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FEDERAL COMMUNICATIONS COMMISSION RELEASES **STUDY ON TELEPHONE TRENDS**

Washington, D.C. – Today, the Federal Communications Commission (FCC) released its *Trends in Telephone Service* report, which summarizes in one convenient reference information published in various reports over the course of the past year. The report provides answers to some of the most frequently asked questions about the telephone industry asked by consumers, members of Congress, other government agencies, telecommunications carriers, and members of the business and academic communities.

This year's report includes 29 new charts graphically depicting the reference information. Highlights from the report include:

Advanced Telecommunications Services

- Advanced services lines (exceeding 200 kbps in both directions) connecting homes and businesses to the Internet increased by 32% during the first half of 2003, from 12.4 million lines in service as of December 31, 2002 to 16.3 million as of June 30, 2003.
- Among advanced services lines, ADSL lines increased by 16%, from 2.2 million to 2.5 million, during the first six months of 2003, compared to a 43% increase, from 8.3 million to 11.9 million, for cable modem lines.

Local Telephone Competition

- As of June 2003, competitive local exchange carriers (CLECs) provided 26.9 million (or 14.7%) of the approximately 183 million nationwide local telephone lines that were in service to end users as opposed to 24.8 million (or 13.2%) of nationwide local telephone lines as of December 2002.
- About one-fourth of CLEC end-user lines are served over local loop facilities that the CLECs own.
- Incumbent local exchange carriers (ILECs) reported providing other carriers about 2.2 million lines on a resale basis as of June 30, 2003, compared to about 2.7 million lines six months earlier. ILECs provided about 17.2 million unbundled network element (UNE) loops as of June 30, 2003, compared to about 14.5 million loops six months earlier.

International Calling

- The number of calls made from the United States to other countries increased from 200 million in 1980 to 5.9 billion in 2002.
- In 2002, Americans spent about \$9.8 billion on international calls. On average, carriers billed 28 cents per minute for international calls in 2002, a decline of nearly 80% since 1980.

Subscribership / Household Expenditures

- Almost twenty-nine million households have been added to the nation's telephone system since November 1983. As of November 2003, 107.1 million households had telephone service.
- While household expenditures for telecommunications services have grown in absolute dollars over time, these expenditures have remained a constant 2% of all consumer expenditures over the last fifteen years. According to sample data from TNS Telecoms, a marketing information research firm, the average monthly household telecommunications expenditures were \$83 for 2002: \$36 to local exchange carriers, \$12 to long distance carriers, and \$35 to wireless carriers. According to the Cellular Telecommunications & Internet Association (CTIA), the average monthly wireless bill was \$49.91 as of December 2003, compared to \$61.48 as of December 1993.

Universal Service

- In 2003, total high-cost support disbursements amounted to \$3.3 billion, an increase from \$3.0 billion in 2002. This increase reflects a full-year of the new interstate common line support mechanism, which began in July 2002.
- Disbursements of low-income support increased from about \$673 million in 2002 to an estimated \$713 million in 2003.
- Schools and libraries are benefiting significantly from the available support. For funding year 2002 (July 2002 through June 2003), \$2.2 billion has been committed, and \$1.3 billion has been disbursed to date. Disbursements are lower than commitments because of the implementation cycle for installing non-recurring services.
- Rural health care disbursements for funding year 2002 were \$23.3 million, up from \$19.7 for the previous funding year.

The report is available for reference in the FCC's Reference Information Center, Courtyard Level, 445 12th Street, SW, Washington, DC. Copies may be purchased by calling Qualex International at (202) 863-2893. The report can also be downloaded from the **FCC-State Link** Internet site at www.fcc.gov/wcb/stats.

- FCC -

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

Trends in Telephone Service

*Industry Analysis and Technology Division
Wireline Competition Bureau*

May 2004

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 at (202) 863-2893, facimile (202) 863-2898, or via e-mail qualexint@aol.com. The report can also be downloaded from the **FCC-State Link** Internet site at www.fcc.gov/wcb/stats.

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1 Introduction

Trends in Telephone Service is published by the Industry Analysis and Technology Division (formerly the Industry Analysis Division) of the Federal Communication Commission's Wireline Competition Bureau (formerly the Common Carrier Bureau).¹ This report is designed to provide answers to some of the most frequently asked questions about the telephone industry -- questions asked by consumers, members of Congress, other government agencies, telecommunications carriers, and members of the business and academic communities. To this end, the report contains summary information about the size, growth, and development of the telephone industry, including data on market shares, minutes of calling, number of lines, and telephone subscribership. The report also provides information about access charges, advanced telecommunications, consumer expenditures for service, infrastructure, international telephone traffic, local telephone competition, telephone rates and price changes, toll service providers, and universal service support.

Trends in Telephone Service summarizes a variety of information contained in other reports that are published periodically by the Industry Analysis and Technology Division.² In most cases, these other reports provide more detailed information than that provided here. These reports can be accessed from our Internet site, **FCC-State Link**, at www.fcc.gov/wcb/stats. In addition, to facilitate further information gathering by consumers and others, we have listed additional sources of information in Appendix B, and we have provided information on contacting the authors of this report in Appendix C.

Highlights from sections in the report on advanced telecommunications services, international calling, local competition, telephone rates, subscribership, and toll-free numbers are shown below.

Advanced Telecommunications Services

- Advanced services lines (exceeding 200 kbps in both directions) connecting homes and businesses to the Internet increased by 32% during the first half of 2003, from 12.4 million lines in service as of December 31, 2002 to 16.3 million as of June 30, 2003.
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¹ *Trends in Telephone Service* was last published in August 2003.

² See Appendix A for a list of these publications.

- About one-fourth of CLEC end-user lines are served over local loop facilities that the CLECs own.
- Incumbent local exchange carriers (ILECs) reported providing other carriers about 2.2 million lines on a resale basis as of June 30, 2003, compared to about 2.7 million lines six months earlier. ILECs provided about 17.2 million unbundled network element (UNE) loops as of June 30, 2003, compared to about 14.5 million loops six months earlier.

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- Rural health care disbursements for funding year 2002 were \$23.3 million, up from \$19.7 for the previous funding year.

Access Charges

Long distance companies rely on the loops, switches, and transport facilities of local telephone companies for access to their customers. As a result, local telephone companies recover a portion of their costs from long distance companies accessing their networks. Both the manner in which these access charges have been assessed and the proportion of the costs they have recovered have varied considerably over time.

In the early 1980s, AT&T provided about three-quarters of the nation's local telephone service and almost all interstate long distance service. Because revenue sharing was largely an internal process for AT&T, it was able to charge prices above true economic cost for long distance calls and share the revenues with local telephone companies. These transfers, while reducing the pressures on the local companies to raise monthly rates, contributed to inefficiently high long distance rates. The high rates were responsible for suppressing demand for long distance calls and inducing large corporations to bypass the public switched network. Moreover, while such revenue sharing arrangements were sustainable in an industry where one firm monopolized both long distance and local service, they were not compatible with a competitive long distance industry.

In mid-1984 the FCC, in cooperation with a Federal-State Joint Board composed of both federal and state regulators, introduced sweeping changes in the way that local telephone companies charged for their services. The historic method of sharing revenues was replaced with a new system of access charges that provided a uniform method for local telephone companies to charge long distance carriers for the origination and termination of interstate traffic on their local networks. In addition, monthly subscriber line charges (SLCs) were introduced to recover a portion of the fixed costs of the local telephone companies' loops directly from end users on a per-line basis. Since local telephone companies were required to reduce their charges to long distance carriers -- dollar for dollar -- as SLCs were introduced, the pricing changes reduced the implicit subsidy from long distance use to local service. The rebalancing of prices between local service and interstate long distance calls during the 1980s had a fundamental impact on the telephone industry as the price of long distance service fell and the volume of long distance calling surged.

In mid-1997, as part of its implementation of the 1996 Telecommunications Act, the FCC introduced further interstate access charge reform. Prior to the 1997 reform, local carriers continued to recover part of their fixed costs in per-minute charges (from long distance carriers) and part from end users (in SLCs.) Presubscribed interexchange carrier charges (PICCs) were created in order to allow local carriers to recover the remaining portion of their fixed loop costs from long distance carriers on a per-line, instead of a per-minute, basis.

As part of access charge reform in May of 2000, the FCC eliminated PICCs and consolidated them with SLCs, and all price-cap local exchange carriers implemented lower access charges paid by long distance carriers. In October of 2001, the FCC modified its interstate access charge rules for rate-of-return incumbent local exchange carriers. These changes for the rate-of-return carriers were designed to align the interstate access rate structure

more closely with the manner in which costs are incurred by driving per-minute access charges towards lower, more cost-based levels.

Average monthly SLCs and PICCs are shown in Table 1.1, and average per-minute rates charged to long distance carriers are shown in Table 1.2. Both tables report historical averages for all local exchange carriers (LECs) that file access tariffs subject to price-cap regulation and all LECs in the National Exchange Carrier Association (NECA) pool. Current per-line charges and per-minute charges are reported for each of the carriers in Tables 1.3 and 1.4, respectively.

Table 1.1
Interstate Per-Line Access Charges
(National Average per Month per Line) ¹

Rates in Effect		Charged to End Users ² (Subscriber Line Charges)			Charged to Long Distance Carriers ³ (Presubscribed Interexchange Carrier Charges)			
From	To	Residential and Single-Line Business	Non-Primary Residential	Multiline Business and Centrex	Residential and Single-Line Business	Non-Primary Residential	Multiline Business	Centrex
05/26/84	05/31/85	\$0.00		\$4.99				
06/01/85	09/30/85	1.00		4.99				
10/01/85	05/31/86	1.00		4.97				
06/01/86	12/31/86	2.00		4.97				
01/01/87	06/30/87	2.00		5.12				
07/01/87	12/31/87	2.60		5.12				
01/01/88	11/30/88	2.60		5.01				
12/01/88	03/31/89	3.20		5.01				
04/01/89	12/31/89	3.50		4.94				
01/01/90	06/30/90	3.48		4.84				
07/01/90	12/31/90	3.48		4.83				
01/01/91	06/30/91	3.48		4.77				
07/01/91	11/27/91	3.49		4.74				
11/28/91	06/30/92	3.49		4.76				
07/01/92	06/30/93	3.49		4.68				
07/01/93	06/30/94	3.50		5.37				
07/01/94	06/30/95	3.50		5.45				
07/01/95	06/30/96	3.50		5.50				
07/01/96	06/30/97	3.50		5.53				
07/01/97	12/31/97	3.50		5.68				
01/01/98	06/30/98	3.50	\$4.98	6.92	\$0.49	\$1.50	\$2.52	\$0.35
07/01/98	12/31/98	3.50	4.99	7.11	0.49	1.38	2.38	0.38
01/01/99	06/30/99	3.50	5.88	7.05	0.49	1.38	2.22	0.32
07/01/99	12/31/99	3.50	5.84	6.94	0.95	1.77	2.78	0.42
01/01/00	06/30/00	3.50	5.81	6.94	0.92	1.70	2.44	0.35
08/11/00	06/30/01 ⁴	4.28	5.99	6.88	0.00	0.00	2.30	0.37
07/01/01	12/31/01	4.78	5.93	6.66	0.00	0.00	1.35	0.22
01/01/02	06/30/02	4.92	5.93	6.79	0.00	0.00	1.35	0.22
07/01/02	06/30/03	5.62	5.88	6.45	0.00	0.00	0.48	0.08
07/01/03	06/30/04	5.96	5.94	6.37	0.00	0.00	0.20	0.04

¹ This table shows average rates (weighted by access lines) for all local exchange carriers (LECs) that file access tariffs subject to price-cap regulation and all LECs in the National Exchange Carrier Association (NECA) pool.

² Prior to 1/01/98, carriers did not charge separate subscriber line charge (SLC) rates for primary and non-primary residential lines. Therefore, the residential and single-line business average SLCs reported prior to 1/01/98 include all residential SLC charges. The average residential and single-line business SLC rate as of 1/01/98 excludes non-primary residential SLCs. Non-primary SLCs are now reported separately, except for the LECs in the NECA pool, which continue to charge a single residential SLC. Under price-cap regulation, as of July 1, 2003, the caps on SLCs for primary residential and single-line business, non-primary residential, and multiline business and Centrex lines equal \$6.50, \$7.00, and \$9.20, respectively. For NECA pool companies, the residential SLC cap is \$6.50, while the multiline business and Centrex SLC cap equals \$9.20.

³ On 1/01/98, price-cap carriers began to charge presubscribed interexchange carrier charges (PICCs). The reported PICCs are averages per line including both price-cap and NECA pool lines. While carriers did not charge different rates for Centrex and multiline business SLCs, they did charge different PCCC rates for these lines. Therefore, the average multiline business and Centrex PCCC rates are reported separately. However, multiline business line counts, used to compute average PCCC rates, include Centrex lines for LECs in the NECA pool, which do not charge PICCs or distinguish in access filings between the two line types. On 7/01/00, price-cap carriers stopped charging residential and single-line business PICCs. Therefore, under price-cap regulation, as of July 1, 2000, the caps on PICCs for multiline business lines equal \$4.31. Centrex groups of 9 or fewer lines are capped at the multiline business PCCC rate of \$4.31 per group. Centrex groups with more than 9 lines are capped at \$0.48 per line (1/9th the multiline business rate).

⁴ Although the charges took effect on July 1, 2000, some companies made adjustments to the tariffs which did not take effect until August 11, 2000.

Source: Access tariff filings.

Table 1.2
Interstate Per-Minute Access Charges
(National Average in Cents per Minute) ¹

Rates in Effect		Interstate Charges for Switched Access Service				
From	To	Carrier Common Line per Originating Access Minute ¹	Carrier Common Line per Terminating Access Minute ¹	Traffic Sensitive per Switched Minute	Non-Traffic Sensitive per Switched Minute ²	Total Charge per Conversation Minute ³
05/26/84	01/14/85	5.24 ¢	5.24 ¢	3.10 ¢		17.26 ¢
01/15/85	05/31/85	5.43	5.43	3.10		17.66
06/01/85	09/30/85	4.71	4.71	3.10		16.17
10/01/85	05/31/86	4.33	4.33	3.10		15.38
06/01/86	12/31/86	3.04	4.33	3.10		14.00
01/01/87	06/30/87	1.55	4.33	3.10		12.41
07/01/87	12/31/87	0.69	4.33	3.10		11.49
01/01/88	11/30/88	0.00	4.14	3.10		10.56
12/01/88	02/14/89	0.00	3.39	3.00		9.60
02/15/89	03/31/89	0.00	3.25	3.00		9.46
04/01/89	12/31/89	1.00	1.83	3.00		9.11
01/01/90	06/30/90	1.00	1.53	2.50		7.78
07/01/90	12/31/90	1.00	1.23	2.50		7.48
01/01/91	06/30/91	1.00	1.14	2.40		7.18
07/01/91	06/30/92	0.88	1.06	2.40		6.97
07/01/92	06/30/93	0.79	0.95	2.40		6.76
07/01/93	06/30/94	0.88	1.16	2.20		6.66
07/01/94	06/30/95	0.84	1.08	2.10	0.28 ¢	6.89
07/01/95	06/30/96	0.74	0.89	1.96	0.21	6.16
07/01/96	06/30/97	0.72	0.89	1.95	0.17	6.04
07/01/97	12/31/97	0.64	0.84	1.63	0.14	5.18
01/01/98	06/30/98	0.68	0.23	1.29	0.21	4.04
07/01/98	12/31/98	0.91	0.20	0.99	0.30	3.82
01/01/99	06/30/99	0.82	0.16	0.98	0.32	3.71
07/01/99	12/31/99	0.37	0.10	0.86	0.28	2.82
01/01/00	06/30/00	0.32	0.10	0.86	0.31	2.85
08/11/00	06/31/00	0.23	0.07	0.52	0.26	1.91
07/01/01	12/31/01	0.15	0.07	0.48	0.24	1.71
01/01/02	06/30/02	0.15	0.07	0.47	0.24	1.69
07/01/02	06/30/03	0.02	0.01	0.48	0.22	1.46
07/01/03	06/30/04	0.00	0.00	0.48	0.22	1.44

¹ This table shows average rates (weighted by minutes of use) for all local exchange carriers (LECs) that file access tariffs subject to price-cap regulation and all LECs in the National Exchange Carrier Association (NECA) pool. The average rates reported here do not include the average revenue per minute from subscriber line charges (SLCs) or primary interexchange carrier charges (PICCs), both of which are reported in Table 1.1. Effective 07/01/03, the carrier common line (CCL) rates for NECA carriers were eliminated.

² Non-traffic-sensitive charges include charges assessed on a per-month, per-unit basis. Prior to 07/01/94, these charges were included in the average traffic-sensitive rates.

³ The total charge per conversation minute consists of charges on the originating end of the call, which are adjusted for dialing and call setup time, plus charges on the terminating end. Originating charges per conversation minute equal the carrier common line charge per originating access minute plus the traffic-sensitive charge per switched minute, both multiplied by 1.07 to account for dialing and call setup time, plus the non-traffic-sensitive charge per switched minute. Terminating charges per conversation minute equal carrier common line charges per terminating access minute plus both traffic-sensitive and non-traffic-sensitive charges per switched minute.

⁴ Although the charges took effect on July 1, 2000, some companies made adjustments to the tariffs which did not take effect until August 11, 2000.

Source: Access tariff filings.

Table 1.3
Interstate Per-Line Access Charges by Carrier
(In Dollars per Month per Line) ¹

Company	Rates Effective from 07/01/03 to 06/30/04							2002 Average Monthly Access Lines ² (Thousands)		
	Subscriber Line Charges			Presubscribed Interexchange Carrier Charges						
	Residential and Single-Line Business	Non-Primary Residential	Multiline Business and Centrex	Residential and Single-Line Business	Non-Primary Residential	Multiline Business	Centrex	Residential and Single-Line Business	Non-Primary Residential	Multiline Business and Centrex
ALLTEL - Nebraska	\$4.96	\$4.96	\$5.71	\$0.00	\$0.00	\$0.00	\$0.00	206	13	70
BellSouth	6.50	7.00	7.13	0.00	0.00	0.00	0.00	14,428	2,214	5,594
CenturyTel ³	6.50	7.00	9.20	0.00	0.00	2.06	1.10	763	40	143
Cincinnati Bell	5.32	5.32	5.32	0.00	0.00	0.00	0.00	649	75	279
Citizens	6.12	6.44	9.20	0.00	0.00	3.81	0.60	1,686	167	485
Iowa Telecom	6.50	7.00	9.20	0.00	0.00	4.31	0.82	207	15	43
Qwest	6.11	6.36	6.76	0.00	0.00	0.04	0.04	9,761	1,762	4,064
SBC	5.00	4.92	4.94	0.00	0.00	0.00	0.00	28,792	6,117	16,064
Sprint	5.89	6.00	7.60	0.00	0.00	0.06	0.01	5,315	778	1,727
Valor	6.46	7.00	8.65	0.00	0.00	2.02	0.95	370	56	97
Verizon	6.35	6.40	6.83	0.00	0.00	0.43	0.07	32,394	6,359	15,077
Price Caps	5.90	5.94	6.22	0.00	0.00	0.21	0.04	94,570	17,597	43,642
NECA	6.50	NA	9.20	0.00	NA	0.00	NA	10,290	NA	2,169
Price Caps and NECA	\$5.96	\$5.94	\$6.37	\$0.00	\$0.00	\$0.20	\$0.04	104,860	17,597	45,811

NA - Not Available.

¹ This table shows average rates (weighted by access lines) for all local exchange carriers (LECs) that file access tariffs subject to price-cap regulation and all LECs in the National Exchange Carrier Association (NECA) pool. Rates are composites of all regions and subsidiaries of each local exchange carrier. No information is available for those carriers that are not in the NECA pool, but are subject to rate-of-return regulation.

² Access line counts measure lines that companies report as qualified to receive subscriber line charges (SLCs). ISDN-BRI lines, which are charged non-primary SLC and PICC rates, are included in the non-primary residential line counts. ISDN-PRI lines, which are charged rates equal to five times the multiline business SLC and PICC rates, are multiplied by five and added to multiline business counts.

³ Data reflect only those company study areas subject to price-cap regulation.

Source: Access tariff filings.

Table 1.4

**Interstate Per-Minute Access Charges by Carrier
(In Cents per Minute) ¹**

Company	Rates Effective from 7/1/03-06/30/04					Year 2002 Minutes of Use (Millions)		
	Carrier Common Line per Originating Access Minute ²	Carrier Common Line per Terminating Access Minute ²	Switched Traffic Sensitive per Access Minute	Switched Non-Traffic Sensitive per Access Minute ³	Total Charge per Conversation Minute ⁴	Carrier Common Line		Local Switching
						Originating	Terminating	
ALLTEL - Nebraska	0.00 ¢	0.00 ¢	0.79 ¢	0.33 ¢	2.29 ¢	372	369	741
BellSouth	0.00	0.00	0.36	0.24	1.23	23,475	55,742	64,411
CenturyTel ⁵	0.01	0.00	0.43	0.28	1.46	815	2,228	3,061
Cincinnati Bell	0.00	0.00	0.51	0.28	1.61	865	2,141	3,008
Citizens	0.04	0.00	0.61	0.47	2.26	2,245	4,035	6,282
Iowa Telecom	0.00	0.00	1.39	0.62	4.10	390	339	730
Qwest	0.00	0.00	0.57	0.16	1.51	18,088	33,606	51,941
SBC	0.00	0.00	0.41	0.19	1.23	63,965	66,731	132,324
Sprint	0.00	0.00	0.60	0.14	1.51	5,825	19,008	24,880
Valor	0.00	0.00	0.79	0.41	2.45	332	1,016	1,348
Verizon	0.00	0.00	0.42	0.18	1.24	44,067	119,169	163,656
Price Caps	0.00	0.00	0.44	0.20	1.31	160,440	304,385	452,382
NECA	0.00	0.00	1.47	0.75	4.54	NA	NA	19,168
All Price Caps and NECA	0.00	0.00	0.48	0.22	1.44	160,440	304,385	471,550

NA - Not Available.

¹ This table shows average rates (weighted by minutes of use) for all local exchange carriers (LECs) that file access tariffs subject to price-cap regulation and all LECs in the National Exchange Carrier Association (NECA) pool. Rates are composites of all regions and subsidiaries of each local exchange carrier. No information is available for those carriers that are not in the NECA pool, but are subject to rate-of-return regulation. The average rates reported here do not include the average revenue per minute from subscriber line charges (SLCs) or primary interexchange carrier charges (PICCs), both of which are reported in Table 1.1.

² Effective 07/01/03, the carrier common line (CCL) rates for NECA carriers were eliminated.

³ Non-traffic sensitive charges include charges assessed on a per-month, per-unit basis. Prior to 07/01/94 these charges were included in the average traffic-sensitive rates.

⁴ The total charge per conversation minute consists of charges on the originating end of the call, which are adjusted for dialing and call setup time, plus charges on the terminating end. Originating charges per conversation minute equal the carrier common line charge per originating access minute plus the traffic-sensitive charge per switched minute, both multiplied by 1.07 to account for dialing and call setup time, plus the non-traffic-sensitive charge per switched minute. Terminating charges per conversation minute equal carrier common line charges per terminating access minute plus both traffic-sensitive and non-traffic-sensitive charges per switched minute.

⁵ Data reflect only those company study areas subject to price-cap regulation.

Source: Access tariff filings.

2 Advanced Telecommunications

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. To assist in its evaluation of such deployment, the Commission launched a formal data collection program (FCC Form 477) to gather standardized information about subscribership to high-speed services, including advanced services, from wireline telephone companies, cable TV companies, terrestrial wireless providers, satellite providers, and any other facilities-based providers of advanced telecommunications capability.

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.

