



# NEWS

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## FEDERAL COMMUNICATIONS COMMISSION RELEASES DATA ON HIGH-SPEED SERVICES FOR INTERNET ACCESS

### *High-Speed Connections to the Internet Increased 63% During the Second Half of 2000 for a Total of 7.1 Million Lines in Service*

Washington, D.C. – The Federal Communications Commission (FCC) today released summary statistics of its latest data on the deployment of high-speed Internet services in the United States. The information being released today was filed by qualifying service providers on March 1, 2001, and includes data as of December 31, 2000. Qualifying providers file such data twice a year under the Commission's local competition and broadband data gathering program (FCC Form 477).

The local competition and broadband data gathering program was adopted by the Commission in March 2000 to assist the Commission in its efforts to monitor and further implement the pro-competitive, deregulatory provisions of the Telecommunications Act of 1996. Specifically, the data from this effort are used by the Commission for its evaluation of the availability of advanced telecommunications services.

### Summary Statistics

- High-speed lines connecting homes and businesses to the Internet increased by 63% during the second half of the year 2000, to a total of 7.1 million. The rate of growth for the full year was 158%.
- Of the total 7.1 million high-speed lines, 5.2 million were residential and small business subscribers.
- About 4.3 million of the 7.1 million high-speed lines provided services at speeds of over 200 kilobits per second (kbps) in both directions, and thus met the Commission's definition of advanced services, an increase of 51% during the last six months of the year 2000. The rate of growth for the full year was 118%.
- At the end of the year 2000, the presence of high-speed service subscribers was reported in all fifty states, the District of Columbia, Puerto Rico, and the Virgin Islands. Subscribers were reported present in 75% of the nation's zip codes, compared to 56% at the end of 1999.

- High-speed asymmetric DSL (ADSL) lines in service increased by 108% during the second half of the year 2000, to 2 million lines. The rate of growth for the full year was 435%.
- High-speed Internet connections over coaxial cable systems increased by 57% during the final six months of the year 2000, to a total of 3.6 million. The rate of growth for the full year was 153%.
- Although the provision of high-speed lines by satellite and fixed wireless technology represents a small fraction of the total high-speed lines in use, the number of lines grew from 50,000 in December 1999 to 112,000 in December 2000.
- High-speed subscribers are reported present in 97% of the most densely populated zip codes. The comparable figure is 45% among zip codes with the lowest population densities, compared to 24% a year earlier.
- For zip codes ranked by median family income, high-speed subscribers are reported present in 96% of the top one-tenth of zip codes and in 56% of the bottom one-tenth of zip codes, compared to 42% a year earlier.

As additional information from Form 477 becomes available, it will be routinely posted on the Commission's Internet site. The Commission recently accepted comments (in CC Docket No. 99-301) on whether various modifications should be made to the reporting system.

The data summary is available in the FCC's Reference Information Center, Courtyard Level, 445 12th Street, S.W., Washington, D.C. Call International Transcription Services, Inc. (ITS) at (202) 857-3800 to purchase a copy. The data summary can also be downloaded from the **FCC-State Link** Internet site at [www.fcc.gov/ccb/stats](http://www.fcc.gov/ccb/stats).

- FCC -

Common Carrier Bureau Contact: Industry Analysis Division at (202) 418-0940; TTY (202) 418- 0484.

# **HIGH-SPEED SERVICES FOR INTERNET ACCESS: SUBSCRIBERSHIP AS OF DECEMBER 31, 2000**

Industry Analysis Division  
Common Carrier Bureau  
Federal Communications Commission  
August 2001



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## High-Speed Services for Internet Access: Subscribership as of December 31, 2000

Congress directed the Commission and the states, in section 706 of the Telecommunications Act of 1996, to encourage deployment of advanced telecommunications capability in the United States on a reasonable and timely basis.<sup>1</sup> To assist in its evaluation of such deployment, the Commission instituted a formal data collection program to gather standardized information about subscribership to high-speed services, including advanced services, from wireline telephone companies, cable providers, terrestrial wireless providers, satellite providers, and any other facilities-based providers of advanced telecommunications capability.<sup>2</sup>

We summarize here information from the third data collection, thereby presenting a snapshot of subscribership at the end of the year 2000.<sup>3</sup> Subscribership to high-speed services for Internet access increased by 63% during the second half of the year 2000, to a total of 7.1 million lines in service. At year's end, the presence of high-speed service subscribers was reported in fifty states, the District of Columbia, Puerto Rico, and the Virgin Islands, and in 75% of the zip codes in the United States.

Before presenting the most recent information in some detail, a brief description of the Commission's data collection program is in order to enable the reader to better understand how the nationwide information presented here may compare to similar information derived from other sources. First, a facilities-based provider of high-speed service lines (or wireless channels) in a given state reports to the

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<sup>1</sup> See §706, Pub.L. 104-104, Title VII, Feb. 8, 1996, 110 Stat. 153, reproduced in the notes under 47 U.S.C. §157. We define services as "high-speed" that provide the subscriber with transmissions at a speed in excess of 200 kilobits per second (kbps) in at least one direction. "Advanced services," which provide the subscriber with transmission speeds in excess of 200 kbps in each direction, are a subset of high-speed services.

<sup>2</sup> *Local Competition and Broadband Reporting*, CC Docket No. 99-301, Report and Order, 15 FCC Rcd 7717 (rel. Mar. 30, 2000) (*Data Gathering Order*). The formal program followed several attempts by the Common Carrier Bureau to collect information on a voluntary basis. See *Local Competition and Broadband Reporting*, CC Docket No. 99-301, Notice of Proposed Rulemaking, 14 FCC Rcd 18106 (rel. Oct. 22, 1999).

<sup>3</sup> Results from the first data collection, in which providers reported numbers of subscribers to high-speed services at the end of 1999, were presented in the Commission's second report to Congress on advanced telecommunications capability. See *Deployment of Advanced Telecommunications Capability to All Americans in a Reasonable and Timely Fashion*, CC Docket No. 98-146, Second Report (rel. Aug. 21, 2000), available at <[www.fcc.gov/broadband](http://www.fcc.gov/broadband)>. (In the report, the Commission's data collection program is referred to as the "Broadband Survey.") Results from the second data collection appear in *High-Speed Services for Internet Access: Subscribership as of June 30, 2000*, available at <[www.fcc.gov/ccb/stats](http://www.fcc.gov/ccb/stats)>. During this data gathering program, qualifying providers will file FCC Form 477 each year on March 1 (reporting data for the preceding December 31) and September 1 (reporting data for June 30 of the same year). An updated FCC Form 477, and Instructions for that particular form, for each specific round of the data collection may be downloaded from the FCC Forms website at <[www.fcc.gov/formpage.html](http://www.fcc.gov/formpage.html)>.

