

High-Speed Services for Internet Access: Subscribership as of June 30, 2001

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High-Speed Services for Internet Access: Subscribership as of June 30, 2001

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.¹ 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.²

We summarize here information from the fourth data collection, thereby presenting a snapshot of subscribership as of June 30, 2001.³ Subscribership to high-speed services for Internet access increased by 36% during the first half of the year 2001, to a total of 9.6 million lines in service. The presence of high-speed service subscribers was reported in fifty states, the District of Columbia, Puerto Rico, and the Virgin Islands, and in 78% 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 Commission basic information about its service offerings and customers if the provider has at least 250

¹ 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.

² *Local Competition and Broadband Reporting*, CC Docket No. 99-301, Report and Order, 15 FCC Rcd 7717 (2000) (*Data Gathering Order*). During this data gathering program, qualifying providers 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>. 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 (1999).

³ 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>. (In the report, the Commission's data collection program is referred to as the "Broadband Survey.") Results from the second and third data collections appear in reports titled *High-Speed Services for Internet Access*, available at <www.fcc.gov/ccb/stats>.

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.⁴ 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.⁵ Nevertheless, based on the information now available, the following broad conclusions emerge:

- Subscribership to high-speed services increased by 36% during the first half of the year 2001, to a total of 9.6 million lines (or wireless channels) in service. The rate of growth during the last half of the year 2000 was 62%.⁶ See Table 1.
- Considering services according to the technology deployed in the "last few feet" to the subscriber's premises, high-speed lines in service over coaxial cable systems (cable modem service) remained the most numerous, increasing 45% during the first half of the year 2001, to 5.2 million lines. High-speed ADSL lines in service increased 36%, to 2.7 million lines.⁷

⁴ We received 76 state-specific voluntary submissions (made by 38 holding companies) in the first FCC Form 477 filing, 81 voluntary submissions (made by 35 holding companies) in the second filing, 64 voluntary submissions (made by 41 holding companies) in the third filing, and 64 voluntary submissions (made by 41 holding companies) in the fourth filing. High-speed lines reported in voluntary submissions in the fourth filing represent less than 0.1% of total high-speed lines reported.

⁵ 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, 16 FCC Rcd 2072 (rel. Jan. 19, 2001).

⁶ The National Bureau of Economic Research dates the current U.S. recession from March, 2001. Starting about a year earlier, facilities-based providers of high-speed services -- particularly non-incumbent providers -- found it increasingly difficult to raise capital.

⁷ 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.

- Reported high-speed connections to end-user customers by means of satellite or fixed wireless technologies increased at the fastest rate, 73%, during the first half of the year 2001, to 0.2 million. Reported fiber optic connections to end-user customer premises increased by 21%, to 0.5 million.⁸
- 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 38% during the first half of the year 2001, to a total of 5.9 million lines (or wireless channels) in service. Advanced services lines provided by means of ADSL technology increased by 48%, and advanced services lines provided over coaxial cable systems increased by 52%. See Table 2.
- As of June 30, 2001, there were 7.8 million residential and small business subscribers to high-speed services. By contrast, there were approximately 5.2 million such subscribers six months earlier, and about 3.2 million a year earlier. See Table 3.
- Of the 7.8 million high-speed lines in service to residential and small business subscribers at the end of June 2001, we estimate that 4.3 million lines also met the Commission's definition of advanced services. See Table 4.
- Among entities that reported facilities-based ADSL high-speed lines in service as of June 30, 2001, about 93% of such lines were reported by incumbent local exchange carriers (ILECs). See Table 5.
- Providers of high-speed services over coaxial cable systems report serving subscribers in 49 states and the District of Columbia. Providers of high-speed ADSL services report serving subscribers in 50 states, the District of Columbia, Puerto Rico, and the Virgin Islands, as do 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.⁹ See Table 6.
- 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, third, and fourth largest numbers of high-speed lines are reported for New York, Florida, and Texas, which are the third, fourth, and second most populous states, respectively. See Table 7.

⁸ Inconsistencies in reporting data in these technology categories over the course of the first three data collections make comparison of growth rates problematic.

⁹ Information about providers of high-speed services other than ADSL and cable modem 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 stated it would 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.

