# Internet Access Services: Status as of June 30, 2011

Industry Analysis and Technology Division Wireline Competition Bureau June 2012



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#### Internet Access Services: Status as of June 30, 2011

<u>Introduction</u>. 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, 2011, as collected by FCC Form 477. Form 477 gathers standardized information about subscribership 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>

Notable developments between June 2010 and June 2011 include:

- Internet connections overall are growing. The number of connections over 200 kbps in at least one direction increased by 31% year-over-year to 206 million.
- Growth is particularly high in mobile Internet subscriptions, but fixed-location connections also continue to increase. The number of mobile subscriptions grew to nearly 120 million up 59% from June 2010. The number of fixed-location connections increased by 6% year-over-year, to nearly 87 million.
- Both fixed and mobile services are shifting to higher speeds. The share of fixed connections with speeds at or above the availability benchmark adopted in the *Sixth Broadband Deployment Report* increased from 51% to 56% of total fixed connections. Among mobile wireless subscriptions, the share increased from 6% to 14%.

The report reflects the Commission's efforts to improve the way it collects, uses, and disseminates data by focusing in detail on reported connection speeds. Before presenting that information, we note two important points about the Form 477 data.

- First, the data track *subscribership*, or *adoption*, of services of different speeds; they do not directly measure the *availability* of services of different speeds. That is, 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 based on the advertised speed of the purchased service, such as the advertised "up to" speed of a wired service or the advertised range of "typical speeds" of a mobile wireless service. It is possible that the purchased service will not operate at its advertised speed at all times.<sup>2</sup>

U.S. Federal Communications Commission

<sup>&</sup>lt;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.

<sup>&</sup>lt;sup>2</sup> The Commission has worked in partnership with a third-party measurement company, SamKnows, to test actual consumer broadband speeds. *See*, *e.g.*, Federal Communications Commission, Office of Engineering and Technology and Consumer and Governmental Affairs Bureau, *Measuring Broadband America: A Report on Consumer Wireline Broadband Performance in the U.S.* (August 2011), available at <a href="https://www.fcc.gov/measuring-broadband-america">www.fcc.gov/measuring-broadband-america</a>.

This is the sixth report to include details about subscribership differences among census tracts and counties, as well as subscribership differences among the states.<sup>3</sup> And we continue to illustrate correlations of subscribership and demographic measures.

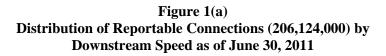
**Connection speeds.** The Form 477 program categorizes reportable connections into 72 speed tiers defined by eight ranges of downstream and nine ranges of upstream speed. In this overview discussion, we organize the extensive information collected for June 2011 into three groups of downstream speeds and three groups of upstream speeds. For the breakpoints between these groups, we use the Form 477defined breakpoints that the Commission discussed as potential proxies for the broadband availability benchmark adopted in the Sixth Broadband Deployment Report.<sup>4</sup> These Form 477-defined breakpoints are 3 mbps and 6 mbps for downstream speeds and 768 kbps and 1.5 mbps for upstream speeds.<sup>5</sup>

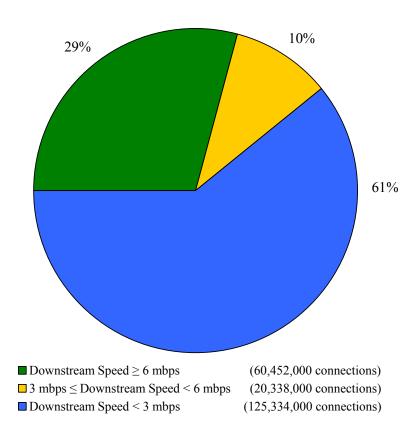
<sup>&</sup>lt;sup>3</sup> The Form 477 program began collecting state-level data in 2000. Census tract-level data were first collected in December 2008. For an overview of program history, see High-Speed Services for Internet Access: Status as of December 31, 2008 (February 2010) (December 2008 High-Speed Report) at pp. 1-4, available at www.fcc.gov/wcb/iatd/comp.html. 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>&</sup>lt;sup>4</sup> The Commission benchmarked broadband as a transmission service that enables an end user actually to download Internet content at 4 megabits per second (mbps) and to upload Internet content at 1 mbps over the service provider's network. 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, para. 11 (2010) (Sixth Broadband Deployment Report).

<sup>&</sup>lt;sup>5</sup> See Sixth Broadband Deployment Report, 25 FCC Rcd at 9568, para. 20. As explained there, the Commission decided to evaluate the evidence of broadband availability using the Form 477-defined speed breakpoints of 3 mbps downstream and 768 kbps upstream.

Figure 1(a) illustrates how the connections reported for June 2011 were distributed across the three ranges of downstream speed defined by breakpoints at 3 mbps and at 6 mbps.





- In June 2011, 61% of *total* reportable connections (or 125.3 million connections) were slower than 3 mbps in the downstream direction, 10% (or 20.3 million connections) were at least 3 mbps in the downstream direction but slower than 6 mbps, and 29% (or 60.5 million connections) were at least 6 mbps in the downstream direction.<sup>6</sup>
  - For *fixed* connections, 27% of reportable connections (or 23.2 million connections) were slower than 3 mbps in the downstream direction, 16% (or 13.8 million connections) were at least 3 mbps in the downstream direction but slower than 6 mbps, and 57% (or 49.6 million connections) were at least 6 mbps in the downstream direction.<sup>7</sup>
  - For *mobile* connections, 85% of reportable connections (or 102.1 million connections) were slower than 3 mbps in the downstream direction, about 5% (or 6.6 million

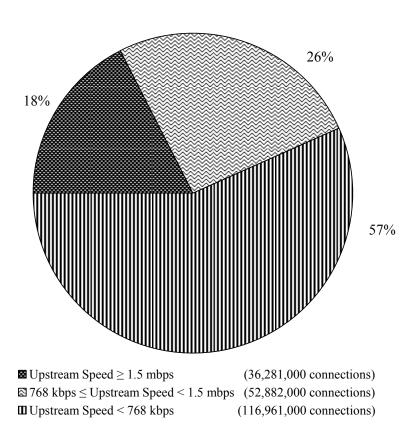
<sup>&</sup>lt;sup>6</sup> Our narrative discussion of the speeds of all reportable connections (including both fixed-location connections and mobile wireless subscriptions) is summarized more concisely in Chart 1, at p. 17.

<sup>&</sup>lt;sup>7</sup> See Chart 2, at p. 18.

connections) were at least 3 mbps in the downstream direction but slower than 6 mbps, and 9% (or 10.9 million connections) were at least 6 mbps in the downstream direction.<sup>8</sup>

Figure 1(b) illustrates how the connections reported for June 2011 were distributed across the three ranges of upstream speed defined by breakpoints at 768 kbps and at 1.5 mbps.

Figure 1(b) Distribution of Reportable Connections (206,124,000) by Upstream Speed as of June 30, 2011



- In June 2011, 57% of *total* reportable connections (or 117.0 million connections) were slower than 768 kbps in the upstream direction, 26% (or 52.9 million connections) were at least 768 kbps in the upstream direction but slower than 1.5 mbps, and 18% (or 36.3 million connections) were at least 1.5 mbps in the upstream direction.
  - For *fixed* connections, 39% of reportable connections (or 33.7 million connections) were slower than 768 kbps in the upstream direction, 26% (or 22.3 million connections) were at least 768 kbps in the upstream direction but slower than 1.5 mbps, and 35% (or 30.6 million connections) were at least 1.5 mbps in the upstream direction.

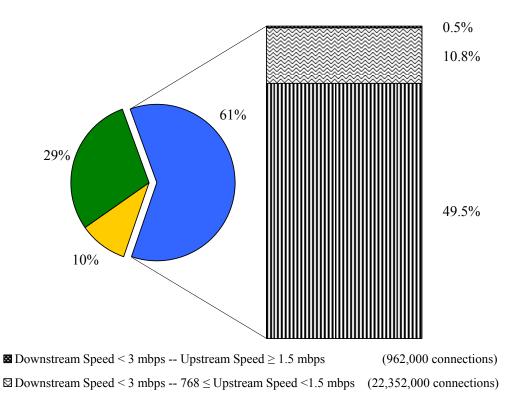
<sup>&</sup>lt;sup>8</sup> See Chart 5, at p. 21.

<sup>&</sup>lt;sup>9</sup> See Chart 2, at p. 18.

For *mobile* connections, 70% of reportable connections (or 83.2 million connections) were slower than 768 kbps in the upstream direction, about 26% (or 30.6 million connections) were at least 768 kbps in the upstream direction but slower than 1.5 mbps, and 5% (or 5.7 million connections) were at least 1.5 mbps in the upstream direction.<sup>10</sup>

In Figures 2(a) - 2(c), we sequentially review the upstream speeds of the total (including both fixed and mobile) connections that fall into each of the three downstream-speed groupings that we illustrated in Figure 1(a).

Figure 2(a) Distribution by Upstream Speed of Reportable Connections (125,334,000) with Downstream Speed Below 3 mbps as of June 30, 2011



In June 2011, about 49% of reportable connections (or 102.0 million connections) were slower than 3 mbps in the downstream direction and also slower than 768 kbps in the upstream direction.

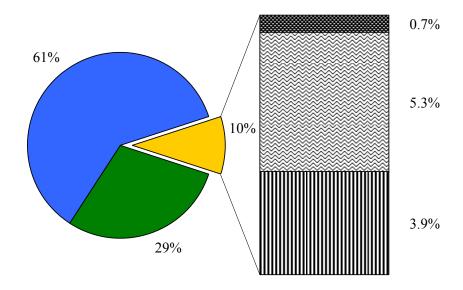
■ Downstream Speed < 3 mbps -- Upstream Speed < 768 kbps

Additionally, about 11% of reportable connections (or 23.3 million connections) were fast enough in the upstream direction (at least 768 kbps) but too slow in the downstream direction (less than 3 mbps) to meet the broadband availability benchmark adopted in the Sixth Broadband Deployment Report.

(102,020,000 connections)

<sup>&</sup>lt;sup>10</sup> See Chart 5, at p. 21.

Figure 2(b) Distribution by Upstream Speed of Reportable Connections (20,338,000) with Downstream Speed at Least 3 mbps but Below 6 mbps as of June 30, 2011



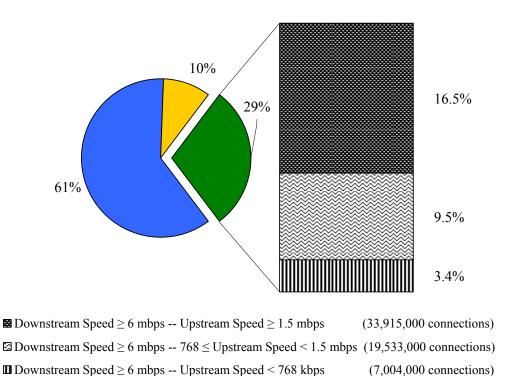
 $\boxtimes 3 \text{ mbps} \leq \text{Downstream Speed} \leq 6 \text{ mbps}$  -- Upstream Speed  $\geq 1.5 \text{ mbps}$ (1,404,000 connections)

☑ 3 mbps ≤ Downstream Speed < 6 mbps -- 768 ≤ Upstream Speed < 1.5 mbps (10,997,000 connections)

 $\blacksquare 3 \text{ mbps} \leq \text{Downstream Speed} < 6 \text{ mbps}$  -- Upstream Speed < 768 kbps(7,937,000 connections)

In June 2011, about 4% of reportable connections (or 7.9 million connections) were at least 3 mbps but below 6 mbps in the downstream direction and were slower than 768 kbps in the upstream direction. These purchased connections are too slow in the upstream direction to meet the broadband availability benchmark adopted in the Sixth Broadband Deployment Report.

Figure 2(c) Distribution by Upstream Speed of Reportable Connections (60,452,000) with Downstream Speed at Least 6 mbps as of June 30, 2011

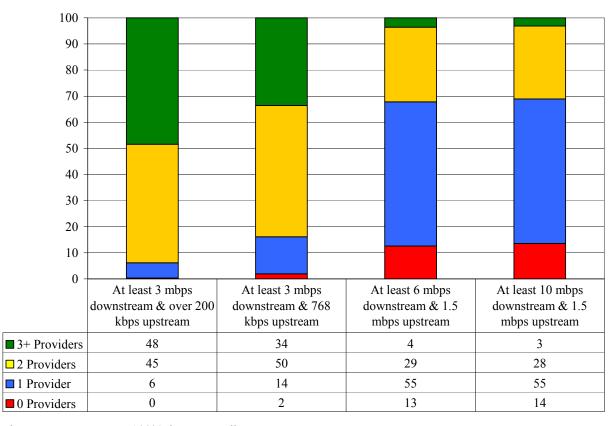


- In June 2011, about 3% of reportable connections (or 7.0 million connections) were at least 6 mbps in the downstream direction and were slower than 768 kbps in the upstream direction. These purchased connections also are too slow in the upstream direction to meet the broadband availability benchmark adopted in the Sixth Broadband Deployment Report.
- In sum, 68% of reportable Internet access service connections (or 140.3 million connections) in June 2011 were too slow in both the downstream and upstream directions, or too slow in a single direction, to meet the broadband availability benchmark adopted in the Sixth Broadband Deployment Report. 11 About 49% of reportable connections (or 102.0 million connections) were too slow in both directions, about 11% (or 23.3 million connections) were too slow in the downstream direction only, and about 7% (or 14.9 million connections) were too slow in the upstream direction only.

<sup>&</sup>lt;sup>11</sup> Of the 140.3 million connections that failed to meet the benchmark, 38.0 million were fixed connections and 102.3 million were mobile wireless subscriptions. *Compare* Tables 1 and 2, at p. 16.

**Providers by census tract by connection speed.** In earlier reports in which we summarized Form 477 data through June 2008, we included summary statistics for the percentage of 5-digit geographical ZIP Codes in which differing numbers of providers (zero providers, one provider, two providers, etc.) had customers for their reportable connections. 12 The ZIP Code-based data did not include information about the speeds of the connections that were purchased in particular ZIP Codes. However, the census tractlevel information collected on Form 477 since December 2008 does include the speeds of purchased fixed-location connections. 13 In Figure 3(a), we use that information to 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 2011.<sup>14</sup>

Figure 3(a) Percentages of Households Located in Census Tracts Where Providers Report Residential Fixed-Location Connections of Various Speeds as of June 30, 2011



Figures may not sum to 100% due to rounding.

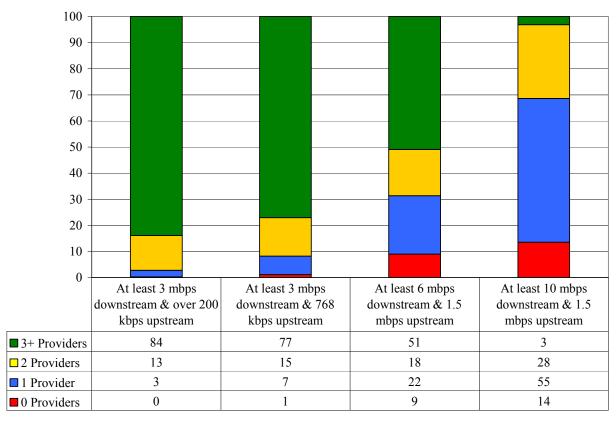
<sup>&</sup>lt;sup>12</sup> For the most recent such report, see High-Speed Services for Internet Access: Status as of June 30, 2008 (July 2009) (June 2008 High-Speed Report) at pp. 1-4, available at www.fcc.gov/wcb/iatd/comp.html.

<sup>&</sup>lt;sup>13</sup> Mobile wireless providers report the number of service subscriptions they have sold, and the speeds of those service subscriptions, at the state level only. For individual census tracts, they report the speeds of mobile wireless service subscriptions that they offer for sale – that is, the capability of the network that they operate in the census

<sup>&</sup>lt;sup>14</sup> A provider who reports residential connections of a particular speed in a particular census tract may or may not offer service of that speed everywhere in the census tract.

In Figure 3(b), we estimate the percentages of households in census tracts where providers reported residential fixed-location connections of different speeds or operated a mobile wireless network capable of sending or receiving data at the indicated speeds.

Figure 3(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, 2011



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 4 illustrates the adoption of fixed-location Internet access connections (that is, all reportable connections except mobile wireless connections) since 1999. 15

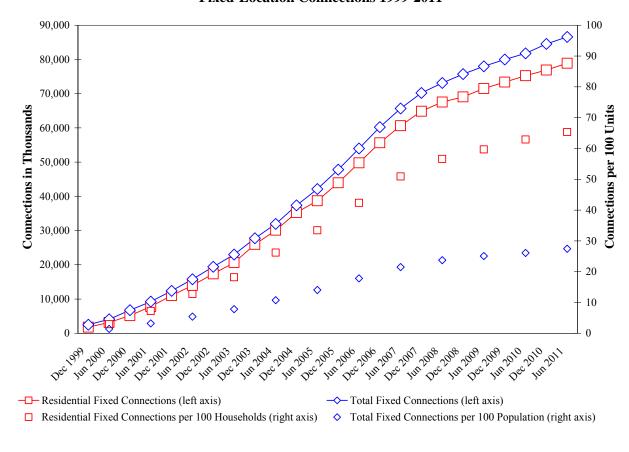


Figure 4 **Fixed-Location Connections 1999-2011** 

- Between June 2001 and June 2011, total (business and residential) reportable fixed-location connections grew from 9 million connections to nearly 87 million connections – at a compound annual growth rate of 25% per year.
- Over the same ten-year period, residential fixed-location connections grew from nearly 8 million connections to 79 million connections – at a compound annual growth rate of 26% per year.
- Between June 2001 and June 2011, household adoption which we track in Figure 4 by comparing the number of residential fixed-location connections to the number of households – increased from 7 connections per 100 households to 65 connections per 100 households. 16,17

<sup>&</sup>lt;sup>15</sup> Historical data not 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.

<sup>&</sup>lt;sup>16</sup> We also show total (including business as well as residential) fixed-location connections per 100 population in Figure 4, which is a statistic routinely reported by the Organization for Economic Cooperation and Development (OECD). This ratio 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

#### Other report highlights.

#### Residential subscribership

- Residential fixed-location Internet access connections over 200 kbps in at least one direction increased by 5% between June 2010 and June 2011, to 79 million. See Table 3.
- Reported residential mobile wireless service subscribers with mobile devices and data plans for full Internet access increased by 62%, to nearly 93 million, between June 2010 and June 2011. See Table 3.
- The reported data show a 25% increase between June 2010 and June 2011 in the number of residential fixed-location connections that are at least 6 mbps downstream and 1.5 mbps upstream (from 22.3 million to 27.9 million) and a 24% increase in the number of connections that are at least 10 mbps downstream and 1.5 mbps upstream (from 21.8 million to 27.1 million). See Chart

#### Household adoption by speed tier

As a national average in June 2011, there were 38 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. That was slightly more than half as large as the ratio of 67 residential fixedlocation connections of any reportable speed per 100 households. <sup>18</sup> See Tables 15 and 16.

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 2011, for example, the maximum value would be 38 because there were about 120.8 million households in the United States and inhabited insular areas and a population of about 315.7 million.)

<sup>&</sup>lt;sup>17</sup> For consistency of presentation, we include only mid-year ratios in Figure 4. We calculated total fixed connections per 100 population using U.S. Census Bureau population estimates for the United States and Puerto Rico – which are as of July 1 each year – and Census 2000 population for the remaining inhabited insular areas. We calculated residential fixed connections per 100 households using U.S. household estimates from the Census Bureau's Current Population Survey (CPS) for July of each year, Census 2010 households for Puerto Rico, and Census 2000 households for the remaining inhabited insular areas. (The CPS also estimates U.S. households for March and November of each year.)

<sup>&</sup>lt;sup>18</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 because, as discussed in connection with Figure 3(a), some households are located in areas where apparently no fixed-location service is offered (as none is purchased).

#### 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, 2011. Our estimates continue to indicate that there are substantial areas of relatively low and relatively high household adoption around the national average. 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. These results suggest that some filers are not accurately assigning customer connections to census tracts, and anecdotal evidence supports that conclusion.<sup>19</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. These maps are similar to previously published maps of providers by ZIP Code, but differ in important respects. In particular, instead of a single map combining providers of connections over all technologies and to both residential and business end users, now separate maps depict: (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>20</sup>

**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.

- Detailed Summary Statistics: The Nation. Tables 1-14 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 15-24 present comparable information for the individual states and our estimates of the shares of households that are connected at different speeds.

<sup>&</sup>lt;sup>19</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>&</sup>lt;sup>20</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.

- Detailed Summary Statistics: Counties and Census Tracts. Charts 15-16 and Tables 25-29 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 <u>IATDreports@fcc.gov</u> for subject: June 2011 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 2007-2011 (In thousands)

|                              | 200     | 7       | 200     | 08      | 200     | 9       | 201     | 0       | 2011    |
|------------------------------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| Technology                   | Jun     | Dec     | Jun     | Dec     | Jun     | Dec     | Jun     | Dec     | Jun     |
| Total                        | 100,986 | 121,222 | 132,814 | 102,239 | 119,433 | 136,293 | 157,017 | 182,065 | 206,124 |
| Total Fixed                  | 65,681  | 70,206  | 73,123  | 75,707  | 77,997  | 79,994  | 81,764  | 84,521  | 86,568  |
| Mobile Wireless <sup>1</sup> | 35,305  | 51,016  | 59,691  | 26,532  | 41,436  | 56,300  | 75,253  | 97,544  | 119,556 |

Table 2 Connections at Least 3 mbps Downstream and 768 kbps Upstream 2008-2011 (In thousands)

|                              | 2008   | 2009   | 9      | 2010   | )      | 2011   |
|------------------------------|--------|--------|--------|--------|--------|--------|
| Technology                   | Dec    | Jun    | Dec    | Jun    | Dec    | Jun    |
| Total                        | 31,120 | 33,332 | 40,669 | 45,554 | 55,113 | 65,849 |
| Total Fixed                  | 30,987 | 33,108 | 38,963 | 41,366 | 44,696 | 48,576 |
| Mobile Wireless <sup>1</sup> | 133    | 224    | 1,706  | 4,188  | 10,416 | 17,272 |

Table 3 Residential Connections over 200 kbps in at Least One Direction 2007-2011 (In thousands)

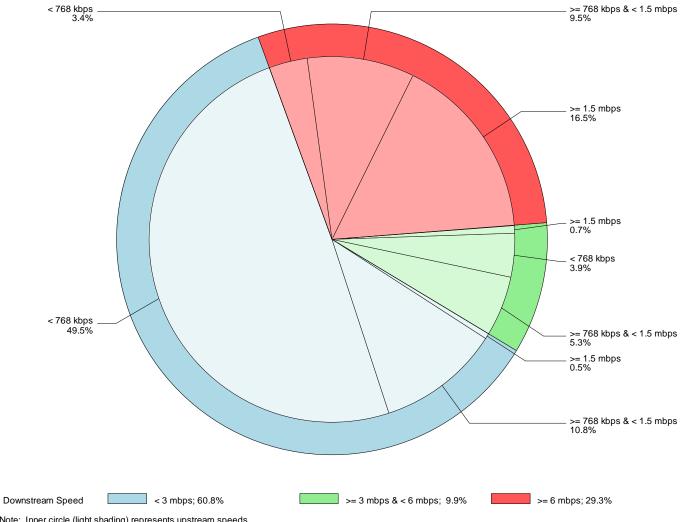
|                              | 200    | 7      | 200    | 8      | 200     | 9       | 201     | 0       | 2011    |
|------------------------------|--------|--------|--------|--------|---------|---------|---------|---------|---------|
| Technology                   | Jun    | Dec    | Jun    | Dec    | Jun     | Dec     | Jun     | Dec     | Jun     |
| Total                        | 66,173 | 73,984 | 79,090 | 88,190 | 103,300 | 117,088 | 132,567 | 149,441 | 171,767 |
| Total Fixed                  | 60,628 | 64,875 | 67,554 | 69,047 | 71,509  | 73,394  | 75,251  | 76,918  | 78,900  |
| Mobile Wireless <sup>1</sup> | 5,545  | 9,109  | 11,536 | 19,142 | 31,791  | 43,695  | 57,316  | 72,523  | 92,867  |

Table 4 Residential Connections at Least 3 mbps Downstream and 768 kbps Upstream 2008-2011 (In thousands)

|                              | 2008   | 2009   | 9      | 2010   | )      | 2011   |
|------------------------------|--------|--------|--------|--------|--------|--------|
| Technology                   | Dec    | Jun    | Dec    | Jun    | Dec    | Jun    |
| Total                        | 29,127 | 31,356 | 38,426 | 42,245 | 47,634 | 52,693 |
| Total Fixed                  | 29,013 | 31,161 | 36,844 | 39,039 | 41,772 | 45,263 |
| Mobile Wireless <sup>1</sup> | 114    | 196    | 1,582  | 3,206  | 5,863  | 7,429  |

<sup>1</sup> Reporting instructions for mobile wireless changed between the June 2008 and December 2008 data. See Technical Notes at the end of the report. 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, 2011

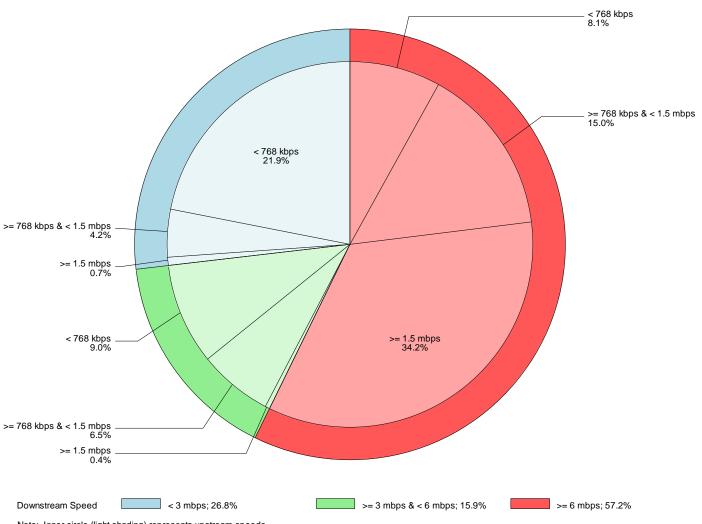


Connections over 200 kbps in at Least One Direction (in thousands)

|  | 1                   |  |                 |         |
|--|---------------------|--|-----------------|---------|
| Upstream Speed                         | Less than 3<br>mbps | At least 3 mbps<br>and less than 6<br>mbps | At least 6 mbps | Total   |
| Less than 768 kbps                     | 102,020             | 7,937                                      | 7,004           | 116,961 |
| At least 768 kbps & Less than 1.5 mbps | 22,352              | 10,997                                     | 19,533          | 52,882  |
| At least 1.5 mbps                      | 962                 | 1,404                                      | 33,915          | 36,281  |
| Total                                  | 125,334             | 20,338                                     | 60,452          | 206,124 |
|  | Percentages         |  |                 |         |
| Less than 768 kbps                     | 49.5                | 3.9  | 3.4             | 56.7    |
| At least 768 kbps & Less than 1.5 mbps | 10.8                | 5.3  | 9.5             | 25.7    |
| At least 1.5 mbps                      | 0.5                 | 0.7  | 16.5            | 17.6    |
| Total                                  | 60.8                | 9.9  | 29.3            | 100.0   |