Table 2.1 shows high-speed lines (over 200 Kbps in at least one direction) for the following types of technology: Asymmetric digital subscriber lines (ADSL), wireline other than ADSL, coaxial cable, fiber, and satellite and fixed wireless. ADSL technologies provide speed in one direction greater than speed in the other direction. Wireline technologies other than ADSL include traditional telephone company high-speed services and symmetric DSL services that provide equivalent functionality. Coaxial cable includes the typical hybrid fiber-coax (HFC) architecture of upgraded cable TV systems. Fiber technologies are those optical fiber technologies deployed to the subscriber's premises (fiber-to-the-home, or FTTH). Satellite and fixed terrestrial wireless systems use radio spectrum to communicate with a radio transmitter located at the subscriber's premises. Chart 2.1 shows the growth of high-speed lines from December 1999 through June 2003, and Chart 2.2 shows the proportion of high-speed lines by technology during December 1999 and June 2003.

Table 2.2 shows advanced services lines (over 200 Kbps in both directions) by the above technologies. Chart 2.3 shows the growth of advanced services lines from December 1999 through June 2003, and Chart 2.4 shows the proportion of advanced services lines by technology during December 1999 and June 2003. Table 2.3 and Table 2.4 show comparable data with respect to residential and small business customers only. Charts 2.5 through 2.8 show the residential and small business categories comparable to the information in Charts 2.1 through 2.4, described above. Table 2.5 shows high-speed lines by state by the above technologies as of June 30, 2003. Table 2.6 shows high-speed lines by state over time.

Table 2.1
High-Speed Lines ¹
(Over 200 kbps in at Least One Direction)

Types of Technology ²	1999	2000		2001		2002		2003	Percent Change	
	Dec	Jun	Dec	Jun	Dec	Jun	Dec	Jun	June 2002 - Dec 2002	Dec 2002 - Jun 2003
ADSL	369,792	951,583	1,977,101	2,693,834	3,947,808	5,101,493	6,471,716	7,675,114	27 %	19 %
Other Wireline	609,909	758,594	1,021,291	1,088,066	1,078,597	1,186,680	1,216,208	1,215,713	2	0
Coaxial Cable	1,411,977	2,284,491	3,582,874	5,184,141	7,059,598	9,172,895	11,369,087	13,684,225	24	20
Fiber	312,204	307,151	376,203	455,593	494,199	520,884	548,471	575,613	5	5
Satellite or Fixed Wireless	50,404	65,615	112,405	194,707	212,610	220,588	276,067	309,006	25	12
Total Lines	2,754,286	4,367,434	7,069,874	9,616,341	12,792,812	16,202,540	19,881,549	23,459,671	23 %	18 %

See notes following Table 2.4.

Chart 2.1
Total High-Speed Lines

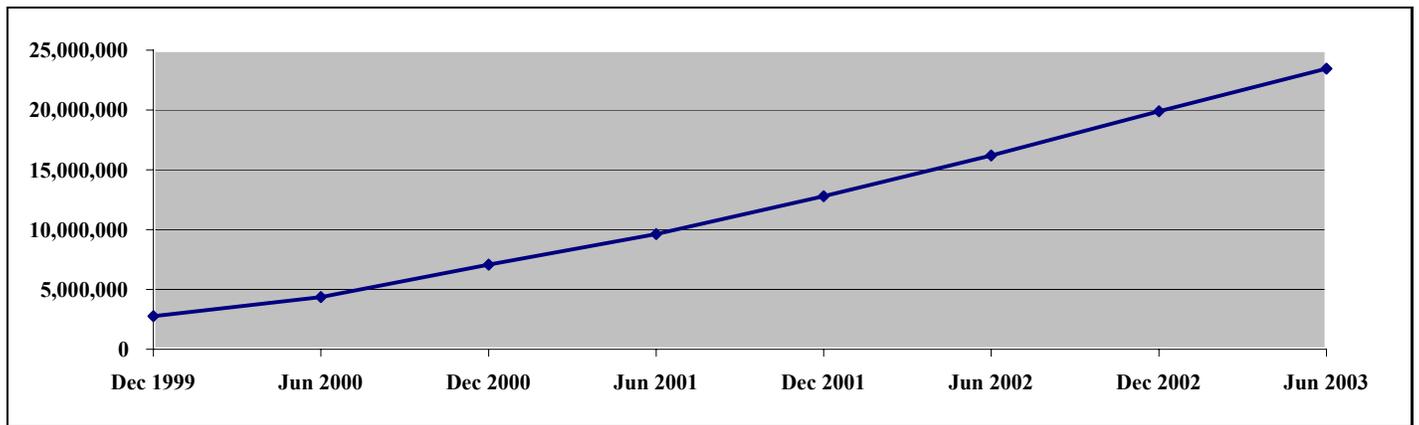


Chart 2.2
High-Speed Lines by Technology

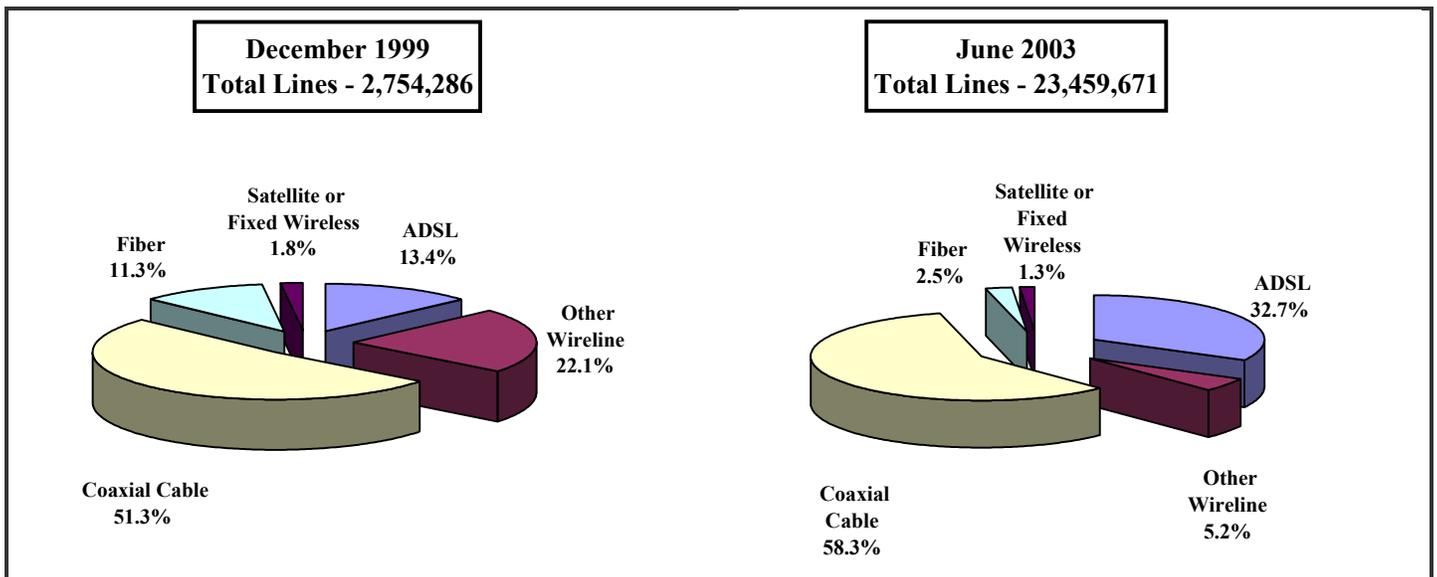


Table 2.2
Advanced Services Lines ¹
(Over 200 kbps in Both Directions)

Types of Technology ²	1999	2000		2001		2002		2003	Percent Change	
	Dec	Jun	Dec	Jun	Dec	Jun	Dec	Jun	June 2002 - Dec 2002	Dec 2002 - Jun 2003
ADSL	185,950	326,816	675,366	998,883	1,369,143	1,852,879	2,178,394	2,536,368	18 %	16 %
Other Wireline	609,909	758,594	1,021,291	1,088,066	1,078,597	1,186,680	1,216,208	1,215,713	2	0
Coaxial Cable	877,465	1,469,130	2,193,609	3,329,976	4,394,778	6,819,395	8,342,234	11,935,866	22	43
Fiber	307,315	301,143	376,197	455,549	486,483	518,908	548,123	575,057	6	5
Satellite or Fixed Wireless	7,816	3,649	26,906	73,476	75,341	66,073	65,929	64,393	0	-2
Total Lines	1,988,455	2,859,332	4,293,369	5,945,950	7,404,343	10,443,935	12,350,888	16,327,396	18 %	32 %

See notes following Table 2.4.

Chart 2.3
Advanced Services Lines

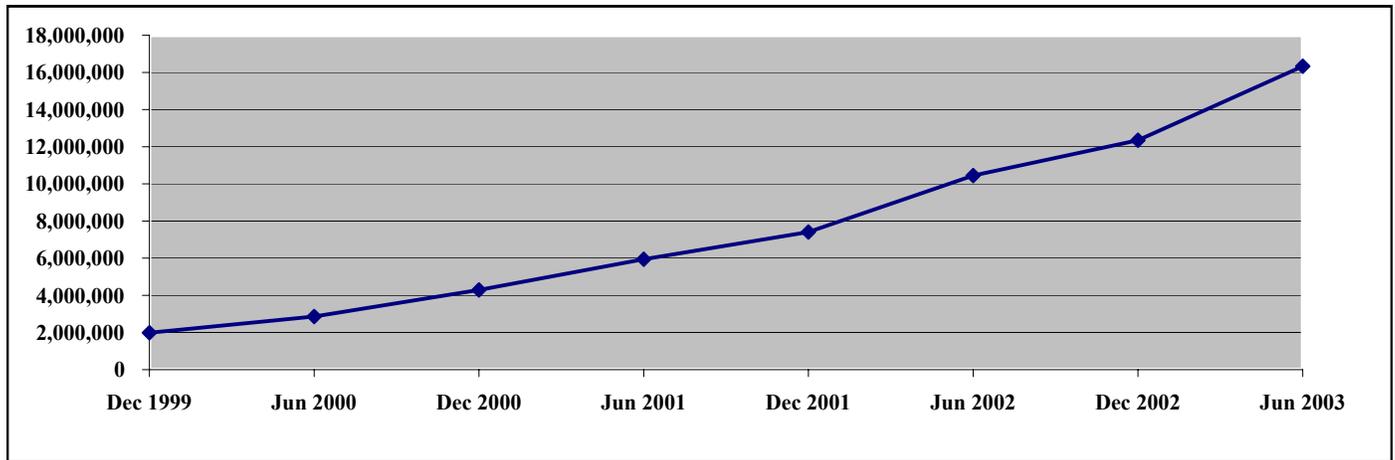


Chart 2.4
Advanced Services Lines by Technology

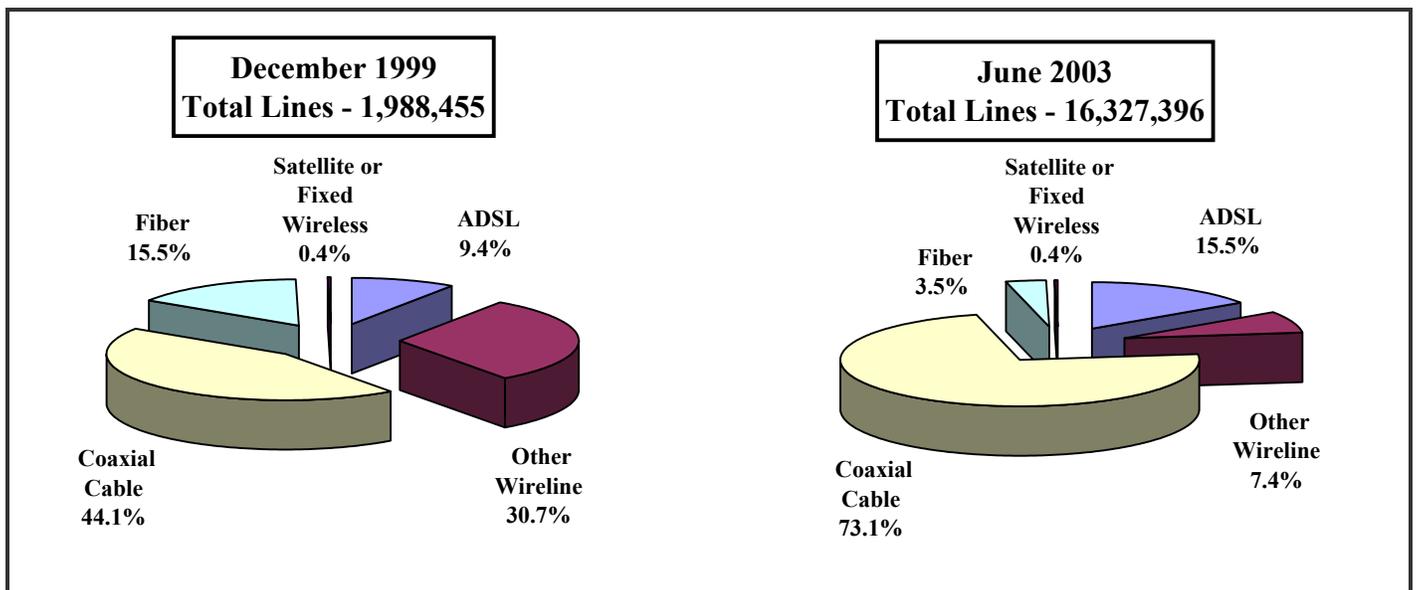


Table 2.3
Residential and Small Business High-Speed Lines ¹
(Over 200 kbps in at Least One Direction)

Types of Technology ²	1999	2000		2001		2002		2003	Percent Change	
	Dec	Jun	Dec	Jun	Dec	Jun	Dec	Jun	June 2002 - Dec 2002	Dec 2002 - Jun 2003
ADSL	291,757	772,272	1,594,879	2,490,740	3,615,989	4,395,033	5,529,241	6,429,938	26 %	16 %
Other Wireline	46,856	111,490	176,520	138,307	139,660	223,599	213,489	250,372	-5	17
Coaxial Cable	1,402,394	2,215,259	3,294,546	4,998,540	7,050,709	9,157,285	11,342,512	13,660,541	24	20
Fiber	1,023	325	1,994	2,623	4,139	6,120	14,692	16,132	NM	NM
Satellite or Fixed Wireless	50,189	64,320	102,432	182,165	194,897	202,251	256,978	288,786	27	12
Total Lines	1,792,219	3,163,666	5,170,371	7,812,375	11,005,396	13,984,287	17,356,912	20,645,769	24 %	19 %

See notes following Table 2.4.

Chart 2.5
Residential and Small Business High-Speed Lines

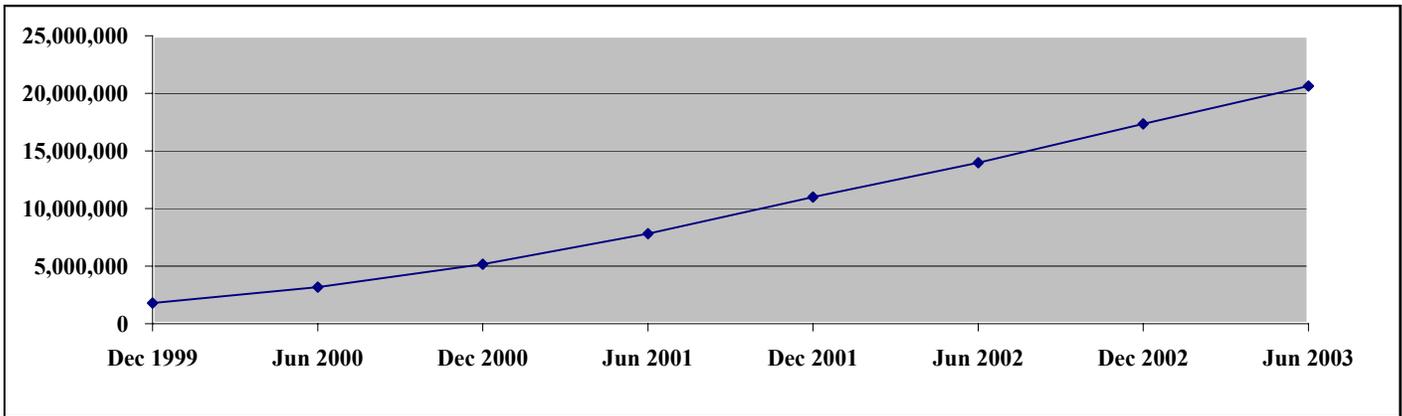


Chart 2.6
Residential and Small Business High-Speed Lines by Technology

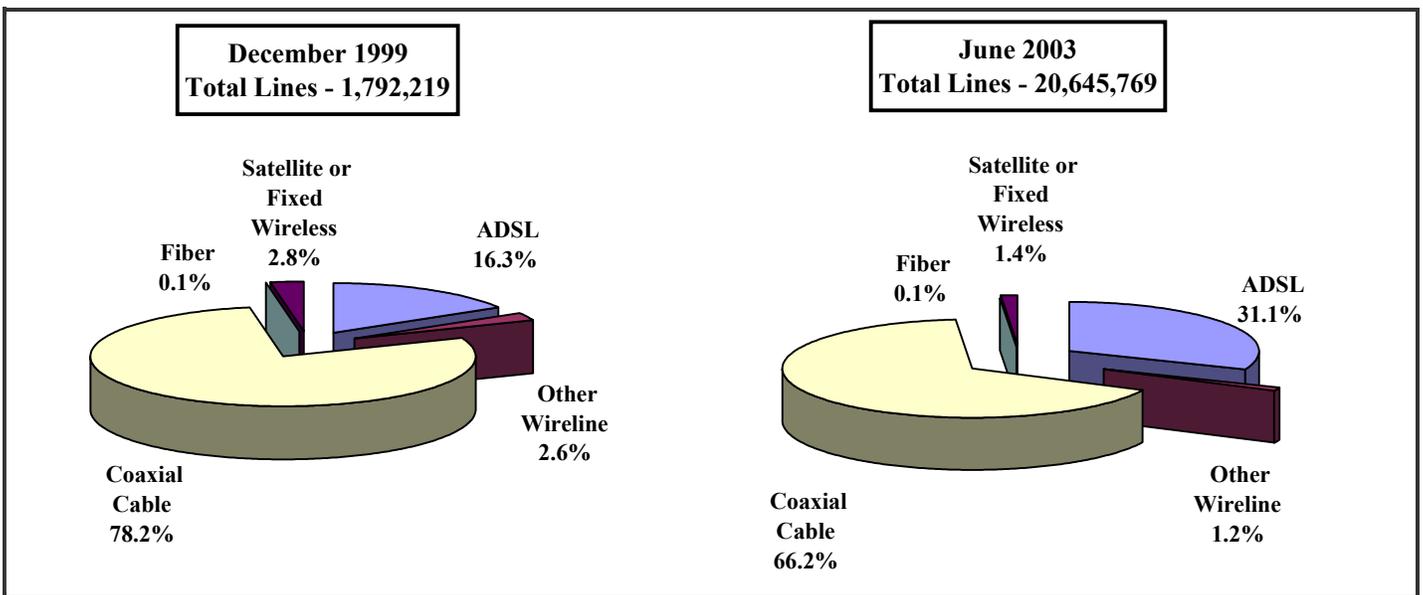


Table 2.4
Residential and Small Business Advanced Services Lines ¹
(Over 200 kbps in Both Directions)

Types of Technology ²	1999	2000		2001		2002		2003	Percent Change	
	Dec	Jun	Dec	Jun	Dec	Jun	Dec	Jun	Dec 2001 - Jun 2002	Jun 2002 - Dec 2002
ADSL	116,994	195,324	393,246	916,364	1,243,996	1,580,575	1,827,547	2,071,779	16 %	13 %
Other Wireline	46,856	111,490	176,520	138,307	139,660	223,599	213,489	250,372	-5	17
Coaxial Cable	872,024	1,401,434	2,177,328	3,146,953	4,388,967	6,809,170	8,322,157	11,920,207	22	43
Fiber	138	325	1,992	2,617	3,523	5,118	14,408	15,751	NM	NM
Satellite or Fixed Wireless	7,682	2,916	17,043	60,988	58,113	47,787	47,903	46,407	0	-3
Total Lines	1,043,694	1,711,488	2,766,130	4,265,229	5,834,258	8,666,249	10,425,505	14,304,515	20 %	37 %

See notes following charts.

Chart 2.7
Residential and Small Business Advanced Services Lines

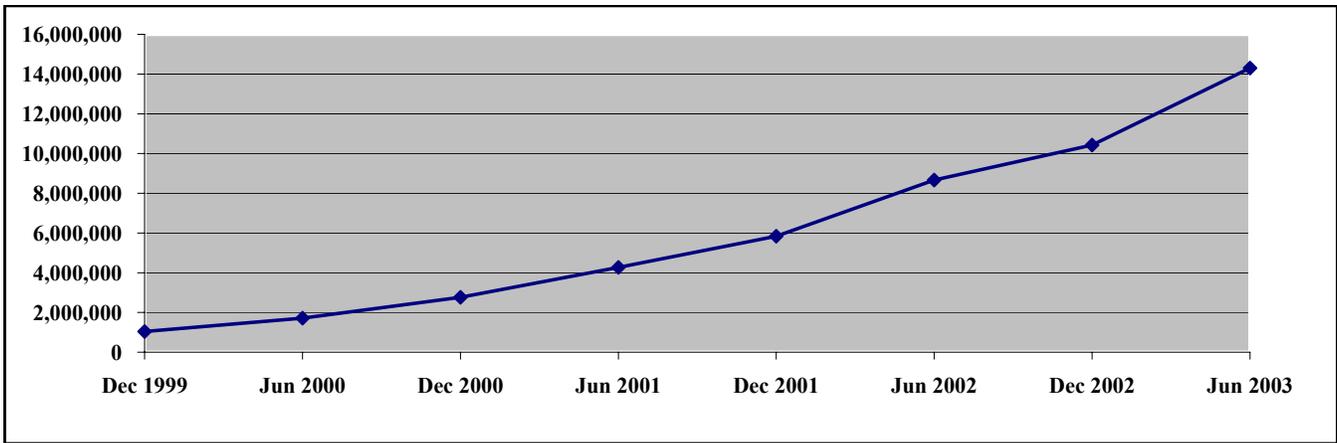
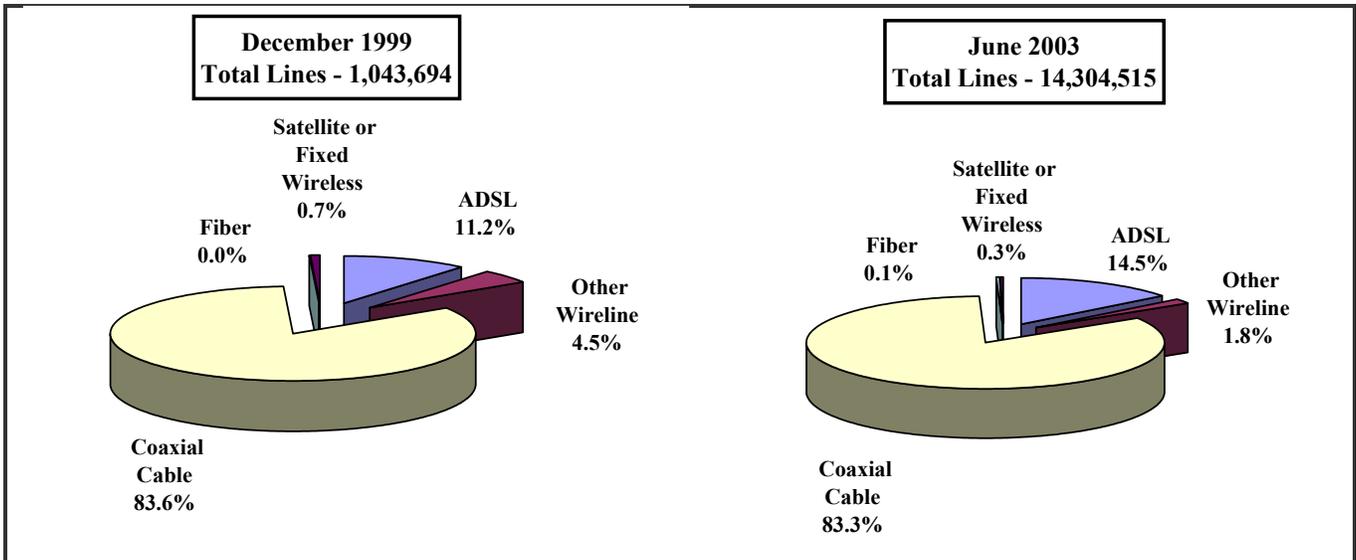


Chart 2.8
Residential and Small Business Advanced Services Lines by Technology



Notes for Tables 2.1 - 2.4.

