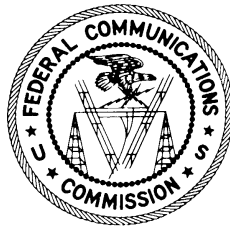


# **Internet Access Services: Status as of June 30, 2013**

Industry Analysis and Technology Division  
Wireline Competition Bureau  
June 2014



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## Internet Access Services: Status as of June 30, 2013

**Introduction.** This report summarizes information about Internet access connections over 200 kilobits per second (kbps) in at least one direction in service in the United States on June 30, 2013, as collected by FCC Form 477. Form 477 gathers standardized information about *subscriptions* to Internet access services in the fifty states, District of Columbia, and inhabited insular areas (American Samoa, Guam, Northern Mariana Islands, Puerto Rico, and U.S. Virgin Islands). The information is reported by telephone companies, cable system operators, terrestrial wireless service providers, satellite service providers, and other facilities-based providers of advanced telecommunications capability.<sup>1</sup> This is the tenth report to include details about subscribership differences among census tracts and counties, as well as subscribership differences among the states.<sup>2</sup>

Notable developments between June 2012 and June 2013 include:

- Internet connections overall are growing. The number of connections over 200 kbps in at least one direction increased by 13% year-over-year to 276 million.
- In June 2013, there were 70 million fixed and 93 million mobile connections with download speeds at or above 3 megabits per second (Mbps) and upload speeds at or above 768 kbps as compared to 57 million fixed and 43 million mobile connections a year earlier. Figure 1 illustrates the trend in connections speeds from June 2010 through June 2013, and Figure 2 presents a side-by-side comparison of fixed and mobile connection speeds in June 2013.<sup>3</sup>

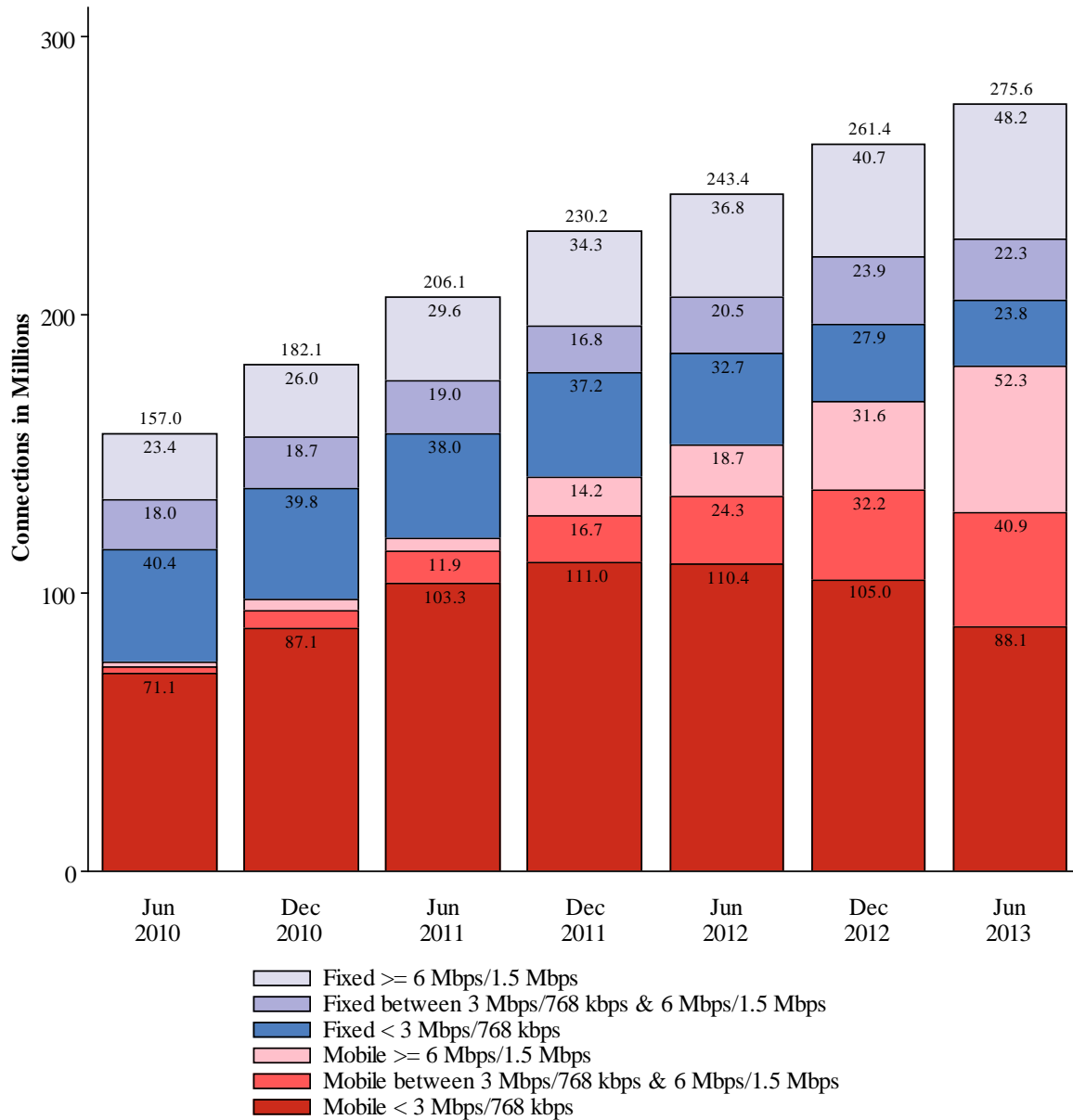
<sup>1</sup> See the Technical Notes and the Glossary that appear at the end of this report for more-detailed information about the Form 477 data collection and the meaning of terms used in this report.

Readers should note two key aspects of the Form 477 data. First, if service connections of different speeds are *available* to a particular consumer for purchase – from one or more suppliers – then only the purchased connection is counted by Form 477. Second, the reported connection speed is typically the advertised speed of the purchased service, and it is possible that the purchased service will not operate at its advertised speed at all times. The Commission has sponsored tests of actual consumer broadband speeds. See, e.g., Federal Communications Commission, Office of Engineering and Technology and Consumer and Governmental Affairs Bureau, *2014 Measuring Broadband America Fixed Broadband Report* (June 2014), available at [www.fcc.gov/measuring-broadband-america](http://www.fcc.gov/measuring-broadband-america).

<sup>2</sup> Census tract-level data were first collected for December 2008. For an overview of program history, see *High-Speed Services for Internet Access: Status as of December 31, 2008* (February 2010) (*December 2008 High-Speed Report*) at pp. 1-4, available at [www.fcc.gov/wcb/iatd/comp.html](http://www.fcc.gov/wcb/iatd/comp.html). Readers who are interested in historical trends in the Form 477 data should note the changes in reporting requirements that were effective in 2008 and earlier, in 2005.

<sup>3</sup> Reporting entities place connections into speed tiers defined by predetermined ranges of upload and download speeds. Note that the Commission has decided to implement a different approach starting with data as of June 30, 2014. For each fixed product subscribed to in a census tract, the provider will report connections by the maximum advertised upload and download speeds of the product in that census tract. For each mobile product subscribed to in a state, the provider will report connections by the minimum advertised upload and download speeds of the product in that state. As the Commission explained, while the maximum advertised speed is a reasonably reliable indicator of the speed of fixed service that subscribers receive, a wireless service provider's targeted minimum data speed in a market typically is a primary driver of the wireless network design that determines the market coverage boundaries. See *Modernizing the FCC Form 477 Data Program*, WC Docket No. 11-10, Report and Order, 28 FCC Rcd 9887, 9908-09, 9915, paras. 42 n.138, 62 (2013) (*June 2013 Form 477 Modernization Order*).

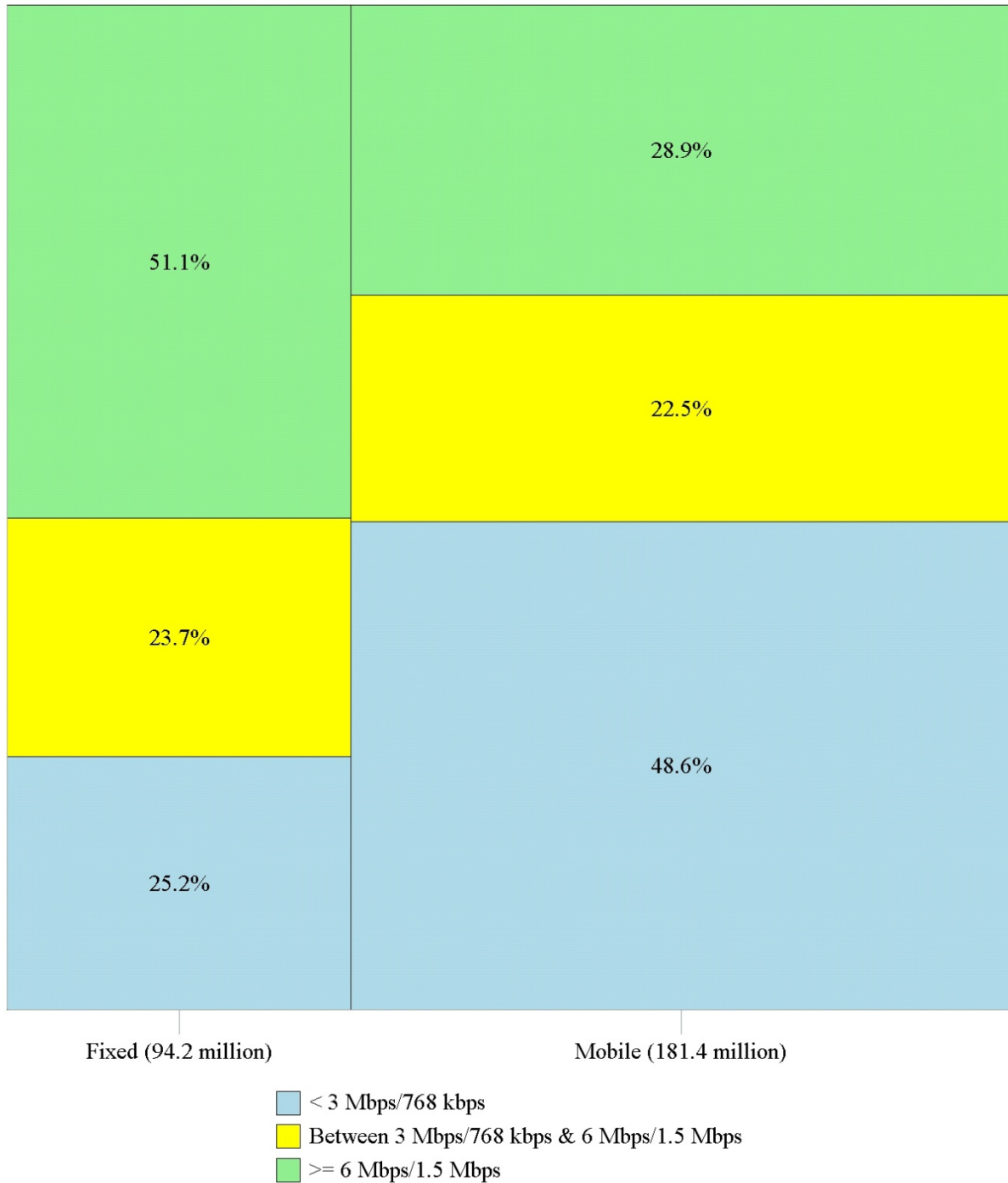
**Figure 1**  
**Fixed Connections and Mobile Connections by Speed 2010-2013\***



\* Some previously published data have been revised. Figures may not sum to totals elsewhere in this report due to rounding. Connections include both residential and business connections. In June 2013, total connections were reported as 31% residential fixed connections, 3% business fixed connections, 52% mobile connections to non-business subscribers, and 14% mobile connections to business subscribers.



**Figure 2**  
**Speed Composition of Fixed Connections and Mobile Connections**  
**as of June 30, 2013**



- The number of connections with downstream speeds of at least 10 Mbps increased by 118% over June 2012, to 103 million connections.<sup>4</sup>
- Growth is particularly high in mobile Internet subscriptions. The number of mobile subscriptions with speeds over 200 kbps in at least one direction grew to 181 million – up 18% from June 2012. The number of fixed-location connections at speeds over 200 kbps in at least one direction increased by 5% year-over-year to 94 million.

**Connection speeds in detail.** The Form 477 program categorizes reportable connections into 72 speed tiers defined by eight ranges of downstream and nine ranges of upstream speed. In this overview discussion, we organize the extensive information collected for June 2013 into three groups of downstream speeds and three groups of upstream speeds. We do this separately for fixed-location connections and for mobile connections. As in previous reports, we use the Form 477 speed tier breakpoints of 3 Mbps and 6 Mbps to organize the information about downstream speeds, and we use the Form 477 speed tier breakpoints of 768 kbps and 1.5 Mbps to organize the information about upstream speeds.<sup>5</sup>

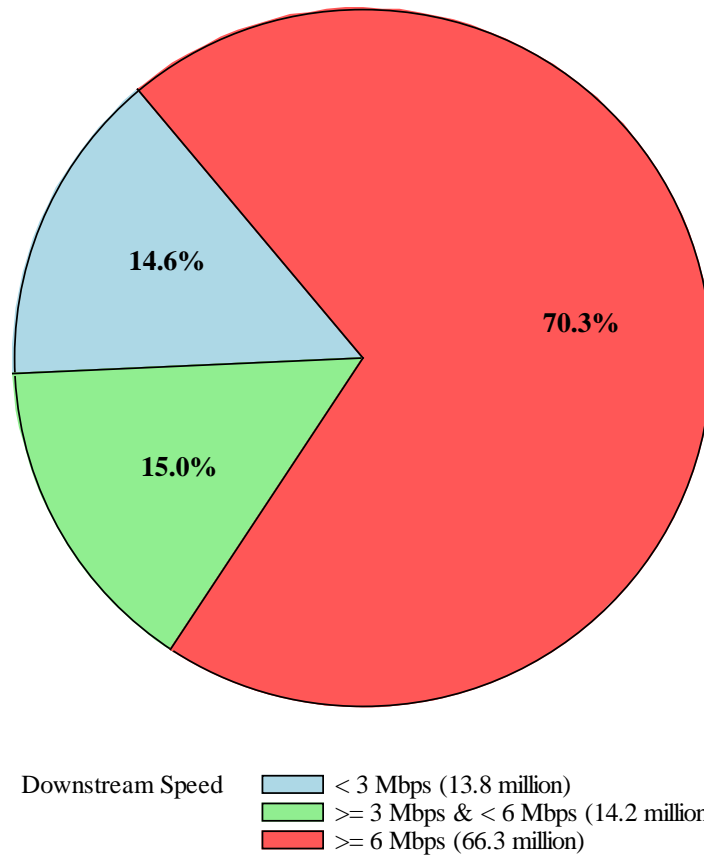
**Fixed connections – downstream speeds.** Figure 3(a) illustrates how the 94 million fixed connections reported for June 2013 were distributed across the three ranges of *downstream speed* defined by breakpoints at 3 Mbps and at 6 Mbps.

<sup>4</sup> Compare Table 10 of this report with Table 10 of *Internet Access Services: Status as of June 30, 2012* (May 2013), available at [www.fcc.gov/wcb/iatd/comp.html](http://www.fcc.gov/wcb/iatd/comp.html).

<sup>5</sup> Our narrative discussion of the speeds of fixed connections is summarized more concisely in Chart 2, at p. 19, and our narrative discussion of the speeds of mobile connections is summarized more concisely in Chart 5, at p. 22.

The Commission benchmarked broadband as a transmission service that enables an end user actually to download Internet content at 4 Mbps and to upload Internet content at 1 Mbps over the service provider's network. That benchmark does not exactly match any Form 477 speed tier, and the Commission decided to evaluate the evidence of broadband availability using the Form 477-defined breakpoints of 3 Mbps downstream and 768 kbps upstream to proxy the speed benchmark of 4 Mbps downstream and 1 Mbps upstream. See *Inquiry Concerning the Deployment of Advanced Telecommunications Capability to All Americans in a Reasonable and Timely Fashion, and Possible Steps to Accelerate Such Deployment Pursuant to Section 706 of the Telecommunications Act of 1996, Amended by the Broadband Data Improvement Act*, GN Docket Nos. 09-137, 09-51, Report, 25 FCC Rcd 95560, 9563, 9568, paras. 11, 20 (2010) (*Sixth Broadband Deployment Report*).

**Figure 3(a)**  
**Distribution of Reportable Fixed Connections (94.2 million) by**  
**Downstream Speed as of June 30, 2013**

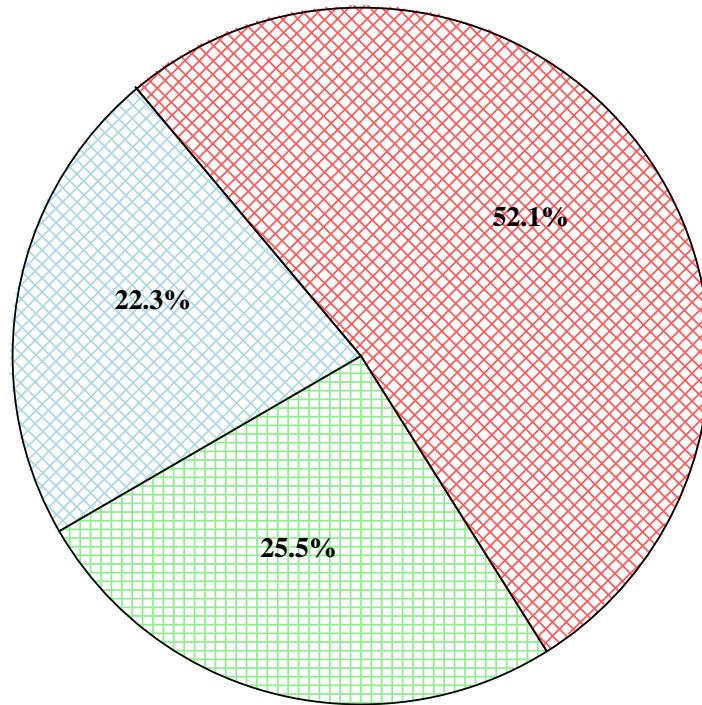





- In June 2013, 15% of reportable fixed connections (or 13.8 million connections) were slower than 3 Mbps in the downstream direction, 15% (or 14.2 million connections) were at least 3 Mbps in the downstream direction but slower than 6 Mbps, and 70% (or 66.3 million connections) were at least 6 Mbps in the downstream direction.<sup>6</sup>

**Fixed connections – upstream speeds.** Figure 3(b) illustrates how the 94 million fixed connections reported for June 2013 were distributed across the three ranges of *upstream speed* defined by breakpoints at 768 kbps and at 1.5 Mbps.

<sup>6</sup> See Chart 2, at p. 19.

**Figure 3(b)**  
**Distribution of Reportable Fixed Connections (94.2 million) by**  
**Upstream Speed as of June 30, 2013**



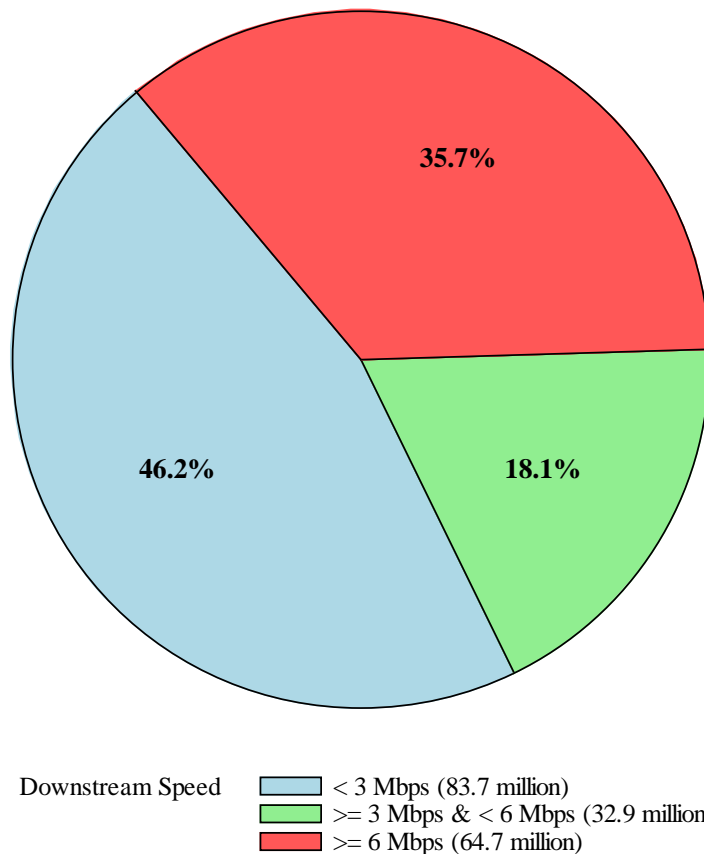
Upstream Speed     < 768 kbps (21.0 million)  
                           >= 768 kbps & < 1.5 Mbps (24.1 million)  
                           >= 1.5 Mbps (49.1 million)

- In June 2013, 22% of reportable fixed connections (or 21 million connections) were slower than 768 kbps in the upstream direction, 26% (or 24.1 million connections) were at least 768 kbps in the upstream direction but slower than 1.5 Mbps, and 52% (or 49.1 million connections) were at least 1.5 Mbps in the upstream direction.<sup>7</sup>

<sup>7</sup> *Ibid.*

**Mobile connections – downstream speeds.** Figure 4(a) illustrates how the 181 million mobile connections reported for June 2013 were distributed across the three ranges of *downstream speed* defined by breakpoints at 3 Mbps and at 6 Mbps.

**Figure 4(a)**  
**Distribution of Reportable Mobile Connections (181.4 million) by**  
**Downstream Speed as of June 30, 2013**

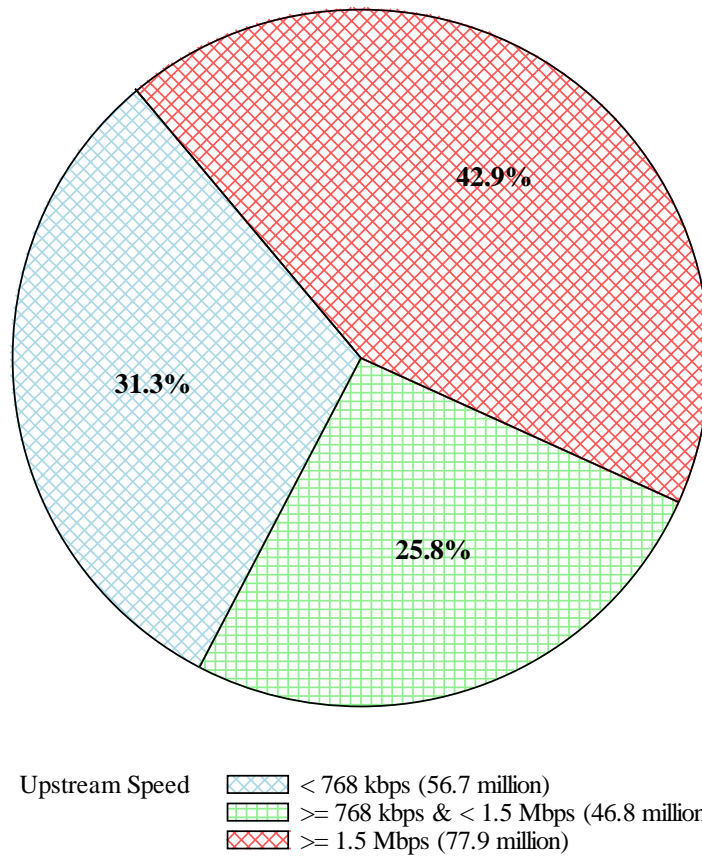


- In June 2013, 46% of reportable mobile connections (or 83.7 million connections) were slower than 3 Mbps in the downstream direction, 18% (or 32.9 million connections) were at least 3 Mbps in the downstream direction but slower than 6 Mbps, and 36% (or 64.7 million connections) were at least 6 Mbps in the downstream direction.<sup>8</sup>

**Mobile connections – upstream speeds.** Figure 4(b) illustrates how the 181 million mobile connections reported for June 2013 were distributed across the three ranges of *upstream speed* defined by breakpoints at 768 kbps and at 1.5 Mbps.

<sup>8</sup> See Chart 5, at p. 22.

**Figure 4(b)**  
**Distribution of Reportable Mobile Connections (181.4 million) by**  
**Upstream Speed as of June 30, 2013**

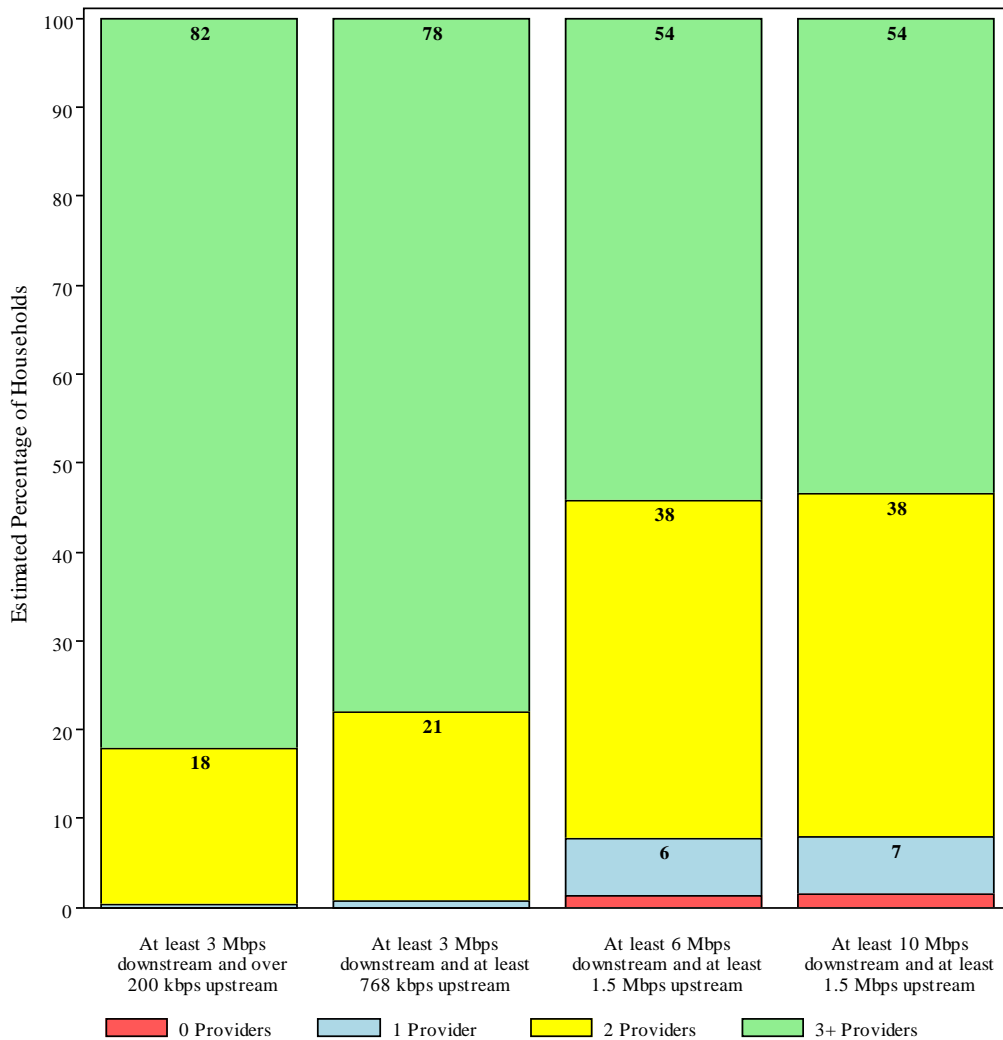


- In June 2013, about 31% of reportable mobile connections (or 56.7 million connections) were slower than 768 kbps in the upstream direction, 26% (or 46.8 million connections) were at least 768 kbps in the upstream direction but slower than 1.5 Mbps, and 43% (or 77.9 million connections) were at least 1.5 Mbps in the upstream direction.<sup>9</sup>

<sup>9</sup> *Ibid.*

**Providers by census tract by connection speed.** In Figure 5(a), we estimate the percentages of households located in census tracts where zero, one, two, or three or more providers reported residential fixed-location connections of several different speeds in June 2013. In doing so, however, we emphasize that a provider that reports residential fixed-location connections of a particular speed in a particular census tract may not necessarily offer service at that speed everywhere in the census tract. Accordingly, the number of providers shown in Figure 5(a) does not necessarily reflect the number of choices available to a particular household, and does not purport to measure competition. We note that the Commission has adopted changes to Form 477 that will enable a more precise analysis in future.<sup>10</sup>

**Figure 5(a)**  
**Percentages of Households Located in Census Tracts Where Providers Report Residential Fixed-Location Connections of Various Speeds as of June 30, 2013**

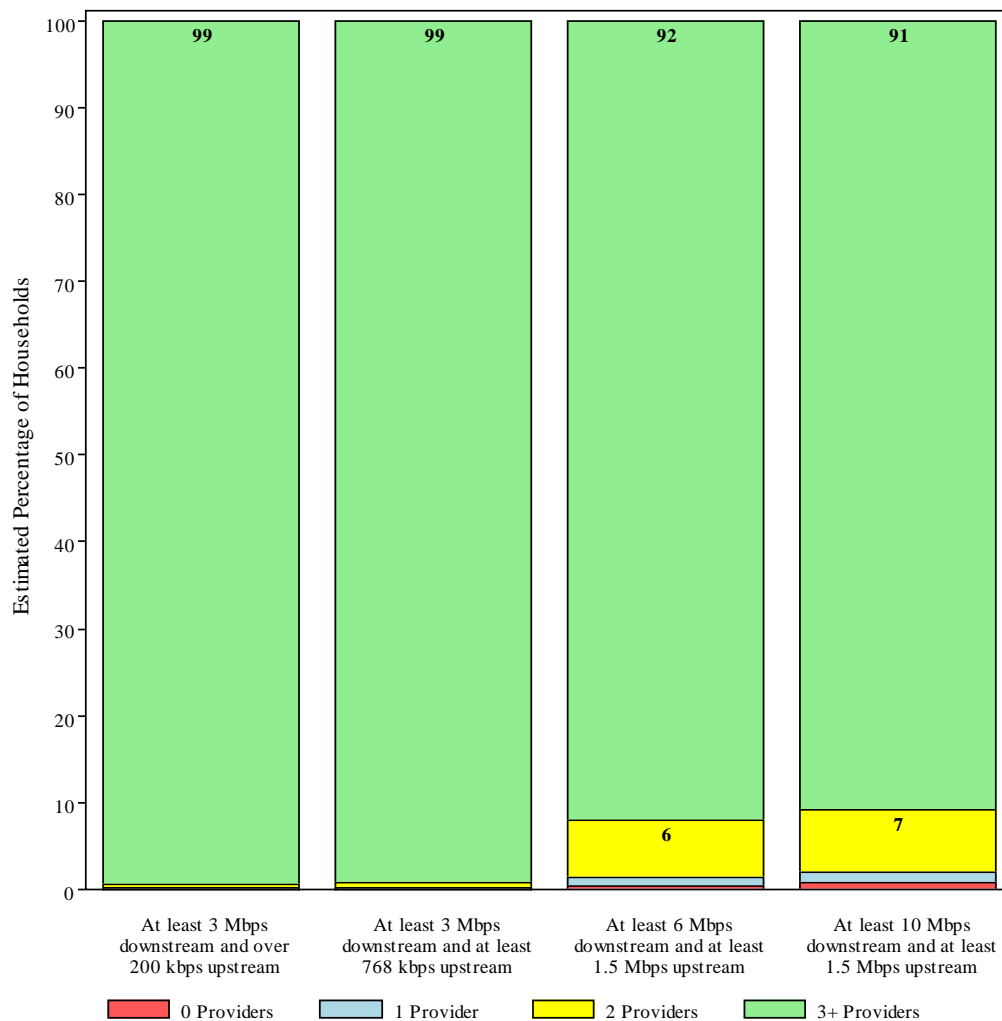


Column figures may not sum to 100% due to rounding.

<sup>10</sup> The Commission anticipates adding deployment information to Form 477 starting with data as of June 30, 2014, and the information about fixed broadband deployment will be reported by census block. (There are approximately 11 million census blocks and approximately 74,000 census tracts, although not all contain households.) See *June 2013 Form 477 Modernization Order*, 28 FCC Rcd at 9902-05, paras. 32-35.

In Figure 5(b), we estimate the percentages of households in census tracts where providers reported purchased residential fixed-location connections of different speeds *or* reported operating a mobile wireless network capable of sending or receiving data at the indicated speeds. Again, we emphasize that such providers may not necessarily offer services at those speeds everywhere in the census tract, and that these data do not necessarily reflect competition.