- 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).¹⁰ These percentages allow us to derive approximate numbers of residential and small-business high-speed lines in service by state. See Table 8.
- 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, 2001, subscribers to high-speed services were reported in 78% of the nation’s zip codes. Multiple providers reported having subscribers in 58% of the nation’s zip codes.¹¹ See Table 9.
- Our analysis indicates that 97% of the country’s population lives in the 78% of zip codes where a provider reports having at least one high-speed service subscriber.¹² Moreover, numerous competing providers report serving high-speed subscribers in the major population centers of the country. See the map that follows Table 9.
- 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 10.
- 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, 2001, high-speed subscribers are reported to be present in 97% of the most densely populated zip codes and in 49% of zip codes with the lowest population densities.¹³ However, the comparable figure for the least dense zip codes was 39% six months earlier. See Table 11.

¹⁰ End-user customers use the high-speed services for their own purposes and do not resell them to other entities. For purposes of the FCC Form 477 data collection, Internet Service Providers (ISPs) are not end-user customers. 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.

¹¹ Lists of zip codes with number of service providers as reported in the FCC Form 477 filings are made available at <www.fcc.gov/ccb/stats> in a format that honors requests for nondisclosure of information the reporting entities assert is competitively sensitive.

¹² Historical zip code data have been revised following staff review of reporting methodologies with a number of reporting entities. Some inconsistencies of reporting methodology among reporting periods and among reporting entities remain.

¹³ 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).

- 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 59% of zip codes with the lowest median family income, compared to 55% six months earlier. See Table 12.

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,
- 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 1/
(Over 200 kbps in at Least One Direction)

Types of Technology 2/	December 1999	June 2000	December 2000	June 2001	Percent Change	
					Jun 2000 - Dec 2000	Dec 2000 - Jun 2001
ADSL	369,792	951,583	1,977,101	2,693,834	108 %	36 %
Other Wireline	609,909	758,594	1,021,291	1,088,066	35	7
Coaxial Cable	1,411,977	2,284,491	3,582,874	5,184,141	57	45
Fiber	312,204	307,151	376,203	455,593	22	21
Satellite or Fixed Wireless	50,404	65,615	112,405	194,707	71	73
Total Lines	2,754,286	4,367,434	7,069,874	9,616,341	62 %	36 %

Table 2
Advanced Services Lines 1/
(Over 200 kbps in Both Directions)

Types of Technology 2/	December 1999	June 2000	December 2000	June 2001	Percent Change	
					Jun 2000 - Dec 2000	Dec 2000 - Jun 2001
ADSL	185,950	326,816	675,366	998,883	107 %	48 %
Other Wireline	609,909	758,594	1,021,291	1,088,066	35	7
Coaxial Cable	877,465	1,469,130	2,193,609	3,329,976	49	52
Fiber	307,315	301,143	376,197	455,549	25	21
Satellite or Fixed Wireless	7,816	3,649	26,906	73,476	NM	173
Total Lines	1,988,455	2,859,332	4,293,369	5,945,950	50 %	38 %

NM - Not meaningful due to inconsistencies in reported data.

1/ Some previously published data have been revised.

2/ 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.

Table 3
Residential and Small Business High-Speed Lines 1/
(Over 200 kbps in at Least One Direction)

Types of Technology 2/	December 1999	June 2000	December 2000	June 2001	Percent Change	
					Jun 2000 - Dec 2000	Dec 2000 - Jun 2001
ADSL	291,757	772,272	1,594,879	2,490,740	107 %	56 %
Other Wireline	46,856	111,490	176,520	138,307	NM	NM
Coaxial Cable	1,402,394	2,215,259	3,294,546	4,998,540	49	52
Fiber	1,023	325	1,994	2,623	NM	NM
Satellite or Fixed Wireless	50,189	64,320	102,432	182,165	59	78
Total Lines	1,792,219	3,163,666	5,170,371	7,812,375	63 %	51 %

Table 4
Residential and Small Business Advanced Services Lines
(Over 200 kbps in Both Directions)

Types of Technology 2/	December 1999	June 2000	December 2000	June 2001	Percent Change	
					Jun 2000 - Dec 2000	Dec 2000 - Jun 2001
ADSL	116,994	195,324	393,246	916,364	101 %	133 %
Other Wireline	46,856	111,490	176,520	138,307	NM	NM
Coaxial Cable	872,024	1,401,434	2,177,328	3,146,953	55	45
Fiber	138	325	1,992	2,617	NM	NM
Satellite or Fixed Wireless	7,682	2,916	17,043	60,988	NM	NM
Total Lines	1,043,694	1,711,488	2,766,130	4,265,229	62 %	54 %

Note: Residential and small business advanced services lines are estimated based on data from FCC Form 477.