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

NM - Not meaningful due to small number of lines.

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.

Source: Industry Analysis and Technology Division, Wireline Competition Bureau, *High-Speed Services for Internet Access: Status as of June 30, 2003* (December 2003).

Table 2.5
High-Speed Lines by Technology as of June 30, 2003
(Over 200 kbps in at Least One Direction)

	ADSL	Coaxial Cable	Other ¹	Total
Alabama	70,639	181,338	31,969	283,946
Alaska	14,013	*	*	61,121
Arizona	77,368	319,272	48,539	445,179
Arkansas	44,801	*	*	128,311
California	1,715,998	1,395,435	345,248	3,456,681
Colorado	126,189	181,766	36,199	344,154
Connecticut	124,742	227,658	15,786	368,186
Delaware	*	*	3,386	55,030
District. of Columbia	39,471	*	*	70,715
Florida	644,621	867,513	141,403	1,653,537
Georgia	368,372	289,922	109,766	768,060
Hawaii	*	*	*	*
Idaho	19,382	*	*	64,353
Illinois	363,733	383,069	124,667	871,469
Indiana	85,968	122,338	28,724	237,030
Iowa	39,386	111,748	11,123	162,257
Kansas	50,839	181,437	16,520	248,796
Kentucky	75,316	23,672	22,606	121,594
Louisiana	100,919	189,920	24,851	315,690
Maine	11,052	*	*	85,615
Maryland	126,873	306,442	36,511	469,826
Massachusetts	207,344	564,961	48,830	821,135
Michigan	135,360	543,336	58,059	736,755
Minnesota	115,244	255,988	29,138	400,370
Mississippi	33,650	50,234	12,227	96,111
Missouri	138,046	191,658	37,274	366,978
Montana	13,119	*	*	28,023
Nebraska	18,285	111,903	10,984	141,172
Nevada	47,934	*	*	209,732
New Hampshire	17,823	95,612	5,444	118,879
New Jersey	211,540	690,620	65,680	967,840
New Mexico	26,948	38,004	7,017	71,969
New York	438,241	1,401,322	157,777	1,997,340
North Carolina	161,642	454,272	65,390	681,304
North Dakota	11,593	10,066	3,815	25,474
Ohio	243,689	508,458	69,788	821,935
Oklahoma	78,248	*	*	234,823
Oregon	95,654	197,794	25,012	318,460
Pennsylvania	230,322	482,471	59,483	772,276
Puerto Rico	*	*	*	32,063
Rhode Island	*	*	4,391	105,610
South Carolina	52,667	185,083	25,118	262,868
South Dakota	8,637	9,156	4,223	22,016
Tennessee	92,777	277,579	44,357	414,713
Texas	597,447	888,595	124,893	1,610,935
Utah	65,648	*	*	135,007
Vermont	15,072	*	*	39,773
Virgin Islands	*	0	*	*
Virginia	114,797	404,616	48,100	567,513
Washington	225,377	313,915	38,086	577,378
West Virginia	*	73,263	*	90,173
Wisconsin	84,100	287,519	30,376	401,995
Wyoming	5,503	*	*	17,507
Nationwide	7,675,114	13,684,225	2,100,332	23,459,671

* 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.

Source: Industry Analysis and Technology Division, Wireline Competition Bureau, *High-Speed Services for Internet Access: Status as of June 30, 2003* (December 2003).

Table 2.6
High-Speed Lines by State
(Over 200 kbps in at Least One Direction)

	1999	2000		2001		2002		2003
	Dec	Jun	Dec	Jun	Dec	Jun	Dec	Jun
Alabama	19,796	32,756	63,334	86,234	138,979	172,365	227,888	283,946
Alaska	*	*	934	20,906	50,277	46,791	55,975	61,121
Arizona	58,825	111,678	153,500	158,122	251,709	308,621	370,939	445,179
Arkansas	8,155	15,539	28,968	40,803	66,537	84,235	100,280	128,311
California	547,179	910,006	1,386,625	1,705,814	2,041,276	2,598,491	3,035,756	3,456,681
Colorado	36,726	64,033	104,534	147,220	177,419	243,810	298,265	344,154
Connecticut	36,488	63,772	111,792	149,057	191,257	236,490	307,860	368,186
Delaware	1,558	3,660	7,492	12,771	26,601	36,619	51,100	55,030
District of Columbia	13,288	16,926	27,757	39,101	43,278	55,197	64,310	70,715
Florida	190,700	244,678	460,795	651,167	911,261	1,119,693	1,405,976	1,653,537
Georgia	75,870	130,292	203,855	302,598	420,206	512,135	654,833	768,060
Hawaii	*	*	*	*	*	*	*	*
Idaho	*	8,070	15,908	20,233	18,445	43,119	54,963	64,353
Illinois	77,672	166,933	242,239	350,241	422,706	553,442	734,171	871,469
Indiana	20,059	49,702	60,494	80,364	123,704	159,392	205,946	237,030
Iowa	19,258	49,159	58,199	72,583	82,024	102,932	121,053	162,257
Kansas	26,179	42,679	68,743	101,734	125,963	149,733	193,568	248,796
Kentucky	23,570	24,237	32,731	39,297	67,870	90,284	99,265	121,594
Louisiana	28,133	43,294	74,950	121,685	164,760	207,257	262,093	315,690
Maine	19,878	17,864	26,266	38,149	49,523	61,406	73,061	85,615
Maryland	52,749	71,005	124,465	181,021	260,634	316,666	391,397	469,826
Massachusetts	114,116	185,365	289,447	357,256	505,819	583,627	679,084	821,135
Michigan	81,223	135,318	198,230	395,583	433,858	538,416	640,766	736,755
Minnesota	38,268	65,272	117,283	148,012	199,856	273,907	335,562	400,370
Mississippi	*	6,514	12,305	21,517	35,586	57,595	80,922	96,111
Missouri	23,347	46,903	100,403	123,915	181,794	224,282	260,752	366,978
Montana	*	*	7,378	10,446	13,037	17,969	20,090	28,023
Nebraska	36,748	44,188	54,085	55,188	71,451	92,849	117,219	141,172
Nevada	23,514	40,582	59,879	78,535	109,850	138,042	159,179	209,732
New Hampshire	22,807	33,045	42,364	55,658	71,200	86,200	102,590	118,879
New Jersey	101,832	144,203	285,311	428,514	590,192	693,036	839,095	967,840
New Mexico	*	2,929	28,497	20,482	31,940	44,942	57,956	71,969
New York	186,504	342,743	603,487	893,032	1,199,159	1,460,894	1,725,296	1,997,340
North Carolina	57,881	81,998	136,703	205,616	357,906	461,736	594,039	681,304
North Dakota	*	2,437	4,227	6,277	6,082	14,164	20,024	25,474
Ohio	160,792	156,980	230,525	358,965	436,766	580,078	710,355	821,935
Oklahoma	96,730	163,703	95,138	92,947	114,931	151,213	196,556	234,823
Oregon	27,062	44,186	76,839	93,242	158,048	199,549	275,449	318,460
Pennsylvania	71,926	79,892	176,670	263,236	376,439	516,488	631,717	772,276
Puerto Rico	*	*	*	*	*	*	22,732	32,063
Rhode Island	*	20,628	30,919	49,215	64,293	72,553	89,821	105,610
South Carolina	25,229	32,824	63,914	96,839	135,165	175,088	222,980	262,868
South Dakota	*	3,516	2,839	5,448	9,585	12,555	18,060	22,016
Tennessee	66,307	87,317	122,391	152,510	237,401	294,573	369,370	414,713
Texas	152,518	276,087	522,538	646,839	840,665	1,050,511	1,349,628	1,610,935
Utah	11,635	19,612	35,970	55,103	72,977	93,928	121,744	135,007
Vermont	*	1,551	7,773	16,230	21,795	29,990	32,814	39,773
Virgin Islands	0	*	*	*	*	*	*	*
Virginia	51,305	72,436	139,915	212,808	292,772	360,722	463,455	567,513
Washington	71,930	118,723	195,628	227,066	335,667	422,348	485,063	577,378
West Virginia	*	1,835	6,498	16,697	32,848	58,209	78,980	90,173
Wisconsin	18,599	34,262	76,257	127,755	182,395	257,099	335,991	401,995
Wyoming	*	*	*	*	7,856	10,990	14,696	17,507
Nationwide	2,754,286	4,367,434	7,069,874	9,616,341	12,792,812	16,202,540	19,881,549	23,459,671

* Data withheld to maintain firm confidentiality.

Source: Industry Analysis and Technology Division, Wireline Competition Bureau, *High-Speed Services for Internet Access: Status as of June 30, 2003* (December 2003).

3 Consumer Expenditures

The Bureau of Labor Statistics conducts surveys of consumer expenditures, in part, to develop weights for CPI indices. Table 3.1 shows total annual expenditures for telephone service for all consumer units.

About 2% of all consumer expenditures are devoted to telephone service. This percentage has remained virtually unchanged over the past fifteen years, despite major changes in the telephone industry and in telephone usage. Average annual expenditures on telephone service increased from \$375 per household in 1982 to \$957 in 2002.

Bill Harvesting® data collected by TNS Telecoms provide information on the telecommunications expenditures of households. (Additional information on TNS Telecoms can be found in Section 14 and Appendix B.)

Expenditures can be classified by the type of carrier providing the service. Table 3.2 presents average monthly household expenditures for local exchange, long distance and wireless carriers for 1995 through 2002. Chart 3.1 compares the proportion of these three major categories of service in 1995 and 2002.

Table 3.1
Household Expenditures for Telephone Service

Year	Annual Expenditures for All Households		Telephone Expenditures as a Percent of All Expenditures
	All Expenditures	Telephone Expenditures	
1981	\$17,558	\$360	2.1 %
1982	18,071	375	2.1
1983	19,692	415	2.1
1984	21,975	435	2.0
1985	23,490	455	1.9
1986	23,866	471	2.0
1987	24,414	499	2.0
1988	25,892	537	2.1
1989	27,810	567	2.0
1990	28,381	592	2.1
1991	29,614	618	2.1
1992	29,846	623	2.1
1993	30,692	658	2.1
1994	31,731	690	2.2
1995	32,264	708	2.2
1996	33,797	772	2.3
1997	34,819	809	2.3
1998	35,535	830	2.3
1999	36,995	849	2.3
2000	38,045	877	2.3
2001	39,518	914	2.3
2002	40,677	957	2.4

Source: Bureau of Labor Statistics, *Consumer Expenditure Survey*.

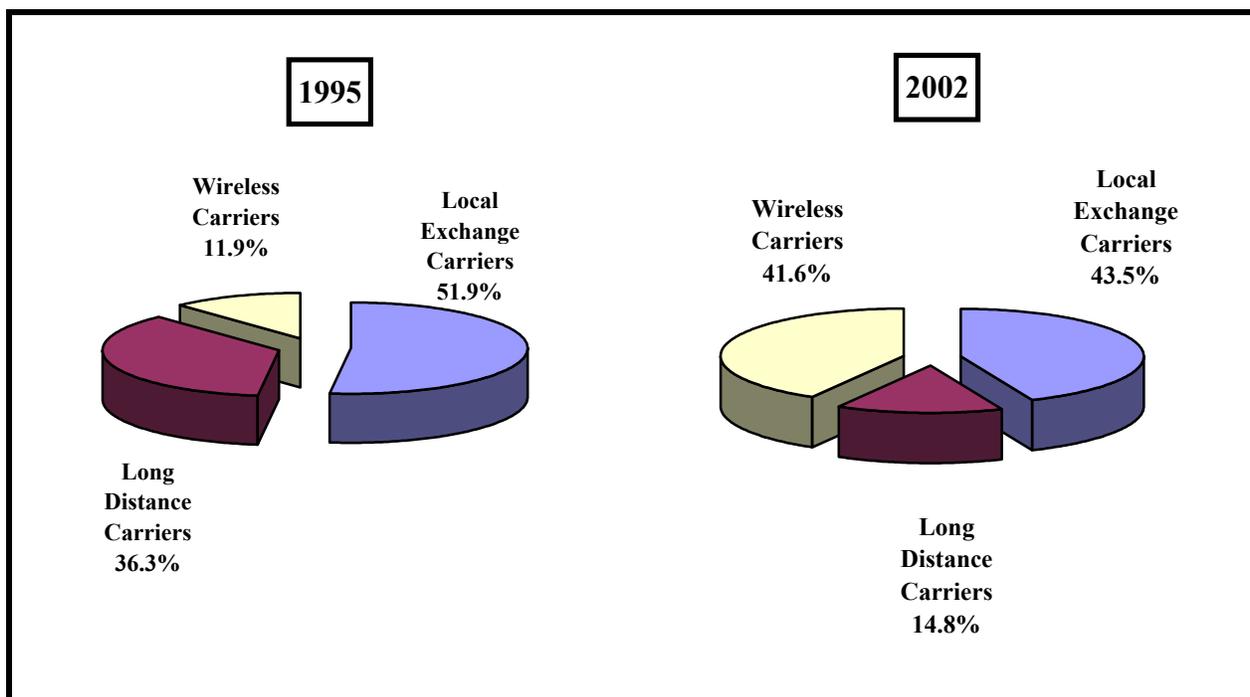
Table 3.2
Average Monthly Household Telecommunications Expenditures
By Type of Provider

Year	Local Exchange Carriers	Long Distance Carriers	Wireless Carriers	Total
1995	\$30	\$21	\$7	\$58
1996	30	21	9	60
1997	32	25	11	68
1998	33	23	14	69
1999	34	21	17	72
2000	35	18	23	75
2001	36	15	29	79
2002	36	12	35	83

Note: Monthly expenditures are based on monthly telephone bills for those households with wireline telephone service. Excludes households in Alaska and Hawaii.

Source: Calculated by Industry Analysis and Technology Division staff using survey data from TNS Telecoms *ReQuest Market Monitor™*, *Bill Harvesting®*.

Chart 3.1
Average Monthly Household Telecommunications Expenditures
By Type of Provider



4 Earnings

Beginning in the mid-1980s, local exchange carriers that file access tariffs with the Commission were required to file rate-of-return reports (FCC Form 492). The first reports were filed for the monitoring period October 1, 1985 - December 31, 1986. Carriers filed reports for each subsequent two-year monitoring period (1987-88 and 1989-90).

In 1991, carriers that became subject to price-cap incentive regulation began filing reports on a yearly basis. Non-price-cap carriers continued to file reports for each two-year monitoring period (1991-1992, 1993-1994, 1995-1996, 1997-1998, 1999-2000, and 2001-2002), as well as annual reports for 1991, 1993, 1995, 1997, 1999, 2001, and 2003. Rate-of-return reports were previously required for AT&T but have been discontinued. Table 4.1 is a summary of rates of return for 1997-2003 for price-cap carriers. Rates of return for 1991-1996 can be found in the August 2001 *Trends* report.

The rates of return were posted at the time of the carriers' individual FCC Form 492 filings. They do not reflect revisions filed by the carriers at a later date. Thus, they are not necessarily the official versions for regulatory purposes, but they do illustrate general industry trends. Summaries of the filings can be found on the **FCC-State Link** web site at www.fcc.gov/wcb/stats. Copies of the FCC Form 492 reports are on file in the FCC's Reference Information Center, Courtyard Level, 445 12th Street S.W., Washington, D.C. 20554.

Table 4.1
Interstate Rate of Return Summary *
Years 1998 through 2003
Price-Cap Companies Reporting FCC Form 492A
(Final Reports for 1998 Through 2002 and Initial Report for 2003) ¹

Reporting Entity	2003	2002	2001	2000	1999	1998	1997
1 BellSouth Telecommunications, Inc.	21.93 %	19.35 %	21.25 %	22.83 %	20.99 %	20.80 %	17.91 %
2 Qwest Corporation, Including Malheur and El Paso	23.03	20.08	19.14	19.93	19.06	16.56	15.41
SBC Communications, Inc.							
3 Southwestern Bell Telephone Company L.P.	15.60	14.88	18.81	15.17	10.22	9.91	10.32
4 Ameritech Operating Companies	20.55	20.24	25.72	30.24	28.93	22.59	18.22
5 Nevada Bell Telephone Company	20.16	14.86	20.86	21.55	19.26	16.02	19.47
6 Pacific Bell Telephone Company	26.23	21.00	23.79	19.20	21.01	16.50	11.98
7 Southern New England Telephone Company, The	23.93	18.47	23.57	18.21	12.12	10.99	12.70
Verizon Telephone Companies							
8 Verizon Telephone Companies (Verizon FCC Tariff No. 1) (Former Bell Atlantic Companies)	7.99	11.95	12.93	13.36	13.66		
Bell Atlantic						13.88	14.73
Bell Atlantic (NYNEX)						11.40	13.72
New England Telephone and Telegraph Co.							
New York Telephone							
9 Verizon California Inc. (California - GTCA)	29.99	28.50	28.48	25.87	22.01	17.19	17.68
10 Verizon California Inc. (California - COCA)	29.90	28.22	29.80	28.74	28.28	22.71	19.16
11 Verizon California Inc. (Arizona - COAZ)	2.03	6.99	13.25	10.9	15.57	13.80	14.17
12 Verizon California Inc. (Nevada - CONV)	28.50	24.08	26.66	28.82	20.57	24.01	31.44
13 Verizon Florida Inc. (Florida - GTFL)	24.16	22.03	29.23	21.90	18.93	14.58	19.14
14 Verizon Hawaii Inc. (Hawaii - GTHI)	16.85	15.30	16.72	17.87	17.62	15.64	10.55
15 Verizon North Inc. (COPA + COQS = COPT)	41.44	43.61	39.71	41.05	39.58	45.97	36.83
16 Verizon North Inc. (Illinois - COIL)	59.89	54.09	53.67	44.51	41.03	14.11	41.14
17 Verizon North Inc. (Indiana - COIN)	47.29	46.06	46.55	47.67	41.40	34.61	33.26
18 Verizon North Inc. (Ohio - GTOH)	19.54	19.53	20.45	21.88	21.7	21.83	24.37
19 Verizon North Inc. (Pennsylvania - GTPA)	13.62	22.50	23.17	21.95	21.41	14.67	20.62
20 Verizon North Inc. (Wisconsin - GTWI)	10.85	9.90	14.16	16.99	17.85	16.08	18.75
21 Contel of the South, Inc. dba Verizon North Sys (IN - GLIN)	20.00	24.75	32.82	33.00	32.47	29.06	23.61
22 Verizon North/Contel South (GTMI + GLMI = GAMI)	15.11	16.64	17.49	16.45	15.75	13.17	15.33
23 Verizon North/Verizon South (GTIL + GLIL = GAIL)	22.82	21.54	23.67	23.90	22.35	23.07	21.59
24 Verizon Northwest Inc. (Oregon - GTOR)	26.40	26.10	31.69	30.95	31.56	27.03	28.23
25 Verizon Northwest Inc. (West Coast CA - GNCA)	(14.17)	(5.17)	1.91	(8.35)	(9.93)	(6.85)	(25.83)
26 Verizon Northwest Inc. (Washington - COWA)	37.26	31.57	40.06	39.49	39.17	30.41	31.85
27 Verizon Northwest Inc. (Washington - GTWA)	30.24	28.97	34.03	33.26	32.91	27.33	24.41
28 Verizon Northwest Inc. (Idaho - GTID)	28.19	33.01	38.74	34.17	32.24	30.89	30.52
29 Verizon South Inc. (North Carolina - GTNC)	16.82	23.45	30.08	26.44	24.85	27.92	24.48
30 Verizon South Inc. (N. Carolina - CONC)	14.80	21.97	22.17	17.75	19.87	12.78	16.63
31 Verizon South Inc. (GTSC + COSC = GTST)	28.92	29.82	32.44	31.19	30.70		
Verizon South Inc. (Alabama - GTAL)			24.02	20.24	22.23	17.59	23.49
Verizon South Inc. (Kentucky - COKY)			30.95	20.60	9.55	5.97	6.62
Verizon South Inc. (Kentucky - GTKY)			27.21	25.07	24.03	22.34	20.57
GTE South Inc. (South Carolina - GTSC)						30.62	24.06
GTE South Inc. (South Carolina - COSC)						26.14	25.09
32 Verizon South Inc. (Virginia - COVA)	39.51	40.41	40.69	40.85	34.74	35.19	33.65
33 Verizon South Inc. (Virginia - GTVA)	(17.50)	1.76	9.53	6.62	9.94	20.56	23.76
34 GTE Southwest Inc. dba Verizon Southwest (Texas - COTX)	10.01	12.46	11.9	12.17	17.13	14.96	18.10
35 GTE Southwest Inc. dba Verizon Southwest (Texas - GTTX)	18.70	20.47	24.35	21.65	21.42	16.43	14.81
36 Micronesian Telecomms. Corp. (N. Mariana Islands - GTMC)	33.91	32.75	21.83	23.58	29.24	34.45	21.17
GTE Midwest Inc. (Missouri - COMO + COCM + COEM = COMT)			20.33	17.06	15.29	12.56	12.39
GTE Midwest Inc. (Missouri - GTMO)			23.92	19.15	11.82	16.08	17.88
GTE Systems of The South (Alabama - COAL)			15.77	14.93	10.88	7.97	15.31

Table 4.1
Interstate Rate of Return Summary *
Years 1998 through 2003
Price-Cap Companies Reporting FCC Form 492A - Continued
(Final Reports for 1998 Through 2002 and Initial Report for 2003) ¹

Reporting Entity	2003	2002	2001	2000	1999	1998	1997
Sprint							
37 Central Telephone Company - Nevada Division	34.16 %	23.80 %	19.61 %	19.29 %	21.15 %	17.79 %	17.07 %
38 Sprint - Florida Incorporated	35.54	29.41	25.89	27.38	27.17	26.14	20.05
39 Sprint Local Telephone Cos. - Eastern (NJ & PA)	45.38	37.78	26.21	25.62	20.87	14.59	17.36
40 Sprint Local Telephone Cos. - Midwest (MO, KS, MN, NE, WY, TX)	25.24	18.89	16.63	18.88	17.69	19.66	19.97
41 Sprint Local Telephone Cos. - North Carolina	45.89	36.64	25.56	22.23	15.92	12.55	16.54
42 Sprint Local Telephone Cos. - Northwest (OR & WA)	33.51	34.62	31.55	32.77	31.86	32.54	30.59
43 Sprint Local Telephone Cos. - Southeast (TN, VA & SC)	34.34	33.76	25.33	23.32	17.50	15.87	17.62
44 United Telephone Co. of Indiana, Inc.	46.47	41.75	35.19	38.21	28.98	24.19	26.13
45 United Telephone Co. of Ohio	31.50	30.89	27.13	20.03	20.16	17.33	13.91
Central Telephone of Illinois							18.92
All Other Companies							
46 ALLTEL Nebraska, Inc.	13.43	12.20	12.57	12.99	19.27	15.02	12.27
47 Kentucky ALLTEL - Lexington, Inc.	26.75	27.78					
48 Kentucky ALLTEL - London, Inc.	26.26	28.76					
49 CenturyTel of Belle-Hermann/So Missouri/Sw Missouri (CNMO)	23.20	4.69 ²					
50 CenturyTel of Central Missouri (CNMC)	47.17	11.83 ²					
51 CenturyTel of Northern Alabama (CNAN)	17.17	7.49 ³					
52 CenturyTel of Southern Alabama (CNAS)	34.53	15.78 ³					
53 Cincinnati Bell Telephone Company	32.48	28.64 ⁴	30.09	28.95	25.45	17.81	20.04
54 Citizens Telecommunications Cos. (CTC1)	24.40	19.27	15.73	19.68	16.71	17.87	9.77
55 Citizens Telecommunications Cos. (CTC2)	16.14	20.67	17.30	24.05	15.74	14.29	13.25
56 Citizens Telecommunications Cos. (CTC3)	10.40	8.94	4.52	16.12	15.56		
57 Citizens Telecommunications Cos. (CTC4)	35.38	23.31	13.08	30.94			
58 Citizens Telecommunications Cos. (CTC5)	40.37	4.90	0.86	(11.23)			
59 Frontier Telephone of Rochester	10.67	11.47	12.32	18.91	16.77	18.37	13.19
60 Frontier Tier 2 Concurring Companies	38.49	33.34	38.12	38.95	43.42	45.45	31.93
61 Frontier Communications of Minnesota & Iowa	32.16	31.15	25.24	33.16	35.40	29.28	28.26
62 Iowa Telecom Service Group	17.58	14.26 ⁴	13.07				
63 Iowa Telecom Systems Service Group	23.97	20.47 ⁴	18.45				
64 Valor New Mexico #1164	18.45	16.86	11.45	20.67			
65 Valor New Mexico #1193	20.41	15.88	8.39	13.35			
66 Valor Oklahoma	8.69	9.31	11.65	11.22			
67 Valor Texas	15.21	10.66	5.70	5.24			
Maximum Rate of Return	59.89 %	54.09 %	53.67 %	47.67 %	43.42 %	47.21 %	48.69 %
Minimum Rate of Return	(17.50)	(5.17)	0.86	(11.23)	(9.93)	(6.85)	(25.83)
Weighted Arithmetic Mean	18.06	17.69	19.62	18.04	18.50	16.52	15.60
Standard Deviation	8.63	5.69	5.80	5.17	5.96	5.13	3.96

* The interstate rates of return reported by carriers on the FCC Form 492A may not necessarily agree with the interstate rates of return reported by the carriers on other Commission forms. For example, price-cap carriers also report interstate rates of return on the Commission's Automated Reporting Management Information System's (ARMIS) 43-01 report. The interstate rates of return reported by carriers on the ARMIS 43-01 include revenues and costs for non-price-cap services.