**Figure 5(b)**  
**Percentages of Households Located in Census Tracts Where Providers Report Residential Fixed-Location Connections of Various Speeds or Operate a Mobile Wireless Network Capable of Delivering Service of Various Speeds as of June 30, 2013**

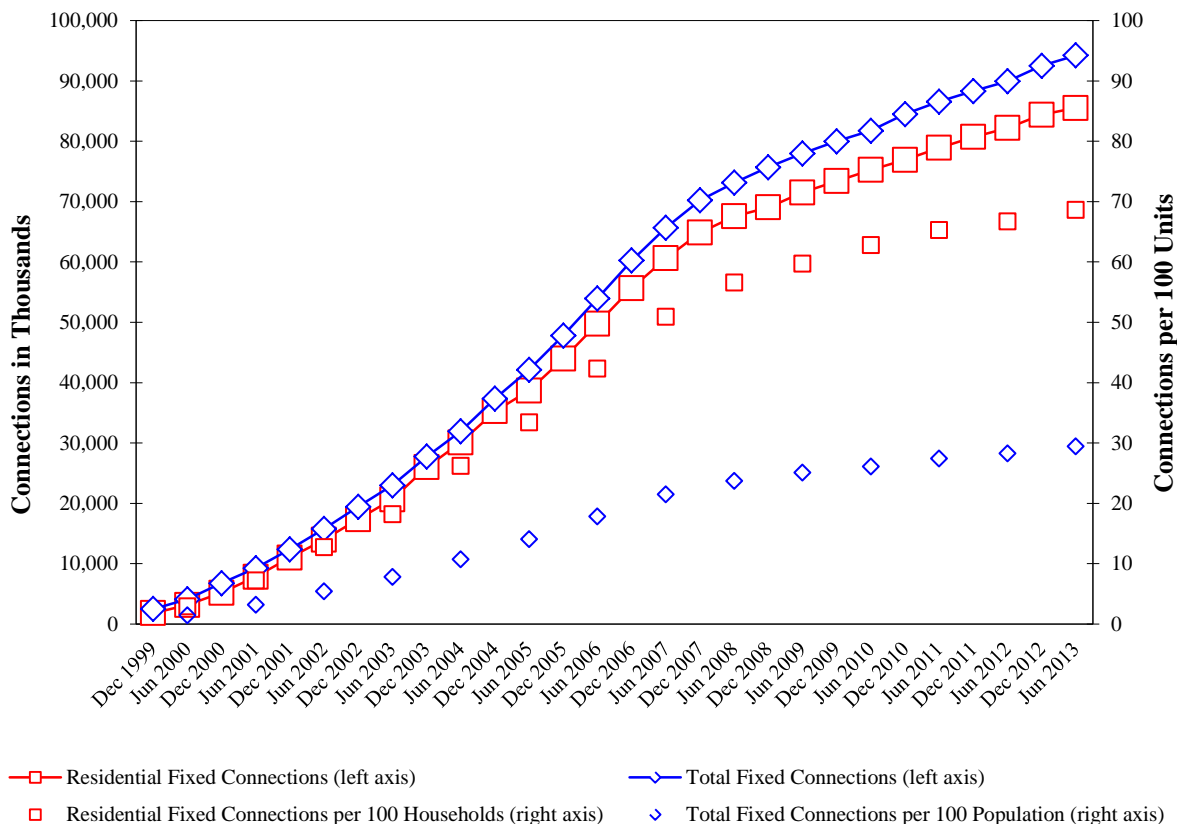


Column figures may not sum to 100% due to rounding.



**Internet access adoption.** The Commission has systematically collected, compiled, and published data about the adoption of fixed-location Internet access connections faster than 200 kbps in at least one direction for more than a decade. Figure 6 illustrates the adoption of fixed-location Internet access connections (that is, all reportable connections over 200 kbps in at least one direction except mobile wireless connections) since 1999.<sup>11</sup>

**Figure 6**  
**Fixed-Location Connections 1999-2013**  
**(Connections over 200 kbps in at least one direction)**



- Between June 2003 and June 2013, total (business and residential) reportable fixed-location connections grew from 23 million connections to 94 million connections – at a compound annual growth rate of 15% per year.<sup>12</sup>
- Over the same ten-year period, residential fixed-location connections grew from 21 million connections to 86 million connections – also at a compound annual growth rate of 15% per year.

<sup>11</sup> For data through December 2004, only those providers with at least 250 connections in a state were required to report. Historical fixed-location connection counts not included in this report may be found in *June 2008 High-Speed Report* at Tables 1 and 3, available in Excel format at [www.fcc.gov/wcb/iatd/comp.html](http://www.fcc.gov/wcb/iatd/comp.html).

<sup>12</sup> The compound annual growth rate (CAGR) is a smoothed rate of growth calculated in three steps. First, divide the ending (June 2013) value by the beginning (June 2003) value. Second, raise the result of that division to a power equal to one divided by the number of years in the period (in this case, 10 years, so the power is 1/10). Third, subtract the number one from the result of the second step.

- Between June 2003 and June 2013, household adoption – which we track in Figure 6 by comparing the number of residential fixed-location connections over 200 kbps in at least one direction to the number of households – increased from 18 connections per 100 households to 69 connections per 100 households.<sup>13</sup>

## **Other report highlights.**

### **Residential subscribership**

- Residential fixed-location Internet access connections over 200 kbps in at least one direction increased by 4% between June 2012 and June 2013, to 86 million. See Table 3.
- Reported residential mobile wireless service subscribers with mobile devices and data plans for full Internet access increased by 24%, to 142 million, between June 2012 and June 2013. See Table 3.
- The reported data show a 30% annual increase in the number of residential fixed-location connections that are at least 6 Mbps downstream and 1.5 Mbps upstream (from 34.5 million in June 2012 to 45 million in June 2013) and a 31% annual increase in the number of connections that are at least 10 Mbps downstream and 1.5 Mbps upstream (from 34.1 million in June 2012 to 44.8 million in June 2013).<sup>14</sup> See Chart 12.

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<sup>13</sup> In Figure 6, we calculated residential fixed connections per 100 *households* using, in the denominator, U.S. household estimates from the Census Bureau’s Current Population Survey (CPS) for July of each year and, for Puerto Rico and the other inhabited island areas, Census 2010 households for 2010 and later years and Census 2000 households for the earlier years. (The CPS also estimates U.S. households for March and November of each year.) Ratios calculated for different dates or by using alternative household estimates will differ somewhat from the ratios reported in Figure 6.

We also show total (including business as well as residential) fixed-location connections per 100 *population* in Figure 6, which we calculated using U.S. Census Bureau population estimates for the United States and Puerto Rico – which are as of July 1 each year – and, for the remaining inhabited island areas, Census 2010 population for 2010 and later years and Census 2000 population for the earlier years. This statistic, which is routinely reported by the Organization for Economic Cooperation and Development (OECD), incorporates connections to business locations into a comparison to persons. A more accurately measured indicator of this type would include only connections to residential locations, but OECD does not have comprehensive, consistent information about residential connections in the member countries. (We note that the ratio of accurately measured *residential* fixed-location connections to population has a maximum value for any given country and point in time – the value when *every* household is connected – if we assume that no household would have more than one fixed connection to its premises. For the United States in June 2013, for example, the maximum value would be 39 because there were about 125 million households in the United States and inhabited insular areas and a population of about 320 million according to the sources used for Figure 6.)

<sup>14</sup> These increases are largely due to a change in upstream-speed reporting by a single aDSL services provider.

### **Household adoption of faster speeds**

- As a national average in June 2013, there were 54 residential fixed-location connections per 100 households for connections with speeds that were reported to be at least 3 Mbps downstream and 768 kbps upstream.<sup>15</sup> See Table 13.

### **Census tract and county shares of households with reportable connections**

- We estimate the share of households with fixed-location Internet access connections over 200 kbps in at least one direction in individual census tracts and counties as of June 30, 2013. We continue to observe substantial variation among these estimates. See Charts 15 and 16.
- For both census tracts and counties, we continue to find estimates above 100% for the share of households with reportable fixed-location Internet access connections. While this is likely to occur more frequently in areas where the number of housing units is substantially greater than the number of households, such as resort areas and beach communities, these results suggest that some filers are not accurately assigning customer connections to census tracts, and anecdotal evidence supports that conclusion.<sup>16</sup>

### **Household adoption rates and subscribership demographics**

- The report includes charts that illustrate correlations between household subscribership, or *adoption*, rates and demographic measures. We update charts based on income, household density, education, age, and race. The data indicate that some demographic variables are correlated with the adoption of Internet access service. See Charts 17-29.

### **Maps of providers by census tract**

- Maps depict the number of providers of reportable connections by census tract: (1) providers of total (combined residential and business) reportable fixed-location connections, (2) providers of *residential* reportable fixed-location connections, (3) providers of *residential* fixed-location connections at least 3 Mbps downstream and 768 kbps upstream, and (4) providers making reportable mobile wireless service *available*.<sup>17</sup>

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<sup>15</sup> Increases over time in the ratio of residential fixed-location connections to households indicate that increasing shares of households are connected at home. The ratio is somewhat different from the “take rate” of offered service (which may also be called an “adoption rate”) because, as discussed in connection with Figure 5(a), some households may be located in areas where no fixed-location service is offered. These methodological differences are discussed in greater detail in *Inquiry Concerning the Deployment of Advanced Telecommunications Capability to All Americans in a Reasonable and Timely Fashion, and Possible Steps to Accelerate Such Deployment Pursuant to Section 706 of the Telecommunications Act of 1996, Amended by the Broadband Data Improvement Act*, GN Docket No.11-121, Eighth Broadband Progress Report, 27 FCC Rcd 10342, 10386, para. 94 (2012).

<sup>16</sup> For example, while contacting Form 477 filers with questions about reported data, FCC staff continue to find situations in which all connections reported for a county have been assigned to a single, anomalous census tract.

<sup>17</sup> As discussed in the Technical Notes, a mobile wireless provider should only report service availability in census tracts where the provider operates a network capable of sending or receiving data at speeds above 200 kbps.

**Remainder of the report.** The remainder of the report consists of tables, charts, and maps that highlight different aspects of Internet access service subscriptions. This information is organized into four sections, as described below. As always, publicly accessible data that are too voluminous to include in this report are available online at [www.fcc.gov/wcb/iatd/comp.html](http://www.fcc.gov/wcb/iatd/comp.html).

- Detailed Summary Statistics: The Nation. Tables 1-12 and Charts 1-14 focus in order on: number of connections, speed of connections, technology of connections, and number of providers.
- Detailed Summary Statistics: The States. Tables 13-21 present comparable information for the individual states and our estimates of the shares of households that are connected at different speeds.
- Detailed Summary Statistics: Counties and Census Tracts. Charts 15-16 and Tables 22-26 present information about differences among counties and census tracts. This section concludes with two maps that illustrate differences among census tracts in the estimated share of connected households and the four maps (discussed above) that illustrate providers by census tract.
- Detailed Correlation Results: Demographic Measures. Charts 17-29 present details of the correlations observed between the estimated share of connected households and demographic measures.

\* \* \* \*

We invite users of this information to suggest improvements in the data analysis by using the attached customer response form or sending comments to [IATDreports@fcc.gov](mailto:IATDreports@fcc.gov) for subject: June 2013 Internet services data, and to participate in proceedings the Commission undertakes to improve the data collection.

## Detailed Summary Statistics: The Nation

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**Table 1**  
**Connections over 200 kbps in at Least One Direction 2009-2013**  
(In thousands)

<i>Technology</i>	2009		2010		2011		2012		2013
	<i>Jun</i>	<i>Dec</i>	<i>Jun</i>	<i>Dec</i>	<i>Jun</i>	<i>Dec</i>	<i>Jun</i>	<i>Dec</i>	<i>Jun</i>
Total	119,433	136,294	157,017	182,065	206,131	230,201	243,359	261,389	275,608
Total Fixed	77,997	79,994	81,764	84,521	86,575	88,317	89,945	92,514	94,243
Mobile Wireless <sup>1</sup>	41,436	56,300	75,253	97,544	119,556	141,883	153,414	168,875	181,365

**Table 2**  
**Connections at Least 3 Mbps Downstream and 768 kbps Upstream 2009-2013**  
(In thousands)

<i>Technology</i>	2009		2010		2011		2012		2013
	<i>Jun</i>	<i>Dec</i>	<i>Jun</i>	<i>Dec</i>	<i>Jun</i>	<i>Dec</i>	<i>Jun</i>	<i>Dec</i>	<i>Jun</i>
Total	33,332	40,669	45,552	55,110	64,819	82,015	100,268	128,448	163,730
Total Fixed	33,108	38,963	41,364	44,694	48,577	51,097	57,243	64,572	70,483
Mobile Wireless <sup>1</sup>	224	1,706	4,188	10,416	16,242	30,918	43,025	63,876	93,247

**Table 3**  
**Residential Connections over 200 kbps in at Least One Direction 2009-2013**  
(In thousands)

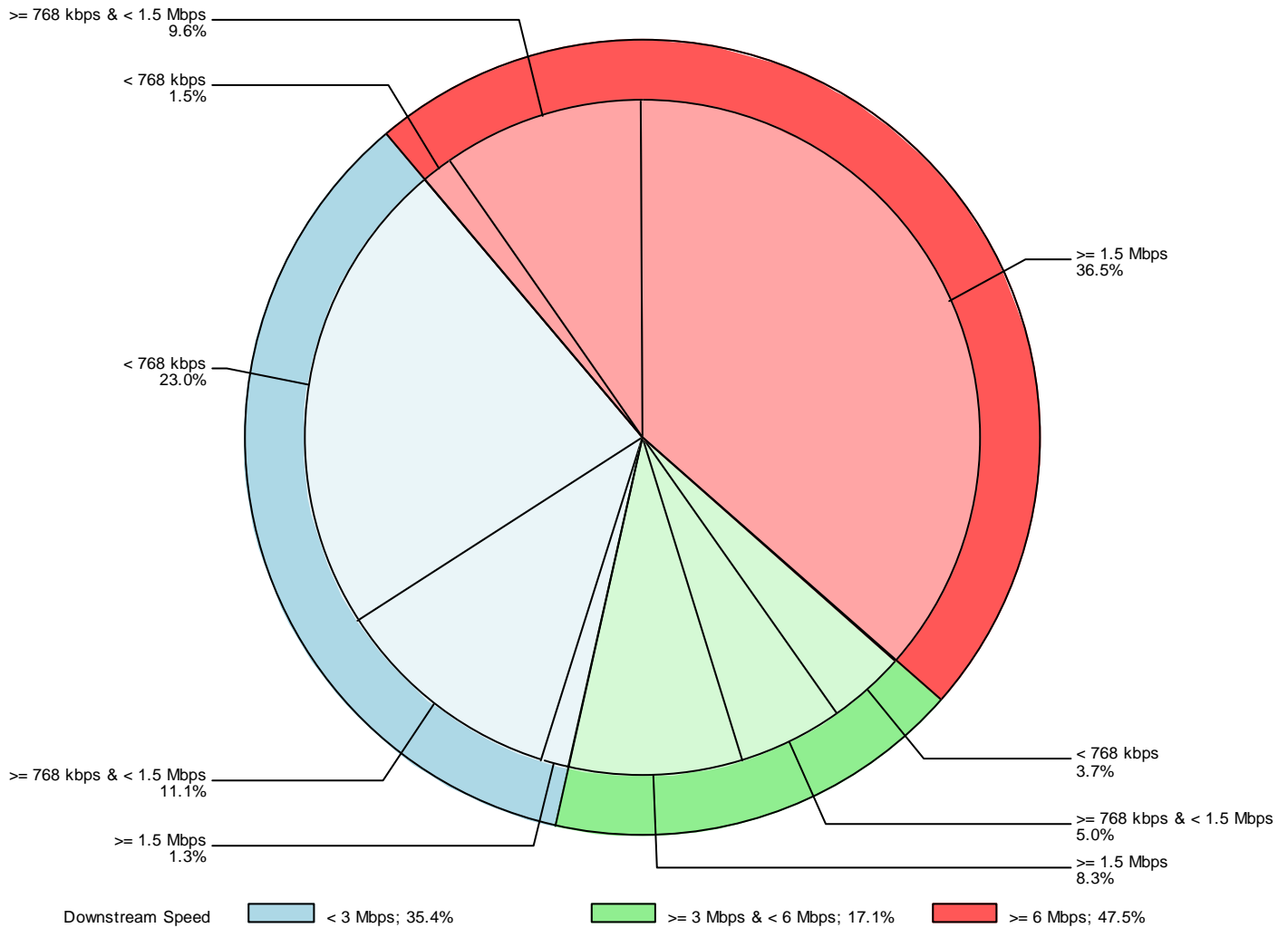
<i>Technology</i>	2009		2010		2011		2012		2013
	<i>Jun</i>	<i>Dec</i>	<i>Jun</i>	<i>Dec</i>	<i>Jun</i>	<i>Dec</i>	<i>Jun</i>	<i>Dec</i>	<i>Jun</i>
Total	103,300	117,089	132,567	149,441	171,773	186,516	196,665	215,111	227,932
Total Fixed	71,509	73,394	75,251	76,918	78,906	80,706	82,217	84,393	85,528
Mobile Wireless <sup>1</sup>	31,791	43,695	57,316	72,523	92,867	105,810	114,448	130,719	142,404

**Table 4**  
**Residential Connections at Least 3 Mbps Downstream and 768 kbps Upstream 2009-2013**  
(In thousands)

<i>Technology</i>	2009		2010		2011		2012		2013
	<i>Jun</i>	<i>Dec</i>	<i>Jun</i>	<i>Dec</i>	<i>Jun</i>	<i>Dec</i>	<i>Jun</i>	<i>Dec</i>	<i>Jun</i>
Total	31,356	38,426	42,243	47,632	51,783	63,736	78,609	105,171	137,056
Total Fixed	31,161	36,844	39,037	41,769	45,263	47,427	53,070	59,828	65,041
Mobile Wireless <sup>1</sup>	196	1,582	3,206	5,863	6,520	16,309	25,539	45,342	72,014

Note: Some historical data have been revised. Figures may not sum to totals due to rounding.  
Source: FCC Form 477, Parts I and VI.

**Chart 1**  
**Distribution of Connections over 200 kbps in at Least One Direction**  
**as of June 30, 2013**



Connections over 200 kbps in at Least One Direction (in thousands)

Upstream Speed	Downstream Speed			Total
	Less than 3 Mbps	At least 3 Mbps and less than 6 Mbps	At least 6 Mbps	
Less than 768 kbps	63,390	10,301	4,061	77,751
At least 768 kbps & Less than 1.5 Mbps	30,508	13,853	26,465	70,826
At least 1.5 Mbps	3,619	22,907	100,505	127,030
<b>Total</b>	<b>97,516</b>	<b>47,061</b>	<b>131,031</b>	<b>275,608</b>

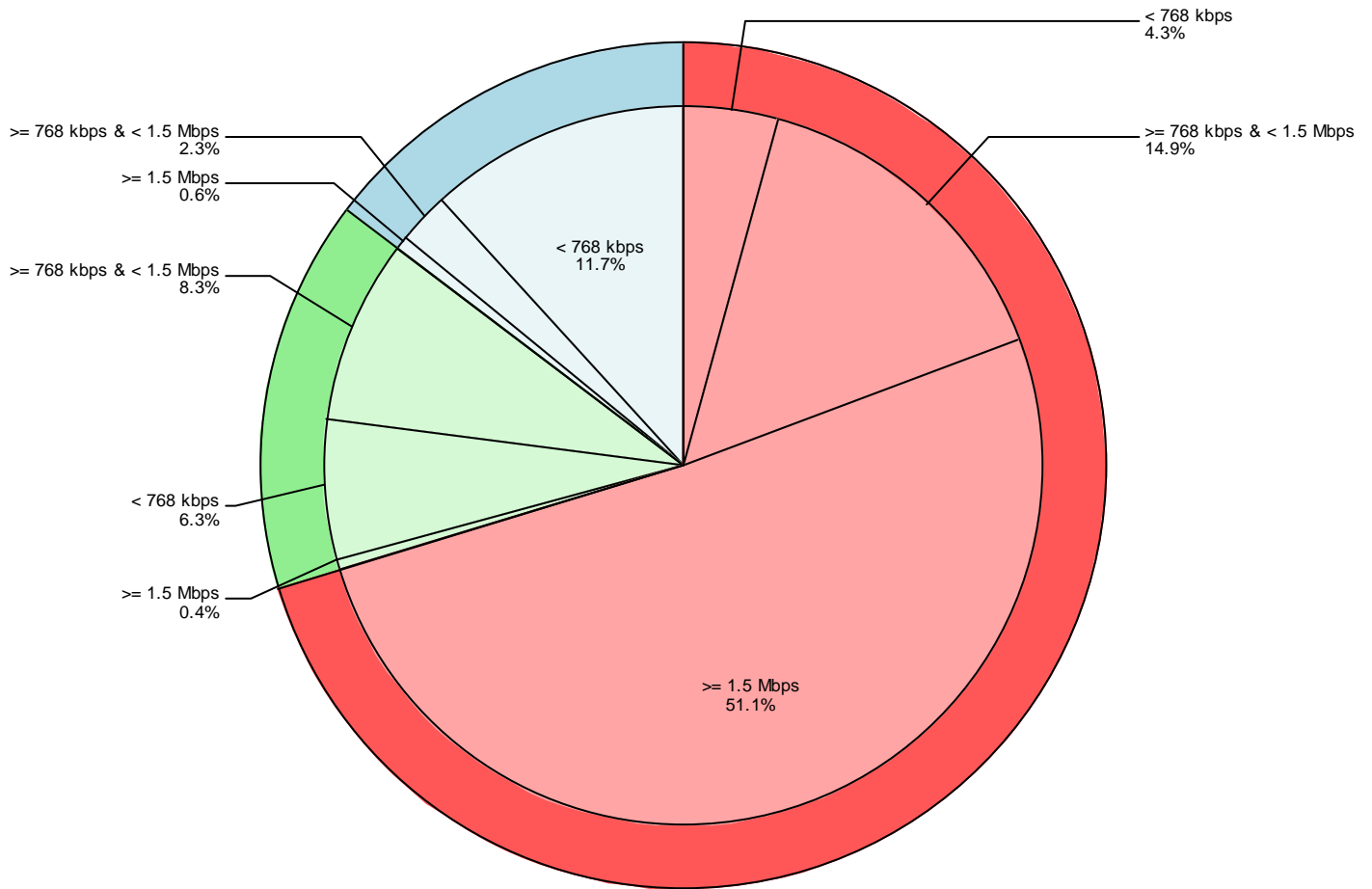
Percentages

Less than 768 kbps	23.0	3.7	1.5	28.2
At least 768 kbps & Less than 1.5 Mbps	11.1	5.0	9.6	25.7
At least 1.5 Mbps	1.3	8.3	36.5	46.1
<b>Total</b>	<b>35.4</b>	<b>17.1</b>	<b>47.5</b>	<b>100.0</b>

Note: Figures may not sum to totals due to rounding.  
 Source: FCC Form 477, Part I.



**Chart 2**  
**Distribution of Fixed Connections over 200 kbps in at Least One Direction**  
**as of June 30, 2013**



Downstream Speed ■ < 3 Mbps; 14.6%

■ >= 3 Mbps & < 6 Mbps; 15.0%

■ >= 6 Mbps; 70.3%

Note: Inner circle (light shading) represents upstream speeds.

Fixed Connections over 200 kbps in at Least One Direction (in thousands)

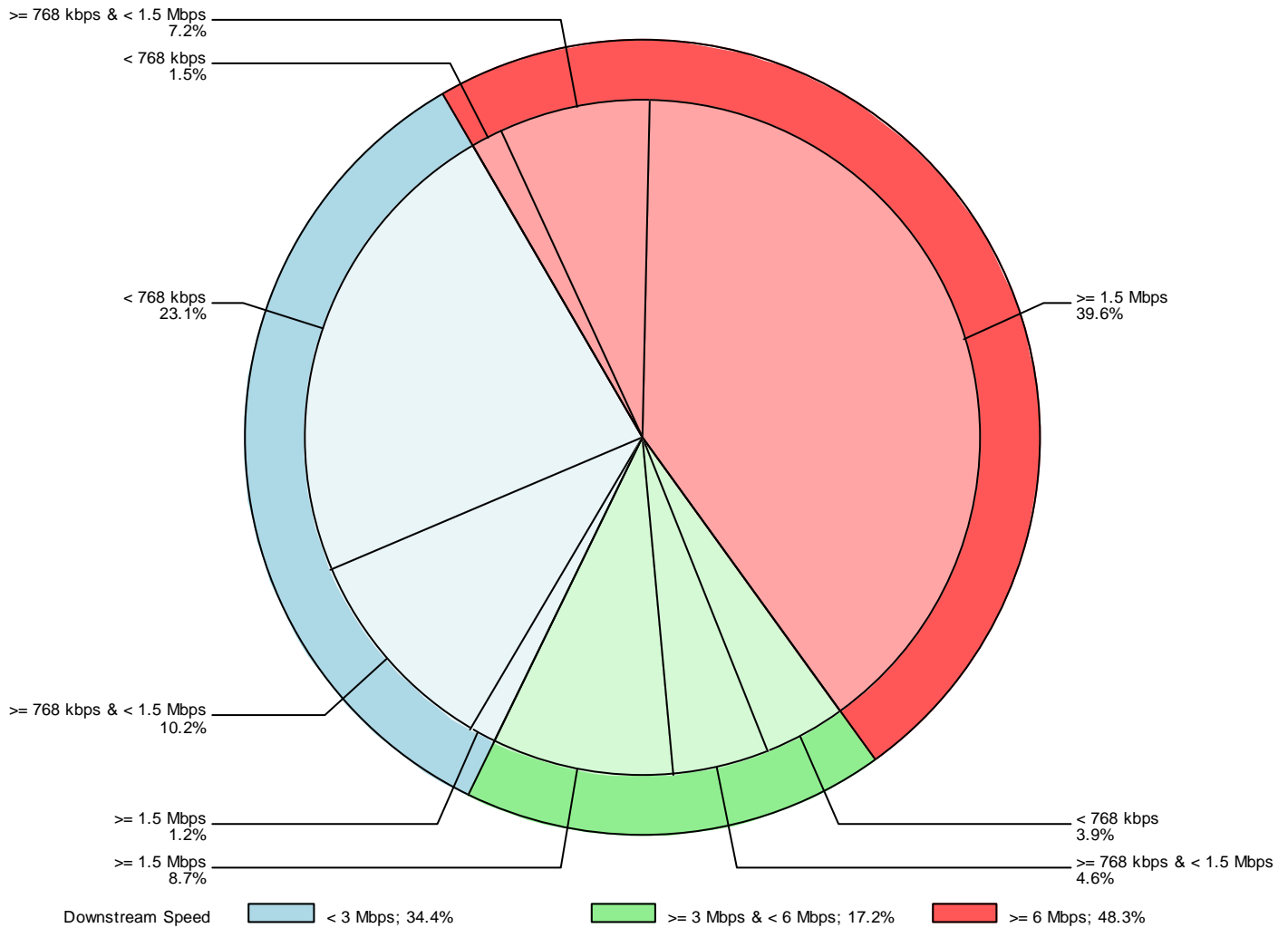
Upstream Speed	Downstream Speed			Total
	Less than 3 Mbps	At least 3 Mbps and less than 6 Mbps	At least 6 Mbps	
Less than 768 kbps	11,057	5,946	4,031	21,034
At least 768 kbps & Less than 1.5 Mbps	2,162	7,812	14,089	24,063
At least 1.5 Mbps	564	415	48,168	49,146
<b>Total</b>	<b>13,784</b>	<b>14,172</b>	<b>66,287</b>	<b>94,243</b>

Percentages

Less than 768 kbps	11.7	6.3	4.3	22.3
At least 768 kbps & Less than 1.5 Mbps	2.3	8.3	14.9	25.5
At least 1.5 Mbps	0.6	0.4	51.1	52.1
<b>Total</b>	<b>14.6</b>	<b>15.0</b>	<b>70.3</b>	<b>100.0</b>

Note: Figures may not sum to totals due to rounding.  
 Source: FCC Form 477, Part I.

**Chart 3**  
**Distribution of Residential Connections over 200 kbps in at Least One Direction**  
**as of June 30, 2013**



Note: Inner circle (light shading) represents upstream speeds.

Residential Connections over 200 kbps in at Least One Direction (in thousands)

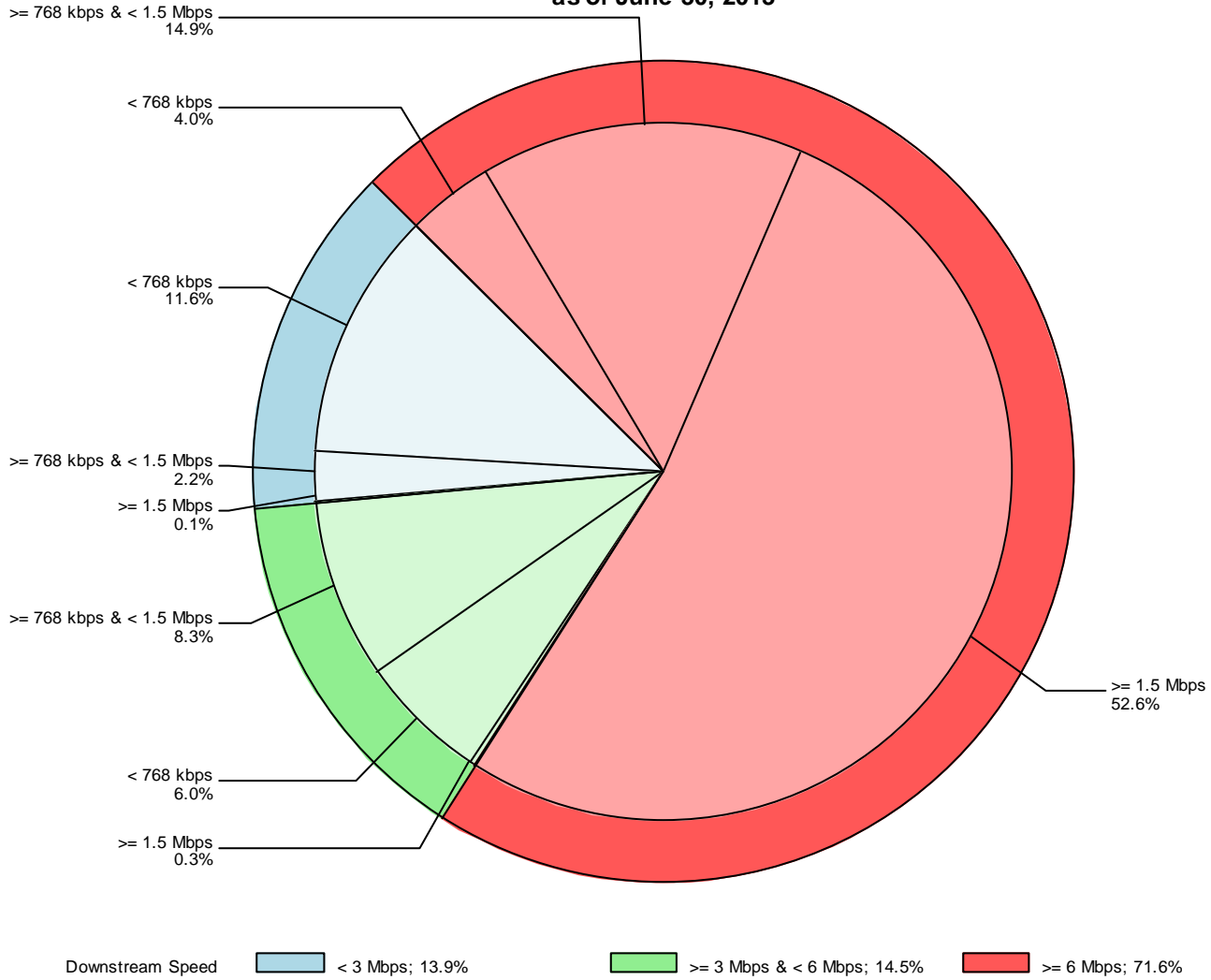
Upstream Speed	Downstream Speed			Total
	Less than 3 Mbps	At least 3 Mbps and less than 6 Mbps	At least 6 Mbps	
Less than 768 kbps	52,539	8,879	3,487	64,905
At least 768 kbps & Less than 1.5 Mbps	23,184	10,549	16,453	50,186
At least 1.5 Mbps	2,787	19,813	90,241	112,841
<b>Total</b>	<b>78,509</b>	<b>39,241</b>	<b>110,181</b>	<b>227,932</b>

Percentages

Less than 768 kbps	23.1	3.9	1.5	28.5
At least 768 kbps & Less than 1.5 Mbps	10.2	4.6	7.2	22.0
At least 1.5 Mbps	1.2	8.7	39.6	49.5
<b>Total</b>	<b>34.4</b>	<b>17.2</b>	<b>48.3</b>	<b>100.0</b>

Note: Figures may not sum to totals due to rounding.  
 Source: FCC Form 477, Parts I and VI.

**Chart 4**  
**Distribution of Residential Fixed Connections over 200 kbps in at Least One Direction**  
**as of June 30, 2013**



Note: Inner circle (light shading) represents upstream speeds.