Commission basic information about its service offerings and customers if the provider has at least 250 such lines in service in that state. While providers not meeting the reporting threshold may provide information on a voluntary basis, as some have done, it is likely that not all such providers have reported data.<sup>4</sup> In particular, we do not know how comprehensively small providers, many of which serve rural areas with relatively small populations, are represented in the data summarized here. Second, lines (or wireless channels) that do not meet the Commission's definition of "high-speed" (i.e., delivering transmissions to the subscriber at a speed in excess of 200 kbps in at least one direction) are not reported. Some asymmetric digital subscriber line (ADSL) services and Integrated Services Digital Network (ISDN) services provided by telephone companies and some services that connect subscribers to the Internet over cable systems do not meet this criterion, but may nevertheless meet the needs of the subscribers who select them.

We expect providers to report data more accurately as they gain experience with the program. We also expect that there may be some need for further clarification and adjustment of the reporting system.<sup>5</sup> Nevertheless, based on the information now available, the following broad conclusions emerge:

- Subscribership to high-speed services increased by 63% during the second half of the year 2000, to a total of 7.1 million lines (or wireless channels) in service. The rate of growth for the full year was 158%.
- Considering services according to the technology deployed in the "last few feet" to the subscriber's premises, high-speed ADSL lines in service increased at the fastest rate, 108%, during the second half of the year, to 2 million lines.<sup>6</sup> High-speed lines in service over coaxial cable systems (cable modem service) remained more numerous, increasing 57% to 3.6 million lines.<sup>7</sup> The rates of growth for the full year were 435% and 153%, respectively. See Table 1.

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<sup>4</sup> We received 84 state-specific voluntary submissions (made by 41 holding companies) in the first Form 477 filing, 78 voluntary submissions (made by 33 holding companies) in the second filing, and 64 voluntary submissions (made by 41 holding companies) in the third filing.

<sup>5</sup> The Commission has requested comments on whether various modifications should be made to this data collection. See *Local Competition and Broadband Reporting*, CC Docket No. 99-301, Second Notice of Proposed Rulemaking (rel. Jan. 19, 2001).

<sup>6</sup> Providers are instructed to report a high-speed subscriber in the (mutually exclusive) technology category that characterizes the last few feet of distribution plant to the subscriber's premises, e.g., coaxial cable in the case of the hybrid fiber-coax (HFC) architecture of upgraded cable systems. As noted above, ADSL services that do not deliver over 200 kbps in at least one direction are not included in the data reported here. Symmetric DSL services at speeds exceeding 200 kbps are included in the "other wireline" category because they are typically used to provide data services that are functionally equivalent to a T1 and other data services that wireline telephone companies have offered to business customers for some time.

<sup>7</sup> In addition, reported high-speed lines (or wireless channels) delivered over wireline technologies other than ADSL, or over fiber to the end-user's premises (e.g., Fiber-to-the-Home, or FTTH), satellite, or fixed wireless technologies increased by 37% during the second half of the year 2000. We believe, however, (continued....)

- Subscribership to the subset of high-speed services that the Commission defines as advanced services (i.e., delivering to subscribers transmission speeds in excess of 200 kbps in each direction) increased by 51% during the second half of the year, to a total of 4.3 million lines (or wireless channels) in service. Advanced service lines provided by means of ADSL technology increased by 107%, and advanced service lines provided over coaxial cable systems increased by 49%. See Table 2.
- As of December 31, 2000, there were about 5.2 million residential and small business subscribers to high-speed services. By contrast, there were approximately 3.2 million such subscribers six months earlier, and about 1.8 million a year earlier. See Table 3.
- Among entities that reported facilities-based ADSL high-speed lines in service at the end of the year 2000, about 92% of such lines were reported by incumbent local exchange carriers (ILECs). See Table 4.
- Providers of high-speed ADSL services report serving subscribers in 49 states and the District of Columbia, as do providers of high-speed services over coaxial cable systems. High-speed service providers who use wireline technologies other than ADSL, or who use optical carrier (i.e., fiber), satellite, or fixed wireless technologies in the last few feet to the subscriber's premises report serving subscribers in all fifty states, the District of Columbia, Puerto Rico, and the Virgin Islands.<sup>8</sup> See Table 5.
- The Commission's data collection program uniquely gathers from providers information about the number of high-speed lines in service in individual states, in total and by technology deployed in the last few feet to the subscriber's premises. Relatively large numbers of total high-speed lines in service are associated with the more populous states. The most populous state, California, has the largest reported number of high-speed lines. The second and third largest numbers of high-speed lines are reported for New York and Texas, which are the third and second most populous states, respectively. See Table 6.
- Reporting entities estimate the percentage of their high-speed lines in service that connect to residential and small business end-user customers (as opposed to connecting to medium and large business, institutional, or government end-user customers).<sup>9</sup> These percentages allow us to derive

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 that inconsistencies in reporting data for these technology categories over the course of the first three data collections make comparison of growth rates problematic.

<sup>8</sup> This information is reported in a single category, for the individual states, to honor requests for nondisclosure of information that reporting entities assert is competitively sensitive. In the *Data Gathering Order*, the Commission agreed to publish high-speed data only once it has been aggregated in a manner that does not reveal individual company data. See *Data Gathering Order*, 15 FCC Rcd 7760.

<sup>9</sup> End-user customers use the high-speed services for their own purposes and do not resell them to other entities. Note that Internet Service Providers (ISPs) are not end-user customers (specifically, business end-user customers) in this sense, insofar as the ISP incorporates the high-speed line into a premium (continued...)

approximate numbers of residential and small-business high-speed lines in service by state. See Table 7.