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

Chart 2 Distribution of Fixed Connections over 200 kbps in at Least One Direction as of June 30, 2011

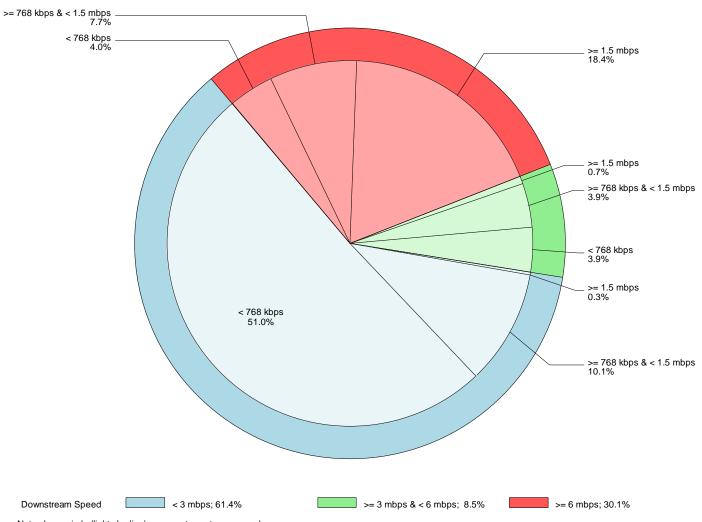


Fixed Connections over 200 kbps in at Least One Direction (in thousands)

|  | 1                   | Downstream Speed                           |                 |        |  |  |  |
|--|---------------------|--|-----------------|--------|--|--|--|
| Upstream Speed                         | Less than 3<br>mbps | At least 3 mbps<br>and less than 6<br>mbps | At least 6 mbps | Total  |  |  |  |
| Less than 768 kbps                     | 18,969              | 7,771                                      | 6,990           | 33,730 |  |  |  |
| At least 768 kbps & Less than 1.5 mbps | 3,667               | 5,652                                      | 12,955          | 22,273 |  |  |  |
| At least 1.5 mbps                      | 595                 | 361  | 29,609          | 30,565 |  |  |  |
| Total                                  | 23,231              | 13,784                                     | 49,554          | 86,568 |  |  |  |
|  | Percentages         |  |                 |        |  |  |  |
| Less than 768 kbps                     | 21.9                | 9.0  | 8.1             | 39.0   |  |  |  |
| At least 768 kbps & Less than 1.5 mbps | 4.2                 | 6.5  | 15.0            | 25.7   |  |  |  |
| At least 1.5 mbps                      | 0.7                 | 0.4  | 34.2            | 35.3   |  |  |  |
| Total                                  | 26.8                | 15.9                                       | 57.2            | 100.0  |  |  |  |

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

Chart 3 Distribution of Residential Connections over 200 kbps in at Least One Direction as of June 30, 2011



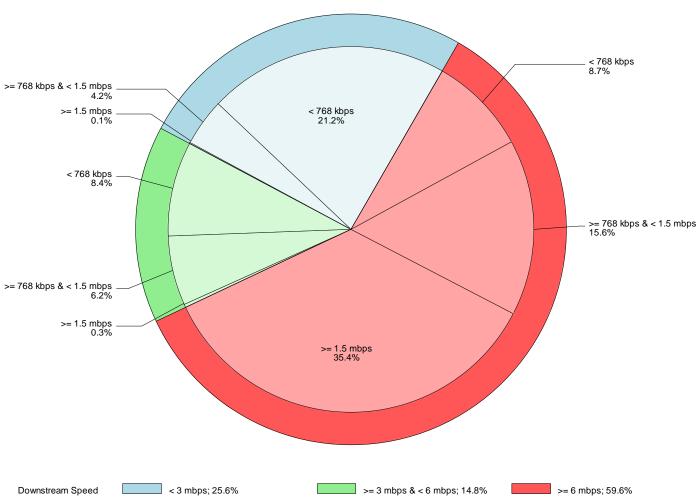
Residential Connections over 200 kbps in at Least One Direction (in thousands)

|  | 1                   | Downstream Spee                            | d               |         |
|--|---------------------|--|-----------------|---------|
| Upstream Speed                         | Less than 3<br>mbps | At least 3 mbps<br>and less than 6<br>mbps | At least 6 mbps | Total   |
| Less than 768 kbps                     | 87,597              | 6,767                                      | 6,880           | 101,244 |
| At least 768 kbps & Less than 1.5 mbps | 17,396              | 6,666                                      | 13,252          | 37,313  |
| At least 1.5 mbps                      | 434                 | 1,132                                      | 31,643          | 33,210  |
| Total                                  | 105,427             | 14,565                                     | 51,775          | 171,767 |
|  | Percentages         |  |                 |         |
| Less than 768 kbps                     | 51.0                | 3.9  | 4.0             | 58.9    |
| At least 768 kbps & Less than 1.5 mbps | 10.1                | 3.9  | 7.7             | 21.7    |
| At least 1.5 mbps                      | 0.3                 | 0.7  | 18.4            | 19.3    |
| Total                                  | 61.4                | 8.5  | 30.1            | 100.0   |

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, 2011

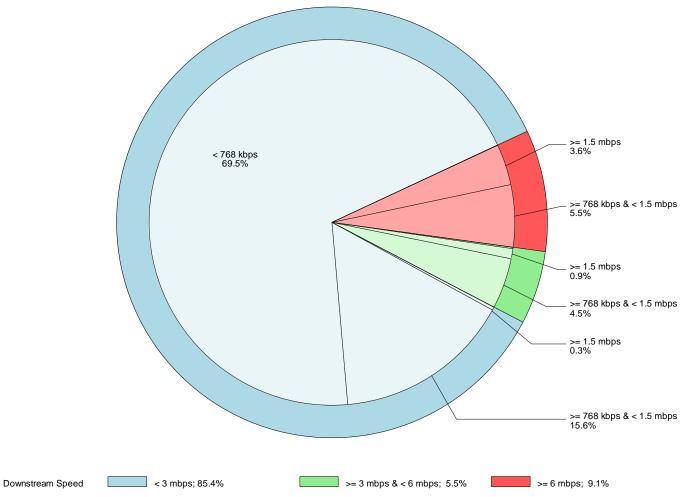


Residential Fixed Connections over 200 kbps in at Least One Direction (in thousands)

|  | 1                   | Downstream Speed                           |                 |        |  |  |
|--|---------------------|--|-----------------|--------|--|--|
| Upstream Speed                         | Less than 3<br>mbps | At least 3 mbps<br>and less than 6<br>mbps | At least 6 mbps | Total  |  |  |
| Less than 768 kbps                     | 16,760              | 6,611                                      | 6,866           | 30,236 |  |  |
| At least 768 kbps & Less than 1.5 mbps | 3,316               | 4,861                                      | 12,296          | 20,473 |  |  |
| At least 1.5 mbps                      | 85                  | 211  | 27,895          | 28,191 |  |  |
| Total                                  | 20,160              | 11,683                                     | 47,057          | 78,900 |  |  |
|  | Percentages         |  |                 |        |  |  |
| Less than 768 kbps                     | 21.2                | 8.4  | 8.7             | 38.3   |  |  |
| At least 768 kbps & Less than 1.5 mbps | 4.2                 | 6.2  | 15.6            | 25.9   |  |  |
| At least 1.5 mbps                      | 0.1                 | 0.3  | 35.4            | 35.7   |  |  |
| Total                                  | 25.6                | 14.8                                       | 59.6            | 100.0  |  |  |

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

Chart 5 Distribution of Mobile Wireless Connections over 200 kbps in at Least One Direction as of June 30, 2011



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

|  | I                   | Downstream Spee                            | d               |         |
|--|---------------------|--|-----------------|---------|
| east 768 kbps & Less than 1.5 mbps east 1.5 mbps al s than 768 kbps east 768 kbps & Less than 1.5 mbps | Less than 3<br>mbps | At least 3 mbps<br>and less than 6<br>mbps | At least 6 mbps | Total   |
| Less than 768 kbps   | 83,051              | 166  | 15              | 83,231  |
| At least 768 kbps & Less than 1.5 mbps   | 18,686              | 5,345                                      | 6,578           | 30,609  |
| At least 1.5 mbps  | 366                 | 1,043                                      | 4,306           | 5,715   |
| Total  | 102,103             | 6,554                                      | 10,899          | 119,556 |
|  | Percentages         |  |                 |         |
| Less than 768 kbps   | 69.5                | 0.1  | 0.0             | 69.6    |
| At least 768 kbps & Less than 1.5 mbps   | 15.6                | 4.5  | 5.5             | 25.6    |
| At least 1.5 mbps  | 0.3                 | 0.9  | 3.6             | 4.8     |
| Total  | 85.4                | 5.5  | 9.1             | 100.0   |

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

Table 5 Connections and Percentage Residential by Speed Tier as of June 30, 2011 (In thousands)

|  |                          |  |  |  | Downstre   | am Speed  |  |   |                      |         |
|--|--------------------------|--|--|--|--|---|--|---|----------------------|---------|
| Upstream Speed                               | Customer<br>Class        | Greater<br>than 200<br>kbps and<br>less than<br>768 kbps | At least<br>768 kbps<br>and less<br>than<br>1.5 mbps | At least<br>1.5 mbps<br>and less<br>than<br>3 mbps | At least 3<br>mbps<br>and less<br>than<br>6 mbps | At least 6<br>mbps<br>and less<br>than<br>10 mbps | At least<br>10 mbps<br>and less<br>than<br>25 mbps | At least<br>25 mbps<br>and less<br>than<br>100 mbps | At least<br>100 mbps | Total   |
| Less than or equal to 200 kbps               | Total Connections        | 10,604   | 2,817  | 7,777  | 66   | 2   | 3  | 0   | 0                    | 21,268  |
|  | % Residential            | 85   | 96   | 59   | 93   | 98  | 100  | 0   | 0                    | 77      |
| Greater than 200 kbps and less than 768 kbps | <b>Total Connections</b> | 31,716   | 26,145   | 22,961   | 7,871  | 5,639   | 1,361  | #   | 0                    | 95,694  |
|  | % Residential            | 86   | 90   | 89   | 85   | 98  | 99   | 90  | 0                    | 89      |
| At least 768 and less than 1.5 mbps          | <b>Total Connections</b> | #  | 9,753  | *  | 10,997   | 10,693  | 8,834  | 6   | *                    | 52,882  |
|  | % Residential            | 93   | 86   | 71   | 61   | 43  | 98   | 90  | 0                    | 71      |
| At least 1.5 mbps and less than 3 mbps       | <b>Total Connections</b> | *  | *  | 955  | 1,203  | 3,395   | 20,859   | 211   | *                    | 26,630  |
|  | % Residential            | 100  | 76   | 45   | 88   | 94  | 95   | 99  | 27                   | 93      |
| At least 3 mbps and less than 6 mbps         | <b>Total Connections</b> | *  | *  | *  | 201  | 1,686   | 3,860  | 1,251   | 1                    | 6,999   |
|  | % Residential            | 100  | 0  | 0  | 39   | 75  | 96   | 91  | 22                   | 88      |
| At least 6 mbps and less than 10 mbps        | Total Connections        | 0  | 0  | 0  | *  | 60  | *  | 44  | 0                    | 106     |
|  | % Residential            | 0  | 0  | 0  | 100  | 55  | 67   | 99  | 0                    | 73      |
| At least 10 mbps and less than 25 mbps       | <b>Total Connections</b> | *  | 0  | 0  | *  | 0   | 1,593  | 159   | 9                    | 1,761   |
|  | % Residential            | 100  | 0  | 0  | 0  | 0   | 91   | 78  | 19                   | 89      |
| At least 25 mbps and less than 100 mbps      | <b>Total Connections</b> | 0  | 0  | 0  | *  | 0   | 0  | 716   | *                    | 716     |
|  | % Residential            | 0  | 0  | 0  | 0  | 0   | 0  | 89  | 13                   | 89      |
| At least 100 mbps                            | <b>Total Connections</b> | 0  | 0  | 0  | 0  | 0   | *  | 0   | *                    | 68      |
|  | % Residential            | 0  | 0  | 0  | 0  | 0   | 0  | 0   | 16                   | 16      |
| Total  | Total Connections        | 42,327   | 38,716   | 44,291   | 20,338   | 21,475  | 36,512   | 2,387   | 79                   | 206,124 |
|  | % Residential            | 86   | 90   | 78   | 72   | 68  | 96   | 90  | 16                   | 83      |

<sup># =</sup> Rounds to Zero.

Source: FCC Form 477, Parts I and VI.

<sup>\* =</sup> Data withheld to maintain firm confidentiality. Note: Figures may not sum to totals due to rounding.

Table 6 Fixed Connections and Percentage Residential by Speed Tier as of June 30, 2011 (In thousands)

|  |                          |  |  |  | Downstrea  | am Speed  |  |   |                      |        |
|--|--------------------------|--|--|--|--|---|--|---|----------------------|--------|
| Upstream Speed                               | Customer<br>Class        | Greater<br>than 200<br>kbps and<br>less than<br>768 kbps | At least<br>768 kbps<br>and less<br>than<br>1.5 mbps | At least<br>1.5 mbps<br>and less<br>than<br>3 mbps | At least 3<br>mbps<br>and less<br>than<br>6 mbps | At least 6<br>mbps<br>and less<br>than<br>10 mbps | At least<br>10 mbps<br>and less<br>than<br>25 mbps | At least<br>25 mbps<br>and less<br>than<br>100 mbps | At least<br>100 mbps | Total  |
| Less than or equal to 200 kbps               | Total Connections        | 1,379  | 2,010  | 139  | 66   | 2   | 3  | 0   | 0                    | 3,598  |
|  | % Residential            | 84   | 96   | 45   | 93   | 98  | 100  | 0   | 0                    | 89     |
| Greater than 200 kbps and less than 768 kbps | <b>Total Connections</b> | 1,752  | 5,342  | 8,347  | *  | *   | *  | #   | 0                    | 30,131 |
|  | % Residential            | 87   | 91   | 86   | 85   | 98  | 99   | 90  | 0                    | 90     |
| At least 768 and less than 1.5 mbps          | <b>Total Connections</b> | #  | 555  | 3,111  | 5,652  | *   | 8,834  | 6   | *                    | 22,273 |
|  | % Residential            | 93   | 75   | 93   | 86   | 88  | 98   | 90  | 0                    | 92     |
| At least 1.5 mbps and less than 3 mbps       | <b>Total Connections</b> | *  | *  | 589  | 161  | *   | *  | 211   | *                    | 22,562 |
|  | % Residential            | 100  | 76   | 13   | 83   | 94  | 95   | 99  | 27                   | 93     |
| At least 3 mbps and less than 6 mbps         | <b>Total Connections</b> | *  | *  | *  | 200  | *   | 3,860  | 1,251   | 1                    | 5,351  |
|  | % Residential            | 100  | 0  | 0  | 39   | 64  | 96   | 91  | 22                   | 92     |
| At least 6 mbps and less than 10 mbps        | <b>Total Connections</b> | 0  | 0  | 0  | *  | *   | 2  | 44  | 0                    | *      |
|  | % Residential            | 0  | 0  | 0  | 100  | 55  | 67   | 99  | 0                    | 73     |
| At least 10 mbps and less than 25 mbps       | <b>Total Connections</b> | *  | 0  | 0  | *  | 0   | 1,593  | 159   | 9                    | 1,761  |
|  | % Residential            | 100  | 0  | 0  | 0  | 0   | 91   | 78  | 19                   | 89     |
| At least 25 mbps and less than 100 mbps      | <b>Total Connections</b> | 0  | 0  | 0  | *  | 0   | 0  | 716   | *                    | 716    |
|  | % Residential            | 0  | 0  | 0  | 0  | 0   | 0  | 89  | 13                   | 89     |
| At least 100 mbps                            | Total Connections        | 0  | 0  | 0  | 0  | 0   | *  | 0   | *                    | *      |
|  | % Residential            | 0  | 0  | 0  | 0  | 0   | 0  | 0   | 16                   | 16     |
| Total  | Total Connections        | 3,138  | 7,908  | *  | 13,784   | 10,590  | *  | 2,387   | 79                   | 86,568 |
|  | % Residential            | 86   | 91   | 84   | 85   | 94  | 96   | 90  | 16                   | 91     |

<sup># =</sup> Rounds to Zero.

Source: FCC Form 477, Parts I and VI.

<sup>\* =</sup> Data withheld to maintain firm confidentiality. Note: Figures may not sum to totals due to rounding.

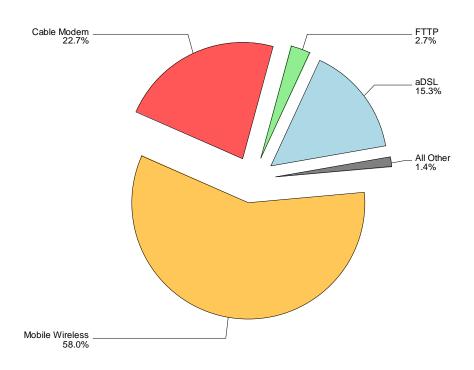
Table 7 Connections over 200 kbps in at Least One Direction by Technology 2007-2011 (In thousands)

|                              | 200     | )7      | 200     | 18      | 200     | 9       | 201     | 0       | 2011    |
|------------------------------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| Technology                   | Jun     | Dec     | Jun     | Dec     | Jun     | Dec     | Jun     | Dec     | Jun     |
| Total                        | 100,986 | 121,222 | 132,814 | 102,239 | 119,433 | 136,293 | 157,017 | 182,065 | 206,124 |
| Total Fixed                  | 65,681  | 70,206  | 73,123  | 75,707  | 77,997  | 79,994  | 81,764  | 84,521  | 86,568  |
| aDSL                         | 27,793  | 29,449  | 29,964  | 30,198  | 30,631  | 30,987  | 30,759  | 31,470  | 31,610  |
| sDSL                         | 320     | 293     | 275     | 241     | 217     | 225     | 191     | 167     | 159     |
| Other Wireline               | 622     | 605     | 665     | 705     | 684     | 714     | 750     | 788     | 772     |
| Cable Modem                  | 34,404  | 36,507  | 38,190  | 40,251  | 41,434  | 42,438  | 43,923  | 45,334  | 46,698  |
| FTTP <sup>1</sup>            | 1,281   | 1,849   | 2,346   | 2,884   | 3,548   | 3,980   | 4,441   | 4,993   | 5,476   |
| Satellite                    | 669     | 791     | 869     | 938     | 990     | 1,116   | 1,144   | 1,176   | 1,204   |
| Fixed Wireless               | 587     | 707     | 808     | 485     | 488     | 527     | 551     | 587     | 644     |
| Power Line and Other         | 5       | 5       | 5       | 5       | 5       | 5       | 6       | 6       | 6       |
| Mobile Wireless <sup>2</sup> | 35,305  | 51,016  | 59,691  | 26,532  | 41,436  | 56,300  | 75,253  | 97,544  | 119,556 |

<sup>&</sup>lt;sup>1</sup> Fiber to the premises. See Technical Notes at the end of the report for a description of Form 477 technology categories and other reporting requirements.

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

Chart 6 Connections by Technology as of June 30, 2011



<sup>&</sup>lt;sup>2</sup> Reporting instructions for mobile wireless changed between the June 2008 and December 2008 data. See Technical Notes at the end of the report.

Table 8 Residential Connections over 200 kbps in at Least One Direction by Technology 2007-2011 (In thousands)

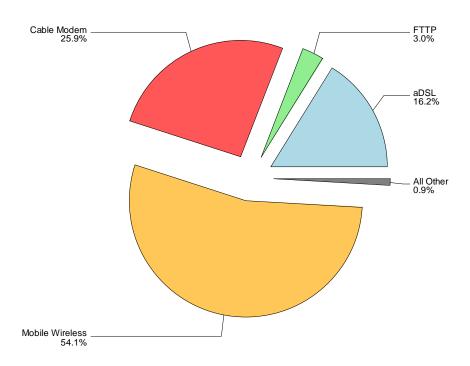
|                              | 200    | 7      | 200    | 8      | 200     | 9       | 201     | 0       | 2011    |
|------------------------------|--------|--------|--------|--------|---------|---------|---------|---------|---------|
| Technology                   | Jun    | Dec    | Jun    | Dec    | Jun     | Dec     | Jun     | Dec     | Jun     |
| Total                        | 66,173 | 73,984 | 79,090 | 88,190 | 103,300 | 117,088 | 132,567 | 149,441 | 171,767 |
| Total Fixed                  | 60,628 | 64,875 | 67,554 | 69,047 | 71,509  | 73,394  | 75,251  | 76,918  | 78,900  |
| aDSL                         | 24,962 | 26,475 | 26,950 | 26,488 | 27,047  | 27,402  | 27,488  | 27,467  | 27,753  |
| sDSL                         | 105    | 82     | 81     | 74     | 71      | 85      | 65      | 53      | 52      |
| Other Wireline               | 12     | 17     | 32     | 42     | 44      | 51      | 56      | 70      | 39      |
| Cable Modem                  | 33,336 | 35,341 | 36,901 | 38,681 | 39,909  | 40,872  | 42,178  | 43,295  | 44,480  |
| FTTP <sup>1</sup>            | 1,153  | 1,683  | 2,139  | 2,717  | 3,348   | 3,758   | 4,185   | 4,704   | 5,118   |
| Satellite                    | 530    | 626    | 705    | 630    | 668     | 767     | 787     | 811     | 885     |
| Fixed Wireless               | 523    | 644    | 741    | 410    | 417     | 454     | 486     | 513     | 567     |
| Power Line and Other         | 5      | 5      | 5      | 5      | 5       | 5       | 6       | 6       | 6       |
| Mobile Wireless <sup>2</sup> | 5,545  | 9,109  | 11,536 | 19,142 | 31,791  | 43,695  | 57,316  | 72,523  | 92,867  |

<sup>&</sup>lt;sup>1</sup> Fiber to the premises. See Technical Notes at the end of the report for a description of Form 477 technology categories and other reporting requirements.

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 7 Residential Connections by Technology as of June 30, 2011



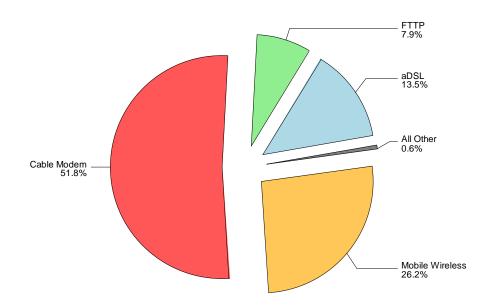
<sup>&</sup>lt;sup>2</sup> Reporting instructions for mobile wireless changed between the June 2008 and December 2008 data. See Technical Notes at the end of the report.

Table 9 Connections at Least 3 mbps Downstream and 768 kbps Upstream by Technology 2008-2011 (In thousands)

|                              | 2008   | 2009   | 9      | 2010   | )      | 2011   |
|------------------------------|--------|--------|--------|--------|--------|--------|
| Technology                   | Dec    | Jun    | Dec    | Jun    | Dec    | Jun    |
| Total                        | 31,120 | 33,332 | 40,669 | 45,554 | 55,113 | 65,849 |
| Total Fixed                  | 30,987 | 33,108 | 38,963 | 41,366 | 44,696 | 48,576 |
| aDSL                         | 5,403  | 5,614  | 6,389  | 6,277  | 7,305  | 8,909  |
| sDSL                         | 5      | 9      | 19     | 13     | 14     | 16     |
| Other Wireline               | 121    | 128    | 149    | 176    | 208    | 202    |
| Cable Modem                  | 22,708 | 23,958 | 28,583 | 30,616 | 32,338 | 34,114 |
| FTTP <sup>1</sup>            | 2,694  | 3,333  | 3,739  | 4,192  | 4,725  | 5,188  |
| Satellite                    | #      | #      | #      | #      | #      | #      |
| Fixed Wireless               | 54     | 64     | 82     | 92     | 105    | 145    |
| Power Line and Other         | 1      | 1      | 1      | 1      | 3      | 3      |
| Mobile Wireless <sup>2</sup> | 133    | 224    | 1,706  | 4,188  | 10,416 | 17,272 |

<sup># =</sup> Rounds to Zero.

Chart 8 Connections at Least 3 mbps Downstream and 768 kbps Upstream by Technology as of June 30, 2011



<sup>&</sup>lt;sup>1</sup> Fiber to the premises. See Technical Notes at the end of the report for a description of Form 477 technology categories and other reporting requirements.

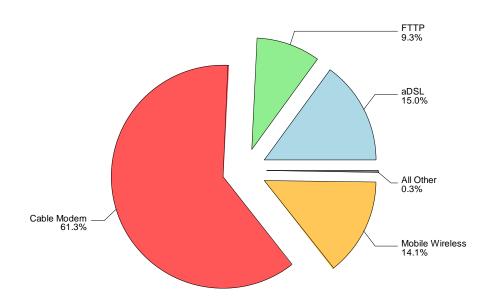
<sup>&</sup>lt;sup>2</sup> Reporting instructions for mobile wireless changed between the June 2008 and December 2008 data. See Technical Notes at the end of the report. Note: Some historical data have been revised. Figures may not sum to totals due to rounding.