Residential Fixed Connections over 200 kbps in at Least One Direction (in thousands)

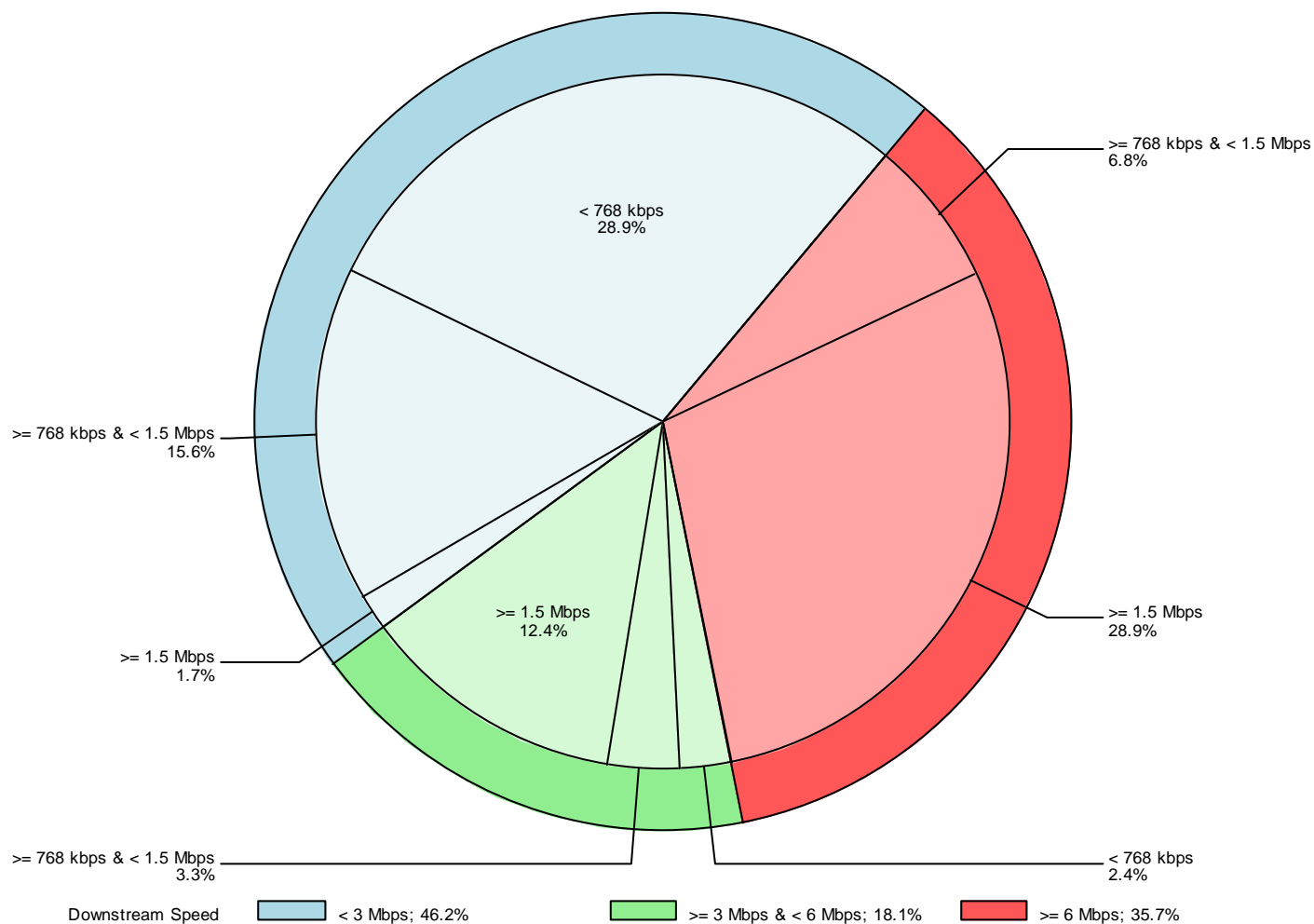
Upstream Speed	Downstream Speed			Total
	Less than 3 Mbps	At least 3 Mbps and less than 6 Mbps	At least 6 Mbps	
Less than 768 kbps	9,882	5,124	3,462	18,467
At least 768 kbps & Less than 1.5 Mbps	1,921	7,058	12,732	21,711
At least 1.5 Mbps	98	240	45,011	45,349
<b>Total</b>	<b>11,901</b>	<b>12,423</b>	<b>61,204</b>	<b>85,528</b>

Percentages

Less than 768 kbps	11.6	6.0	4.0	21.6
At least 768 kbps & Less than 1.5 Mbps	2.2	8.3	14.9	25.4
At least 1.5 Mbps	0.1	0.3	52.6	53.0
<b>Total</b>	<b>13.9</b>	<b>14.5</b>	<b>71.6</b>	<b>100.0</b>

Note: Figures may not sum to totals due to rounding.  
 Source: FCC Form 477, Part VI.

**Chart 5**  
**Distribution of Mobile Wireless Connections over 200 kbps in at Least One Direction**  
**as of June 30, 2013**



Mobile Wireless Connections over 200 kbps in at Least One Direction (in thousands)

Upstream Speed	Downstream Speed			Total
	Less than 3 Mbps	At least 3 Mbps and less than 6 Mbps	At least 6 Mbps	
Less than 768 kbps	52,332	4,355	30	56,717
At least 768 kbps & Less than 1.5 Mbps	28,346	6,042	12,376	46,763
At least 1.5 Mbps	3,055	22,492	52,337	77,884
<b>Total</b>	<b>83,732</b>	<b>32,889</b>	<b>64,743</b>	<b>181,365</b>

Percentages

Less than 768 kbps	28.9	2.4	0.0	31.3
At least 768 kbps & Less than 1.5 Mbps	15.6	3.3	6.8	25.8
At least 1.5 Mbps	1.7	12.4	28.9	42.9
<b>Total</b>	<b>46.2</b>	<b>18.1</b>	<b>35.7</b>	<b>100.0</b>

Note: Figures may not sum to totals due to rounding.  
 Source: FCC Form 477, Part I.

**Table 5**  
**Connections over 200 kbps in at Least One Direction by Technology 2009-2013**  
(In thousands)

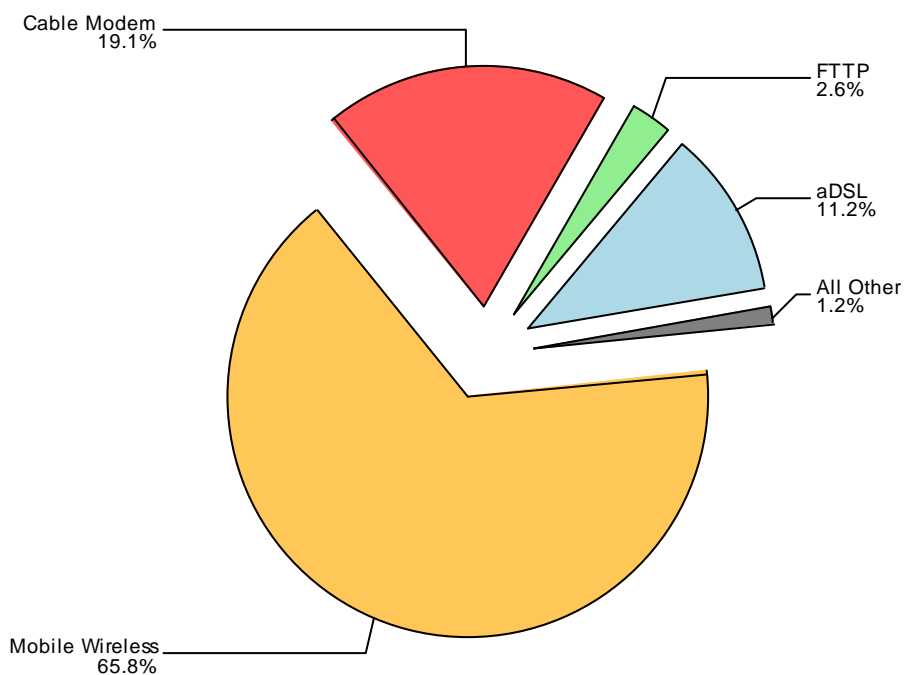
Technology	2009		2010		2011		2012		2013
	Jun	Dec	Jun	Dec	Jun	Dec	Jun	Dec	Jun
Total	119,433	136,294	157,017	182,065	206,131	230,201	243,359	261,389	275,608
Total Fixed	77,997	79,994	81,764	84,521	86,575	88,317	89,945	92,514	94,243
aDSL	30,631	30,987	30,759	31,470	31,611	31,330	31,173	30,979	30,892
sDSL	217	225	191	167	159	148	139	132	117
Other Wireline <sup>1</sup>	689	719	755	795	778	795	770	798	780
Cable Modem	41,434	42,439	43,923	45,334	46,698	48,263	49,664	51,646	52,760
FTTP <sup>2</sup>	3,548	3,980	4,441	4,993	5,477	5,898	6,300	6,728	7,261
Satellite	990	1,116	1,144	1,176	1,204	1,190	1,217	1,454	1,623
Fixed Wireless	488	527	551	587	649	693	682	777	810
Mobile Wireless <sup>3</sup>	41,436	56,300	75,253	97,544	119,556	141,883	153,414	168,875	181,365

<sup>1</sup> Power Line and Other are summarized with Other Wireline to maintain firm confidentiality. See Technical Notes at the end of the report for a description of Form 477 technology categories and other reporting requirements.

<sup>2</sup> Fiber to the premises.

Note: Some historical data have been revised. Figures may not sum to totals due to rounding.  
Source: FCC Form 477, Part I.

**Chart 6**  
**Connections by Technology as of June 30, 2013**



**Table 6**  
**Residential Connections over 200 kbps in at Least One Direction by Technology 2009-2013**  
(In thousands)

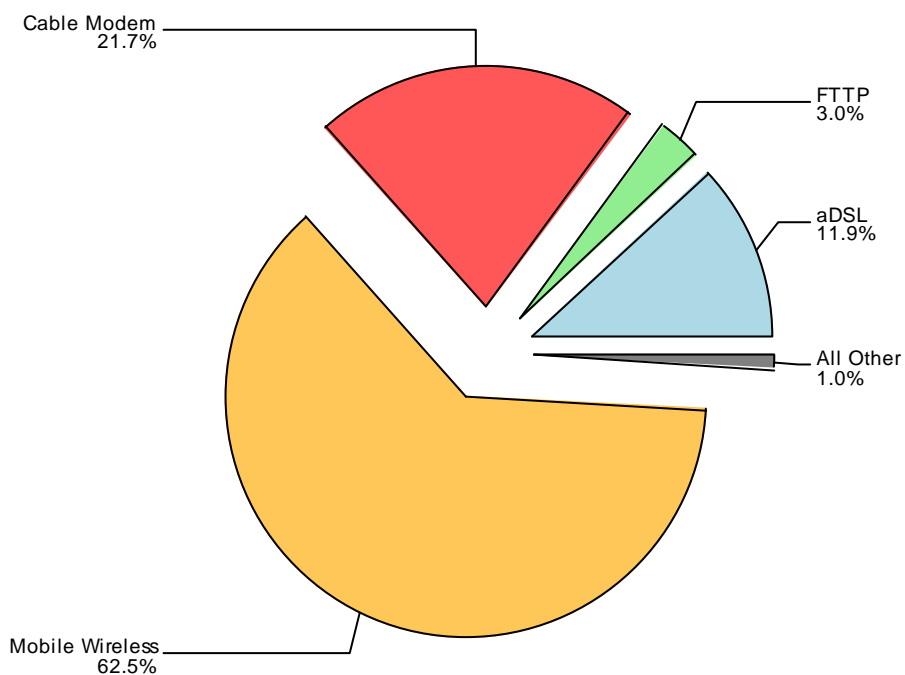
Technology	2009		2010		2011		2012		2013
	Jun	Dec	Jun	Dec	Jun	Dec	Jun	Dec	Jun
Total	103,300	117,089	132,567	149,441	171,773	186,516	196,665	215,111	227,932
Total Fixed	71,509	73,394	75,251	76,918	78,906	80,706	82,217	84,393	85,528
aDSL	27,047	27,402	27,488	27,467	27,754	27,758	27,632	27,397	27,103
sDSL	71	85	65	53	52	54	49	50	43
Other Wireline <sup>1</sup>	49	56	61	76	45	40	14	34	28
Cable Modem	39,909	40,872	42,178	43,295	44,480	45,832	47,033	48,716	49,494
FTTP <sup>2</sup>	3,348	3,758	4,185	4,704	5,118	5,521	5,892	6,264	6,743
Satellite	668	767	787	811	885	886	998	1,242	1,407
Fixed Wireless	417	454	486	513	572	616	600	689	710
Mobile Wireless <sup>3</sup>	31,791	43,695	57,316	72,523	92,867	105,810	114,448	130,719	142,404

<sup>1</sup> Power Line and Other are summarized with Other Wireline to maintain firm confidentiality. See Technical Notes at the end of the report for a description of Form 477 technology categories and other reporting requirements.

<sup>2</sup> Fiber to the premises.

Note: Some historical data have been revised. Figures may not sum to totals due to rounding.  
Source: FCC Form 477, Part I.

**Chart 7**  
**Residential Connections by Technology as of June 30, 2013**



**Table 7**  
**Connections at Least 3 Mbps Downstream and 768 kbps Upstream by Technology 2009-2013**  
(In thousands)

Technology	2009		2010		2011		2012		2013
	Jun	Dec	Jun	Dec	Jun	Dec	Jun	Dec	Jun
Total	33,332	40,669	45,552	55,110	64,819	82,015	100,268	128,448	163,730
Total Fixed	33,108	38,963	41,364	44,694	48,577	51,097	57,243	64,572	70,483
aDSL	5,614	6,389	6,275	7,302	8,909	10,351	12,875	13,028	16,029
sDSL	9	19	13	14	16	26	30	33	34
Other Wireline <sup>1</sup>	129	150	177	211	204	228	239	276	289
Cable Modem	23,958	28,583	30,616	32,338	34,113	34,699	37,798	44,133	46,014
FTTP <sup>2</sup>	3,333	3,739	4,192	4,725	5,188	5,606	6,001	6,425	6,989
Satellite	#	#	#	#	#	#	87	394	791
Fixed Wireless	64	82	92	105	145	186	214	284	337
Mobile Wireless	224	1,706	4,188	10,416	16,242	30,918	43,025	63,876	93,247

# = Rounds to Zero.

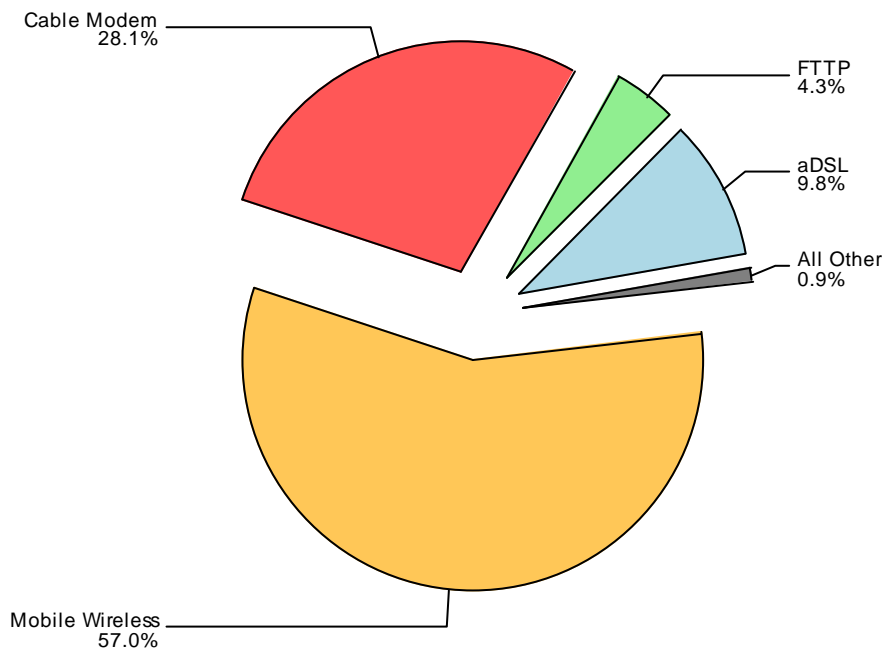
<sup>1</sup> Power Line and Other are summarized with Other Wireline to maintain firm confidentiality. See Technical Notes at the end of the report for a description of Form 477 technology categories and other reporting requirements.

<sup>2</sup> Fiber to the premises.

Note: Some historical data have been revised. Figures may not sum to totals due to rounding.

Source: FCC Form 477, Part I.

**Chart 8**  
**Connections at Least 3 Mbps Downstream and 768 kbps Upstream**  
**by Technology as of June 30, 2013**



**Table 8**  
**Residential Connections at Least 3 Mbps Downstream and 768 kbps Upstream by Technology 2009-2013**  
(In thousands)

Technology	2009		2010		2011		2012		2013
	Jun	Dec	Jun	Dec	Jun	Dec	Jun	Dec	Jun
Total	31,356	38,426	42,243	47,632	51,783	63,736	78,609	105,171	137,056
Total Fixed	31,161	36,844	39,037	41,769	45,263	47,427	53,070	59,828	65,041
aDSL	4,895	5,633	5,557	6,421	7,909	9,274	11,563	11,588	14,353
sDSL	2	10	2	2	4	12	12	13	13
Other Wireline <sup>1</sup>	12	19	20	36	15	16	7	20	26
Cable Modem	23,025	27,548	29,398	30,742	32,321	32,693	35,583	41,561	43,061
FTTP <sup>2</sup>	3,177	3,566	3,982	4,482	4,894	5,271	5,632	6,007	6,512
Satellite	0	0	0	0	0	#	86	393	788
Fixed Wireless	50	68	77	86	121	161	185	245	289
Mobile Wireless	196	1,582	3,206	5,863	6,520	16,309	25,539	45,342	72,014

# = Rounds to Zero.

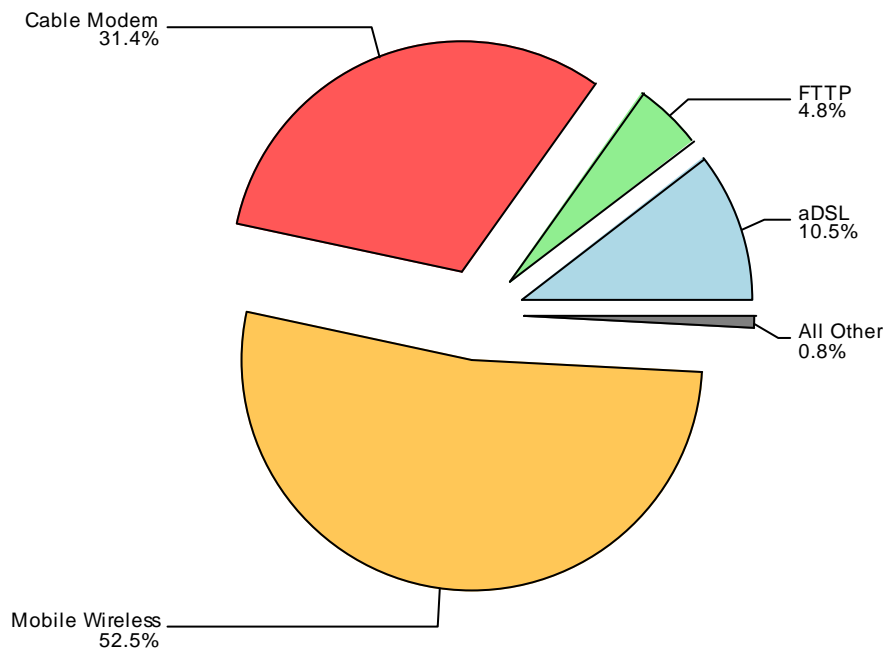
<sup>1</sup> Power Line and Other are summarized with Other Wireline to maintain firm confidentiality. See Technical Notes at the end of the report for a description of Form 477 technology categories and other reporting requirements.

<sup>2</sup> Fiber to the premises.

Note: Some historical data have been revised. Figures may not sum to totals due to rounding.

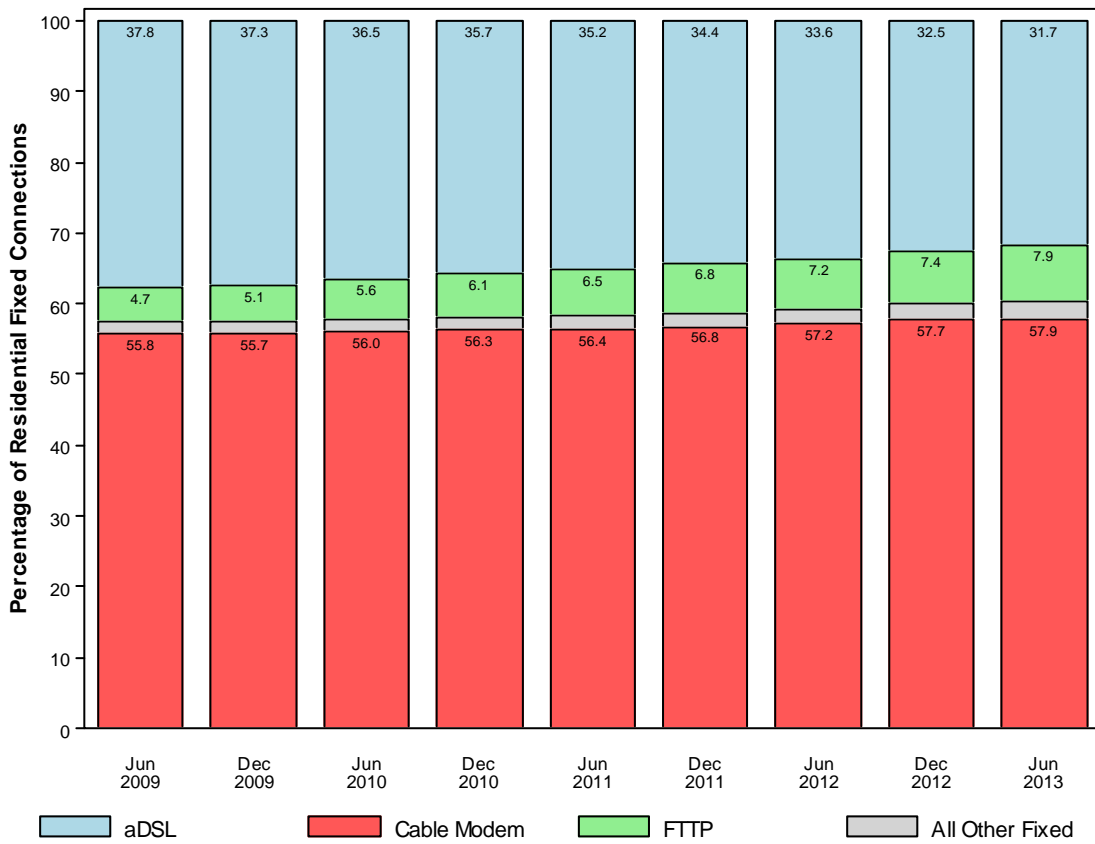
Source: FCC Form 477, Part I.

**Chart 9**  
**Residential Connections at Least 3 Mbps Downstream and 768 kbps Upstream**  
**by Technology as of June 30, 2013**

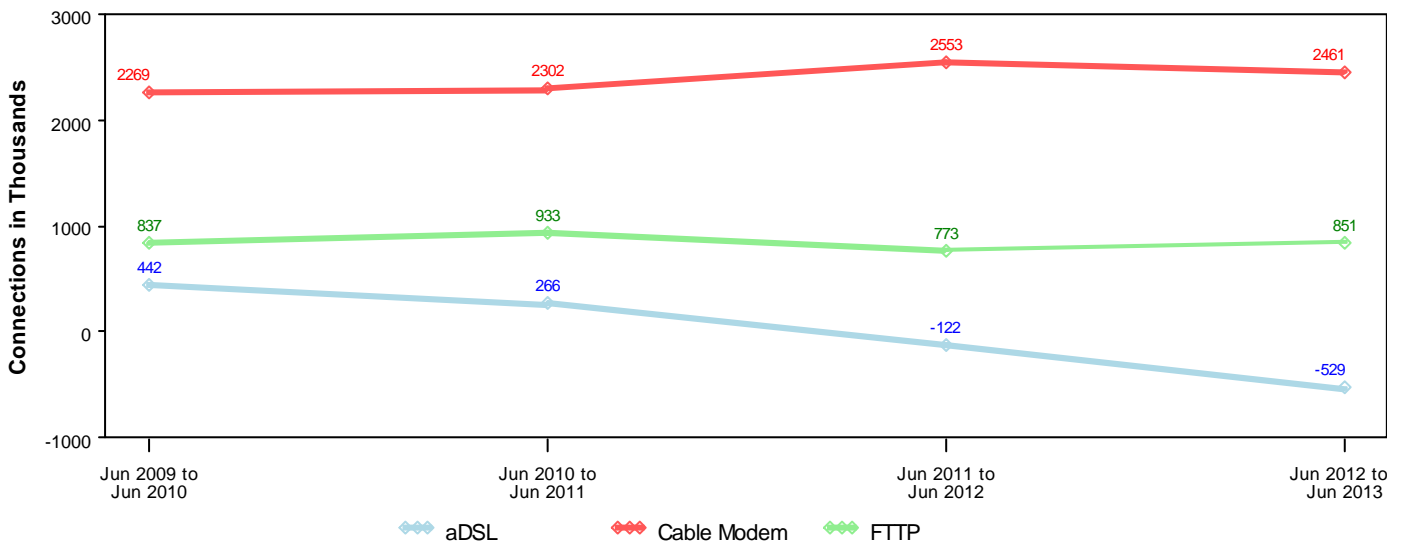




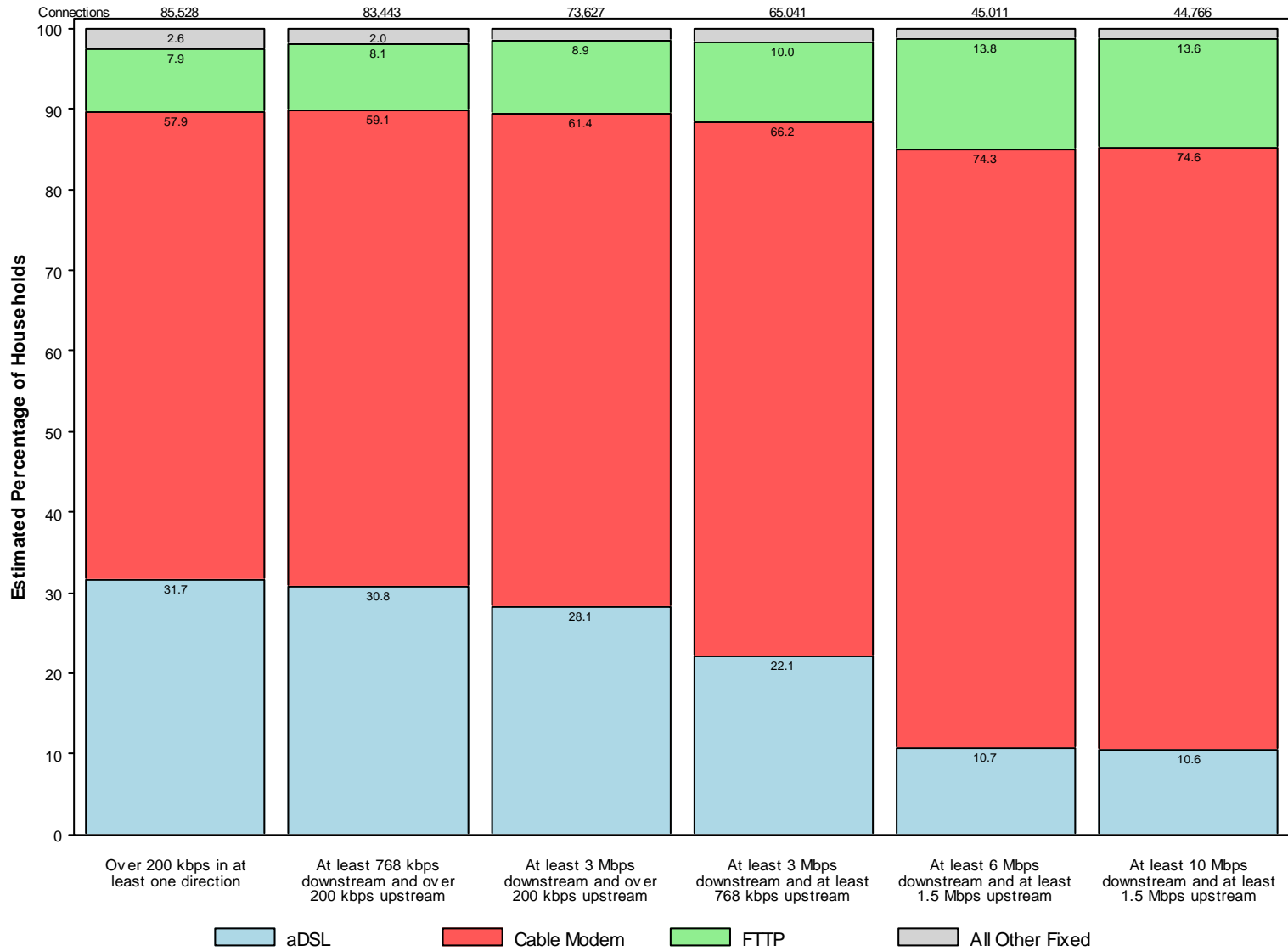
**Chart 10**  
**Residential Fixed Connections over 200 kbps in at Least One Direction 2009-2013**  
 (Shares of selected technologies)



**Chart 11**  
**Residential Fixed Connections over 200 kbps in at Least One Direction 2009-2013**  
 (Net adds for selected technologies)



**Chart 12**  
**Residential Fixed Connections by Technology as of June 30, 2013**  
 (Shares of selected technologies for selected speeds, connections in thousands)

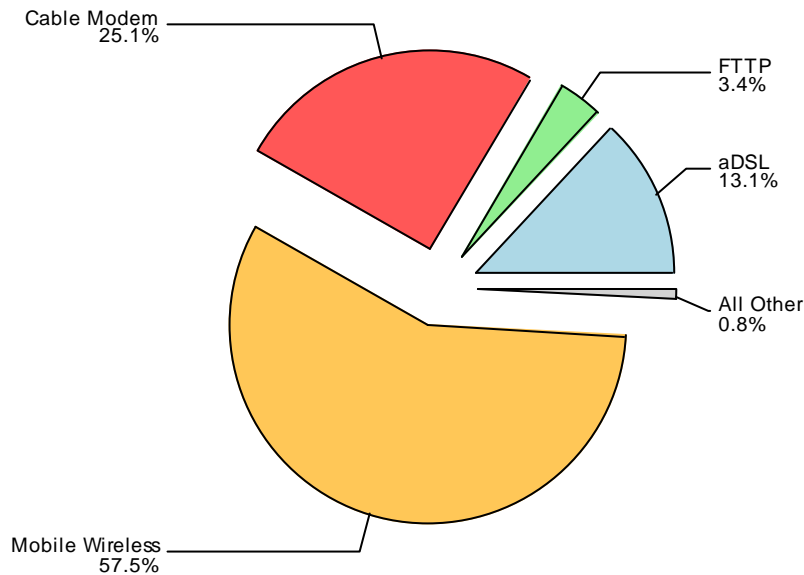


**Table 9**  
**Residential Connections by Technology and Speed (BTOP/BIP Definition)**  
**as of June 30, 2013**  
(In thousands)

<i>Technology</i>	<i>At Most 200 kbps Upstream or less than 768 kbps Downstream</i>	<i>Over 200 kbps Upstream and at least 768 kbps Downstream</i>	<i>Total</i>
aDSL	1,397	25,706	27,103
sDSL	8	35	43
Other Wireline	#	28	28
Cable Modem	146	49,348	49,494
FTTP	11	6,732	6,743
Satellite	443	964	1,407
Fixed Wireless	80	630	710
Mobile Wireless	29,631	112,772	142,404
<b>Total</b>	<b>31,716</b>	<b>196,216</b>	<b>227,932</b>

# = Rounds to Zero. Power Line and Other are combined with Other Wireline to maintain firm confidentiality.  
Note: Figures may not sum to totals due to rounding.  
Source: FCC Form 477, Parts I and VI.

**Chart 13**  
**Residential Connections (BTOP/BIP Definition) by Technology**  
as of June 30, 2013



Note: The BTOP/BIP definition is advertised speeds of at least 768 kbps downstream and 200 kbps upstream to end users.  
Source: FCC Form 477, Parts I and VI.

**Table 10**  
**Connections by Downstream Speed Tier and Technology as of June 30, 2013**  
(In thousands)

Technology	Downstream Speed								Total
	Greater than 200 kbps and less than 768 kbps	At least 768 kbps and less than 1.5 Mbps	At least 1.5 Mbps and less than 3 Mbps	At least 3 Mbps and less than 6 Mbps	At least 6 Mbps and less than 10 Mbps	At least 10 Mbps and less than 25 Mbps	At least 25 Mbps and less than 100 Mbps	At least 100 Mbps	
aDSL	454	2,859	4,023	9,232	6,632	7,524	168	#	30,892
sDSL	25	37	21	*	*	*	*	*	117
Other Wireline	38	43	410	114	29	66	48	32	780
Cable Modem	134	1,003	3,271	4,106	1,510	22,920	19,644	172	52,760
FTTP	13	89	102	272	197	4,080	2,407	101	7,261
Satellite	233	372	218	*	*	*	0	0	1,623
Fixed Wireless	73	137	227	248	65	56	2	1	810
Mobile Wireless	36,257	4,570	42,905	32,889	19,797	38,198	*	*	181,365
<b>Total</b>	<b>37,227</b>	<b>9,113</b>	<b>51,177</b>	<b>47,061</b>	<b>28,233</b>	<b>73,469</b>	<b>29,021</b>	<b>307</b>	<b>275,608</b>

Percentages									
aDSL	0.2	1.0	1.5	3.3	2.4	2.7	0.1	0.0	11.2
sDSL	0.0	0.0	0.0	*	*	*	*	*	0.0
Other Wireline	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.3
Cable Modem	0.0	0.4	1.2	1.5	0.5	8.3	7.1	0.1	19.1
FTTP	0.0	0.0	0.0	0.1	0.1	1.5	0.9	0.0	2.6
Satellite	0.1	0.1	0.1	*	*	*	0.0	0.0	0.6
Fixed Wireless	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.3
Mobile Wireless	13.2	1.7	15.6	11.9	7.2	13.9	*	*	65.8
<b>Total</b>	<b>13.5</b>	<b>3.3</b>	<b>18.6</b>	<b>17.1</b>	<b>10.2</b>	<b>26.7</b>	<b>10.5</b>	<b>0.1</b>	<b>100.0</b>

# = Rounds to Zero. Power Line and Other are combined with Other Wireline to maintain firm confidentiality.  
\* = Data withheld to maintain firm confidentiality.  
Note: Figures may not sum to totals due to rounding.  
Source: FCC Form 477, Part I.