- The Commission’s data collection program also requires service providers to identify each zip code in which the provider has at least one high-speed subscriber. At the end of the year 2000, subscribers to high-speed services were reported in 75% of the nation’s zip codes. Multiple providers reported having subscribers in 51% of the nation’s zip codes.<sup>10</sup> See Table 8.
- Our analysis indicates that over 96% of the country’s population lives in the 75% of zip codes where a provider reports having at least one high-speed service subscriber.<sup>11</sup> Moreover, numerous competing providers report serving high-speed subscribers in the major population centers of the country. See the map that follows Table 8.
- States vary widely with respect to the percentage of zip codes in the state in which no high-speed lines are reported to be in service. See Table 9.
- High population density has a positive correlation with reports that high-speed subscribers are present, and low population density has a negative correlation. For example, as of December 31, 2000, high-speed subscribers are reported to be present in 97% of the most densely populated zip codes and in 45% of zip codes with the lowest population densities.<sup>12</sup> However, the comparable figure for the least dense zip codes was only 24% a year earlier. See Table 10.
- High median family income also has a positive correlation with reports that high-speed subscribers are present. In the top one-tenth of zip codes ranked by median family income, high-speed subscribers are reported in 96% of zip codes. By contrast, high-speed subscribers are reported in 56% of zip codes with the lowest median family income, compared to 42% a year earlier. See Table 11.

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option offered to (residence and/or business) end-user customers of Internet access service. Reporting entities are directed to consider a line as being provided to an end-user customer in the “residential and small business” category if that customer orders high-speed service of a type (e.g., speeds in the downstream (from the Internet to the end user) and upstream (from the end user to the Internet) directions) that is normally associated with residential customers.

<sup>10</sup> Lists of zip codes with number of service providers as reported in the first and second Form 477 filings (data as of December 31, 1999 and as of June 30, 2000, respectively) are available at <[www.fcc.gov/ccb/stats](http://www.fcc.gov/ccb/stats)>. Lists from subsequent filings will be posted when available.

<sup>11</sup> We note that some providers have not strictly followed instructions to report zip codes in which a high-speed subscriber is present and have reported, for example, all zip codes within the boundary of a “wire center” that serves at least one high-speed subscriber.

<sup>12</sup> For this comparison, we consider the most densely populated zip codes to be those with more than 268 persons per square mile (the top three deciles), and the least densely populated zip codes to be those with fewer than 25 persons per square mile (the bottom three deciles).

As other information from the Commission's data collection program (FCC Form 477) becomes available, it will be included in future reports on the deployment of advanced telecommunications capability and in publications such as this one.

We invite users of this information to provide suggestions for improved data collection and analysis by:

- Using the attached customer response form,
- E-mailing comments to [eburton@fcc.gov](mailto:eburton@fcc.gov),
- Calling the Industry Analysis Division at (202) 418-0940, or
- Participating in any formal proceedings undertaken by the Commission to solicit comments for improvement of FCC Form 477.



**Table 1**  
**High-Speed Lines**  
**(Over 200 kbps in at Least One Direction)**

| Types of Technology 1/     | December 1999    | June 2000 2/     | December 2000    | Percent Change        |                        |
|----------------------------|------------------|------------------|------------------|-----------------------|------------------------|
|                            |                  |                  |                  | Dec 1999-<br>Dec 2000 | June 2000-<br>Dec 2000 |
| ADSL                       | 369,792          | 951,583          | 1,977,377        | 435 %                 | 108 %                  |
| Other Wireline             | 609,909          | 764,099          | 1,063,563        | 74                    | 39                     |
| Coaxial Cable              | 1,414,183        | 2,284,491        | 3,576,378        | 153                   | 57                     |
| Fiber                      | 312,204          | 307,151          | 376,506          | NM                    | NM                     |
| Satellite & Fixed Wireless | 50,404           | 65,615           | 112,405          | NM                    | NM                     |
| <b>Total Lines</b>         | <b>2,756,492</b> | <b>4,372,939</b> | <b>7,106,229</b> | <b>158 %</b>          | <b>63 %</b>            |

**Table 2**  
**Advanced Services Lines**  
**(Over 200 kbps in Both Directions)**

| Types of Technology 1/     | December 1999    | June 2000 2/     | December 2000    | Percent Change        |                        |
|----------------------------|------------------|------------------|------------------|-----------------------|------------------------|
|                            |                  |                  |                  | Dec 1999-<br>Dec 2000 | June 2000-<br>Dec 2000 |
| ADSL                       | 185,950          | 326,816          | 675,642          | 263 %                 | 107 %                  |
| Other Wireline             | 609,909          | 764,099          | 1,063,563        | 74                    | 39                     |
| Coaxial Cable              | 879,671          | 1,469,130        | 2,194,002        | 149                   | 49                     |
| Fiber                      | 307,315          | 301,143          | 376,417          | NM                    | NM                     |
| Satellite & Fixed Wireless | 7,816            | 3,649            | 26,906           | NM                    | NM                     |
| <b>Total Lines</b>         | <b>1,990,662</b> | <b>2,864,838</b> | <b>4,336,530</b> | <b>118 %</b>          | <b>51 %</b>            |

**Table 3**  
**Residential and Small Business High-Speed Lines**  
**(Over 200 kbps in at Least One Direction)**

| Types of Technology 1/     | December 1999    | June 2000 2/     | December 2000    | Percent Change        |                        |
|----------------------------|------------------|------------------|------------------|-----------------------|------------------------|
|                            |                  |                  |                  | Dec 1999-<br>Dec 2000 | June 2000-<br>Dec 2000 |
| ADSL                       | 291,757          | 772,272          | 1,595,155        | 447 %                 | 107 %                  |
| Other Wireline             | 46,856           | 116,995          | 218,641          | 367                   | 87                     |
| Coaxial Cable              | 1,404,600        | 2,215,259        | 3,288,034        | 134                   | 48                     |
| Fiber                      | 1,023            | 325              | 1,994            | NM                    | NM                     |
| Satellite & Fixed Wireless | 50,404           | 64,320           | 102,432          | NM                    | NM                     |
| <b>Total Lines</b>         | <b>1,794,640</b> | <b>3,169,170</b> | <b>5,206,257</b> | <b>190 %</b>          | <b>64 %</b>            |

NM: Not meaningful due to inconsistencies in reported data.

1/ The mutually exclusive types of technology are, respectively: Asymmetric digital subscriber line (ADSL) technologies, which provide speeds in one direction greater than speeds in the other direction; wireline technologies "other" than ADSL, including traditional telephone company high-speed services and symmetric DSL services that provide equivalent functionality; coaxial cable, including the typical hybrid fiber-coax (HFC) architecture of upgraded cable TV systems; optical fiber to the subscriber's premises (e.g., Fiber-to-the-Home, or FTTH); and satellite and (terrestrial) fixed wireless systems, which use radio spectrum to communicate with a radio transmitter at the subscriber's premises.

2/ Data for June 2000 have been revised.

