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

### ***High-Speed Lines to the Internet Increased 57% During the First Six Months of Year 2000 For a Total of 4.3 Million Subscribers***

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. 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 in March 2000 to assist the Commission in its efforts to 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, known as 706 reports.

The information released today was filed by qualifying providers on September 1, 2000, and includes data as of June 30, 2000. Noteworthy data include:

- High-speed lines connecting homes and small businesses to the Internet increased by 57% during the first half of 2000, to a total of 4.3 million lines (or wireless channels) in service from 2.8 million at the end of 1999.
- About 2.8 million of high-speed lines provided speeds of over 200 kbps in both directions, and thus met the Commission's definition of advanced services, compared to 2.0 million at the end of 1999.
- The presence of high-speed service subscribers was reported in all fifty states, the District of Columbia, and Puerto Rico, and in about 70% of the nation's zip codes, compared to 59% at the end of 1999.
- High-speed asymmetric DSL (ADSL) lines in service increased by 157%, to almost one million lines, compared to about 370,000 lines at the end of 1999.
- High-speed lines in service over coaxial cable systems remained more numerous, increasing 59% to about 2.2 million lines, compared to 1.4 million at the end of 1999.

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- High-speed lines (or wireless channels) delivered over fiber, satellite, fixed wireless, and wireline technologies other than ADSL increased by at least 18% during the first half of this year.
- High-speed subscribers are reported to be present in 96% of the most densely populated zip codes and in 40% of zip codes with the lowest population densities. The number of sparsely populated zip codes with high-speed subscribers increased by 69% during the first half of the year, compared to an increase of 4% for the most densely populated zip codes.

As additional information from Form 477 becomes available, it will be routinely posted on the Commission's Internet site. Because Form 477 was adopted recently, there may be some need for further clarification and adjustment of the reporting system.

The data summary is available for reference in the FCC's Reference Information Center, Courtyard Level, 445 12th Street, SW, Washington, DC. It can be downloaded [file name: HSPD1000.zip, HSPD1000.pdf] from the **FCC-State Link** Internet site at <http://www.fcc.gov/ccb/stats>. Copies may be purchased by calling International Transcription Services, Inc. (ITS) at (202) 857-3800.

- 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 June 30, 2000

October 2000



Industry Analysis Division  
Common Carrier Bureau  
Federal Communications Commission  
Washington, DC 20554

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This publication is available for reference in the FCC's Information Center at 445 12<sup>th</sup> Street, S.W., Courtyard Level. Copies may be purchased by calling International Transcription Service, Inc. at (202) 857-3800. The publication can also be downloaded [file names: HSPD1000.ZIP, HSPD1000.PDF] from the **FCC-State Link** internet site at <http://www.fcc.gov/ccb/stats> on the World Wide Web.

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## **High-Speed Services for Internet Access: Subscribership as of June 30, 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 launched 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>

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.<sup>3</sup> We summarize here comparable information from the second data collection, thereby presenting a snapshot of subscribership at mid-year 2000.<sup>4</sup> Subscribership to high-speed services for Internet access increased by 57% during the first half of 2000. At mid-year, the presence of high-speed service subscribers was reported in all fifty states, the District of Columbia, and Puerto Rico, and in about 70% of the zip codes in the United States.

Before presenting the new 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 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, we have no assurance that all such providers have reported data.<sup>5</sup> In particular, we do not know how comprehensively small providers, many of which serve rural areas

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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 transmissions at a speed 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. March 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> *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) (*Second Report on Advanced Telecommunications Capability*), available at <http://www.fcc.gov/broadband>. In the report, the Commission's data collection program (FCC Form 477) is referred to as the "Broadband Survey."

<sup>4</sup> Providers filed data for June 30, 2000 on September 1, 2000. 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 for each specific round of the data collection may be downloaded from the FCC Forms website at <http://www.fcc.gov/formpage.html>.

<sup>5</sup> We received 84 state-specific voluntary submissions (made by 41 holding companies) in the first Form 477 filing and 78 voluntary submissions (made by 33 holding companies) in the second filing.