NM - Not meaningful due to inconsistencies in reported data.

1/ Some previously published have been revised.

2/ 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.

Table 5
High-Speed Lines by Type of Provider
as of June 30, 2001
(Over 200 kbps in at Least One Direction)

Types of Technology 1/	Lines				Percent of Lines		
	RBOC 2/	Other ILEC	Non-ILEC 3/	Total	RBOC	Other ILEC	Non-ILEC
ADSL	2,328,147	175,876	189,811	2,693,834	86.4 %	6.5 %	7.0 %
Other Wireline	706,944	108,738	272,384	1,088,066	65.0	10.0	25.0
Coaxial Cable	*	*	5,105,547	5,184,141	*	*	98.5
Other	*	*	597,983	650,300	*	*	92.0
Total Lines	3,095,699	354,917	6,165,725	9,616,341	32.2 %	3.7 %	64.1 %

* 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.

3/ Non-ILEC lines include lines provided by carriers affiliated with non-RBOC ILECs.

Table 6
Providers of High-Speed Lines by Technology
as of June 30, 2001 1/
(Over 200 kbps in at Least One Direction)

	ADSL	Coaxial Cable	Other 2/	Total (Unduplicated)
Alabama	*	8	10	16
Alaska	*	0	6	7
Arizona	5	*	9	11
Arkansas	*	*	4	7
California	12	8	22	28
Colorado	8	*	11	14
Connecticut	5	5	10	13
Delaware	*	*	*	5
District of Columbia	5	*	11	11
Florida	9	10	19	27
Georgia	11	7	18	24
Hawaii	*	*	*	*
Idaho	*	*	4	7
Illinois	10	5	17	23
Indiana	6	6	10	17
Iowa	6	6	9	15
Kansas	*	6	10	14
Kentucky	7	*	7	14
Louisiana	4	4	8	12
Maine	4	*	6	8
Maryland	4	5	13	17
Massachusetts	5	5	13	16
Michigan	8	5	13	20
Minnesota	8	8	15	22
Mississippi	*	*	4	8
Missouri	6	5	12	17
Montana	5	*	*	7
Nebraska	4	5	7	11
Nevada	*	*	10	11
New Hampshire	4	*	8	9
New Jersey	6	*	14	16
New Mexico	4	*	8	10
New York	12	5	20	26
North Carolina	9	7	13	21
North Dakota	*	*	*	5
Ohio	11	8	15	23
Oklahoma	4	*	10	14
Oregon	6	*	9	11
Pennsylvania	11	5	22	25
Puerto Rico	*	0	*	*
Rhode Island	*	*	4	4
South Carolina	6	7	10	15
South Dakota	4	*	*	7
Tennessee	7	5	9	16
Texas	19	7	22	33
Utah	5	*	10	11
Vermont	*	*	*	6
Virgin Islands	*	0	*	*
Virginia	8	5	19	23
Washington	9	*	12	17
West Virginia	*	*	5	6
Wisconsin	9	*	11	16
Wyoming	*	*	*	*
Nationwide (Unduplicated) Jun 2001	86	47	98	160
Nationwide (Unduplicated) Dec 2000	68	39	87	136
Nationwide (Unduplicated) Jun 2000	47	36	75	116
Nationwide (Unduplicated) Dec 1999	28	43	65	105

* Data withheld to maintain firm confidentiality. In this table, an asterisk also indicates 1-3 providers reporting.

1/ Some previously published data have been revised.

2/ 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 Technology 1/
(Over 200 kbps in at Least One Direction)

