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See MCI v. FCC, 515 F 2d 385 (D.C. Circ 1974).

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

### ***High-Speed Connections to the Internet Increased 33% During the Second Half of 2001 for a Total of 12.8 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 connections to the Internet in the United States. The information being released today was filed by qualifying service providers on March 1, 2002, and includes data as of December 31, 2001. 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 deployment of advanced telecommunications capability.

### **Summary Statistics**

- High-speed lines connecting homes and businesses to the Internet increased by 33% during the second half of 2001, from 9.6 million to 12.8 million lines, compared to a 36% increase, from nearly 7.1 million to 9.6 million lines, during the first half of 2001.
- Of the 12.8 million high-speed lines in service at the end of 2001, 11 million served residential and small business subscribers, a 41% increase from the 7.8 million residential and small business high-speed lines reported six months earlier.
- About 7.4 million of the 12.8 million high-speed lines were advanced services lines that provide services at speeds exceeding 200 kilobits per second (kbps) in both directions, an increase of 25% during the second half of 2001. About 5.8 million of the 7.4 million advanced services lines served residential and small business subscribers.

- At the end of 2001, the presence of high-speed service subscribers was reported in all fifty states, the District of Columbia, Puerto Rico, and the Virgin Islands, and in 79% of the nation's zip codes, compared to 78% six months earlier and 73% at the end of 2000.
- High-speed asymmetric DSL (ADSL) lines in service increased by 47% during the second half of 2001, from nearly 2.7 million to over 3.9 million lines, compared to a 36% increase, from nearly 2 million to 2.7 million lines, during the preceding six months.
- High-speed Internet connections over coaxial cable systems (cable modem service) increased by 36% during the final six months of 2001, from 5.2 million to 7.1 million lines. By comparison, cable modem service increased by 45%, from nearly 3.6 million to 5.2 million lines, during the first half of 2001.
- High-speed service subscribers were reported present in 98% of the most densely populated decile of zip codes at the end of 2001, the same percentage as a year earlier, and in 43% of the least densely populated decile, compared to 28% a year earlier.
- For zip codes ranked by median family income, high-speed subscribers were reported present in 97% of the top one-tenth of zip codes and in 63% of the bottom one-tenth of zip codes at the end of 2001. The comparable figures a year earlier were 96% and 55%.

As additional information becomes available, it will be routinely posted on the Commission's Internet site.

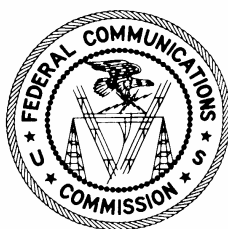
The statistical summary is available in the FCC's Reference Information Center, Courtyard Level, 445 12th Street, S.W. Copies may be purchased from the Commission's duplicating contractor, Qualex International, Portals II, 445 12th Street, S.W., Room CY-B402, Washington, D.C., telephone (202) 863-2893, facsimile (202) 863-2898, or via e-mail [qualexint@aol.com](mailto:qualexint@aol.com). The statistical summary can also be downloaded from the **FCC-State Link** Internet site at [www.fcc.gov/wcb/stats](http://www.fcc.gov/wcb/stats).

- FCC -

Wireline Competition Bureau contacts: Industry Analysis and Technology Division at (202) 418-0940, TTY (202) 418-0484.

# High-Speed Services for Internet Access: Status as of December 31, 2001

Industry Analysis and Technology Division  
Wireline Competition Bureau  
July 2002



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This report is available for reference in the FCC's Information Center at 445 12th Street, S.W., Courtyard Level. Copies may be purchased by calling Qualex International, Portals II, 445 12th Street, S.W., Room CY-B402, Washington, DC 20554, telephone 202-863-2893, facsimile 202-863-2898, or via e-mail [qualexint@aol.com](mailto:qualexint@aol.com). The report can also be downloaded from the **FCC-State Link** Internet site at [www.fcc.gov/wcb/stats](http://www.fcc.gov/wcb/stats).

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## High-Speed Services for Internet Access: Subscribership as of December 31, 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.<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 fifth data collection, thereby presenting a snapshot of subscribership as of December 31, 2001.<sup>3</sup> Subscribership to high-speed services for Internet access increased by 33% during the second half of 2001, to a total of 12.8 million lines in service. The presence of high-speed service subscribers was reported in all fifty states, the District of Columbia, Puerto Rico, and the Virgin Islands, and in 79% 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 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

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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 use the term "high-speed" to describe services 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 (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](http://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).