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.<sup>6</sup>

As the Commission's data collection program was only recently implemented, we expect providers to report data more accurately as they gain experience with the program. There also may be some need for further clarification and adjustment of the reporting system. Nevertheless, based on the information now available, the following broad conclusions emerge:

- Subscribership to high-speed services increased by 57% during the first half of 2000, to a total of 4.3 million lines (or wireless channels) in service.
- 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 during the six months, 157%, to almost one million lines.<sup>7</sup> High-speed lines in service over coaxial cable systems (cable modem service) remained more numerous, increasing 59% to a total of 2.2 million lines.<sup>8</sup> See Table 1.

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<sup>6</sup> For example, based on a systematic, large scale personal interview survey, the Department of Commerce estimates that about 4.4% of the approximately 105 million U.S. households access the Internet at speeds faster than regular "dial-up" telephone lines. This implies about 4.6 million such Internet connections, compared to our estimate, discussed below, that about 3.1 million residences (and home office and other small business customers) connect to the Internet at speeds in excess of 200 kbps in at least one direction. The Department of Commerce notes that their survey results include lines that are slower than the Commission's definition of "high-speed." See U.S. Department of Commerce, *Falling Through the Net: Toward Digital Inclusion* (October 2000), available at <http://www.esa.doc.gov/fttn00.pdf>.

<sup>7</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 the T1 and other data services that wireline telephone companies have offered to business customers for some time.

<sup>8</sup> In addition, reported high-speed lines (or wireless channels) delivered over wireline technologies other than ADSL, fiber to the end-user's premises (e.g., Fiber-to-the-Home, or FTTH), satellite, and fixed wireless technologies increased by 18%. However, because of previously unidentified inconsistencies in reported data, we believe the true rate of increase is closer to 25%. (Based on discussions with reporting service providers, we believe year-end 1999 fiber lines are overstated by about 50,000 and "satellite & fixed wireless" channels by about 4,000.)

- Subscribership to the subset of high-speed services that the Commission defines as advanced services (i.e., delivering to subscribers transmissions at a speed in excess of 200 kbps in each direction) increased by 41% during the first half of 2000, to a total of 2.8 million lines (or wireless channels) in service. Advanced services lines provided by means of ADSL technology increased by 75%, and advanced services lines provided over coaxial cable systems increased by 63%.<sup>9</sup> See Table 2.
- As of June 30, 2000, there were about 3.1 million residential and small business subscribers to high-speed services. By contrast, there were approximately 1.8 million such subscribers at the end of 1999. See Table 3.
- Providers of high-speed ADSL services report serving subscribers in 49 states and the District of Columbia, while providers of high-speed services over cable systems report serving subscribers in 47 states and the District of Columbia. High-speed service providers who use wireline technologies other than ADSL, 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, and Puerto Rico.<sup>10</sup> See Table 4.
- 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.<sup>11</sup> See Table 5.
- 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. As of June 30, 2000, subscribers to high-speed services were reported in about 70% of the nation's zip codes. Multiple providers reported having subscribers in more than 40% of the nation's zip codes.<sup>12</sup> See Table 6.

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<sup>9</sup> Similarly to the situation for high-speed lines, discussed above, we believe year-end 1999 advanced services lines (or wireless channels) provided over fiber to the end-user's premises and over "satellite & fixed wireless" technology are somewhat overstated due to previously unidentified inconsistencies in the reported data.

<sup>10</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. The Commission is optimistic that this approach will encourage providers that fall below the threshold for mandatory reporting of high-speed subscribership information to participate on a voluntary basis in future rounds of the data collection.

<sup>11</sup> 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.

<sup>12</sup> A list of zip codes with number of service providers as reported in the first Form 477 filing (data as of December 31, 1999) is available at <http://www.fcc.gov/ccb/stats>. Lists from subsequent filings will be posted when available.

- Our analysis indicates that about 95% of the country’s population lives in the 70% of zip codes where a provider reports having at least one high-speed service subscriber.<sup>13</sup> Moreover, numerous competing providers report serving high-speed subscribers in the major population centers of the country. See Figure 1.
- In each of California, Massachusetts, and the District of Columbia, at least one-fifth of zip codes have seven or more providers that report having at least one subscriber for high-speed service in the zip code. By contrast, 3% of nationwide zip codes have seven or more such providers. See Table 7.
- 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 June 30, 2000, high-speed subscribers are reported to be present in 96% of the most densely populated zip codes and in 40% of zip codes with the lowest population densities.<sup>14</sup> However, the number of sparsely populated zip codes with high-speed subscribers increased by 69% during the first half of this year, compared to an increase of 4% for the most densely populated zip codes. See Table 8.
- 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 95% of zip codes. By contrast, high-speed subscribers are reported in only 51% of zip codes with the lowest median family income. See Table 9.