	Dec 1999 Total	Jun 2000 Total	Dec 2000 Total	Jun 2001				Percentage Change	
				ADSL	Coaxial Cable	Other 2/	Total	Jun 2000 - Dec 2000	Dec 2000 - Jun 2001
Alabama	19,796	32,756	63,334	*	47,325	*	86,234	93 %	36 %
Alaska	*	*	934	*	0	*	20,906	NA	2138
Arizona	58,825	111,678	153,500	39,828	*	*	158,122	37	3
Arkansas	8,155	15,539	28,968	*	*	5,154	40,803	86	41
California	547,179	910,006	1,386,625	735,677	609,174	360,963	1,705,814	52	23
Colorado	36,726	64,033	104,534	52,617	*	*	147,220	63	41
Connecticut	36,488	63,772	111,792	30,142	106,019	12,896	149,057	75	33
Delaware	1,558	3,660	7,492	*	*	*	12,771	105	70
District of Columbia	13,288	16,926	27,757	16,313	*	*	39,101	64	41
Florida	190,700	244,678	460,795	170,702	372,190	108,275	651,167	88	41
Georgia	75,870	130,292	203,855	106,649	109,922	86,027	302,598	56	48
Hawaii	*	*	*	*	*	*	*	NA	NA
Idaho	*	8,070	15,908	*	*	2,441	20,233	97	27
Illinois	77,672	166,933	242,239	89,080	144,872	116,289	350,241	45	45
Indiana	20,059	49,702	60,494	2,375	56,441	21,548	80,364	22	33
Iowa	19,258	49,159	58,199	9,532	59,253	3,798	72,583	18	25
Kansas	26,179	42,679	68,743	*	74,337	*	101,734	61	48
Kentucky	23,570	24,237	32,731	20,256	*	*	39,297	35	20
Louisiana	28,133	43,294	74,950	37,444	64,219	20,022	121,685	73	62
Maine	19,878	17,864	26,266	6,877	*	*	38,149	47	45
Maryland	52,749	71,005	124,465	51,051	97,466	32,504	181,021	75	45
Massachusetts	114,116	185,365	289,447	82,699	243,670	30,887	357,256	56	23
Michigan	81,223	135,318	198,230	41,428	301,842	52,313	395,583	46	100
Minnesota	38,268	65,272	117,283	51,640	80,259	16,113	148,012	80	26
Mississippi	*	6,514	12,305	*	*	7,551	21,517	89	75
Missouri	23,347	46,903	100,403	53,250	51,733	18,932	123,915	114	23
Montana	*	*	7,378	2,842	*	*	10,446	NA	42
Nebraska	36,748	44,188	54,085	9,293	37,168	8,727	55,188	22	2
Nevada	23,514	40,582	59,879	*	*	16,691	78,535	48	31
New Hampshire	22,807	33,045	42,364	5,651	*	*	55,658	28	31
New Jersey	101,832	144,203	285,311	102,430	*	*	428,514	98	50
New Mexico	*	2,929	28,497	7,578	*	*	20,482	873	-28
New York	186,504	342,743	603,487	197,135	564,423	131,474	893,032	76	48
North Carolina	57,881	81,998	136,703	41,332	115,949	48,335	205,616	67	50
North Dakota	*	2,437	4,227	*	*	*	6,277	73	48
Ohio	160,792	156,980	230,525	87,567	213,606	57,792	358,965	47	56
Oklahoma	96,730	163,703	95,138	31,321	*	*	92,947	NM	NM
Oregon	27,062	44,186	76,839	25,877	*	*	93,242	74	21
Pennsylvania	71,926	79,892	176,670	89,595	131,119	42,522	263,236	121	49
Puerto Rico	*	*	*	*	0	*	*	NA	NA
Rhode Island	*	20,628	30,919	*	*	1,908	49,215	50	59
South Carolina	25,229	32,824	63,914	9,704	68,487	18,648	96,839	95	52
South Dakota	*	3,516	2,839	1,652	*	*	5,448	-19	92
Tennessee	66,307	87,317	122,391	22,902	96,119	33,489	152,510	40	25
Texas	152,518	276,087	522,538	197,668	328,900	120,271	646,839	89	24
Utah	11,635	19,612	35,970	23,476	*	*	55,103	83	53
Vermont	*	1,551	7,773	*	*	*	16,230	401	109
Virgin Islands	0	*	*	*	0	*	*	NA	NA
Virginia	51,305	72,436	139,915	39,114	131,553	42,141	212,808	93	52
Washington	71,930	118,723	195,628	64,812	*	*	227,066	65	16
West Virginia	*	1,835	6,498	*	*	2,062	16,697	254	157
Wisconsin	18,599	34,262	76,257	17,800	*	*	127,755	123	68
Wyoming	*	*	*	*	*	*	*	NA	NA
Nationwide Reported Total	2,754,286	4,367,434	7,069,874	2,693,834	5,184,141	1,738,366	9,616,341	62 %	36 %

NA - Not Available.

NM - Not meaningful due to inconsistencies in reported data.

* Data withheld to maintain firm confidentiality.