<sup>3</sup> Earlier FCC Form 477 filings reported data as of December 31, 1999, June 30, 2000, December 31, 2000, and June 30, 2001. See *Deployment of Advanced Telecommunications Capability to All Americans in a Reasonable and Timely Fashion*, CC Docket No. 98-146, Second Report, 15 FCC Rcd 20913 (2000) (*Second 706 Report*) available at [www.fcc.gov/broadband/706.html](http://www.fcc.gov/broadband/706.html), Industry Analysis Division, Common Carrier Bureau, *High-Speed Services for Internet Access: Status as of June 30, 2000* (October 2000), and *High-Speed Services for Internet Access: Status as of December 31, 2000* (August 2001) available at [www.fcc.gov/wcb/stats](http://www.fcc.gov/wcb/stats), and *Deployment of Advanced Telecommunications Capability to All Americans in a Reasonable and Timely Fashion*, CC Docket No. 98-146, Third Report, 17 FCC Rcd 2844 (2002) available at [www.fcc.gov/broadband/706.html](http://www.fcc.gov/broadband/706.html).

<sup>4</sup> High-speed lines reported in recent voluntary submissions represent less than 0.1% of total high-speed lines reported.

areas with relatively small populations, are represented in the data summarized here. Second, lines (or wireless channels) that are not “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.

Based on the latest information now available, readers can draw the following broad conclusions:

- Subscribership to high-speed services increased by 33% during the second half of 2001, to a total of 12.8 million lines (or wireless channels) in service. The rate of growth during the first half of 2001 was 36%. See Table 1.
- High-speed lines in service over coaxial cable systems (cable modem service) increased 36% during the second half of 2001, to about 7.1 million lines. High-speed ADSL lines in service increased 47%, to about 3.9 million lines.<sup>5</sup> See Table 1.
- Reported high-speed connections to end-user customers by means of satellite or fixed wireless technologies increased by 9% during the second half of 2001, and reported fiber optic connections to end-user customer premises increased by 8%. These technologies, together, accounted for about 0.7 million high-speed connections at the end of 2001. See Table 1.
- Subscribership to the subset of high-speed services that are described as advanced services (i.e., delivering to subscribers transmission speeds in excess of 200 kbps in each direction) increased by 25% during the second half of 2001, to a total of 7.4 million lines (or wireless channels) in service. Advanced services lines provided by means of ADSL technology increased by 37%, and advanced services lines provided over coaxial cable systems increased by 32%.<sup>6</sup> See Table 2.
- As of December 31, 2001, there were about 11 million residential and small business subscribers to high-speed services. By contrast, there were approximately 7.8 million such subscribers six months earlier, and about 5.2 million a year earlier. See Table 3.

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<sup>5</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 T-1 and other data services that wireline telephone companies have offered to business customers for some time.

<sup>6</sup> Providers also estimate the percentage of high-speed connections that are faster than 2 mbps in both directions. About 0.3 million such connections were reported as of December 31, 2001. Over 50% of these connections were reported in the other traditional wireline category and nearly 40% were reported in the optical carrier category.

- Of the 11 million high-speed lines in service to residential and small business subscribers at the end of December 2001, we estimate that about 5.8 million lines provide advanced services.<sup>7</sup> See Table 4.
- Among entities that reported facilities-based ADSL high-speed lines in service as of December 31, 2001, about 97% of such lines were reported by incumbent local exchange carriers (ILECs). ILECs claimed a smaller share, about 83%, of high-speed lines delivered over other traditional wireline facilities.<sup>8</sup> When all technologies are considered, ILECs provided about 38% of high-speed connections to end-user customers. 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.<sup>9</sup> See Table 6.
- The Commission's data collection program 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.
- 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>10</sup> These percentages allow us to derive approximate numbers of residential and small-business high-speed lines in service by state. See Table 8.

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<sup>7</sup> Filers of FCC Form 477 do not directly report the number of advanced services lines provided to residential and small business end users, as opposed to other end users. In estimating the number of advanced services lines serving residential and small business end users, we assume that reported advanced service lines were more likely to be delivered to large business users first and to residential and small business users second. See also *Second 706 Report*, 15 FCC Rcd 20943.

<sup>8</sup> Symmetric forms of DSL services, which are typically purchased by business customers, are included in this category.

<sup>9</sup> 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.

<sup>10</sup> 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 that is normally associated with residential customers.