**Table 11**  
**Residential Connections by Downstream Speed Tier and Technology as of June 30, 2013**  
(In thousands)

Technology	Downstream Speed								Total
	Greater than 200 kbps and less than 768 kbps	At least 768 kbps and less than 1.5 Mbps	At least 1.5 Mbps and less than 3 Mbps	At least 3 Mbps and less than 6 Mbps	At least 6 Mbps and less than 10 Mbps	At least 10 Mbps and less than 25 Mbps	At least 25 Mbps and less than 100 Mbps	At least 100 Mbps	
aDSL	397	2,679	3,312	7,949	5,560	7,049	157	#	27,103
sDSL	8	19	3	*	*	*	*	*	43
Other Wireline	#	1	2	4	3	15	2	2	28
Cable Modem	119	985	3,204	3,834	1,125	21,162	18,924	140	49,494
FTTP	10	82	76	238	180	3,851	2,262	44	6,743
Satellite	102	331	181	*	*	*	0	0	1,407
Fixed Wireless	67	121	201	216	55	49	1	#	710
Mobile Wireless	28,553	4,269	33,787	26,818	10,602	32,225	*	*	142,404
<b>Total</b>	<b>29,257</b>	<b>8,487</b>	<b>40,766</b>	<b>39,241</b>	<b>17,527</b>	<b>64,971</b>	<b>27,499</b>	<b>185</b>	<b>227,932</b>

Percentages									
aDSL	0.2	1.2	1.5	3.5	2.4	3.1	0.1	0.0	11.9
sDSL	0.0	0.0	0.0	*	*	*	*	*	0.0
Other Wireline	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Cable Modem	0.1	0.4	1.4	1.7	0.5	9.3	8.3	0.1	21.7
FTTP	0.0	0.0	0.0	0.1	0.1	1.7	1.0	0.0	3.0
Satellite	0.0	0.1	0.1	*	*	*	0.0	0.0	0.6
Fixed Wireless	0.0	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.3
Mobile Wireless	12.5	1.9	14.8	11.8	4.7	14.1	*	*	62.5
<b>Total</b>	<b>12.8</b>	<b>3.7</b>	<b>17.9</b>	<b>17.2</b>	<b>7.7</b>	<b>28.5</b>	<b>12.1</b>	<b>0.1</b>	<b>100.0</b>

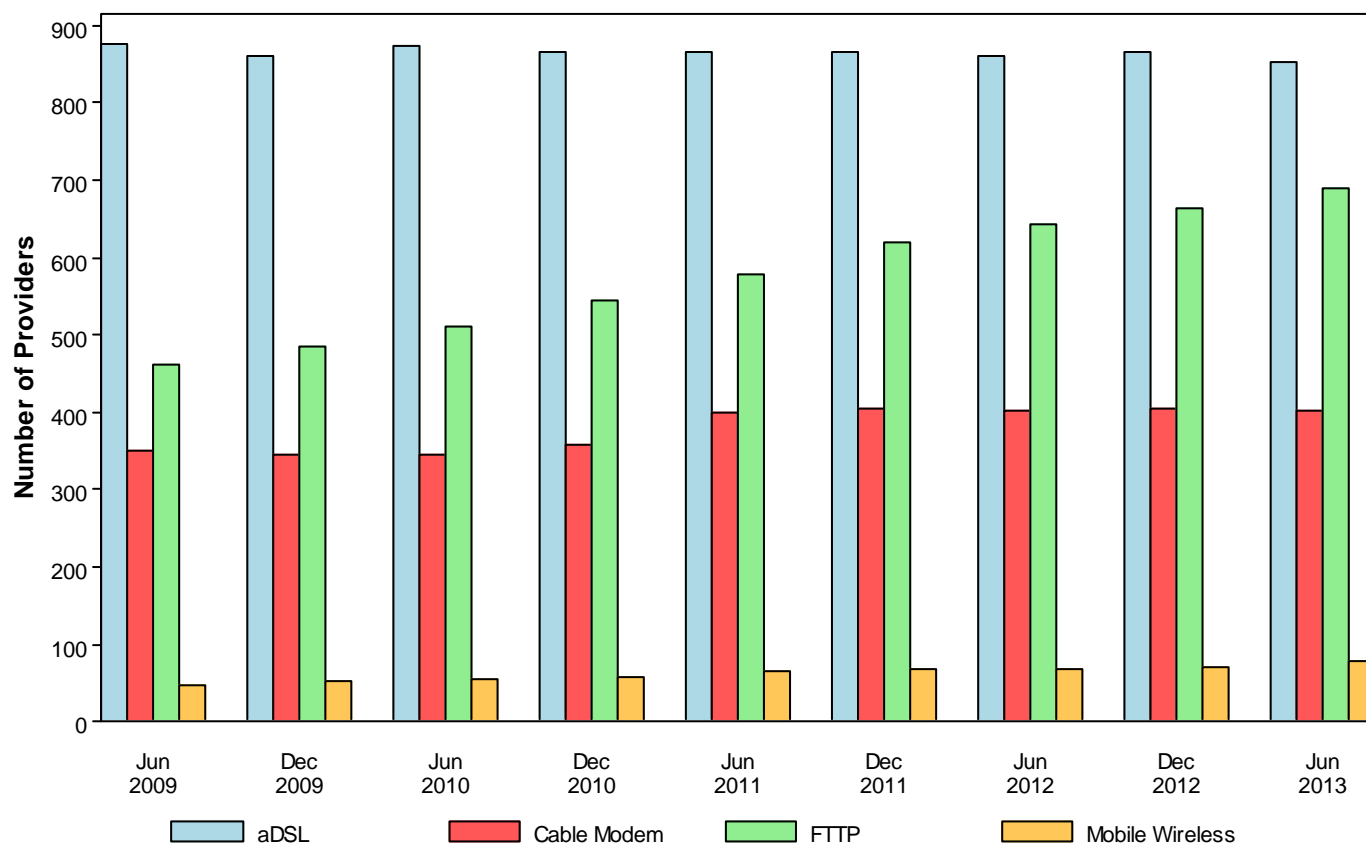
# = Rounds to Zero. Power Line and Other are combined with Other Wireline to maintain firm confidentiality.  
\* = Data withheld to maintain firm confidentiality.  
Note: Figures may not sum to totals due to rounding.  
Source: FCC Form 477, Part I.

**Table 12**  
**Nationwide Number of Providers of Connections over 200 kbps in at Least One Direction**  
**by Technology 2009-2013**

Technology	2009		2010		2011		2012		2013
	Jun	Dec	Jun	Dec	Jun	Dec	Jun	Dec	Jun
aDSL	876	862	875	865	867	867	860	865	852
sDSL	257	261	251	247	252	255	251	255	246
Other Wireline	283	274	267	270	265	274	258	262	246
Cable Modem	351	345	345	357	400	405	401	404	403
FTTP	462	485	510	545	579	621	642	665	691
Satellite	4	4	4	4	5	6	5	6	5
Fixed Wireless	621	607	625	646	672	713	713	765	771
Mobile Wireless	48	51	55	57	64	69	67	70	79
Power Line and Other	6	6	5	7	4	5	*	*	0
<b>Total</b>	<b>1,551</b>	<b>1,526</b>	<b>1,536</b>	<b>1,566</b>	<b>1,624</b>	<b>1,687</b>	<b>1,673</b>	<b>1,722</b>	<b>1,714</b>

Note: Some historical data have been revised. Multiple Form 477 filers within a holding company structure count as one provider. \* = 1-3 providers.  
Source: FCC Form 477, Part I.

**Chart 14**  
**Nationwide Number of Providers of Connections over 200 kbps in at Least One Direction**  
**Selected Technologies 2009-2013**



## Detailed Summary Statistics: The States

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**Table 13**  
**Residential Fixed Connections at Least 3 Mbps Downstream / 768 kbps Upstream**  
**and Households by State as of June 30, 2013**  
**(Connections and households, in thousands)**

<i>State</i>	<i>Connections</i>	<i>Households</i>	<i>Subscribership Ratio</i>
Alabama	715	1,907	0.38
Alaska	108	266	0.41
American Samoa	0	10	0.00
Arizona	1,391	2,457	0.57
Arkansas	403	1,165	0.35
California	6,810	12,812	0.53
Colorado	1,352	2,029	0.67
Connecticut	913	1,381	0.66
Delaware	255	351	0.73
District of Columbia	194	274	0.71
Florida	4,391	7,631	0.58
Georgia	1,821	3,688	0.49
Guam	*	42	*
Hawaii	*	465	*
Idaho	208	596	0.35
Illinois	2,539	4,863	0.52
Indiana	1,141	2,529	0.45
Iowa	362	1,231	0.29
Kansas	551	1,124	0.49
Kentucky	826	1,742	0.47
Louisiana	675	1,742	0.39
Maine	374	559	0.67
Maryland	1,573	2,194	0.72
Massachusetts	2,036	2,567	0.79
Michigan	2,069	3,861	0.54
Minnesota	1,101	2,115	0.52
Mississippi	307	1,123	0.27
Missouri	1,041	2,400	0.43
Montana	185	417	0.44
Nebraska	354	730	0.48
Nevada	568	1,045	0.54
New Hampshire	397	523	0.76
New Jersey	2,542	3,238	0.79
New Mexico	349	809	0.43
New York	4,677	7,350	0.64
North Carolina	2,130	3,855	0.55
North Dakota	156	286	0.54
Northern Mariana Isl	*	16	*
Ohio	2,456	4,609	0.53
Oklahoma	588	1,486	0.40
Oregon	915	1,551	0.59
Pennsylvania	3,156	5,046	0.63
Puerto Rico	219	1,218	0.18
Rhode Island	304	413	0.74
South Carolina	937	1,848	0.51
South Dakota	186	328	0.57
Tennessee	1,177	2,542	0.46
Texas	4,123	9,241	0.45
Utah	563	909	0.62
Vermont	174	257	0.68
Virgin Islands	2	43	0.04
Virginia	2,003	3,124	0.64
Washington	1,763	2,691	0.66
West Virginia	272	766	0.36
Wisconsin	1,183	2,302	0.51
Wyoming	114	232	0.49
<b>Total</b>	<b>65,041</b>	<b>119,999</b>	<b>0.54</b>

# = Rounds to Zero; \* = Data withheld to maintain firm confidentiality.

Note: Figures may not sum to totals due to rounding.

Sources: FCC Form 477, Part VI (Connections); Geolytics 2012 Block-Level Estimates (Households for U.S. and District of Columbia); Census 2010 (Housing Units for Puerto Rico, American Samoa, Guam, Northern Mariana Islands and U.S. Virgin Islands).



**Table 14**  
**Residential Fixed Connections and Households by State as of June 30, 2013**  
(Connections over 200 kbps in at least one direction and households, in thousands)

<i>State</i>	<i>Connections</i>	<i>Households</i>	<i>Subscribership Ratio</i>
Alabama	1,139	1,907	0.60
Alaska	181	266	0.68
American Samoa	*	10	*
Arizona	1,751	2,457	0.71
Arkansas	651	1,165	0.56
California	9,800	12,812	0.76
Colorado	1,588	2,029	0.78
Connecticut	1,090	1,381	0.79
Delaware	283	351	0.81
District of Columbia	209	274	0.76
Florida	5,695	7,631	0.75
Georgia	2,513	3,688	0.68
Guam	*	42	*
Hawaii	383	465	0.82
Idaho	398	596	0.67
Illinois	3,366	4,863	0.69
Indiana	1,655	2,529	0.65
Iowa	835	1,231	0.68
Kansas	779	1,124	0.69
Kentucky	1,137	1,742	0.65
Louisiana	1,093	1,742	0.63
Maine	431	559	0.77
Maryland	1,681	2,194	0.77
Massachusetts	2,135	2,567	0.83
Michigan	2,602	3,861	0.67
Minnesota	1,514	2,115	0.72
Mississippi	576	1,123	0.51
Missouri	1,526	2,400	0.64
Montana	282	417	0.68
Nebraska	512	730	0.70
Nevada	719	1,045	0.69
New Hampshire	439	523	0.84
New Jersey	2,689	3,238	0.83
New Mexico	491	809	0.61
New York	5,870	7,350	0.80
North Carolina	2,838	3,855	0.74
North Dakota	209	286	0.73
Northern Mariana Isl	*	16	*
Ohio	3,162	4,609	0.69
Oklahoma	882	1,486	0.59
Oregon	1,118	1,551	0.72
Pennsylvania	3,741	5,046	0.74
Puerto Rico	553	1,218	0.45
Rhode Island	318	413	0.77
South Carolina	1,265	1,848	0.68
South Dakota	227	328	0.69
Tennessee	1,550	2,542	0.61
Texas	6,229	9,241	0.67
Utah	686	909	0.75
Vermont	204	257	0.79
Virgin Islands	17	43	0.39
Virginia	2,234	3,124	0.72
Washington	2,026	2,691	0.75
West Virginia	479	766	0.63
Wisconsin	1,581	2,302	0.69
Wyoming	158	232	0.68
<b>Total</b>	<b>85,528</b>	<b>119,999</b>	<b>0.71</b>

# = Rounds to Zero; \* = Data withheld to maintain firm confidentiality.

Note: Figures may not sum to totals due to rounding.

Sources: FCC Form 477, Part VI (Connections); Geolytics 2012 Block-Level Estimates (Households for U.S. and District of Columbia); Census 2010 (Housing Units for Puerto Rico, American Samoa, Guam, Northern Mariana Islands and U.S. Virgin Islands).

**Table 15**  
**Connections by Type of End User by State as of June 30, 2013**  
**(Connections over 200 kbps in at least one direction, in thousands)**

State	Connections		Percentages		Total
	Residential	Business	Residential	Business	
Alabama	3,140	432	87.9	12.1	3,573
Alaska	546	97	85.0	15.0	643
American Samoa	*	*	*	*	*
Arizona	4,430	732	85.8	14.2	5,162
Arkansas	1,916	300	86.5	13.5	2,216
California	27,800	6,283	81.6	18.4	34,083
Colorado	5,387	1,088	83.2	16.8	6,475
Connecticut	2,793	585	82.7	17.3	3,378
Delaware	706	138	83.6	16.4	844
District of Columbia	645	576	52.8	47.2	1,221
Florida	14,536	3,229	81.8	18.2	17,765
Georgia	7,088	1,390	83.6	16.4	8,479
Guam	58	14	80.8	19.2	72
Hawaii	1,088	176	86.0	14.0	1,264
Idaho	1,055	200	84.1	15.9	1,255
Illinois	9,203	2,097	81.4	18.6	11,300
Indiana	4,259	704	85.8	14.2	4,962
Iowa	1,990	353	84.9	15.1	2,343
Kansas	1,889	553	77.3	22.7	2,442
Kentucky	2,892	492	85.5	14.5	3,384
Louisiana	3,344	508	86.8	13.2	3,852
Maine	876	140	86.3	13.7	1,016
Maryland	4,510	877	83.7	16.3	5,387
Massachusetts	5,230	1,073	83.0	17.0	6,303
Michigan	6,498	1,731	79.0	21.0	8,229
Minnesota	3,703	909	80.3	19.7	4,613
Mississippi	1,916	207	90.3	9.7	2,123
Missouri	3,947	939	80.8	19.2	4,886
Montana	695	97	87.7	12.3	792
Nebraska	1,199	289	80.6	19.4	1,488
Nevada	2,080	375	84.7	15.3	2,454
New Hampshire	981	162	85.9	14.1	1,143
New Jersey	7,204	1,491	82.9	17.1	8,695
New Mexico	1,289	208	86.1	13.9	1,496
New York	15,102	3,192	82.5	17.5	18,294
North Carolina	6,625	1,343	83.1	16.9	7,968
North Dakota	532	99	84.3	15.7	631
Northern Mariana Isl	*	*	*	*	*
Ohio	7,911	1,682	82.5	17.5	9,593
Oklahoma	2,568	430	85.7	14.3	2,998
Oregon	2,827	544	83.9	16.1	3,371
Pennsylvania	9,138	1,681	84.5	15.5	10,819
Puerto Rico	2,058	204	91.0	9.0	2,261
Rhode Island	766	151	83.5	16.5	917
South Carolina	3,024	453	87.0	13.0	3,477
South Dakota	557	80	87.4	12.6	638
Tennessee	4,311	851	83.5	16.5	5,161
Texas	19,099	4,513	80.9	19.1	23,612
Utah	1,839	416	81.5	18.5	2,256
Vermont	427	78	84.5	15.5	505
Virgin Islands	73	14	83.4	16.6	87
Virginia	5,913	1,331	81.6	18.4	7,244
Washington	5,108	1,167	81.4	18.6	6,275
West Virginia	1,117	154	87.9	12.1	1,271
Wisconsin	3,631	782	82.3	17.7	4,413
Wyoming	405	63	86.6	13.4	468
Total	227,932	47,676	82.7	17.3	275,608

# = Rounds to Zero.

\* = Data withheld to maintain firm confidentiality.

Figures may not sum to totals due to rounding.

Source: FCC Form 477, Part I and VI.

**Table 16**  
**Connections by Technology by State as of June 30, 2013**  
(Connections over 200 kbps in at least one direction, in thousands)

<i>State</i>	<i>ADSL</i>	<i>SDSL</i>	<i>Other Wireline</i>	<i>Cable Modem</i>	<i>Fiber</i>	<i>Satellite</i>	<i>Fixed Wireless</i>	<i>Mobile Wireless</i>	<i>Total</i>
Alabama	536	4	*	630	11	*	4	2,325	3,573
Alaska	81	2	0	*	2	*	5	418	643
American Samoa	*	*	0	*	*	0	*	0	*
Arizona	623	#	*	1,188	5	*	31	3,274	5,162
Arkansas	351	#	*	320	9	*	4	1,489	2,216
California	4,240	11	*	5,578	788	*	44	23,183	34,083
Colorado	*	1	0	925	7	*	51	4,737	6,475
Connecticut	*	1	0	774	5	*	*	2,181	3,378
Delaware	*	#	0	182	*	*	*	537	844
District of Columbia	*	1	0	*	22	*	*	979	1,221
Florida	1,922	1	*	3,830	459	*	6	11,429	17,765
Georgia	1,276	2	*	1,358	38	*	1	5,725	8,479
Guam	*	*	*	*	*	0	*	*	72
Hawaii	*	*	0	*	5	*	*	849	1,264
Idaho	214	#	*	163	3	*	41	819	1,255
Illinois	1,485	6	*	2,100	22	*	52	7,559	11,300
Indiana	746	2	*	897	86	*	35	3,146	4,962
Iowa	387	2	*	415	56	*	29	1,427	2,343
Kansas	283	1	*	467	59	*	29	1,578	2,442
Kentucky	504	3	*	647	26	*	14	2,147	3,384
Louisiana	444	2	*	655	46	*	5	2,647	3,852
Maine	143	3	0	313	5	*	*	537	1,016
Maryland	*	2	0	888	*	*	1	3,563	5,387
Massachusetts	*	1	0	1,566	*	*	2	3,970	6,303
Michigan	907	6	*	1,807	12	*	28	5,368	8,229
Minnesota	637	15	*	894	47	*	21	2,959	4,613
Mississippi	308	#	*	277	2	*	1	1,486	2,123
Missouri	858	#	*	706	21	*	26	3,194	4,886
Montana	121	1	*	154	10	*	15	477	792
Nebraska	174	#	*	345	14	*	19	924	1,488

**Table 16 - Continued**  
**Connections by Technology by State as of June 30, 2013**  
(Connections over 200 kbps in at least one direction, in thousands)

<i>State</i>	<i>ADSL</i>	<i>SDSL</i>	<i>Other Wireline</i>	<i>Cable Modem</i>	<i>Fiber</i>	<i>Satellite</i>	<i>Fixed Wireless</i>	<i>Mobile Wireless</i>	<i>Total</i>
Nevada	257	#	0	*	4	*	7	1,666	2,454
New Hampshire	94	#	0	370	14	*	*	655	1,143
New Jersey	335	1	0	1,886	*	*	#	5,711	8,695
New Mexico	291	#	*	211	4	*	16	955	1,496
New York	761	6	0	4,509	*	*	2	11,795	18,294
North Carolina	1,077	1	*	1,905	41	*	2	4,884	7,968
North Dakota	72	2	*	118	36	*	5	392	631
Northern Mariana Isl	*	0	*	*	*	0	*	*	*
Ohio	1,189	3	*	2,103	60	*	31	6,144	9,593
Oklahoma	394	#	*	508	17	*	16	2,008	2,998
Oregon	364	2	*	731	79	*	16	2,150	3,371
Pennsylvania	994	3	0	2,362	*	*	4	6,738	10,819
Puerto Rico	*	0	0	*	*	*	*	1,641	2,261
Rhode Island	*	#	0	*	*	*	*	569	917
South Carolina	472	*	0	816	42	*	*	2,105	3,477
South Dakota	64	*	0	144	25	*	12	*	638
Tennessee	600	1	*	938	93	*	7	3,455	5,161
Texas	3,094	5	*	2,962	490	*	91	16,710	23,612
Utah	314	#	*	352	26	*	46	1,507	2,256
Vermont	100	*	0	115	7	*	1	272	505
Virgin Islands	*	0	*	*	*	*	*	62	87
Virginia	439	1	0	1,242	*	*	4	4,803	7,244
Washington	592	1	*	1,461	78	*	15	4,072	6,275
West Virginia	*	*	0	308	2	*	2	752	1,271
Wisconsin	649	13	*	958	30	*	36	2,683	4,413
Wyoming	62	#	*	94	3	*	12	288	468
<b>Total</b>	<b>30,892</b>	<b>117</b>	<b>0</b>	<b>52,760</b>	<b>7,261</b>	<b>1,623</b>	<b>810</b>	<b>181,365</b>	<b>275,608</b>

# = Rounds to Zero. Power Line and Other are summarized with Other Wireline to maintain firm confidentiality.

\* = Data withheld to maintain firm confidentiality.

Figures may not sum to totals due to rounding.

Source: FCC Form 477, Part I.

**Table 17**  
**Connections by Technology by State as of June 30, 2013**  
(Connections at least 3 Mbps downstream and 768 kbps upstream, in thousands)

<i>State</i>	<i>ADSL</i>	<i>SDSL</i>	<i>Other Wireline</i>	<i>Cable Modem</i>	<i>Fiber</i>	<i>Satellite</i>	<i>Fixed Wireless</i>	<i>Mobile Wireless</i>	<i>Total</i>
Alabama	203	#	*	530	9	*	#	1,394	2,169
Alaska	40	*	1	*	1	*	*	*	184
American Samoa	0	*	0	0	*	0	0	0	*
Arizona	*	*	6	1,033	5	*	8	1,717	3,183
Arkansas	156	*	2	249	7	*	1	*	659
California	2,259	3	*	4,171	767	*	24	9,342	16,661
Colorado	*	#	10	919	5	*	40	2,334	3,787
Connecticut	*	*	2	766	5	*	*	*	1,676
Delaware	*	0	1	*	*	*	0	206	482
District of Columbia	*	*	4	*	*	*	*	626	847
Florida	1,015	#	*	3,328	447	*	4	8,683	13,534
Georgia	594	#	*	1,292	30	*	#	3,586	5,535
Guam	*	*	*	*	*	0	*	*	41
Hawaii	*	*	#	*	5	*	*	*	684
Idaho	125	*	1	89	1	*	14	*	567
Illinois	723	3	*	1,949	19	*	26	4,829	7,580
Indiana	318	#	*	805	81	*	10	1,002	2,242
Iowa	196	#	*	145	42	*	14	573	983
Kansas	128	#	*	402	40	*	4	974	1,560
Kentucky	256	#	*	584	16	*	4	570	1,454
Louisiana	*	1	2	522	31	*	1	1,811	2,532
Maine	105	1	#	296	5	*	*	*	576
Maryland	*	#	6	872	*	*	#	2,146	3,839
Massachusetts	*	#	9	1,560	*	*	1	2,500	4,711
Michigan	453	2	*	1,678	11	*	16	3,317	5,524
Minnesota	321	10	*	808	35	*	4	1,881	3,077
Mississippi	91	*	1	220	2	*	*	226	564
Missouri	437	#	*	615	14	*	5	2,136	3,247
Montana	45	#	1	*	8	*	5	*	377
Nebraska	105	#	*	258	9	*	8	369	754

**Table 17 - Continued**  
**Connections by Technology by State as of June 30, 2013**  
(Connections at least 3 Mbps downstream and 768 kbps upstream, in thousands)

<i>State</i>	<i>ADSL</i>	<i>SDSL</i>	<i>Other Wireline</i>	<i>Cable Modem</i>	<i>Fiber</i>	<i>Satellite</i>	<i>Fixed Wireless</i>	<i>Mobile Wireless</i>	<i>Total</i>
Nevada	125	0	3	*	3	*	3	1,092	1,690
New Hampshire	57	#	1	359	14	*	*	251	684
New Jersey	211	*	12	1,857	*	*	*	2,256	5,054
New Mexico	171	#	2	198	3	*	2	*	707
New York	437	1	20	3,618	*	*	1	*	10,659
North Carolina	479	#	*	1,744	33	*	#	2,756	5,040
North Dakota	42	*	2	100	31	*	2	*	322
Northern Mariana Isl	*	0	*	0	*	0	*	0	*
Ohio	655	*	5	1,890	57	*	5	3,506	6,142
Oklahoma	165	#	*	415	12	*	7	397	1,025
Oregon	166	#	*	726	76	*	10	811	1,803
Pennsylvania	587	*	10	2,172	*	*	3	2,447	5,888
Puerto Rico	*	0	*	*	*	*	*	880	1,115
Rhode Island	*	*	1	*	*	*	*	373	702
South Carolina	197	*	3	754	33	*	*	805	1,809
South Dakota	46	*	#	132	24	*	2	*	334
Tennessee	230	#	*	921	86	*	1	1,965	3,236
Texas	1,857	2	*	1,959	461	*	44	12,181	16,628
Utah	196	*	4	340	25	*	42	619	1,225
Vermont	72	*	#	114	7	*	*	*	258
Virgin Islands	0	0	*	*	*	*	*	*	9
Virginia	263	#	10	1,195	*	*	2	1,796	3,957
Washington	356	#	*	1,432	74	*	4	1,530	3,420
West Virginia	20	*	#	271	1	*	2	130	434
Wisconsin	290	3	*	917	22	*	7	1,066	2,327
Wyoming	28	*	1	*	2	*	2	*	232
<b>Total</b>	<b>16,029</b>	<b>34</b>	<b>289</b>	<b>46,014</b>	<b>6,989</b>	<b>791</b>	<b>337</b>	<b>93,247</b>	<b>163,730</b>

# = Rounds to Zero. Power Line and Other are summarized with Other Wireline to maintain firm confidentiality.

\* = Data withheld to maintain firm confidentiality.

Figures may not sum to totals due to rounding.

Source: FCC Form 477, Part I.

**Table 18**  
**Percentage of Connections by Downstream Speed by State as of June 30, 2013**  
 (Connections over 200 kbps in at least one direction)

State	Over 200 kbps Upstream and				
	% over 200 kbps Downstream	% at least 768 kbps Downstream	% at least 3 Mbps Downstream	% at least 6 Mbps Downstream	% at least 10 Mbps Downstream
Alabama	96.1	81.8	72.9	44.4	34.8
Alaska	85.6	83.2	32.2	26.4	16.5
American Samoa	*	*	*	*	*
Arizona	97.1	81.4	65.5	49.2	46.2
Arkansas	97.6	86.8	35.6	28.0	22.9
California	97.5	86.8	52.6	45.6	37.2
Colorado	98.1	87.8	59.1	55.4	41.1
Connecticut	97.8	83.8	53.5	48.0	39.5
Delaware	97.2	82.3	59.1	54.6	46.4
District of Columbia	96.1	79.4	71.9	54.5	35.5
Florida	97.6	90.7	84.2	58.3	47.2
Georgia	96.1	83.3	74.3	48.2	32.6
Guam	100.0	98.6	57.1	43.1	24.6
Hawaii	98.5	88.8	54.8	46.2	31.8
Idaho	95.4	77.2	52.0	39.9	31.5
Illinois	97.7	87.6	75.5	46.5	34.6
Indiana	97.1	84.4	52.4	42.9	35.6
Iowa	97.4	83.2	55.2	36.8	32.3
Kansas	95.7	84.7	71.4	47.5	30.6
Kentucky	96.5	88.0	47.9	36.9	26.7
Louisiana	95.8	88.0	79.2	34.5	24.7
Maine	96.9	85.9	57.4	42.2	37.7
Maryland	97.1	83.3	73.9	51.3	44.1
Massachusetts	97.6	82.3	77.4	54.9	50.7
Michigan	97.2	84.7	73.4	51.8	37.9
Minnesota	97.2	84.0	73.4	51.5	39.9
Mississippi	96.2	70.2	34.9	29.6	18.6
Missouri	97.4	91.0	77.3	40.2	27.1
Montana	93.3	71.2	49.8	44.4	39.2
Nebraska	95.9	74.8	53.8	39.9	35.5

**Table 18 - Continued**  
**Percentage of Connections by Downstream Speed by State as of June 30, 2013**  
 (Connections over 200 kbps in at least one direction)

State	Over 200 kbps Upstream and				
	% over 200 kbps Downstream	% at least 768 kbps Downstream	% at least 3 Mbps Downstream	% at least 6 Mbps Downstream	% at least 10 Mbps Downstream
Nevada	98.1	89.4	75.9	42.6	32.3
New Hampshire	96.3	77.4	60.8	53.1	49.0
New Jersey	97.1	81.2	58.3	54.8	51.6
New Mexico	96.6	80.5	49.6	44.1	37.7
New York	97.5	84.0	59.2	54.7	41.2
North Carolina	96.8	81.0	71.0	51.1	42.4
North Dakota	96.8	77.8	55.2	47.8	45.0
Northern Mariana Isl	*	*	*	*	*
Ohio	96.5	80.1	70.0	49.0	39.7
Oklahoma	98.1	93.8	40.8	28.3	21.7
Oregon	97.7	85.8	55.9	49.5	39.7
Pennsylvania	96.9	83.3	56.1	48.4	39.8
Puerto Rico	99.4	92.4	54.4	22.2	13.2
Rhode Island	97.6	84.3	78.9	58.1	53.2
South Carolina	96.3	79.0	57.7	51.2	42.9
South Dakota	96.4	77.8	54.2	49.1	43.7
Tennessee	95.9	79.0	70.0	46.7	36.9
Texas	98.1	91.3	78.4	42.4	24.1
Utah	97.8	85.3	56.7	48.3	38.1
Vermont	96.0	82.2	52.0	41.3	35.3
Virgin Islands	98.7	91.1	10.1	1.2	0.1
Virginia	96.9	82.1	55.3	48.0	41.8
Washington	97.6	86.4	56.0	49.9	41.1
West Virginia	97.0	91.5	47.5	29.8	25.3
Wisconsin	97.7	88.5	57.1	43.1	34.5
Wyoming	96.0	74.3	51.4	46.9	41.7
Total	97.2	85.3	64.6	47.5	37.3

\* = Data withheld to maintain firm confidentiality.  
 Source: FCC Form 477, Part I.



**Table 19**  
**ADSL Connections by State 2009-2013**  
(Connections over 200 kbps in at least one direction, in thousands)

State	2009		2010		2011		2012		2013
	Jun	Dec	Jun	Dec	Jun	Dec	Jun	Dec	Jun
Alabama	473	496	498	523	536	538	546	546	536
Alaska	77	77	77	78	79	77	78	79	81
American Samoa	*	*	*	*	*	*	*	*	*
Arizona	487	518	527	552	557	589	597	620	623
Arkansas	298	308	314	330	337	343	344	345	351
California	4,587	4,568	4,456	4,538	4,471	4,416	4,370	4,285	4,240
Colorado	641	651	658	663	*	*	*	*	*
Connecticut	*	*	*	*	*	*	*	*	*
Delaware	*	*	*	*	*	*	*	*	*
District of Columbia	*	*	*	*	*	*	*	*	*
Florida	1,962	1,988	2,006	2,070	2,104	1,998	1,955	1,977	1,922
Georgia	1,251	1,256	1,129	1,413	1,435	1,282	1,291	1,300	1,276
Guam	*	*	*	*	*	*	*	*	*
Hawaii	*	*	*	*	*	*	*	*	*
Idaho	169	174	177	181	185	190	200	208	214
Illinois	1,538	1,556	1,537	1,577	1,576	1,549	1,519	1,504	1,485
Indiana	699	721	725	754	763	765	760	754	746
Iowa	351	362	373	376	381	388	392	394	387
Kansas	250	260	264	271	273	275	275	278	283
Kentucky	431	454	459	473	481	501	502	507	504
Louisiana	390	404	397	396	407	437	444	446	444
Maine	123	125	126	125	134	136	139	140	143
Maryland	440	405	*	350	*	*	*	*	*
Massachusetts	*	*	*	*	*	*	*	*	*
Michigan	835	857	860	902	922	906	909	907	907
Minnesota	573	590	611	618	629	622	626	631	637
Mississippi	240	255	240	263	267	299	306	313	308
Missouri	767	805	811	846	862	870	864	863	858
Montana	111	115	119	119	123	122	122	121	121
Nebraska	158	164	167	169	173	175	175	175	174

**Table 19 - Continued**  
**ADSL Connections by State 2009-2013**  
(Connections over 200 kbps in at least one direction, in thousands)

State	2009		2010		2011		2012		2013
	Jun	Dec	Jun	Dec	Jun	Dec	Jun	Dec	Jun
Nevada	225	229	232	242	245	250	255	255	257
New Hampshire	91	86	84	85	87	88	89	91	94
New Jersey	624	568	530	486	449	415	387	346	335
New Mexico	242	250	259	266	271	277	283	289	291
New York	1,100	1,046	1,010	957	928	875	841	777	761
North Carolina	918	969	985	995	1,026	1,050	1,059	1,063	1,077
North Dakota	64	67	67	69	71	71	71	73	72
Northern Mariana Isl	*	*	*	*	*	*	*	*	*
Ohio	1,109	1,127	1,145	1,177	1,190	1,184	1,175	1,178	1,189
Oklahoma	349	359	361	379	384	387	391	393	394
Oregon	367	367	362	359	360	363	373	370	364
Pennsylvania	1,246	1,232	1,202	1,159	1,131	1,098	1,063	1,017	994
Puerto Rico	*	*	*	*	*	*	*	*	*
Rhode Island	*	*	*	*	*	*	*	*	*
South Carolina	412	428	437	434	452	471	477	477	472
South Dakota	58	58	60	58	60	63	64	65	64
Tennessee	549	559	570	557	576	593	603	607	600
Texas	2,706	2,784	2,797	2,898	2,943	2,952	2,967	2,983	3,094
Utah	280	309	312	311	309	309	313	315	314
Vermont	79	81	84	85	87	94	97	98	100
Virgin Islands	*	*	*	*	*	*	*	*	*
Virginia	547	536	527	507	498	486	471	453	439
Washington	596	593	589	582	583	590	597	595	592
West Virginia	160	161	162	*	*	*	*	*	*
Wisconsin	586	612	615	646	658	657	651	651	649
Wyoming	58	58	59	59	59	61	62	62	62
<b>Total</b>	<b>30,631</b>	<b>30,987</b>	<b>30,759</b>	<b>31,470</b>	<b>31,611</b>	<b>31,330</b>	<b>31,173</b>	<b>30,979</b>	<b>30,892</b>

# = Rounds to Zero.

\* = Data withheld to maintain firm confidentiality.