Table 10 Residential Connections at Least 3 mbps Downstream and 768 kbps Upstream by Technology 2008-2011 (In thousands)

|                              | 2008   | 2009   | 9      | 2010   | )      | 2011   |
|------------------------------|--------|--------|--------|--------|--------|--------|
| Technology                   | Dec    | Jun    | Dec    | Jun    | Dec    | Jun    |
| Total                        | 29,127 | 31,356 | 38,426 | 42,245 | 47,634 | 52,693 |
| Total Fixed                  | 29,013 | 31,161 | 36,844 | 39,039 | 41,772 | 45,263 |
| aDSL                         | 4,613  | 4,895  | 5,633  | 5,559  | 6,423  | 7,909  |
| sDSL                         | 1      | 2      | 10     | 2      | 2      | 4      |
| Other Wireline               | 10     | 11     | 18     | 19     | 33     | 13     |
| Cable Modem                  | 21,776 | 23,025 | 27,548 | 29,398 | 30,742 | 32,321 |
| FTTP <sup>1</sup>            | 2,571  | 3,177  | 3,566  | 3,982  | 4,482  | 4,894  |
| Satellite                    | 0      | 0      | 0      | 0      | 0      | 0      |
| Fixed Wireless               | 42     | 50     | 68     | 77     | 86     | 120    |
| Power Line and Other         | 1      | 1      | 1      | 1      | 3      | 3      |
| Mobile Wireless <sup>2</sup> | 114    | 196    | 1,582  | 3,206  | 5,863  | 7,429  |

<sup>&</sup>lt;sup>1</sup> Fiber to the premises. See Technical Notes at the end of the report for a description of Form 477 technology categories and other reporting requirements.

Chart 9 Residential Connections at Least 3 mbps Downstream and 768 kbps Upstream by Technology as of June 30, 2011



<sup>&</sup>lt;sup>2</sup> Reporting instructions for mobile wireless changed between the June 2008 and December 2008 data. See Technical Notes at the end of the report. 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 10 Residential Fixed Connections over 200 kbps in at Least One Direction 2006-2011 (Shares of selected technologies)



Chart 11 Residential Fixed Connections over 200 kbps in at Least One Direction 2007-2011 (Net adds for selected technologies)

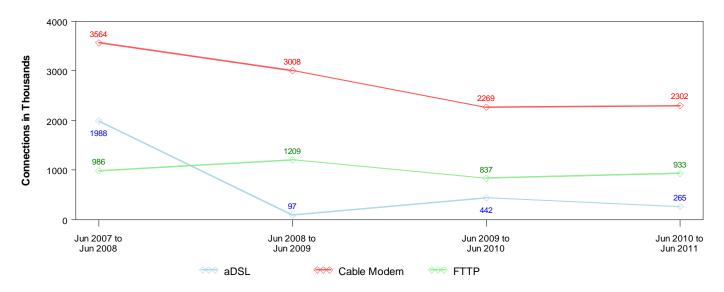


Chart 12 Residential Fixed Connections by Technology as of June 30, 2011 (Shares of selected technologies for selected speeds, connections in thousands)

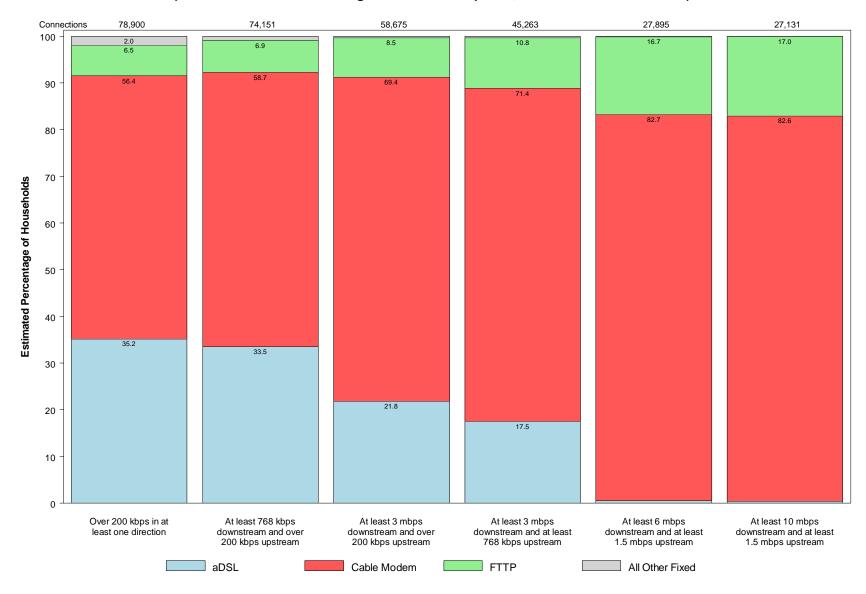


Table 11 Residential Connections by Technology and Speed (BTOP/BIP Definition) as of June 30, 2011

(In thousands)

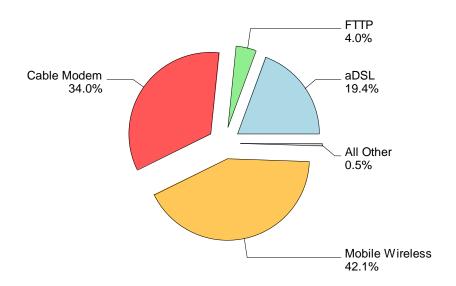
| Technology           | At Most<br>200 kbps<br>Upstream or<br>less than<br>768 kbps<br>Downstream | Over<br>200 kbps<br>Upstream and<br>at least<br>768 kbps<br>Downstream | Total   |
|----------------------|---|--|---------|
| aDSL                 | 2,892   | 24,861   | 27,753  |
| sDSL                 | 22  | 31   | 52      |
| Other Wireline       | 3   | 36   | 39      |
| Cable Modem          | 926   | 43,554   | 44,480  |
| FTTP                 | 16  | 5,103  | 5,118   |
| Satellite            | 768   | 118  | 885     |
| Fixed Wireless       | 121   | 446  | 567     |
| Mobile Wireless      | 38,840  | 54,027   | 92,867  |
| Power Line and Other | 3   | 3  | 6       |
| Total                | 43,589  | 128,178  | 171,767 |

<sup># =</sup> Rounds to Zero.

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, 2011



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 12 Connections by Speed Tier and Technology as of June 30, 2011 (In thousands)

|                      | 200 kb <sub>l</sub>                                       | os or less Up                    | stream   |   |  |  | Over 200 kb  | ps Upstrean   | ו  |                                 |          |         |
|----------------------|---|----------------------------------|----------|---|--|--|--|---|--|---------------------------------|----------|---------|
| Technology           | Download<br>over 200<br>kbps and<br>less than<br>768 kbps | Download<br>at least<br>768 kbps | Subtotal | Download<br>over 200<br>kbps and<br>less than<br>768 kbps | Download<br>at least<br>768 kbps<br>and less<br>than<br>1.5 mbps | Download<br>at least<br>1.5 mbps<br>and less<br>than<br>3 mbps | Download<br>at least 3<br>mbps<br>and less<br>than<br>6 mbps | Download<br>at least 6<br>mbps<br>and less<br>than<br>10 mbps | Download<br>at least 10<br>mbps<br>and less<br>than<br>25 mbps | Download<br>at least 25<br>mbps | Subtotal | Total   |
| aDSL                 | 824   | 833                              | 1,657    | 1,489   | 4,767  | 8,917  | 10,170   | 3,430   | 1,106  | 74                              | 29,953   | 31,610  |
| sDSL                 | 0   | 0                                | 0        | 55  | 53   | *  | 12   | 2   | *  | #                               | 159      | 159     |
| Other Wireline       | 0   | 0                                | 0        | 54  | 76   | 440  | 103  | 21  | 29   | 48                              | 772      | 772     |
| Cable Modem          | 88  | 801                              | 888      | 58  | 776  | 2,148  | 3,080  | 6,978   | 31,244   | 1,526                           | 45,810   | 46,698  |
| FTTP                 | 4   | 2                                | 6        | 14  | 50   | 138  | 217  | 129   | 4,108  | 814                             | 5,470    | 5,476   |
| Satellite            | 429   | 567                              | 996      | *   | *  | *  | *  | 0   | 0  | 0                               | 209      | 1,204   |
| Fixed Wireless       | 35  | 17                               | 52       | 82  | 150  | 191  | 130  | 30  | 7  | 2                               | 592      | 644     |
| Mobile Wireless      | 9,224   | 8,445                            | 17,669   | 29,965  | 30,001   | *  | 6,554  | 10,885  | *  | 0                               | 101,887  | 119,556 |
| Power Line and Other | 0   | 0                                | 0        | *   | *  | *  | *  | 0   | 0  | 0                               | 6        | 6       |
| Total                | 10,604  | 10,664                           | 21,268   | 31,723  | 35,899   | 36,514   | 20,272   | 21,473  | 36,509   | 2,466                           | 184,856  | 206,124 |
|                      |   |                                  |          |   | Perce  | ntages   |  |   |  |                                 |          |         |
| aDSL                 | 2.6   | 2.6                              | 5.2      | 4.7   | 15.1   | 28.2   | 32.2   | 10.9  | 3.5  | 0.2                             | 94.8     | 100.0   |
| sDSL                 | 0.0   | 0.0                              | 0.0      | 34.6  | 33.4   | *  | 7.6  | 1.5   | *  | 0.2                             | 100.0    | 100.0   |
| Other Wireline       | 0.0   | 0.0                              | 0.0      | 7.0   | 9.9  | 57.0   | 13.4   | 2.7   | 3.8  | 6.3                             | 100.0    | 100.0   |
| Cable Modem          | 0.2   | 1.7                              | 1.9      | 0.1   | 1.7  | 4.6  | 6.6  | 14.9  | 66.9   | 3.3                             | 98.1     | 100.0   |
| FTTP                 | 0.1   | 0.0                              | 0.1      | 0.3   | 0.9  | 2.5  | 4.0  | 2.3   | 75.0   | 14.9                            | 99.9     | 100.0   |
| Satellite            | 35.6  | 47.1                             | 82.7     | *   | *  | *  | *  | 0.0   | 0.0  | 0.0                             | 17.3     | 100.0   |
| Fixed Wireless       | 5.4   | 2.6                              | 8.1      | 12.7  | 23.3   | 29.7   | 20.2   | 4.6   | 1.0  | 0.4                             | 91.9     | 100.0   |
| Mobile Wireless      | 7.7   | 7.1                              | 14.8     | 25.1  | 25.1   | *  | 5.5  | 9.1   | *  | 0.0                             | 85.2     | 100.0   |
| Power Line and Other | 0.0   | 0.0                              | 0.0      | *   | *  | *  | *  | 0.0   | 0.0  | 0.0                             | 100.0    | 100.0   |
| Total                | 5.1   | 5.2                              | 10.3     | 15.4  | 17.4   | 17.7   | 9.8  | 10.4  | 17.7   | 1.2                             | 89.7     | 100.0   |

<sup># =</sup> Rounds to Zero.

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

<sup>\* =</sup> Data withheld to maintain firm confidentiality.

Table 13 Residential Connections by Speed Tier and Technology as of June 30, 2011 (In thousands)

|                      | 200 kb  | ps or less Up                    | stream   |   |  |  | Over 200 kb  | ps Upstrean   | )  |                                 |          |         |
|----------------------|---|----------------------------------|----------|---|--|--|--|---|--|---------------------------------|----------|---------|
| Technology           | Download<br>over 200<br>kbps and<br>less than<br>768 kbps | Download<br>at least<br>768 kbps | Subtotal | Download<br>over 200<br>kbps and<br>less than<br>768 kbps | Download<br>at least<br>768 kbps<br>and less<br>than<br>1.5 mbps | Download<br>at least<br>1.5 mbps<br>and less<br>than<br>3 mbps | Download<br>at least 3<br>mbps<br>and less<br>than<br>6 mbps | Download<br>at least 6<br>mbps<br>and less<br>than<br>10 mbps | Download<br>at least 10<br>mbps<br>and less<br>than<br>25 mbps | Download<br>at least 25<br>mbps | Subtotal | Total   |
| aDSL                 | 749   | 766                              | 1,515    | 1,376   | 4,308  | 7,752  | 8,573  | 3,158   | 1,002  | 69                              | 26,238   | 27,753  |
| sDSL                 | 0   | 0                                | 0        | 22  | 22   | *  | 3  | 1   | *  | #                               | 52       | 52      |
| Other Wireline       | 0   | 0                                | 0        | 3   | 6  | 18   | 11   | 1   | #  | #                               | 39       | 39      |
| Cable Modem          | 83  | 799                              | 882      | 44  | 754  | 2,057  | 2,727  | 6,616   | 30,024   | 1,376                           | 43,598   | 44,480  |
| FTTP                 | 4   | 2                                | 5        | 10  | 41   | 93   | 193  | 118   | 3,941  | 716                             | 5,113    | 5,118   |
| Satellite            | 292   | 473                              | 765      | *   | *  | *  | *  | 0   | 0  | 0                               | 121      | 885     |
| Fixed Wireless       | 32  | 16                               | 48       | 72  | 133  | 171  | 113  | 25  | 4  | #                               | 519      | 567     |
| Mobile Wireless      | 7,899   | 5,313                            | 13,212   | 25,628  | 26,744   | *  | 2,882  | 4,706   | *  | 0                               | 79,655   | 92,867  |
| Power Line and Other | 0   | 0                                | 0        | *   | *  | *  | *  | 0   | 0  | 0                               | 6        | 6       |
| Total                | 9,059   | 7,369                            | 16,427   | 27,162  | 32,032   | 29,872   | 14,504   | 14,625  | 34,984   | 2,162                           | 155,340  | 171,767 |
|                      |   |                                  |          |   | Perce  | ntages   |  |   |  |                                 |          |         |
| aDSL                 | 2.7   | 2.8                              | 5.5      | 5.0   | 15.5   | 27.9   | 30.9   | 11.4  | 3.6  | 0.3                             | 94.5     | 100.0   |
| sDSL                 | 0.0   | 0.0                              | 0.0      | 41.3  | 41.6   | *  | 5.1  | 2.1   | *  | 0.0                             | 100.0    | 100.0   |
| Other Wireline       | 0.0   | 0.0                              | 0.0      | 7.0   | 15.4   | 45.3   | 27.5   | 2.8   | 1.1  | 1.0                             | 100.0    | 100.0   |
| Cable Modem          | 0.2   | 1.8                              | 2.0      | 0.1   | 1.7  | 4.6  | 6.1  | 14.9  | 67.5   | 3.1                             | 98.0     | 100.0   |
| FTTP                 | 0.1   | 0.0                              | 0.1      | 0.2   | 0.8  | 1.8  | 3.8  | 2.3   | 77.0   | 14.0                            | 99.9     | 100.0   |
| Satellite            | 33.0  | 53.4                             | 86.4     | *   | *  | *  | *  | 0.0   | 0.0  | 0.0                             | 13.6     | 100.0   |
| Fixed Wireless       | 5.7   | 2.8                              | 8.5      | 12.8  | 23.4   | 30.2   | 19.9   | 4.4   | 0.8  | 0.1                             | 91.5     | 100.0   |
| Mobile Wireless      | 8.5   | 5.7                              | 14.2     | 27.6  | 28.8   | *  | 3.1  | 5.1   | *  | 0.0                             | 85.8     | 100.0   |
| Power Line and Other | 0.0   | 0.0                              | 0.0      | *   | *  | *  | *  | 0.0   | 0.0  | 0.0                             | 100.0    | 100.0   |
| Total                | 5.3   | 4.3                              | 9.6      | 15.8  | 18.6   | 17.4   | 8.4  | 8.5   | 20.4   | 1.3                             | 90.4     | 100.0   |

<sup># =</sup> Rounds to Zero.

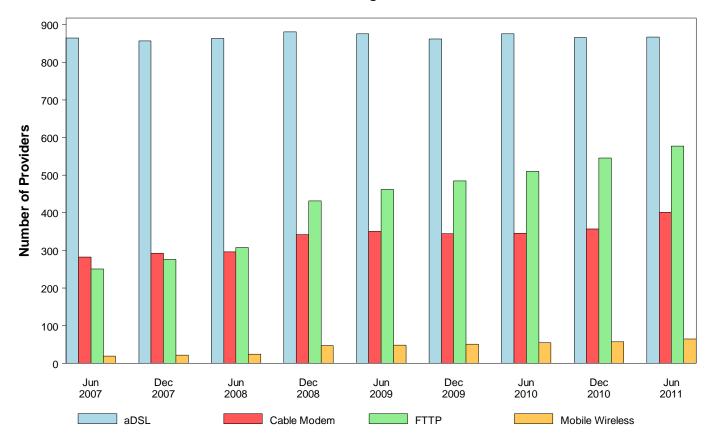
<sup>\* =</sup> Data withheld to maintain firm confidentiality. Note: Figures may not sum to totals due to rounding.

Table 14 Nationwide Number of Providers of Connections over 200 kbps in at Least One Direction by Technology 2007-2011

|                      | 200   | 7     | 200   | 8     | 200   | 9     | 2010  |       | 2011  |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Technology           | Jun   | Dec   | Jun   | Dec   | Jun   | Dec   | Jun   | Dec   | Jun   |
| aDSL                 | 864   | 856   | 863   | 881   | 876   | 862   | 875   | 865   | 866   |
| sDSL                 | 242   | 233   | 238   | 264   | 257   | 261   | 251   | 247   | 252   |
| Other Wireline       | 246   | 250   | 259   | 292   | 283   | 274   | 267   | 270   | 262   |
| Cable Modem          | 282   | 292   | 296   | 342   | 351   | 344   | 345   | 357   | 401   |
| FTTP                 | 251   | 276   | 308   | 432   | 462   | 485   | 510   | 545   | 577   |
| Satellite            | 5     | 5     | 4     | 5     | 4     | 4     | 4     | 4     | 5     |
| Fixed Wireless       | 484   | 514   | 505   | 620   | 621   | 607   | 625   | 646   | 668   |
| Mobile Wireless      | 19    | 22    | 24    | 47    | 48    | 51    | 55    | 57    | 64    |
| Power Line and Other | 6     | 7     | 6     | 5     | 6     | 6     | 5     | 7     | 4     |
| Total                | 1,374 | 1,399 | 1,395 | 1,562 | 1,551 | 1,525 | 1,536 | 1,566 | 1,620 |

Note: Some historical data have been revised. Multiple Form 477 filers within a holding company structure count as one provider. Source: FCC Form 477, Part I.

Chart 14 Nationwide Number of Providers of Connections over 200 kbps in at Least One Direction Selected Technologies 2007-2011



# **Detailed Summary Statistics: The States**

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Table 15 Residential Fixed Connections (Approximating the National Broadband Availability Target) and Households by State as of June 30, 2011

(Connections with advertised speeds at least 3 mbps down and 768 up and households, in thousands)

| State                | Connections | Households | Subscribership<br>Ratio |
|----------------------|-------------|------------|-------------------------|
| Alabama              | 424         | 1,867      | 0.23                    |
| Alaska               | *           | 252        | *                       |
| American Samoa       | 0           | 9          | 0.00                    |
| Arizona              | 993         | 2,464      | 0.40                    |
| Arkansas             | 215         | 1,144      | 0.19                    |
| California           | 5,565       | 12,634     | 0.44                    |
| Colorado             | 1,056       | 1,978      | 0.53                    |
| Connecticut          | 696         | 1,358      | 0.51                    |
| Delaware             | 226         | 343        | 0.66                    |
| District of Columbia | 150         | 270        | 0.55                    |
| Florida              | 3,069       | 7,344      | 0.42                    |
| Georgia              | 1,262       | 3,697      | 0.34                    |
| Guam                 | *           | 39         | *                       |
| Hawaii               | *           | 436        | *                       |
| Idaho                | 100         | 575        | 0.17                    |
| Illinois             | 1,704       | 4,803      | 0.35                    |
| Indiana              | 815         | 2,493      | 0.33                    |
| Iowa                 | 253         | 1,197      | 0.21                    |
| Kansas               | 276         | 1,101      | 0.25                    |
| Kentucky             | 567         | 1,718      | 0.33                    |
| Louisiana            | 473         | 1,694      | 0.28                    |
| Maine                | 120         | 539        | 0.22                    |
| Maryland             | 1,403       | 2,158      | 0.65                    |
| Massachusetts        | 1,762       | 2,568      | 0.69                    |
| Michigan             | 1,463       | 3,808      | 0.38                    |
| Minnesota            | 839         | 2,046      | 0.41                    |
| Mississippi          | 143         | 1,098      | 0.13                    |
| Missouri             | 531         | 2,374      | 0.22                    |
| Montana              | 136         | 394        | 0.35                    |
| Nebraska             | 294         | 709        | 0.41                    |
| Nevada               | 360         | 1,008      | 0.36                    |
| New Hampshire        | 279         | 513        | 0.54                    |
| New Jersey           | 2,317       | 3,192      | 0.73                    |
| New Mexico           | 246         | 759        | 0.32                    |
| New York             | 3,521       | 7,339      | 0.48                    |
| North Carolina       | 495         | 3,737      | 0.13                    |
| North Dakota         | 91          | 262        | 0.35                    |
| Northern Mariana Isl | *           | 14         | *                       |
| Ohio                 | 854         | 4,540      | 0.19                    |
| Oklahoma             | 349         | 1,455      | 0.24                    |
| Oregon               | 731         | 1,522      | 0.48                    |
| Pennsylvania         | 2,524       | 4,927      | 0.51                    |
| Puerto Rico          | *           | 1,262      | *                       |
| Rhode Island         | *           | 410        | *                       |
| South Carolina       | 349         | 1,783      | 0.20                    |
| South Dakota         | 116         | 317        | 0.37                    |
| Tennessee            | 789         | 2,511      | 0.31                    |
| Texas                | 2,508       | 8,977      | 0.28                    |
| Utah                 | 424         | 894        | 0.47                    |
| Vermont              | 133         | 248        | 0.54                    |
| Virgin Islands       | *           | 41         | *                       |
| Virginia             | 1,725       | 3,052      | 0.57                    |
| Washington           | 1,393       | 2,615      | 0.53                    |
| West Virginia        | 198         | 747        | 0.27                    |
| Wisconsin            | 554         | 2,220      | 0.25                    |
| Wyoming              | 93          | 219        | 0.43                    |
| Total                | 45,263      | 117,671    | 0.38                    |

<sup># =</sup> 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 2010 Block-Level Estimates (Households for U.S. and District of Columbia); Census 2000 (Households for Puerto Rico, American Samoa, Guam, Northern Mariana Islands and U.S. Virgin Islands).

Table 16 Residential Fixed Connections and Households by State as of June 30, 2011 (Connections over 200 kbps in at least one direction and households, in thousands)

| State                | Connections | Households | Subscribership<br>Ratio |
|----------------------|-------------|------------|-------------------------|
| Alabama              | 1,052       | 1,867      | 0.56                    |
| Alaska               | 178         | 252        | 0.70                    |
| American Samoa       | *           | 9          | *                       |
| Arizona              | 1,602       | 2,464      | 0.65                    |
| Arkansas             | 596         | 1,144      | 0.52                    |
| California           | 9,307       | 12,634     | 0.74                    |
| Colorado             | 1,449       | 1,978      | 0.73                    |
| Connecticut          | 1,056       | 1,358      | 0.78                    |
| Delaware             | 259         | 343        | 0.76                    |
| District of Columbia | 183         | 270        | 0.68                    |
| Florida              | 5,284       | 7,344      | 0.72                    |
| Georgia              | 2,305       | 3,697      | 0.62                    |
| Guam                 | *           | 39         | *                       |
| Hawaii               | *           | 436        | *                       |
| Idaho                | 348         | 575        | 0.60                    |
| Illinois             | 3,172       | 4,803      | 0.66                    |
| Indiana              | 1,537       | 2,493      | 0.62                    |
| lowa                 | 777         | 1,197      | 0.65                    |
| Kansas               | 726         | 1,101      | 0.66                    |
| Kentucky             | 1,010       | 1,718      | 0.59                    |
| Louisiana            | 977         | 1,694      | 0.58                    |
| Maine                | 398         | 539        | 0.74                    |
| Maryland             | 1,588       | 2,158      | 0.74                    |
| Massachusetts        | 1,996       | 2,568      | 0.78                    |
| Michigan             | 2,424       | 3,808      | 0.64                    |
| Minnesota            | 1,395       | 2,046      | 0.68                    |
| Mississippi          | 510         | 1,098      | 0.46                    |
| Missouri             | 1,424       | 2,374      | 0.60                    |
| Montana              | 257         | 394        | 0.65                    |
| Nebraska             | 477         | 709        | 0.67                    |
| Nevada               | 648         | 1,008      | 0.64                    |
| New Hampshire        | 407         | 513        | 0.79                    |
| New Jersey           | 2,562       | 3,192      | 0.80                    |
| New Mexico           | 451         | 759        | 0.59                    |
| New York             | 5,358       | 7,339      | 0.73                    |
| North Carolina       | 2,455       | 3.737      | 0.66                    |
| North Dakota         | 178         | 262        | 0.68                    |
| Northern Mariana Isl | *           | 14         | *                       |
| Ohio                 | 3,006       | 4,540      | 0.66                    |
| Oklahoma             | 824         | 1,455      | 0.57                    |
| Oregon               | 1,014       | 1,522      | 0.67                    |
| Pennsylvania         | 3,465       | 4,927      | 0.70                    |
| Puerto Rico          | 507         | 1,262      | 0.40                    |
| Rhode Island         | 301         | 410        | 0.74                    |
| South Carolina       | 1,075       | 1,783      | 0.60                    |
| South Dakota         | 193         | 317        | 0.61                    |
| Tennessee            | 1,378       | 2,511      | 0.55                    |
| Texas                | 5,612       | 8,977      | 0.63                    |
| Utah                 | 630         | 894        | 0.70                    |
| Vermont              | 182         | 248        | 0.74                    |
| Virgin Islands       | 12          | 41         | 0.74                    |
| Virginia             | 2,072       | 3,052      | 0.68                    |
| Washington           | 1,844       | 2,615      | 0.00                    |
| West Virginia        | 423         | 747        | 0.57                    |
| Wisconsin            | 1,486       | 2,220      | 0.67                    |
| Wyoming              | 1,400       | 2,220      | 0.64                    |
| Total                | 78,900      | 117,671    | 0.67                    |

<sup># =</sup> 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 2010 Block-Level Estimates (Households for U.S. and District of Columbia); Census 2000 (Households for Puerto Rico, American Samoa, Guam, Northern Mariana Islands and U.S. Virgin Islands).