- 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 December 31, 2001, subscribers to high-speed services were reported in 79% of the nation's zip codes. Multiple providers reported having subscribers in 60% of the nation's zip codes.<sup>11</sup> See Table 9.
- Our analysis indicates that nearly 98% of the country's population lives in the 79% of zip codes where a provider reports having at least one high-speed service subscriber. 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 association with reports that high-speed subscribers are present, and low population density has an inverse association. For example, as of December 31, 2001, high-speed subscribers are reported to be present in 98% of the most densely populated zip codes and in 43% of zip codes with the lowest population densities.<sup>12</sup> However, the comparable figure for the least dense zip codes was 28% a year earlier. See Table 11.
- High median family income also has a positive association 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 97% of zip codes. By contrast, high-speed subscribers are reported in 63% of zip codes with the lowest median family income, compared to 55% a year 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 [jeisner@fcc.gov](mailto:jeisner@fcc.gov),
- Calling the Industry Analysis and Technology Division of the Wireline Competition Bureau 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>11</sup> Lists of zip codes with number of service providers as reported in the FCC Form 477 filings are made available at [www.fcc.gov/wcb/stats](http://www.fcc.gov/wcb/stats) in a format that honors requests for nondisclosure of information the reporting entities assert is competitively sensitive.

<sup>12</sup> For this comparison, we consider the most densely populated zip codes to be those with more than 3,147 persons per square mile (the top decile of zip codes) and the least densely populated zip codes to be those with fewer than 6 persons per square mile (the bottom decile).

**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	December 2001	Percent Change	
						Dec 2000 - June 2001	June 2001 - Dec 2001
ADSL	369,792	951,583	1,977,101	2,693,834	3,947,808	36 %	47 %
Other Wireline	609,909	758,594	1,021,291	1,088,066	1,078,597	7	-1
Coaxial Cable	1,411,977	2,284,491	3,582,874	5,184,141	7,059,598	45	36
Fiber	312,204	307,151	376,203	455,593	494,199	21	8
Satellite or Fixed Wireless	50,404	65,615	112,405	194,707	212,610	73	9
Total Lines	2,754,286	4,367,434	7,069,874	9,616,341	12,792,812	36 %	33 %

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

Types of Technology 2/	December 1999	June 2000	December 2000	June 2001	December 2001	Percent Change	
						Dec 2000 - June 2001	June 2001 - Dec 2001
ADSL	185,950	326,816	675,366	998,883	1,369,143	48 %	37 %
Other Wireline	609,909	758,594	1,021,291	1,088,066	1,078,597	7	-1
Coaxial Cable	877,465	1,469,130	2,193,609	3,329,976	4,394,778	52	32
Fiber	307,315	301,143	376,197	455,549	486,483	21	7
Satellite or Fixed Wireless	7,816	3,649	26,906	73,476	75,341	173	3
Total Lines	1,988,455	2,859,332	4,293,369	5,945,950	7,404,343	38 %	25 %

1/ A high-speed line is a connection to an end-user customer that is faster than 200 kbps in at least one direction. Advanced services lines, which are a subset of high-speed lines, are connections to end-user customers that are faster than 200 kbps in both directions. The speed of the purchased service varies among end-user customers. For example, a high-speed service delivered to the end-user customer over other traditional wireline technology, such as DS1 or DS3 service, or over optical fiber to the end user's premises may be much faster than the ADSL or cable modem service purchased by a different, or by the same, end user. Numbers of lines reported here are not adjusted for the speed of the service delivered over the line or the number of end users able to utilize the lines.

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	December 2001	Percent Change	
						Dec 2000 - June 2001	June 2001 - Dec 2001
ADSL	291,757	772,272	1,594,879	2,490,740	3,615,989	56 %	45 %
Other Wireline	46,856	111,490	176,520	138,307	139,660	NM	1
Coaxial Cable	1,402,394	2,215,259	3,294,546	4,998,540	7,050,709	52	41
Fiber	1,023	325	1,994	2,623	4,139	NM	NM
Satellite or Fixed Wireless	50,189	64,320	102,432	182,165	194,897	78	7
Total Lines	1,792,219	3,163,666	5,170,371	7,812,375	11,005,396	51	41 %