Note: Some historical data have been revised. Figures may not sum to totals due to rounding.

Source: FCC Form 477, Part I.

**Table 20**  
**Cable Modem Connections by State 2009-2013**  
(Connections over 200 kbps in at least one direction, in thousands)

State	2009		2010		2011		2012		2013
	Jun	Dec	Jun	Dec	Jun	Dec	Jun	Dec	Jun
Alabama	478	497	513	539	556	576	592	615	630
Alaska	*	*	*	*	*	*	*	*	*
American Samoa	0	0	0	*	*	*	*	*	*
Arizona	1,039	1,104	1,096	1,161	1,104	1,169	1,156	1,210	1,188
Arkansas	252	262	267	278	288	301	308	313	320
California	4,144	4,224	4,418	4,639	4,853	5,034	5,222	5,413	5,578
Colorado	693	709	744	787	817	848	870	899	925
Connecticut	626	640	672	673	713	723	744	761	774
Delaware	*	*	158	156	164	*	*	174	182
District of Columbia	*	*	*	*	*	*	*	*	*
Florida	2,859	2,992	3,076	3,292	3,313	3,549	3,557	3,803	3,830
Georgia	1,020	1,022	1,052	1,114	1,151	1,190	1,245	1,291	1,358
Guam	*	*	*	*	*	*	*	*	*
Hawaii	*	*	*	*	*	*	*	*	*
Idaho	130	133	137	145	150	158	160	161	163
Illinois	1,575	1,577	1,630	1,696	1,768	1,857	1,936	2,020	2,100
Indiana	641	669	697	728	766	801	835	868	897
Iowa	344	360	376	389	395	397	403	407	415
Kansas	419	435	434	441	447	456	455	468	467
Kentucky	483	497	512	530	565	597	614	637	647
Louisiana	544	559	562	586	593	612	625	644	655
Maine	224	237	259	269	286	282	300	297	313
Maryland	757	768	778	773	797	826	842	873	888
Massachusetts	1,253	1,250	1,339	1,343	1,401	1,415	1,454	1,503	1,566
Michigan	1,431	1,451	1,517	1,537	1,603	1,643	1,687	1,756	1,807
Minnesota	685	701	739	776	800	820	846	874	894
Mississippi	227	232	241	246	258	263	271	273	277
Missouri	561	586	599	604	617	623	653	688	706
Montana	102	108	113	119	127	*	*	150	154
Nebraska	286	295	293	309	316	324	331	338	345

**Table 20 - Continued**  
**Cable Modem Connections by State 2009-2013**  
(Connections over 200 kbps in at least one direction, in thousands)

State	2009		2010		2011		2012		2013
	Jun	Dec	Jun	Dec	Jun	Dec	Jun	Dec	Jun
Nevada	*	*	*	*	*	*	*	*	*
New Hampshire	295	303	329	325	340	342	354	358	370
New Jersey	1,604	1,623	1,698	1,702	1,759	1,775	1,830	1,847	1,886
New Mexico	155	158	168	176	190	193	198	203	211
New York	3,850	3,886	3,982	4,013	4,091	4,116	4,253	4,457	4,509
North Carolina	1,392	1,444	1,513	1,554	1,566	1,653	1,729	1,851	1,905
North Dakota	88	93	90	101	96	108	111	116	118
Northern Mariana Isl	*	*	*	*	*	*	*	*	*
Ohio	1,757	1,813	1,862	1,895	1,943	2,025	2,057	2,171	2,103
Oklahoma	429	432	436	468	474	487	490	502	508
Oregon	528	542	576	608	640	662	683	711	731
Pennsylvania	1,777	1,835	1,915	1,983	2,057	2,135	2,200	2,286	2,362
Puerto Rico	*	*	*	*	*	*	*	*	*
Rhode Island	*	*	*	*	*	*	*	*	*
South Carolina	582	598	627	660	664	691	730	780	816
South Dakota	122	127	118	134	124	138	141	143	144
Tennessee	739	751	784	795	824	853	881	911	938
Texas	2,280	2,383	2,456	2,459	2,577	2,686	2,804	2,888	2,962
Utah	243	253	268	283	303	316	325	339	352
Vermont	80	83	93	97	104	106	109	113	115
Virgin Islands	0	0	0	0	0	*	*	*	*
Virginia	1,097	1,105	1,114	1,124	1,141	1,154	1,187	1,238	1,242
Washington	1,102	1,106	1,186	1,239	1,296	1,329	1,362	1,400	1,461
West Virginia	215	226	220	255	274	285	297	306	308
Wisconsin	779	802	823	846	870	897	914	948	958
Wyoming	70	74	76	80	82	85	89	92	94
<b>Total</b>	<b>41,434</b>	<b>42,439</b>	<b>43,923</b>	<b>45,334</b>	<b>46,698</b>	<b>48,263</b>	<b>49,664</b>	<b>51,646</b>	<b>52,760</b>

# = Rounds to Zero.

\* = Data withheld to maintain firm confidentiality.

Note: Some historical data have been revised. Figures may not sum to totals due to rounding.

Source: FCC Form 477, Part I.

**Table 21**  
**Providers of Connections by Technology by State as of June 30, 2013**  
(Connections over 200 kbps in at least one direction)

<i>State</i>	<i>ADSL</i>	<i>SDSL</i>	<i>Other Wireline</i>	<i>Cable Modem</i>	<i>Fiber</i>	<i>Satellite</i>	<i>Fixed Wireless</i>	<i>Mobile Wireless</i>	<i>Power Line and Other</i>	<i>Total</i>
Alabama	26	10	21	22	30	*	16	7	0	78
Alaska	13	4	8	4	7	4	8	8	0	27
American Samoa	*	*	0	*	*	0	*	0	0	*
Arizona	24	6	29	12	23	4	24	7	0	75
Arkansas	23	7	17	16	17	*	10	5	0	60
California	37	16	48	25	29	*	46	9	0	130
Colorado	36	9	35	17	30	*	33	10	0	99
Connecticut	10	8	23	8	13	*	*	4	0	40
Delaware	6	5	19	4	8	*	*	5	0	33
District of Columbia	10	7	23	*	10	*	*	5	0	35
Florida	29	16	48	18	36	*	17	7	0	96
Georgia	35	16	39	30	43	*	10	7	0	103
Guam	*	*	*	*	*	0	*	*	0	6
Hawaii	4	*	8	*	6	*	*	5	0	20
Idaho	24	4	17	14	23	*	17	8	0	60
Illinois	63	21	49	18	37	*	57	11	0	156
Indiana	40	10	31	13	36	*	42	7	0	101
Iowa	123	30	25	43	91	*	74	19	0	204
Kansas	36	13	22	27	42	*	31	10	0	97
Kentucky	24	9	23	29	31	*	19	9	0	93
Louisiana	17	10	23	18	22	*	10	6	0	63
Maine	12	10	17	5	12	*	*	5	0	33
Maryland	19	11	33	13	18	*	8	7	0	68
Massachusetts	14	10	35	11	12	*	8	4	0	59
Michigan	40	18	35	19	28	*	30	8	0	104
Minnesota	49	19	29	15	46	*	37	6	0	108
Mississippi	16	5	22	13	14	*	5	6	0	52
Missouri	38	14	30	20	38	*	44	9	0	115
Montana	21	8	15	7	15	*	17	4	0	49
Nebraska	34	8	14	20	32	*	30	8	0	79

**Table 21 - Continued**  
**Providers of Connections by Technology by State as of June 30, 2013**  
(Connections over 200 kbps in at least one direction)

<i>State</i>	<i>ADSL</i>	<i>SDSL</i>	<i>Other Wireline</i>	<i>Cable Modem</i>	<i>Fiber</i>	<i>Satellite</i>	<i>Fixed Wireless</i>	<i>Mobile Wireless</i>	<i>Power Line and Other</i>	<i>Total</i>
Nevada	16	8	23	8	18	*	12	6	0	59
New Hampshire	14	10	17	5	13	*	*	5	0	38
New Jersey	20	10	41	7	18	*	4	5	0	58
New Mexico	22	9	20	8	13	*	18	8	0	58
New York	42	17	42	21	33	*	14	5	0	97
North Carolina	28	10	30	21	32	*	10	11	0	83
North Dakota	29	9	17	7	16	*	12	4	0	49
Northern Mariana Isl	*	0	*	*	*	0	*	*	0	*
Ohio	38	10	34	28	37	*	24	8	0	110
Oklahoma	41	9	22	16	20	*	19	10	0	82
Oregon	42	13	32	14	35	*	25	6	0	90
Pennsylvania	35	11	43	26	28	*	13	7	0	97
Puerto Rico	*	0	6	*	*	*	*	5	0	13
Rhode Island	8	5	11	4	7	*	*	4	0	25
South Carolina	20	7	22	16	19	*	4	9	0	53
South Dakota	29	*	10	7	20	*	21	5	0	59
Tennessee	24	12	22	18	24	*	18	7	0	80
Texas	72	22	60	33	51	*	62	9	0	172
Utah	22	9	15	9	18	*	11	7	0	52
Vermont	10	5	16	5	9	*	4	4	0	35
Virgin Islands	*	0	*	*	*	*	4	4	0	8
Virginia	26	12	37	17	27	*	19	8	0	83
Washington	32	9	34	20	28	*	31	7	0	96
West Virginia	7	*	18	13	11	*	6	8	0	47
Wisconsin	49	18	25	19	36	*	30	8	0	102
Wyoming	14	6	7	4	5	*	14	7	0	38
<b>Total</b>	<b>852</b>	<b>246</b>	<b>246</b>	<b>403</b>	<b>691</b>	<b>5</b>	<b>771</b>	<b>79</b>	<b>0</b>	<b>1,714</b>

\* Indicates one to three providers.  
Source: FCC Form 477, Part I.

## Detailed Summary Statistics: Counties and Census Tracts

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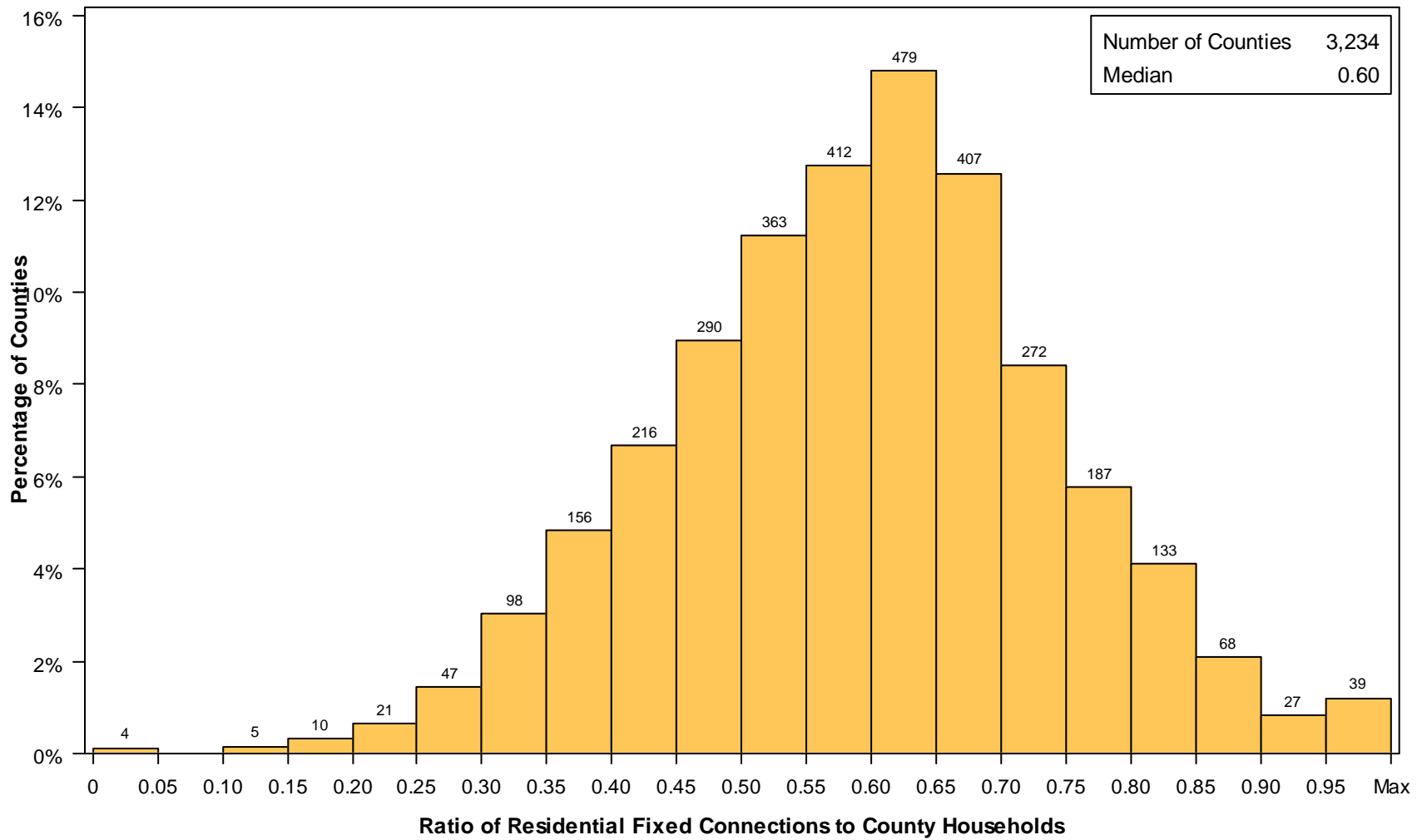
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**Chart 15**  
**Distribution of Counties by Ratio of Residential Fixed Connections over 200 kbps in at Least One Direction to County Households as of June 30, 2013**



Note: Ratios over 1 were set to 1. See Technical Notes at the end of the report.  
 Sources: FCC Form 477, Part VI: Geolytics 2012 Block-Level Estimates; and Census 2010. 2010 housing units proxv households in island area counties.

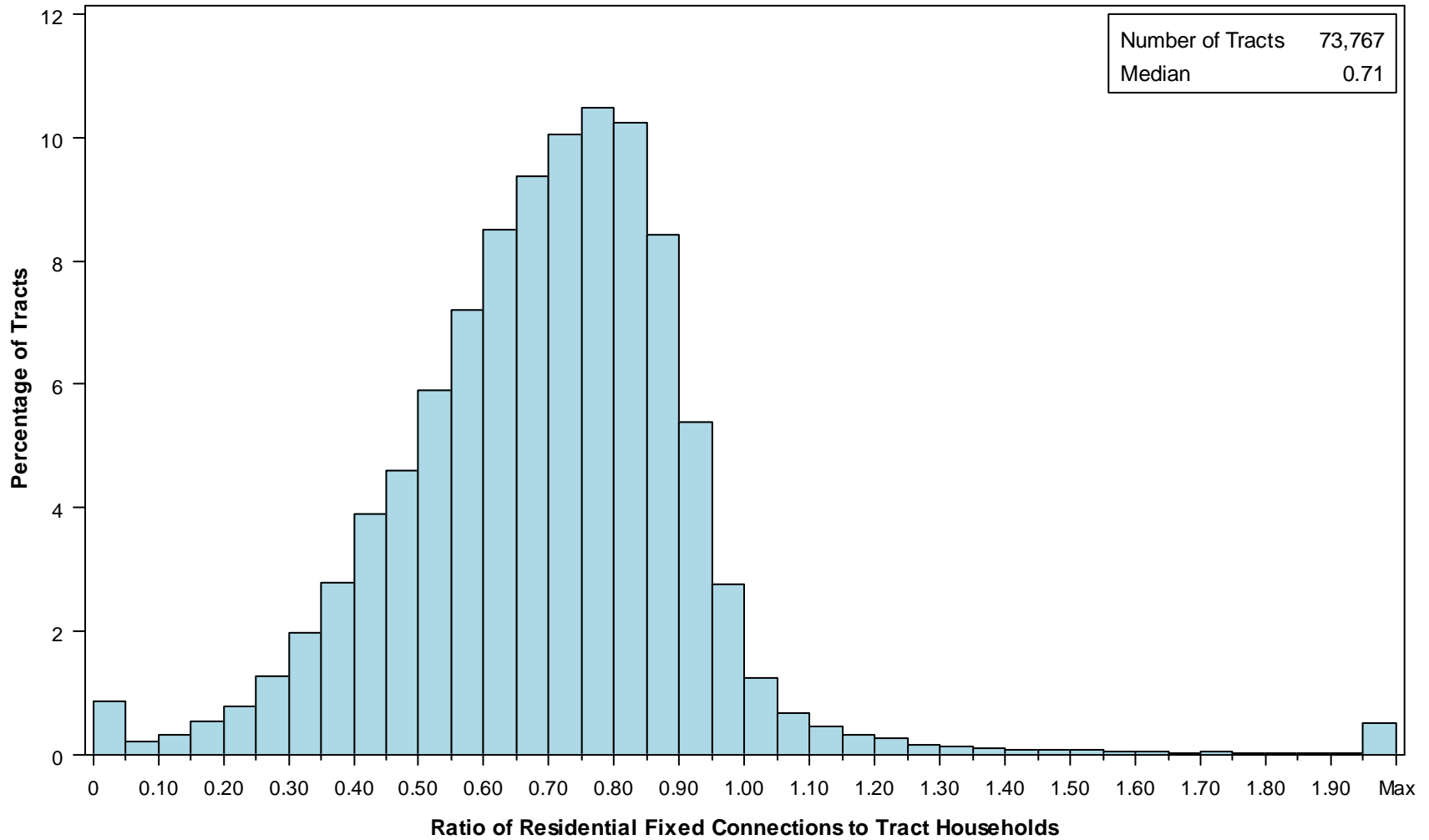


**Table 22**  
**Distribution of Counties by Ratio of Residential Fixed Connections over 200 kbps in at Least One Direction to County Households by Technology as of June 30, 2013**

Technology	Ratio of Residential Fixed Connections to County Households										
	Zero	Greater than 0 and no more than 5%	Greater than 5 and no more than 10%	Greater than 10 and no more than 20%	Greater than 20 and no more than 30%	Greater than 30 and no more than 40%	Greater than 40 and no more than 50%	Greater than 50 and no more than 60%	Greater than 60 and no more than 80%	Greater than 80 and no more than 100%	100% or more
aDSL	0.4	2.4	5.8	26.1	30.4	20.5	8.9	3.8	1.3	0.3	0.1
sDSL	82.3	17.2	0.3	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0
Other Wireline	97.1	2.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Cable Modem	12.5	8.8	8.7	17.9	16.3	15.0	11.8	5.6	3.0	0.2	0.2
FTTP	53.3	31.2	5.0	4.3	2.8	1.5	1.0	0.4	0.4	0.1	0.0
Satellite	0.6	73.5	19.3	6.0	0.5	0.0	0.0	0.0	0.0	0.0	0.0
Fixed Wireless	39.7	46.5	8.4	4.5	0.6	0.2	0.1	0.1	0.0	0.0	0.0
Power Line	100.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
All Other	100.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total	0.1	0.0	0.0	0.5	2.1	7.9	15.6	24.0	41.6	7.4	0.9

Note: Figures may not sum to totals due to rounding. See Technical Notes at the end of the report.  
Sources: FCC Form 477, Part VI; Geolytics 2012 Block-Level Estimates; and Census 2010. 2010 housing units proxy households in island area counties.

**Chart 16**  
**Distribution of Census Tracts by Ratio of Residential Fixed Connections over 200 kbps in at Least One Direction to Tract Households as of June 30, 2013**



Note: Ratios over 2 were set to 2. See Technical Notes at the end of the report.  
 Sources: FCC Form 477, Part VI: Geolitics 2012 Block-Level Estimates; and Census 2010.

**Table 23**  
**Distribution of Census Tracts by Ratio of Residential Fixed Connections over 200 kbps in at Least One Direction to Tract Households by Technology as of June 30, 2013**

<i>Technology</i>	<i>Ratio of Residential Fixed Connections to Tract Households</i>										
	<i>Zero</i>	<i>Greater than 0 and no more than 5%</i>	<i>Greater than 5 and no more than 10%</i>	<i>Greater than 10 and no more than 20%</i>	<i>Greater than 20 and no more than 30%</i>	<i>Greater than 30 and no more than 40%</i>	<i>Greater than 40 and no more than 50%</i>	<i>Greater than 50 and no more than 60%</i>	<i>Greater than 60 and no more than 80%</i>	<i>Greater than 80 and no more than 100%</i>	<i>100% or more</i>
aDSL	1.4	9.8	11.4	27.4	23.4	14.8	7.0	2.7	1.3	0.3	0.3
sDSL	96.6	3.2	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Other Wireline	99.7	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Cable Modem	5.6	3.3	2.4	7.2	13.8	18.5	18.3	14.6	13.2	2.2	1.0
FTTP	71.2	11.5	2.1	3.0	3.1	3.8	2.9	1.6	0.8	0.1	0.1
Satellite	30.2	61.8	4.7	2.5	0.5	0.1	0.0	0.0	0.0	0.0	0.0
Fixed Wireless	82.3	13.7	1.9	1.4	0.4	0.2	0.1	0.0	0.0	0.0	0.0
Power Line	100.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
All Other	100.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total	0.7	0.1	0.2	0.9	2.1	4.8	8.5	13.1	38.4	26.8	4.3

Note: Figures may not sum to totals due to rounding. See Technical Notes at the end of the report.  
Sources: FCC Form 477, Part VI; Geolytics 2012 Block-Level Estimates; and Census 2010.

**Table 24**  
**Percentage of Census Tracts with Residential Fixed Connections by Technology as of June 30, 2013**  
 (Connections over 200 kbps in at least one direction)

<i>Technology</i>	<i>Number of Providers</i>							
	<i>Zero</i>	<i>One</i>	<i>Two</i>	<i>Three</i>	<i>Four</i>	<i>Five</i>	<i>Six</i>	<i>Seven or More</i>
aDSL	1.4	53.5	33.6	10.0	1.3	0.1	0.0	0.0
sDSL	96.6	3.2	0.1	0.0	0.0	0.0	0.0	0.0
Other Wireline	99.7	0.3	0.0	0.0	0.0	0.0	0.0	0.0
Cable Modem	5.6	81.4	12.4	0.5	0.0	0.0	0.0	0.0
FTTP	71.2	28.0	0.7	0.1	0.0	0.0	0.0	0.0
Satellite	30.2	23.6	44.3	1.9	0.0	0.0	0.0	0.0
Fixed Wireless	82.3	12.8	3.6	1.0	0.2	0.0	0.0	0.0
Power Line	100.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
aDSL and/or Cable Modem and/or FTTP	0.9	2.8	45.7	34.0	13.4	2.6	0.4	0.1
Any Technology	0.7	0.4	12.7	22.1	29.2	20.1	9.3	5.3

Note: Figures may not sum to totals due to rounding. The number of providers in a census tract does not necessarily reflect the number of choices available to a particular household, and does not purport to measure competition.  
 Sources: FCC Form 477, Part VI and Census 2010.

**Table 25**  
**Distribution of Counties by Ratio of Residential Fixed Connections to County Households by State as of June 30, 2013**  
**(Connections over 200 kbps in at least one direction)**

State	Counties	Ratio of Residential Fixed Connections over 200 kbps in at Least One Direction to County Households										
		Zero	Greater than 0 and no more than 5%	Greater than 5 and no more than 10%	Greater than 10 and no more than 20%	Greater than 20 and no more than 30%	Greater than 30 and no more than 40%	Greater than 40 and no more than 50%	Greater than 50 and no more than 60%	Greater than 60 and no more than 80%	Greater than 80 and no more than 100%	100% or more
Alabama	67	0	0	0	0	3	9	22	16	17	0	0
Alaska	29	0	0	0	1	2	1	6	3	15	0	1
American Samoa	5	2	1	0	1	0	1	0	0	0	0	0
Arizona	15	0	0	0	0	0	2	0	5	8	0	0
Arkansas	75	0	0	0	0	2	17	34	13	9	0	0
California	58	0	0	0	1	0	1	2	9	33	11	1
Colorado	64	0	0	0	0	1	2	6	12	22	14	7
Connecticut	8	0	0	0	0	0	0	0	0	4	4	0
Delaware	3	0	0	0	0	0	0	0	0	1	2	0
District of Columbia	1	0	0	0	0	0	0	0	0	1	0	0
Florida	67	0	0	0	0	1	2	10	11	33	9	1
Georgia	159	0	0	0	1	7	16	38	33	54	10	0
Guam	1	0	0	0	0	0	0	0	0	1	0	0
Hawaii	5	0	0	0	0	0	0	0	0	2	3	0
Idaho	44	0	0	0	0	2	0	6	10	23	2	1
Illinois	102	0	0	0	1	2	3	13	35	41	4	3
Indiana	92	0	0	0	0	0	3	17	34	36	2	0
Iowa	99	0	0	0	0	0	0	3	26	68	2	0
Kansas	105	0	0	0	0	0	1	12	29	52	11	0
Kentucky	120	0	0	0	0	2	5	24	42	45	2	0
Louisiana	64	0	0	0	0	1	10	14	17	22	0	0
Maine	16	0	0	0	0	0	0	0	2	9	5	0
Maryland	24	0	0	0	2	0	0	2	1	13	5	1
Massachusetts	14	0	0	0	0	0	0	0	0	7	4	3
Michigan	83	0	0	0	0	0	8	5	32	35	3	0
Minnesota	87	0	0	0	0	0	1	2	17	63	4	0
Mississippi	82	0	0	0	0	10	36	18	10	8	0	0
Missouri	115	0	0	0	1	2	8	34	41	27	2	0
Montana	56	0	0	0	0	1	0	6	12	33	4	0
Nebraska	93	0	0	0	0	0	4	6	28	54	1	0

**Table 25 - Continued**  
**Distribution of Counties by Ratio of Residential Fixed Connections to County Households by State as of June 30, 2013**  
**(Connections over 200 kbps in at least one direction)**

State	Counties	Ratio of Residential Fixed Connections over 200 kbps in at Least One Direction to County Households										
		Zero	Greater than 0 and no more than 5%	Greater than 5 and no more than 10%	Greater than 10 and no more than 20%	Greater than 20 and no more than 30%	Greater than 30 and no more than 40%	Greater than 40 and no more than 50%	Greater than 50 and no more than 60%	Greater than 60 and no more than 80%	Greater than 80 and no more than 100%	100% or more
Nevada	17	0	0	0	0	0	4	3	3	7	0	0
New Hampshire	10	0	0	0	0	0	0	0	0	4	5	1
New Jersey	21	0	0	0	0	0	0	0	0	6	14	1
New Mexico	33	0	0	0	0	1	6	5	10	9	2	0
New York	62	0	0	0	0	0	0	0	2	43	16	1
North Carolina	100	0	0	0	0	0	2	19	21	43	13	2
North Dakota	53	0	0	0	0	0	0	4	6	36	7	0
Northern Mariana Isl	4	1	0	0	0	3	0	0	0	0	0	0
Ohio	88	0	0	0	1	0	1	7	23	52	4	0
Oklahoma	77	0	0	0	0	2	17	22	19	16	1	0
Oregon	36	0	0	0	0	0	2	0	10	21	3	0
Pennsylvania	67	0	0	0	0	0	1	1	11	40	13	1
Puerto Rico	78	0	0	0	0	10	18	34	13	3	0	0
Rhode Island	5	0	0	0	0	0	0	0	0	3	2	0
South Carolina	46	0	0	0	0	0	7	10	13	11	5	0
South Dakota	66	0	0	0	0	1	2	4	7	47	5	0
Tennessee	95	0	0	0	1	2	9	31	32	19	1	0
Texas	254	0	0	0	1	5	29	58	81	69	8	3
Utah	29	0	0	0	0	1	1	1	5	15	5	1
Vermont	14	0	0	0	0	0	0	0	1	7	6	0
Virgin Islands	3	0	0	0	0	0	1	1	0	1	0	0
Virginia	134	0	0	0	4	7	18	14	39	35	17	0
Washington	39	0	0	0	0	0	2	1	6	27	3	0
West Virginia	55	0	0	0	0	0	3	8	19	24	1	0
Wisconsin	72	0	0	0	0	0	0	1	13	54	4	0
Wyoming	23	0	0	0	0	0	1	2	4	16	0	0
<b>Total</b>	<b>3,234</b>	<b>3</b>	<b>1</b>	<b>0</b>	<b>15</b>	<b>68</b>	<b>254</b>	<b>506</b>	<b>776</b>	<b>1344</b>	<b>239</b>	<b>28</b>

Note: Figures may not sum to totals due to rounding. See Technical Notes at the end of the report.

Sources: FCC Form 477, Part VI (Connections); Geolytics 2012 Block-Level Estimates (Households for U.S. and District of Columbia); Census 2010 (Housing units for Puerto Rico, American Samoa, Guam, Northern Mariana Islands and U.S. Virgin Islands).