Table 17 Connections by Type of End User by State as of June 30, 2011 (Connections over 200 kbps in at least one direction, in thousands)

|                                      | Connec         | tions        | Percent      | ages         |                |
|--------------------------------------|----------------|--------------|--------------|--------------|----------------|
| State                                | Residential    | Business     | Residential  | Business     | Total          |
| Alabama                              | 2,382          | 287          | 89.3         | 10.7         | 2,669          |
| Alaska                               | 432            | 66           | 86.8         | 13.2         | 498            |
| American Samoa                       | *              | *            | *            | *            | *              |
| Arizona                              | 3,427          | 520          | 86.8         | 13.2         | 3,947          |
| Arkansas                             | 1,481          | 200          | 88.1         | 11.9         | 1,681          |
| California                           | 21,782         | 4,247        | 83.7         | 16.3         | 26,029         |
| Colorado                             | 3,103          | 611          | 83.6         | 16.4         | 3,713          |
| Connecticut                          | 2,228          | 402          | 84.7         | 15.3         | 2,630          |
| Delaware                             | 547            | 90           | 85.9         | 14.1         | 638            |
| District of Columbia                 | 524            | 470          | 52.7         | 47.3         | 995            |
| Florida                              | 10,245         | 2,475        | 80.5         | 19.5         | 12,720         |
| Georgia                              | 5,221          | 1,195        | 81.4         | 18.6         | 6,417          |
| Guam                                 | 62             | 13           | 82.5         | 17.5         | 76             |
| Hawaii                               | 861            | 123          | 87.5         | 12.5         | 984            |
| Idaho                                | 772            | 140          | 84.6         | 15.4         | 912            |
| Illinois                             | 7,126          | 1,519        | 82.4         | 17.6         | 8,645          |
| Indiana                              | 3,244          | 526          | 86.0         | 14.0         | 3,770          |
| lowa                                 | 1,398          | 227          | 86.0         | 14.0         | 1,625          |
| Kansas                               | 1,476          | 462          | 76.1         | 23.9         | 1,938          |
| Kentucky                             | 2,079          | 360          | 85.2         | 14.8         | 2,439          |
| Louisiana                            | 2,537          | 396          | 86.5         | 13.5         | 2,933          |
| Maine                                | 661            | 82           | 88.9         | 11.1         | 743            |
| Maryland                             | 3,609          | 653          | 84.7         | 15.3         | 4,263          |
| Massachusetts                        | 4,081          | 711          | 85.2         | 14.8         | 4,792          |
| Michigan                             | 4,660          | 1,317        | 78.0         | 22.0         | 5,977          |
| Minnesota                            | 2,851          | 654          | 81.3         | 18.7         | 3,505          |
| Mississippi                          | 1,458          | 169          | 89.6         | 10.4         | 1,628          |
| Missouri                             | 3,018          | 728          | 80.6         | 19.4         | 3,746          |
| Montana                              | 581            | 68           | 89.5         | 10.5         | 649            |
| Nebraska                             | 930            | 183          | 83.6         | 16.4         | 1,113          |
| Nevada                               | 1,574          | 292          | 84.4         | 15.6         | 1,866          |
| New Hampshire                        | 757            | 109          | 87.4         | 12.6         | 866            |
| New Jersey                           | 5,564          | 965          | 85.2         | 14.8         | 6,529          |
| New Mexico                           | 1,050          | 144          | 87.9         | 12.1         | 1,193          |
| New York                             | 11,470         | 2,194        | 83.9         | 16.1         | 13,664         |
| North Carolina                       | 4,922          | 977          | 83.4         | 16.6         | 5,899          |
| North Dakota<br>Northern Mariana Isl | 437            | 62           | 87.5         | 12.5         | 499            |
| Ohio                                 | 6,173          | 1,155        | 84.2         |              | 7 220          |
| Oklahoma                             | 1,967          | 310          | 86.4         | 15.8<br>13.6 | 7,328<br>2,276 |
| Oregon                               | 2,164          | 385          | 84.9         | 15.1         | 2,549          |
| Pennsylvania                         |                |              | 85.9         | 14.1         | 8,212          |
| Puerto Rico                          | 7,057          | 1,155<br>154 | 89.2         | 10.8         | 1,422          |
| Rhode Island                         | 1,268          | 104          | 85.1         | 14.9         |                |
| South Carolina                       | 595<br>2,253   | 328          | 87.3         | 12.7         | 699            |
| South Dakota                         | 478            | 56           |              |              | 2,581<br>534   |
| Tennessee                            | 3,220          | 612          | 89.5<br>84.0 | 10.5<br>16.0 |                |
| Texas                                |                | 3,515        |              | 20.1         | 3,833          |
|                                      | 13,972         |              | 79.9         |              | 17,487         |
| Utah<br>Vermont                      | 1,385<br>326   | 305<br>52    | 81.9<br>86.3 | 18.1<br>13.7 | 1,690<br>377   |
| Virgin Islands                       |                |              |              |              |                |
|                                      | 52             | 15           | 77.6         | 22.4         | 68<br>5 5 9 9  |
| Virginia<br>Washington               | 4,605          | 982          | 82.4<br>81.7 | 17.6         | 5,588          |
| Washington                           | 3,969          | 888          |              | 18.3         | 4,857          |
| West Virginia                        | 781            | 113          | 87.4         | 12.6         | 893            |
| Wisconsin                            | 2,610          | 544          | 82.8         | 17.2         | 3,154          |
| Wyoming                              | 334<br>171 767 | 41<br>34 357 | 89.1         | 10.9<br>16.7 | 375            |
| Total                                | 171,767        | 34,357       | 83.3         | 16.7         | 206,124        |

<sup># =</sup> Rounds to Zero.

<sup>\* =</sup> Data withheld to maintain firm confidentiality.

Figures may not sum to totals due to rounding.

Table 18 Connections by Technology by State as of June 30, 2011 (Connections over 200 kbps in at least one direction, in thousands)

| State                | ADSL  | SDSL | Other<br>Wireline | Cable<br>Modem | Fiber | Satellite | Fixed<br>Wireless | Mobile<br>Wireless | Power Line<br>and Other | Total  |
|----------------------|-------|------|-------------------|----------------|-------|-----------|-------------------|--------------------|-------------------------|--------|
| Alabama              | 536   | 5    | 11                | 556            | 7     | *         | 6                 | 1,513              | *                       | 2,669  |
| Alaska               | 79    | 3    | #                 | *              | 1     | *         | 6                 | 292                | 0                       | 498    |
| American Samoa       | *     | *    | 0                 | *              | *     | 0         | *                 | 0                  | 0                       | *      |
| Arizona              | 557   | 1    | *                 | 1,104          | 5     | *         | 25                | 2,220              | 0                       | 3,947  |
| Arkansas             | 337   | #    | *                 | 288            | 4     | *         | 1                 | 1,020              | 0                       | 1,681  |
| California           | 4,471 | 14   | *                 | 4,853          | 621   | *         | 27                | 15,834             | 0                       | 26,029 |
| Colorado             | *     | 2    | 22                | 817            | 9     | *         | 45                | 2,126              | 0                       | 3,713  |
| Connecticut          | *     | 2    | 5                 | 713            | 3     | *         | *                 | 1,479              | 0                       | 2,630  |
| Delaware             | *     | #    | 4                 | 164            | *     | *         | 0                 | 359                | 0                       | 638    |
| District of Columbia | *     | 2    | 6                 | *              | 9     | *         | *                 | 784                | 0                       | 995    |
| Florida              | 2,104 | 2    | *                 | 3,313          | 361   | *         | 5                 | 6,842              | 0                       | 12,720 |
| Georgia              | 1,435 | 1    | *                 | 1,151          | 32    | *         | #                 | 3,730              | 0                       | 6,417  |
| Guam                 | *     | *    | *                 | *              | 0     | 0         | *                 | *                  | 0                       | 76     |
| Hawaii               | *     | *    | 1                 | *              | 1     | *         | *                 | 606                | 0                       | 984    |
| Idaho                | 185   | #    | *                 | 150            | 2     | *         | 31                | 530                | 0                       | 912    |
| Illinois             | 1,576 | 7    | *                 | 1,768          | 13    | *         | 42                | 5,163              | 0                       | 8,645  |
| Indiana              | 763   | 3    | 10                | 766            | 70    | *         | 34                | 2,095              | *                       | 3,770  |
| Iowa                 | 381   | 2    | *                 | 395            | 28    | *         | 26                | 772                | 0                       | 1,625  |
| Kansas               | 273   | 1    | *                 | 447            | 32    | *         | 24                | 1,141              | 0                       | 1,938  |
| Kentucky             | 481   | 4    | *                 | 565            | 13    | *         | 7                 | 1,339              | 0                       | 2,439  |
| Louisiana            | 407   | 2    | *                 | 593            | 34    | *         | 4                 | 1,855              | 0                       | 2,933  |
| Maine                | 134   | 4    | 2                 | 286            | 4     | *         | *                 | 304                | 0                       | 743    |
| Maryland             | *     | 3    | 17                | 797            | *     | *         | 1                 | 2,552              | 0                       | 4,263  |
| Massachusetts        | *     | 3    | 18                | 1,401          | *     | *         | 2                 | 2,633              | *                       | 4,792  |
| Michigan             | 922   | 7    | 19                | 1,603          | 9     | *         | 28                | 3,332              | *                       | 5,977  |
| Minnesota            | 629   | 14   | *                 | 800            | 31    | *         | 17                | 1,980              | 0                       | 3,505  |
| Mississippi          | 267   | 1    | *                 | 258            | 2     | *         | #                 | 1,061              | 0                       | 1,628  |
| Missouri             | 862   | 1    | *                 | 617            | 10    | *         | 13                | 2,181              | 0                       | 3,746  |
| Montana              | 123   | 2    | 2                 | 127            | 5     | *         | 18                | *                  | 0                       | 649    |
| Nebraska             | 173   | 1    | *                 | 316            | 6     | *         | 19                | 587                | 0                       | 1,113  |

**Table 18 - Continued** Connections by Technology by State as of June 30, 2011 (Connections over 200 kbps in at least one direction, in thousands)

| State                | ADSL   | SDSL | Other<br>Wireline | Cable<br>Modem | Fiber | Satellite | Fixed<br>Wireless | Mobile<br>Wireless | Power<br>Line<br>and Other | Total   |
|----------------------|--------|------|-------------------|----------------|-------|-----------|-------------------|--------------------|----------------------------|---------|
| Nevada               | 245    | #    | 7                 | *              | 3     | *         | 3                 | 1,158              | 0                          | 1,866   |
| New Hampshire        | 87     | 1    | *                 | 340            | 12    | *         | #                 | 415                | 0                          | 866     |
| New Jersey           | 449    | 2    | 28                | 1,759          | *     | *         | #                 | 3,728              | 0                          | 6,529   |
| New Mexico           | 271    | #    | *                 | 190            | 3     | *         | 16                | 698                | 0                          | 1,193   |
| New York             | 928    | 10   | 47                | 4,091          | *     | *         | 2                 | 7,792              | *                          | 13,664  |
| North Carolina       | 1,026  | 1    | 26                | 1,566          | 22    | *         | 1                 | 3,226              | *                          | 5,899   |
| North Dakota         | 71     | 1    | *                 | 96             | 24    | *         | 7                 | 296                | 0                          | 499     |
| Northern Mariana Isl | *      | 0    | *                 | *              | *     | 0         | *                 | *                  | 0                          | *       |
| Ohio                 | 1,190  | 5    | 18                | 1,943          | 37    | *         | 26                | 4,075              | *                          | 7,328   |
| Oklahoma             | 384    | #    | *                 | 474            | 10    | *         | 9                 | 1,361              | 0                          | 2,276   |
| Oregon               | 358    | 4    | *                 | 640            | 74    | *         | 11                | 1,436              | 0                          | 2,549   |
| Pennsylvania         | 1,131  | 6    | 25                | 2,057          | *     | *         | 1                 | 4,467              | *                          | 8,212   |
| Puerto Rico          | *      | *    | 4                 | *              | *     | *         | *                 | 871                | 0                          | 1,422   |
| Rhode Island         | *      | #    | 1                 | *              | *     | *         | *                 | 372                | 0                          | 699     |
| South Carolina       | 452    | #    | 12                | 664            | 29    | *         | 1                 | 1,406              | *                          | 2,581   |
| South Dakota         | 60     | 1    | #                 | 124            | 18    | *         | 9                 | *                  | 0                          | 534     |
| Tennessee            | 576    | 5    | *                 | 824            | 60    | *         | 2                 | 2,313              | 0                          | 3,833   |
| Texas                | 2,943  | 8    | *                 | 2,578          | 383   | *         | 63                | 11,325             | 0                          | 17,487  |
| Utah                 | 309    | 2    | *                 | 303            | 20    | *         | 42                | 1,003              | 0                          | 1,690   |
| Vermont              | 87     | #    | 3                 | 104            | 5     | *         | *                 | 169                | 0                          | 377     |
| Virgin Islands       | *      | 0    | *                 | 0              | 0     | *         | *                 | *                  | 0                          | 68      |
| Virginia             | 498    | 2    | 32                | 1,141          | *     | *         | 4                 | 3,334              | *                          | 5,588   |
| Washington           | 583    | 3    | *                 | 1,296          | 71    | *         | 11                | 2,845              | 0                          | 4,857   |
| West Virginia        | *      | *    | 2                 | 274            | 1     | *         | 2                 | 429                | 0                          | 893     |
| Wisconsin            | 658    | 16   | 8                 | 870            | 13    | *         | 27                | 1,534              | *                          | 3,154   |
| Wyoming              | 59     | *    | 1                 | 82             | 1     | *         | 6                 | 218                | 0                          | 375     |
| Total                | 31,610 | 159  | 772               | 46,698         | 5,476 | 1,204     | 644               | 119,556            | 6                          | 206,124 |

<sup># =</sup> Rounds to Zero.

<sup>\* =</sup> Data withheld to maintain firm confidentiality. Figures may not sum to totals due to rounding.

Table 19 Connections by Technology by State as of June 30, 2011 (Connections at least 3 mbps downstream and 768 kbps upstream, in thousands)

| State                        | ADSL     | SDSL | Other<br>Wireline | Cable<br>Modem | Fiber   | Satellite | Fixed<br>Wireless | Mobile<br>Wireless | Power Line<br>and Other | Total        |
|------------------------------|----------|------|-------------------|----------------|---------|-----------|-------------------|--------------------|-------------------------|--------------|
| Alabama                      | 78       |      |                   | 368            | Fiber 4 | *         | Wireless 1        | wireless *         |                         |              |
| Alaska                       | / o<br>* | #    | 2 #               | 300            | #       | *         | l<br>*            | *                  | U                       | 523          |
| American Samoa               | 0        | 0    | 0                 | 0              | *       | 0         | 0                 | 0                  | 0                       | 59           |
| Arizona                      | *        | *    | 3                 | 777            | 4       | *         |                   | *                  | 0                       | 1 161        |
| Arkansas                     | 62       | *    | 3<br>1            | 165            | 3       | *         | 3                 | *                  | 0                       | 1,161<br>233 |
| California                   | 1,008    | 1    | *                 | 4,194          | 600     | *         | 8                 | 2,125              |                         | 7,958        |
| Colorado                     | 1,006    | #    | 5                 | 770            | 5       | *         | 20                | 2,123              |                         | 1,411        |
| Connecticut                  | *        | *    | 2                 | 671            | 3       | 0         | 20                | 204                | 0                       | 906          |
| Delaware                     | *        | *    | 1                 | 147            | 3<br>*  | 0         | 0                 | *                  | 0                       | 285          |
|                              | *        | *    | 3                 | 147            | 0       | _         | *                 | *                  | •                       |              |
| District of Columbia Florida | 439      |      |                   |                | 8       | 0         | 2                 |                    | 0                       | 437          |
|                              |          | #    | 17                | 2,474          |         | *         | 2                 | 1,309              |                         | 4,584        |
| Georgia                      | 290      | #    | 8                 | 1,012          | 22      |           | #                 | *                  | 0                       | 1,901        |
| Guam                         |          | *    |                   | *              | 0       | 0         |                   |                    | 0                       | 8            |
| Hawaii                       | 70       | *    | #                 |                | 1       | 0         | 0                 |                    | 0                       | 456          |
| Idaho                        | 79       |      | #                 | 33             | 2       | *         | 3                 | 1 100              | 0                       | 187          |
| Illinois                     | 308      | 2    |                   | 1,492          | 9       |           | 11                | 1,102              |                         | 2,933        |
| Indiana                      | 201      | *    | 2                 | 611            | 64      | *         | 6                 | 180                |                         | 1,064        |
| Iowa                         | 145      | #    | 1                 | 121            | 13      | *         | 6                 |                    | 0                       | 454          |
| Kansas                       | 51       | #    | *                 | 222            | 18      | *         | 1                 | 303                |                         | 597          |
| Kentucky                     | 172      | *    | 1                 | 417            | 6       | *         | 2                 | 184                |                         | 782          |
| Louisiana                    | 36       | *    | 1                 | 430            | 24      | *         | #                 | *                  | 0                       | 524          |
| Maine                        | 74       | #    | #                 | 67             | 4       | *         | *                 | *                  | 0                       | 187          |
| Maryland                     | *        | *    | 5                 | 748            | *       | *         | #                 | 353                |                         | 1,847        |
| Massachusetts                | *        | #    | 8                 | 1,311          | *       | *         | 1                 | 309                |                         | 2,201        |
| Michigan                     | 197      | 1    | *                 | 1,334          | 7       | *         | 1                 | 660                |                         | 2,205        |
| Minnesota                    | 198      | 2    | *                 | 677            | 18      | *         | 1                 | 348                | 0                       | 1,247        |
| Mississippi                  | 20       | *    | #                 | 138            | 1       | *         | *                 | *                  | 0                       | 172          |
| Missouri                     | 167      | *    | 5                 | 387            | 4       | *         | 1                 | 406                | 0                       | 970          |
| Montana                      | 26       | *    | #                 | *              | 3       | *         | 1                 | 0                  | 0                       | 148          |
| Nebraska                     | 75       | *    | #                 | 233            | 2       | 0         | 1                 | *                  | 0                       | 331          |

**Table 19 - Continued** Connections by Technology by State as of June 30, 2011 (Connections at least 3 mbps downstream and 768 kbps upstream, in thousands)

|                      |       |      | Other    | Cable  |       |           | Fixed    | Mobile   | Power Line |        |
|----------------------|-------|------|----------|--------|-------|-----------|----------|----------|------------|--------|
| State                | ADSL  | SDSL | Wireline | Modem  | Fiber | Satellite | Wireless | Wireless | and Other  | Total  |
| Nevada               | 54    | *    | 1        | *      | 2     | *         | 2        | *        | 0          | 592    |
| New Hampshire        | 45    | #    | 1        | 252    | *     | 0         | 0        | *        | 0          | 335    |
| New Jersey           | 245   | #    | 9        | *      | *     | *         | #        | *        | 0          | 2,887  |
| New Mexico           | 102   | *    | 1        | 160    | 2     | *         | 1        | *        | 0          | 285    |
| New York             | 441   | 1    | 19       | 2,672  | *     | *         | 1        | *        | 0          | 5,060  |
| North Carolina       | 264   | #    | *        | 273    | 16    | *         | #        | 579      | 0          | 1,139  |
| North Dakota         | 22    | *    | #        | 69     | 10    | 0         | *        | 0        | 0          | 104    |
| Northern Mariana Isl | *     | 0    | *        | 0      | *     | 0         | *        | 0        | 0          | *      |
| Ohio                 | 424   | *    | 4        | 509    | 32    | *         | 2        | 525      | *          | 1,498  |
| Oklahoma             | 60    | *    | 1        | 297    | 6     | *         | *        | 171      | 0          | 536    |
| Oregon               | 118   | #    | *        | 597    | 70    | *         | 3        | 230      | 0          | 1,019  |
| Pennsylvania         | 530   | *    | 8        | 1,682  | *     | *         | #        | 550      | 0          | 3,270  |
| Puerto Rico          | *     | *    | *        | *      | *     | *         | *        | *        | 0          | 59     |
| Rhode Island         | *     | *    | #        | *      | *     | 0         | *        | *        | 0          | 354    |
| South Carolina       | 93    | *    | 3        | 269    | 18    | *         | #        | 126      | 0          | 509    |
| South Dakota         | 10    | 0    | #        | 109    | 10    | *         | 1        | *        | 0          | 135    |
| Tennessee            | 70    | #    | *        | 728    | 42    | *         | #        | 306      | 0          | 1,151  |
| Texas                | 735   | #    | *        | 1,564  | 338   | *         | 24       | 2,157    | 0          | 4,836  |
| Utah                 | 124   | *    | 1        | 278    | 19    | *         | 30       | *        | 0          | 617    |
| Vermont              | 53    | *    | #        | 93     | 4     | *         | 0        | *        | 0          | 152    |
| Virgin Islands       | 0     | 0    | *        | 0      | 0     | 0         | *        | 0        | 0          | *      |
| Virginia             | 257   | #    | 13       | 1,047  | *     | *         | 2        | 446      | 0          | 2,289  |
| Washington           | 210   | *    | 3        | 1,213  | 65    | *         | 2        | 415      | 0          | 1,908  |
| West Virginia        | 2     | 0    | #        | 206    | 1     | *         | *        | *        | 0          | 244    |
| Wisconsin            | 137   | 2    | 2        | 447    | 8     | 0         | 2        | 398      | 0          | 998    |
| Wyoming              | 17    | *    | *        | 81     | 1     | *         | 1        | 0        | 0          | 101    |
| Total                | 8,909 | 16   | 202      | 34,114 | 5,188 | #         | 145      | 17,272   | 3          | 65,849 |

<sup># =</sup> Rounds to Zero.

<sup>\* =</sup> Data withheld to maintain firm confidentiality. Figures may not sum to totals due to rounding.

Table 20 Percentage of Connections by Downstream Speed by State as of June 30, 2011 (Connections over 200 kbps in at least one direction)

|                      |                               | (                                 | Over 200 kbps Upstream a        | nd                              |                                  |
|----------------------|-------------------------------|-----------------------------------|---------------------------------|---------------------------------|----------------------------------|
| State                | % over 200 kbps<br>Downstream | % at least 768 kbps<br>Downstream | % at least 3 mbps<br>Downstream | % at least 6 mbps<br>Downstream | % at least 10 mbps<br>Downstream |
| Alabama              | 89.1                          | 70.9                              | 29.7                            | 23.0                            | 12.4                             |
| Alaska               | 90.0                          | 84.2                              | 25.2                            | 15.4                            | 10.3                             |
| American Samoa       | *                             | *                                 | *                               | *                               | *                                |
| Arizona              | 89.9                          | 69.8                              | 37.3                            | 29.1                            | 20.8                             |
| Arkansas             | 92.0                          | 76.6                              | 21.8                            | 13.6                            | 11.1                             |
| California           | 89.0                          | 74.2                              | 35.1                            | 25.9                            | 18.2                             |
| Colorado             | 91.9                          | 75.2                              | 39.1                            | 34.2                            | 22.0                             |
| Connecticut          | 91.3                          | 74.1                              | 37.8                            | 30.8                            | 22.4                             |
| Delaware             | 89.0                          | 69.8                              | 47.1                            | 41.1                            | 33.8                             |
| District of Columbia | 89.8                          | 69.0                              | 45.2                            | 38.8                            | 12.2                             |
| Florida              | 91.7                          | 82.0                              | 44.9                            | 34.9                            | 21.6                             |
| Georgia              | 89.5                          | 74.3                              | 37.0                            | 25.1                            | 15.7                             |
| Guam                 | *                             | *                                 | *                               | *                               | *                                |
| Hawaii               | 94.7                          | 82.8                              | 47.7                            | 31.2                            | 17.2                             |
| Idaho                | 87.4                          | 64.9                              | 35.1                            | 15.5                            | 5.3                              |
| Illinois             | 91.8                          | 78.4                              | 39.0                            | 27.4                            | 17.1                             |
| Indiana              | 88.7                          | 71.4                              | 33.4                            | 22.8                            | 16.6                             |
| Iowa                 | 90.1                          | 70.1                              | 47.1                            | 25.6                            | 7.8                              |
| Kansas               | 88.6                          | 74.6                              | 42.7                            | 29.0                            | 11.7                             |
| Kentucky             | 90.6                          | 80.7                              | 40.2                            | 26.0                            | 17.7                             |
| Louisiana            | 89.4                          | 79.6                              | 24.8                            | 17.5                            | 13.5                             |
| Maine                | 89.5                          | 76.9                              | 49.5                            | 34.5                            | 8.9                              |
| Maryland             | 88.5                          | 71.1                              | 44.1                            | 35.5                            | 29.8                             |
| Massachusetts        | 90.2                          | 73.0                              | 46.9                            | 39.8                            | 34.1                             |
| Michigan             | 87.8                          | 71.6                              | 40.2                            | 31.1                            | 16.6                             |
| Minnesota            | 90.0                          | 73.9                              | 41.4                            | 34.0                            | 21.1                             |
| Mississippi          | 93.0                          | 62.8                              | 20.3                            | 11.3                            | 4.9                              |
| Missouri             | 90.6                          | 80.4                              | 34.4                            | 22.6                            | 11.1                             |
| Montana              | 82.7                          | 55.5                              | 25.2                            | 19.9                            | 1.0                              |
| Nebraska             | 84.7                          | 59.7                              | 37.1                            | 23.8                            | 20.5                             |

**Table 20 - Continued** Percentage of Connections by Downstream Speed by State as of June 30, 2011 (Connections over 200 kbps in at least one direction)

|                      |                               | (                                 | Over 200 kbps Upstream a        | nd                              |                                  |
|----------------------|-------------------------------|-----------------------------------|---------------------------------|---------------------------------|----------------------------------|
| State                | % over 200 kbps<br>Downstream | % at least 768 kbps<br>Downstream | % at least 3 mbps<br>Downstream | % at least 6 mbps<br>Downstream | % at least 10 mbps<br>Downstream |
| Nevada               | 92.6                          | 80.9                              | 41.0                            | 27.5                            | 18.4                             |
| New Hampshire        | 87.9                          | 65.1                              | 46.9                            | 37.6                            | 33.1                             |
| New Jersey           | 88.9                          | 70.0                              | 45.3                            | 39.5                            | 35.1                             |
| New Mexico           | 87.9                          | 66.4                              | 26.9                            | 21.8                            | 6.7                              |
| New York             | 89.0                          | 72.9                              | 47.3                            | 38.4                            | 31.3                             |
| North Carolina       | 86.9                          | 68.5                              | 43.5                            | 30.7                            | 8.1                              |
| North Dakota         | 87.0                          | 63.2                              | 29.8                            | 19.8                            | 16.6                             |
| Northern Mariana Isl | *                             | *                                 | *                               | *                               | *                                |
| Ohio                 | 84.6                          | 63.9                              | 36.5                            | 26.2                            | 6.5                              |
| Oklahoma             | 93.1                          | 86.9                              | 32.8                            | 16.4                            | 13.0                             |
| Oregon               | 92.1                          | 77.3                              | 42.1                            | 34.9                            | 24.8                             |
| Pennsylvania         | 89.3                          | 72.5                              | 44.0                            | 32.4                            | 25.6                             |
| Puerto Rico          | 85.0                          | 78.4                              | 19.8                            | 9.4                             | 0.4                              |
| Rhode Island         | 90.9                          | 75.2                              | 50.8                            | 42.5                            | 36.2                             |
| South Carolina       | 86.0                          | 66.0                              | 36.7                            | 27.4                            | 14.3                             |
| South Dakota         | 86.4                          | 66.7                              | 30.5                            | 28.5                            | 22.5                             |
| Tennessee            | 88.0                          | 67.6                              | 35.1                            | 27.4                            | 19.6                             |
| Texas                | 92.3                          | 81.7                              | 36.0                            | 24.8                            | 10.8                             |
| Utah                 | 92.5                          | 77.1                              | 39.7                            | 32.1                            | 18.9                             |
| Vermont              | 87.6                          | 71.7                              | 41.3                            | 30.0                            | 15.8                             |
| Virgin Islands       | 92.5                          | 74.4                              | *                               | *                               | *                                |
| Virginia             | 88.4                          | 68.7                              | 42.5                            | 32.5                            | 24.8                             |
| Washington           | 91.7                          | 76.9                              | 41.4                            | 34.9                            | 26.3                             |
| West Virginia        | 91.6                          | 84.6                              | 46.7                            | 40.1                            | 19.1                             |
| Wisconsin            | 90.6                          | 77.7                              | 45.4                            | 30.1                            | 14.9                             |
| Wyoming              | 86.7                          | 57.6                              | 28.6                            | 22.9                            | 1.6                              |
| Total                | 89.7                          | 74.3                              | 39.2                            | 29.3                            | 18.9                             |

<sup>\* =</sup> Data withheld to maintain firm confidentiality.

