Provide	10/13/2009	
H&B Communications, Inc.	Fixed Wireless	No Update to Provide	10/13/2009	
Haug Communications, Inc.	Fixed Wireless	No Update to Provide	12/4/2009	
Haviland Telephone Company, Inc.	DSL	No Update to Provide	12/3/2009	
Haviland Telephone Company, Inc.	Fixed Wireless	No Update to Provide	12/3/2009	
				[SEP-16-11 Brian Dudek] Correction: Satellite data is being submitted and was not included in the April 2011 submission. While coverage is currently the entire state boundary, work continues on having more granular data available.
Hughes Network Systems, LLC	Satellite	No Update to Provide	2/5/2010	
JBN Telephone Company, Inc.	DSL	No Update to Provide	12/14/2009	
Kansas Broadband Internet, Inc.	Fixed Wireless	No Update to Provide	1/15/2010	
Kansas Data Internet, Inc.	Fixed Wireless	No Update to Provide		
KeyOn Communications, Inc.	Fixed Wireless	No Update to Provide	10/15/2009	
LaHarpe Telephone Company, Inc.	Fiber	No Update to Provide	9/28/2009	
Lawrence Freenet	Fixed Wireless	No Update to Provide	10/5/2009	
Madison Telephone Company, LLC	DSL	No Update to Provide	11/17/2009	
MCC Missouri LLC	Cable	No Update to Provide	1/12/2010	
MCC Missouri LLC	Backhaul	No Update to Provide	1/12/2010	
Midwest Mobile Radio	Fixed Wireless	No Update to Provide		
Mokan Dial, Inc.	DSL	No Update to Provide	12/2/2009	
Moundridge Telephone Company, Inc.	DSL	No Update to Provide	10/7/2009	
Mutual Telephone Company	Backhaul	No Update to Provide	12/9/2009	
Mutual Telephone Company	Fiber	No Update to Provide	12/9/2009	
Mutual Telephone Company	Fixed Wireless	No Update to Provide	12/9/2009	
Nautilus Net	Fixed Wireless	No Update to Provide		
North Central Kansas Community Network	Fixed Wireless	No Update to Provide		
Peoples Telecommunications, LLC	DSL	No Update to Provide	12/1/2009	
Pioneer Telephone Association, Inc.	DSL	No Update to Provide	12/7/2009	
Pixius Communications LLC	Fixed Wireless	No Update to Provide		
Rainbow Telecommunications Association, Inc.	Fixed Wireless	No Update to Provide	12/9/2009	
Rebeltec Communications LLC	Fixed Wireless	No Update to Provide		
Rural Telephone Service Company, Inc.	Fixed Wireless	No Update to Provide	11/16/2009	
S&T Telephone Cooperative Association	DSL	No Update to Provide	8/28/2009	
S&T Telephone Cooperative Association	Fiber	No Update to Provide	8/28/2009	
S&T Telephone Cooperative Association	Fixed Wireless	No Update to Provide	8/28/2009	
South Central Telephone Association	Backhaul	No Update to Provide	12/17/2009	
South Central Telephone Association	DSL	No Update to Provide	12/17/2009	
South Central Telephone Association	Fiber	No Update to Provide	12/17/2009	
				[SEP-9-11 Brian Dudek] Correction: Provider service area is now a real-world propagation unlike prior submissions.
Stelera Wireless, LLC	Mobile Wireless	No Update to Provide		
Sumner Cable TV, Inc.	Cable	No Update to Provide		
Sumner Cable TV, Inc.	Fixed Wireless	No Update to Provide		
Superior INET	Fixed Wireless	No Update to Provide	1/29/2010	
SWKO, Inc.	Fixed Wireless	No Update to Provide	2/18/2011	
The Computer Generation, Inc.	Fixed Wireless	No Update to Provide	1/8/2010	
Tri-County Telephone Association, Inc.	DSL	No Update to Provide	12/1/2009	
Tri-County Telephone Association, Inc.	Fiber	No Update to Provide	12/1/2009	
Tri-County Telephone Association, Inc.	Fixed Wireless	No Update to Provide	12/1/2009	
Tri-Rivers Internet	Fixed Wireless	No Update to Provide		
Twin Valley Telephone, Inc.	DSL	No Update to Provide	10/12/2009	
Twin Valley Telephone, Inc.	Fiber	No Update to Provide	10/12/2009	
Twin Valley Telephone, Inc.	Fiber	No Update to Provide	10/12/2009	
Twin Valley Telephone, Inc.	Fixed Wireless	No Update to Provide	10/12/2009	
TwinMounds	Fixed Wireless	No Update to Provide		
United Communications Association, Inc.	Cable	No Update to Provide	11/23/2009	
United Communications Association, Inc.	DSL	No Update to Provide	11/23/2009	
United Communications Association, Inc.	Fixed Wireless	No Update to Provide	11/23/2009	
Wamego Telecommunications Company, Inc.	DSL	No Update to Provide	9/29/2009	
Wamego Telecommunications Company, Inc.	Fiber	No Update to Provide	9/29/2009	
Wave Wireless LLC	Fixed Wireless	No Update to Provide	2/19/2010	
Wheat State Telephone, Inc.	DSL	No Update to Provide	12/7/2009	
Wheat State Telephone, Inc.	Fiber	No Update to Provide	12/7/2009	

				[SEP-16-11 Brian Dudek] Correction: Satellite data is being submitted and was not included in the April 2011 submission. While coverage is currently the entire state boundary, work continues on having more granular data available.