¹ For years 1991 - 1996, see Industry Analysis Division, Common Carrier Bureau, *Trends in Telephone Service* (August 2001).

² For the reporting period 9/1/02 - 12/31/02.

³ For the reporting period 7/1/02 - 12/31/02.

⁴ For final 2002, there were no changes to the preliminary.

5 Employment and Labor Productivity

The Bureau of Labor Statistics (BLS) publishes monthly data regarding the total number of employed workers in the communications industry. Specifically, BLS compiles employment statistics for the entire telephone communications industry. In the past, BLS compiled the data based on the Standard Industrial Classification (SIC) system. With the May 2003 data, the employment series underwent a complete industry reclassification, changing from the 1987 SIC system to the 2002 North American Industry Classification System (NAICS). Employment statistics from 1951 to 2002 based on the SIC system can be found in Table 5.1 in the previous edition of *Trends*.¹ The Labor Productivity Index for the telephone communications industry for the years 1951 to 2002 based on the SIC system can also be found in the previous edition of *Trends* in Table 5.2.

NAICS is a collaborative effort between the United States, Canada, and Mexico to provide new comparability in statistics about business activity across North America. The telecommunications industry subsector (517) can be found in the NAICS *Information Sector – 51*. The industry groups under telecommunications are as follows: wired telecommunications carriers (5171); wireless telecommunications carriers – wireless (excluding satellite), paging, cellular and other wireless (5172); telecommunications resellers (5173); telecommunications distribution (5175); and other telecommunications (5179). Further information on the NAICS can be found on the Census Bureau web site at <http://www.census.gov/epcd/www/naics.html>.

Table 5.1 and the associated graph show the information compiled by BLS for the annual average employment figures for the telecommunications industry – NAICS 517, as well as the industry distributions for wired telecommunications carriers – NAICS 5171, wireless telecommunications carriers – NAICS 5172, telecommunications resellers – NAICS 5173, and cable and other program distribution – NAICS 5175. Wireless telecommunications carriers' employees are further shown for cellular and other wireless carriers – NAICS 517212. Monthly employment data for these categories from 1990 to the present can be found on the BLS web site at www.bls.gov.

Table 5.2 and the associated graph show the information compiled by BLS for the labor productivity index for wired telecommunications carriers – NAICS 5171 and wireless telecommunications carriers – NAICS 5172. The BLS index of labor productivity relates output to the employee hours expended in producing that output.

Table 5.3 presents estimates of the number of telecommunications service providers that the Small Business Administration's Office of Size Standards defines as small businesses (i.e., 1,500 or fewer employees, including all affiliates).

¹ Industry Analysis and Technology Division, Wireline Competition Bureau, *Trends in Telephone Service* (August 2003).

Table 5.1
Annual Average Number of Employees in the Telecommunications Industry
(In Thousands)

Year	Telecom Carriers 517	Wired Telecom Carriers 5171	Wireless Telecom Carriers 5172	Cellular and Other Wireless Carriers 517212	Telecom Resellers 5173	Cable and Other Program Distribution 5175
1990	980.3	672.2	35.8	30.4	179.5	70.1
1991	973.1	662.7	41.8	35.4	178.1	71.3
1992	946.0	637.2	47.8	40.3	172.6	72.7
1993	942.2	624.5	56.3	47.4	170.5	75.8
1994	961.1	621.9	71.7	60.3	171.8	80.4
1995	975.7	611.1	90.3	75.9	171.2	86.6
1996	997.0	603.2	110.1	92.5	171.6	94.6
1997	1,059.5	629.9	132.1	111.0	181.3	96.9
1998	1,107.8	652.1	144.2	121.1	188.7	102.4
1999	1,179.7	688.1	160.0	134.3	200.2	110.9
2000	1,262.6	719.2	185.6	155.7	213.6	123.0
2001	1,302.1	732.2	201.4	171.0	214.1	129.2
2002	1,186.5	650.7	197.3	170.4	179.5	130.3
2003	1,082.6	578.6	193.6	170.6	150.7	132.8
2004	1,054.0 <i>pp</i>	557.6 <i>p</i>	199.7 <i>p</i>	179.1 <i>p</i>	140.3 <i>p</i>	132.1 <i>p</i>

p - preliminary for January 2004.
pp - preliminary for February 2004.

Source: Bureau of Labor Statistics

Chart 5.1
Annual Average Number of Employees in the Telecommunications Industry
(In Thousands)

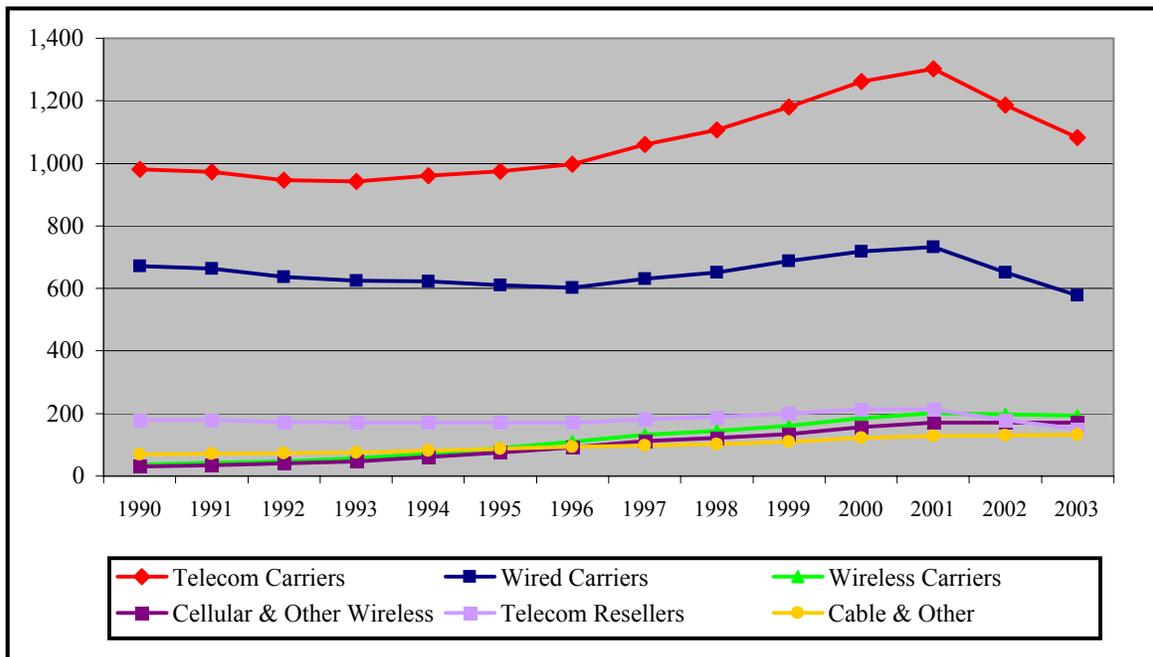


Table 5.2

**Labor Productivity Index for the Wired and Wireless
Telecommunications Industry Measured in Output per Hour (OPH)
(Base Year 1997 = 100)**

Year	Wired Carriers (NAICS 5171)	Wireless Carriers (NAICS 5172)
1987	59.2	45.7
1988	62.8	54.6
1989	65.5	64.7
1990	66.5	76.0
1991	70.9	73.5
1992	76.8	85.6
1993	81.7	94.8
1994	85.8	97.1
1995	90.6	98.3
1996	97.5	103.0
1997	100.0	100.0
1998	106.9	114.2
1999	114.6	133.9
2000	122.3	138.2
2001	124.3	171.6

Source: Bureau of Labor Statistics.

Chart 5.2

**Wired and Wireless Telecommunications Carriers
(NAICS 5171 and 5172) Labor Productivity Index**

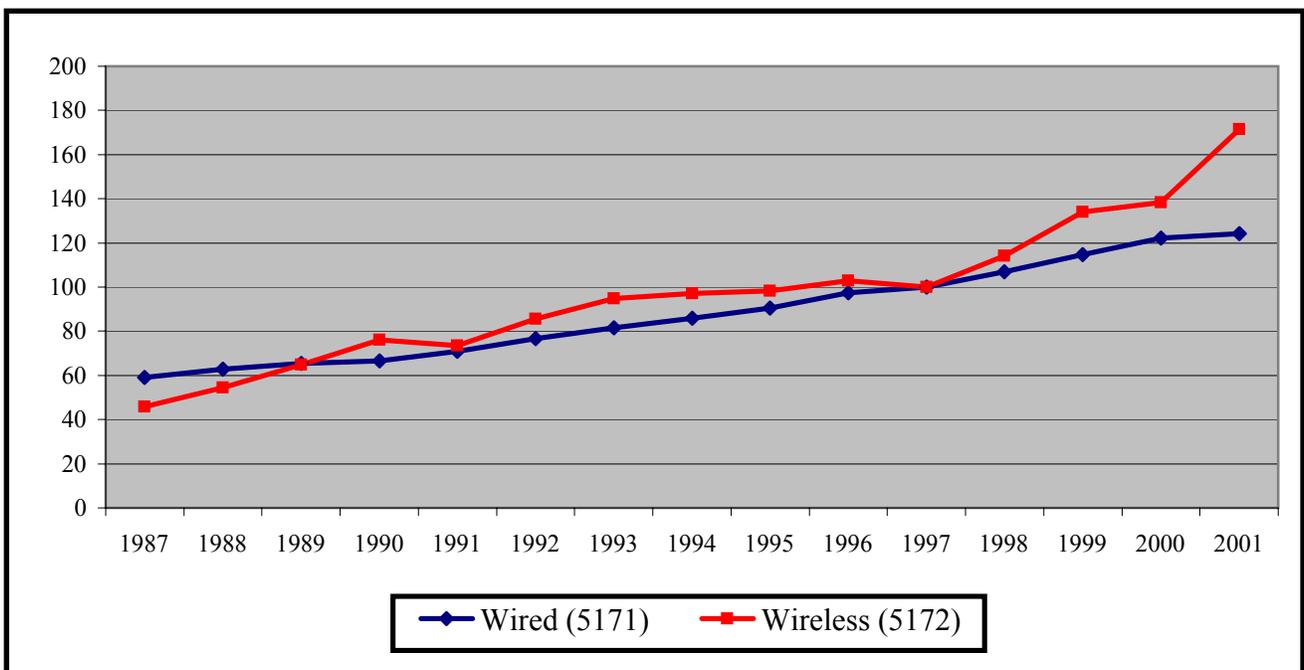


Table 5.3
Number of Telecommunications Service Providers by Size of Business
(As of October 22, 2003)

Type of Provider	Number of FCC Form 499-A Filers ¹	Filers That in Combination with Affiliates Have	
		1,500 or Fewer Employees ²	More than 1,500 Employees ²
Incumbent Local Exchange Carriers (ILECs)	1,310	1,025	285
Competitive Access Providers (CAPs) and Competitive Local Exchange Carriers (CLECs)	563	472	91
Local Resellers	127	121	6
Shared-Tenant Service Providers	14	14	0
Other Local Service Providers	37	36	1
Total Local Competitors	741	643	98
Total Fixed Local Service Providers	2,051	1,668	383
Payphone Service Providers	613	609	4
Private Service Providers	20	19	1
Wireless Telephony Including Cellular, Personal Communications Service (PCS) and SMR Telephony Carriers	447	245	202
Paging & Messaging Service Providers	346	341	5
Specialized Mobile Radio (SMR) Dispatch	149	149	0
Wireless Data and Other Mobile Service Providers	33	32	1
Total Wireless Service Providers	975	767	208
Interexchange Carriers (IXCs)	281	254	27
Operator Service Providers (OSPs)	21	20	1
Prepaid Calling Card Providers	40	40	0
Satellite Service Providers	37	33	4
Toll Resellers	645	619	26
Other Toll Carriers	65	62	3
Total Toll Service Providers	1,089	1,028	61
All Filers	4,748	4,091	657

Holding Company Analysis			
Filers without Affiliates:			
Holding Company Level	3,078	3,064	14
Filer Level	3,078	3,064	14
Filers with Affiliates ³ :			
Holding Company Level	389	352	37
Filer Level	1,670	1,027	643
Total, Holding Company Level	3,467	3,416	51
Total, Filer Level	4,748	4,091	657

Note: Estimates are based on gross revenue data filed on the 2003 FCC Form 499-A worksheets, public employment data from ARMIS, and Securities and Exchange Commission filings. Filers were considered affiliated based on information from their FCC Form 499-A filings. These estimates do not reflect affiliates that do not provide telecommunications service or that operate solely outside the United States.

¹ While FCC Form 499-A filings are not publicly available, filer registration information is published by the Industry Analysis and Technology Division in the *Telecommunications Provider Locator* (February 2004), which can be accessed at www.fcc.gov/wcb/stats. This same information is searchable online at www.fcc.gov/wcb/iatd/locator.html.

² Employee counts are estimated at the holding company level, and presented at the filer level. If our analysis indicates that, at the holding company level, a group of filers together employs more than 1,500 people, then each of the individual filers that comprise the holding company are entered in the column labeled as such. Therefore, our estimates **do not imply** that each or any of the individual filers alone employs more than 1,500 persons.

³ In some cases, affiliated companies may file a single FCC Form 499A for all operations. Such consolidated filings are included in this category.

Source: FCC Form 499-A filings and IATD staff estimates.

6 International Telephone Service

International telecommunications has become an increasingly important segment of the telecommunications market. International telephone calling -- propelled by technological innovation, and increased international trade and travel -- has skyrocketed. The number of calls made from the United States to other countries increased from 200 million in 1980, to 1.4 billion in 1991, 4.5 billion in 1998, and by 2002, 5.9 billion. U.S. billed minutes increased about 55% over the last five years to 35.1 billion. Americans spent \$9.8 billion on international calls in 2002. On average, carriers billed 28 cents per minute for international calls in 2002, a decline of 79% since 1980, and 54% since 1998. International private line revenues have also increased substantially since 1980. These trends are shown in Table 6.1. Chart 6.1 shows the trends in billed revenues per minute and per call since 1980.

U.S. and foreign carriers compensate each other when one carries traffic that the other bills. Since 1980, the number of calls billed in the United States increased at a faster pace than calls billed in foreign countries, contributing to rapid increases in net settlement payments to foreign carriers. These net payments from the United States to other countries were \$2.8 billion in 2002. Trends in settlement payments are shown in Table 6.2.

International traffic data are available on a country-by-country basis. Table 6.3 summarizes traffic by region of the world. Five markets -- Canada, Mexico, the United Kingdom, Germany, and India -- currently account for about 41% of the international billed minutes in the United States. Chart 6.2 shows the percentage breakout for the five markets.

Since 1985, when MCI began to compete with AT&T for international calls, numerous carriers have begun to provide international service. Fifty-six carriers provided international telecommunications service in 2002 by using their own facilities or lines leased from other carriers. These carriers provided \$9.3 billion of international telephone service between the U.S. and foreign points, \$988 million of international private line service, and \$113 million other miscellaneous international services. Table 6.4 shows the U.S.-billed revenues for each of the 56 carriers. Together, AT&T, WorldCom d/b/a MCI, and Sprint, accounted for 82% of the international service billed in the United States.

In addition to the 56 carriers that owned or leased facilities, 644 carriers reported the resale of international message telephone service. These carriers reported \$4.9 billion of resale revenues in 2002. The revenues of the fifty largest resellers are shown in Table 6.5.

The data compiled in Tables 6.1 - 6.5 are filed pursuant to section 43.61 of the Commission's rules. Preliminary data are filed July 31st of each year and final data are filed October 31st. Additional information can be found in a number of international reports on the Internet on the **FCC-State Link** web page at www.fcc.gov/wcb/stats.

Table 6.1
International Service from the United States
(Minute, Message, and Revenue Amounts Shown in Millions)

	Telephone Service					Other Services			
	Minutes	Messages	Billed Revenues			Billed Revenues			
			Total End-User ¹	Per Minute ²	Per Call	Telex	Telegraph	Private Line	Misc. Services
1980	1,569	199	\$2,097	\$1.34	\$10.53	\$325	\$63	\$115	
1981	1,857	233	2,239	1.21	9.61	350	62	126	
1982	2,187	274	2,382	1.09	8.70	363	56	138	
1983	2,650	322	2,876	1.09	8.92	379	54	154	
1984	3,037	367	3,197	1.05	8.71	394	46	158	
1985	3,446	411	3,487	1.01	8.49	415	45	172	
1986	4,126	482	4,004	0.97	8.30	390	42	175	
1987	4,819	570	4,751	0.99	8.33	360	35	191	
1988	5,679	687	5,806	1.02	8.45	310	30	194	
1989	6,751	835	6,912	1.02	8.28	243	27	208	
1990	8,030	984	8,059	1.00	8.19	196	24	201	
1991	9,072	1,384	9,263	1.02	6.69	201	15	309	\$23
1992	10,294	1,663	10,382	1.01	6.25	156	16	323	24
1993	11,513	1,945	11,564	1.00	5.95	136	12	366	23
1994	13,616	2,347	12,543	0.92	5.35	123	12	441	25
1995	15,889	2,830	14,335	0.90	5.07	120	6	514	48
1996	19,325	3,520	14,598	0.76	4.15	119	5	661	26
1997	22,753	4,259	15,661	0.69	3.68	110	4	851	28
1998	24,250	4,477	14,726	0.61	3.29	64	2	921	36
1999	28,515	5,305	14,980	0.53	2.82	57	2	1,216	31
2000	30,135	5,742	14,909	0.49	2.60	33	1	1,480	251
2001	33,287	6,265	11,380	0.34	1.82	10	*	1,419	199
2002	35,064	5,926	9,695	0.28	1.64	**	**	988	113

Note: Data represent traffic and circuits from all U.S. points.

* Denotes revenues less than \$500,000.

** Data not filed.

¹ Billed revenues in Table 6.1 differ from billed revenues in Table 6.3. The amounts shown here represent charges to end-user customers and equal the amounts billed by underlying carriers plus estimated reseller markups. The amounts shown in Table 6.3 are the amounts reported by the underlying carriers that carried the traffic to foreign destinations.

² Billed revenue per minute for international service differs in Table 6.1 and Table 13.3. Data in Table 6.1 are calculated using all U.S. billed minutes and revenues. Data for Table 13.3 represent charges for most U.S. billed calls that originate or terminate in the United States. International-to-international revenues and reorigination, country-beyond and country-direct minutes are not included in that table.

Source: Industry Analysis Division, Common Carrier Bureau, *Trends in the International Telecommunications Industry* (April 2001). Data for 2000 from Industry Analysis Division, Common Carrier Bureau, *International Telecommunications Data* (December 2001). Data for 2001 from Industry Analysis and Technology Division, Wireline Competition Bureau, *International Telecommunications Data* (January 2003).

Chart 6.1
Billed Revenues per Minute and per Call

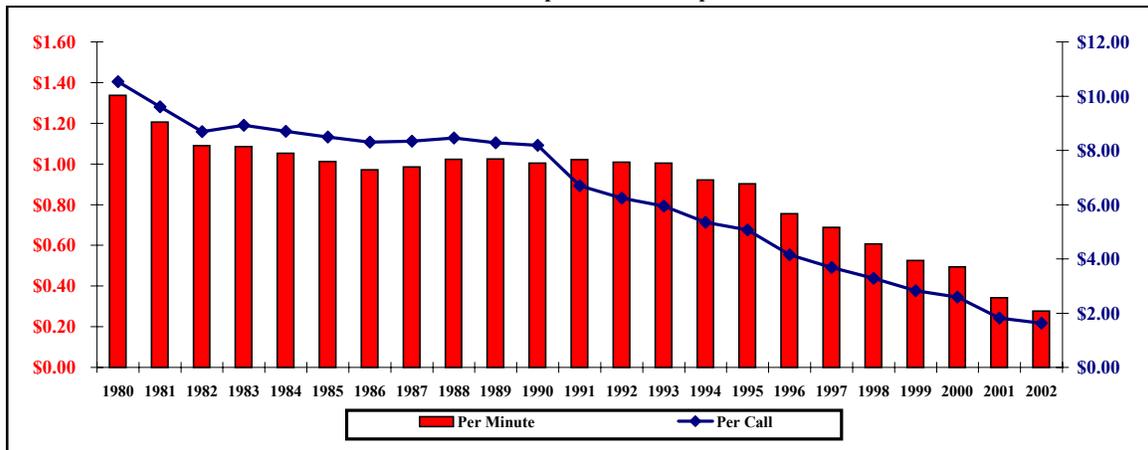


Table 6.2
International Telephone Service Settlements
(Revenue Amounts Shown in Millions)

							Average per Minute		
							Settlement Owed to Foreign Carriers for U.S. Billed Calls	Settlement Due from Foreign Carriers for Foreign Billed Calls	U.S. Carrier Net End-User Revenues All Traffic 3/
	End-User Billed Revenues 1/	Owed to Foreign Carriers	Retained End-User Revenues 1/	Due from Foreign Carriers 2/	Net Settlements	Net End-User Revenues 1/			
1980	\$2,097	\$1,063	\$1,034	\$716	(\$347)	\$1,750	\$0.68	0.62	\$0.64
1981	2,239	1,330	910	799	(531)	1,708	0.72	0.56	0.52
1982	2,382	1,674	708	961	(712)	1,670	0.77	0.60	0.44
1983	2,876	2,036	841	1,086	(950)	1,926	0.77	0.60	0.43
1984	3,197	2,269	928	1,066	(1,203)	1,994	0.75	0.54	0.40
1985	3,487	2,398	1,089	1,243	(1,155)	2,332	0.70	0.55	0.41
1986	4,004	2,865	1,140	1,396	(1,469)	2,536	0.69	0.56	0.38
1987	4,751	3,423	1,328	1,671	(1,752)	2,999	0.71	0.59	0.39
1988	5,806	4,039	1,767	1,906	(2,133)	3,674	0.71	0.59	0.41
1989	6,912	4,735	2,177	2,213	(2,523)	4,390	0.70	0.58	0.42
1990	8,059	5,297	2,762	2,426	(2,871)	5,188	0.66	0.56	0.42
1991	9,263	5,852	3,411	2,536	(3,317)	5,946	0.65	0.51	0.42
1992	10,382	6,008	4,375	2,650	(3,357)	7,025	0.58	0.46	0.44
1993	11,564	6,372	5,192	2,667	(3,705)	7,859	0.55	0.43	0.44
1994	12,543	7,010	5,533	2,719	(4,291)	8,252	0.51	0.39	0.40
1995	14,335	7,569	6,766	2,631	(4,938)	9,397	0.48	0.35	0.40
1996	14,598	8,252	6,345	2,594	(5,658)	8,939	0.43	0.30	0.32
1997	15,661	8,031	7,630	2,602	(5,429)	10,232	0.35	0.27	0.31
1998	14,726	7,022	7,704	2,538	(4,484)	10,242	0.29	0.21	0.28
1999	14,980	6,383	8,597	1,782	(4,601)	10,379	0.22	0.15	0.26
2000	14,909	5,536	9,373	1,609	(3,927)	10,982	0.18	0.11	0.25
2001	11,380	4,526	6,854	1,181	(3,346)	8,034	0.14	0.08	0.17
2002	9,773	3,733	6,040	892	(2,842)	6,931	0.11	0.05	0.14

Note: Data represent traffic to and from all U.S. points.