Table 21 ADSL Connections by State 2007-2011 (Connections over 200 kbps in at least one direction, in thousands)

|                      | 2007  | 7     | 2008  | 3     | 2009  | )     | 2010  | )     | 2011  |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| State                | Jun   | Dec   | Jun   | Dec   | Jun   | Dec   | Jun   | Dec   | Jun   |
| Alabama              | 357   | 403   | 431   | 457   | 473   | 496   | 498   | 523   | 536   |
| Alaska               | 64    | 68    | 72    | 75    | 77    | 77    | 77    | 78    | 79    |
| American Samoa       | *     | *     | *     | *     | *     | *     | *     | *     | *     |
| Arizona              | 406   | 437   | 454   | 466   | 487   | 518   | 527   | 552   | 557   |
| Arkansas             | 227   | 249   | 267   | 273   | 298   | 308   | 314   | 330   | 337   |
| California           | 4,626 | 4,780 | 4,755 | 4,617 | 4,587 | 4,568 | 4,456 | 4,538 | 4,471 |
| Colorado             | 530   | 573   | 575   | 624   | 641   | 651   | 658   | 663   | *     |
| Connecticut          | *     | *     | *     | *     | *     | *     | *     | *     | *     |
| Delaware             | *     | *     | *     | *     | *     | *     | *     | *     | *     |
| District of Columbia | *     | *     | *     | *     | *     | *     | *     | *     | *     |
| Florida              | 1,960 | 2,046 | 2,045 | 2,005 | 1,962 | 1,988 | 2,006 | 2,070 | 2,104 |
| Georgia              | 1,219 | 1,307 | 1,361 | 1,240 | 1,251 | 1,256 | 1,129 | 1,413 | 1,435 |
| Guam                 | *     | *     | *     | *     | *     | *     | *     | *     | *     |
| Hawaii               | *     | *     | *     | *     | *     | *     | *     | *     | *     |
| Idaho                | 129   | 142   | 154   | 160   | 169   | 174   | 177   | 181   | 185   |
| Illinois             | 1,300 | 1,382 | 1,419 | 1,503 | 1,538 | 1,556 | 1,537 | 1,577 | 1,576 |
| Indiana              | 584   | 636   | 651   | 672   | 699   | 721   | 725   | 754   | 763   |
| Iowa                 | 271   | 298   | 322   | 336   | 351   | 362   | 373   | 376   | 381   |
| Kansas               | 225   | 236   | 241   | 243   | 250   | 260   | 264   | 271   | 273   |
| Kentucky             | 340   | 367   | 385   | 421   | 431   | 454   | 459   | 473   | 481   |
| Louisiana            | 306   | 333   | 354   | 385   | 390   | 404   | 397   | 396   | 407   |
| Maine                | 115   | 118   | 120   | 114   | 123   | 125   | 126   | 125   | 134   |
| Maryland             | 512   | 514   | 495   | 471   | 440   | 405   | *     | 350   | *     |
| Massachusetts        | *     | *     | *     | *     | *     | *     | *     | *     | *     |
| Michigan             | 690   | 733   | 749   | 780   | 835   | 857   | 860   | 902   | 922   |
| Minnesota            | 449   | 496   | 529   | 544   | 573   | 590   | 611   | 618   | 629   |
| Mississippi          | 180   | 202   | 220   | 229   | 240   | 255   | 240   | 263   | 267   |
| Missouri             | 618   | 683   | 712   | 727   | 767   | 805   | 811   | 846   | 862   |
| Montana              | 96    | 102   | 108   | 108   | 111   | 115   | 119   | 119   | 123   |
| Nebraska             | 124   | 135   | 143   | 151   | 158   | 164   | 167   | 169   | 173   |

**Table 21 - Continued ADSL Connections by State 2007-2011** (Connections over 200 kbps in at least one direction, in thousands)

|                      | 2007   | 7      | 2008   | 3      | 2009   | )      | 2010   | )      | 2011   |
|----------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| State                | Jun    | Dec    | Jun    | Dec    | Jun    | Dec    | Jun    | Dec    | Jun    |
| Nevada               | 207    | 220    | 225    | 222    | 225    | 229    | 232    | 242    | 245    |
| New Hampshire        | 98     | 100    | 97     | 91     | 91     | 86     | 84     | 85     | 87     |
| New Jersey           | 735    | 735    | 700    | 666    | 624    | 568    | 530    | 486    | 449    |
| New Mexico           | 180    | 200    | 217    | 231    | 242    | 250    | 259    | 266    | 271    |
| New York             | 1,182  | 1,184  | 1,169  | 1,122  | 1,100  | 1,046  | 1,010  | 957    | 928    |
| North Carolina       | 725    | 820    | 870    | 891    | 918    | 969    | 985    | 995    | 1,026  |
| North Dakota         | 51     | 56     | 60     | 65     | 64     | 67     | 67     | 69     | 71     |
| Northern Mariana Isl | *      | *      | *      | *      | *      | *      | *      | *      | *      |
| Ohio                 | 951    | 1,024  | 1,034  | 1,069  | 1,109  | 1,127  | 1,145  | 1,177  | 1,190  |
| Oklahoma             | 302    | 324    | 334    | 338    | 349    | 359    | 361    | 379    | 384    |
| Oregon               | 339    | 356    | 361    | 371    | 367    | 367    | 362    | 359    | 358    |
| Pennsylvania         | 1,126  | 1,191  | 1,209  | 1,231  | 1,246  | 1,232  | 1,202  | 1,159  | 1,131  |
| Puerto Rico          | *      | *      | *      | *      | *      | *      | *      | *      | *      |
| Rhode Island         | *      | *      | *      | *      | *      | *      | *      | *      | *      |
| South Carolina       | 323    | 359    | 386    | 400    | 412    | 428    | 437    | 434    | 452    |
| South Dakota         | 46     | 48     | 53     | 56     | 58     | 58     | 60     | 58     | 60     |
| Tennessee            | 447    | 499    | 535    | 541    | 549    | 559    | 570    | 557    | 576    |
| Texas                | 2,294  | 2,464  | 2,475  | 2,608  | 2,706  | 2,784  | 2,797  | 2,898  | 2,943  |
| Utah                 | 250    | 270    | 284    | 299    | 280    | 309    | 312    | 311    | 309    |
| Vermont              | 68     | 72     | 73     | 61     | 79     | 81     | 84     | 85     | 87     |
| Virgin Islands       | *      | *      | *      | *      | *      | *      | *      | *      | *      |
| Virginia             | 548    | 568    | 561    | 553    | 547    | 536    | 527    | 507    | 498    |
| Washington           | 569    | 592    | 600    | 599    | 596    | 593    | 589    | 582    | 583    |
| West Virginia        | 124    | 138    | 147    | 152    | 160    | 161    | 162    | *      | *      |
| Wisconsin            | 484    | 528    | 556    | 556    | 586    | 612    | 615    | 646    | 658    |
| Wyoming              | 50     | 53     | 55     | 57     | 58     | 58     | 59     | 59     | 59     |
| Total                | 27,793 | 29,449 | 29,964 | 30,198 | 30,631 | 30,987 | 30,759 | 31,470 | 31,610 |

<sup># =</sup> Rounds to Zero.

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

<sup>\* =</sup> Data withheld to maintain firm confidentiality.

Table 22 Cable Modem Connections by State 2007-2011 (Connections over 200 kbps in at least one direction, in thousands)

|                      | 2007  | 7     | 2008  | 3     | 2009  | )     | 2010  | )     | 2011  |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| State                | Jun   | Dec   | Jun   | Dec   | Jun   | Dec   | Jun   | Dec   | Jun   |
| Alabama              | 374   | 399   | 417   | 460   | 478   | 497   | 513   | 539   | 556   |
| Alaska               | *     | *     | *     | *     | *     | *     | *     | *     | *     |
| American Samoa       | 0     | 0     | 0     | 0     | 0     | 0     | 0     | *     | *     |
| Arizona              | 850   | 897   | 992   | 1,044 | 1,039 | 1,104 | 1,096 | 1,161 | 1,104 |
| Arkansas             | 205   | 214   | 236   | 227   | 252   | 262   | 267   | 278   | 288   |
| California           | 3,411 | 3,603 | 3,799 | 3,990 | 4,144 | 4,223 | 4,418 | 4,639 | 4,853 |
| Colorado             | 561   | 604   | 626   | 659   | 693   | 709   | 744   | 787   | 817   |
| Connecticut          | 513   | 550   | 576   | 615   | 626   | 640   | 672   | 673   | 713   |
| Delaware             | *     | *     | *     | *     | *     | *     | 158   | 156   | 164   |
| District of Columbia | *     | *     | *     | *     | *     | *     | *     | *     | *     |
| Florida              | 2,344 | 2,543 | 2,631 | 2,825 | 2,859 | 2,992 | 3,076 | 3,292 | 3,313 |
| Georgia              | 802   | 862   | 904   | 974   | 1,020 | 1,022 | 1,052 | 1,114 | 1,151 |
| Guam                 | 0     | *     | *     | *     | *     | *     | *     | *     | *     |
| Hawaii               | *     | *     | *     | *     | *     | *     | *     | *     | *     |
| Idaho                | 116   | 123   | 127   | 121   | 130   | 133   | 137   | 145   | 150   |
| Illinois             | 1,466 | 1,570 | 1,625 | 1,591 | 1,575 | 1,577 | 1,630 | 1,696 | 1,768 |
| Indiana              | 410   | 439   | 456   | 626   | 641   | 669   | 697   | 728   | 766   |
| Iowa                 | 268   | 287   | 309   | 330   | 344   | 360   | 376   | 389   | 395   |
| Kansas               | 351   | 369   | 380   | 415   | 419   | 435   | 434   | 441   | 447   |
| Kentucky             | 384   | 435   | 482   | 452   | 483   | 497   | 512   | 530   | 565   |
| Louisiana            | 446   | 485   | 481   | 518   | 544   | 559   | 562   | 586   | 593   |
| Maine                | 169   | 179   | 197   | 202   | 224   | 237   | 259   | 269   | 286   |
| Maryland             | 829   | 865   | 871   | 801   | 757   | 768   | 778   | 773   | 797   |
| Massachusetts        | 1,088 | 1,136 | 1,159 | 1,291 | 1,253 | 1,250 | 1,339 | 1,343 | 1,401 |
| Michigan             | 1,197 | 1,265 | 1,307 | 1,394 | 1,431 | 1,451 | 1,517 | 1,537 | 1,603 |
| Minnesota            | 571   | 608   | 622   | 666   | 685   | 701   | 739   | 776   | 800   |
| Mississippi          | 152   | 166   | 188   | 216   | 227   | 232   | 241   | 246   | 258   |
| Missouri             | 473   | 498   | 517   | 560   | 561   | 586   | 599   | 604   | 617   |
| Montana              | 74    | 83    | 90    | 92    | 102   | 108   | 113   | 119   | 127   |
| Nebraska             | 238   | 252   | 262   | 278   | 286   | 295   | 293   | 309   | 316   |

**Table 22 - Continued** Cable Modem Connections by State 2007-2011 (Connections over 200 kbps in at least one direction, in thousands)

|                      | 2007   | 7      | 2008   | }      | 2009   | 1      | 2010   | 1      | 2011   |
|----------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| State                | Jun    | Dec    | Jun    | Dec    | Jun    | Dec    | Jun    | Dec    | Jun    |
| Nevada               | *      | *      | *      | *      | *      | *      | *      | *      | *      |
| New Hampshire        | 230    | 240    | 250    | 285    | 295    | 303    | 329    | 325    | 340    |
| New Jersey           | 1,474  | 1,538  | 1,586  | 1,637  | 1,604  | 1,623  | 1,698  | 1,702  | 1,759  |
| New Mexico           | 117    | 127    | 137    | 146    | 155    | 158    | 168    | 176    | 190    |
| New York             | 3,164  | 3,342  | 3,548  | 3,749  | 3,850  | 3,886  | 3,982  | 4,013  | 4,091  |
| North Carolina       | 1,134  | 1,196  | 1,266  | 1,344  | 1,392  | 1,444  | 1,513  | 1,554  | 1,566  |
| North Dakota         | 76     | 80     | 83     | 85     | 88     | 93     | 90     | 101    | 96     |
| Northern Mariana Isl | 0      | *      | *      | *      | *      | *      | *      | *      | *      |
| Ohio                 | 1,406  | 1,498  | 1,627  | 1,705  | 1,757  | 1,813  | 1,862  | 1,895  | 1,943  |
| Oklahoma             | 348    | 373    | 382    | 408    | 429    | 432    | 436    | 468    | 474    |
| Oregon               | 490    | 531    | 554    | 517    | 528    | 542    | 576    | 608    | 640    |
| Pennsylvania         | 1,271  | 1,399  | 1,492  | 1,800  | 1,777  | 1,835  | 1,915  | 1,983  | 2,057  |
| Puerto Rico          | *      | *      | *      | *      | *      | *      | *      | *      | *      |
| Rhode Island         | *      | *      | *      | *      | *      | *      | *      | *      | *      |
| South Carolina       | 459    | 496    | 517    | 555    | 582    | 598    | 627    | 660    | 664    |
| South Dakota         | 101    | 111    | 115    | 122    | 122    | 127    | 118    | 134    | 124    |
| Tennessee            | 663    | 703    | 715    | 718    | 739    | 751    | 784    | 795    | 824    |
| Texas                | 2,082  | 2,183  | 2,214  | 1,971  | 2,280  | 2,383  | 2,456  | 2,459  | 2,578  |
| Utah                 | *      | *      | 212    | *      | 243    | 253    | 268    | 283    | 303    |
| Vermont              | *      | *      | *      | 71     | 80     | 83     | 93     | 97     | 104    |
| Virgin Islands       | 0      | 0      | 0      | 0      | 0      | 0      | 0      | 0      | 0      |
| Virginia             | 906    | 921    | 941    | 1,096  | 1,097  | 1,105  | 1,114  | 1,124  | 1,141  |
| Washington           | 862    | 909    | 944    | 998    | 1,102  | 1,106  | 1,186  | 1,239  | 1,296  |
| West Virginia        | 156    | 159    | 167    | 205    | 215    | 226    | 220    | 255    | 274    |
| Wisconsin            | 637    | 676    | 711    | 759    | 779    | 802    | 823    | 846    | 870    |
| Wyoming              | *      | *      | *      | 64     | 70     | 74     | 76     | 80     | 82     |
| Total                | 34,404 | 36,507 | 38,190 | 40,251 | 41,434 | 42,438 | 43,923 | 45,334 | 46,698 |

<sup># =</sup> Rounds to Zero.

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

<sup>\* =</sup> Data withheld to maintain firm confidentiality.

Table 23 Providers of Connections by Technology by State as of June 30, 2011 (Connections over 200 kbps in at least one direction)

| State                | ADSL | SDSL | Other<br>Wireline | Cable<br>Modem | Fiber | Satellite | Fixed<br>Wireless | Mobile<br>Wireless | Power Line<br>and Other | Total |
|----------------------|------|------|-------------------|----------------|-------|-----------|-------------------|--------------------|-------------------------|-------|
| Alabama              | 26   | 9    | 22                | 22             | 25    | *         | 16                | 6                  | *                       | 81    |
| Alaska               | 12   | 4    | 6                 | 4              | 5     | *         | 8                 | 6                  | 0                       | 22    |
| American Samoa       | *    | *    | 0                 | *              | *     | 0         | *                 | 0                  | 0                       | *     |
| Arizona              | 24   | 7    | 24                | 11             | 24    | 4         | 22                | 6                  | 0                       | 76    |
| Arkansas             | 21   | 8    | 12                | 17             | 15    | *         | 5                 | 5                  | 0                       | 53    |
| California           | 36   | 20   | 46                | 23             | 28    | *         | 35                | 10                 | 0                       | 123   |
| Colorado             | 34   | 10   | 31                | 17             | 24    | *         | 32                | 10                 | 0                       | 95    |
| Connecticut          | 8    | 8    | 19                | 8              | 14    | *         | *                 | 4                  | 0                       | 36    |
| Delaware             | 5    | 4    | 14                | 4              | 6     | *         | 0                 | 6                  | 0                       | 27    |
| District of Columbia | 10   | 8    | 23                | *              | 8     | *         | *                 | 5                  | 0                       | 34    |
| Florida              | 30   | 19   | 46                | 21             | 34    | *         | 23                | 7                  | 0                       | 99    |
| Georgia              | 34   | 16   | 35                | 34             | 42    | *         | 8                 | 8                  | 0                       | 104   |
| Guam                 | *    | *    | *                 | *              | 0     | 0         | *                 | *                  | 0                       | 5     |
| Hawaii               | 4    | 4    | 5                 | *              | 6     | *         | *                 | 5                  | 0                       | 19    |
| Idaho                | 25   | 6    | 18                | 13             | 20    | *         | 17                | 8                  | 0                       | 61    |
| Illinois             | 60   | 22   | 44                | 21             | 29    | *         | 51                | 11                 | 0                       | 144   |
| Indiana              | 36   | 13   | 25                | 15             | 39    | *         | 42                | 7                  | *                       | 97    |
| lowa                 | 130  | 31   | 27                | 43             | 72    | *         | 67                | 10                 | 0                       | 210   |
| Kansas               | 41   | 14   | 22                | 27             | 38    | *         | 31                | 11                 | 0                       | 97    |
| Kentucky             | 27   | 10   | 20                | 29             | 21    | *         | 18                | 9                  | 0                       | 89    |
| Louisiana            | 18   | 7    | 20                | 16             | 17    | *         | 6                 | 6                  | 0                       | 58    |
| Maine                | 13   | 9    | 11                | 6              | 10    | *         | *                 | 5                  | 0                       | 29    |
| Maryland             | 15   | 10   | 29                | 12             | 15    | *         | 8                 | 6                  | 0                       | 58    |
| Massachusetts        | 14   | 9    | 29                | 11             | 12    | *         | 7                 | 6                  | *                       | 56    |
| Michigan             | 39   | 20   | 35                | 17             | 22    | *         | 30                | 9                  | *                       | 98    |
| Minnesota            | 56   | 18   | 28                | 19             | 44    | *         | 32                | 6                  | 0                       | 108   |
| Mississippi          | 20   | 5    | 19                | 12             | 11    | *         | 5                 | 6                  | 0                       | 53    |
| Missouri             | 39   | 15   | 26                | 22             | 26    | *         | 36                | 7                  | 0                       | 102   |
| Montana              | 24   | 10   | 14                | 7              | 13    | *         | 16                | *                  | 0                       | 49    |
| Nebraska             | 34   | 9    | 11                | 21             | 27    | *         | 28                | 8                  | 0                       | 77    |

Table 23 - Continued Providers of Connections by Technology by State as of June 30, 2011 (Connections over 200 kbps in at least one direction)

| State                | ADSL | SDSL | Other<br>Wireline | Cable<br>Modem | Fiber | Satellite | Fixed<br>Wireless | Mobile<br>Wireless | Power Line<br>and Other | Total |
|----------------------|------|------|-------------------|----------------|-------|-----------|-------------------|--------------------|-------------------------|-------|
| Nevada               | 17   | 9    | 20                | 5              | 17    | *         | 7                 | 7                  | 0                       | 50    |
| New Hampshire        | 13   | 8    | 17                | 6              | 11    | *         | 4                 | 6                  | 0                       | 41    |
| New Jersey           | 20   | 12   | 37                | 6              | 13    | *         | 5                 | 6                  | 0                       | 56    |
| New Mexico           | 23   | 8    | 16                | 8              | 11    | *         | 15                | 10                 | 0                       | 53    |
| New York             | 44   | 16   | 39                | 19             | 26    | *         | 16                | 6                  | *                       | 98    |
| North Carolina       | 26   | 9    | 29                | 24             | 28    | *         | 9                 | 9                  | *                       | 78    |
| North Dakota         | 32   | 10   | 15                | 7              | 18    | *         | 15                | 4                  | 0                       | 49    |
| Northern Mariana Isl | *    | 0    | *                 | *              | *     | 0         | *                 | *                  | 0                       | *     |
| Ohio                 | 41   | 17   | 31                | 29             | 33    | *         | 24                | 8                  | *                       | 106   |
| Oklahoma             | 40   | 7    | 22                | 14             | 16    | *         | 14                | 11                 | 0                       | 79    |
| Oregon               | 40   | 14   | 29                | 16             | 33    | *         | 20                | 6                  | 0                       | 84    |
| Pennsylvania         | 36   | 12   | 38                | 25             | 24    | *         | 11                | 7                  | *                       | 93    |
| Puerto Rico          | *    | *    | 6                 | *              | *     | *         | *                 | 5                  | 0                       | 15    |
| Rhode Island         | 6    | 4    | 11                | 4              | 6     | *         | *                 | 5                  | 0                       | 24    |
| South Carolina       | 21   | 5    | 20                | 16             | 18    | *         | 5                 | 8                  | *                       | 52    |
| South Dakota         | 30   | 6    | 12                | 7              | 20    | *         | 20                | 5                  | 0                       | 56    |
| Tennessee            | 25   | 13   | 22                | 16             | 23    | *         | 13                | 7                  | 0                       | 76    |
| Texas                | 70   | 24   | 54                | 33             | 46    | *         | 57                | 10                 | 0                       | 165   |
| Utah                 | 17   | 9    | 20                | 8              | 17    | *         | 13                | 7                  | 0                       | 51    |
| Vermont              | 10   | 5    | 14                | 6              | 8     | *         | *                 | 4                  | 0                       | 34    |
| Virgin Islands       | *    | 0    | *                 | 0              | 0     | *         | *                 | *                  | 0                       | 7     |
| Virginia             | 28   | 15   | 31                | 15             | 21    | *         | 16                | 8                  | *                       | 77    |
| Washington           | 30   | 9    | 28                | 16             | 29    | *         | 24                | 7                  | 0                       | 83    |
| West Virginia        | 8    | *    | 18                | 12             | 9     | *         | 4                 | 8                  | 0                       | 44    |
| Wisconsin            | 49   | 17   | 25                | 19             | 27    | *         | 25                | 8                  | *                       | 98    |
| Wyoming              | 12   | 6    | 7                 | 4              | 6     | *         | 11                | 6                  | 0                       | 35    |
| Total                | 866  | 252  | 262               | 401            | 577   | 5         | 668               | 64                 | 4                       | 1,620 |

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

Table 24 Percentage of Residential End-User Premises with Access to Services over 200 kbps in at Least One Direction by State as of June 30, 2011

| State                | xDSL Availability Where ILECs<br>Offer Local Telephone Service | Cable Modem Availability Where Cable<br>Systems Offer Cable TV Service |
|----------------------|--|--|
| Alabama              | 82   | 94   |
| Alaska               | 76   | *  |
| American Samoa       | *  | *  |
| Arizona              | 90   | 99   |
| Arkansas             | 81   | 83   |
| California           | 88   | 99   |
| Colorado             | *  | 98   |
| Connecticut          | *  | 100  |
| Delaware             | *  | 99   |
| District of Columbia | *  | *  |
| Florida              | 89   | 97   |
| Georgia              | 94   | 94   |
| Guam                 | *  | *  |
| Hawaii               | *  | *  |
| Idaho                | 87   | 98   |
| Illinois             | 88   | 97   |
| Indiana              | 87   | 97<br>97   |
| lowa                 | 85   | 93   |
| lowa<br>Kansas       |  |  |
|                      | 87   | 92   |
| Kentucky             | 88   | 93   |
| Louisiana            | 85   | 94   |
| Maine                | 85   | 96   |
| Maryland             | *  | 99   |
| Massachusetts        | *  | 100  |
| Michigan             | 79   | 98   |
| Minnesota            | 91   | 97   |
| Mississippi          | 80   | 91   |
| Missouri             | 85   | 96   |
| Montana              | 84   | 94   |
| Nebraska             | 87   | 95   |
| Nevada               | 93   | *  |
| New Hampshire        | 87   | 98   |
| New Jersey           | 80   | 100  |
| New Mexico           | 88   | 93   |
| New York             | 76   | 100  |
| North Carolina       | 94   | 95   |
| North Dakota         | 90   | 92   |
| Northern Mariana Isl | *  | *  |
| Ohio                 | 88   | 95   |
| Offic<br>Oklahoma    |  |  |
|                      | 83   | 93   |
| Oregon               | 91   | 98   |
| Pennsylvania         | 75<br>*  | 97   |
| Puerto Rico          |  |  |
| Rhode Island         | *  | *  |
| South Carolina       | 90   | 95   |
| South Dakota         | 82   | 88   |
| Tennessee            | 85   | 98   |
| Texas                | 83   | 98   |
| Utah                 | 95   | 94   |
| Vermont              | 91   | 71   |
| Virgin Islands       | *  | 0  |
| Virginia             | 67   | 96   |
| Washington           | 89   | 97   |
| West Virginia        | *  | 93   |
| Wisconsin            | 87   | 98   |
| Wyoming              | 83   | 93   |
| Total                | 84   | 97   |

<sup>\* =</sup> Data withheld to maintain firm confidentiality.