**Table 4**  
**High-Speed Lines by Type of Provider**  
**as of December 31, 2000**  
**(Over 200 kbps in at Least One Direction)**

| Types of Technology 1/ | Lines            |                |                  |                  | Percent of Lines |            |             |
|------------------------|------------------|----------------|------------------|------------------|------------------|------------|-------------|
|                        | RBOC 2/          | Other ILEC     | Non-ILEC         | Total            | RBOC             | Other ILEC | Non-ILEC    |
| ADSL                   | 1,707,360        | 107,792        | 162,225          | 1,977,377        | 86.3 %           | 5.5 %      | 8.2 %       |
| Other Wireline         | 652,369          | 198,276        | 212,918          | 1,063,563        | 61.3             | 18.6       | 20.0        |
| Coaxial Cable          | *                | *              | 3,540,685        | 3,576,378        | *                | *          | 99.0        |
| Other                  | *                | *              | 444,671          | 488,911          | *                | *          | 91.0        |
| <b>Total Lines</b>     | <b>2,436,491</b> | <b>309,239</b> | <b>4,360,499</b> | <b>7,106,229</b> | <b>34.3</b>      | <b>4.3</b> | <b>61.4</b> |

\* Data withheld to maintain firm confidentiality.

1/ The mutually exclusive types of technology are, respectively: Asymmetric digital subscriber line (ADSL) technologies, which provide speeds in one direction greater than speeds in the other direction; wireline technologies "other" than ADSL, including traditional telephone company high-speed services and symmetric DSL services that provide equivalent functionality; coaxial cable, including the typical hybrid fiber-coax (HFC) architecture of upgraded cable TV systems; optical fiber to the subscriber's premises (e.g., Fiber-to-the-Home, or FTTH); and satellite and (terrestrial) fixed wireless systems, which use radio spectrum to communicate with a radio transmitter at the subscriber's premises.

2/ RBOC lines include all high-speed lines reported by BellSouth, Qwest, SBC, and Verizon.

**Table 5**  
**Providers of High-Speed Lines by Technology**  
**as of December 31, 2000**  
**(Over 200 kbps in at Least One Direction)**

|  | ADSL | Coaxial Cable | Other 1/ | Total<br>(Unduplicated) |
|--|------|---------------|----------|-------------------------|
| Alabama                                    | 4    | 7             | 8        | 13                      |
| Alaska                                     | 0    | 0             | 4        | 4                       |
| Arizona                                    | 4    | *             | 8        | 9                       |
| Arkansas                                   | *    | *             | *        | 5                       |
| California                                 | 12   | 10            | 20       | 28                      |
| Colorado                                   | 6    | *             | 9        | 11                      |
| Connecticut                                | 4    | 4             | 8        | 11                      |
| Delaware                                   | *    | *             | *        | 5                       |
| District of Columbia                       | *    | *             | 10       | 10                      |
| Florida                                    | 7    | 10            | 13       | 21                      |
| Georgia                                    | 7    | 5             | 9        | 14                      |
| Hawaii                                     | *    | *             | *        | *                       |
| Idaho                                      | *    | *             | *        | 4                       |
| Illinois                                   | 10   | 5             | 14       | 19                      |
| Indiana                                    | 5    | 4             | 10       | 13                      |
| Iowa                                       | *    | 6             | 6        | 10                      |
| Kansas                                     | 4    | 5             | 9        | 11                      |
| Kentucky                                   | 6    | *             | 7        | 12                      |
| Louisiana                                  | 4    | *             | 7        | 10                      |
| Maine                                      | *    | *             | *        | 5                       |
| Maryland                                   | *    | 4             | 10       | 13                      |
| Massachusetts                              | 5    | 5             | 11       | 14                      |
| Michigan                                   | 7    | 5             | 10       | 15                      |
| Minnesota                                  | 7    | 7             | 11       | 19                      |
| Mississippi                                | *    | *             | 4        | 6                       |
| Missouri                                   | 5    | 5             | 10       | 13                      |
| Montana                                    | 4    | *             | *        | 5                       |
| Nebraska                                   | *    | *             | 4        | 6                       |
| Nevada                                     | 4    | *             | 8        | 9                       |
| New Hampshire                              | 4    | *             | 6        | 7                       |
| New Jersey                                 | 5    | *             | 12       | 14                      |
| New Mexico                                 | *    | *             | 6        | 8                       |
| New York                                   | 10   | 4             | 17       | 23                      |
| North Carolina                             | 9    | 6             | 12       | 18                      |
| North Dakota                               | *    | *             | 4        | 6                       |
| Ohio                                       | 9    | 5             | 12       | 17                      |
| Oklahoma                                   | *    | *             | 5        | 8                       |
| Oregon                                     | 5    | *             | 10       | 11                      |
| Pennsylvania                               | 11   | 6             | 15       | 21                      |
| Puerto Rico                                | 0    | 0             | *        | *                       |
| Rhode Island                               | *    | *             | *        | 4                       |
| South Carolina                             | 5    | 6             | 8        | 15                      |
| South Dakota                               | *    | *             | 4        | 5                       |
| Tennessee                                  | 5    | 4             | 8        | 13                      |
| Texas                                      | 15   | 7             | 17       | 28                      |
| Utah                                       | 4    | *             | 8        | 9                       |
| Vermont                                    | *    | *             | *        | 6                       |
| Virgin Islands                             | 0    | 0             | *        | *                       |
| Virginia                                   | 6    | 5             | 14       | 17                      |
| Washington                                 | 11   | *             | 15       | 19                      |
| West Virginia                              | *    | *             | *        | 6                       |
| Wisconsin                                  | 10   | *             | 8        | 14                      |
| Wyoming                                    | *    | *             | *        | *                       |
| Nationwide (Unduplicated)<br>December 2000 | 66   | 37            | 86       | 130                     |
| Nationwide (Unduplicated)<br>June 2000     | 47   | 36            | 72       | 118                     |
| Nationwide (Unduplicated)<br>December 1999 | 28   | 44            | 65       | 105                     |

\* Data withheld to maintain firm confidentiality. In this table, an asterisk also indicates 1-3 providers reporting.  
1/ Other includes wireline technologies other than asymmetric digital subscriber line (ADSL), optical fiber to the subscriber's premises, satellite, and (terrestrial) fixed wireless systems.