1/ Some previously published data have been revised.

2/ 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 8
High-Speed Lines by Type of User
as of June 30, 2001
(Over 200 kbps in at Least One Direction)

	Residential and Small Business	Other 1/	Total
Alabama	70,308	15,926	86,234
Alaska	15,288	5,618	20,906
Arizona	141,450	16,672	158,122
Arkansas	37,616	3,187	40,803
California	1,332,462	373,352	1,705,814
Colorado	128,198	19,022	147,220
Connecticut	138,552	10,505	149,057
Delaware	10,736	2,035	12,771
District of Columbia	22,243	16,858	39,101
Florida	547,207	103,960	651,167
Georgia	221,220	81,378	302,598
Hawaii	*	*	*
Idaho	17,616	2,617	20,233
Illinois	256,197	94,044	350,241
Indiana	62,335	18,029	80,364
Iowa	69,232	3,351	72,583
Kansas	96,393	5,341	101,734
Kentucky	23,557	15,740	39,297
Louisiana	102,516	19,169	121,685
Maine	32,898	5,251	38,149
Maryland	149,593	31,429	181,021
Massachusetts	312,711	44,545	357,256
Michigan	350,073	45,510	395,583
Minnesota	132,244	15,768	148,012
Mississippi	15,008	6,509	21,517
Missouri	108,458	15,457	123,915
Montana	9,528	918	10,446
Nebraska	49,912	5,276	55,188
Nevada	62,451	16,084	78,535
New Hampshire	49,992	5,666	55,658
New Jersey	369,508	59,006	428,514
New Mexico	17,513	2,969	20,482
New York	738,924	154,108	893,032
North Carolina	163,507	42,109	205,616
North Dakota	5,645	632	6,277
Ohio	299,240	59,725	358,965
Oklahoma	81,584	11,363	92,947
Oregon	82,919	10,323	93,242
Pennsylvania	216,551	46,685	263,236
Puerto Rico	*	*	*
Rhode Island	46,622	2,593	49,215
South Carolina	78,183	18,656	96,839
South Dakota	4,479	969	5,448
Tennessee	119,464	33,046	152,510
Texas	387,910	258,929	646,839
Utah	47,256	7,847	55,103
Vermont	15,021	1,209	16,230
Virgin Islands	*	*	*
Virginia	178,648	34,160	212,808
Washington	204,137	22,929	227,066
West Virginia	15,223	1,474	16,697
Wisconsin	105,574	22,181	127,755
Wyoming	*	*	*
Nationwide Reported Total	7,812,375	1,803,966	9,616,341

* Data withheld to maintain firm confidentiality.

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

Table 9
Percentage of Zip Codes with High-Speed Lines in Service 1/

Number of Providers	December 1999	June 2000	December 2000	June 2001
Zero	40.3 %	33.0 %	26.8 %	22.2 %
One	26.0	25.9	22.7	20.3
Two	15.5	17.8	18.4	16.7
Three	8.2	9.2	10.9	13.2
Four	4.3	4.9	6.1	8.2
Five	2.7	3.4	4.0	4.9
Six	1.7	2.5	3.0	3.6
Seven	0.8	1.7	2.3	2.8
Eight	0.3	0.8	2.0	2.2
Nine	0.2	0.4	1.6	1.9
Ten or More	0.0	0.4	2.4	3.9

1/ Some previously published data have been revised.

High-Speed Providers by Zip Code

(As of June 30, 2001)