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.

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<sup>13</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>14</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).

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

<b>Types of Technology*</b>	<b>December 1999</b>	<b>June 2000</b>	<b>% Change</b>
ADSL	369,792	950,590	157%
Other Wireline	609,909	747,028	22
Coaxial Cable	1,414,183	2,248,981	59
Fiber	312,204	307,151	n.m.
Satellite & Fixed Wireless	50,404	65,615	n.m.
<b>Total Lines</b>	<b>2,756,492</b>	<b>4,319,365</b>	<b>57%</b>

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

<b>Types of Technology*</b>	<b>December 1999</b>	<b>June 2000</b>	<b>% Change</b>
ADSL	185,950	325,901	75%
Other Wireline	609,909	747,028	22
Coaxial Cable	879,671	1,434,237	63
Fiber	307,315	301,551	n.m.
Satellite & Fixed Wireless	7,816	3,649	n.m.
<b>Total Lines</b>	<b>1,990,662</b>	<b>2,812,366</b>	<b>41%</b>

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

<b>Types of Technology*</b>	<b>December 1999</b>	<b>June 2000</b>	<b>% Change</b>
ADSL	291,757	771,311	164%
Other Wireline	46,856	104,647	123
Coaxial Cable	1,404,600	2,179,749	55
Fiber	1,023	325	n.m.
Satellite & Fixed Wireless	50,404	64,320	n.m.
<b>Total Lines</b>	<b>1,794,640</b>	<b>3,121,653</b>	<b>74%</b>

\*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.

n.m.: Not meaningful due to previously unidentified inconsistencies in reported data.



**Table 4**  
**High-Speed Providers by Technology as of June 30, 2000**

	ADSL	Coaxial Cable	Other #	All Broadband (Unduplicated)
Alabama	*	6	5	11
Alaska	0	0	*	*
Arizona	*	*	7	7
Arkansas	*	*	4	6
California	8	8	17	22
Colorado	*	*	9	10
Connecticut	*	4	7	10
Delaware	*	*	4	5
District of Columbia	*	*	8	8
Florida	5	8	11	16
Georgia	*	4	8	12
Hawaii	*	*	*	*
Idaho	*	*	*	4
Illinois	6	4	10	13
Indiana	*	4	7	11
Iowa	*	6	6	9
Kansas	*	*	6	7
Kentucky	4	*	5	8
Louisiana	*	*	5	7
Maine	*	*	*	4
Maryland	*	4	8	11
Massachusetts	4	4	12	15
Michigan	*	5	9	13
Minnesota	4	7	8	16
Mississippi	*	*	*	5
Missouri	*	4	9	11
Montana	*	*	*	*
Nebraska	*	*	5	6
Nevada	*	*	7	8
New Hampshire	*	*	6	6
New Jersey	*	*	10	11
New Mexico	*	0	4	4
New York	8	*	13	19
North Carolina	5	4	7	12
North Dakota	*	*	4	6
Ohio	6	*	14	15
Oklahoma	*	*	*	5
Oregon	4	*	9	10
Pennsylvania	7	4	15	18
Puerto Rico	0	0	*	*
Rhode Island	*	*	*	4
South Carolina	*	4	6	9
South Dakota	*	*	5	5
Tennessee	*	*	5	10
Texas	7	4	14	17
Utah	*	*	5	6
Vermont	*	*	*	4
Virginia	5	4	14	16
Washington	8	*	12	15
West Virginia	*	*	*	4
Wisconsin	6	*	8	11
Wyoming	*	0	*	*
Nationwide (Unduplicated)	45	33	69	106

# Other includes other wireline, fiber, satellite and fixed wireless.

\* Indicates 1-3 providers reporting.