**Table 6**  
**High-Speed Lines by Technology**  
**(Over 200 kbps in at Least One Direction)**

|                           | December 1999 | June 2000 | December 2000 |               |           |           | Percentage Change |            |
|---------------------------|---------------|-----------|---------------|---------------|-----------|-----------|-------------------|------------|
|                           | Total         | Total     | ADSL          | Coaxial Cable | Other 1/  | Total     | Dec 1999-         | June 2000- |
|                           |               |           |               |               |           |           | Dec 2000          | Dec 2000   |
| Alabama                   | 19,796        | 32,756    | 12,320        | 36,432        | 14,582    | 63,334    | 220%              | 93%        |
| Alaska                    | 0             | *         | 0             | 0             | 934       | 934       | NA                | NA         |
| Arizona                   | 58,825        | 111,678   | 32,395        | *             | *         | 153,500   | 161               | 37         |
| Arkansas                  | 8,155         | 15,539    | *             | *             | *         | 28,968    | 255               | 86         |
| California                | 547,179       | 910,006   | 622,894       | 476,544       | 287,187   | 1,386,625 | 153               | 52         |
| Colorado                  | 36,726        | 64,033    | 42,810        | *             | *         | 104,534   | 185               | 63         |
| Connecticut               | 36,488        | 63,772    | 22,348        | 78,234        | 11,210    | 111,792   | 206               | 75         |
| Delaware                  | 1,558         | 3,660     | *             | *             | *         | 7,492     | 381               | 105        |
| District of Columbia      | 13,288        | 16,926    | *             | *             | 13,627    | 27,757    | 109               | 64         |
| Florida                   | 190,700       | 244,678   | 115,133       | 255,978       | 89,684    | 460,795   | 142               | 88         |
| Georgia                   | 75,870        | 130,292   | 56,588        | 75,474        | 71,793    | 203,855   | 169               | 56         |
| Hawaii                    | *             | *         | *             | *             | *         | *         | NA                | NA         |
| Idaho                     | *             | 8,070     | *             | *             | *         | 15,908    | NA                | 97         |
| Illinois                  | 77,672        | 166,933   | 48,278        | 126,490       | 67,471    | 242,239   | 212               | 45         |
| Indiana                   | 20,059        | 49,702    | 6,442         | 37,052        | 17,000    | 60,494    | 202               | 22         |
| Iowa                      | 19,258        | 49,159    | *             | 48,008        | *         | 58,199    | 202               | 18         |
| Kansas                    | 26,179        | 42,679    | 14,281        | 48,541        | 5,921     | 68,743    | 163               | 61         |
| Kentucky                  | 23,570        | 24,237    | 16,327        | *             | *         | 32,731    | 39                | 35         |
| Louisiana                 | 28,133        | 43,294    | 22,788        | *             | *         | 74,950    | 166               | 73         |
| Maine                     | 19,878        | 17,864    | *             | *             | *         | 26,266    | 32                | 47         |
| Maryland                  | 52,749        | 71,005    | *             | 65,668        | *         | 124,465   | 136               | 75         |
| Massachusetts             | 114,116       | 185,365   | 53,700        | 210,019       | 25,728    | 289,447   | 154               | 56         |
| Michigan                  | 81,223        | 135,318   | 25,482        | 130,296       | 42,452    | 198,230   | 144               | 46         |
| Minnesota                 | 38,268        | 65,272    | 40,870        | 64,215        | 12,809    | 117,894   | 208               | 81         |
| Mississippi               | *             | 6,514     | *             | *             | *         | 12,305    | NA                | 89         |
| Missouri                  | 23,347        | 46,903    | 38,759        | 42,255        | 19,389    | 100,403   | 330               | 114        |
| Montana                   | *             | *         | 1,760         | *             | *         | 7,378     | NA                | NA         |
| Nebraska                  | 36,748        | 44,188    | *             | *             | 4,729     | 54,085    | 47                | 22         |
| Nevada                    | 23,514        | 40,582    | 10,023        | *             | *         | 59,879    | 155               | 48         |
| New Hampshire             | 22,807        | 33,045    | 3,339         | *             | *         | 42,364    | 86                | 28         |
| New Jersey                | 101,832       | 144,203   | 59,332        | *             | *         | 285,311   | 180               | 98         |
| New Mexico                | *             | 2,929     | *             | *             | 21,207    | 28,497    | NA                | 873        |
| New York                  | 186,504       | 342,743   | 124,146       | 377,521       | 101,820   | 603,487   | 224               | 76         |
| North Carolina            | 57,881        | 81,998    | 24,091        | 73,092        | 39,798    | 136,981   | 137               | 67         |
| North Dakota              | *             | 3,467     | *             | *             | 2,723     | 6,380     | NA                | 84         |
| Ohio                      | 160,792       | 156,980   | 55,046        | 121,196       | 47,603    | 223,845   | 39                | 43         |
| Oklahoma                  | *             | 163,703   | *             | *             | 67,511    | 95,138    | NA                | -42        |
| Oregon                    | 27,062        | 44,186    | 31,644        | *             | *         | 76,839    | 184               | 74         |
| Pennsylvania              | 71,926        | 79,892    | 60,083        | 85,104        | 31,483    | 176,670   | 146               | 121        |
| Puerto Rico               | *             | *         | 0             | 0             | *         | *         | NA                | NA         |
| Rhode Island              | *             | 20,628    | *             | *             | *         | 30,919    | NA                | 50         |
| South Carolina            | 25,229        | 32,824    | 5,168         | 44,812        | 13,934    | 63,914    | 153               | 95         |
| South Dakota              | *             | 7,991     | *             | *             | 10,264    | 11,799    | NA                | 48         |
| Tennessee                 | 66,307        | 87,317    | 13,705        | 77,760        | 31,016    | 122,481   | 85                | 40         |
| Texas                     | 152,518       | 276,087   | 158,513       | 227,070       | 136,955   | 522,538   | 243               | 89         |
| Utah                      | 11,635        | 19,612    | 17,352        | *             | *         | 35,970    | 209               | 83         |
| Vermont                   | *             | 1,551     | *             | *             | *         | 7,773     | NA                | 401        |
| Virgin Islands            | 0             | 0         | 0             | 0             | *         | *         | NA                | NA         |
| Virginia                  | 51,305        | 72,436    | 26,750        | 78,585        | 34,580    | 139,915   | 173               | 93         |
| Washington                | 71,930        | 118,723   | 79,130        | *             | *         | 195,628   | 172               | 65         |
| West Virginia             | *             | 1,835     | *             | *             | 1,517     | 6,498     | NA                | 254        |
| Wisconsin                 | 18,599        | 34,262    | 8,623         | *             | *         | 76,257    | 310               | 123        |
| Wyoming                   | *             | *         | *             | *             | *         | *         | NA                | NA         |
| Nationwide Reported Total | 2,756,492     | 4,372,939 | 1,977,377     | 3,576,378     | 1,552,474 | 7,106,229 | 158%              | 63%        |

\* Data withheld to maintain firm confidentiality.