1/ Billed revenues in Table 6.2 differ from billed revenues in Table 6.3. The amounts shown here represent charges to end-user customers and equal the amounts billed by underlying carriers plus estimated markups, where service was provided through resellers. The amounts shown in Table 6.3 are the amounts reported by the underlying carriers. Similar differences exist for retained end-user and net revenues.

2/ Beginning in 1991, includes net settlement receipts for transiting traffic.

3/ Beginning in 1991, includes transiting traffic.

Source: Industry Analysis Division, Common Carrier Bureau, *Trends in the International Telecommunications Industry* (April 2001). Data for 2000 from Industry Analysis Division, Common Carrier Bureau, *International Telecommunications Data* (December 2001). Data for 2001 from Industry Analysis and Technology Division, Wireline Competition Bureau, *International Telecommunications Data* (January 2003). Preliminary data for 2002 from 43.61 filings.

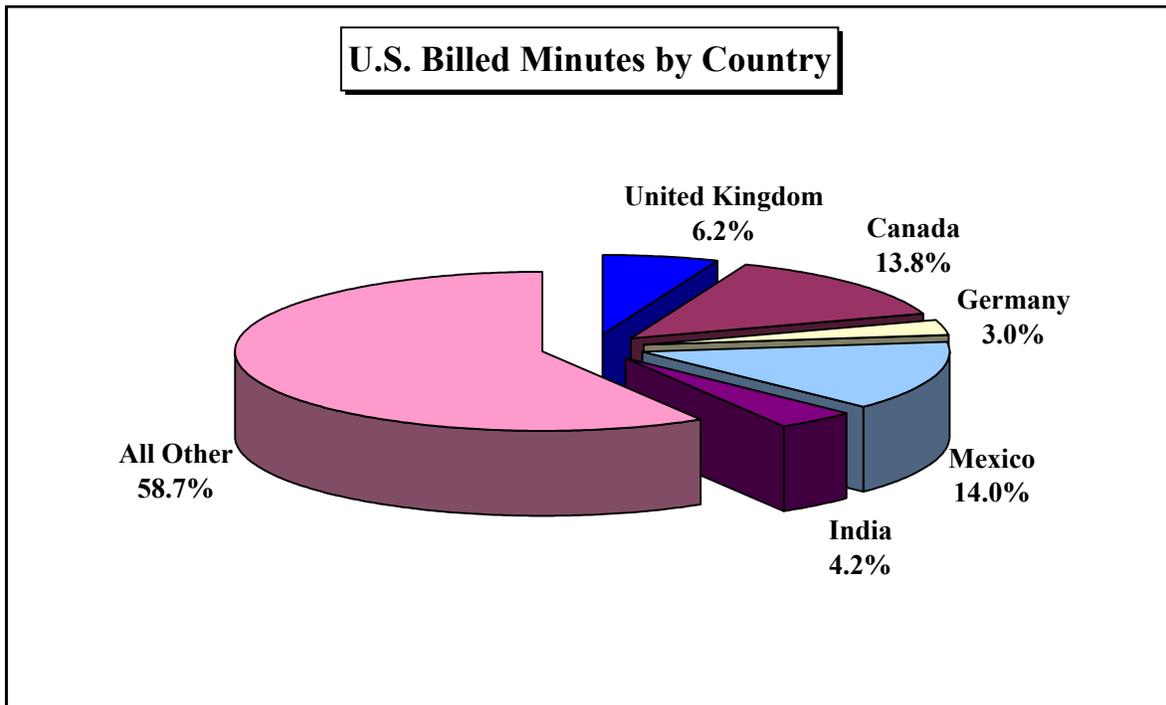
Table 6.3
International Message Telephone Service for 2002
(Figures Rounded to the Nearest Million)

Region of the World ¹	Traffic Billed in the United States					Traffic Billed in Foreign Countries				Total U.S. Carrier Retained Revenues
	Number of Messages	Number of Minutes	U.S. Carrier Revenues	Owed to Foreign Carriers	Retained Revenues	Originating or Terminating in the United States			Transiting Retained Revenues	
						Number of Messages	Number of Minutes	Due from Foreign Carriers		
Africa	219	1,063	\$320	\$196	\$125	34	114	\$15	\$11	\$150
Asia	1,145	7,248	2,305	1,142	1,163	268	1,342	152	16	1,331
Caribbean	384	2,292	590	256	334	153	570	42	2	377
Eastern Europe	222	1,251	284	148	135	29	110	9	3	147
Middle East	190	872	302	133	169	84	404	12	2	183
North and Central America	1,788	12,031	2,997	951	2,046	1,590	6,193	302	9	2,357
Oceania	132	819	248	73	175	55	373	20	4	199
Other Regions	1	2	4	6	(2)	*	*	*	*	(1)
South America	316	2,288	578	258	321	117	653	59	7	387
Western Europe	1,525	7,168	1,651	566	1,085	696	3,903	125	100	1,310
Total for Foreign Points	5,896	34,855	9,254	3,716	5,537	3,003	13,535	728	154	6,419
Total for U.S. Points	<u>30</u>	<u>209</u>	<u>32</u>	<u>17</u>	<u>15</u>	<u>26</u>	<u>142</u>	<u>10</u>	<u>*</u>	<u>25</u>
Total for All International Points	5,926	35,064	\$9,286	\$3,733	\$5,552	3,030	13,677	\$738	\$154	\$6,444

* Denotes values that are less than half a million.

¹ The region totals include all international traffic reported by carriers serving domestic U.S. points including Guam and the U.S. Virgin Islands. Most traffic between Guam, the U.S. Virgin Islands, American Samoa and Northern Mariana Islands and other U.S. points are shown separately as the total for U.S. points, and also are included in the total for all international points. The total for all international points also includes all traffic originating in American Samoa and the Northern Mariana Islands, which is excluded from the region totals.

Chart 6.2



Source: Industry Analysis and Technology Division, Wireline Competition Bureau, *2002 International Telecommunications Data* (March 2004).

Table 6.4
U.S. Billed Revenues of Facilities-Based and Facilities-Resale Carriers in 2002 1/
(Revenue Amounts Shown in Millions)

	International Service			Total International Billed Revenues
	Telephone	Private Line	Miscellaneous	
ABS-CBN Telecom North America, Inc.	*			*
American Samoa Telecomm. Authority	2			2
American Tower Corporation		\$182		182
Americatel, Inc.	33			33
AnTel Telecom, Inc.		*		*
AT&T Corp. & Concert Global Ntwks. USA LLC	5,316	287	\$1	5,604
Bestel USA Inc.	21			21
Cable & Wireless USA, Inc.	1			1
Centennial Puerto Rico Operations Corp.	1			1
Colt Telecommunications		33		33
France Telecom Long Distance USA, LLC	*		6	6
Geocomm Corporation		*		*
GNG Networks America, Inc.		1		1
Hanaro Telecom America		1		1
Harris Corporation/MCS	*			*
IDT Corporation	129			129
IMPSAT USA, Inc.		23		23
Intelsat USA License Corp.		18		18
International Telnet, Inc.			*	*
IT&E Overseas, Inc.	8	2		10
Japan Telecom America, Inc.		16		16
KDDI America, Inc.	10	12		21
KPN-INS, Inc.	15			15
Level 3 Communications, LLC		8		8
Lockheed Martin Corporation		62		62
Medley International Teleport, Inc.			2	2
Melbourne Teleport, Inc.			*	*
NDNT, Inc.		*		*
Norlight Telecommunications, Inc.		*		*
NTT America, Inc.		9		9
ONSEnet America, Inc.		1		1
Orbitel S.A. E.S.P.	1	2		3
Philippine Long Distance Telephone Co., Ltd.	23			23
Primus Telecommunications, Inc.	129			129
Qwest Communications International, Inc.		37		37
Reach Services USA	1	4		5
Satellite Communication Systems, Inc.	*	1		1
SES Americom, Inc.		11		11
Singapore Telecom USA, Inc.	6	4		10
Sprint	1,185	47	96	1,328
StarHub, Inc.	*			*
Startec Global Communications Corporation	14			14
T-Systems USA, Inc.		10		10
Telecom Argentina USA, Inc.	3			3
Telecom Italia North America, Inc.	39			39
Telecomunicaciones Ultramarinas-Puerto Rico		*		*
Telefonica Larga Distancia, Inc. (TLD)	6	*		6
Telenor Global Services AS	5			5
Teleport of the Americas, Inc.			*	*
Telstra Incorporated		4		4
Threshold Communications, Inc.		*		*
TRICOM USA, Inc.	76			76
Verizon Communications, Inc.	141	4		145
Viatel Holding (Bermuda) Limited		1		1
Williams Communications, Inc.	4		8	12
WorldCom, Inc. d/b/a MCI	2,116	206		2,321
Total All Carriers 2/	\$9,286	\$988	\$113	\$11,320 3/

* Represents revenues greater than \$0 but less than \$500,000.

1/ Totals exclude pure resale services. Data do not show settlement receipts for terminating foreign billed traffic.

2/ Includes \$25 million of revenues reported for American Samoa, Guam, the Northern Mariana Islands, and the U.S. Virgin Islands. Also includes \$32 million of revenues for calls between the domestic United States and these points.

3/ Includes \$933 million of telephone, private line, and miscellaneous service revenues for 11 carriers that requested confidential treatment.

Source: Industry Analysis and Technology Division, Wireline Competition Bureau, *2002 International Telecommunications Data* (March 2004).

**Table 6.5
Top Providers of Pure Resale International MTS in 2002**

	Number of Messages	Number of Minutes	U.S. Carrier Revenues	Percent of Total IMTS Resale Revenues
ACN Communication Services, Inc.	2,312,872	17,889,914	\$6,142,869	0.13 %
Airnex Communications, Inc.	5,172,036	5,170,716	9,487,595	0.19
ALLTEL Corporation	2,367,203	17,953,013	5,200,223	0.11
Americatel, Inc.	110,264,336	854,691,171	104,789,788	2.15
AnTel Telecom, Inc.	11,302,211	68,030,815	7,065,447	0.15
AT&T Corp.	283,807,604	1,972,833,715	763,647,489	15.68
Bell Canada Enterprises, Inc. (including eMeritus & Excel)	20,303,488	148,055,845	52,917,940	1.09
Broadview Networks Holdings, Inc.	213,514,958	893,651,119	91,462,650	1.88
Capsule Communications, Inc.	6,108,551	42,335,912	6,232,534	0.13
Cingular Wireless	5,290,000	30,440,000	48,710,000	1.00
Citizens Communications Company (including Frontier)	5,608,603	25,238,713	4,512,186	0.09
ClearPop, Inc.	3,089,966	30,899,664	3,862,458	0.08
Cox Communications, Inc.	4,090,634	34,464,025	13,116,889	0.27
Deutsche Telekom AG (T-Mobile USA, Inc.)	7,781,111	41,698,649	22,183,513	0.46
Elephant Talk, Inc.	2,726,096	40,891,445	4,642,650	0.10
Encore Telecommunications, Inc.	106,074,890	419,147,230	14,212,076	0.29
Evercom Systems, Inc.	11,319,667	33,959,000	4,075,080	0.08
Focal Communications Corporation	4,722,148	25,850,613	4,591,104	0.09
Gates Communications Inc.	15,249,840	25,416,400	30,049,968	0.62
Global Crossing, Ltd	451,739,896	108,470,607	346,595,070	7.12
Grande Communications	16,067,960	184,368,648	15,351,776	0.32
Heritage Communications Corporation	51,263,081	484,523,933	29,216,350	0.60
IDT Corporation	570,898,933	7,370,057,600	871,294,456	17.89
I-Link, Inc. (including Worldxchange Corp.)	12,525,842	146,833,138	33,127,141	0.68
Intellicall Operator Services, Inc.	1,979,983	17,895,590	7,867,788	0.16
Last Mile Connections, Inc.	7,476,302	43,661,602	4,031,918	0.08
Lightyear Communications, Inc.	5,500,190	21,704,121	5,712,149	0.12
Long Distance of Michigan, Inc.(including LDMI & Fonetel)	4,452,556	38,712,022	9,819,083	0.20
McLeodUSA Incorporated	10,831,404	33,862,587	9,728,647	0.20
Net One International, Inc.	23,358,589	560,606	4,671,718	0.10
Network Communications International Corporation	576,343	2,873,976	15,614,731	0.32
NOS Communications, Inc.	13,327,799	119,406,702	30,365,500	0.62
PaeTec Communications, Inc.	10,152,658	40,559,986	10,154,196	0.21
PT-1 Long Distance, Inc.	40,516,128	296,826,557	24,909,900	0.51
Qwest Communications International, Inc. (including USLD)	54,979,857	356,325,154	73,971,433	1.52
Reach Services USA	85,363,586	357,001,804	46,979,578	0.96
Sprint Corporation	129,106,718	644,205,769	183,939,580	3.78
Startec Global Communications Corporation	58,183,315	383,386,662	52,532,699	1.08
Talk America Inc.	10,502,139	65,698,277	14,649,488	0.30
Telco Group Inc.	155,284,307	1,567,145,880	314,025,607	6.45
TeleDirect Telecommunications Group, LLC	31,165,761	131,248,657	17,769,000	0.36
Telenational Communications, Inc.	3,503,091	35,030,910	4,378,864	0.09
Trans National Communications International, Inc.	727,579,682	524,092,991	19,896,117	0.41
UniPlex Telecom Technologies, Inc.	7,997,901	77,937,745	10,552,963	0.22
VarTec Telecom, Inc.	21,066,638	223,342,923	58,825,194	1.21
Verizon Communications, Inc. (including PRTC)	59,517,063	358,004,419	104,690,266	2.15
Williams Communications, Inc.	299,804,550	1,559,282,230	169,019,071	3.47
Working Assets Funding Services, Inc.	3,452,557	32,098,073	12,955,723	0.27
WorldCom, Inc., d/b/a MCI	225,331,581	1,809,109,568	281,571,294	5.78
Z-Tel Communications, Inc.	2,846,106	17,877,537	6,837,728	0.14
Total for 20 Companies Requesting Confidential Treatment	741,694,986	4,852,397,349	746,053,631	15.32
Total for 574 Companies Not Shown Above 1/	171,567,533	748,528,455	136,605,447	2.80
Total for all Reporting Carriers	4,830,721,249	27,381,650,037	\$4,870,616,565	100.00 %

1/ Data are consolidated for affiliated carriers. A total of 644 companies made a total of 706 filings.

Source: Industry Analysis and Technology Division, Wireline Competition Bureau, *2002 International Telecommunications Data* (March 2004).

7 Lines

Within the telephone industry there are several alternative, but closely related, definitions of telephone lines or loops. While these differences often make it difficult to reconcile data from different statistical series, they are not usually large enough to affect comparisons among companies or trends over time. Since 1970, over 90% of households and virtually all businesses have subscribed to telephone service. Until 2000, line growth over time, averaging about 3% per year, has historically reflected growth in the population and the economy. Since then, the number of lines provided by wireline carriers has declined, likely due to some consumers substituting wireless service for wireline service, and some households eliminating second lines when they move from dial-up internet service to broadband service.

Table 7.1 shows the nation's total number of telephone lines using three alternative measures. The first measure is the number of end-user switched access lines for both incumbent local exchange carriers (ILECs) and competitive local exchange carriers (CLECs) as reported to the Commission on the FCC Form 477. These totals undercount lines by a small amount because carriers with less than 10,000 lines in a state are not required to file FCC Form 477. The second measure is the number of local loops, which is a way of counting lines that is used to determine the amount of high-cost universal service support provided to eligible telecommunications carriers. The number of local loops includes end-user access lines, lines resold to other carriers and UNE-P. This measure excludes CLEC lines provided over their own facilities. The third measure, access lines, represents estimates for the whole ILEC industry based on data filed with the Commission by large ILECs through the Automated Reporting Management Information System (ARMIS). A substantial number of ILEC lines provided to CLECs as UNE-P lines in 2001 and 2002 are not included in this ARMIS data.

Table 7.2 shows the number of local exchange operating areas (study areas – company's operations in one state) and loops in each state, and shows breakdowns by loops for price-cap and average-schedule companies. Table 7.3 shows the number of loops by holding companies, and Chart 7.1 shows the five largest holding companies' share of loops.

Table 7.4 compares the number of residential local loops with the number of households with telephone service. The difference between these series is an approximate measure of the number of additional residential access lines. Table 7.4 shows that the percentage of additional lines for households with telephone service increased dramatically, from about 3% in 1988 to about 26% in 2000, and has since decreased back to 18% in 2002.

Tables 7.5 and 7.6 display payphone line information. Long distance carriers are required to pay payphone owners 24 cents for every completed dial-around call (calls where the consumer chooses the long distance carrier over the payphone's presubscribed long distance carrier).¹ Because of this requirement, several long distance carriers employ the National

¹ See *Third Report and Order and Order on Reconsideration of the 2nd Report and Order*, CC Docket 96-128, adopted Jan. 28, 1999.

Payphone Clearinghouse to administer payments on their behalf. On an annual basis, the National Payphone Clearinghouse supplies the FCC with data that allow the number of payphones in each state to be calculated.

Table 7.5 shows the number of payphones owned by LECs and by independent payphone operators in each state at the end of the first quarter of 2003. The number of payphones is broken down by whether the payphones are served by an RBOC or by another LEC. Payphones located in RBOC territories but that are served by a CLEC are accounted for in the “RBOC territories” columns. Similarly, payphones located in non-RBOC territories (i.e., other ILEC territories) but that are served by a CLEC are accounted for in the “all other LEC territories” columns. Data for earlier years can be found in earlier editions of *Trends*.

Table 7.6 shows the number of payphones over time. The National Payphone Clearinghouse began providing detailed data to the Commission starting with data as of March 31, 1999. Where possible, data from the payphone proceedings were used to fill values for 1997 and 1998 (see the footnotes to Table 7.6 for citations).

Table 7.1
U.S. Wireline Telephone Lines

Year End	CLEC and ILEC Lines ¹	Annual Growth (%)	ILEC Local Loops ²	Annual Growth (%)	ILEC Access Lines ³	Annual Growth (%)
1980			102,216,367			
1981			105,559,222	3.3 %		
1982			107,519,214	1.9		
1983			110,612,689	2.9		
1984			112,550,739	1.8	113,832,113	
1985			115,985,813	3.1	117,384,865	3.1 %
1986			118,289,121	2.0	120,730,205	2.8
1987			122,789,249	3.8	124,625,693	3.2
1988			127,086,765	3.5	126,899,632	1.8
1989			131,504,568	3.5	130,860,026	3.1
1990			136,114,201	3.5	134,685,732	2.9
1991			139,412,884	2.4	139,613,309	3.7
1992			143,341,581	2.8	142,367,463	2.0
1993			148,106,159	3.3	147,033,132	3.3
1994			153,447,946	3.6	151,543,061	3.1
1995			159,658,662	4.0	158,152,644	4.4
1996			166,445,580	4.3	165,350,308	4.6
1997			173,866,799	4.5	173,857,193	5.1
1998			179,849,045	3.4	180,516,161	3.8
1999	189,501,938		185,002,911	2.9	186,594,497	3.4
2000	192,555,081	1.6 %	188,499,346	1.9	187,581,092	0.5
2001	191,697,023	-0.4	185,588,179	-1.5	179,811,283	-4.1
2002	187,523,916	-2.2	180,110,858	-3.0	172,265,210	-4.2

NA - Not Available.

¹ Include end-user switched access lines for competitive local exchange carriers (CLECs) and incumbent local exchange carriers (ILECs) as reported in FCC Form 477. Carriers with greater than 10,000 lines in a state are required to report.

² Include end-user switched access lines, resold lines, and unbundled network elements (UNEs).

³ Beginning in 2001, a substantial number of ILEC lines provided to CLECs as UNE-P lines are not included in this total.

Source: CLEC and ILEC access lines: Industry Analysis and Technology Division, Wireline Competition Bureau, *Local Telephone Competition: Status as of June 30, 2003* (December 2003).
Local loops: National Exchange Carrier Association, Universal Service Fund filings.
Access Lines: Industry Analysis and Technology Division, Wireline Competition Bureau, *Statistics of Communications Common Carriers, 2002/2003 Edition* (March 2004), Table 4.10, after inflating access lines of reporting carriers to represent the total industry. The 1996 adjustment factor was used for the years prior to 1996.

Table 7.2
Telephone Loops of Incumbent Local Exchange Carriers by State
(As of December 31, 2002)

	Study Areas	Price Cap		Non-Price Cap		Total Loops
		Bell Company Loops ¹	Other Company Loops	Schedule Company Loops	Other Company Loops	
Alabama	28	1,894,740	316,691	31,317	174,876	2,417,624
Alaska	24	0	0	229	450,809	451,038
American Samoa	1	0	0	0	10,325	10,325
Arizona	17	2,721,761	167,101	0	40,901	2,929,763
Arkansas	28	986,362	0	15,446	451,798	1,453,606
California	22	22,312,986	150,146	0	221,517	22,684,649
Colorado	28	2,672,887	0	1,091	134,719	2,808,697
Connecticut	2	2,297,099	0	25,634	0	2,322,733
Delaware	1	580,535	0	0	0	580,535
District of Columbia	1	897,193	0	0	0	897,193
Florida	12	8,737,299	2,119,377	0	194,408	11,051,084
Georgia	36	4,030,955	30,882	67,764	823,368	4,952,969
Guam	1	0	0	0	70,975	70,975
Hawaii	2	705,095	0	0	985	706,080
Idaho	20	673,943	20,437	1,633	46,200	742,213
Illinois	57	7,596,282	126,797	39,029	226,451	7,988,559
Indiana	42	3,279,940	278,532	78,106	86,992	3,723,570
Iowa	153	1,069,497	341,211	196,125	52,885	1,659,718
Kansas	39	1,305,416	137,923	412	128,870	1,572,621
Kentucky	19	1,195,542	207,105	91,045	668,435	2,162,127
Louisiana	20	2,303,388	0	1,627	194,239	2,499,254
Maine	20	724,201	0	38,124	114,699	877,024
Maryland	2	3,835,943	0	0	7,910	3,843,853
Massachusetts	3	4,185,130	0	0	4,215	4,189,345
Michigan	39	6,044,547	25,658	29,459	179,764	6,279,428
Minnesota	88	2,133,873	433,454	244,348	172,940	2,984,615
Mississippi	19	1,311,913	6,717	11,163	81,097	1,410,890
Missouri	44	2,589,570	600,305	14,331	313,519	3,517,725
Montana	18	363,764	8,370	4,143	165,850	542,127
Nebraska	40	428,546	372,463	20,669	89,425	911,103
Nevada	14	421,880	892,009	0	33,301	1,347,190
New Hampshire	10	754,277	0	2,432	56,202	812,911
New Jersey	3	6,386,976	230,923	0	10,416	6,628,315
New Mexico	16	840,470	103,597	0	46,037	990,104
New York	44	11,402,671	885,980	21,780	270,569	12,581,000
North Carolina	26	2,806,989	1,445,422	262,477	484,693	4,999,581
North Dakota	24	201,794	10,371	63,997	113,201	389,363
Northern Mariana Islands	1	22,206	0	0	0	22,206
Ohio	42	4,982,170	1,377,106	58,067	473,795	6,891,138
Oklahoma	39	1,567,762	120,156	4,161	241,218	1,933,297
Oregon	33	1,836,016	89,465	12,329	145,150	2,082,960
Pennsylvania	36	6,677,804	438,965	623,052	261,700	8,001,521
Puerto Rico	2	0	0	0	1,289,665	1,289,665
Rhode Island	1	595,651	0	0	0	595,651
South Carolina	27	1,675,116	101,172	61,802	473,936	2,312,026
South Dakota	30	240,762	0	75,898	76,514	393,174
Tennessee	25	2,582,666	340,952	115,467	252,056	3,291,141
Texas	58	11,411,173	748,575	10,711	585,864	12,756,323
Utah	13	1,017,668	24,393	8,176	65,629	1,115,866
Vermont	10	356,688	0	4,673	60,613	421,974
Virgin Islands	1	0	0	0	69,369	69,369
Virginia	21	4,107,367	411,111	92,665	27,978	4,639,121
Washington	23	3,256,222	85,648	4,510	270,436	3,616,816
West Virginia	10	846,247	158,638	2,751	14,272	1,021,908
Wisconsin	90	2,457,365	72,523	226,011	606,457	3,362,356
Wyoming	10	253,233	6,958	0	44,248	304,439
Total	1,435	153,579,580	12,887,133	2,562,654	11,081,491	180,110,858

¹ Includes loops owned by Verizon/GTE and SBC/Southern New England Telephone. Excludes Woodbury Telephone of Connecticut, affiliated with SBC, 25,364 average schedule company loops. Also excludes Puerto Rico Telephone Company, affiliated with Verizon, 1,289,665 rate of return lines.