**Table 5**  
**High-Speed Lines by Technology**

	December 1999	June 2000			Percentage Change from 1999 to 2000	
	Total	ADSL	Coaxial Cable	Other #		Total
Alabama	19,796	*	17,164	*	32,679	65 %
Alaska	*	0	0	*	*	n.a.
Arizona	58,825	*	*	48,983	111,678	90
Arkansas	8,155	*	*	3,688	15,484	90
California	547,179	373,574	297,415	238,700	909,689	66
Colorado	36,726	*	*	13,127	64,033	74
Connecticut	36,488	*	47,127	*	63,772	75
Delaware	1,558	*	*	1,506	3,660	135
District of Columbia	13,288	*	*	10,766	16,926	27
Florida	190,700	37,806	127,238	75,851	240,895	26
Georgia	75,870	*	48,947	*	130,292	72
Hawaii	*	*	*	*	*	n.a.
Idaho	*	*	*	*	8,070	n.a.
Illinois	77,672	12,812	83,737	70,384	166,933	115
Indiana	20,059	*	33,431	*	49,599	147
Iowa	19,258	*	42,081	*	49,159	155
Kansas	26,179	*	*	5,171	42,679	63
Kentucky	23,570	*	*	*	24,019	2
Louisiana	28,133	*	*	11,749	43,294	54
Maine	19,878	*	*	*	17,864	-10
Maryland	52,749	*	42,412	*	71,005	35
Massachusetts	114,116	15,802	148,233	19,922	183,957	61
Michigan	81,223	*	94,586	*	135,318	67
Minnesota	38,268	25,975	30,485	8,375	64,835	69
Mississippi	*	*	*	*	6,514	n.a.
Missouri	23,347	*	16,482	*	46,903	101
Montana	*	*	*	*	*	n.a.
Nebraska	36,748	*	*	5,609	44,184	20
Nevada	23,514	*	*	10,441	40,582	73
New Hampshire	22,807	*	*	2,580	33,045	45
New Jersey	101,832	*	*	36,909	144,203	42
New Mexico	*	*	0	*	2,925	n.a.
New York	186,504	41,576	*	*	311,839	67
North Carolina	57,881	8,662	42,290	30,158	81,110	40
North Dakota	*	*	*	1,632	3,467	n.a.
Ohio	160,792	33,603	*	*	156,888	-2
Oklahoma	*	*	*	*	162,790	n.a.
Oregon	27,062	19,989	*	*	44,186	63
Pennsylvania	71,926	18,313	38,340	23,239	79,892	11
Puerto Rico	*	0	0	*	*	n.a.
Rhode Island	*	*	*	*	20,628	n.a.
South Carolina	25,229	*	20,190	*	32,824	30
South Dakota	*	*	*	5,414	7,991	n.a.
Tennessee	66,307	*	*	23,979	85,500	29
Texas	152,518	73,117	135,999	65,014	274,130	80
Utah	11,635	*	*	4,828	19,612	69
Vermont	*	*	*	*	1,551	n.a.
Virginia	51,305	9,510	40,337	22,153	72,000	40
Washington	71,930	52,345	*	*	118,318	64
West Virginia	*	*	*	*	1,835	n.a.
Wisconsin	18,599	1,063	*	*	34,220	84
Wyoming	*	*	0	*	*	n.a.
Nationwide Reported Total	2,756,492	950,590	2,248,981	1,119,794	4,319,365	57

