

Montana Broadband Data Changes and Corrections Report
June 30, 2011 Data (Fall 2011 Update)
9/23/2011

DATA PROCESSING NOTES

2000 to 2010 Census Block Conversion

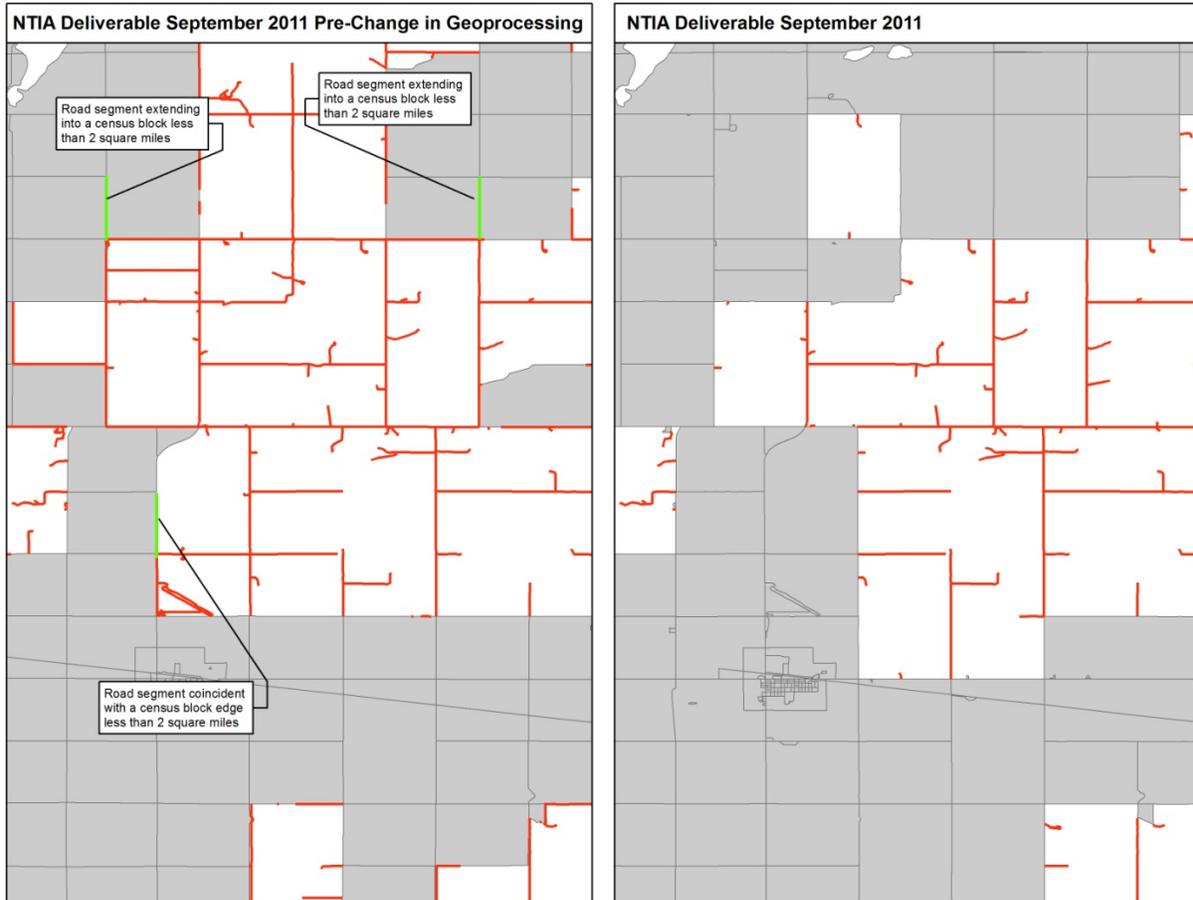
2000 to 2010 Census Block Conversion

The September 2011 deliverable to NTIA required the transition from 2000 census data to 2010 census data. The conversion process was dependent upon the type of data submitted by a provider - block providers or coverage providers. Block providers submit their data by census block, coverage providers submit data by defining their service area geographically in GIS, CAD, or map format.

The conversion to 2010 census geography was a straightforward process for the coverage providers; the reference to the census block data in the geoprocessing model used to select census blocks and road segments was simply changed from the 2000 data to the 2010 data and each provider's data was re-run. The conversion from 2000 census to 2010 census data for block providers required several geoprocessing steps due to the inability to simply match census block IDs from 2000 to 2010 vintages. The census blocks for each provider were dissolved by type of technology to form a quasi-coverage area. The dissolved blocks were then used to select any 2010 census block whose centroid fell within the "coverage area."