**Table 4**  
**Residential and Small Business Advanced Services Lines 1/**  
**(Over 200 kbps in Both Directions)**

Types of Technology 2/	December 1999	June 2000	December 2000	June 2001	December 2001	Percent Change	
						Dec 2000 - June 2001	June 2001 - Dec 2001
ADSL	116,994	195,324	393,246	916,364	1,243,996	133 %	36 %
Other Wireline	46,856	111,490	176,520	138,307	139,660	NM	1
Coaxial Cable	872,024	1,401,434	2,177,328	3,146,953	4,388,967	45	39
Fiber	138	325	1,992	2,617	3,523	NM	NM
Satellite or Fixed Wireless	7,682	2,916	17,043	60,988	58,113	NM	-5
Total Lines	1,043,694	1,711,488	2,766,130	4,265,229	5,834,258	54 %	37 %

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/ A high-speed line is a connection to an end-user customer that is faster than 200 kbps in at least one direction. Advanced services lines, which are a subset of high-speed lines, are connections to end-user customers that are faster than 200 kbps in both directions. The speed of the purchased service varies among end-user customers. For example, a high-speed service delivered to the end-user customer over other traditional wireline technology, such as DS1 or DS3 service, or over optical fiber to the end user's premises may be much faster than the ADSL or cable modem service purchased by a different, or by the same, end user. Numbers of lines reported here are not adjusted for the speed of the service delivered over the line or the number of end users able to utilize the lines.

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 December 31, 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 2/	Other ILEC	Non-ILEC 3/
ADSL	3,566,594	273,072	108,142	3,947,808	90.3 %	6.9 %	2.7 %
Other Wireline	775,551	116,807	186,239	1,078,597	71.9	10.8	17.3
Coaxial Cable	*	*	7,034,490	7,059,598	*	*	99.6
Other	*	*	652,516	706,809	*	*	92.3
<b>Total Lines</b>	<b>4,408,120</b>	<b>403,305</b>	<b>7,981,387</b>	<b>12,792,812</b>	<b>34.5 %</b>	<b>3.2 %</b>	<b>62.4 %</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.

3/ High-speed lines reported by competitive local exchange carrier (CLEC) or cable TV operations that are affiliated with a local exchange carrier are included in "Non-ILEC" lines, except that any such lines reported by an RBOC are included in "RBOC" lines.

**Table 6**  
**Providers of High-Speed Lines by Technology**  
**as of December 31, 2001**  
**(Over 200 kbps in at Least One Direction)**

	ADSL	Coaxial Cable	Other 1/	Total (Unduplicated)
Alabama	5	8	12	19
Alaska	4	*	7	8
Arizona	5	4	8	13
Arkansas	4	*	6	10
California	10	9	22	28
Colorado	6	*	11	13
Connecticut	4	5	11	13
Delaware	*	*	*	5
District of Columbia	*	*	8	7
Florida	8	10	19	26
Georgia	9	10	19	25
Hawaii	*	0	*	*
Idaho	5	*	5	8
Illinois	11	5	19	24
Indiana	8	7	10	19
Iowa	5	4	10	13
Kansas	5	7	12	17
Kentucky	7	*	9	14
Louisiana	5	4	9	13
Maine	*	*	5	7
Maryland	6	7	13	19
Massachusetts	6	6	13	18
Michigan	11	5	13	21
Minnesota	12	8	14	22
Mississippi	*	4	4	9
Missouri	10	6	15	22
Montana	5	*	*	9
Nebraska	5	5	6	10
Nevada	5	*	12	15
New Hampshire	6	*	9	12
New Jersey	7	5	14	18
New Mexico	*	*	6	8
New York	13	5	17	22
North Carolina	11	7	14	24
North Dakota	4	*	4	7
Ohio	12	9	19	24
Oklahoma	6	*	12	16
Oregon	8	*	13	16
Pennsylvania	14	6	18	25
Puerto Rico	*	0	*	*
Rhode Island	*	*	6	7
South Carolina	11	7	12	18
South Dakota	6	*	5	10
Tennessee	10	5	9	20
Texas	20	6	24	34
Utah	5	*	10	13
Vermont	*	*	*	6
Virgin Islands	*	0	*	*
Virginia	8	5	14	19
Washington	10	*	14	18
West Virginia	*	*	5	9
Wisconsin	9	*	13	18
Wyoming	*	*	4	5
Nationwide (Unduplicated) Dec 2001	117	59	122	203
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/ 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**  
**(Over 200 kbps in at Least One Direction)**