**Table 26**  
**Distribution of Census Tracts by Ratio of Residential Fixed Connections to Tract Households by State as of June 30, 2013**  
**(Connections over 200 kbps in at least one direction)**

State	Tracts	Ratio of Residential Fixed Connections over 200 kbps in at Least One Direction to Tract Households										
		Zero	Greater than 0 and no more than 5%	Greater than 5 and no more than 10%	Greater than 10 and no more than 20%	Greater than 20 and no more than 30%	Greater than 30 and no more than 40%	Greater than 40 and no more than 50%	Greater than 50 and no more than 60%	Greater than 60 and no more than 80%	Greater than 80 and no more than 100%	100% or more
Alabama	1,179	5	2	1	14	73	151	229	217	342	123	22
Alaska	167	1	0	1	4	7	7	14	26	76	19	12
American Samoa	18	3	5	2	1	2	0	3	0	1	0	1
Arizona	1,526	18	7	10	18	21	60	119	210	541	454	68
Arkansas	686	2	1	1	11	54	107	161	133	161	43	12
California	8,036	51	8	12	33	71	164	398	752	3,071	3,192	284
Colorado	1,249	13	1	1	2	8	19	50	110	489	467	89
Connecticut	829	3	0	0	0	2	9	34	58	283	420	20
Delaware	215	1	0	0	0	1	0	11	22	75	83	22
District of Columbia	179	1	0	0	0	0	2	11	28	75	48	14
Florida	4,199	37	2	2	6	26	94	265	526	1,822	1,173	246
Georgia	1,964	10	2	4	12	65	143	241	312	688	417	70
Guam	56	6	0	1	3	4	6	4	4	6	4	18
Hawaii	326	11	0	1	2	0	3	4	19	125	120	41
Idaho	298	0	0	1	1	4	11	19	61	159	34	8
Illinois	3,121	9	3	3	14	34	153	331	503	1,353	663	55
Indiana	1,508	5	2	1	3	20	55	207	370	632	200	13
Iowa	825	2	1	0	0	4	12	52	160	498	85	11
Kansas	770	9	0	1	3	10	37	71	167	309	131	32
Kentucky	1,115	11	0	1	10	24	59	139	246	434	168	23
Louisiana	1,136	14	0	1	4	28	105	184	220	434	124	22
Maine	351	0	0	0	0	1	4	15	39	174	83	35
Maryland	1,394	7	1	3	17	15	61	83	110	446	574	77
Massachusetts	1,471	12	0	1	1	2	6	16	83	499	752	99
Michigan	2,767	30	3	5	16	80	221	288	362	1,104	627	31
Minnesota	1,335	4	2	0	3	7	13	66	198	698	330	14
Mississippi	661	4	0	0	13	72	148	133	104	143	35	9
Missouri	1,393	6	1	2	12	55	129	182	298	466	213	29
Montana	271	2	0	3	2	2	8	18	52	135	40	9
Nebraska	532	2	0	0	0	0	13	40	91	253	114	19

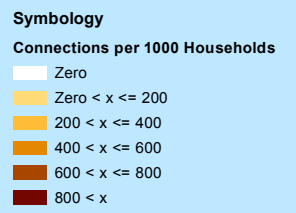
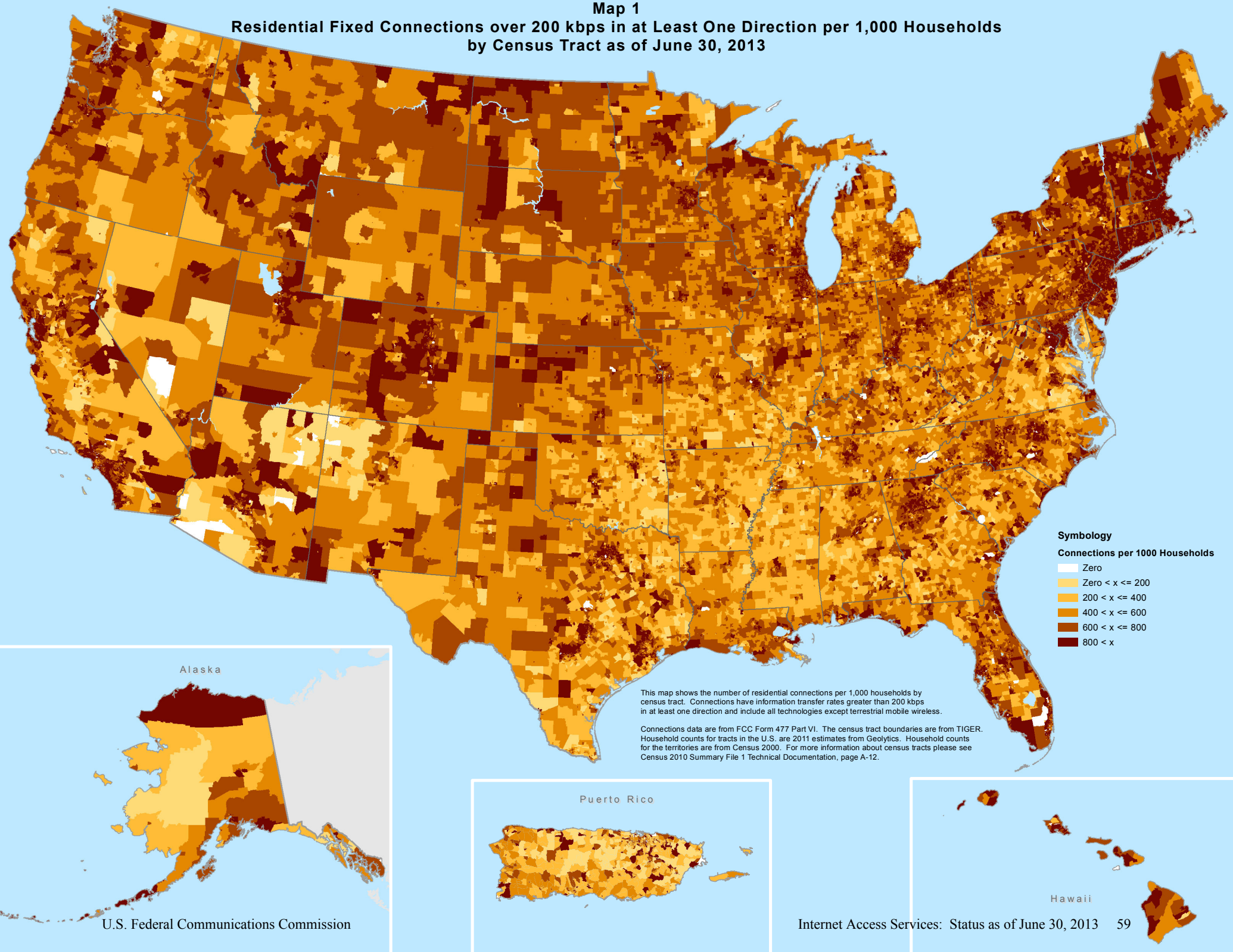
**Table 26 - Continued**  
**Distribution of Census Tracts by Ratio of Residential Fixed Connections to Tract Households by State as of June 30, 2013**  
**(Connections over 200 kbps in at least one direction)**

State	Tracts	Ratio of Residential Fixed Connections over 200 kbps in at Least One Direction to Tract Households										
		Zero	Greater than 0 and no more than 5%	Greater than 5 and no more than 10%	Greater than 10 and no more than 20%	Greater than 20 and no more than 30%	Greater than 30 and no more than 40%	Greater than 40 and no more than 50%	Greater than 50 and no more than 60%	Greater than 60 and no more than 80%	Greater than 80 and no more than 100%	100% or more
Nevada	683	6	0	0	9	12	31	68	76	290	161	30
New Hampshire	294	2	0	0	1	0	0	1	7	102	161	20
New Jersey	2,004	9	1	0	1	0	5	19	76	690	1,088	115
New Mexico	499	4	9	5	8	20	41	75	98	171	53	15
New York	4,900	73	0	3	19	20	54	130	276	2,084	1,918	323
North Carolina	2,183	19	2	1	4	34	102	231	353	712	459	266
North Dakota	205	0	0	0	0	0	7	11	27	108	42	10
Northern Mariana Isl	22	3	2	0	6	7	0	1	2	0	1	0
Ohio	2,946	7	10	27	78	64	141	266	434	1,214	600	105
Oklahoma	1,046	1	4	4	30	65	122	184	174	286	140	36
Oregon	827	2	0	0	2	1	9	24	107	469	197	16
Pennsylvania	3,217	21	2	2	17	27	45	154	408	1,456	908	177
Puerto Rico	903	16	4	13	114	145	172	144	96	107	40	52
Rhode Island	241	1	0	0	1	0	0	2	13	130	86	8
South Carolina	1,097	10	0	0	6	37	93	172	170	332	189	88
South Dakota	222	0	1	0	1	1	9	8	30	133	34	5
Tennessee	1,497	22	2	1	12	60	153	266	310	459	181	31
Texas	5,253	39	1	25	65	222	522	767	772	1,559	978	303
Utah	588	5	2	3	1	3	3	17	56	277	195	26
Vermont	184	1	0	0	0	0	1	1	10	91	66	14
Virgin Islands	29	0	0	1	4	5	6	4	5	3	0	1
Virginia	1,895	22	1	9	34	64	95	148	230	484	712	96
Washington	1,446	2	1	3	4	11	22	55	108	674	542	24
West Virginia	484	0	1	2	13	17	31	52	94	189	65	20
Wisconsin	1,393	3	2	0	5	8	60	96	223	748	229	19
Wyoming	132	1	0	0	0	4	4	11	17	73	22	0
<b>Total</b>	<b>73,767</b>	<b>548</b>	<b>86</b>	<b>157</b>	<b>640</b>	<b>1,519</b>	<b>3,528</b>	<b>6,295</b>	<b>9,653</b>	<b>28,333</b>	<b>19,803</b>	<b>3,205</b>

Note: Figures may not sum to totals due to rounding. See Technical Notes at the end of the report.  
Sources: FCC Form 477, Part VI (Connections); Geolytics 2012 Block-Level Estimates (Households for U.S. and District of Columbia); Census 2010 (Households for Puerto Rico, American Samoa, Guam, Northern Mariana Islands and U.S. Virgin Islands).



**Map 1**  
**Residential Fixed Connections over 200 kbps in at Least One Direction per 1,000 Households**  
**by Census Tract as of June 30, 2013**



This map shows the number of residential connections per 1,000 households by census tract. Connections have information transfer rates greater than 200 kbps in at least one direction and include all technologies except terrestrial mobile wireless.

Connections data are from FCC Form 477 Part VI. The census tract boundaries are from TIGER. Household counts for tracts in the U.S. are 2011 estimates from Geolytics. Household counts for the territories are from Census 2000. For more information about census tracts please see Census 2010 Summary File 1 Technical Documentation, page A-12.

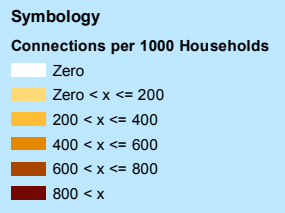
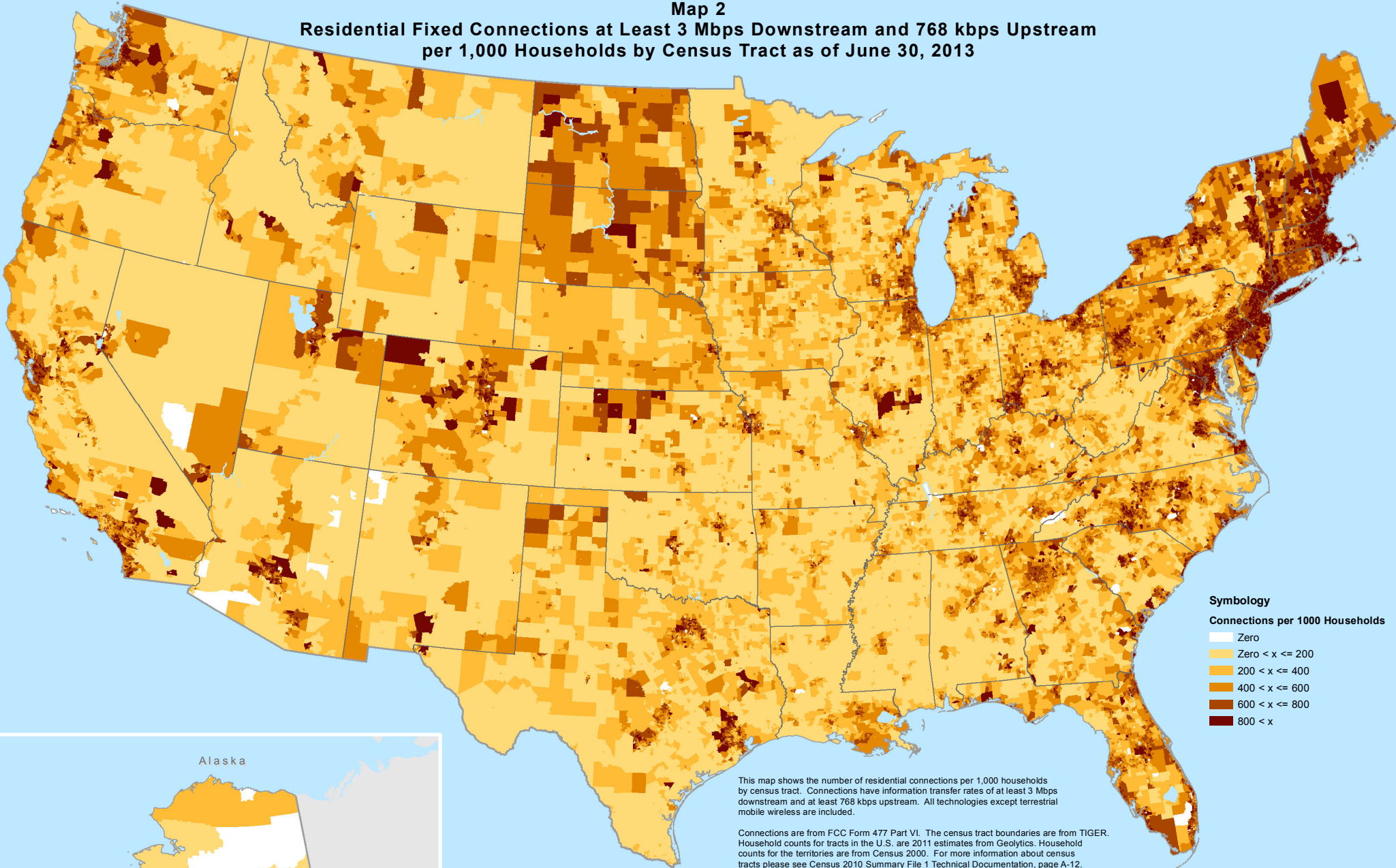
Alaska

Puerto Rico

Hawaii

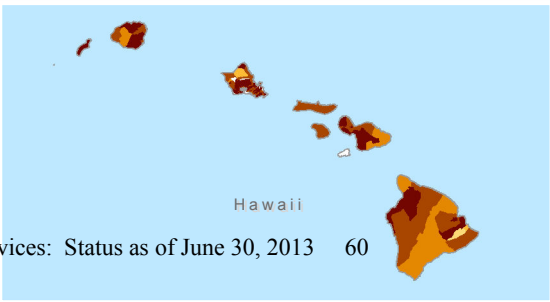
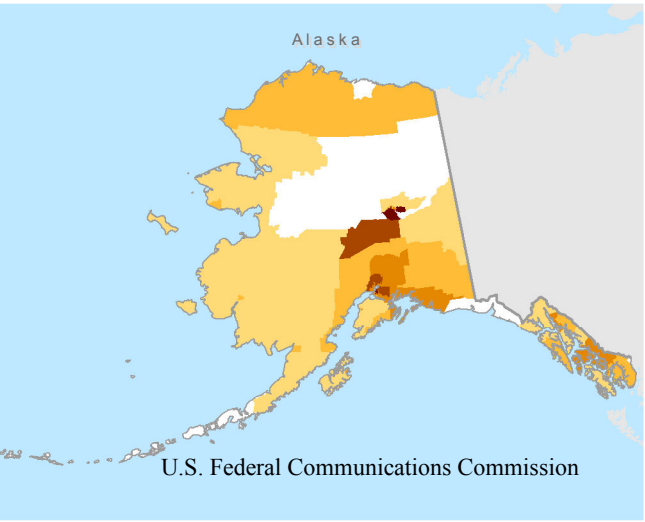


**Map 2**  
**Residential Fixed Connections at Least 3 Mbps Downstream and 768 kbps Upstream**  
**per 1,000 Households by Census Tract as of June 30, 2013**



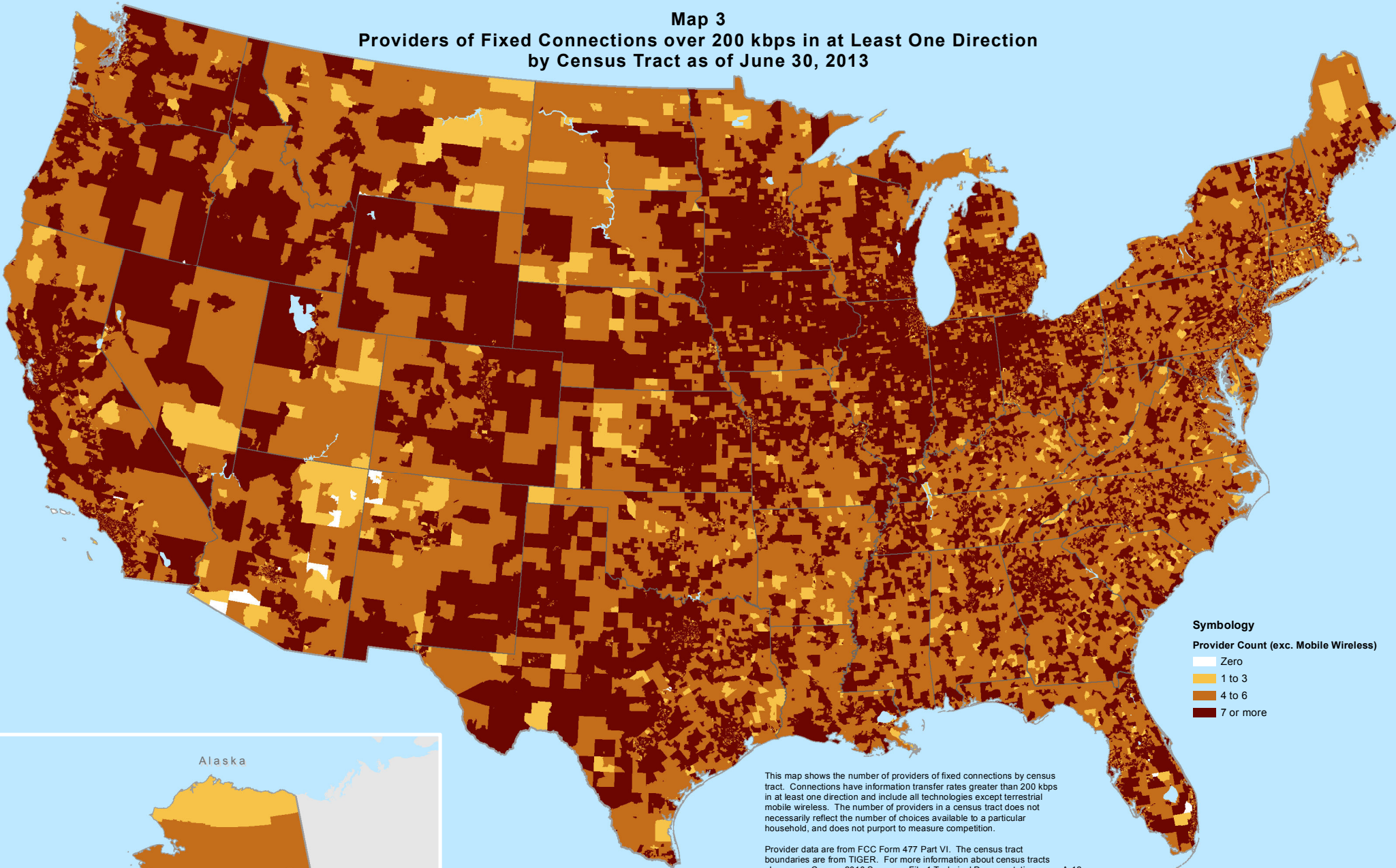
This map shows the number of residential connections per 1,000 households by census tract. Connections have information transfer rates of at least 3 Mbps downstream and at least 768 kbps upstream. All technologies except terrestrial mobile wireless are included.

Connections are from FCC Form 477 Part VI. The census tract boundaries are from TIGER. Household counts for tracts in the U.S. are 2011 estimates from Geolytics. Household counts for the territories are from Census 2000. For more information about census tracts please see Census 2010 Summary File 1 Technical Documentation, page A-12.





**Map 3**  
**Providers of Fixed Connections over 200 kbps in at Least One Direction**  
**by Census Tract as of June 30, 2013**

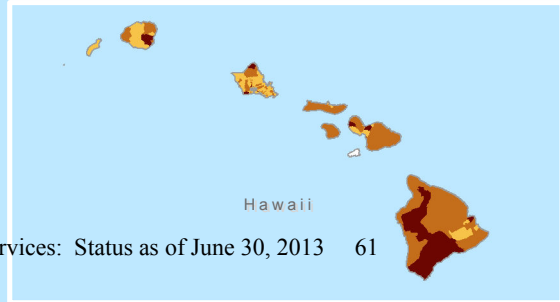
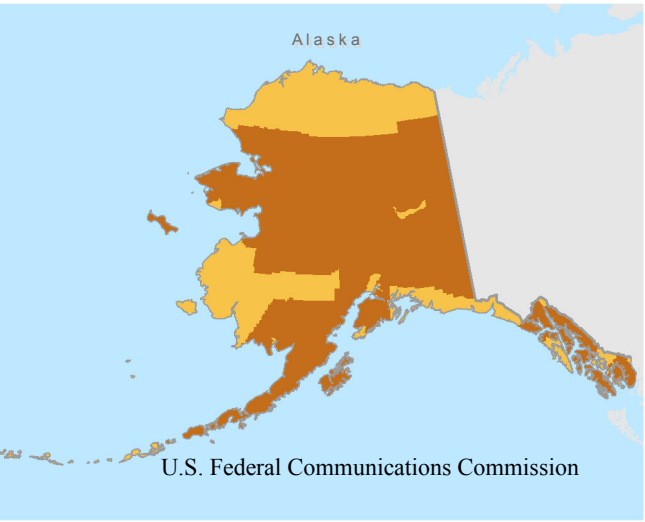


**Symbology**  
**Provider Count (exc. Mobile Wireless)**

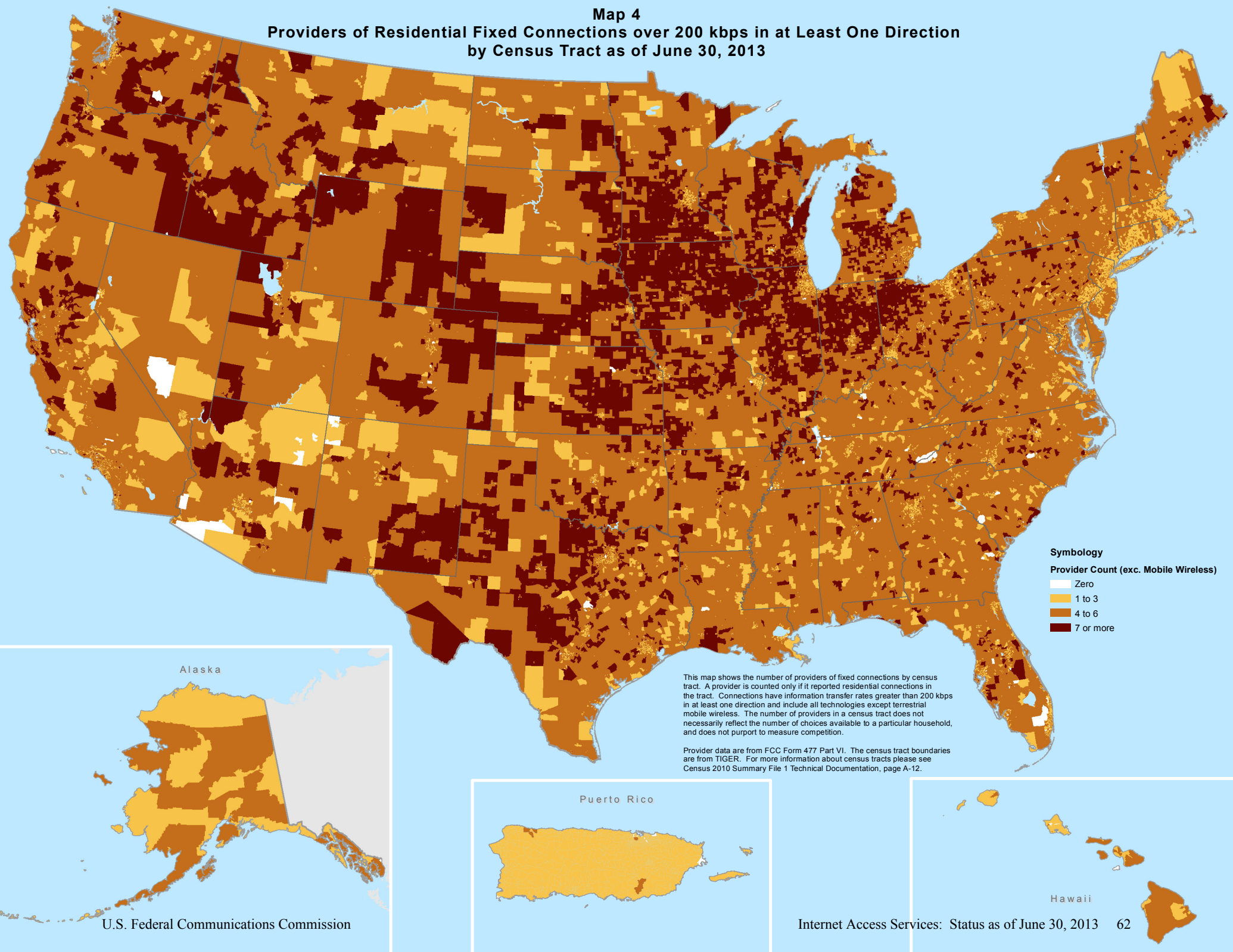
- Zero
- 1 to 3
- 4 to 6
- 7 or more

This map shows the number of providers of fixed connections by census tract. Connections have information transfer rates greater than 200 kbps in at least one direction and include all technologies except terrestrial mobile wireless. The number of providers in a census tract does not necessarily reflect the number of choices available to a particular household, and does not purport to measure competition.

Provider data are from FCC Form 477 Part VI. The census tract boundaries are from TIGER. For more information about census tracts please see Census 2010 Summary File 1 Technical Documentation, page A-12.



**Map 4**  
**Providers of Residential Fixed Connections over 200 kbps in at Least One Direction**  
**by Census Tract as of June 30, 2013**



**Symbology**  
**Provider Count (exc. Mobile Wireless)**

- Zero
- 1 to 3
- 4 to 6
- 7 or more

This map shows the number of providers of fixed connections by census tract. A provider is counted only if it reported residential connections in the tract. Connections have information transfer rates greater than 200 kbps in at least one direction and include all technologies except terrestrial mobile wireless. The number of providers in a census tract does not necessarily reflect the number of choices available to a particular household, and does not purport to measure competition.

Provider data are from FCC Form 477 Part VI. The census tract boundaries are from TIGER. For more information about census tracts please see Census 2010 Summary File 1 Technical Documentation, page A-12.

Alaska

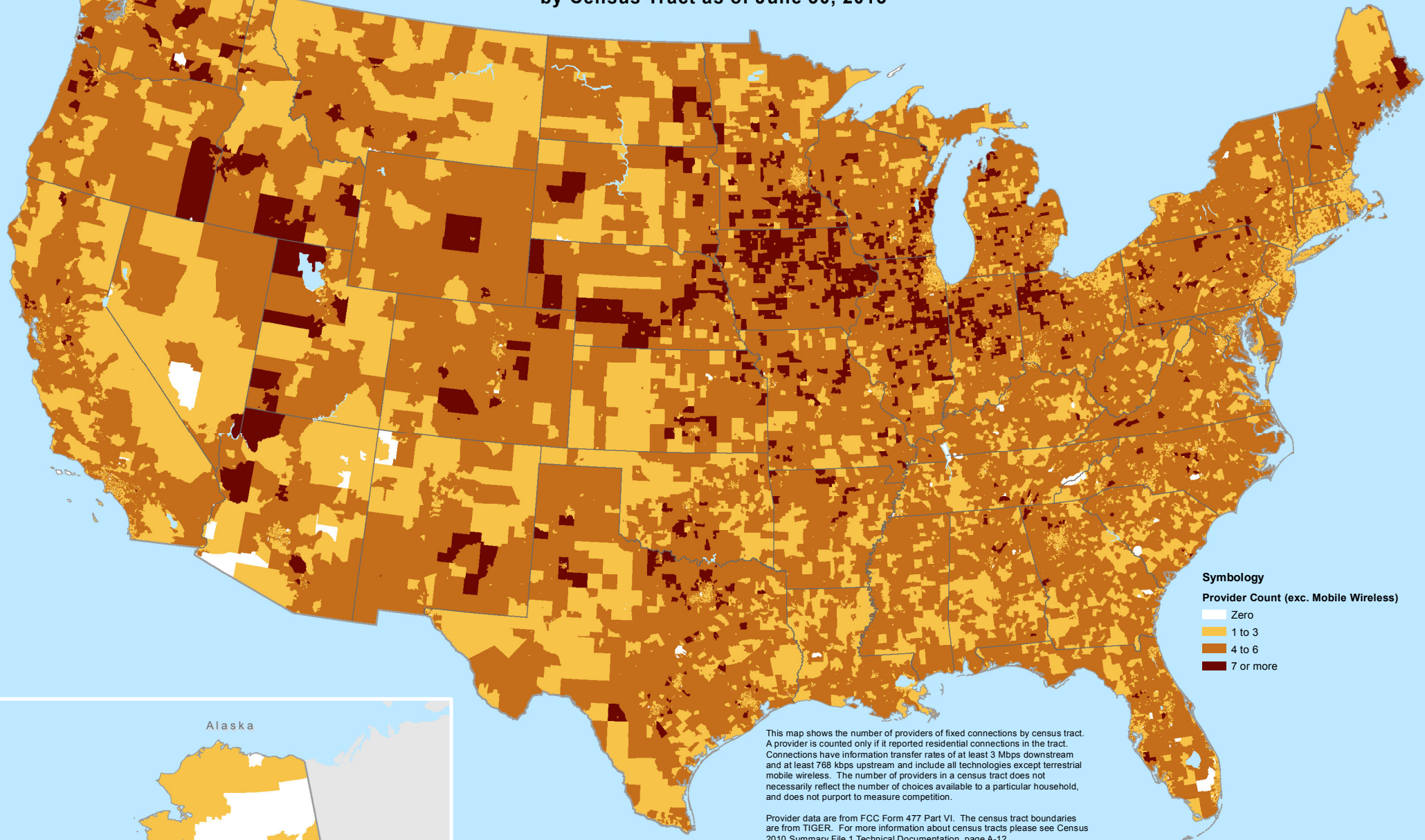
U.S. Federal Communications Commission

Puerto Rico

Hawaii



**Map 5**  
**Providers of Residential Fixed Connections at Least 3 Mbps Downstream and 768 kbps Upstream**  
**by Census Tract as of June 30, 2013**



**Symbology**  
**Provider Count (exc. Mobile Wireless)**

- Zero
- 1 to 3
- 4 to 6
- 7 or more

This map shows the number of providers of fixed connections by census tract. A provider is counted only if it reported residential connections in the tract. Connections have information transfer rates of at least 3 Mbps downstream and at least 768 kbps upstream and include all technologies except terrestrial mobile wireless. The number of providers in a census tract does not necessarily reflect the number of choices available to a particular household, and does not purport to measure competition.

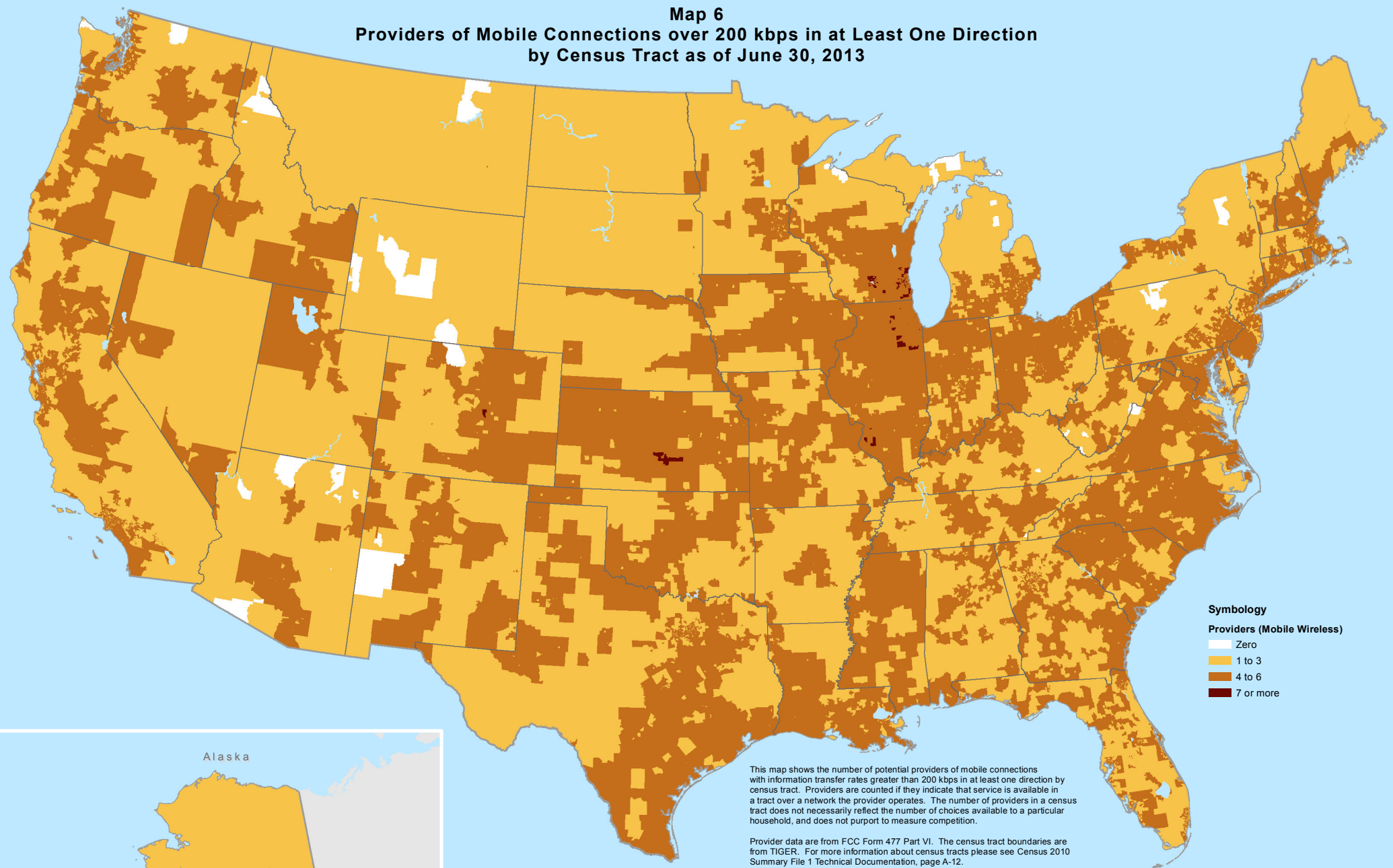
Provider data are from FCC Form 477 Part VI. The census tract boundaries are from TIGER. For more information about census tracts please see Census 2010 Summary File 1 Technical Documentation, page A-12.

Alaska

Puerto Rico

Hawaii

**Map 6**  
**Providers of Mobile Connections over 200 kbps in at Least One Direction**  
**by Census Tract as of June 30, 2013**



**Symbology**  
**Providers (Mobile Wireless)**  
 Zero  
 1 to 3  
 4 to 6  
 7 or more

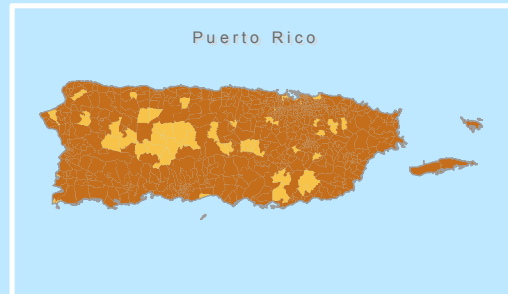
This map shows the number of potential providers of mobile connections with information transfer rates greater than 200 kbps in at least one direction by census tract. Providers are counted if they indicate that service is available in a tract over a network the provider operates. The number of providers in a census tract does not necessarily reflect the number of choices available to a particular household, and does not purport to measure competition.

Provider data are from FCC Form 477 Part VI. The census tract boundaries are from TIGER. For more information about census tracts please see Census 2010 Summary File 1 Technical Documentation, page A-12.