Road Segment Geoprocessing Change

In previous submissions to NTIA, road segment in census blocks greater than 2 square miles were selected with a straight intersect. This resulted in road segments being selected that were coincident with census block edges in blocks less than or equal to 2 square miles. Using this same geoprocessing methodology combined with the new 2010 census blocks and TIGER roads, road segments were selected that were coincident with census block edges and that extended into census block less than or equal to 2 square mile. We believe this "error" occurred due to the improvements in the spatial accuracy of both the 2010 census blocks and road segments (green lines in the image below are examples of this issue) for 2010 where features were now coincident. For the September 2011 submittal a small negative buffer (-0.5 feet) was applied to the intersect to avoid selecting roads that were coincident with census block edges and/or those that extended into census blocks less than 2 square miles. This resulted in a significant decrease in the number of road segments reported but overall we believe this method more accurately portrays each provider's coverage area.



SBDD Request on Speed Frequency

In our data review for the last NTIA submission with Andrew MacRae on July 19, 2011, he requested that we contact all providers reporting DSL speed tier codes of 7 or greater and request clarification on how they were able to meet those speed tiers. We subsequently sent out emails to two providers (Blackfoot Communications, Inc. and Blackfoot Telephone Cooperative, Inc., Bridgeband Communications, Inc.) to verify if their reported speeds in Tier 7 for ADSL were accurate and if so provide documentation. We received email from one of the providers we emailed who responded with explanation they were using DSL2+ technology, and provided detailed documentation, including speed tests to verify that their speeds were correctly in the speed tier 7 (10-25 mbps) range. Further research showed that they were correct, the ADSL 2+ appears to have been introduced in 2007 and is standard technology, and speeds are commonly in the speed tier 7 and potentially in speed tier 8. In examining the spreadsheet that Andrew sent summarizing all nationwide speed tiers, our analysis shows 36% of the responses from providers nationwide were speed tier 7. This represents the largest response percentage of any speed class for ADSL, and does not appear in retrospect to be an anomaly that should have been pursued.

SBDD Request on Provider Research

In our data review for the last NTIA submission with Andrew MacRae on July 19, 2011, he requested that we add to Data Package Provider Table all providers in the state that we researched, but that did not meet the criteria for broadband service. He also requested that we include providers in the state that did meet with criteria for broadband service, but have not or will not provide data. These providers are included in the Data Package Provider Table.

SBDD Request on FCC FRNs

For those providers who did not submit an FRN, we changed or added the FRN to match FCC Form 477 (June 2009) MT SBDD Submission Summary.xlsx.

Data Package Revision

We added a column to the Data Package Provider Table titled "Company Name" because of the large number of providers who have the same DBA.

Changes/Corrections

Changes

- **3 Rivers Telephone Cooperative, Inc.** - Worked with provider to update coverage and speeds. Added TFWU because of acquisition of Big Sky Wifi. Changed FRN to match FCC Form 477 (June 2009) MT SBDD Submission Summary.xlsx.
- **360networks** - Submitted spreadsheet of middle-mile locations. First round in which data was included for this provider.
- **Alltel Wireless** - Removed coverage because of merger with AT&T. (approx April 2011).
- **AT&T** – Added coverage from image on website (AT&T would not provide data). Used speeds from Mobility Response ND June 2011.xlsx. First round in which data was included for this provider.
- **Cellco Partnership** - Submitted shapefile of updated coverage.
- **CenturyTel, Inc.** – Submitted shapefile and census block spreadsheet of updated coverage. Assigned Qwest Corporation to CenturyTel, Inc. BB_ConnectionPoint_MiddleMile feature class.
- **Qwest Corporation** - Deleted coverage because of merger with CenturyTel, Inc. (approx March 2011).
- **Range Telephone Company** – Worked with provider to update ADSL and SDSL coverage and speeds.