	Dec 1999	Jun 2000	Dec 2000	Jun 2001	Dec 2001				Percentage Change	
	Total	Total	Total	Total	ADSL	Coaxial Cable	Other 1/ Total	Total	Dec 2000 - Jun 2001	Jun 2001 - Dec 2001
Alabama	19,796	32,756	63,334	86,234	34,785	83,933	20,261	138,979	36 %	61 %
Alaska	*	*	934	20,906	7,975	*	*	50,277	2138	140
Arizona	58,825	111,678	153,500	158,122	53,489	151,916	46,304	251,709	3	59
Arkansas	8,155	15,539	28,968	40,803	22,240	*	*	66,537	41	63
California	547,179	910,006	1,386,625	1,705,814	928,345	786,789	326,142	2,041,276	23	20
Colorado	36,726	64,033	104,534	147,220	70,615	*	*	177,419	41	21
Connecticut	36,488	63,772	111,792	149,057	41,261	137,003	12,993	191,257	33	28
Delaware	1,558	3,660	7,492	12,771	*	*	*	26,601	70	108
District of Columbia	13,288	16,926	27,757	39,101	*	*	15,410	43,278	41	11
Florida	190,700	244,678	460,795	651,167	306,015	486,977	118,269	911,261	41	40
Georgia	75,870	130,292	203,855	302,598	172,556	156,142	91,508	420,206	48	39
Hawaii	*	*	*	*	*	0	*	*	NA	NA
Idaho	*	8,070	15,908	20,233	13,643	*	*	18,445	27	-9
Illinois	77,672	166,933	242,239	350,241	110,448	204,202	108,056	422,706	45	21
Indiana	20,059	49,702	60,494	80,364	22,385	78,837	22,482	123,704	33	54
Iowa	19,258	49,159	58,199	72,583	13,193	63,788	5,043	82,024	25	13
Kansas	26,179	42,679	68,743	101,734	23,564	94,047	8,352	125,963	48	24
Kentucky	23,570	24,237	32,731	39,297	43,191	*	*	67,870	20	73
Louisiana	28,133	43,294	74,950	121,685	58,019	88,851	17,890	164,760	62	35
Maine	19,878	17,864	26,266	38,149	*	*	2,372	49,523	45	30
Maryland	52,749	71,005	124,465	181,021	79,997	143,174	37,463	260,634	45	44
Massachusetts	114,116	185,365	289,447	357,256	125,630	339,244	40,945	505,819	23	42
Michigan	81,223	135,318	198,230	395,583	52,505	329,697	51,656	433,858	100	10
Minnesota	38,268	65,272	117,283	148,012	67,527	113,900	18,429	199,856	26	35
Mississippi	*	6,514	12,305	21,517	*	12,998	*	35,586	75	65
Missouri	23,347	46,903	100,403	123,915	68,186	89,370	24,238	181,794	23	47
Montana	*	*	7,378	10,446	4,272	*	*	13,037	42	25
Nebraska	36,748	44,188	54,085	55,188	13,637	49,939	7,875	71,451	2	29
Nevada	23,514	40,582	59,879	78,535	17,598	*	*	109,850	31	40
New Hampshire	22,807	33,045	42,364	55,658	9,618	*	*	71,200	31	28
New Jersey	101,832	144,203	285,311	428,514	151,829	375,362	63,001	590,192	50	38
New Mexico	*	2,929	28,497	20,482	*	*	4,625	31,940	-28	56
New York	186,504	342,743	603,487	893,032	285,814	780,473	132,872	1,199,159	48	34
North Carolina	57,881	81,998	136,703	205,616	65,582	239,107	53,217	357,906	50	74
North Dakota	*	2,437	4,227	6,277	4,849	*	*	6,082	48	-3
Ohio	160,792	156,980	230,525	358,965	112,527	264,031	60,208	436,766	56	22
Oklahoma	96,730	163,703	95,138	92,947	39,978	*	*	114,931	NM	24
Oregon	27,062	44,186	76,839	93,242	57,899	*	*	158,048	21	70
Pennsylvania	71,926	79,892	176,670	263,236	136,829	190,915	48,695	376,439	49	43
Puerto Rico	*	*	*	*	*	0	*	*	NA	NA
Rhode Island	*	20,628	30,919	49,215	*	*	3,383	64,293	59	31
South Carolina	25,229	32,824	63,914	96,839	18,686	96,559	19,920	135,165	52	40
South Dakota	*	3,516	2,839	5,448	2,869	*	*	9,585	92	76
Tennessee	66,307	87,317	122,391	152,510	42,571	158,120	36,710	237,401	25	56
Texas	152,518	276,087	522,538	646,839	300,752	427,324	112,589	840,665	24	30
Utah	11,635	19,612	35,970	55,103	33,306	*	*	72,977	53	32
Vermont	*	1,551	7,773	16,230	*	*	*	21,795	109	34
Virgin Islands	0	*	*	*	*	0	*	*	NA	NA
Virginia	51,305	72,436	139,915	212,808	65,298	182,591	44,883	292,772	52	38
Washington	71,930	118,723	195,628	227,066	140,273	*	*	335,667	16	48
West Virginia	*	1,835	6,498	16,697	*	*	2,530	32,848	157	97
Wisconsin	18,599	34,262	76,257	127,755	28,233	*	*	182,395	68	43
Wyoming	*	*	*	*	*	*	1,385	7,856	NA	NA
Reported Total	2,754,286	4,367,434	7,069,874	9,616,341	3,947,808	7,059,598	1,785,406	12,792,812	36 %	33 %