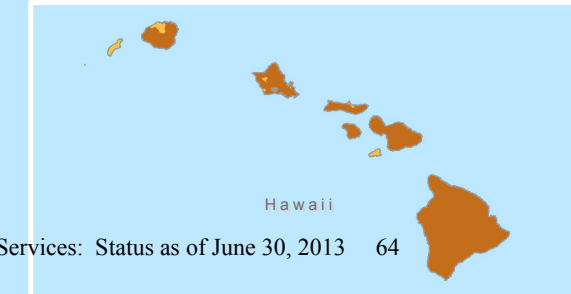
Alaska



Puerto Rico



Hawaii



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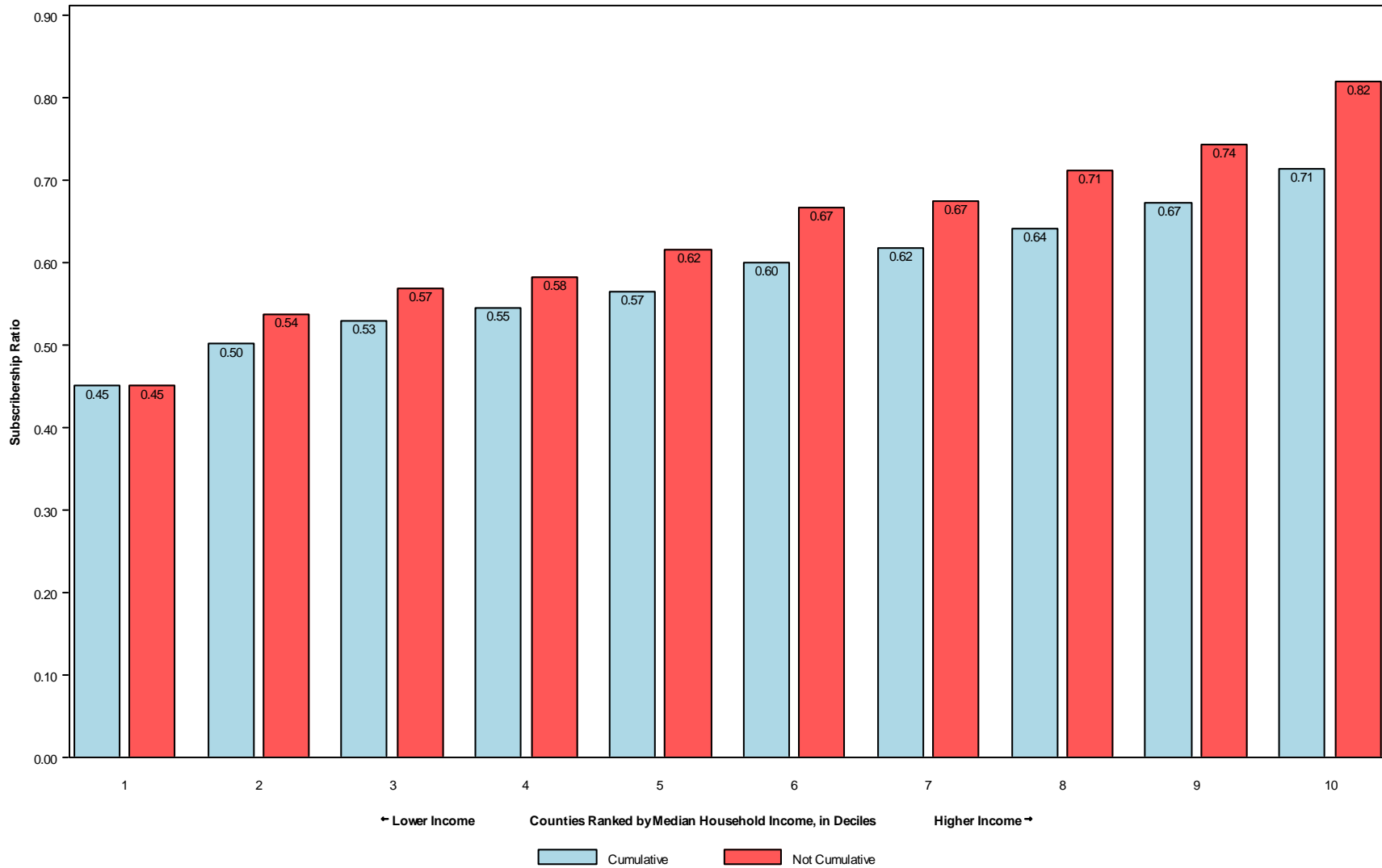
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**Chart 17**  
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**by Income Deciles as of June 30, 2013**  
**(County Data)**

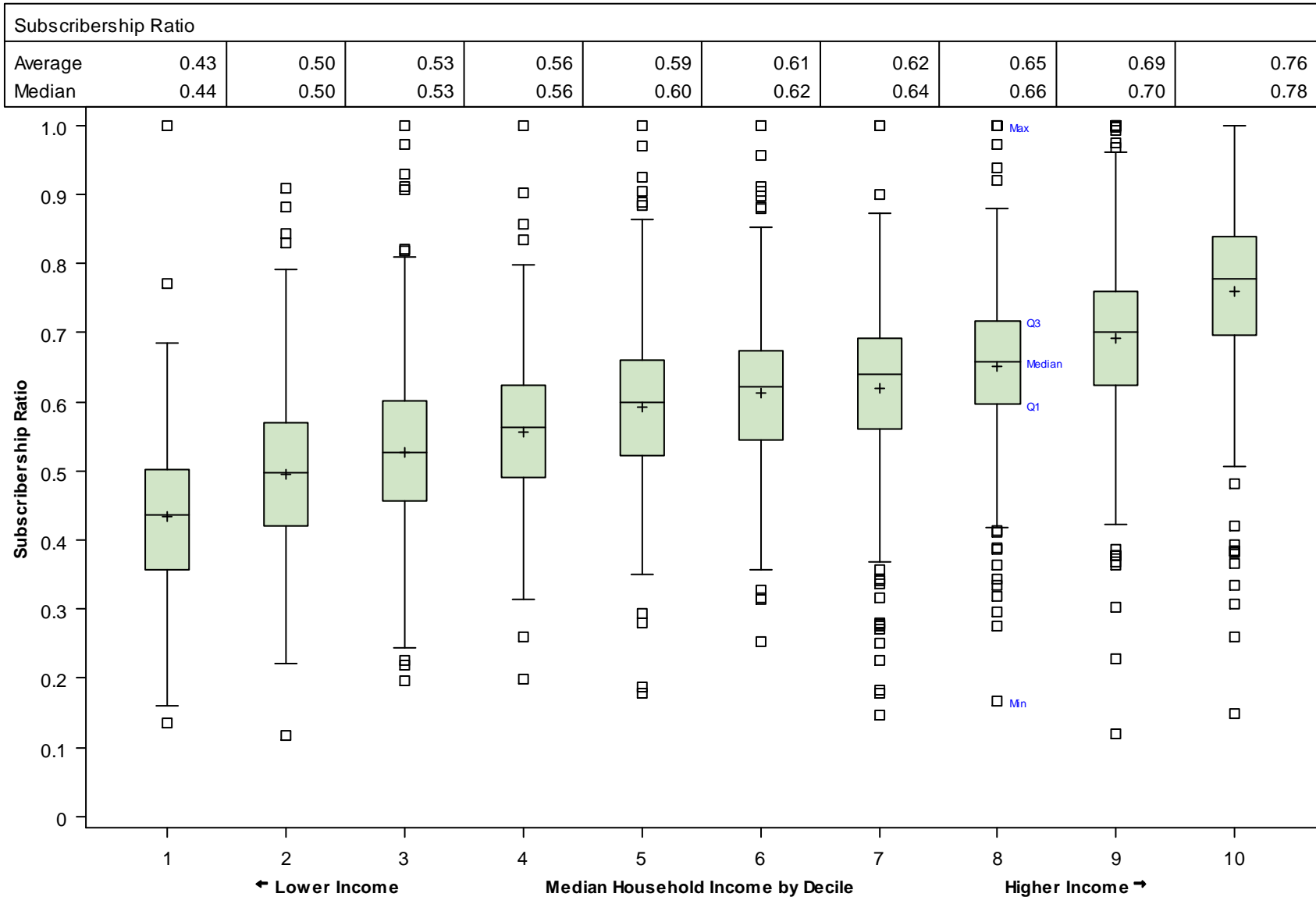


This chart shows cumulative and non-cumulative subscribership ratios by income deciles. Counties were grouped into income deciles based on county median household income in 2009, as reported by the Census Bureau. For each decile, the height of any red, non-cumulative bar represents the ratio of the sum of residential fixed connections over 200 kbps in at least one direction across counties in the decile to the sum of households across counties in the decile. The height of the blue, cumulative bar for decile N represents the ratio of the sum of residential fixed connections over 200 kbps in at least one direction across all counties in decile N and all deciles less than N to the number of households in all the counties in decile N and deciles less than N.

Sources: FCC Form 477, Part VI: Geolytics 2012 Block-Level Estimates (Households in 2012); and 2008-2012 ACS 5-year Estimates (Median household income).

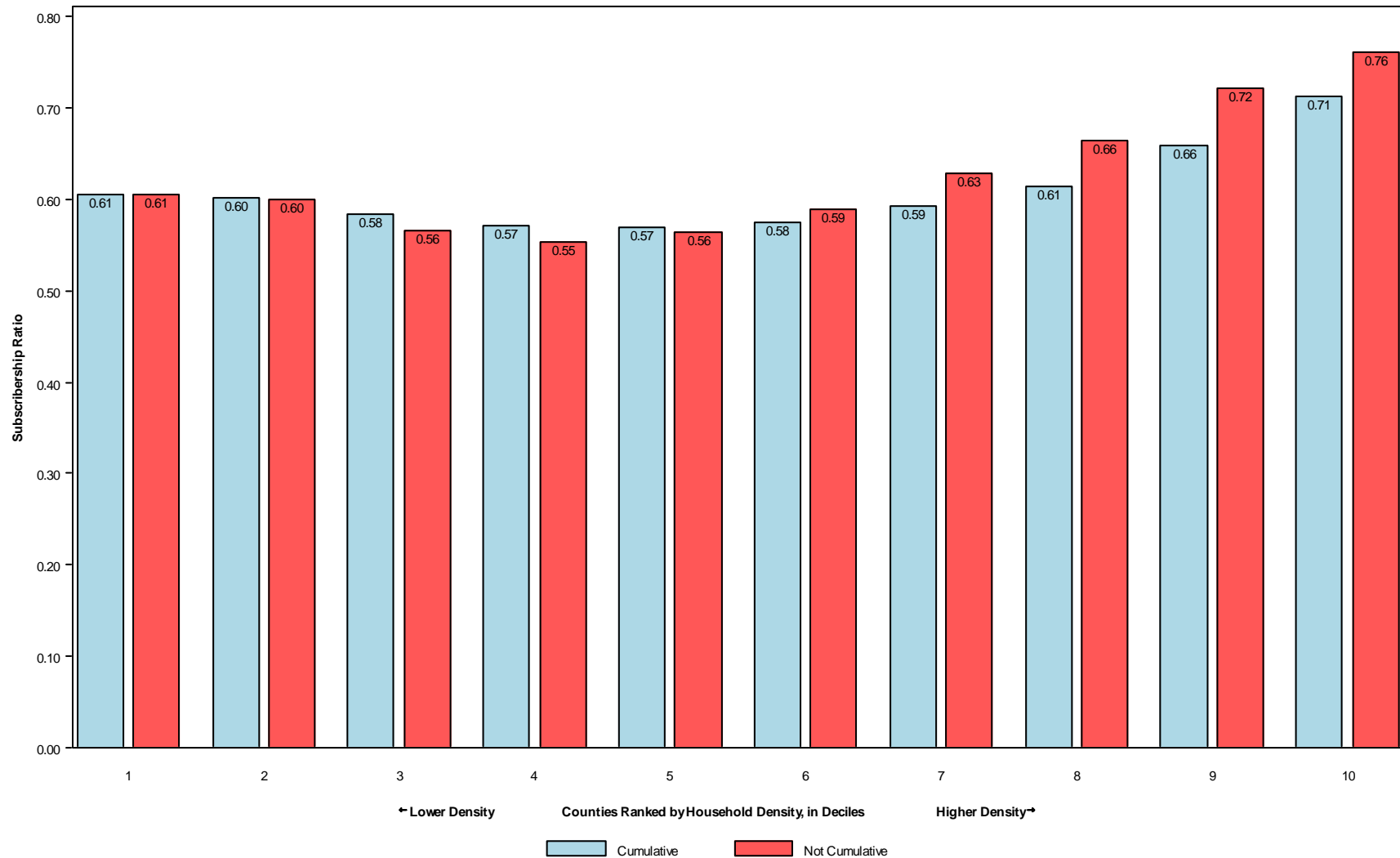


**Chart 18**  
**Subscribership Ratio Distributions by Income Deciles as of June 30, 2013**



Note: Each box plot shows the distribution of residential subscribership to connections over 200 kbps in at least one direction for counties in the income decile. Some of the features are labeled, but note also that + denotes the position of the average residential subscribership ratio taken across all counties in the decile; L is the minimum observation above Q1-1.5(Q3-Q1); T is the maximum observation below Q3+1.5(Q3-Q1); and □ is any data point beyond Q1-1.5(Q3-Q1) or Q3+1.5(Q3-Q1). Ratios greater than 1 were set to 1.  
Sources: FCC Form 477, Part VI: Geolytics 2012 Block-Level Estimates (Households in 2012); and 2008-2012 ACS 5-year Estimates (Median household income).

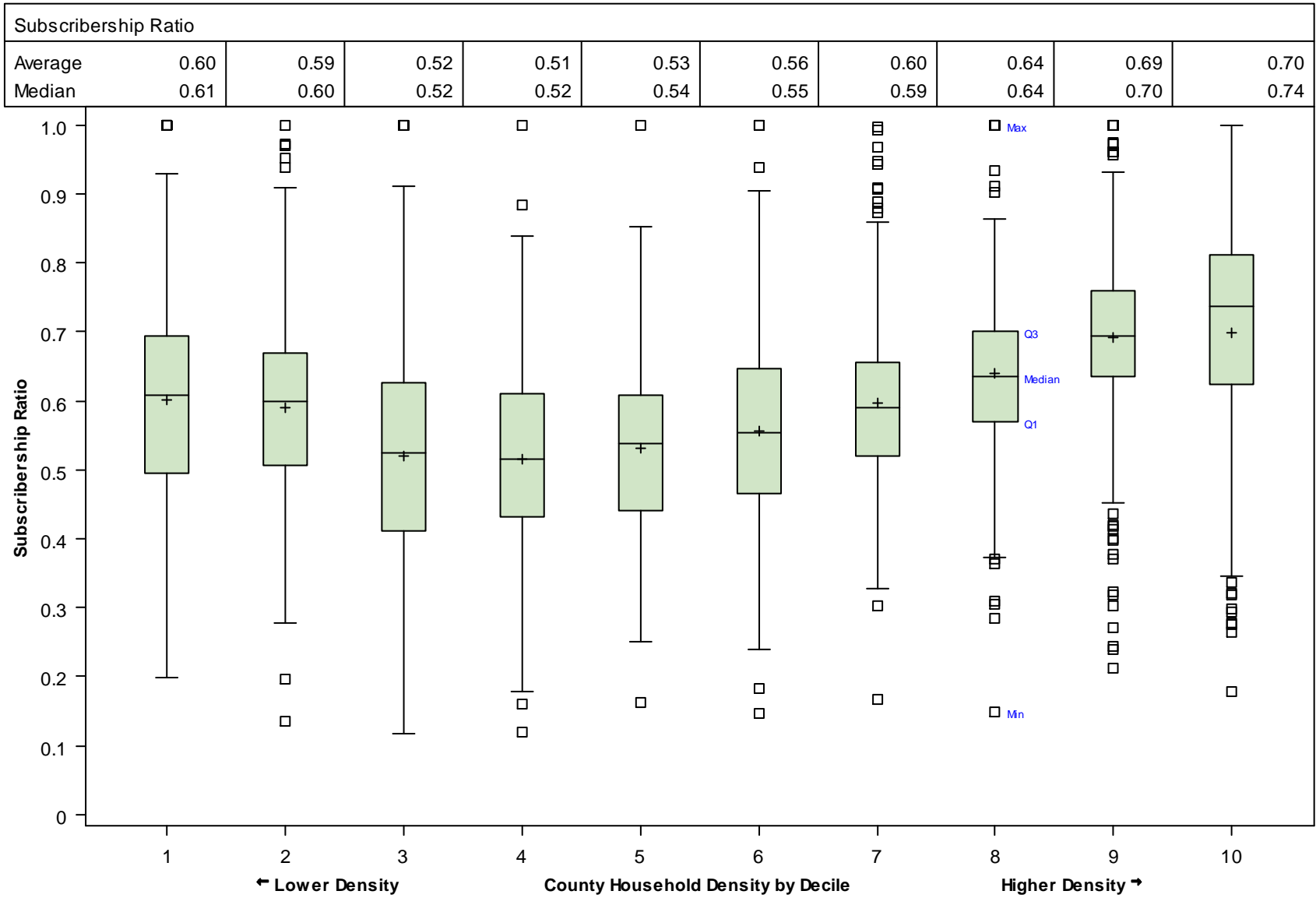
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**(County Data)**



This chart shows cumulative and non-cumulative subscribership ratios by density deciles. Counties were grouped into density deciles based on households per square mile, calculated as the ratio of estimated county households in 2010 to county land area from the Census Bureau. For each decile, the height of any red, non-cumulative bar represents the ratio of the sum of residential fixed connections over 200 kbps in at least one direction across counties in the decile to the sum of households across counties in the decile. The height of the blue, cumulative bar for decile N represents the ratio of the sum of residential fixed connections over 200 kbps in at least one direction across all counties in decile N and all deciles less than N to the number of households in all the counties in decile N and deciles less than N.

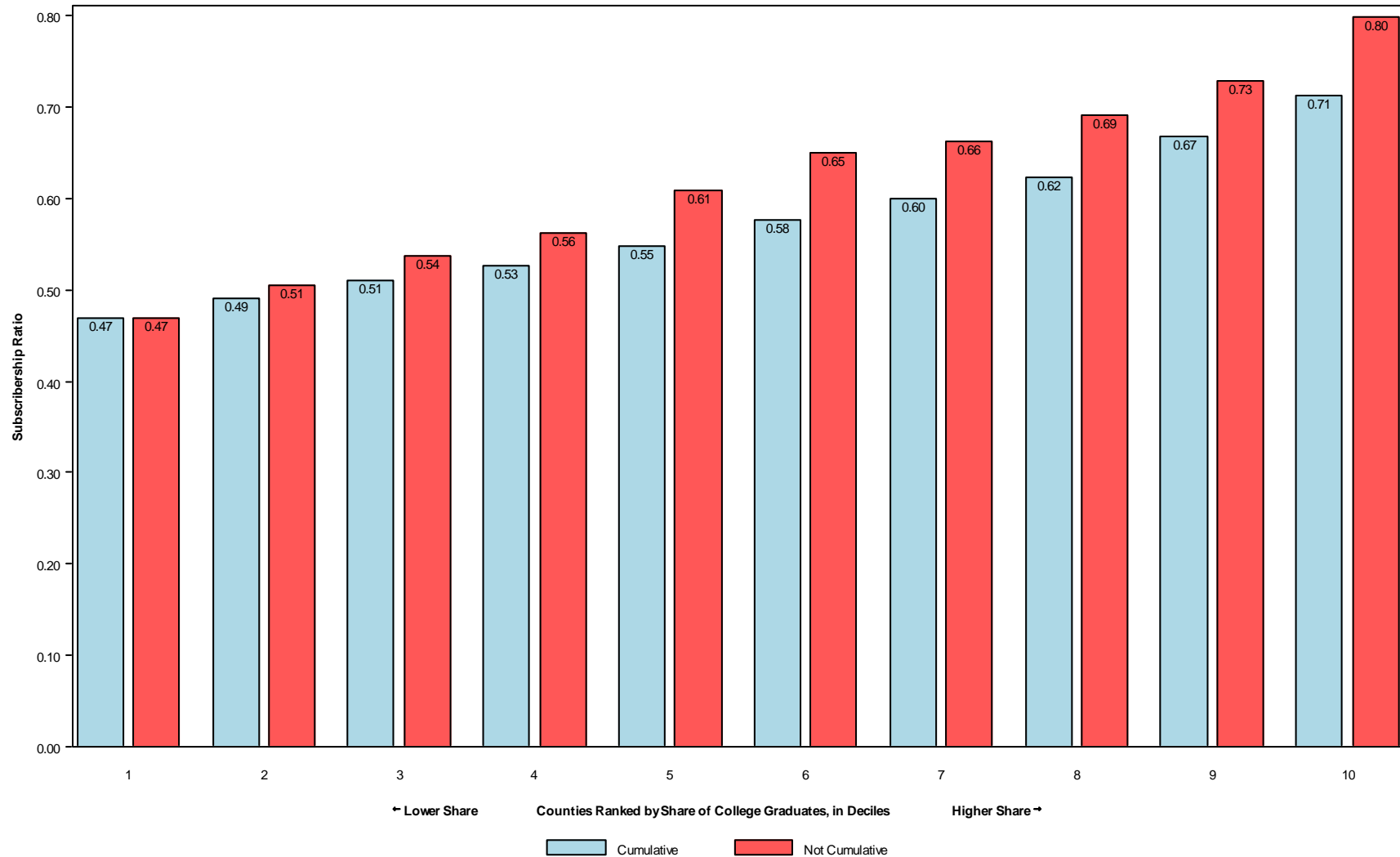
Sources: FCC Form 477, Part VI: Geolitics 2012 Block-Level Estimates (Households in 2012); and Census 2010 (County land area).

**Chart 20  
Subscribership Ratio Distributions by Density Deciles as of June 30, 2013**



Note: Each box plot shows the distribution of residential subscribership to connections over 200 kbps in at least one direction for counties in the density decile. Some of the features are labeled, but note also that + denotes the position of the average residential subscribership ratio taken across all counties in the decile; L is the minimum observation above  $Q1-1.5(Q3-Q1)$ ; T is the maximum observation below  $Q3+1.5(Q3-Q1)$ ; and □ is any data point beyond  $Q1-1.5(Q3-Q1)$  or  $Q3+1.5(Q3-Q1)$ . Ratios greater than 1 were set to 1.  
Sources: FCC Form 477, Part VI: Geolitics 2012 Block-Level Estimates (Households in 2012); and Census 2010 (County land area).

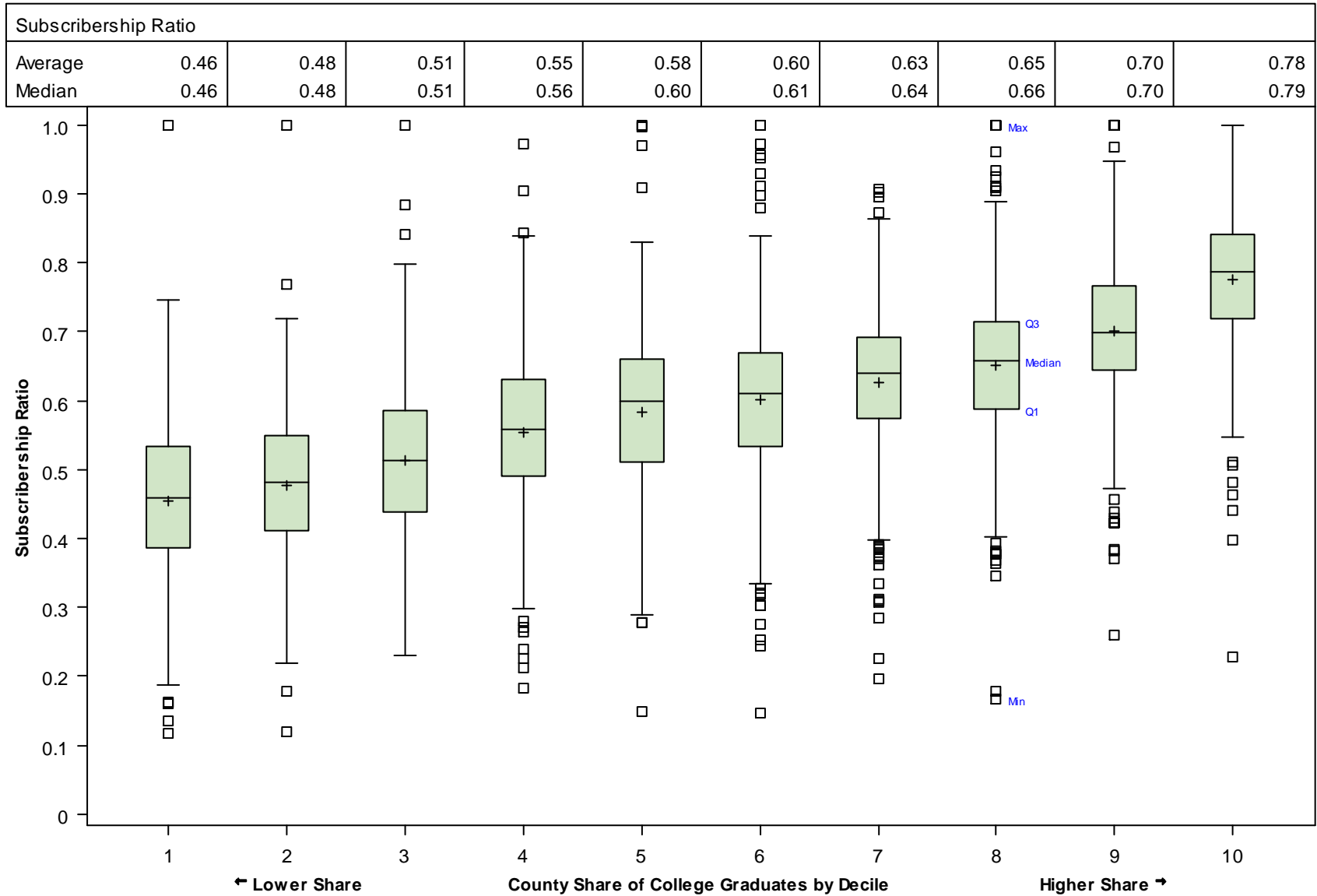
**Chart 21**  
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**(County Data)**



This chart shows cumulative and non-cumulative subscribership ratios by county share of college graduates in deciles. Counties were grouped into deciles based on the share of the county population at least 25 years of age with a college degree or higher educational attainment. For each decile, the height of any red, non-cumulative bar represents the ratio of the sum of residential fixed connections over 200 kbps in at least one direction across counties in the decile to the sum of households across counties in the decile. The height of the blue, cumulative bar for decile N represents the ratio of the sum of residential fixed connections over 200 kbps in at least one direction across all counties in decile N and all deciles less than N, to the number of households in all the counties in decile N and deciles less than N.

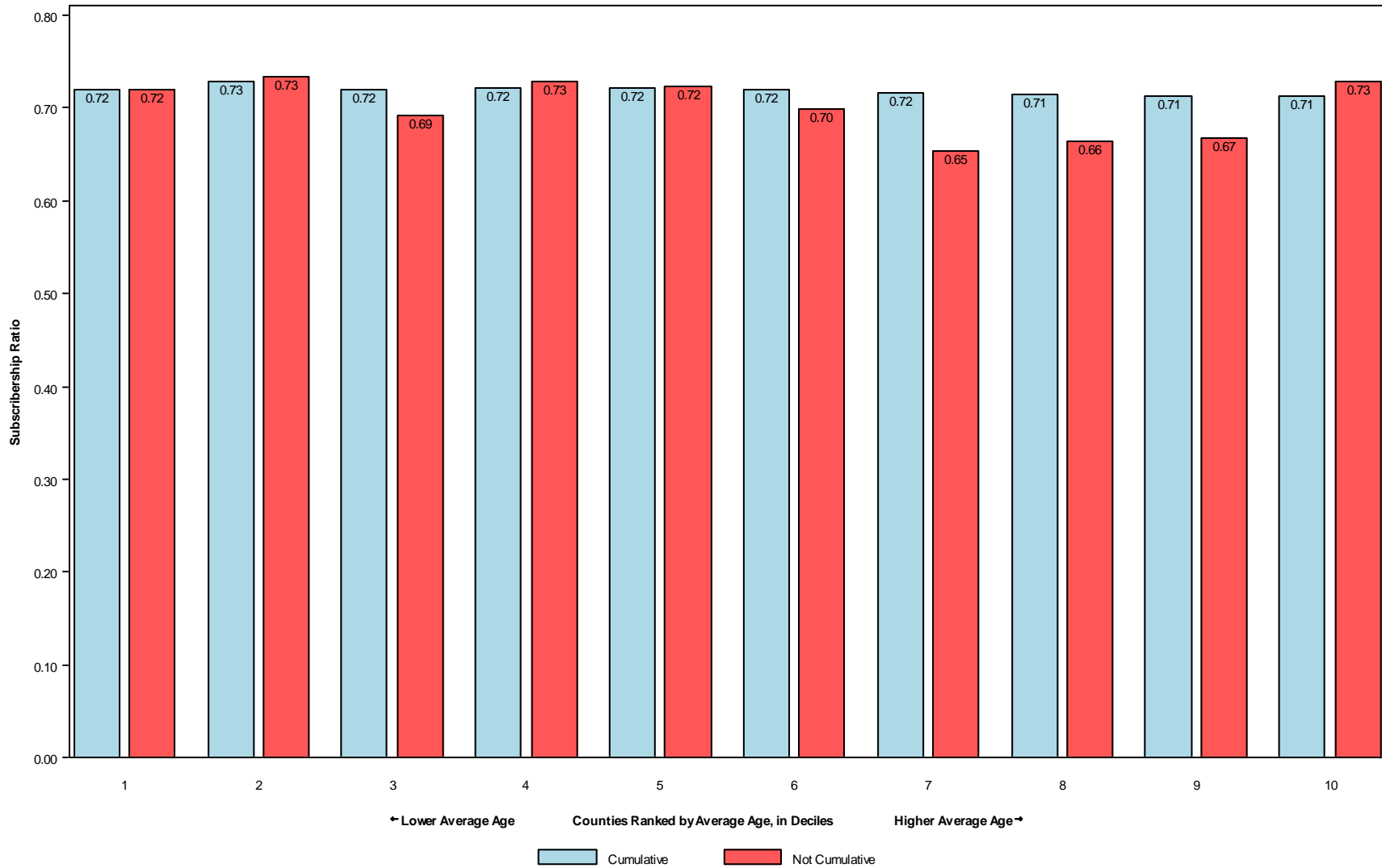
Sources: FCC Form 477, Part VI: Geolitics 2012 Block-Level Estimates (Households in 2012); and 2008-2012 ACS 5-year Estimates (County educational attainment).

**Chart 22**  
**Subscribership Ratio Distributions by Share of Population with a College Degree (in Deciles) as of June 30, 2013**



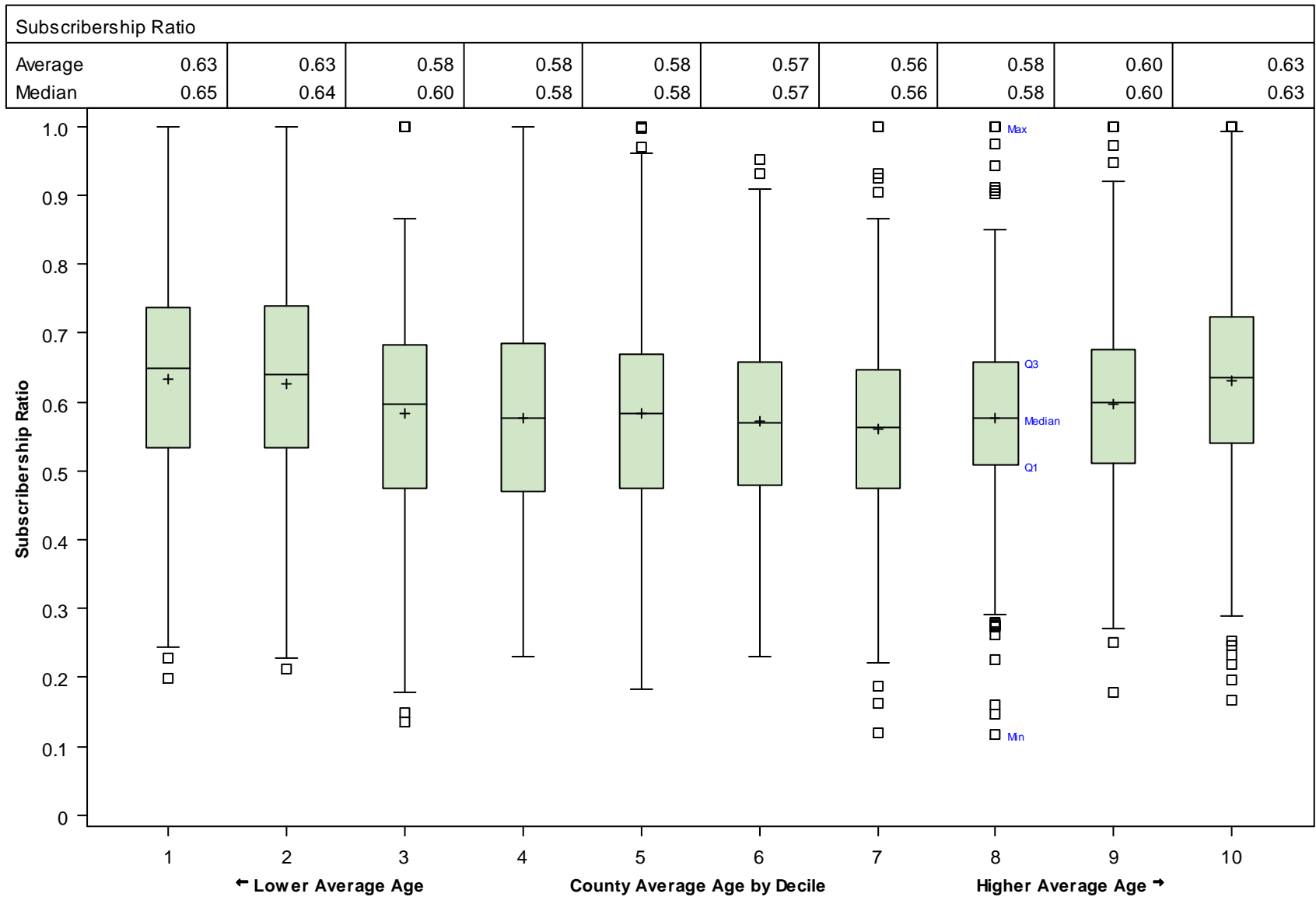
Note: Each box plot shows the distribution of residential subscribership to connections over 200 kbps in at least one direction for counties in the share decile. Some of the features are labeled, but note also that + denotes the position of the average residential subscribership ratio taken across all counties in the decile; L is the minimum observation above Q1-1.5(Q3-Q1); T is the maximum observation below Q3+1.5(Q3-Q1); and □ is a data point beyond Q1-1.5(Q3-Q1) or Q3+1.5(Q3-Q1). Ratios greater than 1 were set to 1.  
 Sources: FCC Form 477, Part VI: Geolytics 2012 Block-Level Estimates (Households in 2012); and 2008-2012 ACS 5-year Estimates (County educational attainment).