Corrections

- **Antilles Wireless LLC** - Changed DBA to match FCC Form 477 (June 2009) MT SBDD Submission Summary.xlsx dba USA Companies, L.P.
- **Big Sky Wifi** - Removed coverage because of acquisition by 3 Rivers Telephone Cooperative, Inc.
- **Blackfoot Communications, Inc.** – Re-processed coverage to more accurately reflect coverage area and run geoprocessing model with road clip and centroid selection. Changed DBA to match FCC Form 477 (June 2009) MT SBDD Submission Summary.xlsx dba Blackfoot Telephone Cooperative, Inc.
- **Blackfoot Telephone Cooperative, Inc.** – Re-processed coverage to more accurately reflect coverage area and run geoprocessing model with road clip and centroid selection.

- **Bridgeband Communications, Inc.** - Re-processed coverage to more accurately reflect coverage area and run geoprocessing model with road clip and centroid selection.
- **Cable Montana, LLC** - Re-processed coverage to more accurately reflect coverage area and run geoprocessing model with road clip and centroid selection. Changed DBA to match FCC Form 477 (June 2009) MT SBDD Submission Summary.xlsx dba USA Companies, L.P.
- **Central Montana Communications, Inc.** - Changed DBA to match FCC Form 477 (June 2009) MT SBDD Submission Summary.xlsx dba Triangle Telephone Cooperative Association, Inc.
- **CSC Holdings, Inc.** - Re-processed coverage to more accurately reflect coverage area and ran geoprocessing model with road clip and centroid selection on the urban/suburban areas that had speed tests and cross-checked with FCC franchise list. Although CSC Holdings, Inc. submitted a coverage for this round it appeared to over-estimate their service area and included many census blocks greater than two square miles.
- **HNS License Sub, LLC** - Changed FRN and DBA to match FCC Form 477 (June 2009) MT SBDD Submission Summary.xlsx. Update speed per website.
- **Hot Springs Telephone** - Re-processed coverage to more accurately reflect coverage area and run geoprocessing model with road clip and centroid selection.
- **Konceptio Data Service LLC** - Removed overlapping polygons to ensure that the highest maximum advertised speed was shown as opposed to multiple speed tiers for the same technology/spectrum combination. Added FRN from FCC Form 477 (June 2009) MT SBDD Submission Summary.xlsx.
- **Landmark Electronics** - Added FRN from FCC Form 477 (June 2009) MT SBDD Submission Summary.xlsx.
- **Lincoln Telephone Company, Inc.** - Re-processed coverage to more accurately reflect coverage area and run geoprocessing model with road clip and centroid selection.
- **Little Apple Technologies** - Changed DBA to match FCC Form 477 (June 2009) MT SBDD Submission Summary.xlsx dba LAT Inc.
- **Montana Internet Corporation** - Removed overlapping polygons to ensure that the highest maximum advertised speed was shown as opposed to multiple speed tiers for the same technology/spectrum combination.
- **Northern Telephone Cooperative, Inc.** - Re-processed coverage to more accurately reflect coverage area and run geoprocessing model with road clip and centroid selection.
- **Project Telephone Company** - Changed DBA to match FCC Form 477 (June 2009) MT SBDD Submission Summary.xlsx dba Nemont Telephone Cooperative, Inc.
- **Southern Montana Telephone Company** - Re-processed coverage to more accurately reflect coverage area and run geoprocessing model with road clip and centroid selection.
- **Starband Communications, Inc.** – Updated speeds using original provider submission.
- **Triangle Communication Systems, Inc.** - Changed DBA to match FCC Form 477 (June 2009) MT SBDD Submission Summary.xlsx dba Triangle Telephone Cooperative Association, Inc.

- **WildBlue Communications, Inc.** – Updated speeds from website.
- **Windjammer Communications LLC** - Re-processed coverage to more accurately reflect coverage area and run geoprocessing model with road clip and centroid selection.