Note: This table summarizes responses to Form 477 questions about service availability, as opposed to subscribership. xDSL includes both asymmetric and symmetric DSL. Each state-specific estimate is a weighted average of the availability percentages that ILECs or cable system operators report for the areas they serve. Reported xDSL availability is weighted by ILEC end-user switched access lines and VoIP lines. Reported cable modem availability is weighted by cable TV subscribers. The weighted averages include ILECs or cable system operators that report no availability. Figures are presented to the nearest percent.

Source: FCC Form 477, Parts I and II; Warren Communications News, Inc., Television & Cable Factbook: Online (Cable General Information, February 2010).

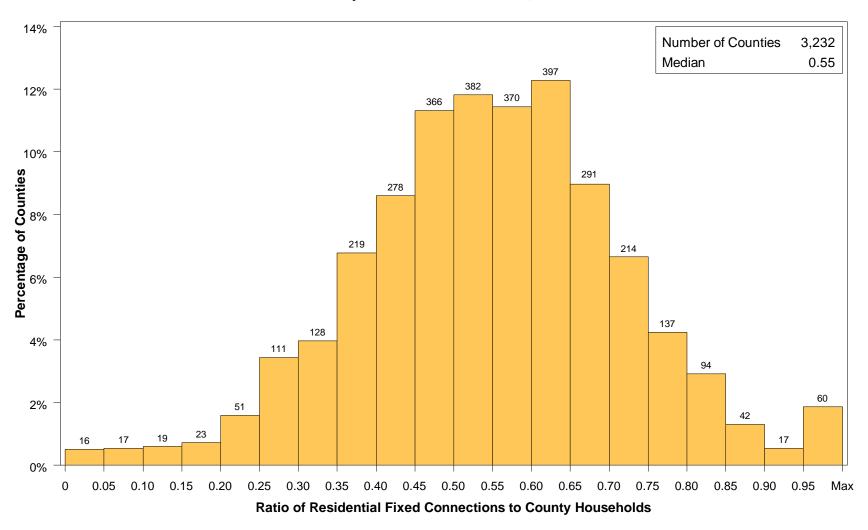
## **Detailed Summary Statistics: Counties and Census Tracts**

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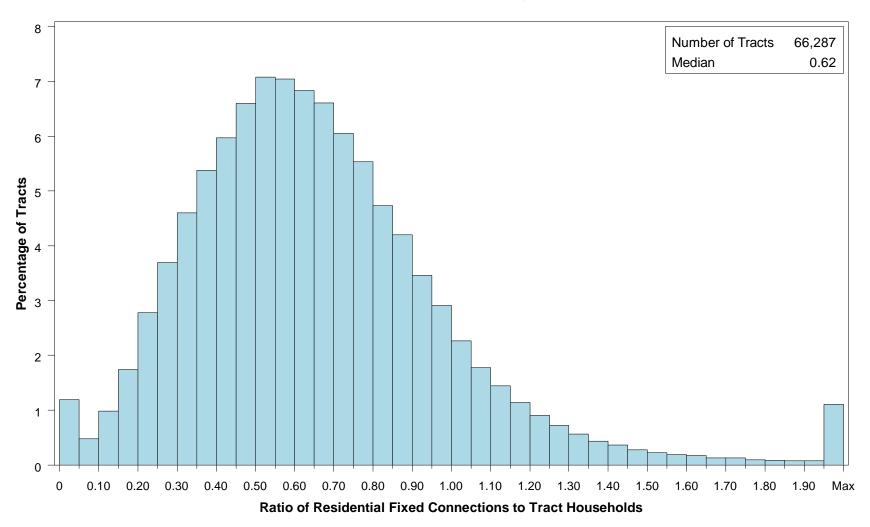
Note: Ratios over 1 were set to 1. See Technical Notes at the end of the report. Sources: FCC Form 477, Part VI; Geolytics 2010 Block-Level Estimates; and Census 2000.

Table 25 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, 2011

|                |       |  | Ratio  | of Reside   | ntial Fixed   | l Connecti  | ons to Cou  | ınty House  | eholds  |  |                 |
|----------------|-------|--|--|---|---|---|---|---|---|--|-----------------|
| Technology     | Zero  | Greater<br>than 0<br>and no<br>more<br>than 5% | Greater<br>than 5<br>and no<br>more<br>than<br>10% | Greater<br>than 10<br>and no<br>more<br>than<br>20% | Greater<br>than 20<br>and no<br>more<br>than<br>30% | Greater<br>than 30<br>and no<br>more<br>than<br>40% | Greater<br>than 40<br>and no<br>more<br>than<br>50% | Greater<br>than 50<br>and no<br>more<br>than<br>60% | Greater<br>than 60<br>and no<br>more<br>than<br>80% | Greater<br>than 80<br>and no<br>more<br>than<br>100% | 100% or<br>more |
| aDSL           | 0.7   | 2.4  | 5.1  | 26.7  | 29.0  | 20.7  | 9.5   | 3.5   | 1.6   | 0.4  | 0.3             |
| sDSL           | 83.1  | 15.8   | 0.7  | 0.3   | 0.1   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0  | 0.0             |
| Other Wireline | 95.3  | 4.5  | 0.1  | 0.1   | 0.1   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0  | 0.0             |
| Cable Modem    | 13.8  | 9.3  | 10.2   | 18.4  | 18.0  | 14.1  | 9.6   | 4.5   | 1.9   | 0.2  | 0.1             |
| FTTP           | 61.9  | 27.6   | 3.6  | 2.9   | 2.0   | 0.9   | 0.7   | 0.2   | 0.2   | 0.0  | 0.0             |
| Satellite      | 0.7   | 83.7   | 12.7   | 2.7   | 0.1   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0  | 0.0             |
| Fixed Wireless | 48.1  | 40.9   | 6.6  | 3.5   | 0.6   | 0.2   | 0.1   | 0.1   | 0.0   | 0.0  | 0.0             |
| Power Line     | 99.5  | 0.5  | 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   | 0.4  | 0.5  | 1.3   | 5.0   | 10.7  | 19.9  | 23.3  | 32.1  | 5.3  | 1.3             |

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 2010 Block-Level Estimates; and Census 2000.

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, 2011



Note: Ratios over 2 were set to 2. See Technical Notes at the end of the report. Sources: FCC Form 477, Part VI; Geolytics 2010 Block-Level Estimates; and Census 2000.

Table 26 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, 2011

|                |       |  | Ratio  | of Reside   | ential Fixe   | d Connect   | ions to Tra   | act House   | holds   |  |                 |
|----------------|-------|--|--|---|---|---|---|---|---|--|-----------------|
| Technology     | Zero  | Greater<br>than 0<br>and no<br>more<br>than 5% | Greater<br>than 5<br>and no<br>more<br>than<br>10% | Greater<br>than 10<br>and no<br>more<br>than<br>20% | Greater<br>than 20<br>and no<br>more<br>than<br>30% | Greater<br>than 30<br>and no<br>more<br>than<br>40% | Greater<br>than 40<br>and no<br>more<br>than<br>50% | Greater<br>than 50<br>and no<br>more<br>than<br>60% | Greater<br>than 60<br>and no<br>more<br>than<br>80% | Greater<br>than 80<br>and no<br>more<br>than<br>100% | 100% or<br>more |
| aDSL           | 4.9   | 9.9  | 10.4   | 25.1  | 20.6  | 13.7  | 7.7   | 3.6   | 2.6   | 0.7  | 0.8             |
| sDSL           | 95.7  | 4.0  | 0.1  | 0.1   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0  | 0.0             |
| Other Wireline | 99.0  | 0.9  | 0.0  | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0  | 0.0             |
| Cable Modem    | 6.2   | 3.8  | 3.8  | 12.4  | 16.6  | 16.7  | 14.6  | 10.8  | 10.1  | 2.9  | 2.1             |
| FTTP           | 79.8  | 7.9  | 1.7  | 2.7   | 2.1   | 1.7   | 1.3   | 1.0   | 1.2   | 0.3  | 0.3             |
| Satellite      | 46.5  | 47.9   | 3.9  | 1.5   | 0.2   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0  | 0.0             |
| Fixed Wireless | 84.6  | 12.2   | 1.7  | 1.1   | 0.3   | 0.1   | 0.0   | 0.0   | 0.0   | 0.0  | 0.0             |
| Power Line     | 99.9  | 0.1  | 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          | 0.8   | 0.4  | 0.5  | 2.7   | 6.5   | 10.0  | 12.6  | 14.1  | 25.0  | 15.3   | 12.1            |

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 2010 Block-Level Estimates; and Census 2000.

Table 27 Percentage of Census Tracts with Residential Fixed Connections by Technology as of June 30, 2011 (Connections over 200 kbps in at least one direction)

|                                     |      |      |           | Number of I | Providers |      |     |                  |
|-------------------------------------|------|------|-----------|-------------|-----------|------|-----|------------------|
| Technology                          | Zero | One  | Two Three |             | Four      | Five | Six | Seven or<br>More |
| aDSL                                | 4.9  | 46.1 | 35.2      | 11.6        | 1.9       | 0.3  | 0.0 | 0.0              |
| sDSL                                | 95.7 | 4.0  | 0.2       | 0.0         | 0.0       | 0.0  | 0.0 | 0.0              |
| Other Wireline                      | 99.0 | 1.0  | 0.0       | 0.0         | 0.0       | 0.0  | 0.0 | 0.0              |
| Cable Modem                         | 6.2  | 80.7 | 12.4      | 0.7         | 0.0       | 0.0  | 0.0 | 0.0              |
| FTTP                                | 79.8 | 19.6 | 0.6       | 0.1         | 0.0       | 0.0  | 0.0 | 0.0              |
| Satellite                           | 46.5 | 21.8 | 28.1      | 3.6         | 0.0       | 0.0  | 0.0 | 0.0              |
| Fixed Wireless                      | 84.6 | 12.0 | 2.8       | 0.6         | 0.1       | 0.0  | 0.0 | 0.0              |
| Power Line                          | 99.9 | 0.1  | 0.0       | 0.0         | 0.0       | 0.0  | 0.0 | 0.0              |
| aDSL and/or Cable Modem and/or FTTP | 1.1  | 6.2  | 39.4      | 34.5        | 14.8      | 3.4  | 0.6 | 0.1              |
| Any Technology                      | 0.8  | 2.6  | 17.8      | 25.5        | 25.0      | 15.9 | 7.6 | 4.8              |

Note: Figures may not sum to totals due to rounding. Sources: FCC Form 477, Part VI and Census 2000.

Table 28 Distribution of Counties by Ratio of Residential Fixed Connections to County Households by State as of June 30, 2011 (Connections over 200 kbps in at least one direction)

|                      |          |      | Rati  | io of Residen                                | tial Fixed Con                                | nections over                                 | 200 kbps in a                                 | nt Least One L                                | Direction to Co                               | ounty Househ                                  | olds   |                 |
|----------------------|----------|------|---|--|---|---|---|---|---|---|--|-----------------|
| State                | Counties | Zero | Greater<br>than 0 and<br>no more<br>than 5% | Greater<br>than 5 and<br>no more<br>than 10% | Greater<br>than 10 and<br>no more<br>than 20% | Greater<br>than 20 and<br>no more<br>than 30% | Greater<br>than 30 and<br>no more<br>than 40% | Greater<br>than 40 and<br>no more<br>than 50% | Greater<br>than 50 and<br>no more<br>than 60% | Greater<br>than 60 and<br>no more<br>than 80% | Greater<br>than 80 and<br>no more<br>than 100% | 100% or<br>more |
| Alabama              | 67       | 0    | 0   | 0  | 2   | 5   | 12  | 25  | 13  | 9   | 1  | 0               |
| Alaska               | 27       | 0    | 0   | 0  | 3   | 1   | 2   | 4   | 4   | 11  | 2  | 0               |
| American Samoa       | 5        | 3    | 0   | 0  | 1   | 1   | 0   | 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   | 24  | 32  | 11  | 6   | 0  | 0               |
| California           | 58       | 0    | 0   | 0  | 1   | 0   | 0   | 6   | 12  | 30  | 7  | 2               |
| Colorado             | 64       | 0    | 0   | 0  | 0   | 1   | 2   | 6   | 19  | 22  | 10   | 4               |
| Connecticut          | 8        | 0    | 0   | 0  | 0   | 0   | 0   | 0   | 0   | 3   | 5  | 0               |
| Delaware             | 3        | 0    | 0   | 0  | 0   | 0   | 0   | 0   | 0   | 2   | 1  | 0               |
| District of Columbia | 1        | 0    | 0   | 0  | 0   | 0   | 0   | 0   | 0   | 1   | 0  | 0               |
| Florida              | 67       | 0    | 0   | 0  | 0   | 2   | 2   | 14  | 7   | 36  | 5  | 1               |
| Georgia              | 159      | 0    | 11  | 9  | 11  | 14  | 14  | 25  | 19  | 34  | 18   | 4               |
| Guam                 | 1        | 0    | 0   | 0  | 0   | 0   | 0   | 0   | 0   | 0   | 0  | 1               |
| Hawaii               | 5        | 0    | 1   | 0  | 0   | 0   | 0   | 0   | 0   | 2   | 2  | 0               |
| Idaho                | 44       | 0    | 0   | 0  | 2   | 1   | 3   | 9   | 11  | 18  | 0  | 0               |
| Illinois             | 102      | 0    | 0   | 0  | 1   | 3   | 12  | 24  | 25  | 31  | 3  | 3               |
| Indiana              | 92       | 0    | 0   | 0  | 0   | 0   | 10  | 27  | 29  | 23  | 2  | 1               |
| Iowa                 | 99       | 0    | 0   | 0  | 0   | 0   | 0   | 7   | 45  | 46  | 1  | 0               |
| Kansas               | 105      | 0    | 0   | 0  | 0   | 0   | 4   | 17  | 40  | 40  | 4  | 0               |
| Kentucky             | 120      | 0    | 0   | 0  | 1   | 9   | 16  | 31  | 34  | 29  | 0  | 0               |
| Louisiana            | 64       | 0    | 0   | 0  | 0   | 6   | 12  | 15  | 15  | 15  | 1  | 0               |
| Maine                | 16       | 0    | 0   | 0  | 0   | 0   | 0   | 0   | 2   | 11  | 3  | 0               |
| Maryland             | 24       | 0    | 0   | 0  | 0   | 0   | 1   | 4   | 2   | 11  | 5  | 1               |
| Massachusetts        | 14       | 0    | 0   | 0  | 0   | 0   | 0   | 0   | 0   | 8   | 3  | 3               |
| Michigan             | 83       | 0    | 0   | 0  | 1   | 5   | 5   | 18  | 19  | 33  | 1  | 1               |
| Minnesota            | 87       | 0    | 0   | 0  | 0   | 0   | 2   | 9   | 26  | 47  | 3  | 0               |
| Mississippi          | 82       | 0    | 0   | 1  | 4   | 26  | 26  | 14  | 3   | 7   | 0  | 1               |
| Missouri             | 115      | 0    | 0   | 1  | 1   | 3   | 16  | 46  | 30  | 16  | 2  | 0               |
| Montana              | 56       | 0    | 0   | 0  | 0   | 0   | 1   | 10  | 20  | 24  | 1  | 0               |
| Nebraska             | 93       | 0    | 0   | 0  | 0   | 0   | 1   | 24  | 27  | 40  | 1  | 0               |

Table 28 - Continued Distribution of Counties by Ratio of Residential Fixed Connections to County Households by State as of June 30, 2011 (Connections over 200 kbps in at least one direction)

|                      |          |      | Rati                  | o of Residen          | tial Fixed Con      | nections over       | 200 kbps in a       | nt Least One I      | Direction to Co     | ounty Househ        | olds                 |                 |
|----------------------|----------|------|-----------------------|-----------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|----------------------|-----------------|
|                      |          |      | Greater<br>than 0 and | Greater<br>than 5 and |                     |                     |                     |                     |                     |                     |                      | 4000/           |
| State                | Counties | Zero | no more<br>than 5%    | no more<br>than 10%   | no more<br>than 20% | no more<br>than 30% | no more<br>than 40% | no more<br>than 50% | no more<br>than 60% | no more<br>than 80% | no more<br>than 100% | 100% or<br>more |
| Nevada               | 17       | 0    | 0                     | 0                     | 1                   | 0                   | 4                   | 3                   | 2                   | 7                   | 0                    | 0               |
| New Hampshire        | 10       | 0    | 0                     | 0                     | 0                   | 0                   | 0                   | 0                   | 1                   | 6                   | 3                    | 0               |
| New Jersey           | 21       | 0    | 0                     | 0                     | 0                   | 0                   | 0                   | 0                   | 1                   | 8                   | 11                   | 1               |
| New Mexico           | 33       | 0    | 0                     | 0                     | 0                   | 3                   | 6                   | 7                   | 7                   | 9                   | 1                    | 0               |
| New York             | 62       | 0    | 0                     | 0                     | 0                   | 0                   | 0                   | 0                   | 6                   | 41                  | 11                   | 4               |
| North Carolina       | 100      | 0    | 0                     | 0                     | 0                   | 0                   | 2                   | 25                  | 36                  | 28                  | 6                    | 3               |
| North Dakota         | 53       | 0    | 0                     | 0                     | 0                   | 0                   | 3                   | 2                   | 13                  | 31                  | 2                    | 2               |
| Northern Mariana Isl | 4        | 1    | 0                     | 0                     | 1                   | 2                   | 0                   | 0                   | 0                   | 0                   | 0                    | 0               |
| Ohio                 | 88       | 0    | 0                     | 0                     | 0                   | 0                   | 5                   | 13                  | 20                  | 47                  | 2                    | 1               |
| Oklahoma             | 77       | 0    | 0                     | 0                     | 0                   | 9                   | 18                  | 22                  | 17                  | 10                  | 0                    | 1               |
| Oregon               | 36       | 0    | 0                     | 0                     | 0                   | 0                   | 1                   | 7                   | 13                  | 15                  | 0                    | 0               |
| Pennsylvania         | 67       | 0    | 0                     | 0                     | 0                   | 0                   | 4                   | 3                   | 12                  | 36                  | 8                    | 4               |
| Puerto Rico          | 78       | 0    | 0                     | 0                     | 2                   | 18                  | 26                  | 27                  | 1                   | 4                   | 0                    | 0               |
| Rhode Island         | 5        | 0    | 0                     | 0                     | 0                   | 0                   | 0                   | 0                   | 0                   | 1                   | 3                    | 1               |
| South Carolina       | 46       | 0    | 0                     | 0                     | 0                   | 4                   | 10                  | 7                   | 14                  | 9                   | 2                    | 0               |
| South Dakota         | 66       | 0    | 0                     | 0                     | 1                   | 2                   | 3                   | 12                  | 21                  | 24                  | 3                    | 0               |
| Tennessee            | 95       | 0    | 0                     | 0                     | 1                   | 8                   | 20                  | 31                  | 26                  | 8                   | 1                    | 0               |
| Texas                | 254      | 0    | 0                     | 2                     | 1                   | 21                  | 46                  | 64                  | 59                  | 51                  | 7                    | 3               |
| Utah                 | 29       | 0    | 0                     | 0                     | 0                   | 0                   | 2                   | 1                   | 8                   | 14                  | 4                    | 0               |
| Vermont              | 14       | 0    | 0                     | 0                     | 0                   | 0                   | 0                   | 1                   | 2                   | 8                   | 3                    | 0               |
| Virgin Islands       | 3        | 0    | 0                     | 0                     | 0                   | 1                   | 1                   | 0                   | 1                   | 0                   | 0                    | 0               |
| Virginia             | 134      | 0    | 0                     | 3                     | 7                   | 12                  | 18                  | 24                  | 30                  | 26                  | 14                   | 0               |
| Washington           | 39       | 0    | 0                     | 0                     | 0                   | 2                   | 3                   | 3                   | 5                   | 23                  | 3                    | 0               |
| West Virginia        | 55       | 0    | 0                     | 0                     | 0                   | 1                   | 6                   | 16                  | 20                  |                     | 0                    | 0               |
| Wisconsin            | 72       | 0    | 0                     | 1                     | 0                   | 0                   | 1                   | 5                   | 14                  | 46                  | 5                    | 0               |
| Wyoming              | 23       | 0    | 0                     | 0                     | 0                   | 0                   | 1                   | 4                   | 6                   | 11                  | 1                    | 0               |
| Total                | 3,232    | 4    | 12                    | 17                    | 42                  | 162                 | 347                 | 644                 | 753                 | 1038                | 171                  | 42              |

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 2010 Block-Level Estimates (Households for U.S. and District of Columbia); Census 2000 (Households for Puerto Rico, American Samoa, Guam, Northern Mariana Islands and U.S. Virgin Islands).

Table 29 Distribution of Census Tracts by Ratio of Residential Fixed Connections to Tract Households by State as of June 30, 2011 (Connections over 200 kbps in at least one direction)

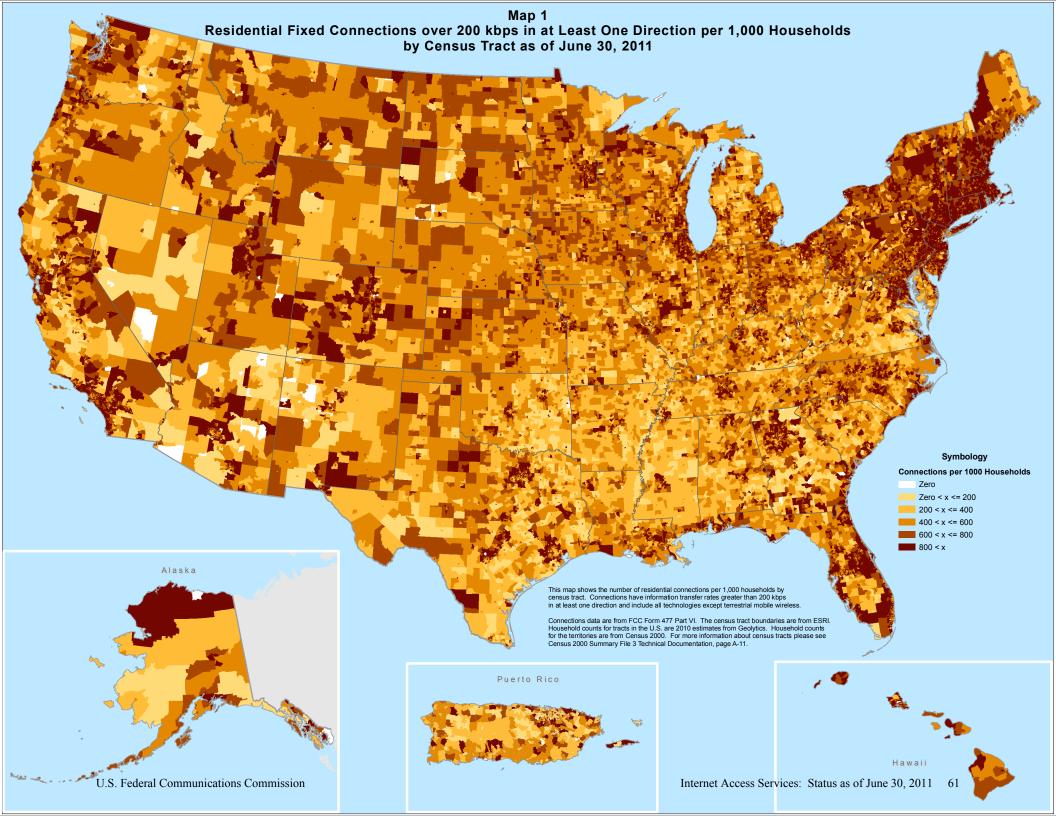
| -                    |        |      | Ra                               | tio of Resider                   | ntial Fixed Co | nnections ove | r 200 kbps in | at Least One | Direction to T | ract Househo                      | lds       |         |
|----------------------|--------|------|----------------------------------|----------------------------------|----------------|---------------|---------------|--------------|----------------|-----------------------------------|-----------|---------|
| 0                    |        | _    | Greater<br>than 0 and<br>no more | Greater<br>than 5 and<br>no more | no more        | no more       | no more       | no more      | no more        | Greater<br>than 60 and<br>no more | no more   | 100% or |
| State                | Tracts | Zero | than 5%                          | than 10%                         | than 20%       | than 30%      | than 40%      | than 50%     | than 60%       | than 80%                          | than 100% | more    |
| Alabama              | 1,081  | 0    | 5                                | 4                                | 54             | 122           | 208           | 192          |                | 198                               | 93        | 62      |
| Alaska               | 158    | 2    | 0                                | 2                                | 9              | 7             | 5             | 15           | 15             | 53                                | 36        | 14      |
| American Samoa       | 21     | 5    | 10                               | 1                                | 1              | 1             | 0             | 0            |                | 1                                 | 0         | 1       |
| Arizona              | 1,107  | 15   | 10                               | 16                               | 53             | 85            | 109           | 144          | 166            | 254                               | 127       | 128     |
| Arkansas             | 624    | 1    | 2                                | 6                                | 33             | 94            | 124           | 120          | 96             | 82                                | 38        | 28      |
| California           | 7,049  | 41   | 15                               | 13                               |                | 248           | 431           | 743          |                | 2,026                             | 1,515     | 1,007   |
| Colorado             | 1,075  | 15   | 1                                | 0                                | _              | 36            | 70            | 129          | 167            | 296                               | 181       | 172     |
| Connecticut          | 815    | 3    | 0                                | 0                                | 0              | 17            | 30            | 52           |                | 234                               | 295       | 108     |
| Delaware             | 197    | 1    | 0                                | 1                                | 6              | 17            | 19            | 24           | 20             | 29                                | 26        | 54      |
| District of Columbia | 188    | 7    | 1                                | 1                                | 0              | 5             | 12            | 23           | 17             | 70                                | 26        | 26      |
| Florida              | 3,153  | 9    | 5                                | 5                                | 33             | 123           | 270           | 401          | 449            | 807                               | 504       | 547     |
| Georgia              | 1,618  | 11   | 56                               | 27                               | 83             | 156           | 184           | 198          | 191            | 313                               | 197       | 202     |
| Guam                 | 56     | 9    | 0                                | 0                                | 1              | 2             | 3             | 1            | 2              | 7                                 | 7         | 24      |
| Hawaii               | 286    | 7    | 1                                | 0                                | 1              | 5             | 2             | 13           | 30             | 112                               | 76        | 39      |
| Idaho                | 280    | 1    | 3                                | 1                                | 6              | 12            | 41            | 59           | 50             | 58                                | 23        | 26      |
| Illinois             | 2,964  | 16   | 7                                | 9                                | 53             | 181           | 344           | 379          | 425            | 862                               | 429       | 259     |
| Indiana              | 1,412  | 3    | 5                                | 3                                | 26             | 86            | 202           | 242          | 254            | 359                               | 139       | 93      |
| Iowa                 | 793    | 2    | 1                                | 0                                | 2              | 15            | 45            | 120          | 199            | 306                               | 70        | 33      |
| Kansas               | 727    | 7    | 2                                | 0                                | 6              | 23            | 73            | 120          | 132            | 220                               | 78        | 66      |
| Kentucky             | 994    | 2    | 4                                | 4                                | 30             | 79            | 128           | 183          | 190            | 229                               | 88        | 57      |
| Louisiana            | 1,106  | 6    | 3                                | 5                                | 38             | 133           | 164           | 186          | 155            | 258                               | 111       | 47      |
| Maine                | 344    | 0    | 0                                | 0                                | 0              | 3             | 10            | 27           | 42             | 156                               | 72        | 34      |
| Maryland             | 1,216  | 6    | 3                                | 5                                | 49             | 81            | 90            | 94           | 115            | 289                               | 236       | 248     |
| Massachusetts        | 1,361  | 5    | 0                                | 1                                | 8              | 71            | 111           | 110          | 118            | 285                               | 374       | 278     |
| Michigan             | 2,716  | 16   | 5                                | 7                                | 108            | 211           | 254           | 305          | 365            | 737                               | 459       | 249     |
| Minnesota            | 1,300  | 6    | 1                                | 3                                | 8              | 33            | 80            | 154          | 242            | 437                               | 214       | 122     |
| Mississippi          | 605    | 0    | 0                                | 7                                | 43             | 132           | 150           | 88           | 63             | 75                                | 25        | 22      |
| Missouri             | 1,320  | 10   | 3                                | 9                                | 43             | 125           | 176           | 201          | 230            | 284                               | 153       | 86      |
| Montana              | 270    | 6    | 4                                | 1                                | 6              | 6             | 22            | 36           | 55             | 95                                | 20        | 19      |
| Nebraska             | 503    | 3    | 2                                | 0                                | 2              | 12            | 43            | 86           | 103            | 151                               | 53        | 48      |