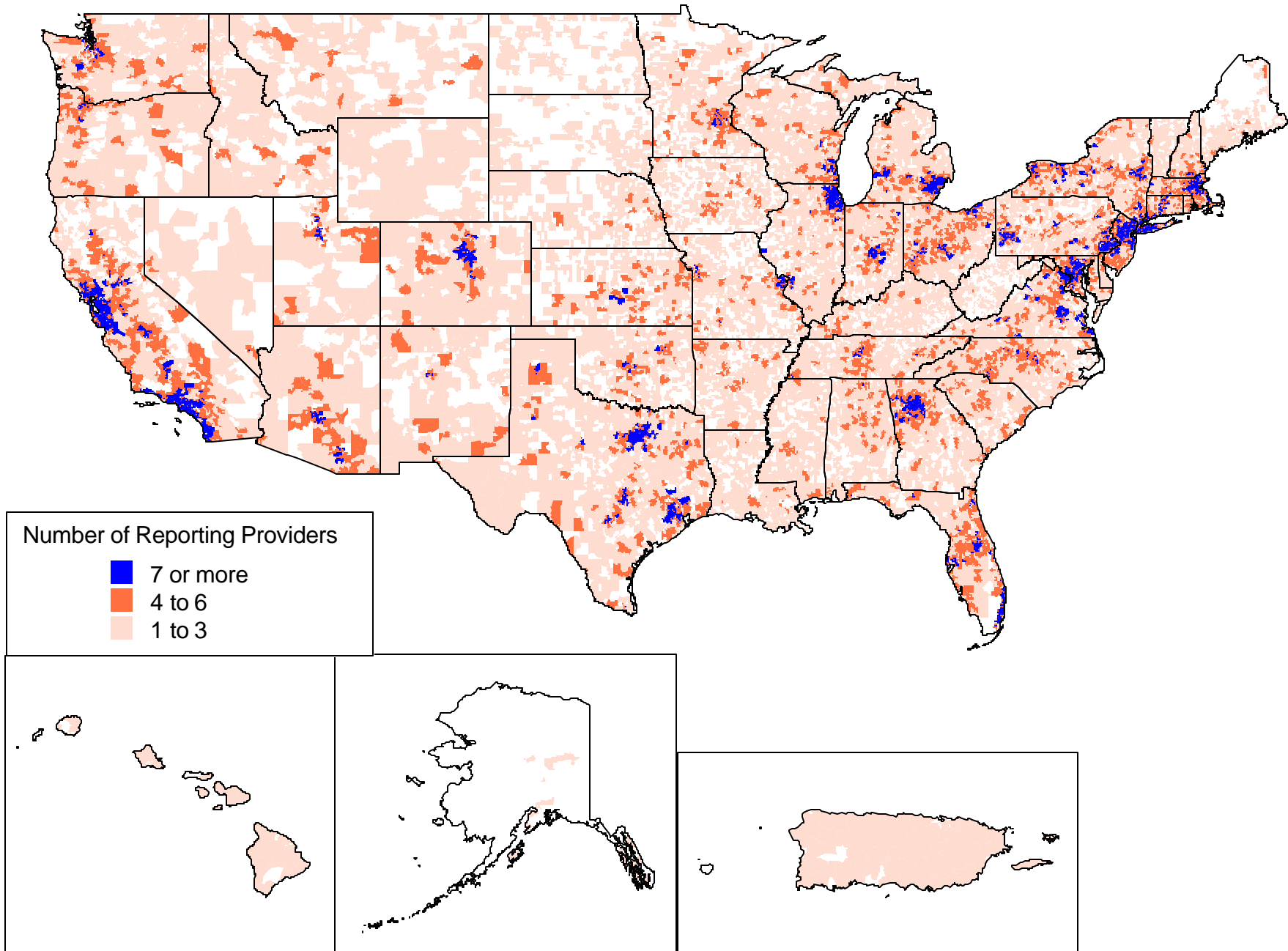


Table 10
Percentage of Zip Codes with High-Speed Lines in Service
as of June 30, 2001
(Over 200 kbps in at Least One Direction)

	Number of Providers					
	Zero	One - Three	Four	Five	Six	Seven or More
Alabama	20 %	66 %	11 %	3 %	1 %	0 %
Alaska	79	18	3	0	0	0
Arizona	8	37	14	10	12	20
Arkansas	39	54	7	0	0	0
California	7	29	9	7	7	41
Colorado	15	48	10	6	3	18
Connecticut	3	48	11	10	12	16
Delaware	0	72	28	0	0	0
District of Columbia	7	15	4	7	4	63
Florida	2	35	17	13	9	24
Georgia	16	51	10	5	4	13
Hawaii	20	80	0	0	0	0
Idaho	34	56	5	5	0	0
Illinois	18	56	5	3	2	16
Indiana	19	61	8	5	1	6
Iowa	49	45	4	1	0	0
Kansas	35	52	8	4	1	0
Kentucky	40	57	3	0	0	0
Louisiana	21	75	4	0	0	0
Maine	35	61	3	1	0	0
Maryland	12	37	10	4	8	28
Massachusetts	1	31	18	10	11	29
Michigan	10	57	8	5	4	16
Minnesota	35	46	7	4	5	3
Mississippi	28	66	6	1	0	0
Missouri	35	50	4	4	3	4
Montana	48	48	3	0	0	0
Nebraska	44	49	5	2	0	0
Nevada	22	47	17	11	2	2
New Hampshire	8	64	14	8	4	2
New Jersey	1	25	13	10	10	40
New Mexico	34	56	5	3	2	1
New York	8	45	11	8	6	20
North Carolina	11	64	14	5	3	2
North Dakota	72	28	0	0	0	0
Ohio	8	59	15	7	4	6
Oklahoma	29	53	5	5	5	3
Oregon	9	64	11	7	6	3
Pennsylvania	22	50	7	6	3	12
Puerto Rico	0	100	0	0	0	0
Rhode Island	6	43	26	25	0	0
South Carolina	16	67	13	3	1	0
South Dakota	63	37	1	0	0	0
Tennessee	18	62	12	5	2	2
Texas	17	48	8	5	3	19
Utah	25	42	8	6	6	13
Vermont	25	74	1	0	0	0
Virginia	18	51	6	7	3	15
Washington	11	50	11	11	8	9
West Virginia	58	41	0	0	0	0
Wisconsin	16	62	8	5	5	4
Wyoming	47	53	0	0	0	0
Nationwide	22 %	50 %	8 %	5 %	4 %	11 %