Source: NECA, *Universal Service Fund 2003 Submission of 2002 Study Results* (October 1, 2003).

Table 7.3
Telephone Loops of Incumbent Local Exchange Carriers By Holding Company ¹
(As of December 31, 2002)

Holding Companies	Loops	Percent of Loops
Verizon Communications, Inc.	57,948,446	32.17 %
SBC Communications, Inc.	57,010,081	31.65
BellSouth Telecommunications, Inc	23,688,786	13.15
Qwest Communications International, Inc	16,247,566	9.02
Sprint Corporation	7,853,621	4.36
ALLTEL Corporation	2,912,182	1.62
CenturyTel, Inc.	2,387,446	1.33
Citizens Communications Company	2,293,462	1.27
Broadwing, Inc.	968,706	0.54
TDS Telecommunications Corporation	691,304	0.38
Valor Telecommunications, LLC	563,831	0.31
C-TEC Corporation	338,132	0.19
Alaska Communications System	316,037	0.18
Iowa Network Service, Inc	282,396	0.16
FairPoint Communications, Inc	246,188	0.14
Madison River Telephone Company	188,566	0.10
TXU Communications Telephone Company	169,558	0.09
D & E Communications, Inc.	169,558	0.09
North State Telecommunications Corporation	135,692	0.08
Roseville Telephone Company	134,361	0.07
Rock Hill Telephone Company	126,902	0.07
The Concord Telephone Company	119,273	0.07
Horry Telephone Cooperative	94,530	0.05
Consolidated Communications, Inc	82,707	0.05
North Pittsburgh Telephone Company	78,550	0.04
Hargray Communications Group, Inc	74,099	0.04
Guam Telephone Authority	70,975	0.04
Virgin Islands Telephone Corporation	69,369	0.04
Hickory Tech Corporation	66,608	0.04
Matanuska Telephone Association	61,641	0.03
Farmers Telephone Cooperative, Inc	60,316	0.03
Lynch Interactive Corporation	55,758	0.03
Pioneer Telephone Cooperative, Inc	54,622	0.03
Ntelos, Inc.	50,154	0.03
SRT Service Corporation	46,631	0.03
Guadalupe Valley Telephone Cooperative	41,641	0.02
East Ascension Telephone Company, Inc	40,762	0.02
Atlantic Telephone Membership Corporation	40,683	0.02
CEA Capital	39,099	0.02
Twin Lake Telephone Cooperative	38,722	0.02
Skyline Telephone Membership Corporation	37,777	0.02
Ben Lomand Rural Telephone Cooperative, Inc	37,198	0.02
The Chillicothe Telephone Company	36,847	0.02
Golden West Telecommunications	36,704	0.02
Telephone Electronics Corporation	35,517	0.02
All Other Companies	4,067,854	2.26
Total	180,110,858	100.00 %

¹ Includes incumbent local exchange carriers' loops for holding companies with more than 35,000 loops.
Source: NECA, *Universal Service Fund 2003 Submission of 2002 Study Results* (October 1, 2003).

Chart 7.1
Five Largest Holding Companies' Share of Loops

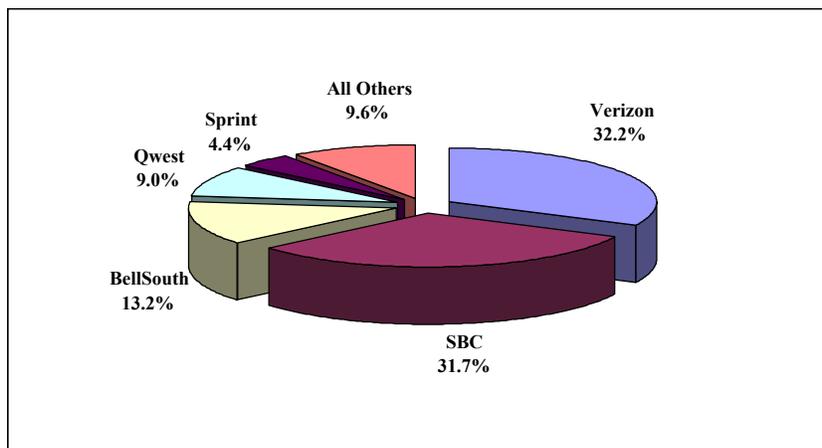


Table 7.4
Additional Residential Lines
For Households with Telephone Service
(End-of-Year Data in Millions)

Year	Loops ¹			Households with Telephone Service ²	Additional Residential Lines	Percentage of Additional Lines for Households with Telephones
	Residential	Non-Residential	Total Loops			
1988	87.7	38.5	126.2	85.4	2.3	2.7 %
1989	90.0	40.6	130.6	87.4	2.6	3.0
1990	92.2	42.9	135.1	88.4	3.9	4.4
1991	95.9	42.5	138.4	89.4	6.5	7.3
1992	99.3	43.0	142.3	91.0	8.3	9.1
1993	101.8	45.2	147.0	93.0	8.8	9.4
1994	105.1	47.2	152.3	93.7	11.4	12.2
1995	108.1	50.4	158.5	94.2	13.9	14.7
1996	111.1	54.3	165.4	95.1	16.0	16.8
1997	114.7	58.2	172.9	96.5	18.2	18.9
1998	117.1	62.6	179.8	98.0	19.1	19.5
1999	122.7	63.5	186.2	99.1	23.6	23.8
2000	126.4	65.8	192.2	100.2	26.2	26.2
2001	127.3	62.9	190.2	102.2	25.1	24.6
2002	122.6	62.4	185.0	104.0	18.7	18.0

¹ Loop counts provided by the National Exchange Carrier Association. American Samoa, Guam, the Northern Mariana Islands, Puerto Rico, and the U.S. Virgin Islands totals have been removed. For 1988 to 2001, total loops were divided between residential and non-residential using the ratio of residential to non-residential access lines reported in Industry Analysis and Technology Division, Wireline Competition Bureau, *Statistics of Communications Common Carriers*, 2002/2003 Edition (March 2004). Those totals also exclude Puerto Rico, but cover only the carriers that file ARMIS reports (of which there are none for American Samoa, Guam, the Northern Mariana Islands, and the U.S. Virgin Islands). Loop counts beginning in 1996 have been increased by estimated competitive local exchange carrier lines from the Association for Local Telecommunications Services (ALTS) and the report by Industry Analysis and Technology Division, Wireline Competition Bureau, *Local Telephone Competition: Status as of June 30, 2003* (December 2003). For 2002, the percentage of additional lines for households with telephones was computed from the ratio of non-primary residential access lines to primary residential access lines (Lifeline and Non-Lifeline) reported in Table 2.4 of the *Statistics of Communications Common Carriers*.

² *Current Population Survey* (U.S. Department of Commerce, Bureau of the Census).

Source: FCC staff estimates.

Table 7.5
Number of Payphones Owned by LECs and Independent Operators
(As of March 31, 2003)

State	RBOC Territories		All Other LEC Territories		Total LEC Owned	Total Independent	Grand Total
	LEC Owned	Independent	LEC Owned	Independent			
Alabama	7,176	5,929	1,295	1,955	8,471	7,884	16,355
Alaska	0	0	1,134	2,675	1,134	2,675	3,809
Arizona	14,227	10,555	65	2,332	14,292	12,887	27,179
Arkansas	7,880	1,259	1,920	1,134	9,800	2,393	12,193
California	109,551	90,363	853	5,505	110,404	95,868	206,272
Colorado	14,239	7,466	243	647	14,482	8,113	22,595
Connecticut	15,714	32	111	3,312	15,825	3,344	19,169
Delaware	3,324	885	0	0	3,324	885	4,209
District of Columbia	5,450	439	0	0	5,450	439	5,889
Florida	25,719	35,139	6,572	7,645	32,291	42,784	75,075
Georgia	17,508	16,674	3,279	3,657	20,787	20,331	41,118
Hawaii	6,014	889	0	0	6,014	889	6,903
Idaho	2,969	1,589	153	278	3,122	1,867	4,989
Illinois	47,951	22,035	1,010	1,664	48,961	23,699	72,660
Indiana	21,623	6,657	1,882	1,140	23,505	7,797	31,302
Iowa	5,775	1,997	603	1,208	6,378	3,205	9,583
Kansas	8,162	1,988	630	729	8,792	2,717	11,509
Kentucky	4,577	5,238	2,806	4,224	7,383	9,462	16,845
Louisiana	8,748	8,869	306	1,100	9,054	9,969	19,023
Maine	4,301	644	104	385	4,405	1,029	5,434
Maryland	23,843	1,227	0	9	23,843	1,236	25,079
Massachusetts	26,707	10,410	5	6	26,712	10,416	37,128
Michigan	35,227	16,518	709	743	35,936	17,261	53,197
Minnesota	10,296	3,988	1,708	1,848	12,004	5,836	17,840
Mississippi	6,786	4,504	93	136	6,879	4,640	11,519
Missouri	15,623	4,749	3,255	3,135	18,878	7,884	26,762
Montana	2,470	1,127	331	574	2,801	1,701	4,502
Nebraska	3,353	907	3,274	771	6,627	1,678	8,305
Nevada	2,719	1,375	1,413	9,261	4,132	10,636	14,768
New Hampshire	4,530	1,250	134	54	4,664	1,304	5,968
New Jersey	45,783	17,264	1,527	229	47,310	17,493	64,803
New Mexico	5,374	2,615	265	940	5,639	3,555	9,194
New York	89,377	47,115	5,748	5,146	95,125	52,261	147,386
North Carolina	9,023	9,273	6,561	8,717	15,584	17,990	33,574
North Dakota	567	443	143	453	710	896	1,606
Ohio	32,992	9,131	7,180	6,093	40,172	15,224	55,396
Oklahoma	11,657	3,890	1,502	828	13,159	4,718	17,877
Oregon	9,304	5,738	771	935	10,075	6,673	16,748
Pennsylvania	37,316	18,326	5,600	3,146	42,916	21,472	64,388
Rhode Island	3,782	2,849	0	0	3,782	2,849	6,631
South Carolina	6,826	8,807	1,652	2,560	8,478	11,367	19,845
South Dakota	2,049	608	510	394	2,559	1,002	3,561
Tennessee	9,852	10,512	1,901	2,273	11,753	12,785	24,538
Texas	56,061	40,275	2,161	5,442	58,222	45,717	103,939
Utah	6,128	2,222	49	656	6,177	2,878	9,055
Vermont	2,147	306	46	220	2,193	526	2,719
Virginia	23,789	6,973	2,180	1,563	25,969	8,536	34,505
Washington	17,157	7,937	594	1,527	17,751	9,464	27,215
West Virginia	5,974	114	64	1,116	6,038	1,230	7,268
Wisconsin	14,489	4,686	3,317	2,678	17,806	7,364	25,170
Wyoming	2,186	693	226	84	2,412	777	3,189
Totals	854,295	464,479	75,885	101,127	930,180	565,606	1,495,786

Source: Raw data provided by National Payphone Clearinghouse. Rollups performed by the Industry Analysis and Technology Division staff, Wireline Competition Bureau.

Table 7.6
Number of Payphones Over Time
(As of March 31 of Each Year)

Year	RBOCs' Territories			All Other LECs' Territories			Total LEC Owned	Total Independent	Grand Total
	LEC Owned	Independent	Total	LEC Owned	Independent	Total			
1997	1,399,600 ¹	NA	NA	NA	NA	NA	NA	NA	2,086,540 ²
1998	1,381,800 ¹	NA	NA	NA	NA	NA	NA	NA	2,100,558 ²
1999	1,305,463	572,503	1,877,966	80,491	163,069	243,560	1,385,954	735,572	2,121,526
2000	1,244,535	633,022	1,877,557	63,808	122,353	186,161	1,308,343	755,375	2,063,718
2001	1,131,377	571,778	1,703,155	88,399	128,086	216,485	1,219,776	699,864	1,919,640
2002	964,999	531,801	1,496,800	95,639	118,622	214,261	1,060,638	650,423	1,711,061
2003	854,295	464,479	1,318,774	75,885	101,127	177,012	930,180	565,606	1,495,786

NA - Not Available.

¹ See RBOC/GTE/SNET Payphone Coalition Comments on Remand Issues in CC Docket No. 96-128, Report of Arthur Andersen on Per-Call Compensation, Carl R. Geppert at 10 (July 13, 1998).

² See Letter from Denny Reuss, NPC Product Manager, to Craig Stroup, Federal Communications Commission, CC Docket 96-128 at 1 (Filed October 22, 1998. The 1997 data point is as of June 30, 1997.)

Source: Unless otherwise noted, raw data provided by National Payphone Clearinghouse. Rollups performed by the Industry Analysis and Technology Division staff, Wireline Competition Bureau.

8 Local Telephone Competition

For most of the past century, households and businesses had no choice in selecting their local telephone company. In the 1980s, competitive access providers (CAPs) began to market to business customers access services provided over CAPs' wired networks. To some extent they also carried local telephone calls among their customers. In the 1990s, some CAPs and other companies, including affiliates of cable television companies and local service divisions of long distance companies, began to offer local telephone services to a broader range of customers. Companies with operations in larger cities added operations in smaller cities, where the typical customer is more likely to be a small or medium-sized business than a large business, and some new companies focused on smaller cities from the beginning. The newer competitors are often called competitive local exchange carriers (CLECs), although the terms CAPs and CLECs are sometimes used interchangeably.

The Telecommunications Act of 1996 (1996 Act) contemplated three vehicles for competitors to enter local telephone service markets. First, CLECs may resell the services of incumbent local exchange carriers (ILECs). Second, CLECs may make use of ILEC facilities, for example, by leasing ILEC unbundled network element (UNE) loops to use in combination with the CLECs' own switching capabilities, or by leasing the UNE-platform that combines the unbundled ILEC loop with unbundled ILEC switching and transport. Third, CLECs may build the complete set of facilities they need to compete. Individual competitors have used various combinations of these methods at different times.

1. CLEC Share of Switched Access Lines

Table 8.1 and the associated chart show the number of ILEC and CLEC end-user switched access lines from December 1999 through June 2003. CLECs provided 26.9 million (or 14.7%) of the approximately 183 million nationwide switched access lines in service to end-user customers at the end of June 2003, according to information reported on FCC Form 477, Local Competition and Broadband Reporting. This represents a 9% growth of CLEC market size during the first half of 2003. Table 8.2 and the associated chart show the relative shares of the residential and small business end-user switched access lines provisioned by ILECs and CLECs from December 1999 through June 2003. At the end of June 2003, about 38% of these CLEC lines served medium and large business, institutional, and government customers. By contrast, 22% of reported ILEC switched access lines served such customers.

Table 8.3 shows that CLECs report providing almost one-fourth of their switched access lines over their own local loop facilities. In the course of the semiannual data collections, the percentage of these lines provisioned by reselling services has declined steadily (to 18% at the end of June 2003) and the percentage provisioned over acquired UNE loops, both stand-alone and with switching, has grown (to 58%). Chart 8.3 shows the percentages of CLEC end-user lines that were provisioned over their own facilities and those lines acquired from other carriers during December 1999 and June 2003. Data reported by ILECs, presented in Table 8.4, indicate

that UNE loops provided with ILEC switching (including the UNE-platform) have increased faster than UNE loops provided without switching. Chart 8.4 shows the trend, from December 1997 through June 2003, of ILEC switched access lines and the percentages provided to other carriers.

Table 8.5 shows ILEC and CLEC switched access lines by state, and the CLEC share of total switched access lines by state, at the end of June 2003. Table 8.6 presents historical data on CLEC share by state.

2. CLEC Share of Local Telephone Service Revenues

Table 8.7 shows that carriers competing with the ILECs increased their local telephone service revenues by about 1% from 2001 to 2002 – from \$14.8 billion to \$15.0 billion. The share of nationwide local telephone service revenues claimed by the competitors increased from 11.8% in 2001 to 12.1% in 2002. Chart 8.5 shows the ILEC and CLEC shares of local service revenues from 1993 through 2002.

3. Ported Telephone Numbers

Table 8.8 shows that, as of the end of 2003, there were 26.7 million telephone numbers in service that had been “ported” (transferred) from one telephone carrier to another because end users changed local telephone carriers and retained their telephone numbers. Starting November 24, 2003, telephone numbers could be ported to mobile wireless carriers.

This information is developed from the telephone number porting database managed by the Local Number Portability Administrator, which is currently NeuStar, Inc. The database contains all ported numbers currently in service. It also contains information about when the number was most recently ported (to a carrier other than the carrier to which the number originally was assigned) or, in some cases, when the database was updated to reflect a new area code. In order to protect consumer privacy, the Commission receives information from the porting database in a manner that prevents it from determining if any particular telephone number has been ported.

Sequential “snapshots” of the porting database can help quantify the extent of local telephone competition and telephone number “churn” (movement of customer lines among carriers). Table 8.9 shows the quantity of ported telephone numbers in service as reported in database snapshots taken at the end of each quarter, from the second quarter of 1999 (when the FCC first began receiving the data) through the fourth quarter of 2003. Historical quantities reported in Table 8.9 differ from the cumulative values reported in Table 8.8, for the same years and quarters. For example, Table 8.9 shows that at the end of 2001, 15.5 million numbers had been transferred to a new carrier. Table 8.8 shows that 11.4 million of those numbers remained ported to the same carrier at the end of 2003. There are three reasons for the difference of 4.1 million telephone numbers: 1) the customer ported the number to yet a new carrier; 2) the customer returned to the carrier to which the number originally was assigned; or 3) the number has a new area code.

Table 8.1
End-User Switched Access Lines Reported

Date	ILEC Lines	CLEC Lines	Total	CLEC Share
December 1999	181,307,695	8,194,243	189,501,938	4.3 %
June 2000	179,761,930	11,557,381	191,319,311	6.0
December 2000	177,641,529	14,871,409	192,555,081	7.7
June 2001	174,861,248	17,274,727	191,760,433	9.0
December 2001	172,043,582	19,653,441	191,697,023	10.3
June 2002	167,472,318	21,644,928	189,117,246	11.4
December 2002	162,742,937	24,780,979	187,523,916	13.2
June 2003	155,922,118	26,890,594	182,812,712	14.7

Chart 8.1
End-User Switched Access Lines Reported
(Lines in Millions)

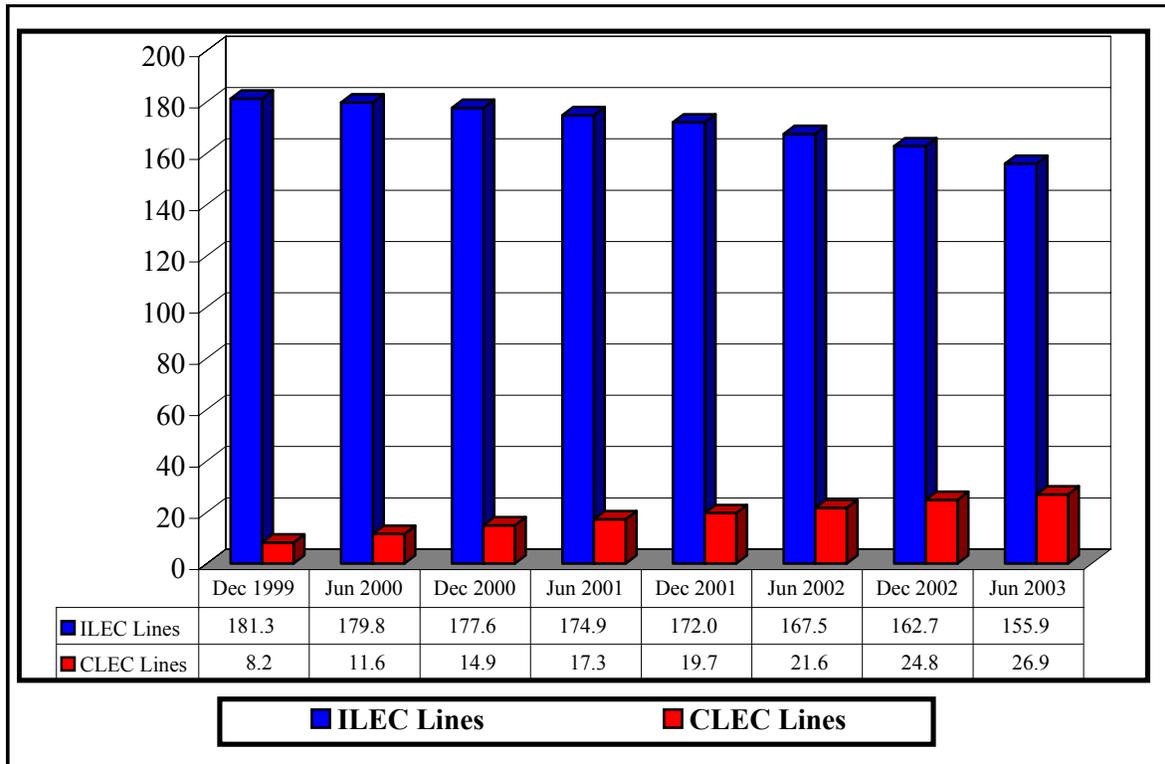


Table 8.2
End-User Switched Access Lines by Customer Type

Date	Reporting ILECs			Reporting CLECs		
	Residential & Small Business	Other ¹	% Residential & Small Business	Residential & Small Business	Other ¹	% Residential & Small Business
December 1999	139,758,434	41,549,261	77.1 %	3,368,702	4,825,541	41.1 %
June 2000	140,635,199	39,126,731	78.2	4,579,501	6,977,880	39.6
December 2000	138,872,415	38,769,114	78.2	6,620,471	8,250,938	44.5
June 2001	134,618,062	40,243,186	77.0	7,793,071	9,481,656	45.1
December 2001	133,421,570	38,622,012	77.6	9,489,049	10,164,392	48.3
June 2002	131,051,178	36,421,140	78.3	11,080,676	10,564,252	51.2
December 2002	127,008,159	35,734,778	78.0	14,525,783	10,255,196	58.6
June 2003	122,025,182	33,896,936	78.3	16,675,810	10,214,784	62.0

¹ Medium and large business, institutional, and government customers.