NA: Not available

1/ Other includes wireline technologies other than asymmetric digital subscriber line (ADSL), optical fiber to the subscriber's premises, satellite, and (terrestrial) fixed wireless systems.

**Table 7**  
**High-Speed Lines by Type of User**  
**as of December 31, 2000**  
**(Over 200 kbps in at Least One Direction)**

|                                  | Residential and Small Business | Other 1/         | Total            |
|----------------------------------|--------------------------------|------------------|------------------|
| Alabama                          | 32,579                         | 30,755           | 63,334           |
| Alaska                           | 546                            | 388              | 934              |
| Arizona                          | 141,052                        | 12,448           | 153,500          |
| Arkansas                         | 26,119                         | 2,849            | 28,968           |
| California                       | 1,048,819                      | 337,806          | 1,386,625        |
| Colorado                         | 89,885                         | 14,649           | 104,534          |
| Connecticut                      | 102,303                        | 9,489            | 111,792          |
| Delaware                         | 2,450                          | 5,042            | 7,492            |
| District of Columbia             | 14,518                         | 13,239           | 27,757           |
| Florida                          | 253,912                        | 206,883          | 460,795          |
| Georgia                          | 67,974                         | 135,881          | 203,855          |
| Hawaii                           | *                              | *                | *                |
| Idaho                            | 13,291                         | 2,617            | 15,908           |
| Illinois                         | 183,656                        | 58,583           | 242,239          |
| Indiana                          | 23,217                         | 37,277           | 60,494           |
| Iowa                             | 55,205                         | 2,994            | 58,199           |
| Kansas                           | 64,095                         | 4,648            | 68,743           |
| Kentucky                         | 12,443                         | 20,288           | 32,731           |
| Louisiana                        | 40,246                         | 34,704           | 74,950           |
| Maine                            | 25,048                         | 1,218            | 26,266           |
| Maryland                         | 37,472                         | 86,993           | 124,465          |
| Massachusetts                    | 255,558                        | 33,889           | 289,447          |
| Michigan                         | 120,259                        | 77,971           | 198,230          |
| Minnesota                        | 103,735                        | 14,159           | 117,894          |
| Mississippi                      | 4,097                          | 8,208            | 12,305           |
| Missouri                         | 79,429                         | 20,974           | 100,403          |
| Montana                          | 6,513                          | 865              | 7,378            |
| Nebraska                         | 50,910                         | 3,176            | 54,085           |
| Nevada                           | 50,575                         | 9,304            | 59,879           |
| New Hampshire                    | 39,490                         | 2,874            | 42,364           |
| New Jersey                       | 240,039                        | 45,272           | 285,311          |
| New Mexico                       | 21,274                         | 7,223            | 28,497           |
| New York                         | 487,876                        | 115,611          | 603,487          |
| North Carolina                   | 82,909                         | 54,072           | 136,981          |
| North Dakota                     | 5,793                          | 587              | 6,380            |
| Ohio                             | 174,566                        | 49,279           | 223,845          |
| Oklahoma                         | 43,115                         | 52,023           | 95,138           |
| Oregon                           | 66,261                         | 10,578           | 76,839           |
| Pennsylvania                     | 106,021                        | 70,649           | 176,670          |
| Puerto Rico                      | *                              | *                | *                |
| Rhode Island                     | 29,005                         | 1,914            | 30,919           |
| South Carolina                   | 36,925                         | 26,989           | 63,914           |
| South Dakota                     | 10,905                         | 894              | 11,799           |
| Tennessee                        | 77,008                         | 45,473           | 122,481          |
| Texas                            | 420,710                        | 101,828          | 522,538          |
| Utah                             | 29,973                         | 5,997            | 35,970           |
| Vermont                          | 7,059                          | 714              | 7,773            |
| Virgin Islands                   | *                              | *                | *                |
| Virginia                         | 81,244                         | 58,671           | 139,915          |
| Washington                       | 167,451                        | 28,177           | 195,628          |
| West Virginia                    | 5,487                          | 1,011            | 6,498            |
| Wisconsin                        | 58,119                         | 18,138           | 76,257           |
| Wyoming                          | *                              | *                | *                |
| <b>Nationwide Reported Total</b> | <b>5,206,257</b>               | <b>1,899,972</b> | <b>7,106,229</b> |

\* Data withheld to maintain firm confidentiality.

1/ Other includes medium and large business, institutional, and government customers.