Table 11
High-Speed Subscribership
Ranked by Population Density 1/
(Over 200 kbps in at Least One Direction)

Deciles (Blocks of Zip Codes Grouped by Density)	Persons per Square Mile (In Each Decile of Zip Codes)	Percent of Zip Codes in Decile with at Least One High-Speed Subscriber			Percent of Population in Decile that Resides in Zip Codes with High-Speed Service		
		Dec 1999	Dec 2000	Jun 2001	Dec 1999	Dec 2000	Jun 2001
90-100	More Than 3,147	96.1 %	98.2 %	98.1 %	98.9 %	99.9 %	99.9 %
80-90	947-3,147	93.2	97.1	97.1	98.5	99.8	99.8
70-80	268-947	87.5	95.7	95.6	96.2	99.3	99.5
60-70	118-268	77.7	91.5	92.3	91.4	98.1	98.8
50-60	67-118	66.9	85.9	87.5	83.3	95.0	96.8
40-50	41-67	53.7	76.1	80.9	72.3	87.9	93.0
30-40	25-41	40.9	65.0	72.8	60.0	80.0	87.3
20-30	15-25	29.8	50.1	58.9	50.9	69.4	78.4
10-20	6-15	26.7	38.5	51.1	50.2	61.9	74.6
0-10	Fewer Than 6	19.9	27.5	36.8	38.5	49.9	60.7

1/ Some previously published data have been revised.

Table 12
High-Speed Subscribership
Ranked by Household Income 1/
(Over 200 kbps in at Least One Direction)

Deciles (Blocks of Zip Codes Grouped by Median Household Income)	Median Household Income (In Each Decile of Zip Codes)	Percent of Zip Codes in Decile with at Least One High-Speed Subscriber			Percent of Population in Decile that Resides in Zip Codes with High-Speed Service		
		Dec 1999	Dec 2000	Jun 2001	Dec 1999	Dec 2000	Jun 2001
90-100	\$53,494 to \$291,938	90.8 %	96.1 %	96.4 %	98.4 %	99.8 %	99.8 %
80-90	\$43,617 to \$53,478	77.1	88.9	90.7	95.8	99.0	99.3
70-80	\$38,396 to \$43,614	67.0	79.5	83.8	94.3	97.8	98.5
60-70	\$34,744 to \$38,395	59.9	74.5	80.0	91.5	96.6	97.9
50-60	\$32,122 to \$34,743	55.3	71.2	77.3	90.0	95.9	97.4
40-50	\$29,893 to \$32,121	53.7	67.4	73.4	88.9	94.5	96.3
30-40	\$27,542 to \$29,892	50.4	66.9	73.5	86.1	93.8	95.9
20-30	\$24,855 to \$27,541	50.1	65.1	69.6	85.7	93.1	95.2
10-20	\$21,645 to \$24,855	46.3	61.2	67.4	83.0	91.1	93.9
0-10	\$0 to \$21,644	41.7	54.9	59.1	83.8	91.5	94.1

1/ Some previously published data have been revised.

Customer Response

Publication: *High-Speed Services for Internet Access: Status as of June 30, 2001.*

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?

5. May we contact you to discuss possible improvements?

Name:
Telephone #:

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