



STATE OF INDIANA

Michael R. Pence, Governor

OFFICE OF TECHNOLOGY
Jim Sparks
Geological Information Officer

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Round 10 (Fall 2014) Data Submission to NTIA October 1, 2014

Data Description	File Name	Contents	Description
	IN_SBDD_2014_09_29.ZIP	This Delivery Package	A zip file containing all of the files described below
	IN_SBDD_2014_09_29.gdb	Data Transfer Model	Current NTIA approved data model with the assembled data properly loaded into the data transfer model
	IN_DataPackage_2014_09_29.xls	Data Package	A formatted file containing associated documentation about Indiana's submission
	IN_2014_09_29.txt	Data Submission Receipt	File containing the results of the submission check tool
	IN_Methodology_2014_09_29.pdf	Methodology White Paper	Documentation about our process
	IN_Readme_2014_09_29.pdf	Readme Doc	A document that contains added notes about the delivery
	IN_Changes_and_Corrections_2014_09_29.xlsx	Changes and Corrections	This document contains the changes and updates for each Indiana provider.

Provider Participation

131 Internet Providers

- 70 Wireline Providers
- 61 Wireless Providers

Fall 2014

59 Data Sets Received

- 37 Wireline Providers
- 21 Wireless Providers



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About this Submission

119 Broadband Companies "Doing Business As – DBA" in State of Indiana

- Some organizations have more than one name (for a total of):
 - 131 Internet Providers
 - 70 Wireline Providers
 - 61 Wireless Providers

Provided New Data:

- AT&T, Inc.
- Bright House Networks, LLC
- CenturyTel, Inc./CenturyLink/Embarq
- Citizens Telephone/Town of Warren
- Clay County Rural Telephone Cooperative, Inc./Endeavor Communications
- Cogent Communications
- Comcast Cable Communications Management
- CSInet Internet Access
- Frontier Communications of Indiana, Inc. (Frontier North, Inc).
- Good Connections
- Indiana Fiber Network
- Joink, LLC
- Leap Wireless International, Inc./Cricket Communications/Denali Spectrum License Sub, LLC
- Mediacom Communications Corp.
- MetaLINK Technologies, Inc.
- Monon Telephone
- NewWays Networking, LLC
- NITCO Holding Corporation/FBN Indiana, Inc. (Northwestern Indiana Telephone Company)
- On-Ramp Indiana (ORI Net)
- Perry-Spencer Rural Telephone Coop (Communications)/PSC
- Rochester Telephone Co./RTC Communications
- Smithville Telephone Company, Inc.
- Sprint-Nextel Communications
- State of the Art Communications
- Surf Air Wireless
- Telephone and Data Systems, Inc. (TDS)



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- Time Warner Cable LLC
- TransWorld Network, Corp./Wi-Power
- TV Cable of Rensselaer & Winamac (Zing)
- Verizon Wireless
- Wintek

Data Still Current:

- ABC Hi-DEF Communications/ Broadway Broadband
- Accelplus
- AirHOP Wireless
- Bloomingdale Home Telephone Company
- Blueriver Networking Services
- Citizens Communications
- Community Fiber Solutions/Benton Ridge Telephone Company/Watchtv.net/bright.net-BRT/WatchNet Wireless Internet Services/Watch Communications
- Community Wireless
- Comteck/Fairnet
- Covad Communications Group, LLC/DIECA Communications/MegaPath
- Craigville Telephone Company, Inc./AdamsWells Telecom
- Daviess-Martin County RTC/RTC Communications
- East Allen High Speed Internet, LLC/ Eastern Indiana WIFI, Inc. (EIWIFI)
- Echo Wireless
- Enhanced Telecommunications Corporation/ (Sunman Telecommunications Corp) ETC Communications
- Foundation Communications
- Fourway Computer Products, Inc.
- Full Choice Communications, Inc./Indiana Communications
- FULLnet
- Geetel/Geetingsville Telephone Company, Inc.
- Hancock Rural Telephone Corporation/Nine Star Connect
- Helix Technologies Incorporated/NetSurfUSA, Inc.
- Hoosier Broadband
- Internet Communications Inc
- KC Online, Inc. U4