Source: Industry Analysis and Technology Division, Wireline Competition Bureau, *Local Telephone Competition: Status as of June 30, 2003* (December 2003).

Chart 8.2
Percent of Residential and Small Business End-User Switched Access Lines
Provisioned by ILECs and CLECs

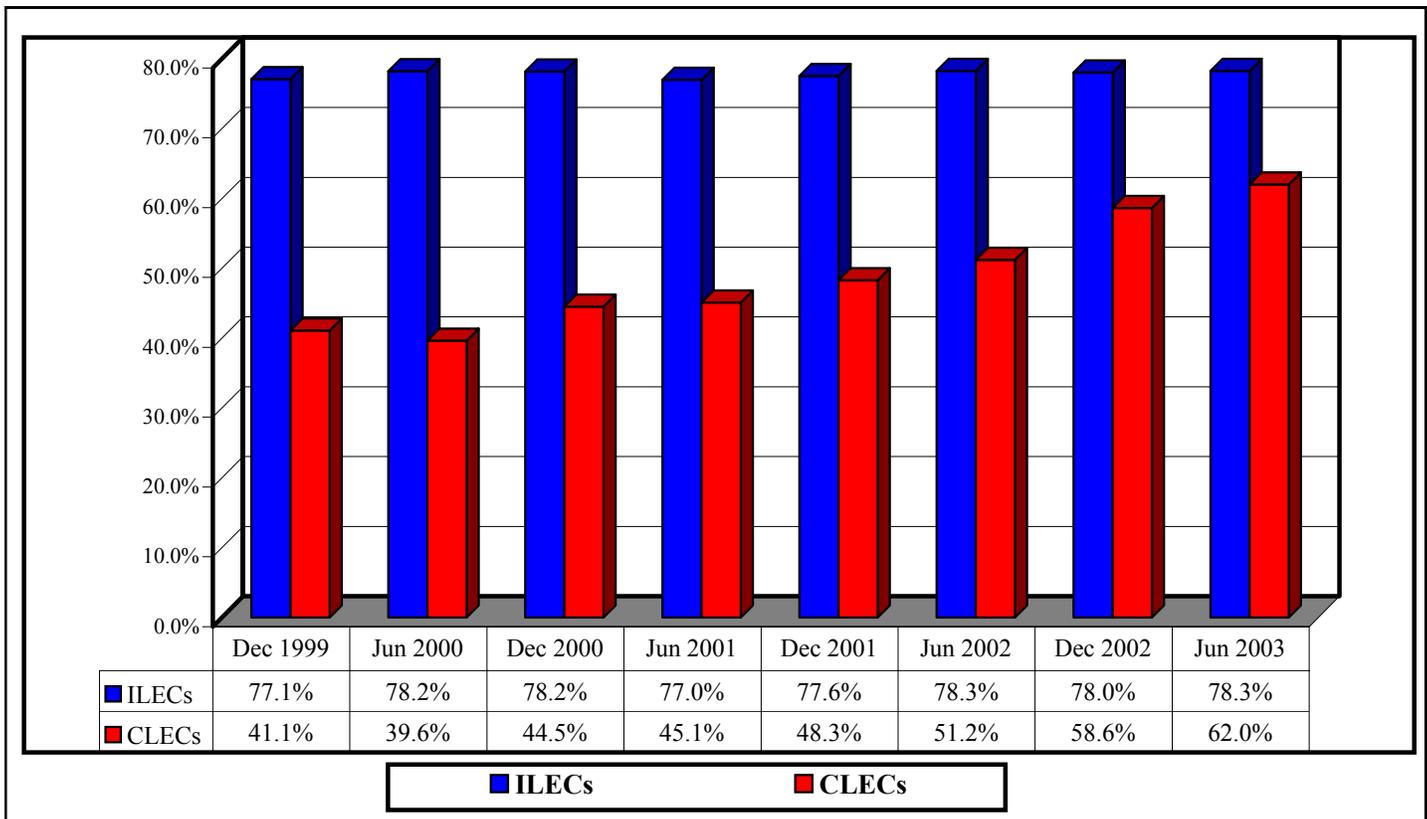


Table 8.3
Reporting Competitive Local Exchange Carriers
(End-User Switched Access Lines in Thousands)

Date	CLECs Reporting	Total End-User Lines	Acquired From Other Carriers				CLEC-Owned	
			Resold Lines	Percent	UNEs ¹	Percent	Lines ²	Percent
Dec 1999	81	8,194	3,513	42.9 %	1,959	23.9 %	2,723	33.2 %
Jun 2000	78	11,557	4,315	37.3	3,201	27.7	4,042	35.0
Dec 2000	89	14,871	4,114	27.7	5,540	37.3	5,217	35.1
Jun 2001	91	17,275	3,919	22.7	7,580	43.9	5,776	33.4
Dec 2001	94	19,653	4,250	21.6	9,332	47.5	6,072	30.9
Jun 2002	96	21,645	4,478	20.7	10,930	50.5	6,236	28.8
Dec 2002	112	24,781	4,677	18.9	13,709	55.3	6,396	25.8
Jun 2003	125	26,891	4,887	18.2	15,728	58.5	6,276	23.3

Notes: Figures may not add to totals due to rounding.

¹ Includes unbundled network element (UNE) loops leased from an unaffiliated carrier on a stand-alone basis and also UNE loops leased in combination with UNE switching or any other unbundled network element.

² Lines provided over CLEC-owned "last-mile" facilities.

Source: Industry Analysis and Technology Division, Wireline Competition Bureau, *Local Telephone Competition: Status as of June 30, 2003* (December 2004).

Chart 8.3
Competitive Local Exchange Carriers' End-User Lines

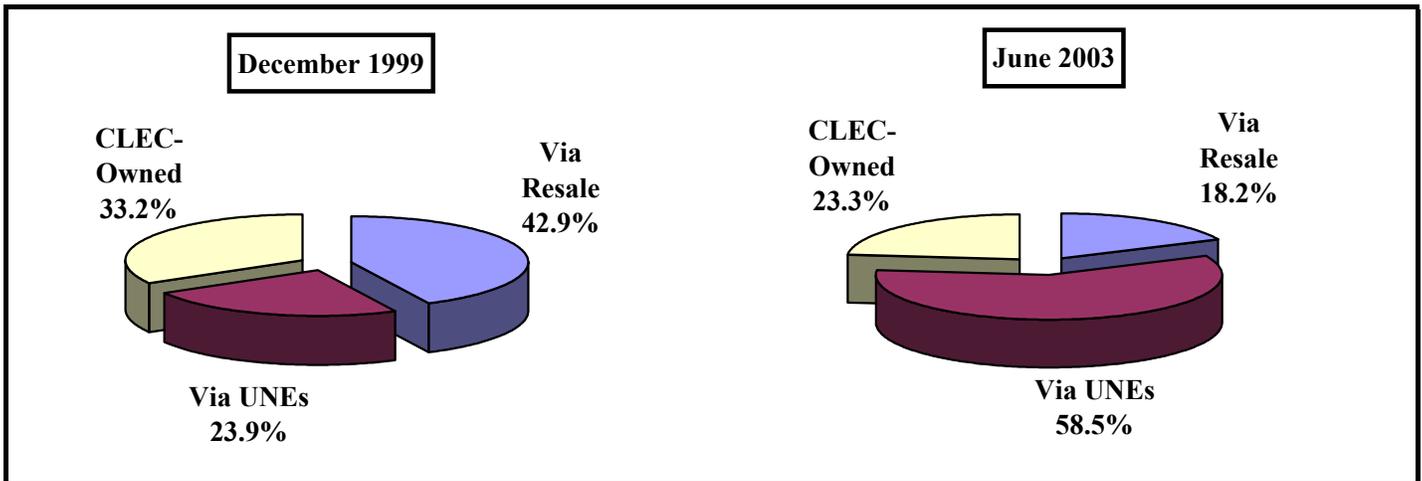


Table 8.4
Reporting Incumbent Local Exchange Carriers
(End-User Switched Access Lines in Thousands)

Date ¹	ILECs Reporting	Total Lines	End-User Lines	Provided to Other Carriers					
				Resold Lines	UNEs			Total UNEs and Resold Lines	Percent of Total Lines
					Without Switching	With Switching	Total UNEs		
Dec 1997	9	159,008	157,132	1,743			133	1,876	1.2 %
Jun 1998	8	161,810	159,118	2,448			244	2,692	1.7
Dec 1998	7	164,614	161,191	3,062			361	3,423	2.1
Jun 1999	7	167,177	162,909	3,583			685	4,268	2.6
Dec 1999	168	187,294	181,308	4,494	1,004	489	1,493	5,987	3.2
Jun 2000	159	188,171	179,762	5,098	1,696	1,616	3,312	8,409	4.5
Dec 2000	166	188,346	177,684	5,388	2,436	2,838	5,274	10,662	5.7
Jun 2001	156	186,825	174,486	4,417	3,161	4,761	7,922	12,340	6.6
Dec 2001	164	185,517	172,044	4,014	3,679	5,781	9,460	13,474	7.3
Jun 2002	166	182,487	167,472	3,475	4,061	7,478	11,540	15,015	8.2
Dec 2002	174	179,971	162,743	2,744	4,259	10,225	14,484	17,228	9.6
Jun 2003	181	175,386	155,922	2,233	4,205	13,026	17,231	19,464	11.1

Notes: Figures may not add to totals due to rounding.

¹ Data for December 1997 through June 1999 are from Common Carrier Bureau voluntary surveys. Starting with December 1999, data are from FCC Form 477 filings.

Source: Industry Analysis and Technology Division, Wireline Competition Bureau, *Local Telephone Competition: Status as of June 30, 2003* (December 2003).

Chart 8.4
ILEC Switched Access Lines and the Percent Provided to Other Carriers

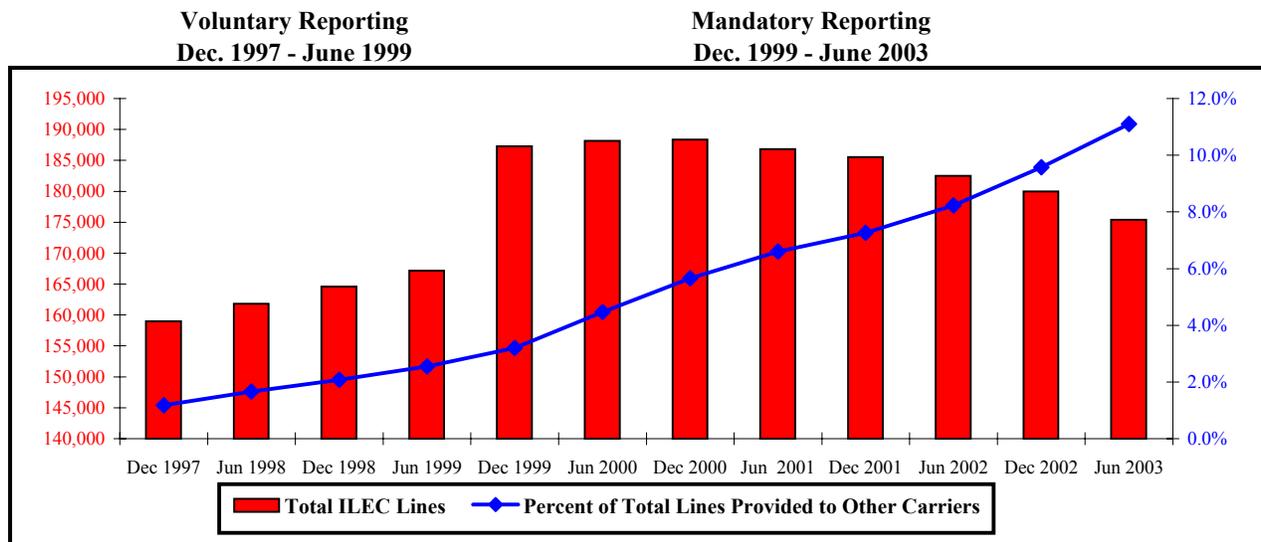


Table 8.5
End-User Switched Access Lines Served by Reporting Local Exchange Carriers
(As of June 30, 2003)

State	ILECs	CLECs	Total	CLEC Share
Alabama	2,183,237	234,330	2,417,567	10 %
Alaska	430,339	*	*	*
Arizona	2,700,186	519,128	3,219,314	16
Arkansas	1,220,542	*	*	*
California	20,645,363	3,046,959	23,692,322	13
Colorado	2,557,814	495,007	3,052,821	16
Connecticut	2,215,546	234,372	2,449,918	10
Delaware	503,681	53,473	557,154	10
District of Columbia	772,587	174,584	947,171	18
Florida	10,133,865	1,537,632	11,671,497	13
Georgia	4,308,760	827,841	5,136,601	16
Hawaii	707,634	*	*	*
Idaho	687,342	33,864	721,206	5
Illinois	6,741,172	1,616,765	8,357,937	19
Indiana	3,327,235	348,159	3,675,394	9
Iowa	1,296,148	195,860	1,492,008	13
Kansas	1,186,953	318,862	1,505,815	21
Kentucky	2,024,894	97,288	2,122,182	5
Louisiana	2,251,091	212,363	2,463,454	9
Maine	721,077	70,275	791,352	9
Maryland	3,250,282	379,961	3,630,243	10
Massachusetts	3,561,688	846,276	4,407,964	19
Michigan	4,819,294	1,384,973	6,204,267	22
Minnesota	2,572,413	534,965	3,107,378	17
Mississippi	1,235,339	93,912	1,329,251	7
Missouri	3,067,732	334,319	3,402,051	10
Montana	500,865	17,473	518,338	3
Nebraska	775,829	190,754	966,583	20
Nevada	1,304,641	132,684	1,437,325	9
New Hampshire	692,777	136,510	829,287	16
New Jersey	5,389,747	1,009,996	6,399,743	16
New Mexico	940,232	*	*	*
New York	9,019,394	3,478,918	12,498,312	28
North Carolina	4,682,253	443,600	5,125,853	9
North Dakota	280,507	*	*	*
Ohio	6,131,768	754,020	6,885,788	11
Oklahoma	1,679,984	217,854	1,897,838	11
Oregon	1,871,970	167,965	2,039,935	8
Pennsylvania	6,848,086	1,413,458	8,261,544	17
Puerto Rico	1,212,779	*	*	*
Rhode Island	491,682	167,714	659,396	25
South Carolina	2,143,712	192,934	2,336,646	8
South Dakota	296,879	49,243	346,122	14
Tennessee	3,042,739	346,060	3,388,799	10
Texas	10,451,045	2,266,028	12,717,073	18
Utah	1,019,089	235,170	1,254,259	19
Vermont	372,238	*	*	*
Virgin Islands	71,132	0	71,132	0
Virginia	4,021,042	738,479	4,759,521	16
Washington	3,452,669	386,104	3,838,773	10
West Virginia	911,882	*	*	*
Wisconsin	2,953,647	526,343	3,479,990	15
Wyoming	241,316	*	*	*
Nationwide	155,922,118	26,890,594	182,812,712	15 %

Note: Carriers with under 10,000 lines in a state were not required to report.

* Data withheld to maintain firm confidentiality.

Source: Industry Analysis and Technology Division, Wireline Competition Bureau, *Local Telephone Competition: Status as of June 30, 2003* (December 2003).

Table 8.6
Competitive Local Exchange Carrier Share of End-User Switched Access Lines

State	1999	2000		2001		2002		2003
	Dec	Jun	Dec	Jun	Dec	Jun	Dec	Jun
Alabama	5 %	3 %	4 %	5 %	5 %	5 %	8 %	10 %
Alaska	*	*	*	*	*	*	*	*
Arizona	*	5	5	7	9	11	12	16
Arkansas	*	*	*	*	*	*	10	*
California	4	5	6	7	8	9	11	13
Colorado	5	7	9	10	13	14	15	16
Connecticut	3	5	6	7	7	9	9	10
Delaware	*	*	*	0	0	*	*	10
District of Columbia	7	7	9	12	13	16	16	18
Florida	6	6	6	7	7	9	13	13
Georgia	5	6	8	10	11	13	15	16
Hawaii	*	*	0	*	*	*	*	*
Idaho	0	0	*	*	*	*	*	5
Illinois	5	7	9	13	15	17	19	19
Indiana	3	4	5	5	5	7	8	9
Iowa	*	9	11	11	12	12	13	13
Kansas	*	5	7	8	9	12	17	21
Kentucky	2	*	3	*	*	*	4	5
Louisiana	3	2	3	4	4	5	7	9
Maine	*	*	*	*	*	*	*	9
Maryland	2	3	4	6	4	6	8	10
Massachusetts	6	8	11	12	15	16	17	19
Michigan	3	5	6	9	13	18	21	22
Minnesota	6	7	9	11	13	14	17	17
Mississippi	4	*	4	4	3	2	6	7
Missouri	3	5	6	6	7	8	10	10
Montana	*	*	*	*	*	*	*	3
Nebraska	*	*	*	*	12	16	18	20
Nevada	*	*	*	10	*	*	11	9
New Hampshire	*	*	6	8	10	13	15	16
New Jersey	*	4	5	4	5	6	11	16
New Mexico	*	*	*	*	*	*	*	*
New York	9	16	20	23	25	25	25	28
North Carolina	3	4	4	6	6	6	8	9
North Dakota	*	*	*	*	*	*	*	*
Ohio	4	4	4	4	5	7	9	11
Oklahoma	*	*	5	6	8	10	11	11
Oregon	2	3	4	5	7	7	9	8
Pennsylvania	5	8	10	13	14	15	16	17
Puerto Rico	0	*	*	*	*	*	*	*
Rhode Island	*	*	*	10	16	18	22	25
South Carolina	*	*	4	4	3	5	7	8
South Dakota	*	*	*	*	*	*	*	14
Tennessee	4	6	6	8	8	7	9	10
Texas	4	7	13	14	16	16	17	18
Utah	3	6	10	11	13	13	15	19
Vermont	*	*	*	*	*	*	*	*
Virgin Islands	0	0	0	0	0	0	0	0
Virginia	2	5	7	9	11	12	13	16
Washington	4	5	6	6	8	9	10	10
West Virginia	*	*	*	*	*	*	*	*
Wisconsin	5	7	8	9	11	12	13	15
Wyoming	*	*	*	*	*	*	*	*
Nationwide	4 %	6 %	8 %	9 %	10 %	11 %	13 %	15 %

Notes: Carriers with under 10,000 lines in a state were not required to report.

* Data withheld to maintain firm confidentiality.

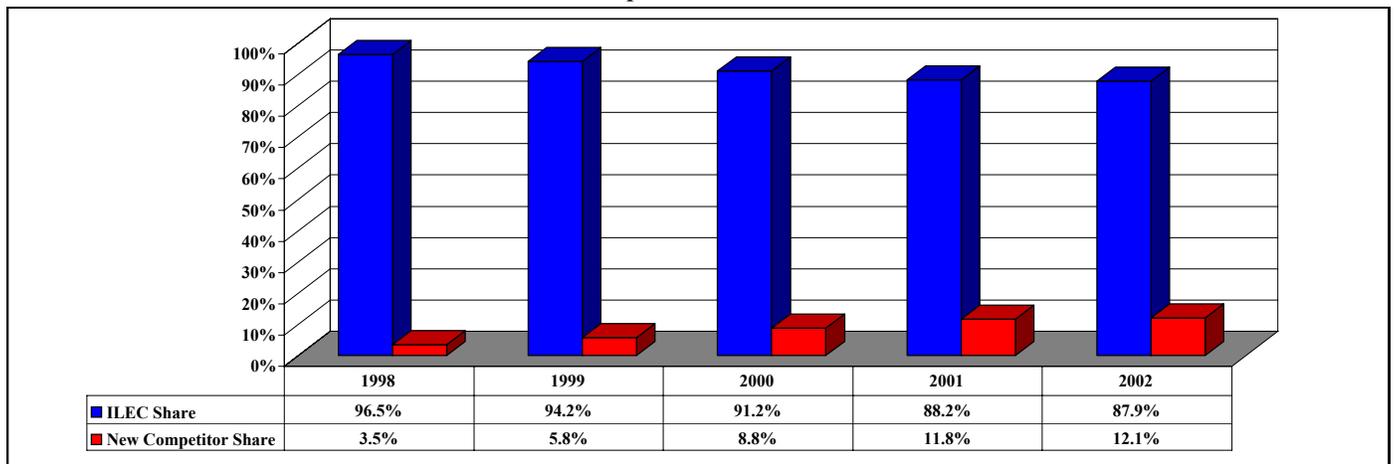
Source: Industry Analysis and Technology Division, Wireline Competition Bureau, *Local Telephone Competition: Status as of June 30, 2003* (December 2003).

Table 8.7
Nationwide Local Service Revenues and New Competitors' Share¹
(Dollar Amounts Shown in Millions)

	TRS Data				TRS & USF Data		FCC Form 499 Data			
	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
Number of Local Competitors¹										
RBOCs & Other Incumbent LECs	1,281	1,347	1,347	1,376	1,410	1,348	1,318	1,335	1,335	1,309
CAPs & CLECs	20	30	57	94	129	212	298	479	511	542
Local Resellers, Shared Tenant, Private Carriers, & Other Local All Other Carriers Reporting	NA	NA	NA	25	18	64	96	128	158	186
<u>Local Exchange Service Revenues</u>	<u>NA</u>	<u>NA</u>	<u>NA</u>	<u>74</u>	<u>109</u>	<u>133</u>	<u>143</u>	<u>229</u>	<u>168</u>	<u>176</u>
Total ²	1,301	1,377	1,404	1,569	1,666	1,757	1,855	2,171	2,172	2,213
Local Service Revenues³										
Incumbent LECs										
Bell Operating Companies ⁴	\$58,838	\$61,415	\$65,485	\$70,290	\$68,028	\$69,801	\$76,586	\$93,135	\$93,388	\$91,158
<u>Other Incumbent LECs⁴</u>	<u>20,894</u>	<u>22,507</u>	<u>24,269</u>	<u>24,899</u>	<u>24,960</u>	<u>26,989</u>	<u>26,084</u>	<u>15,166</u>	<u>17,490</u>	<u>17,590</u>
Total ⁵	79,732	83,922	89,754	95,189	92,988	96,790	102,670	108,301	110,879	108,749
Local Service Competitors										
CAPs & CLECs	174	269	595	949	1,556	2,393	4,505	7,552	10,629	10,001
Local Resellers, Shared Tenant, Private Carriers, & Other Local All Other Filers (Local Exchange Service Revenues Only) ⁵	NA	NA	NA	NA	224	329	522	914	1,395	1,644
<u>Service Revenues Only⁵</u>	<u>46</u>	<u>32</u>	<u>56</u>	<u>59</u>	<u>381</u>	<u>809</u>	<u>1,319</u>	<u>2,028</u>	<u>2,796</u>	<u>3,337</u>
Total	220	301	651	1,008	2,161	3,530	6,347	10,494	14,820	14,982
Total	\$79,952	\$84,224	\$90,405	\$96,197	\$95,149	\$100,320	\$109,016	\$118,795	\$125,698	\$123,730
Share of Local Service Revenues										
Incumbent LECs										
Bell Operating Companies	73.6%	72.9%	72.4%	73.1%	71.5%	69.6%	70.3%	78.4%	74.3%	73.7%
<u>Other Incumbent LECs</u>	<u>26.1%</u>	<u>26.7%</u>	<u>26.8%</u>	<u>25.9%</u>	<u>26.2%</u>	<u>26.9%</u>	<u>23.9%</u>	<u>12.8%</u>	<u>13.9%</u>	<u>14.2%</u>
Total	99.7%	99.6%	99.3%	99.0%	97.7%	96.5%	94.2%	91.2%	88.2%	87.9%
Local Service Competitors										
CAPs & CLECs	0.2%	0.3%	0.7%	1.0%	1.6%	2.4%	4.1%	6.4%	8.5%	8.1%
Local Resellers, Shared Tenant, Private Carriers, & Other Local Providers	NA	NA	NA	NA	0.2%	0.3%	0.5%	0.8%	1.1%	1.3%
<u>All Other Filers</u>	<u>0.1%</u>	<u>0.0%</u>	<u>0.1%</u>	<u>0.1%</u>	<u>0.4%</u>	<u>0.8%</u>	<u>1.2%</u>	<u>1.7%</u>	<u>2.2%</u>	<u>2.7%</u>
Total	0.3%	0.4%	0.7%	1.0%	2.3%	3.5%	5.8%	8.8%	11.8%	12.1%
Total Telecommunications Revenues (Including Payphone, Mobile, & Toll Service)										
Incumbent LECs ⁴	\$95,228	\$98,431	\$102,820	\$107,905	\$105,154	\$108,234	\$112,216	\$116,158	\$117,885	\$114,999
Local Competitors	191	274	637	1,012	2,481	4,034	6,508	10,945	14,781	15,309
Ratio of ILEC Total Telecommunications Revenues to Local Competitor Total Telecommunications Revenues	498 : 1	351 : 1	165 : 1	107 : 1	42 : 1	27 : 1	17 : 1	11 : 1	8 : 1	8 : 1

See notes on following page

Chart 8.5
ILEC and New Local Competitor Share of Local Service Revenues



Notes to Table 8.7.