ADVERTISED SPEED REPORT

PROVNAME	TRANSTECH	SPECTRUM	MAXADDOWN	MAXADUP	NOTES
3 Rivers Telephone Cooperative, Inc.	10	0	3	2	
3 Rivers Telephone Cooperative, Inc.	10	0	6	3	
3 Rivers Telephone Cooperative, Inc.	50	0	3	2	
3 Rivers Telephone Cooperative, Inc.	50	0	6	3	
3 Rivers Telephone Cooperative, Inc.	70		5	3	
Antilles Wireless, LLC	70	6	6	3	
AT&T Mobility LLC	80		4	3	From AT&T ND
Blackfoot Communications, Inc.	10	0	4	4	
Blackfoot Communications, Inc.	10	0	5	4	
Blackfoot Communications, Inc.	10	0	6	6	
Blackfoot Communications, Inc.	10	0	7	6	
Blackfoot Telephone Cooperative, Inc.	10	0	6	4	
Blackfoot Telephone Cooperative, Inc.	10	0	7	4	
Bridgeband Communications, Inc.	10	0	7	3	
Cable Montana, LLC	41	0	5	2	
Cellco Partnership	80	1	5	4	
Central Montana Communications, Inc.	10	0	3	2	
Central Montana Communications, Inc.	10	0	4	2	
Central Montana Communications, Inc.	10	0	5	2	
Central Montana Communications, Inc.	10	0	6	2	
Central Montana Communications, Inc.	50	0	10	2	
CenturyTel, Inc.	10		4	3	
CenturyTel, Inc.	10		5	3	
CenturyTel, Inc.	10		6	3	
CenturyTel, Inc.	10		7	3	
Citizens Telecommunications Company of Montana	10	0	5	2	
CSC Holdings, Inc	41	0	7	3	
Grizzly Internet, Inc.	70	6	5	5	
HNS License Sub, LLC	60	9	4	2	
Hot Springs Telephone Company	10	0	4	2	
Interbel Telephone Cooperative, Inc.	10	0	6	2	
Konceptio Data Service LLC	70	6	5	4	
Konceptio Data Service LLC	70	6	7	6	
Landmark Electronics	71	5	4	2	
Lincoln Telephone Company, Inc.	10	0	3	2	
Lincoln Telephone Company, Inc.	10	0	5	3	
Little Apple Technologies	70	6	4	4	
Mid-Rivers Internet	10	0	3	2	
Mid-Rivers Internet	10	0	4	2	
Mid-Rivers Internet	10	0	5	3	
Mid-Rivers Internet	41	0	7	3	
Mid-Rivers Internet	71	2	4	2	
Montana Internet Corporation	70	6	3	3	
Montana Internet Corporation	70	6	4	4	
Montana Sky Networks	10	0	3	2	
Nemont Telephone Cooperative, Inc.	10	0	3	2	
Nemont Telephone Cooperative, Inc.	10	0	5	2	
Nemont Telephone Cooperative, Inc.	50	0	3	2	
Nemont Telephone Cooperative, Inc.	71	2	3	2	
Northern Telephone Cooperative, Inc.	10	0	3	2	
Northern Telephone Cooperative, Inc.	10	0	4	2	
Northern Telephone Cooperative, Inc.	10	0	5	2	

Northern Telephone Cooperative, Inc.	10	0	6	5
Northwest Communications	50	0	3	2
Oki Communications LLC	71	2	6	3
Polson CommunityTel	71	2	4	2
Project Telephone Company	10	0	3	2
Project Telephone Company	71	2	3	2
Range Telephone Cooperative, Inc.	10		5	2
Range Telephone Cooperative, Inc.	10		6	2
Range Telephone Cooperative, Inc.	10		6	3
Range Telephone Cooperative, Inc.	20		5	5
Range Telephone Cooperative, Inc.	20		6	3
Range Telephone Cooperative, Inc.	50		6	3
Rocky Mountain Internet	70	6	3	2
Ronan Telephone Company	10	0	5	3
Ronan Telephone Company	50	0	5	5
Ronan Telephone Company	50	0	6	6
Ronan Telephone Company	50	0	7	7
Southern Montana Telephone Company	10	0	4	3
Starband Communications, Inc.	60	9	3	2
Stellar Computing	70	6	5	5
Traceworks, LLC	70	6	3	2
Triangle Communication Systems, Inc.	70	6	4	2
Triangle Telephone Cooperative Association, Inc.	10	0	3	2
Triangle Telephone Cooperative Association, Inc.	10	0	4	2
Triangle Telephone Cooperative Association, Inc.	10	0	5	2
Triangle Telephone Cooperative Association, Inc.	10	0	6	2
Triangle Telephone Cooperative Association, Inc.	50	0	10	2
West River Cooperative Telephone Company	50	0	5	3
Western Montana CommunityTel	41	0	4	2
Western Montana CommunityTel	71	2	4	2
Wildblue Communications, Inc.	60	9	3	2
Windjammer Communications LLC	41	0	7	3
WispWest.net	70	6	5	2

 From Provider Data Submission
 No Speed Data from Provider, Entered Lowest Domain Value
 From Provider Website
 Special Case See Note Field