# Other includes other wireline, fiber, satellite and fixed wireless.

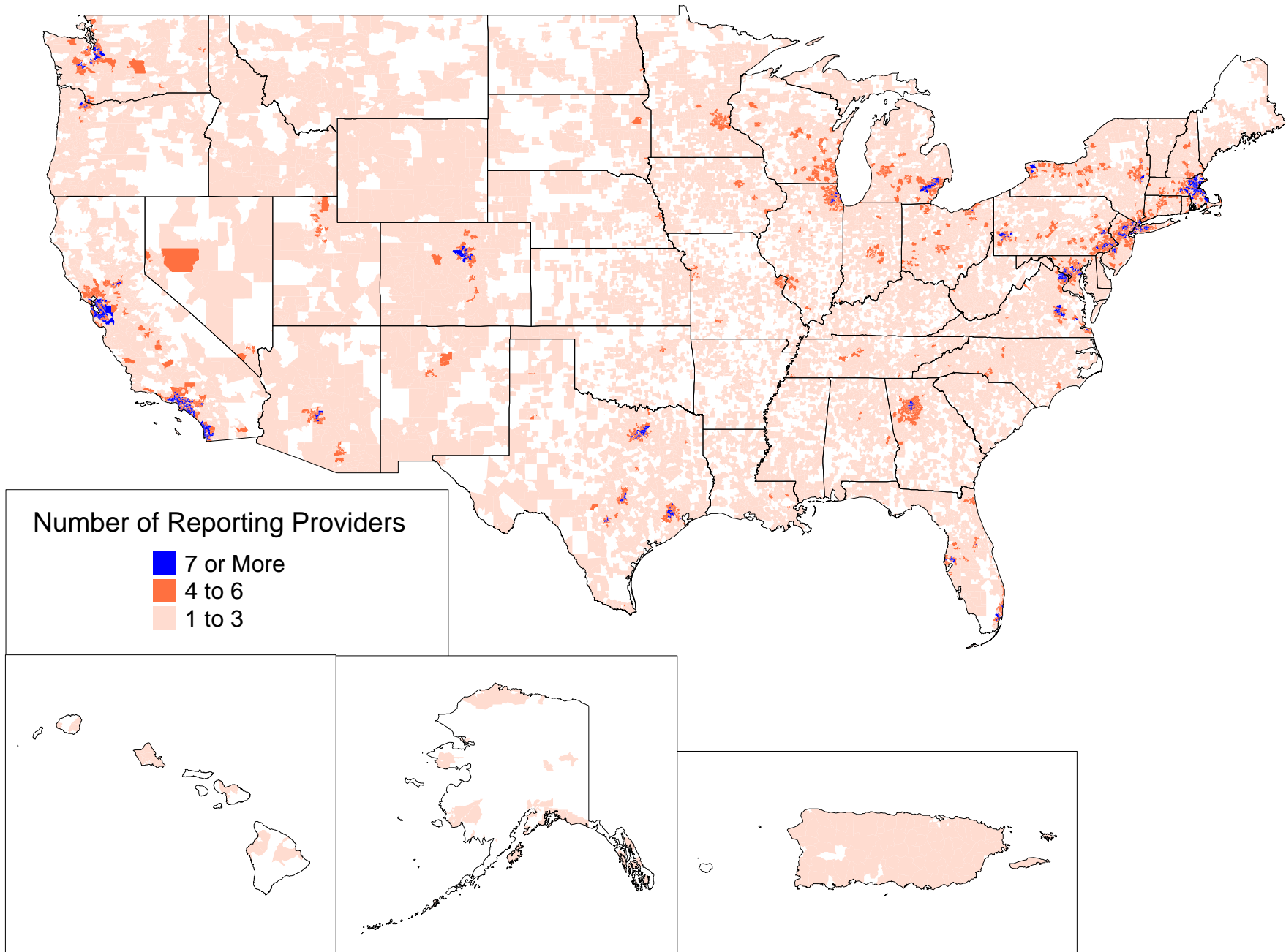
\* Data withheld to maintain firm confidentiality.

n.a.: Not available

**Table 6**  
**Percentage of Zip Codes with High-Speed Service**

<b>Providers</b>	<b>December 1999</b>	<b>June 2000</b>
Zero	44.0 %	30.1 %
One	24.5	27.8
Two	14.2	18.6
Three	8.1	9.3
Four	4.4	5.0
Five	2.6	3.4
Six	1.5	2.6
Seven	0.6	1.7
Eight	0.2	0.9
Nine	0.0	0.4
Ten or More	0.0	0.4