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- Kendallville Internet
- Level 3 Communications, LLC (Purchased Global Crossing North America, Inc.)
- Lightbound
- Ligonier Telephone Company (part of IFN Ligonier is Ligtel)
- Ligtel Communications (part of IFN Ligtel is Ligonier)
- Metro FastNet
- Metronet
- Michiana Wireless
- Microdome Wireless
- MidwayNet.net
- Mulberry Cooperative Telephone Co. Inc.
- New Lisbon Telephone Co., Inc.
- New Paris Telephone Co., Inc./Brightnet of Indiana
- New Wave Communication
- NITLine (Northern Indiana Technologies, Inc.)
- Node 1 Technology/Wireless Internet for Illiana
- Ohio Valley Wireless purchased by Sit-Co.net (Sitco)
- Only Internet.net/MapleNetBroadband/CorpsiteNMD
- Parallax Systems (RMC)
- PCS-WIN / RC-WiFi
- PDS Wireless/Precision Data Solutions
- Performance PC / Performance WISP
- Portative Technologies, LLC
- Pulaski White Rural Telephone Coop., Inc.
- Skycasters Satellite Internet
- Southeastern Indiana Rural Telephone Coop./SEI Communications
- StarBand
- Swayzee Telephone Company
- T-Mobile
- Wabash Mutual Telephone Company (Part of Brightnet)
- Washington County Rural Telephone Cooperative/Tele-Media Solutions
- WideOpenWest
- WildBlue Communications, Inc.
- Windstream Communications
- Yeoman Telephone Co.



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- Zayo Enterprise Networks
- Zig Wireless/Altius Broadband

Awaiting Data:

- DC Tech Solutions, LLC
- Indiana Data Center/Metrolan
- Locl.Net
- OINC Wireless
- Total Logic Systems (TLS.net)
- YDial LLC

New Start-ups in Indiana (providing data in future):

- Airbridge/Neupath
- aXess America/Mercury Wireless
- Apparatus Inc
- Convergence Technologies, Inc.
- Qwireless

Will Not Provide Data:

- Airbaud (Magnum Wireless)
- Midwest Telecom of America, Inc.
- One Communications Corporation (Now EarthLink Business)
- Broadband Indiana

Updated Information:

- **Indiana Data Center/Metrolan** – Provider had previously stated that they would not be participating in the program. We were hoping to have their data by this submission, but unfortunately they did not come through. They still promise to give it in the future.
- **AT&T** – significantly increased their coverage area for this submission.
- **Good Connections** – New provider (first time submission).
- **Cogent Communications** - New provider (first time submission).
- **Surf Air Wireless** - New provider (first time submission).
- **Wintek** – First new data since 2012. Their technology type has changed significantly. They have gone from DSL to Fiber.



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- **aXess America** – New provider to the state of Indiana. Plan to be up and running by spring.
- **Apparatus Inc** - New provider to the state of Indiana. Plan to be up and running by spring.
- **Qwireless** - New provider to the state of Indiana. Plan to be up and running by next summer.
- **Airbridge/Neupath** - New provider to the state of Indiana. Plan to be up and running by spring.
- **Convergence Technologies, Inc.** - New provider to the state of Indiana. Plan to be up and running by next fall.
- **Omnicity** – Removing all their data. We have data from almost 5 years ago. The organization has been sold and we no longer have a working relationship with the new owners to confirm the data. (We advised them of deadline prior to removal).

- **Submission differences:**
 - **Wireline**
 - **State (square miles) – 36,397.80**
 - 2014 Spring Wireline (square miles) - 29,586
 - 2014 Fall Wireline (square miles) - 29,073
 - **State (Census Blocks)**
 - 2014 Spring Wireline (square miles) - 710,078
 - 2014 Fall Wireline (square miles) - 627,304
 - **Explanation of decrease:** The decrease of 513 square miles and 82,744 Census Blocks was due to the deletion of data from ForePoint Networks, LLC because of the lack of response in confirming their data and the deletion of data from DIECA Communications, Inc. because it was redundant data (Megapath fully replaced this data).
 - **Wireless**
 - **State (square miles) – 36,397.80**
 - 2014 Spring Wireless (square miles) - 36,134
 - 2014 Fall Wireless (square miles) - 36,318
 - **Explanation of increase:** The increase of 184 square miles is due to the addition of data from overall territory expansion by existing providers and new records from one provider.