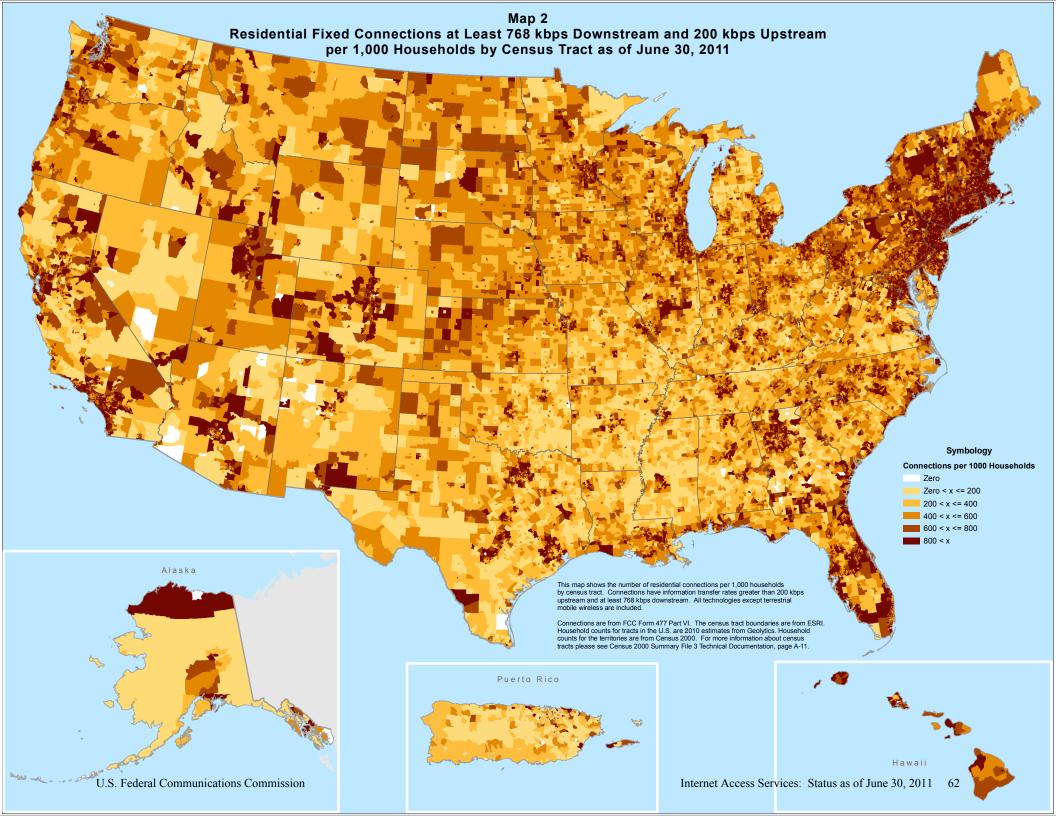
Table 29 - Continued Distribution of Census Tracts by Ratio of Residential Fixed Connections to Tract Households by State as of June 30, 2011 (Connections over 200 kbps in at least one direction)

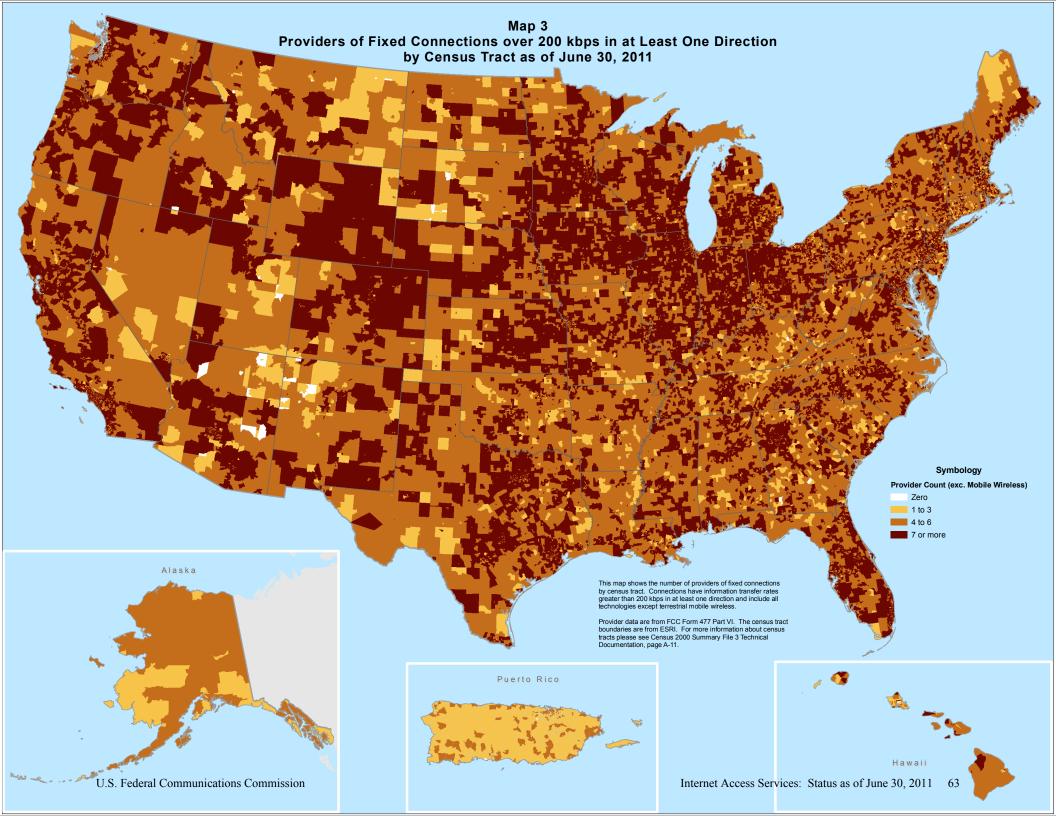
| Ratio of Residential Fixed Connections over 200 kbps in at Least One Direction to Tract Households |        |      |                       |                       |                        |                        |                        |                        |                        |                        |                        |                 |
|--|--------|------|-----------------------|-----------------------|------------------------|------------------------|------------------------|------------------------|------------------------|------------------------|------------------------|-----------------|
|  |        |      | Greater<br>than 0 and | Greater<br>than 5 and | Greater<br>than 10 and | Greater<br>than 20 and | Greater<br>than 30 and | Greater<br>than 40 and | Greater<br>than 50 and | Greater<br>than 60 and | Greater<br>than 80 and |                 |
| State  | Tracts | Zero | no more<br>than 5%    | no more<br>than 10%   | no more<br>than 20%    | no more<br>than 30%    | no more<br>than 40%    | no more<br>than 50%    | no more<br>than 60%    | no more<br>than 80%    | no more<br>than 100%   | 100% or<br>more |
| Nevada   | 487    | 9    | 3                     | 9                     | 27                     | 45                     | 71                     | 66                     | 51                     | 91                     | 57                     | 58              |
| New Hampshire  | 272    | 0    | 0                     | 0                     | 1                      | 0                      | 6                      | 12                     | 24                     | 105                    | 78                     | 46              |
| New Jersey   | 1,944  | 14   | 2                     | 2                     | 32                     | 79                     | 116                    | 139                    | 183                    | 405                    | 476                    | 496             |
| New Mexico   | 456    | 18   | 10                    | 6                     | 17                     | 34                     | 53                     | 76                     | 61                     | 96                     | 40                     | 45              |
| New York   | 4,898  | 98   | 3                     | 8                     | 41                     | 230                    | 433                    | 640                    | 711                    | 1,063                  | 803                    | 868             |
| North Carolina   | 1,555  | 2    | 2                     | 3                     | 34                     | 81                     | 198                    | 258                    | 270                    | 350                    | 183                    | 174             |
| North Dakota   | 227    | 6    | 0                     | 1                     | 1                      | 9                      | 13                     | 31                     | 25                     | 102                    | 29                     | 10              |
| Northern Mariana Isl   | 21     | 1    | 2                     | 0                     | 8                      | 4                      | 3                      | 1                      | 0                      | 2                      | 0                      | 0               |
| Ohio   | 2,934  | 13   | 1                     | 6                     | 53                     | 195                    | 279                    | 343                    | 451                    | 887                    | 485                    | 221             |
| Oklahoma   | 990    | 5    | 11                    | 12                    | 53                     | 88                     | 134                    | 190                    | 141                    | 191                    | 94                     | 71              |
| Oregon   | 755    | 1    | 0                     | 1                     | 1                      | 14                     | 47                     | 91                     | 174                    | 254                    | 119                    | 53              |
| Pennsylvania   | 3,134  | 34   | 24                    | 6                     | 113                    | 243                    | 266                    | 256                    | 333                    | 728                    | 597                    | 534             |
| Puerto Rico  | 823    | 9    | 42                    | 39                    | 144                    | 168                    | 117                    | 111                    | 57                     | 61                     | 28                     | 47              |
| Rhode Island   | 233    | 0    | 0                     | 1                     | 3                      | 28                     | 25                     | 17                     | 13                     | 37                     | 43                     | 66              |
| South Carolina   | 867    | 4    | 1                     | 2                     | 43                     | 98                     | 163                    | 133                    | 111                    | 154                    | 73                     | 85              |
| South Dakota   | 235    | 16   | 1                     | 3                     | 9                      | 6                      | 22                     | 36                     | 41                     | 81                     | 16                     | 4               |
| Tennessee  | 1,261  | 8    | 3                     | 13                    | 69                     | 137                    | 224                    | 235                    | 177                    | 226                    | 90                     | 79              |
| Texas  | 4,388  | 24   | 20                    | 45                    | 213                    | 476                    | 657                    | 618                    | 628                    | 801                    | 427                    | 479             |
| Utah   | 496    | 7    | 4                     | 1                     | 7                      | 8                      | 27                     | 49                     | 94                     | 149                    | 77                     | 73              |
| Vermont  | 179    | 0    | 0                     | 0                     | 0                      | 1                      | 6                      | 13                     | 27                     | 73                     | 39                     | 20              |
| Virgin Islands   | 32     | 0    | 0                     | 3                     | 8                      | 6                      | 6                      | 5                      | 2                      | 1                      | 1                      | 0               |
| Virginia   | 1,530  | 5    | 6                     | 18                    | 58                     | 102                    | 136                    | 188                    | 196                    | 350                    | 250                    | 221             |
| Washington   | 1,318  | 2    | 0                     | 1                     | 18                     | 31                     | 76                     | 152                    | 180                    | 440                    | 253                    | 165             |
| West Virginia  | 466    | 0    | 6                     | 8                     | 17                     | 31                     | 48                     | 79                     | 93                     | 119                    | 49                     | 16              |
| Wisconsin  | 1,320  | 8    | 1                     | 1                     | 11                     | 56                     | 88                     | 154                    | 254                    | 474                    | 180                    | 93              |
| Wyoming  | 127    | 1    | 0                     | 0                     | 4                      | 2                      | 9                      | 10                     | 28                     | 55                     | 13                     | 5               |
| Total  | 66,287 | 500  | 291                   | 320                   | 1,810                  | 4,293                  | 6,623                  | 8,348                  | 9,331                  | 16,578                 | 10,165                 | 8,028           |

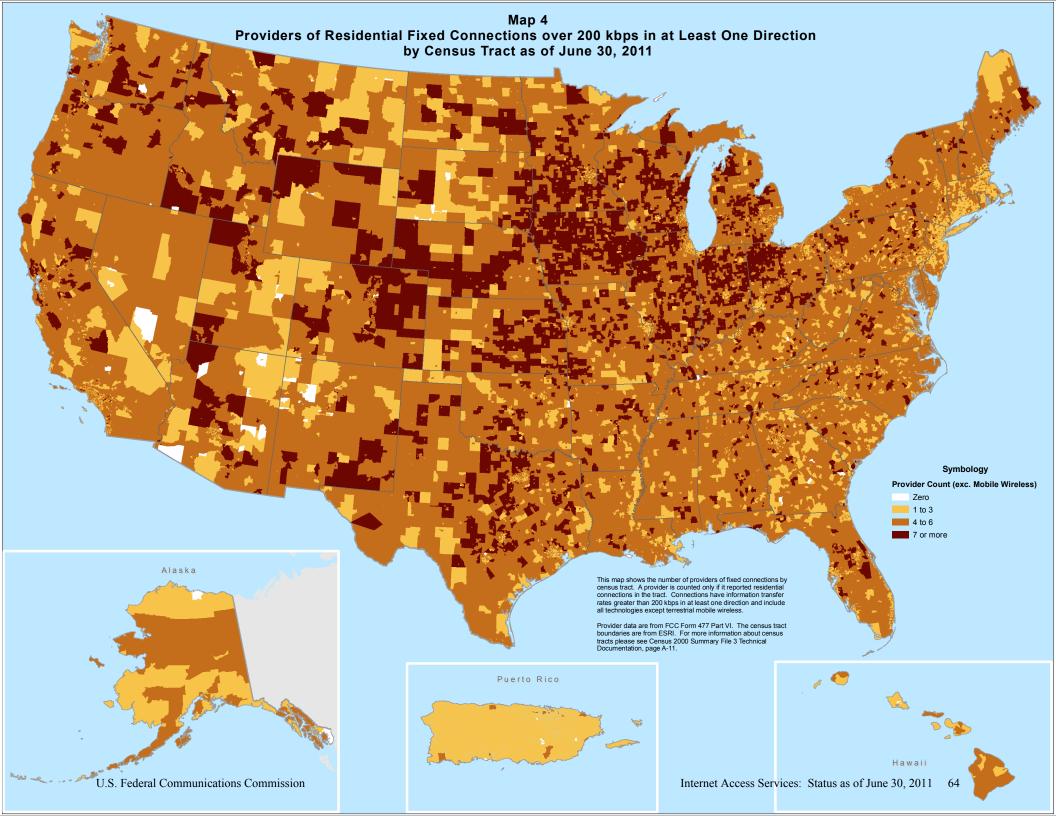
Note: Figures may not sum to totals due to rounding. See Technical Notes at the end of the report.

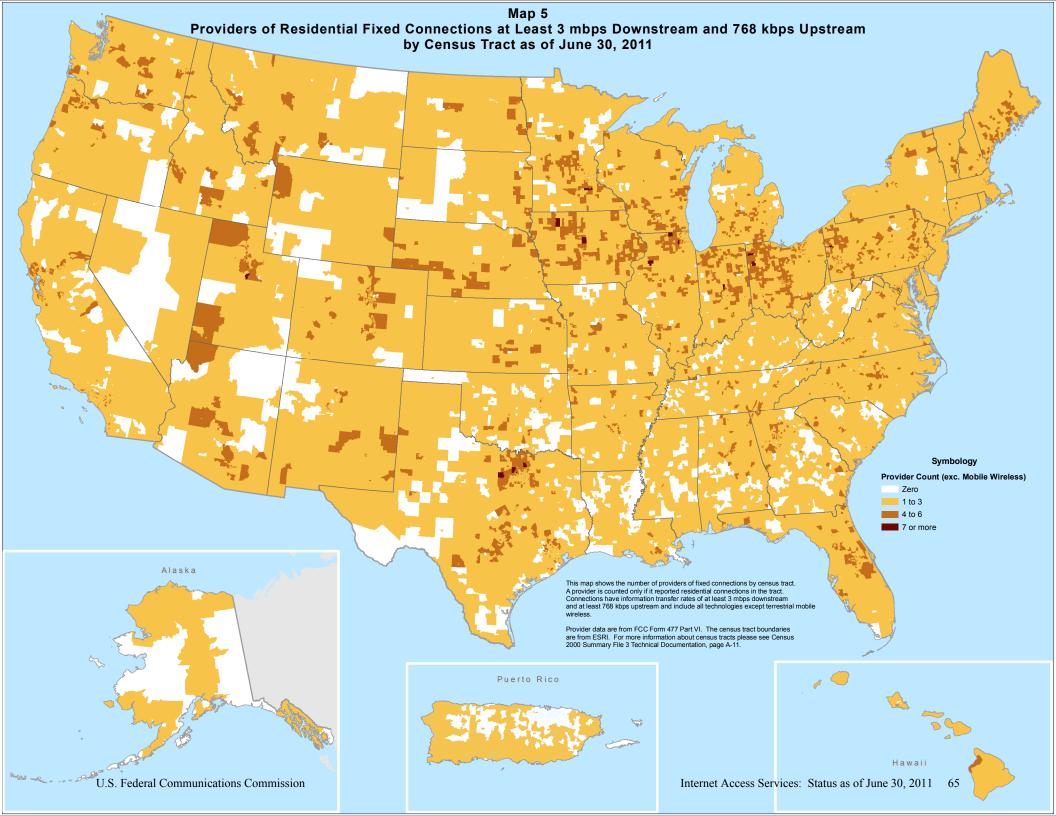
Sources: FCC Form 477, Part VI (Connections); Geolytics 2010 Block-Level Estimates (Households for U.S. and District of Columbia); Census 2000 (Households for Puerto Rico, American Samoa, Guam, Northern Mariana Islands and U.S. Virgin Islands).

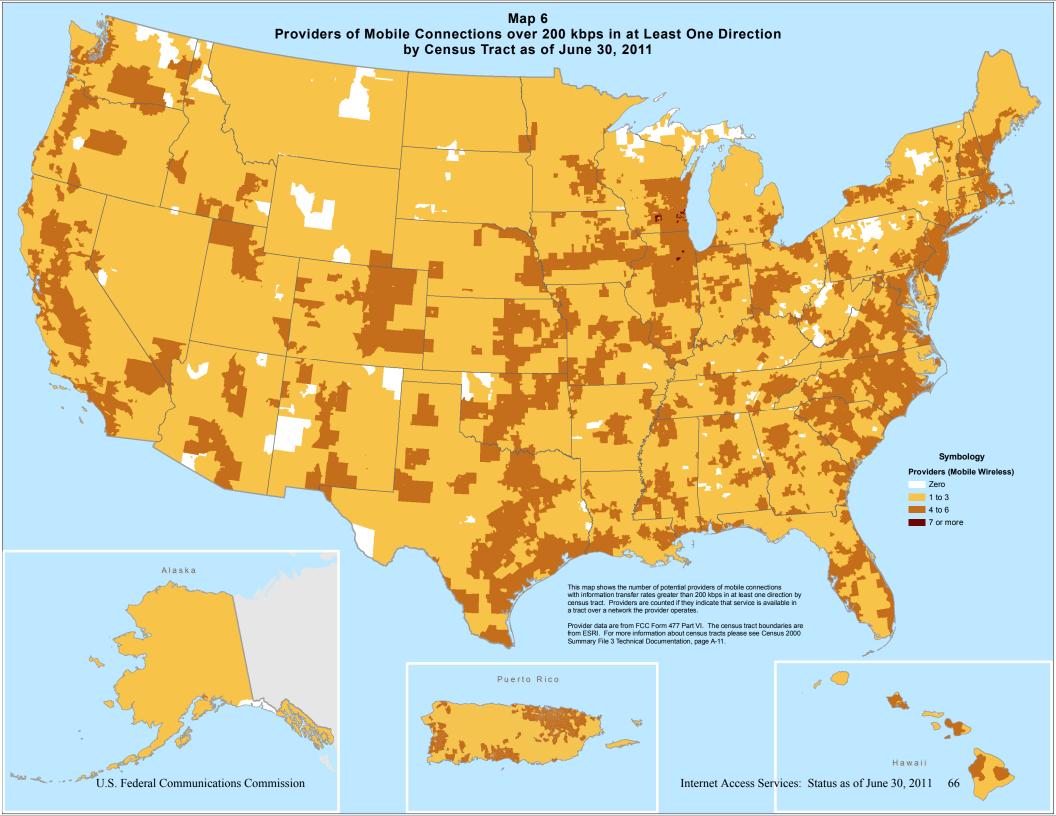












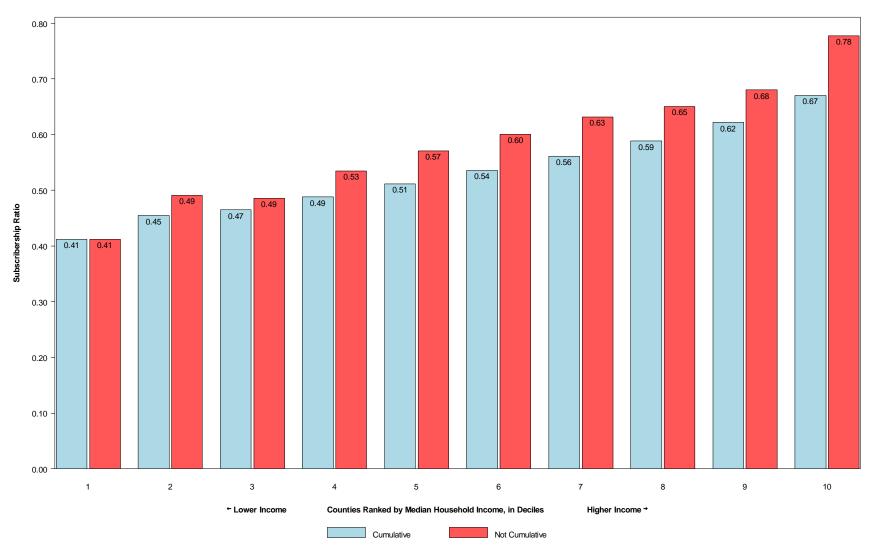
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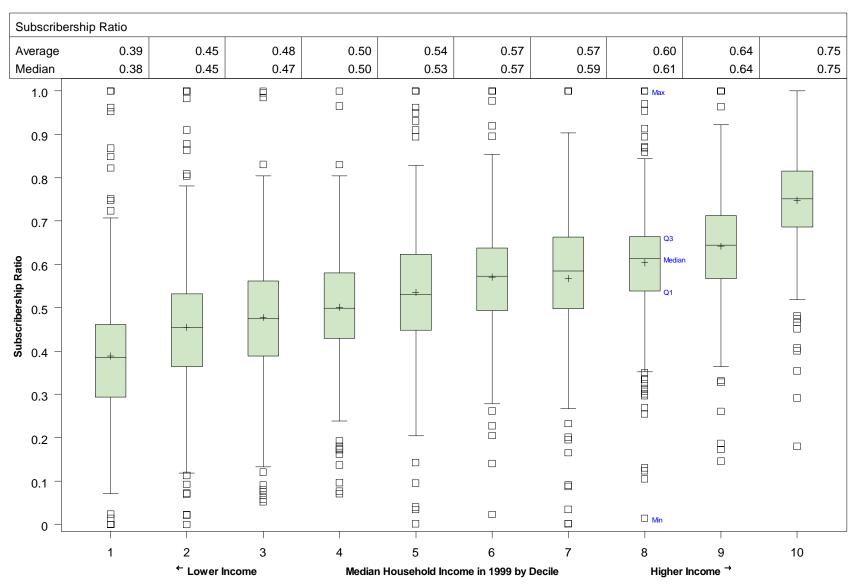
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Chart 17 Ratio of Residential Fixed Connections over 200 kbps in at Least One Direction to Households by Income Deciles as of June 30, 2011 (County Data)



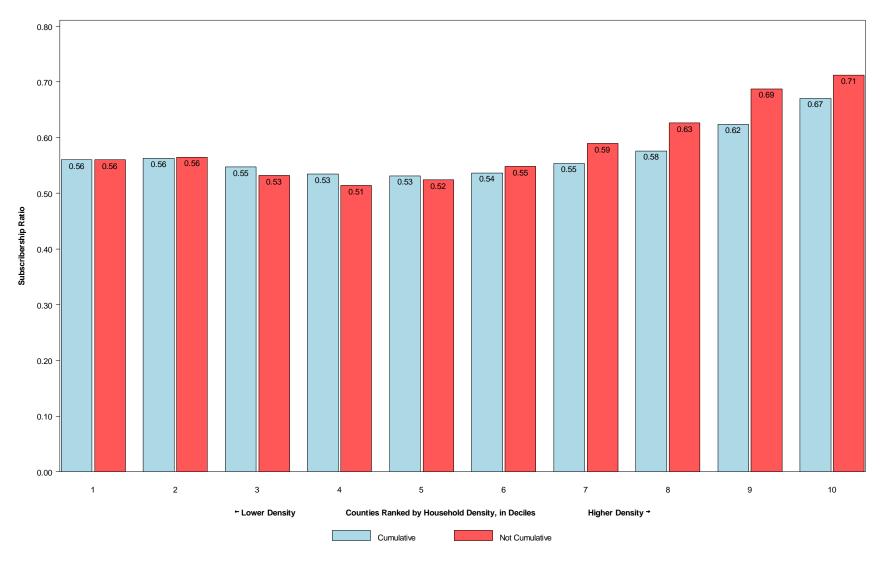
This chart shows cumulative and non-cumulative subscribership ratios by income deciles. Counties were grouped into income deciles based on county median household income in 1999, as reported by the Census Bureau. For each decile, the height of any red, non-cumulative bar represents the ratio of the sum 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 2010 Block-Level Estimates (Households in 2010); and Census 2000 (Median household income in 1999).