NA - Not available.

NM - Not meaningful due to inconsistencies in reported data.

\* Data withheld to maintain firm confidentiality.

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 8**  
**High-Speed Lines by Type of User as of December 31, 2001**  
**(Over 200 kbps in at Least One Direction)**

	Residential & Small Business	Other 1/	Total
Alabama	121,074	17,905	138,979
Alaska	44,559	5,718	50,277
Arizona	233,214	18,495	251,709
Arkansas	62,900	3,637	66,537
California	1,685,476	355,800	2,041,276
Colorado	156,709	20,710	177,419
Connecticut	180,616	10,641	191,257
Delaware	24,197	2,404	26,601
District of Columbia	28,621	14,657	43,278
Florida	776,704	134,557	911,261
Georgia	335,428	84,778	420,206
Hawaii	*	*	*
Idaho	13,288	5,157	18,445
Illinois	329,721	92,985	422,706
Indiana	99,837	23,867	123,704
Iowa	77,859	4,165	82,024
Kansas	120,375	5,588	125,963
Kentucky	47,060	20,810	67,870
Louisiana	148,039	16,721	164,760
Maine	46,955	2,568	49,523
Maryland	227,097	33,537	260,634
Massachusetts	447,030	58,789	505,819
Michigan	387,308	46,550	433,858
Minnesota	180,371	19,485	199,856
Mississippi	28,559	7,027	35,586
Missouri	164,774	17,020	181,794
Montana	11,676	1,361	13,037
Nebraska	69,171	2,280	71,451
Nevada	92,525	17,325	109,850
New Hampshire	62,967	8,233	71,200
New Jersey	522,979	67,213	590,192
New Mexico	28,119	3,821	31,940
New York	1,029,106	170,053	1,199,159
North Carolina	310,439	47,467	357,906
North Dakota	5,116	966	6,082
Ohio	371,141	65,625	436,766
Oklahoma	104,835	10,096	114,931
Oregon	131,279	26,769	158,048
Pennsylvania	318,833	57,606	376,439
Puerto Rico	*	*	*
Rhode Island	60,202	4,091	64,293
South Carolina	115,343	19,822	135,165
South Dakota	8,361	1,224	9,585
Tennessee	202,393	35,008	237,401
Texas	748,785	91,880	840,665
Utah	64,354	8,623	72,977
Vermont	20,354	1,441	21,795
Virgin Islands	*	*	*
Virginia	256,813	35,959	292,772
Washington	294,078	41,589	335,667
West Virginia	31,160	1,688	32,848
Wisconsin	159,328	23,067	182,395
Wyoming	6,845	1,011	7,856
Reported Total	11,005,396	1,787,416	12,792,812

\* Data withheld to maintain firm confidentiality.