WildBlue Communications, Inc.	Satellite	No Update to Provide	1/8/2010	
Wilson Telephone Company, Inc.	DSL	No Update to Provide	9/29/2009	
Zito Midwest, LLC	Cable	No Update to Provide	2/17/2011	
Cogent Communications, Inc.	Backhaul	No Update Provided - Use Last Submission Data		
IdeaTek Systems, Inc.	Fiber	No Update Provided - Use Last Submission Data	3/4/2010	
KanOkla Telephone Association, Inc.	DSL	No Update Provided - Use Last Submission Data	12/18/2009	
KanOkla Telephone Association, Inc.	Fixed Wireless	No Update Provided - Use Last Submission Data	12/18/2009	
Mercury Wireless, LLC	Fixed Wireless	No Update Provided - Use Last Submission Data	3/25/2010	
JMZ CORPORATION	Fixed Wireless	Provider Gathering Data		
Blue Valley Tele-Communications, Inc.	DSL	Other	11/17/2009	[SEP-16-11 Brian Dudek] Provider indicated that all DSL has been converted to fiber and is now inactive.
Cequel Communications	Backhaul	Other	12/15/2009	[SEP-16-11 Brian Dudek] Data was not received from this provider and was incorrectly reported as no update to provide in the April 2011 submission.
Cunningham Communications, Inc.	DSL	Other	9/8/2009	[SEP-16-11 Brian Dudek] Provider indicated that all DSL has been converted to fiber and is now inactive.
PAETEC Communications, Inc.	DSL	Other		[SEP-08-11 Wes Kerr] Multiple outreach attempts were conducted but no response was received. PAETEC was bought out during the collection phase of this round by Windstream and we intend to be able to include the PAETEC coverage as a part of the Windstream footprint during the next round.
Rainbow Telecommunications Association, Inc.	DSL	Other	12/9/2009	[SEP-8-11 Brian Dudek] Provider indicated all DSL was converted to fiber and is now inactive.
arcplasma.com	Fixed Wireless	Refused to Participate		[JUN-08-11 John Determan]Spoke with ArcPlasma Representative who stated that we've called repeatedly and we don't seem to understand that they are NOT interested in participating and prefer not to be contacted anymore.
WISP-Router, Inc.	Fixed Wireless	Refused to Participate		[MAY-5-11 John Determan] After sending out advance notice e-mail received return e-mail from provider stating "No thanks."
Ace Computers	Fixed Wireless	Non-Responsive to Multiple Attempts		In addition to multiple contact attempts made between July 1, 2010 and February 18, 2011, 8 additional attempts were made this period.
Midwest Connections, Inc.	Fixed Wireless	Non-Responsive to Multiple Attempts		In addition to multiple contact attempts made between July 1, 2010 and February 18, 2011, 9 additional attempts were made this period.
SCI Cable, Inc.	Cable	Non-Responsive to Multiple Attempts		In addition to multiple contact attempts made between July 1, 2010 and February 7, 2011, 8 additional attempts were made this period.
SureWest Communications	Cable	Non-Responsive to Multiple Attempts		In addition to multiple contact attempts made between July 1, 2010 and February 15, 2011, 8 additional attempts were made this period.

SureWest Communications	Fiber	Non-Responsive to Multiple Attempts		In addition to multiple contact attempts made between July 1, 2010 and February 15, 2011, 8 additional attempts were made this period.
SureWest Communications	DSL	Non-Responsive to Multiple Attempts		In addition to multiple contact attempts made between July 1, 2010 and February 15, 2011, 8 additional attempts were made this period.
SureWest Communications	Backhaul	Non-Responsive to Multiple Attempts		In addition to multiple contact attempts made between July 1, 2010 and February 15, 2011, 8 additional attempts were made this period.
Utopian Wireless Corporation	Fixed Wireless	Non-Responsive to Multiple Attempts		In addition to multiple contact attempts made between August 9, 2010 and February 15, 2011, 3 additional attempts were made this period.