- **Data Sets Received:**



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Spring 2014

68 Data Sets Received

- 41 Wireline Providers
- 27 Wireless Providers

Fall 2014

59 Data Sets Received

- 37 Wireline Providers
- 22 Wireless Providers

Data Collection

We continue to collect and compare data from these sources, including:

- The Indiana Utility Regulatory Commission (comparison broadband data)
- Office of Utility Consumer Counselor (comparison broadband data)
- The Indiana Business Research Center (demographic data)
- Indiana Department of Local Government Finance (residential versus commercial status by address)
- Indiana Counties (point addresses, land parcels, road centerlines with address ranges, and administrative boundaries, aggregated and integrated into the IndianaMap)
- Indiana Department of Natural Resources (state forests and parks)
- Indiana Department of Homeland Security (locations of emergency medical service (EMS) stations, fire stations, and hospitals)
- Department of Education (school locations)
- Indiana Libraries (point of connectivity for low income/unemployed consumers—provide vital speed information for respective geographical locations)
- Commission for Higher Education (locations of colleges and universities)
- Reference USA /Infogroup (community anchors)
- **Broadband service providers, and others**

This information is processed according to the current data submission model offered by the National States Geographic Information Council and to be able to perform spatial comparisons, logic rules and other checks.

We also add emphasis to the collection of speed information using the “crowd sourcing” web-based application already implemented.



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Integration and Verification Processes Used in the Mapping Indiana Broadband Project Data Integration

When data is received from a service provider, it is loaded into either Excel or Access depending on the number of records and file size. This table is then joined with a copy of the Census Block *.dbf file from our census block shapefile. After the data has been joined, it is exported as a new *.dbf. The original Census block *.dbf is renamed to preserve the original integrity and the newly exported *.dbf is renamed to the same name as the shapefile. The shapefile is then loaded into ArcMap and a Feature Class is generated. The number of records is then validated against the number of records that were originally imported into either Excel or Access.

Data Loading: A final integration check occurs when the data is loaded into the data model. This includes the logic checks for values.

Validation Processes:

- **Comparing source documents that duplicate geographies or content.** We have public domain data that covers most of the state. We compare this data to that provided by the Internet Service Providers. We note areas of discrepancy for follow-up using other verification methods listed here.
- **Collecting end-user data.** We are working with The Polis Center at Indiana University Purdue University Indianapolis and have created a Google Map-based, user-friendly web application hosted on the IndianaMap portal to collect information from end-users about their location, broadband service provider, and speed (as captured from a speed test). The information collected from this website is valuable for data verification as the database grows.
- **Using service providers' websites,** especially those that contain service area information. Many service providers have websites that give service area information (often address by address) to assist consumers. These sites are useful for spot checking.
- **Inspection of high-resolution orthophotography.** High-resolution orthophotography has been used to verify the existence and location of wireless towers. Where recent six-inch resolution orthophotography exists (cities and counties), it can also be used to verify the existence of residence connection boxes.
- **"Boots on the ground"** inspection. We visually inspect the existence of physical features, where feasible, when we have a question or conflict that can be resolved by an on-site inspection.

Indiana Broadband Providers Website



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A URL is available <http://www.in.gov/gis/Broadband.htm> to communicate and distribute NTIA NOFA requirements to providers along with outreach and data submittal materials including:

- NTIA NOFA and subsequent clarification
- Outreach letter to providers
- Non-Disclosure Agreement
- Data Submission Guidelines
- Broadband Data Submittal Templates (Spreadsheets)
- Data Submittal Assistance Contact Information

Indiana Broadband Service Questionnaire

<http://www.in.gov/gis/BroadbandQuestionnaire.htm>

<http://in-polis-app21.ads.iu.edu/BroadbandService/default.aspx>

www.in.gov/survey

Instructions

Fill out this form from a hard-wired computer that is connected to the Broadband service (not wireless).

1. Fill in the **address** of the location to which Internet service is being provided. (While you are entering your information, your internet connection speed will be queried).
(e.g.) 123 Smith Street, Indianapolis, 46202
2. Click the **Verify Address** button to confirm/locate address. (The location does not have to be exact, a close street is sufficient).
3. Select your **Customer Type** from the dropdown list.
4. Select your **Connection Type** from the dropdown list. If you are unsure about your connection select "Unknown".
5. Select your **Internet Provider** from the drop-down list.
6. Click **Submit** to complete the questionnaire. Your results will be displayed.

Links

- [The Polis Center](#)
- [Indiana Geographic Information Council](#)
- [Indiana Geographic Information Office](#)

Your Information

Fill out this form from a hard-wired computer that is connected to the Broadband service (not wire-less).

Your Address:
(Example: 123 Smith Street, Indianapolis, 46220)

Customer Type:
Business

Connection Type:
Broadband over Power Line (BRC)

Internet Provider:
1-800-Reconex

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The information collected from this website is valuable for data verification. The Polis Center works with communities in Indiana and beyond to develop and apply knowledge, to build



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collaborations and to find innovative solutions to common problems. The center excels in community-based research and advanced information technologies, especially geographic information systems (GIS).