**Chart 23**  
**Ratio of Residential Fixed Connections over 200 kbps in at Least One Direction to Households**  
**by Average Age in Deciles as of June 30, 2013**  
**(County Data)**



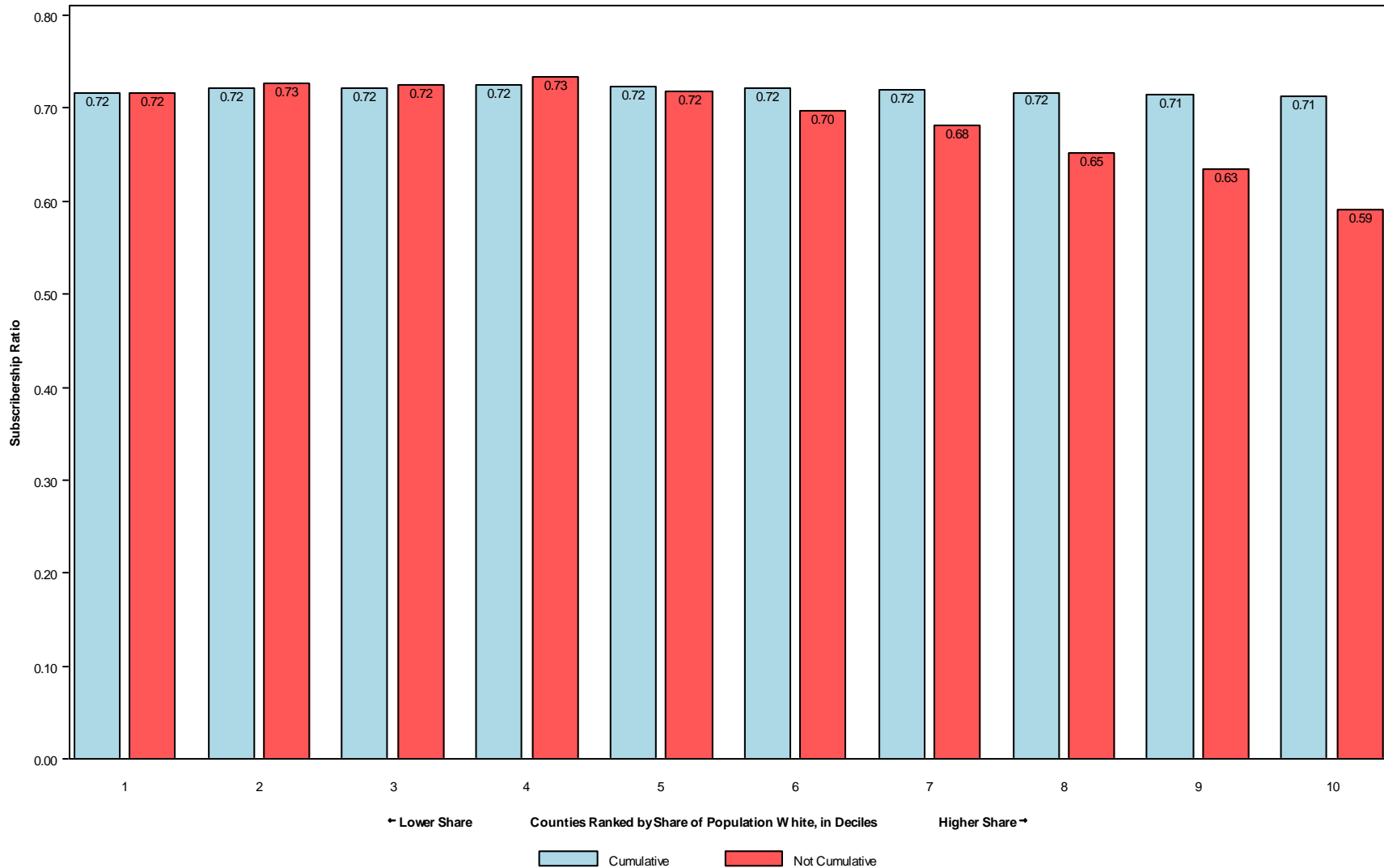
This chart shows cumulative and non-cumulative subscribership ratios by county average age in deciles. Counties were grouped into deciles based on the average age of the county population. For each decile, the height of any red, non-cumulative bar represents the ratio of the sum of residential fixed connections over 200 kbps in at least one direction across counties in the decile to the sum of households across counties in the decile. The height of the blue, cumulative bar for decile N represents the ratio of the sum of residential fixed connections over 200 kbps in at least one direction across all counties in decile N and all deciles less than N, to the number of households in all the counties in decile N and deciles less than N.  
 Sources: FCC Form 477, Part VI: Geolytics 2012 Block-Level Estimates (Households in 2012); and 2008-2012 ACS 5-year Estimates (County average age).

**Chart 24**  
**Subscribership Ratio Distributions by Average Age of County Population (in Deciles) as of June 30, 2013**



Note: Each box plot shows the distribution of residential subscribership to connections over 200 kbps in at least one direction for counties in the average age decile. Some of the features are labeled, but note also that + denotes the position of the average residential subscribership ratio taken across all counties in the decile; L is the minimum observation above  $Q1-1.5(Q3-Q1)$ ; T is the maximum observation below  $Q3+1.5(Q3-Q1)$ ; and □ is a data point beyond  $Q1-1.5(Q3-Q1)$  or  $Q3+1.5(Q3-Q1)$ . Ratios greater than 1 were set to 1.  
 Sources: FCC Form 477, Part VI: Geolytics 2012 Block-Level Estimates (Households in 2012); and 2008-2012 ACS 5-year Estimates (County average age).

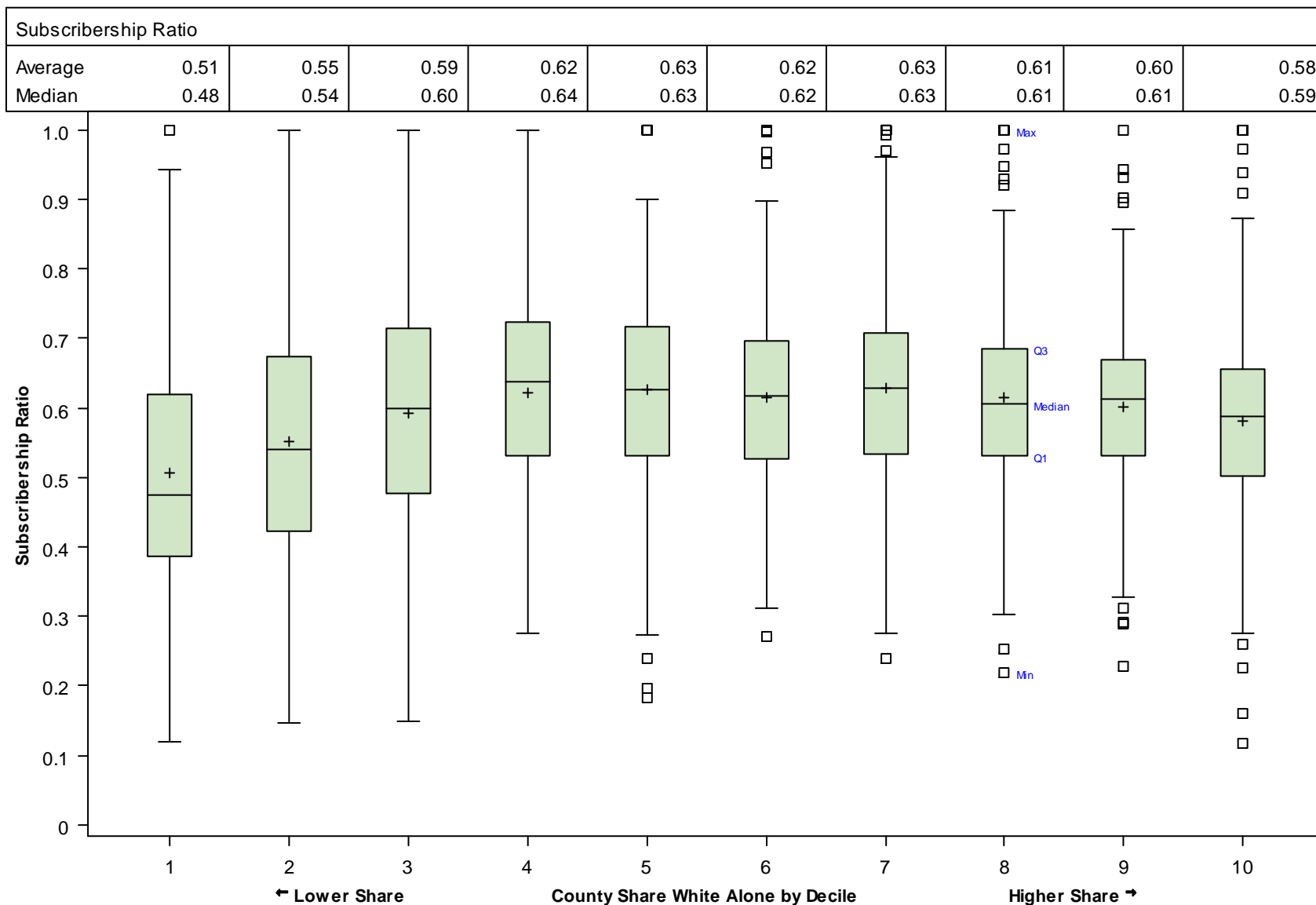
**Chart 25**  
**Ratio of Residential Fixed Connections over 200 kbps in at Least One Direction to Households**  
**by Share White Alone in Deciles as of June 30, 2013**  
**(County Data)**



This chart shows cumulative and non-cumulative subscribership ratios by the share of county population white alone in deciles. Counties were grouped into deciles based on the share of the county population that reported their race as white alone. For each decile, the height of any red, non-cumulative bar represents the ratio of the sum of residential fixed connections over 200 kbps in at least one direction across counties in the decile to the sum of households across counties in the decile. The height of the blue, cumulative bar for decile N represents the ratio of the sum of residential fixed connections over 200 kbps in at least one direction across all counties in decile N and all deciles less than N, to the number of households in all the counties in decile N and deciles less than N. Sources: FCC Form 477, Part VI: Geolytics 2012 Block-Level Estimates (Households in 2012); and 2008-2012 ACS 5-year Estimates (Race).

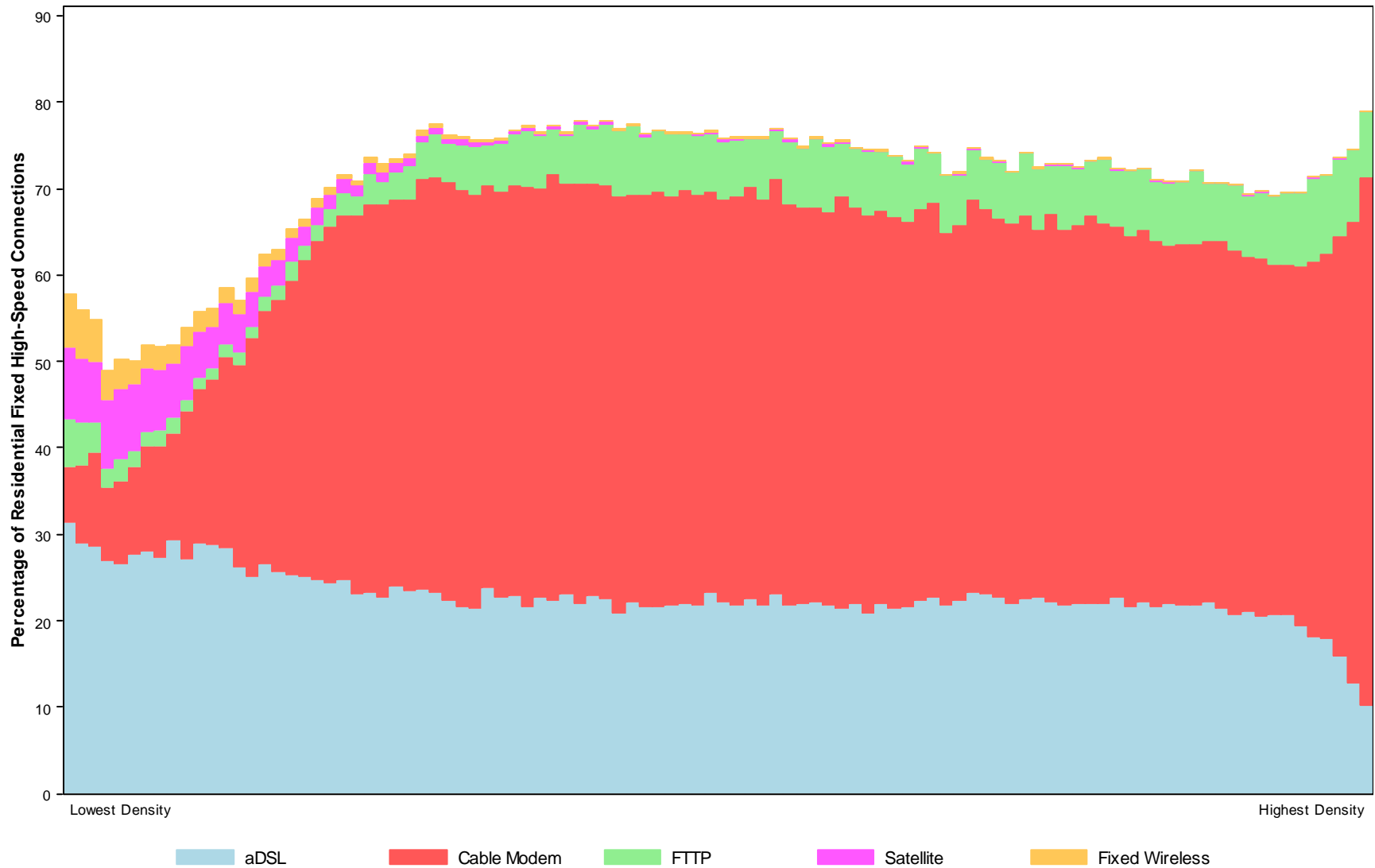


**Chart 26**  
**Subscriber Ratio Distributions by Share White Alone (in Deciles) as of June 30, 2013**



Note: Each box plot shows the distribution of residential subscribership to connections over 200 kbps in at least one direction for counties in each race decile. Counties were grouped into deciles based on the share of the county population that reported their race as white alone. Some of the features are labeled, but note also that + denotes the position of the average residential subscribership ratio taken across all counties in the decile; I is the minimum observation above Q1-1.5(Q3-Q1); T is the maximum observation below Q3+1.5(Q3-Q1); and □ is a data point beyond Q1-1.5(Q3-Q1) or Q3+1.5(Q3-Q1). Ratios greater than 1 were set to 1.  
 Sources: FCC Form 477, Part VI: Geolytics 2012 Block-Level Estimates (Households in 2012); and 2008-2012 ACS 5-year Estimates (Race).

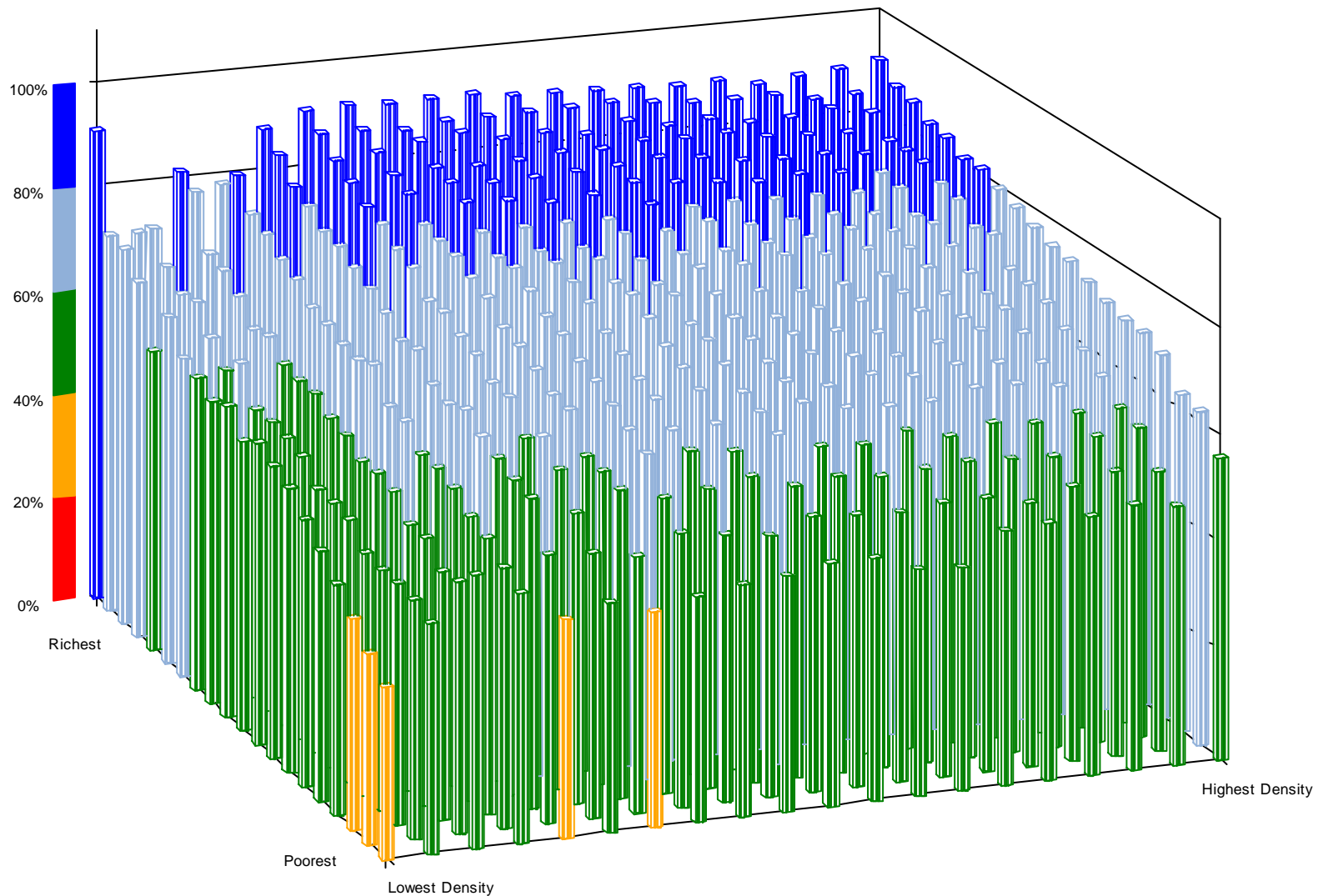
**Chart 27**  
**Subscribership Ratios by Technology and Tract Household Density as of June 30, 2013**  
**(Residential fixed connections over 200 kbps in at least one direction)**



This chart shows subscribership ratios by technology and household density. Tracts were grouped into 100 density percentiles based on households per square mile, calculated as the ratio of estimated tract households in 2011 to tract land area from the Census Bureau. For each percentile, the height of the bar represents the household-weighted average ratio of residential fixed connections to households across tracts in the percentile.

Sources: FCC Form 477, Part VI: Geolitics 2012 Block-Level Estimates (Households in 2012); and Census 2010 (Tract land area).

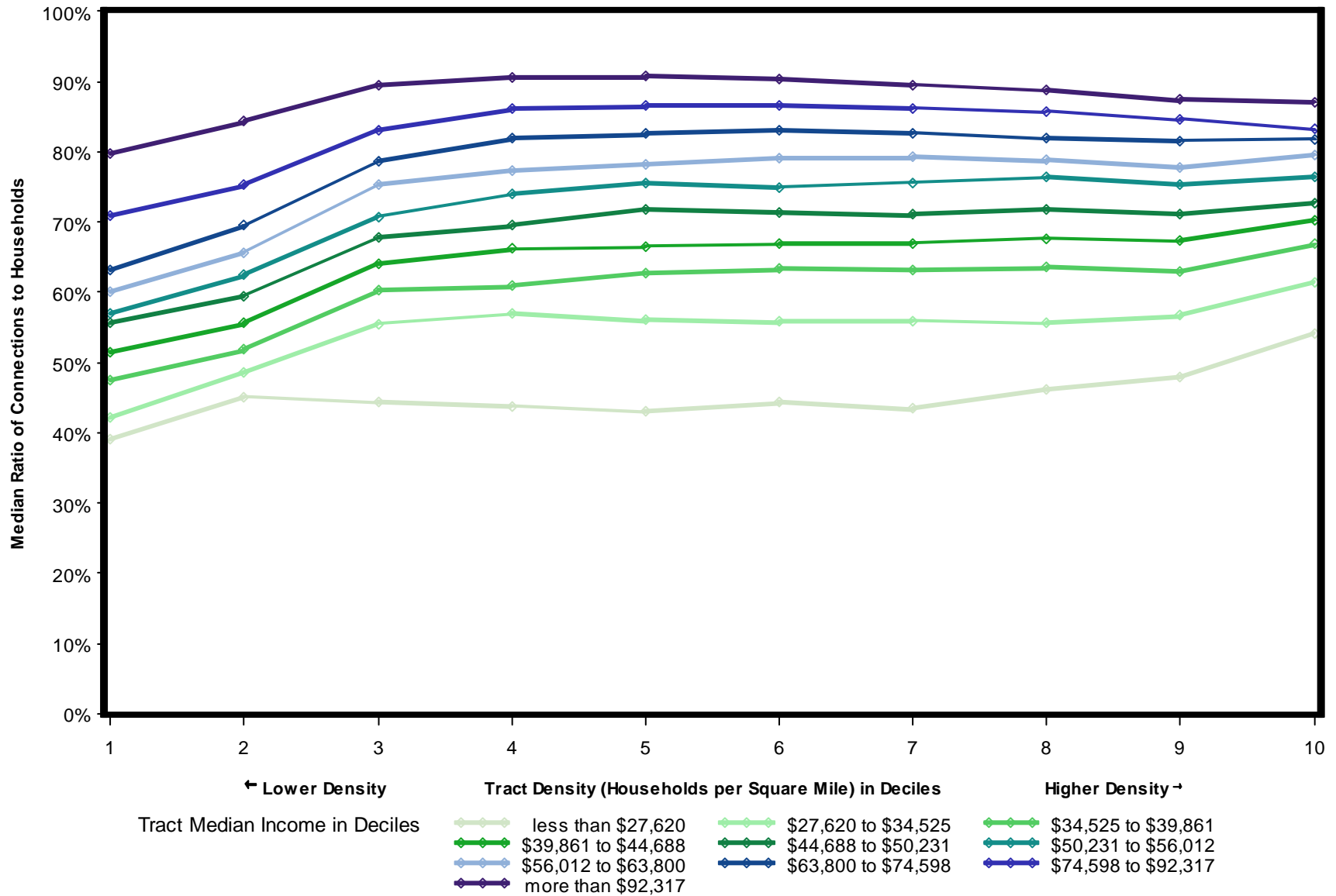
**Chart 28**  
**Average Subscribership Ratios by Income and Household Density as of June 30, 2013**  
**(Residential fixed connections over 200 kbps in at least one direction by Tract)**



This chart shows subscribership ratios by household density and income quantiles. Tracts were grouped into 400 density/income quantiles based on households per square mile, calculated as the ratio of estimated tract households in 2011 to tract land area from the Census Bureau, and median household income. For each quantile, the height of the bar represents the household-weighted average ratio of residential fixed connections to households across tracts in the decile.

Sources: FCC Form 477, Part VI: Geolitics 2012 Block-Level Estimates (Households in 2012); Census 2010 (Tract land area); 2008-2012 ACS 5-year Estimates (Median household income).

**Chart 29**  
**Median Ratios of Residential Fixed Connections over 200 kbps in at Least One Direction to Households by Income and Density**  
**Tract Data as of June 30, 2013**



Sources: FCC Form 477, Part VI: Geolitics 2012 Block-Level Estimates (Households in 2012); and 2008-2012 ACS 5-year Estimates (Median household income).

## Technical Notes

### General

Detailed information about FCC Form 477 reporting requirements is available at [www.fcc.gov/form477](http://www.fcc.gov/form477).

Wherever a number of providers is cited in this report, multiple Form 477 filers within a holding company structure count as one provider.

Form 477 collects information about Internet access connections in service to end-user locations that are advertised to deliver information to and/or from the end user – that is, in at least one direction – at transfer rates (“speeds”) above 200 kilobits per second (kbps). Information is collected about connections in 72 speed tiers (nine upstream tiers and eight downstream) defined by ranges of upstream speeds and downstream speeds. Connections are further categorized by the technology employed by the part of the connection that terminates at the end-user location.

“End users” are residential, business, institutional, or government entities who use services for their own purposes and who do not resell such services to other entities. Facilities-based providers report information about connections they provide directly to their own end-user customers and also connections that they provide to Internet Service Providers for resale to end users. For Form 477 purposes, the facilities-based provider of a connection is the entity that owns the portion of the physical facility that terminates at the end-user location, obtains an unbundled network element (UNE), special access line, or other leased facility that terminates at the end-user location and provisions/equips it as a connection that transfers information at rates over 200 kbps in at least one direction, or provisions/equips a wireless channel that transfers information at rates over 200 kbps in at least one direction to the end-user location over licensed spectrum or over spectrum that the provider uses on an unlicensed basis.

The mutually exclusive Form 477 technology categories are: asymmetric Digital Subscriber Line (“aDSL” in this report), symmetric Digital Subscriber Line (“sDSL”), other wireline, cable modem, optical fiber to the end-user premises (“FTTP”), satellite, fixed wireless (using licensed or unlicensed spectrum), mobile wireless (using licensed or unlicensed spectrum), electric power line, and all other (which is included to capture deployment of additional technologies over time). In the Form 477 data collection, aDSL-based services delivered over fiber-to-the-node architecture are reported in the aDSL category. The other wireline category comprises T1/DS1, T3/DS3, and other copper-based connections, not elsewhere categorized, that deliver *Internet access* service at the end-user location. Ethernet connections delivering Internet access service are reported in the other wireline category if the connection terminates over copper and in the FTTP category if the connection terminates over fiber. Connections deployed over hybrid fiber-coax (HFC) architecture are reported in the cable modem category. Wireless ISPs (“WISPs”) report in the fixed wireless category if providing service to dispersed, fixed end-user locations and report in the mobile wireless category if providing a commercial service that can be received at any location within a service footprint. Wireless local area networks (such as Wi-Fi hotspots) that only enable local distribution and sharing of a premises connection are not included, although the shared premises connection is included.

Numbers of connections presented in this report are not adjusted for the number of persons at a single end-user location who have access to, or who use, the Internet access services delivered over the connection to that location.

Numbers of residential connections are estimated based on the total connections and percentage-residential connections information reported on Form 477.

### **Census tracts**

Starting with data as of December 31, 2008, facilities-based providers of reportable fixed-location Internet access connections must report connection counts and percentage residential information at the census tract level of detail. Because of the inherent mobility of their service, facilities-based mobile wireless providers do not report subscriber counts by census tract. Instead, they report the census tracts in the state that best represent the areas where service is available over the provider's own network, for each of the speed tiers in which the provider offers service.

The census tract-level data summarized in this report were collected for tracts in the 2010 decennial census. For the purposes of this report, there are 73,767 census tracts because we exclude census tracts delineated specifically to cover large bodies of water.

About 110 of the census tracts have population but no households because the population resides in group living quarters. For the purpose of estimating residential subscribership rates by census tract, we assume these census tracts have no reportable *residential* Internet access service because persons residing in group quarters would have Internet access over a business connection provided to the operator of the group quarters. Therefore, these census tracts are included in the "zero" column.

### **Ratios of residential fixed-location connections to households that exceed 100%**

We estimate the share of households with fixed-location connections in individual census tracts by taking the ratio of the reported number of fixed-location residential service connections to the estimated number of households. We continue to find "outlier" estimates at or above 100% and to find that the number of outliers is substantially reduced when estimates are made for individual counties rather than for individual census tracts.

Possible explanations of ratios at or above 100% include (1) geocoding misallocations of service locations to census tracts; (2) proper allocation of connections to the county level by some filers, but improper allocation of all connections to a single tract in the county; (3) possible overestimation of residential connections in service plans for which the customer base is primarily residential; and (4) connections at seasonally or occasionally occupied housing units, such as vacation homes, while the household is counted elsewhere. Most of the numbers of households in census tracts that were used to generate the estimated ratios are themselves estimates (from GeoLytics, Inc.), which could have an independent effect.

### **Maps showing residential subscribership rates by census tract**

The two maps based on estimated Internet access connections over 200 kbps in at least one direction per 1,000 households (that is, estimated household subscribership rates) exclude all connections identified as business connections and necessarily exclude residential mobile wireless connections (which are reported for the state but not for individual census tracts).

## Glossary

<b>Term</b>	<b>Definition</b>
aDSL	Asymmetric Digital Subscriber Line: A digital local loop typically using copper facilities and providing greater bandwidth in one direction than the other.
Cable modem service	A service which offers customers access to the Internet over a cable system.
Downstream speed	Speed of transmission from the Internet to the end user.
End users	Residential, business, institutional, or government entities who use services for their own purposes and who do not resell such services to other entities.
Facilities-based provider	Entity that owns the portion of the physical facility that terminates at the end-user location, obtains an unbundled network element (UNE), special access line, or other leased facility that terminates at the end-user location and provisions/equips it as a connection that transfers information at rates over 200 kbps in at least one direction, or provisions/equips a wireless channel that transfers information at rates over 200 kbps in at least one direction to the end-user location over licensed spectrum or over spectrum that the provider uses on an unlicensed basis.
Fixed wireless	A radio communication service between specified fixed points.
Fixed-location technologies	All technologies other than terrestrial mobile wireless.
FTTH or FTTP	Fiber to the Home (Premises): A network access architecture in which optical fiber is deployed all the way to the customer's home (premises).
Internet access service	Service that provides end users access to the Internet.
ISPs	Internet Service Providers: Companies or organizations that provide Internet access service (see above).
iVoIP	Interconnected Voice Over Internet Protocol: A service that enables real-time, two-way voice communications; requires a broadband connection from the user's location; requires Internet-protocol compatible customer premises equipment; and permits users generally to receive calls that originate on the public switched telephone network and to terminate calls to the public switched telephone network.
Mobile wireless service	A radio communication service between mobile and fixed stations, or between mobile stations.
Mobile wireless provider	Provider of mobile wireless service (see above).
Other wireline	All copper-wire based technologies other than DSL technologies; Ethernet over copper and T-1 are examples.
Power line	Internet access service delivered over electric power transmission lines.
Satellite communications	A telecommunications service provided via one or more satellite relays and their associated uplinks and downlinks.
sDSL	Symmetric Digital Subscriber Line: DSL technology that provides equal bandwidth for both uploads and downloads.

Speed tiers	Sub-groupings defined by ranges of upstream speeds and downstream speeds.
Upstream speed	Speed of transmission from the end user to the Internet.
Wi-Fi hotspot	Wireless Fidelity: Generic term referring to any type of IEEE 802.11 wireless network. A hotspot is a small geographic area in which users can gain access to a Wi-Fi network which in turn connects to the Internet.
Wireless service	Telephone, Internet, data, and other services provided to customers through the transmission of signals over networks of radio towers.
Wireless service provider	Provider of wireless service (see above).
Wireless telecommunications	Any means of electronic data transfer using electromagnetic means, most commonly radio waves.
WISP	Wireless ISP: A company that provides end users with wireless access to the Internet, most commonly by using radio spectrum designated for unlicensed use.
WLAN	Wireless local area network: A WLAN uses radio waves to connect user devices to a local area network (LAN), thereby extending an existing wired LAN.



# Customer Response

Publication: *Internet Access Services: Status as of June 30, 2013*

You can help us provide the best possible information to the public by completing this form and returning it to the Industry Analysis and Technology Division of the FCC's Wireline Competition Bureau.

1. Please check the category that best describes you:

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- current telecommunications carrier
- potential telecommunications carrier
- business customer evaluating vendors/service options
- consultant, law firm, lobbyist
- other business customer
- academic/student
- residential customer
- FCC employee
- other federal government employee
- state or local government employee
- Other (please specify)

2.	Please rate the report:	Excellent	Good	Satisfactory	Poor	No opinion
	Data accuracy	( )	( )	( )	( )	( )
	Data presentation	( )	( )	( )	( )	( )
	Timeliness of data	( )	( )	( )	( )	( )
	Completeness of data	( )	( )	( )	( )	( )
	Text clarity	( )	( )	( )	( )	( )
	Completeness of text	( )	( )	( )	( )	( )

3.	Overall, how do you rate this report?	Excellent	Good	Satisfactory	Poor	No opinion
		( )	( )	( )	( )	( )

4. How can this report be improved?

5. May we contact you to discuss possible improvements?

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To discuss the information in this report, contact: 202-418-0940 or for users of TTY equipment, call 202-418-0484		
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