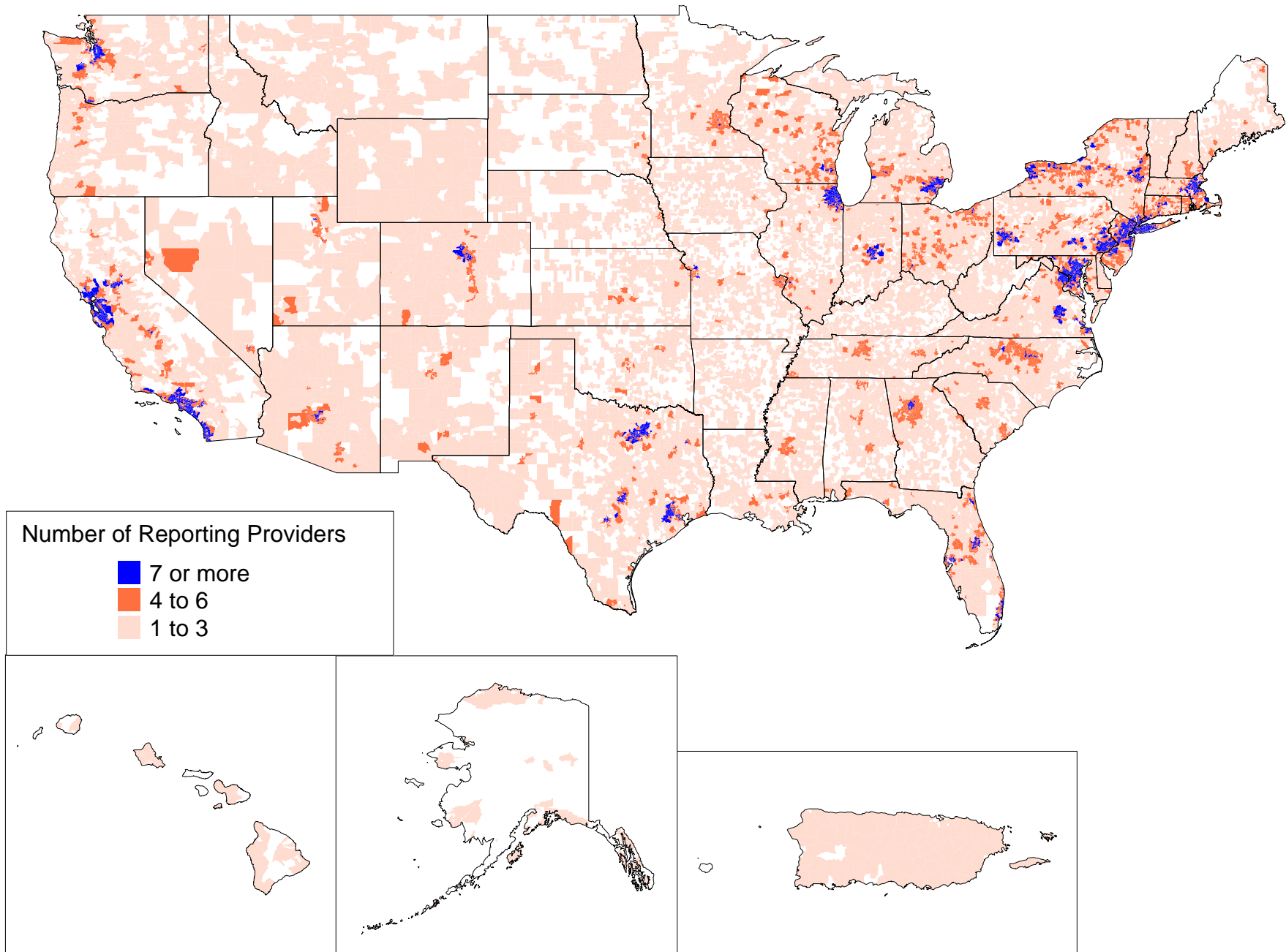
**Table 8**  
**Percentage of Zip Codes with High-Speed Lines in Service**

| <b>Number of Providers</b> | <b>December 1999</b> | <b>June 2000*</b> | <b>December 2000</b> |
|----------------------------|----------------------|-------------------|----------------------|
| Zero                       | 44.0 %               | 30.1 %            | 25.0 %               |
| One                        | 24.5                 | 25.8              | 24.5                 |
| Two                        | 14.2                 | 16.7              | 18.6                 |
| Three                      | 8.1                  | 9.3               | 10.7                 |
| Four                       | 4.4                  | 6.0               | 6.2                  |
| Five                       | 2.6                  | 4.2               | 4.1                  |
| Six                        | 1.5                  | 3.1               | 3.0                  |
| Seven                      | 0.6                  | 2.2               | 2.3                  |
| Eight                      | 0.2                  | 1.2               | 2.0                  |
| Nine                       | 0.0                  | 0.6               | 1.6                  |
| Ten or More                | 0.0                  | 0.9               | 2.1                  |

\* Data for June 2000 have been revised.

# High-Speed Providers by Zip Code

(As of December 31, 2000)



**Table 9**  
**Percentage of Zip Codes with High-Speed Lines in Service**  
**as of December 31, 2000**  
**(Over 200 kbps in at Least One Direction)**

|                      | Number of Providers |             |      |      |     |               |
|----------------------|---------------------|-------------|------|------|-----|---------------|
|                      | Zero                | One - Three | Four | Five | Six | Seven or More |
| Alabama              | 29 %                | 62 %        | 5 %  | 4 %  | 0 % | 0 %           |
| Alaska               | 78                  | 22          | 0    | 0    | 0   | 0             |
| Arizona              | 13                  | 43          | 8    | 13   | 16  | 7             |
| Arkansas             | 59                  | 41          | 0    | 0    | 0   | 0             |
| California           | 16                  | 36          | 6    | 5    | 6   | 31            |
| Colorado             | 16                  | 58          | 6    | 6    | 6   | 8             |
| Connecticut          | 4                   | 46          | 18   | 12   | 13  | 8             |
| Delaware             | 0                   | 91          | 9    | 0    | 0   | 0             |
| District of Columbia | 7                   | 19          | 4    | 11   | 7   | 52            |
| Florida              | 2                   | 56          | 14   | 10   | 6   | 12            |
| Georgia              | 27                  | 53          | 7    | 6    | 5   | 3             |
| Hawaii               | 37                  | 63          | 0    | 0    | 0   | 0             |
| Idaho                | 35                  | 65          | 0    | 0    | 0   | 0             |
| Illinois             | 26                  | 52          | 5    | 3    | 3   | 12            |
| Indiana              | 25                  | 65          | 3    | 1    | 2   | 5             |
| Iowa                 | 48                  | 52          | 1    | 0    | 0   | 0             |
| Kansas               | 41                  | 58          | 1    | 0    | 0   | 0             |
| Kentucky             | 50                  | 50          | 0    | 0    | 0   | 0             |
| Louisiana            | 36                  | 57          | 6    | 1    | 0   | 0             |
| Maine                | 20                  | 78          | 3    | 0    | 0   | 0             |
| Maryland             | 1                   | 47          | 8    | 8    | 5   | 31            |
| Massachusetts        | 1                   | 48          | 13   | 7    | 5   | 26            |
| Michigan             | 14                  | 61          | 6    | 4    | 4   | 10            |
| Minnesota            | 34                  | 53          | 5    | 5    | 2   | 0             |
| Mississippi          | 37                  | 58          | 3    | 2    | 0   | 0             |
| Missouri             | 47                  | 43          | 3    | 5    | 2   | 1             |
| Montana              | 51                  | 49          | 0    | 0    | 0   | 0             |
| Nebraska             | 49                  | 47          | 4    | 0    | 0   | 0             |
| Nevada               | 21                  | 49          | 15   | 10   | 3   | 3             |
| New Hampshire        | 4                   | 80          | 8    | 4    | 3   | 0             |
| New Jersey           | 1                   | 26          | 12   | 13   | 12  | 37            |
| New Mexico           | 34                  | 59          | 3    | 3    | 1   | 0             |
| New York             | 5                   | 48          | 13   | 7    | 5   | 22            |
| North Carolina       | 18                  | 67          | 7    | 5    | 2   | 1             |
| North Dakota         | 60                  | 39          | 0    | 0    | 0   | 0             |
| Ohio                 | 11                  | 68          | 10   | 7    | 4   | 1             |
| Oklahoma             | 48                  | 45          | 7    | 0    | 0   | 0             |
| Oregon               | 22                  | 64          | 6    | 7    | 1   | 0             |
| Pennsylvania         | 17                  | 54          | 8    | 4    | 3   | 13            |
| Puerto Rico          | 0                   | 100         | 0    | 0    | 0   | 0             |
| Rhode Island         | 0                   | 46          | 35   | 19   | 0   | 0             |
| South Carolina       | 20                  | 68          | 8    | 3    | 1   | 0             |
| South Dakota         | 49                  | 49          | 3    | 0    | 0   | 0             |
| Tennessee            | 27                  | 59          | 10   | 2    | 1   | 0             |
| Texas                | 22                  | 51          | 6    | 4    | 3   | 13            |
| Utah                 | 23                  | 50          | 9    | 8    | 9   | 1             |
| Vermont              | 9                   | 91          | 0    | 0    | 0   | 0             |
| Virginia             | 16                  | 62          | 4    | 4    | 2   | 13            |
| Washington           | 18                  | 49          | 8    | 5    | 4   | 16            |
| West Virginia        | 25                  | 74          | 0    | 0    | 0   | 0             |
| Wisconsin            | 22                  | 59          | 10   | 5    | 3   | 1             |
| Wyoming              | 26                  | 74          | 0    | 0    | 0   | 0             |
| Nationwide           | 25 %                | 54 %        | 6 %  | 4 %  | 3 % | 8 %           |