Figure 1  
High-Speed Providers by Zip Code



**Table 7**  
**Percentage of Zip Codes with High-Speed Lines as of June 30, 2000**

	Number of Providers					
	Zero	One - Three	Four	Five	Six	Seven or More
Alabama	38 %	61 %	1 %	0 %	0 %	0 %
Alaska	78	22	0	0	0	0
Arizona	14	50	8	11	13	4
Arkansas	66	34	0	0	0	0
California	17	40	7	7	8	20
Colorado	13	63	5	6	6	8
Connecticut	8	69	17	4	3	0
Delaware	0	98	2	0	0	0
District of Columbia	0	33	4	11	26	26
Florida	12	62	9	8	4	4
Georgia	34	49	6	5	3	3
Hawaii	49	51	0	0	0	0
Idaho	31	69	0	0	0	0
Illinois	39	44	7	5	2	2
Indiana	35	60	4	1	0	0
Iowa	41	58	1	0	0	0
Kansas	50	50	0	0	0	0
Kentucky	55	45	0	0	0	0
Louisiana	39	59	1	0	0	0
Maine	30	70	0	0	0	0
Maryland	1	68	8	9	9	5
Massachusetts	1	49	14	5	5	26
Michigan	18	64	6	6	4	3
Minnesota	33	57	5	4	1	0
Mississippi	47	53	0	0	0	0
Missouri	57	36	3	3	1	0
Montana	49	51	0	0	0	0
Nebraska	48	48	4	0	0	0
Nevada	26	59	11	3	0	0
New Hampshire	5	85	4	5	0	0
New Jersey	2	51	21	14	7	5
New Mexico	33	62	5	0	0	0
New York	11	62	8	7	5	6
North Carolina	24	73	2	1	0	0
North Dakota	59	41	1	0	0	0
Ohio	19	69	7	3	1	0
Oklahoma	58	40	3	0	0	0
Oregon	23	66	4	4	2	2
Pennsylvania	25	56	7	4	5	2
Puerto Rico	15	85	0	0	0	0
Rhode Island	0	81	19	0	0	0
South Carolina	35	65	0	0	0	0
South Dakota	41	58	1	0	0	0
Tennessee	34	63	2	0	0	0
Texas	33	49	5	4	4	5
Utah	20	64	9	8	0	0
Vermont	8	92	0	0	0	0
Virginia	25	59	3	2	4	7
Washington	20	52	6	6	7	9
West Virginia	25	75	0	0	0	0
Wisconsin	34	54	8	4	1	0
Wyoming	26	74	0	0	0	0
Nationwide	30	56	5	3	3	3

**Table 8**  
**High-Speed Subscribership in Zip Codes**  
**Ranked by Population Density**

Deciles (blocks of zip codes grouped by density)	Persons per square mile (in each decile of zip codes)	% of zip codes in decile with at least one high- speed subscriber		% of population in decile that reside in zip codes with high speed service	
		December 1999	June 2000	December 1999	June 2000
90-100	More than 3,147	96.2	97.6	99.0	99.7
80-90	947-3,147	93.2	96.0	98.4	99.4
70-80	268-947	87.2	93.6	96.2	98.4
60-70	118-268	77.8	87.2	91.7	96.2
50-60	67-118	66.3	78.7	82.9	90.4
40-50	41-67	53.7	66.9	72.2	82.1
30-40	25-41	40.2	56.8	59.1	73.0
20-30	15-25	27.9	44.7	48.5	63.4
10-20	6-15	23.9	38.9	46.6	61.6
0-10	less than 6	18.7	35.4	36.1	56.4

**Table 9**  
**High-Speed Subscribership in Zip Codes**  
**Ranked by Median Household Income**

Deciles (blocks of zip codes grouped by median household income)	Median household income (in each decile of zip codes)	% of zip codes in decile with at least one high- speed subscriber		% of population in decile that reside in zip codes with high speed service	
		December 1999	June 2000	December 1999	June 2000
90-100	\$53,494 to \$291,938	90.8	95.4	98.4	99.5
80-90	\$43,617 to \$53,478	77.4	86.9	95.9	98.2
70-80	\$38,396 to \$43,614	67.0	78.1	94.3	96.8
60-70	\$34,744 to \$38,395	59.6	73.6	91.7	95.6
50-60	\$32,122 to \$34,743	53.7	68.3	89.4	93.9
40-50	\$29,893 to \$32,121	51.8	65.0	88.2	92.7
30-40	\$27,542 to \$29,892	49.1	62.4	85.9	91.4
20-30	\$24,855 to \$27,541	48.8	59.6	85.1	90.3
10-20	\$21,645 to \$24,855	45.3	55.7	82.5	88.1
0-10	\$0 to \$21,644	41.7	50.5	84.1	89.5

### Customer Response

Publication: High-Speed Services for Internet Access: Subscribership as of June 30, 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.

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