Chart 18 Subscribership Ratio Distributions by Income Deciles as of June 30, 2011



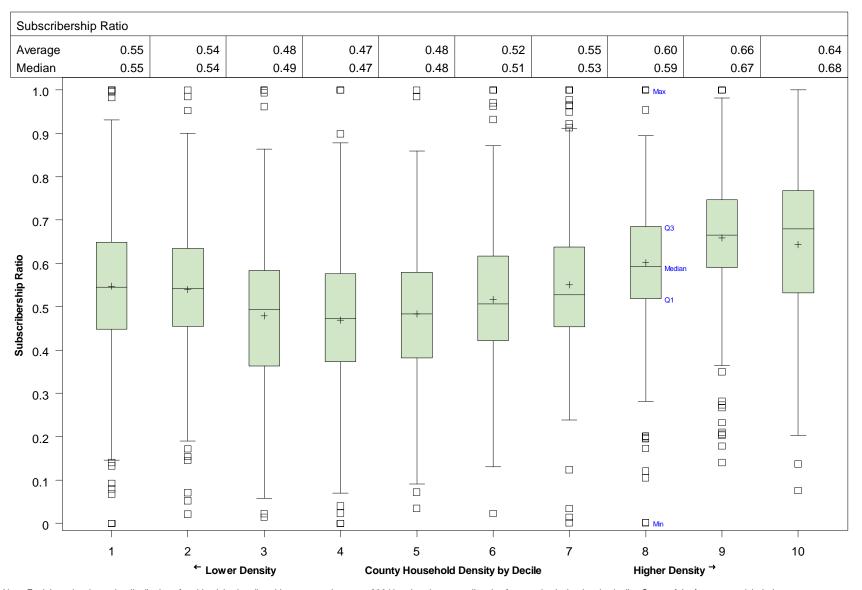
Note: Each box plot shows the distribution of residential subscribership to connections over 200 kbps in at least one direction for counties in the income decile. Some of the features are labeled, but note also that + denotes the position of the averageresidential subscribership ratio taken across all 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 2010 Block-Level Estimates (Households in 2010); and Census 2000 (Median household income in 1999).

Chart 19 Ratio of Residential Fixed Connections over 200 kbps in at Least One Direction to Households by Density Deciles as of June 30, 2011 (County Data)



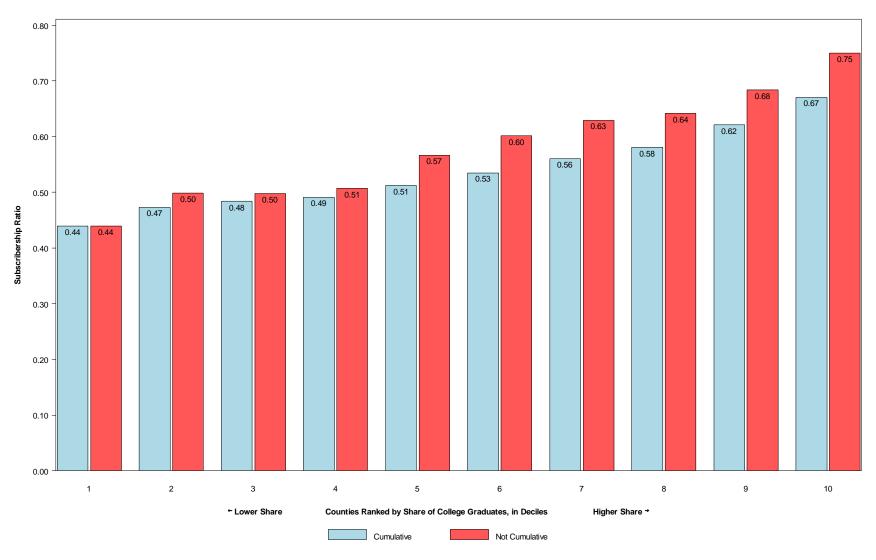
This chart shows cumulative and non-cumulative subscribership ratios by density deciles. Counties were grouped into density deciles based on households per square mile, calculated as the ratio of estimated county households in 2010 to county land area from the Census Bureau. For each decile, the height 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; Geolytics 2010 Block-Level Estimates (Households in 2010); and Census 2000 (County land area).

Chart 20 Subscribership Ratio Distributions by Density Deciles as of June 30, 2011



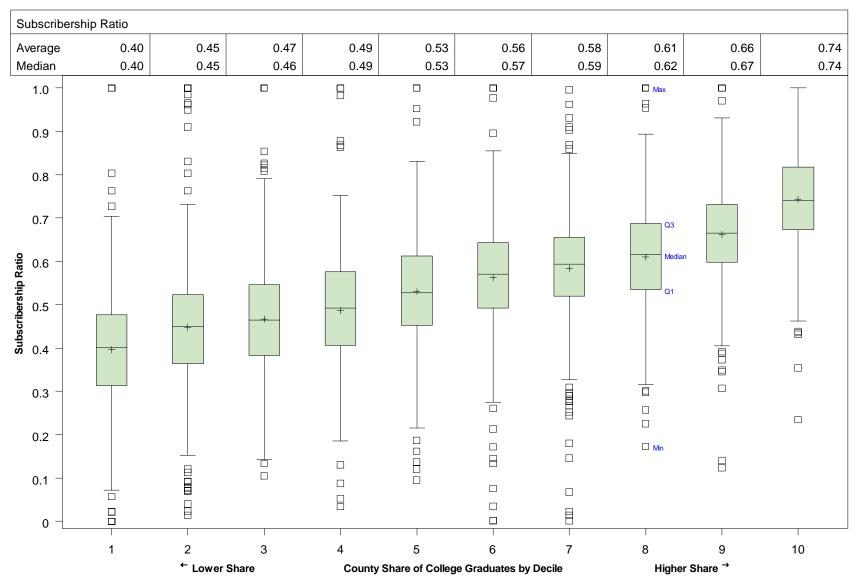
Note: Each box plot shows the distribution of residential subscribership to connections over 200 kbps in at least one direction for counties in the density decile. Some of the features are labeled, but note also that + denotes the position of the average residential subscribership ratio taken across 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  $\square$  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 2010 Block-Level Estimates (Households in 2010); and Census 2000 (County land area).

Chart 21 Ratio of Residential Fixed Connections over 200 kbps in at Least One Direction to Households by Share of College Graduates in Deciles as of June 30, 2011 (County Data)



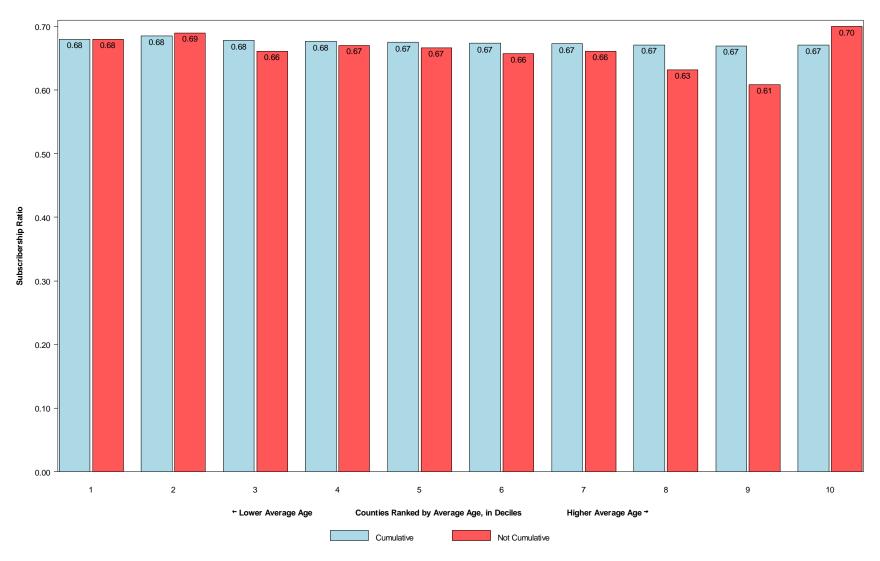
This chart shows cumulative and non-cumulative subscribership ratios by county share of college graduates in deciles. Counties were grouped into deciles based on the share of the county population at least 25 years of age with a college degree or higher educational attainment. For each decile, the height 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; Geolytics 2010 Block-Level Estimates (Households in 2010); and Census 2000 (County educational attainment).

Chart 22 Subscribership Ratio Distributions by Share of Population with a College Degree (in Deciles) as of June 30, 2011



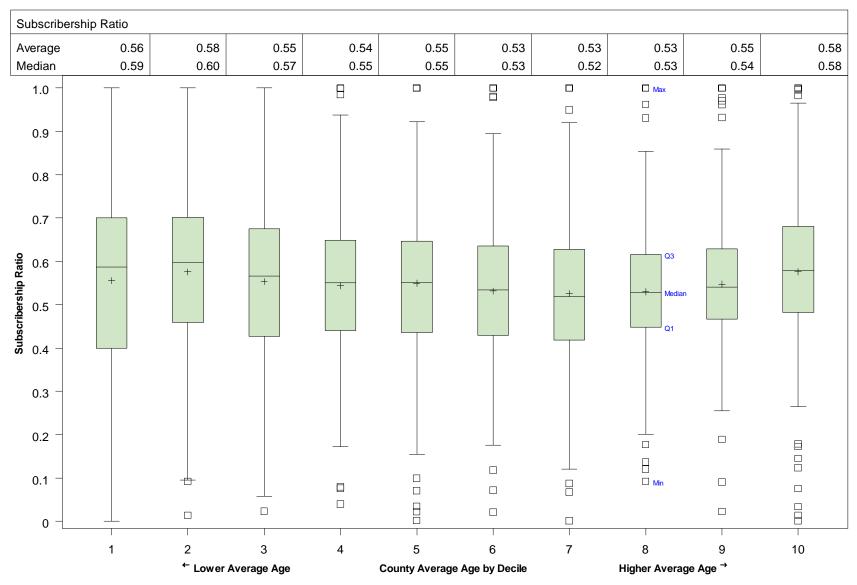
Note: Each box plot shows the distribution of residential subscribership to connections over 200 kbps in at least one direction for counties in the share decile. Some of the features are labeled, but note also that + denotes the position of the average residential subscribership ratio taken across all 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 2010 Block-Level Estimates (Households in 2010); and Census 2000 (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, 2011 (County Data)



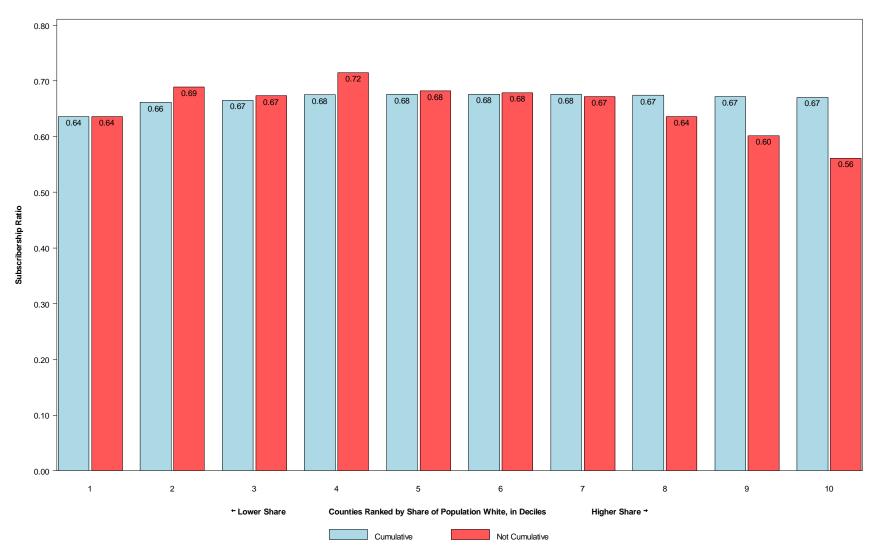
This chart shows cumulative and non-cumulative subscribership ratios by county average age in deciles. Counties were grouped into deciles based on the average age of the county population. For each decile, the height of any red, non-cumulative bar represents the ratio of the sum of residential fixed 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 2010 Block-Level Estimates (Households in 2010); and Census 2000 (County average age).

Chart 24 Subscribership Ratio Distributions by Average Age of County Population (in Deciles) as of June 30, 2011



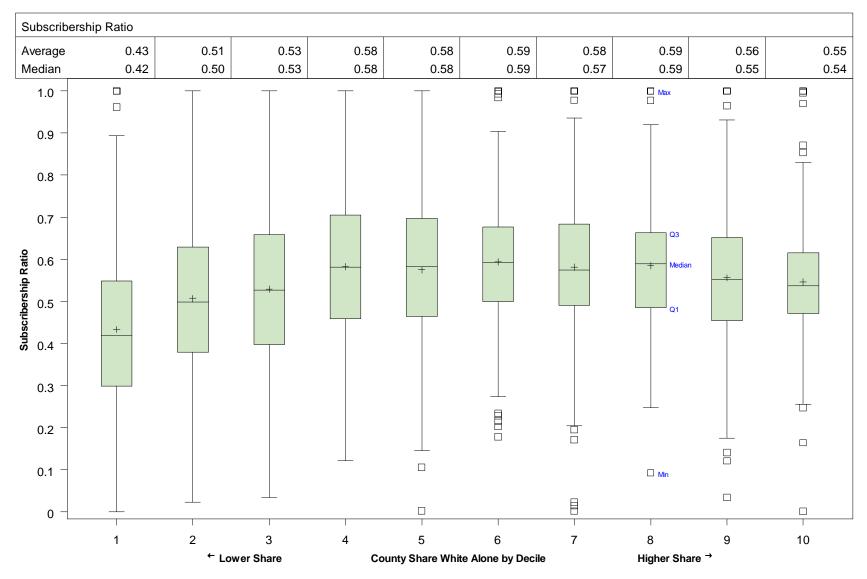
Note: Each box plot shows the distribution of residential subscribership to connections over 200 kbps in at least one direction for counties in the average age decile. Some of the features are labeled, but note also that + denotes the position of the average residential subscribership ratio taken across 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  $\square$  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 2010 Block-Level Estimates (Households in 2010); and Census 2000 (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, 2011 (County Data)



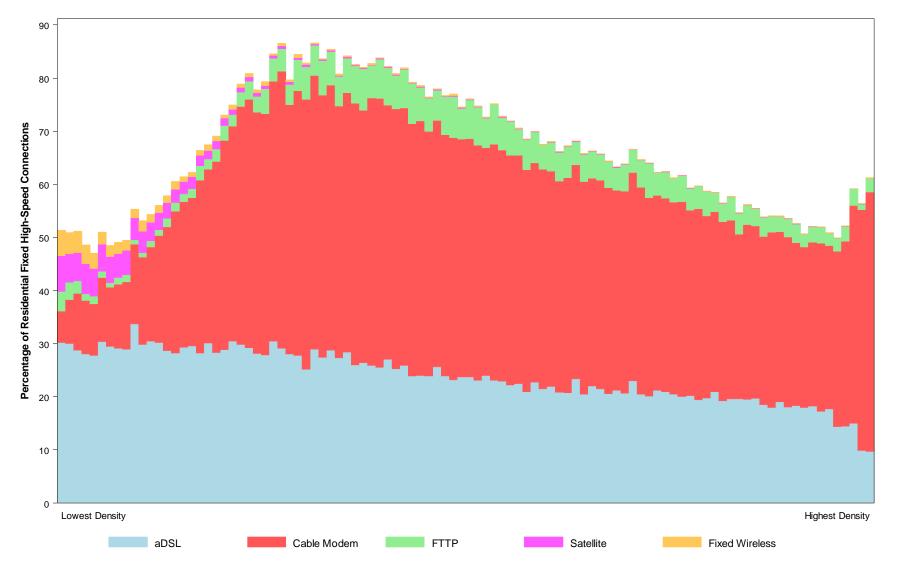
This chart shows cumulative and non-cumulative subscribership ratios by the share of county population white alone in deciles. Counties were grouped into deciles based on the share of the county population that reported their race as white alone. For each decile, the height of any red, non-cumulative 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 2010 Block-Level Estimates (Households in 2010); and Census 2000 (Race).

Chart 26 Subscribership Ratio Distributions by Share White Alone (in Deciles) as of June 30, 2011



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;  $\bot$  is the minimum observation above Q1-1.5(Q3-Q1); T is the maximum observation below Q3+1.5(Q3-Q1); and  $\Box$ 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 2010 Block-Level Estimates (Households in 2010); and Census 2000 (Race).

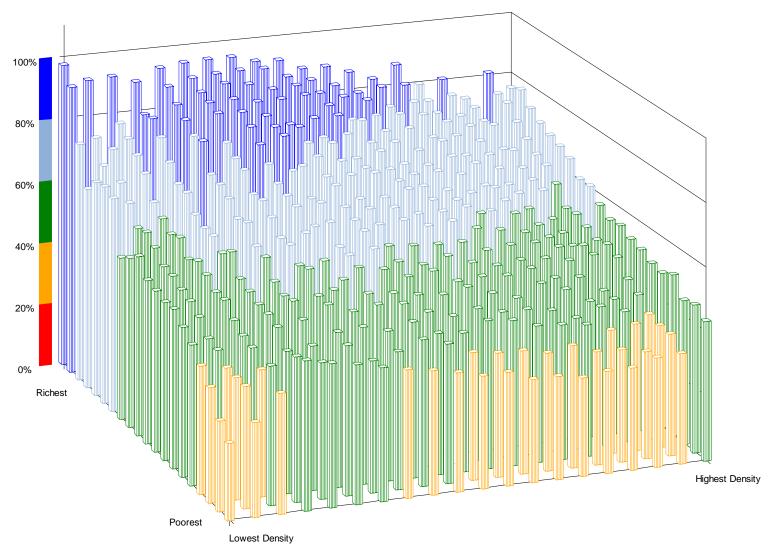
Chart 27 Subscribership Ratios by Technology and Tract Household Density as of June 30, 2011 (Residential fixed connections over 200 kbps in at least one direction)



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 2010 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; Geolytics 2010 Block-Level Estimates (Households in 2010); and Census 2000 (Tract land area).

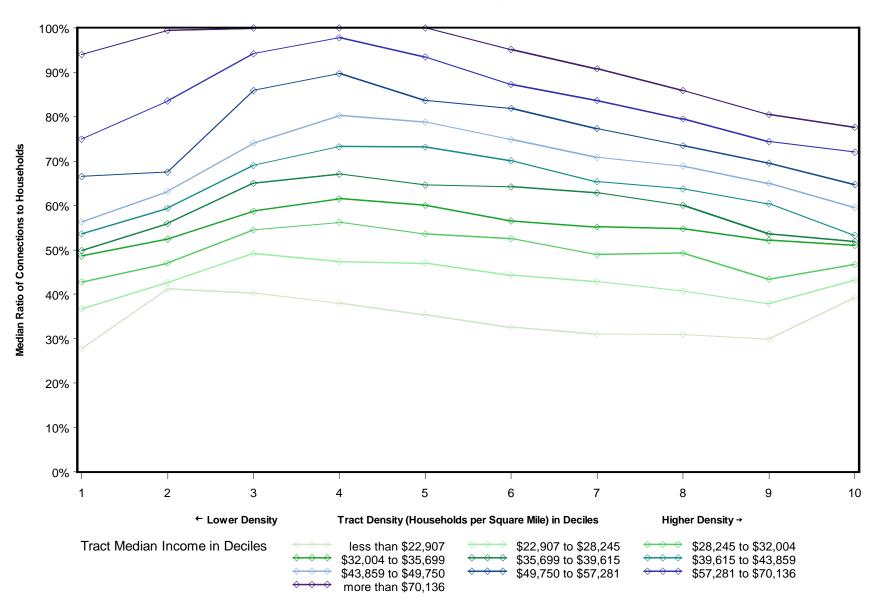
Chart 28 Average Subscribership Ratios by Income and Household Density as of June 30, 2011 (Residential fixed connections over 200 kbps in at least one direction by Tract)



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 2010 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; Geolytics 2010 Block-Level Estimates (Households in 2010); and Census 2000 (Tract land area, 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, 2011



Sources: FCC Form 477, Part VI; Geolytics 2010 Block-Level Estimates (Households in 2010); and Census 2000 (Median household income in 1999).

### **Technical Notes**

#### General

Detailed information about FCC Form 477 reporting requirements is available at 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 percentageresidential 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 2000 decennial census. For that census, the Census Bureau assigned a default census tract code of 000000 to some coastal and Great Lakes water and territorial sea. These default-code tracts are not included in the statistics presented in this report, which therefore summarize data for 66,287 census tracts.

According to GeoLytics, Inc. estimates for 2010, about 200 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.

### Decline in reported mobile wireless connections between June 2008 and December 2008

Changed reporting instructions starting in December 2008 caused a one-time decrease in the reported number of mobile wireless Internet access service connections, from about 60 million in June 2008 to about 25 million in December 2008. For reporting periods through June 30, 2008, Form 477 had instructed mobile wireless providers to report the number of subscribers whose mobile device (such as a wireless modem laptop card, smartphone, or handset) was capable of sending or receiving data at speeds above 200 kbps. The Commission found these instructions insufficiently precise to enable it to determine, from the reported data, the number of subscribers making regular use of Internet access service above 200 kbps as part of their mobile service package. Starting with the December 31, 2008 data, therefore, Form 477 requires mobile wireless providers to report the number of subscribers that have a capable device (as discussed above) for which the subscription includes a data plan for transferring, on a monthly basis, either a specified or an unlimited amount of data to and from Internet sites of the subscriber's choice, and excluding subscribers whose choice of content is restricted to only customizedfor-mobile content (for example, text and multimedia messaging, or the capacity to download ringtones and games).

Starting with the December 31, 2008, data, providers also must report, explicitly and separately, total subscribers with a device capable of sending or receiving data at speeds above 200 kbps, irrespective of the service plan purchased. The number of such devices reported for December 2008 was about 86 million. That figure is not directly comparable to mobile wireless connections reported for June 2008 or earlier reporting periods, however, because individual providers – to a varying and largely unknown degree – included or excluded subscribers with service plans for less than full Internet access in the earlier data.

Finally, the Form 477 modifications adopted for the December 31, 2008, and later, data specify how mobile wireless providers should distinguish between residential subscribers and other subscribers, and some of these providers consequently reported a larger share of residential subscribers than they had reported for earlier dates.

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

Starting with data as of December 31, 2008, information about connections over fixed-location technologies must be reported for individual census tracts. This allows us to 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. In the year-end 2009 data, 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. The numbers of households in census tracts that were used to generate the estimated ratios are themselves estimates (for 2010, from GeoLytics, Inc.), which could have an independent effect.

#### Maps showing number of providers by census tract

Readers of previous reports in this series may note certain differences in the provider-count maps in this report as compared to maps for June 30, 2008 and earlier dates, which showed the number of providers by 5-digit geographical ZIP Code. The ZIP Code-based maps counted (at the holding company level) each provider with any fixed-location connections (wired, terrestrial fixed wireless, or satellite) reported for the ZIP Code and also any mobile wireless service provider who listed the ZIP Code as part of its service area. By contrast, in this report we provide separate maps for providers (counted at the holding company level) of fixed-location connections and for mobile wireless providers. Also, we present maps showing the number of providers that reported any residential fixed-location connections, thereby excluding any providers of exclusively business fixed-location connections in the census tract.

# 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, or adoption, rates) are not comparable to ZIP Code-based maps developed from FCC Form 477 data for June 30, 2008 and earlier dates because numbers of connections were never reported for individual ZIP Codes. Readers should note that these two maps (1) exclude all connections identified as business connections and (2) necessarily exclude residential mobile wireless connections (which are reported for the state but not for individual census tracts).

# Glossary

| Term                        | Definition   |  |  |  |
|-----------------------------|--|--|--|--|
| 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;<br>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, 2011

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| 1. | Please check the category that best describes you:  press 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 |                                   |                                  |  |                              |  |  |  |  |
|----|--|-----------------------------------|----------------------------------|--|------------------------------|--|--|--|--|
|    | <ul><li>other federal government employee</li><li>state or local government employee</li><li>Other (please specify)</li></ul>  |                                   |                                  |  |                              |  |  |  |  |
| 2. | Please rate the report: Data accuracy Data presentation Timeliness of data Completeness of data Text clarity Completeness of text  | Excellent (_) (_) (_) (_) (_) (_) | Good (_) (_) (_) (_) (_) (_) (_) | Satisfactory (_) (_) (_) (_) (_) (_) (_) | Poor (_) (_) (_) (_) (_) (_) | No opinion (_) (_) (_) (_) (_) (_) (_) |  |  |  |
| 3. | Overall, how do you rate this report?  | Excellent (_)                     | Good<br>(_)                      | Satisfactory (_)                         | Poor<br>(_)                  | No opinion (_)                         |  |  |  |
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