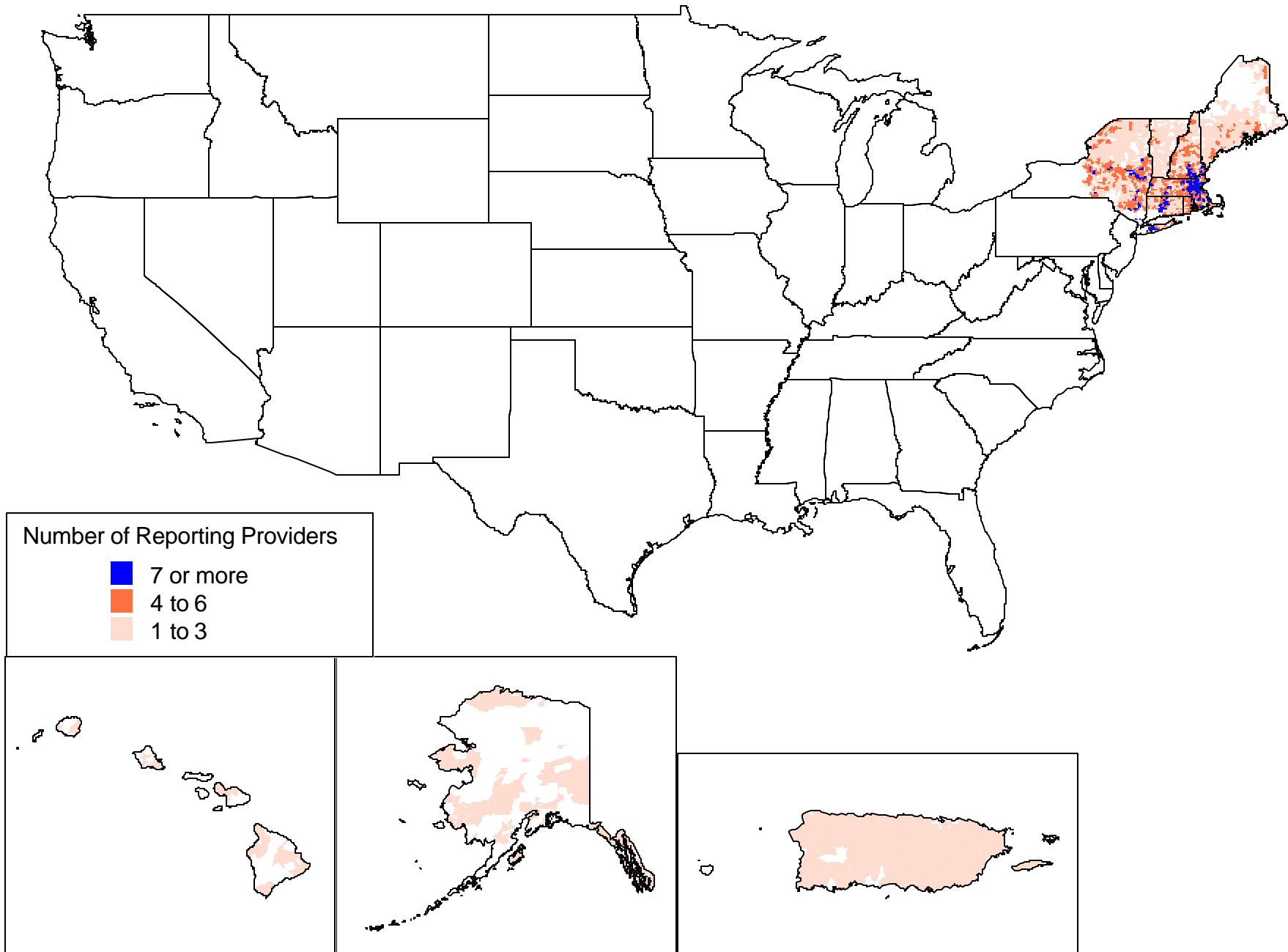
1/ Other includes medium and large business, institutional, and government customers.

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

<b>Number of Providers</b>	<b>December 1999</b>	<b>June 2000</b>	<b>December 2000</b>	<b>June 2001</b>	<b>December 2001</b>
Zero	40.3 %	33.0 %	26.8 %	22.2 %	20.6 %
One	26.0	25.9	22.7	20.3	19.3
Two	15.5	17.8	18.4	16.7	15.7
Three	8.2	9.2	10.9	13.2	13.1
Four	4.3	4.9	6.1	8.2	9.1
Five	2.7	3.4	4.0	4.9	6.1
Six	1.7	2.5	3.0	3.6	4.2
Seven	0.8	1.7	2.3	2.8	3.2
Eight	0.3	0.8	2.0	2.2	2.5
Nine	0.2	0.4	1.6	1.9	2.0
Ten or More	0.0	0.4	2.4	3.9	4.0

# High-Speed Providers by Zip Code

(As of December 31, 2001)



**Table 10**  
**Percentage of Zip Codes with High-Speed Lines in Service**  
**as of December 31, 2001**  
**(Over 200 kbps in at Least One Direction)**