Data Display

Indiana Map

We are currently displaying the mapping results as additional geospatial layers added to the 220-plus layers already on the IndianaMap (www.indianamap.org)



Indiana Business Research Center (IBRC)



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We have integrated the broadband map data with economic data available from IBRC
www.stats.indiana.edu/broadband/

The screenshot shows the STATS Indiana website interface. At the top left is the logo "STATS Indiana" with the tagline "data everyone can use". To the right is a Google Custom Search box. Below the logo is a navigation menu with items: Home, Data By Topic, Profiles, Maps & Tools, and Data Calendar. On the far right of the menu is "Hoosiers by the Numbers • in.gov".

The main content area is titled "Broadband" and features a background image of fiber optic cables. Below the title is a paragraph: "Broadband provides high-speed Internet connections to businesses and consumers. While in past decades, access to interstates and railroads played a crucial role in economic development, the knowledge-based economy is experiencing a similar reliance on broadband connectivity."

There are two main columns of content:

- Left Column:**
 - Indiana Broadband Demographics:** A link to view a report of broadband coverage with associated economic and demographics for neighborhoods and custom regions. Below it is a link "About the Data".
 - National Broadband Map:** A thumbnail image of a map of the United States showing broadband coverage.
 - Indiana Broadband Map:** A thumbnail image of a detailed map of Indiana showing broadband coverage.
 - Related Links:** A list of links:
 - Internet Adoption by County and Census Tract (Federal Communications Commission)
 - Innovation Index: Includes data on broadband density
 - Indiana Geographic Information Office
 - Broadband: Federal Communications Commission
 - National Broadband Plan
 - IndianaMap: Download broadband shapefiles
- Right Column:**
 - Maps:** A link to "Broadband Map Gallery".
 - Publications:** A section titled "Find out what local analysts are saying:" with two links:
 - Broadband Adoption in Indiana (May-June 2011)
 - Measuring Regional Capacity for Innovation (Jan-Feb 2010)
 - In the News:** A section titled "Articles compiled daily from newspapers across the state:" with two links:
 - NWI economic development district can't get guidance from feds
 - New law signed by Daniels aims to stop 'bleeding' of 911 fees in Hoosier counties
 Below these links is a "-more-" link.

Indiana Broadband Map



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We have developed a web-based information tool that will provide information about broadband service availability at a user-specified location.

www.indianabroadbandmap.com

This application provides tools for searching and displaying broadband availability information anywhere in Indiana.

Public Use

- Zoom to County
- Zoom to Address and retrieve Broadband Information for that address
- Buffer Address for additional Broadband Information in the area
- View Provider Results
- Filter Broadband Information by Speed
- Filter Broadband Information by Technology (i.e. Wireless, Wireline)
- Filter Broadband Information by Service Provider
- Query Census Blocks

Provider Use

- All of the above
- Edit Broadband Information via Secure Login
 - Multiple webinars were hosted by IOT and our web developer 39°north to train the broadband providers how to update their data. Each broadband provider was given their own unique login information. The website was then released to the public so that they can view the available provider information for their area.
 - Through this secure login, the original provider data may be modified to more accurately reflect the various broadband providers' territories.



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Address Level Data Collection



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We identified community anchor institutions by cross referencing a statewide land parcel dataset with a data set from the Indiana Local Government Finance office containing, among other information, institution name, location by address, and use category. The results of this analysis have been included in previous deliveries for records containing name, location, and category at a minimum. These data, however, did not have sufficient broadband service information. Therefore, we have previously engaged a third party to survey the institutions to complete the attributes defined in the NOFA for these institutions.

The Indiana Office of Technology engaged Infogroup to identify and contact all anchor institutions in the State of Indiana. The goal was to determine broadband service and internet service providers that meet the definitions of “broadband” as outlined in the broadband mapping Notice of Funds Availability. The definition is inclusive of two-way data transmission with advertised speeds of 768 kbps downstream and 200 kbps upstream.

Infogroup had the ability to identify state anchor institutions and developed a script designed to gather the information required to answer to the requirements of the NTIA.

There data compilation process telephone verified all businesses, including those identified as anchor institutes, to ensure the highest level of accuracy with business name, business type and contact information. After compiling the list, Infogroup prepared a script and software to assist in capturing the necessary information. They then begin the telephone survey and data collection process and created a report in the tab-delimited text file format of the required information. This survey included institution name, complete address, latitude/longitude, category of institution, broadband service, technology of transmission and advertised downstream/upstream service speed where they are collected in a tab-delimited text file.