**Table 10**  
**High-Speed Subscribership**  
**Ranked by Population Density**  
**(Over 200 kbps in at Least One Direction)**

| Deciles<br>(Blocks of Zip Codes<br>Grouped by Density) | Persons per Square Mile (in Each<br>Decile of Zip Codes) | Percent of Zip Codes in Decile with at<br>Least One High-Speed Subscriber |               | Percent of Population in Decile that Resides in<br>Zip Codes with High-Speed Service |               |
|--|--|---|---------------|--|---------------|
|  |  | December 1999   | December 2000 | December 1999  | December 2000 |
| 90-100   | More Than 3,147  | 96.2 %  | 98.2 %        | 99.0 %   | 99.9 %        |
| 80-90  | 947-3,147  | 93.2  | 96.8          | 98.4   | 99.7          |
| 70-80  | 268-947  | 87.2  | 95.4          | 96.2   | 99.3          |
| 60-70  | 118-268  | 77.8  | 91.7          | 91.7   | 98.2          |
| 50-60  | 67-118   | 66.3  | 85.8          | 82.9   | 94.8          |
| 40-50  | 41-67  | 53.7  | 76.8          | 72.2   | 88.2          |
| 30-40  | 25-41  | 40.2  | 66.4          | 59.1   | 80.4          |
| 20-30  | 15-25  | 27.9  | 54.3          | 48.5   | 71.8          |
| 10-20  | 6-15   | 23.9  | 44.5          | 46.6   | 66.2          |
| 0-10   | Fewer Than 6   | 18.7  | 37.2          | 36.1   | 58.6          |

**Table 11**  
**High-Speed Subscribership**  
**Ranked by Household Income**  
**(Over 200 kbps in at Least One Direction)**

| Deciles (Blocks of Zip<br>Codes Grouped by<br>Median Household<br>Income) | Median Household Income (in<br>Each Decile of Zip Codes) | Percent of Zip Codes in Decile with at<br>Least One High-Speed Subscriber |               | Percent of Population in Decile that Resides in<br>Zip Codes with High-Speed Service |               |
|---|--|---|---------------|--|---------------|
|   |  | December 1999   | December 2000 | December 1999  | December 2000 |
| 90-100  | \$53,494 to \$291,938                                    | 90.8 %  | 96.1 %        | 98.4 %   | 99.8 %        |
| 80-90   | \$43,617 to \$53,478                                     | 77.4  | 90.4          | 95.9   | 99.1          |
| 70-80   | \$38,396 to \$43,614                                     | 67.0  | 82.4          | 94.3   | 98.1          |
| 60-70   | \$34,744 to \$38,395                                     | 59.6  | 78.7          | 91.7   | 97.1          |
| 50-60   | \$32,122 to \$34,743                                     | 53.7  | 74.6          | 89.4   | 96.3          |
| 40-50   | \$29,893 to \$32,121                                     | 51.8  | 69.8          | 88.2   | 94.8          |
| 30-40   | \$27,542 to \$29,892                                     | 49.1  | 69.4          | 85.9   | 94.0          |
| 20-30   | \$24,855 to \$27,541                                     | 48.8  | 67.1          | 85.1   | 93.2          |
| 10-20   | \$21,645 to \$24,855                                     | 45.3  | 62.6          | 82.5   | 91.2          |
| 0-10  | \$0 to \$21,644  | 41.7  | 56.0          | 84.1   | 91.7          |

## Customer Response

Publication: *High-Speed Services for Internet Access: Status as of December 31, 2000*

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

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
- other federal government employee
- state or local government employee
- Other (please specify) \_\_\_\_\_

2. Please rate the report:

|                      | Excellent | Good | Satisfactory | Poor | No opinion |
|----------------------|-----------|------|--------------|------|------------|
| Data accuracy        | ( )       | ( )  | ( )          | ( )  | ( )        |
| Data presentation    | ( )       | ( )  | ( )          | ( )  | ( )        |
| Timeliness of data   | ( )       | ( )  | ( )          | ( )  | ( )        |
| Completeness of data | ( )       | ( )  | ( )          | ( )  | ( )        |
| Text clarity         | ( )       | ( )  | ( )          | ( )  | ( )        |
| Completeness of text | ( )       | ( )  | ( )          | ( )  | ( )        |

3. Overall, how do you rate this report?

|  | Excellent | Good | Satisfactory | Poor | No opinion |
|--|-----------|------|--------------|------|------------|
|  | ( )       | ( )  | ( )          | ( )  | ( )        |

4. How can this report be improved?

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5. May we contact you to discuss possible improvements?

Name:

Telephone #:

|  |    |   |
|--|----|---|
| To discuss the information in this report contact: call 202-418-0940<br>or for users of TTY equipment, call (202) 418-0484 |    |   |
| Fax this response to   | Or | Mail this response to                               |
| 202-418-0520   |    | FCC/IAD<br>Mail Stop 1600 F<br>Washington, DC 20554 |