	Number of Providers					
	Zero	One - Three	Four	Five	Six	Seven or More
Alabama	18 %	64 %	11 %	5 %	2 %	0 %
Alaska	43	53	2	1	0	0
Arizona	6	41	12	14	18	9
Arkansas	32	55	8	3	1	1
California	7	34	10	7	6	37
Colorado	13	48	10	5	4	20
Connecticut	0	49	12	11	4	23
Delaware	2	70	28	0	0	0
District of Columbia	7	22	11	7	33	19
Florida	3	34	16	12	8	26
Georgia	13	49	12	9	4	13
Hawaii	60	40	0	0	0	0
Idaho	36	58	4	1	0	0
Illinois	24	47	5	4	2	18
Indiana	18	58	10	6	3	5
Iowa	52	39	4	4	1	0
Kansas	44	41	6	5	3	2
Kentucky	35	56	7	2	0	0
Louisiana	16	63	15	5	0	0
Maine	12	81	6	1	0	0
Maryland	10	38	12	6	6	27
Massachusetts	2	28	15	11	8	36
Michigan	10	52	11	7	4	15
Minnesota	35	45	7	5	4	5
Mississippi	25	68	5	2	0	0
Missouri	30	51	5	5	3	6
Montana	44	50	6	0	0	0
Nebraska	43	51	5	2	0	0
Nevada	14	40	6	9	15	16
New Hampshire	4	53	15	11	6	11
New Jersey	1	24	16	13	9	37
New Mexico	34	55	6	3	3	0
New York	7	44	14	10	8	17
North Carolina	8	58	14	8	5	7
North Dakota	60	40	0	0	0	0
Ohio	8	52	13	11	6	10
Oklahoma	26	52	7	4	7	4
Oregon	14	59	14	8	4	2
Pennsylvania	22	45	9	7	4	14
Puerto Rico	8	92	0	0	0	0
Rhode Island	3	33	19	14	24	7
South Carolina	12	66	14	5	3	0
South Dakota	57	41	1	0	0	0
Tennessee	17	51	12	10	4	6
Texas	15	41	8	6	6	24
Utah	26	44	3	7	6	14
Vermont	23	75	2	0	0	0
Virginia	24	48	9	3	4	13
Washington	11	47	9	8	6	19
West Virginia	48	46	5	1	0	0
Wisconsin	13	56	9	9	7	6
Wyoming	29	66	5	1	0	0
Nationwide	21 %	48 %	9 %	6 %	4 %	12 %



**Table 11**  
**High-Speed Subscribership**  
**Ranked by Population Density**  
**(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	Dec 2001	Dec 1999	Dec 2000	Dec 2001
90-100	More Than 3,147	96.1 %	98.2 %	98.1 %	98.9 %	99.9 %	99.8 %
80-90	947-3,147	93.2	97.1	97.3	98.5	99.8	99.7
70-80	268-947	87.5	95.7	95.8	96.2	99.3	99.5
60-70	118-268	77.7	91.5	93.3	91.4	98.1	99.1
50-60	67-118	66.9	85.9	89.3	83.3	95.0	97.1
40-50	41-67	53.7	76.1	83.3	72.3	87.9	94.4
30-40	25-41	40.9	65.0	73.1	60.0	80.0	87.6
20-30	15-25	29.8	50.1	61.2	50.9	69.4	80.4
10-20	6-15	26.7	38.5	52.1	50.2	61.9	76.2
0-10	Fewer Than 6	19.9	27.5	43.3	38.5	49.9	67.9

**Table 12**  
**High-Speed Subscribership**  
**Ranked by Household Income**  
**(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	Dec 2001	Dec 1999	Dec 2000	Dec 2001
90-100	\$53,494 to \$291,938	90.8 %	96.1 %	96.8 %	98.4 %	99.8 %	99.6 %
80-90	\$43,617 to \$53,478	77.1	88.9	91.7	95.8	99.0	99.3
70-80	\$38,396 to \$43,614	67.0	79.5	84.9	94.3	97.8	98.6
60-70	\$34,744 to \$38,395	59.9	74.5	79.9	91.5	96.6	97.6
50-60	\$32,122 to \$34,743	55.3	71.2	78.2	90.0	95.9	97.6
40-50	\$29,893 to \$32,121	53.7	67.4	75.5	88.9	94.5	96.8
30-40	\$27,542 to \$29,892	50.4	66.9	75.2	86.1	93.8	96.5
20-30	\$24,855 to \$27,541	50.1	65.1	71.8	85.7	93.1	95.6
10-20	\$21,645 to \$24,855	46.3	61.2	70.0	83.0	91.1	95.0
0-10	\$0 to \$21,644	41.7	54.9	62.7	83.8	91.5	95.1

# Customer Response

Publication: *High-Speed Services for Internet Access: Status as of December 31, 2001.*

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

1. Please check the category that best describes you:

- 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/WCB/IATD Mail Stop 1600 F Washington, DC 20554