NA - Not available.

¹ Counts for ILECs, CLECs, CAPs, local resellers, shared tenant service providers, private carriers and other local service providers are based on the numbers of filers actually reporting revenues. The category All Other Filers includes payphone mobile service, and toll providers that reported local exchange service revenues. Non-ILEC affiliates of ILECs are classified as local service competitors, not as ILECs.

² The total number of local service providers shown in Table 8.7 differs from the total fixed local service providers shown in Table 15.3 because the number shown in Table 8.7 includes filers that self identify as mobile or toll providers, but that also report some local exchange service revenues.

³ For 1993 through 1996, for most categories of carriers, local service revenues include revenues from the following TRS reporting categories: local exchange, local private line, other local services, interstate access services, and intrastate access services. The amounts shown do not include pay telephone, mobile, or toll service revenues. See also footnote three. Local service revenues for carriers that filed TRS worksheets but not universal service worksheets were estimated using 1998 TRS worksheets. These worksheets contain carrier revenue data for calendar year 1997.

⁴ Incumbent LEC local service revenues for 1996 and prior years include significant amounts of yellow pages, billing and collection, and other revenues that were reported as other local service revenues. If these revenues were included in 1997, incumbent LECs would show significant revenue growth from 1996 to 1997. Inside wire maintenance was included in local service revenues in 1997 but not thereafter.

⁵ Toll carriers typically provide resold special access and private line services as part of toll service operations. Accordingly, the table shows local exchange revenues rather than all local revenues for these carriers.

Sources: Data filed on FCC Forms 431, 457, 499-Q and 499-A worksheets. See also: Industry Analysis and Technology Division, Wireline Competition Bureau, *Telecommunications Industry Revenues* (March 2003).

Table 8.8
Telephone Numbers Ported Because Customers Changed Carriers
(By Quarter in Which They Were Most Recently Ported) ¹

Ported During Year	Ported During Quarter	Ported to a		Total Ported	
		Wireline Carrier	Wireless Carrier ²	During Quarter	Cumulative
1997	Fourth	80	0	80	80
1998	First	39	0	39	119
	Second	3,917	0	3,917	4,036
	Third	49,770	0	49,770	53,806
	Fourth	201,217	0	201,217	255,023
1999	First	304,639	0	304,639	559,662
	Second	466,774		466,774	1,026,436
	Third	548,491	0	548,491	1,574,927
	Fourth	711,606	0	711,606	2,286,533
2000	First	718,918	0	718,918	3,005,451
	Second	770,990	0	770,990	3,776,441
	Third	930,229	0	930,229	4,706,670
	Fourth	1,087,999	0	1,087,999	5,794,669
2001	First	1,155,676	0	1,155,676	6,950,345
	Second	1,377,117	0	1,377,117	8,327,462
	Third	1,412,985	20	1,413,005	9,740,467
	Fourth	1,633,090	0	1,633,090	11,373,557
2002	First	1,538,290	0	1,538,290	12,911,847
	Second	1,683,898	0	1,683,898	14,595,745
	Third	2,161,598	7	2,161,605	16,757,350
	Fourth	2,320,250	26	2,320,276	19,077,626
2003	First	1,653,736	0	1,653,736	20,731,362
	Second	1,684,216	2,368	1,686,584	22,417,946
	Third	1,748,198	833	1,749,031	24,166,977
	Fourth	1,707,379	807,802	2,515,181	26,682,158

¹ As is mentioned more thoroughly in the text, the database contains the date when the telephone number record was last updated. For most telephone numbers, this was the most recent port. For those telephone numbers affected by area code changes, however, the date refers to when the record was updated to reflect the new area code.

² Wireless portability started November 24, 2003. Numbers ported to wireless carriers before then represent carriers making test ports.

Source: Raw data from Local Number Portability Administrator (NeuStar, Inc.). Rollups performed by the Industry Analysis and Technology Division staff, Wireline Competition Bureau.

Table 8.9
Telephone Numbers Ported between Carriers
(At the End of the Quarter)

Year Quarter	Numbers Ported Due to Customers Changing Carriers
	Quantity
1999 Second	1,839,633
Third	2,658,295
Fourth	3,853,834
2000 First	5,028,858
Second	5,781,174
Third	7,595,076
Fourth	9,145,985
2001 First	10,567,098
Second	12,309,799
Third	14,609,551
Fourth	15,519,411
2002 First	16,809,924
Second	18,210,322
Third	19,862,391
Fourth	21,449,350
2003 First	22,513,143
Second	23,507,517
Third	24,572,395
Fourth	26,682,158

Source: Raw data from Local Number Portability Administrator (NeuStar, Inc.). Rollups performed by the Industry Analysis and Technology Division staff, Wireline Competition Bureau.

9 Long Distance Telephone Industry

Until the 1970s, AT&T had a virtual monopoly on long distance service in the United States. In the 1970s, competitors such as MCI and Sprint began also to offer long distance service. With the gradual emergence of competition, basic rates dropped, calling surged, and AT&T's dominance declined. The end of 1999 to the present has brought forth further changes with the Commission's approval of section 271 applications by the Bell operating companies (BOCs) to provide in-region interLATA throughout the United States.

More than 900 companies now offer wireline long distance service. These carriers remain subject to the Commission's jurisdiction. The Commission, however, has chosen to rely on competition, rather than regulation, as much as possible. Thus, the Commission forbears from regulating most aspects of long distance service.

1. Toll Revenues

In 2002, carriers providing toll service generated \$83.7 billion in toll revenues. These include toll revenues from long distance carriers, wireless toll from wireless carriers, and toll revenues from local exchange carriers. These revenues are shown in Table 9.1.

Toll calls can be divided into three jurisdictional categories - intrastate calls, domestic interstate calls, and international calls. The revenues, from 1984 through 2002, for each of the three jurisdictional categories are shown in Table 9.2 and Chart 9.1.

Toll revenues also can be divided between residential and nonresidential services, as in Table 9.3. In 2002, residential customers generated over one third of all end-user toll revenues.

2. Number of Companies

The number and types of carriers reporting long distance revenues are shown in Table 9.4. The Telecommunications Reporting Worksheet (FCC Form 499-A) requires each filer to select one of 18 categories as best describing its primary line of business. Six of these categories consist of carriers that are primarily engaged in providing long distance service and are collectively described as being toll carriers: interexchange carriers (IXCs), operator service providers (OSPs), other toll service providers, prepaid calling card providers, satellite service providers, and toll resellers.

In 2002, 932 filers selected one of the above six categories for their primary line of business and are therefore categorized as being a toll carrier.

Carrier identification codes (CICs) provide information on the number of firms seeking to acquire certain types of interconnecting arrangements with local telephone companies. Any firm that seeks to use trunk-side connections with local telephone companies is provided a carrier identification code so that traffic can be efficiently routed. CICs are four-digit codes.

CICs are currently assigned by the North American Numbering Plan Administrator (NANPA), which is part of Neustar, Inc. Further information on such codes can be found on the Internet at www.nanpa.com.

Beginning in 1986, a number of corporations, government agencies and other organizations began to acquire carrier identification codes for their own use, rather than for the purpose of providing telecommunications services to others. After that time, the use of such codes to estimate the number of long distance carriers became less reliable. We believe, however, that the number of firms obtaining these codes provides the best information available on the entry of new firms into the long distance market prior to 1986. The number of codes assigned is shown in Table 9.5.

3. Long Distance Market Shares

A generation ago, before the breakup of the Bell System, AT&T's local telephone companies provided local service to most of the United States. At the beginning of 1984, however, AT&T's local operating companies were divested in the settlement of an antitrust case.

After the AT&T divestiture, AT&T's former operating companies were restricted to providing service within their own local access and transport areas (LATAs), i.e., they were precluded from offering toll service that crossed LATA boundaries. As a result, two separate and distinct toll markets emerged.

In the first, AT&T competed with small but rapidly growing competitors for calls that crossed LATA boundaries. This market included almost all interstate and international calls and a large number of intrastate toll calls as well. A second and much smaller market consisted of short distance toll calls that did not cross LATA boundaries. This second market was dominated, at least initially, by the local exchange carriers operating within their own service territories.

Over time, the distinctions between the two markets have become blurred as customers acquired the ability to select among competing carriers for their intraLATA calls as well as their interLATA calls. The 1996 Telecommunications Act established a procedure for Bell companies to offer in-region, interLATA long distance service after complying with certain preconditions to open their own markets.

Long-term trends in toll revenues are shown in Table 9.6. Over time, AT&T and the local operating companies that provided telephone service have lost market share to new entrants. By 2002, carriers not even in existence a generation ago accounted for more than half of all long distance telephone toll revenues.

Table 9.7 shows market share information based on all long distance toll providers (excluding the incumbent local exchange carriers). AT&T's 1984 toll revenues were about 90% of those reported by all toll service providers, excluding incumbent LECs. In 1995, AT&T was classified as a non-dominant carrier and, by 2002, AT&T's revenues had declined to less than 35% of those reported by all long distance toll providers. By year-end 2002, the RBOC long

distance affiliates collectively reported toll revenues representing 7.6% of the revenues reported by all long distance toll providers.

Table 9.8 and Chart 9.2 show market-share information based on all toll revenues, including the toll revenues of the incumbent local exchange carriers.

4. Residential Toll Revenues

Bill Harvesting® data collected by TNS Telecoms (TNS) are used to calculate residential market shares. Further information on TNS and its Bill Harvesting® data can be found in Section 14 and in Appendix B. Table 9.9, which is based on this information, presents nationwide market shares of households, and direct dial intraLATA and interLATA minutes from 1995 to 2002. Chart 9.3 shows the residential market shares for the largest carriers for 2002. Table 9.10 presents market shares by region for 2002. Chart 9.4 shows residential market shares for the largest carriers for the northeast and southwest regions for 2002.

5. Section 271 Applications

Section 271 of the Communications Act required the regional Bell operating companies (RBOCs) to apply to the Commission, on a state-by-state basis, for authorization to provide in-region interLATA services. To obtain such authorization pursuant to section 271, the RBOC had to demonstrate that it satisfied the 14-point competitive checklist, that it complied with the separate affiliate and nondiscrimination requirements of section 272, and that the requested authorization was consistent with the public interest, convenience, and necessity. After a section 271 application was filed with the Commission, the Commission had 90 days to determine whether the RBOC had taken the statutorily required steps to open its local telecommunications markets to competition.

A RBOC applicant had to demonstrate either that: A) one or more unaffiliated competing providers of local telephone service to residential and business subscribers was connected to the RBOC's network, and that such local telephone service was being "offered by such competing providers either exclusively over their own telephone exchange service facilities or predominately over their own telephone exchange service facilities in combination with the resale of the telecommunications services of another carrier" (commonly referred to as "Track A"); or B) if no potential competing provider had requested to connect to a RBOC's network, the RBOC had a statement of generally available terms and conditions in place demonstrating that it is ready to allow potential competitors to connect to its facilities (commonly referred to as "Track B").

On December 22, 1999, the first regional Bell operating company's application (Bell Atlantic, which is now known as Verizon) was approved by the Commission to provide in-region interLATA service in the state of New York. On December 3, 2003, the final Bell operating company's application (Qwest) was approved to provide in-region interLATA service in the state of Arizona. Table 9.11 shows the states in which the BOCs filed section 271 applications, the date the application was filed, and the application's resolution date and outcome. Table 9.12

shows, by quarter, the number of section 271 applications approved from the end of 1999 to year-end 2003 and the percentage of lines these approvals represent. At the end of 2003, RBOC section 271 applications were authorized in forty-eight states and the District of Columbia.

The companies approved must continue to comply with the section 271 requirements. The Commission has a number of enforcement tools at its disposal, including imposing penalties or suspension of approval.

Table 9.1
Total Toll Service Revenues by Carrier
(Dollar Amounts Shown in Millions)

Company	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
AT&T Companies ¹											
AT&T Communications, Inc.	\$35,495	\$35,731	\$37,166	\$38,069	\$39,264	\$39,470	\$40,551	\$39,680	\$37,646	\$33,310	\$27,094
Alascom, Inc.	333	320	329	325							
Teleport Communications Group, Inc.					118	122	123	284	464	632	437
ACC Long Distance Corp.											
WorldCom Companies ^{2 3}											
WorldCom, Inc.							22,192	23,431	22,554	21,259	17,659 ^p
MCI Telecommunications Corp.	9,719	10,947	11,715	14,617	16,372	17,150					
WorldCom, Inc.	801	1,145	2,221	3,640	4,485	5,897					
Advanced Telecommunications Corp. (ATC)											
Metromedia Communications Corp.	369	297									
Comsystems Network Services	135	116									
Wiltel, Inc.	494	664	917								
MFS Intelenet, Inc.				118	122						
Intermedia Communications, Inc.							380	516	444		
Sprint Companies ^{4 5}											
Sprint Corporation	5,658	6,139	6,805	7,277	7,944	8,595	7,994	9,708	9,038	8,424	7,077
Qwest Companies ⁶											
LCI Int'l Telecom Corp. d/b/a Qwest Comm. Svcs. *	243	317	453	671	1,103	1,001	1,664	1,394	1,271	871	
Qwest Communications Corp. *							320	517	1,773	2,309	3,202
USLD Communications, Inc. *		100	136	155	188	241	279	216			
Global Crossing Companies ⁷											
Global Crossing Telecommunications, Inc.	376	436	568	827	1,119	775	874	874	801	817	786
Global Crossing Bandwidth, Inc.			144	127		324	539	692	1,555	1,225	1,312
Global Crossing North American Networks, Inc.	168	213	306	309	323	223			196		
Frontier Comm. - North Central Region, Inc.			123	133	121						
International Exchange Ntwks, Ltd. (IXnet, Inc.)									131		
IDT Corporation							376	850	945	1,303	1,532
Verizon Companies											
Bell Atlantic Comm, Inc. d/b/a Verizon Long Dist. *									130	864	1,433
Verizon Select Services, Inc.						340	607	834	1,004	509	
VarTec Telecom, Inc. ⁸			107	125	470	820	836	819	923	947	793
Excel Telecommunications, Inc.			156	363	1,091	1,179	1,219	942	703	611	427
eMeritus Communications, Inc.			215	429	379	264	260	169			
Long Distance Wholesale Club					176	121	131				
SBC Companies											
Southwestern Bell Communications Svcs., Inc. *										449	729
SNET America, Inc. *						142	162	186	189	177	158
Wiltel Communications, LLC ⁹						227	126	184	413	593	737
Cincinnati Bell, Inc., f/k/a Broadwing Inc., Cos. ¹⁰											
Broadwing Communications Services, Inc.						258	724	453	574	676	413
Broadwing Telecommunications, Inc.								150	202	349	285
BellSouth Long Distance, Inc. *										294	486
Cable & Wireless USA, Inc. ¹¹	495	557	654	700	919	1,066	953	913	770	598	399
McLeodUSA Telecommunications, Inc. ¹²								232	448	463	358
ITC^DeltaCom Communications, Inc. ¹³							122	172	270	259	311
Teleglobe USA, Inc.							275	557	282	208	269
Touch America, Inc. ¹⁴									140	476	260
Business Telecom, Inc. ¹⁵				115	149	195	212	260	271	286	251
Americatel Corporation								129	188	269	246
Evercom Systems, Inc.								205	206	245	239
General Communication, Inc.		92	106	120	143	158	175	184	211	238	227
Electric Lightwave, Inc.									145	227	180
ALLTEL Communications, Inc. (ACI)								120	175	174	160
Talk America, Inc. f/k/a Talk.com Holding Corp.				180	232	305	426	398	428	249	160
Equant, Inc.										183	151
Norlight Telecommunications, Inc.									119	142	140
Level 3 Communications, LLC										160	131
Cox California Telcom, LLC d/b/a Cox Comm											130
Other Toll, Wireless and CLECs ^{16 17}	7,843	11,694	8,982	9,997	13,725	11,705	14,106	15,131	18,390	13,732	10,636
Total Toll Carriers Excluding ILECs	62,129	68,768	71,103	78,297	88,443	90,578	95,626	100,200	102,999	93,528	78,808
Bell Incumbent Local Exchange Operating Cos.	9,718	9,849	9,527	8,189	7,950	7,138	6,857	6,182	5,865	5,084	4,365
BellSouth Telecommunications, Inc.									466	412	341
Qwest Communications, Inc.									374	264	175
SBC Communications, Inc.									2,748	2,420	2,182
Verizon Communications, Inc.									2,278	1,988	1,668
Other Incumbent Local Telephone Cos. ¹⁷	3,897	3,908	3,848	3,143	3,298	3,077	2,572	1,864	751	688	523
Total Incumbent Local Exchange Carriers	13,615	13,757	13,375	11,332	11,248	10,215	9,429	8,046	6,617	5,772	4,889
Total Toll Service Revenues	\$75,744	\$82,525	\$84,478	\$89,629	\$99,691	\$100,793	\$105,055	\$108,246	\$109,615	\$99,300	\$83,697

Note: Total toll service revenues include intrastate, interstate and international toll revenues. Also, some numbers for previous years have been revised for consistency with other reports.

In addition, CLECs have now been included with other toll.

See notes following Table 1.6.

^p - preliminary

* Regional Bell operating company long distance subsidiaries.

Notes for Table 9.1.

NA - Not Available.

* Regional Bell operating company long distance affiliates.

¹ ACC Long Distance Corp. and Teleport Communications Group merged in April of 1998, and the combined company, Teleport Communications Group, merged with AT&T Communications, Inc., in July of that year. AT&T Communications acquired Alascom, Inc., August 7, 1995 and began filing a consolidated revenue statement in 1996.

² On July 21, 2002, WorldCom, Inc., and certain of its direct and indirect U.S. subsidiaries filed voluntary petitions for relief under Chapter 11 of Title 11 of the United States Code in the United States Bankruptcy Code in the United States Bankruptcy Court for the Southern District of New York and continued in the possession of their assets and the management of their business. Their Plan of Reorganization was confirmed by the Bankruptcy Court on October 31, 2003.

³ MCI WorldCom's revenues were revised for 1998 to exclude enhanced services and to be consistent with revenues reported for 1999. WorldCom, Inc., completed a merger with MCI Communications Corp. in September of 1998 and filed 1998 revenue figures for the combined company, MCI WorldCom, Inc. LDDS Communications, Inc., and Advanced Telecommunications Corp. merged in 1992. In 1993, LDDS merged with Metromedia Comm Corp. and Comsystems Network Services. For 1993, only the revenues that were received after the merger are included in LDDS's revenues; those preceding the merger are listed individually. LDDS and Wiltel merged January 5, 1995. In May 1995, LDDS changed its name to WorldCom, Inc. WorldCom acquired MFS Intelnet December 31, 1996. On July 1, 2001, WorldCom acquired Intermedia Communications, Inc.

⁴ Sprint's revenues were revised for 1998 to exclude enhanced services and to be consistent with revenues reported for 1999.

⁵ In July 1986, GTE Sprint and US Telecom merged into US Sprint. United Telecommunications, Inc., then majority owner of US Sprint, purchased the remaining interest from GTE in July of 1992. Effective February 16, 1992, the company's name became Sprint Communications Co.

⁶ LCI International Telecom Corp. and USLD Communications, Inc., merged in December of 1997 and filed separate statements for the year. Qwest Communications Corp. merged with LCI and USLD Communications in June of 1998, and each of the three affiliated companies filed a separate revenue statement for 1998.

⁷ On January 28, 2002, Global Crossing Holdings, Ltd. and certain subsidiaries and affiliates filed a voluntary petition in the United States Bankruptcy Court for the Southern District of New York and continued in the possession of their assets and the management of their business. Global Crossing's Plan of Reorganization was confirmed by the Bankruptcy Court on December 26, 2002.

⁸ VarTec acquired Excel Telecommunications on April 8, 2002.

⁹ On April 22, 2002, Williams Communications Group, Inc., the parent company of Williams Communications LLC, filed a voluntary petition for reorganization under Chapter 11 of the U.S. Bankruptcy Code in the U.S. Bankruptcy Court for the Southern District of New York. Effective October 15, 2002 upon completion of its financial restructuring Williams Communications Group, Inc. emerged from Chapter 11 bankruptcy proceedings as Wiltel Communications Group, Inc.

¹⁰ Cincinnati Bell Inc., merged with IXC Communications, Inc. on November 9, 1999 and soon began doing business as Broadwing, Inc. The corporate name was changed from Broadwing back to Cincinnati Bell, Inc. on May 27, 2003.

¹¹ As part of its process of exiting the U.S. retail voice business, Cable and Wireless plc entered into a definitive agreement on September 16, 2002 to transfer its U.S. retail customer base to a wholly-owned subsidiary of Primus Telecom pending regulatory approval.

¹² On January 31, 2002, McLeodUSA Incorporated, the parent company, filed voluntary petitions for relief under Chapter 11 of the United States Bankruptcy Code in the United States Bankruptcy Court for the District of Delaware. On April 16, 2002, McLeodUSA, Inc. emerged from the Bankruptcy court proceeding pursuant to the terms of its amended plan of reorganization.

¹³ On June 25, 2002, ITC^DeltaCom, Inc. filed a voluntary petition for relief under Chapter 11 of the U.S. Bankruptcy Code in the United States Bankruptcy Court for the District of Delaware. On October 29, 2002, the company consummated a plan of reorganization.

¹⁴ On June 19, 2003, Touch America Holdings, Inc., the parent company, and all of its subsidiaries filed a voluntary petition for relief under Chapter 11 of the United States Bankruptcy Code in the United States Bankruptcy Court for the District of Delaware.

¹⁵ Data for 1996 taken from the Annual Report to the Colorado Public Utilities Commission from telecommunications carriers regulated pursuant to §40-15-301 C.R.S.

¹⁶ Includes wireless toll service revenues reported by wireless carriers and toll service revenues reported by CLECs.

¹⁷ Estimated by FCC staff.

Source: The revenue information for the larger long distance telephone companies, shown in Table 1.4, is reported annually to the FCC in response to 47 C.F.R. § 43.21(c). The revenue information for large local exchange telephone companies is based on annual ARMIS (Automated Reporting Management Information System) USOA reports (FCC Reports 43-02). The Commission also collects revenue information on FCC Form 499-A, Telecommunications Reporting Worksheet, and, in previous years, on FCC Form 431, Telecommunications Relay Service Worksheet, and FCC Form 457, Universal Service Worksheet. Revenues for carriers not subject to section 43.21 or ARMIS reports are estimated by FCC staff based on carriers' filings of FCC Forms 431, 457, and 499-A.

Table 9.2
Intrastate, Interstate, and International Toll Revenues
(Dollar Amounts Shown in Millions)

Year	Toll Revenues			Total Toll Revenues	As Percentage of Total Toll Revenues		
	Intrastate	Domestic Interstate	International		Intrastate	Domestic Interstate	International
1984	\$20,872	\$26,490	\$3,794	\$51,156	40.8 %	51.8 %	7.4 %
1985	22,310	28,387	4,119	54,815	40.7	51.8	7.5
1986	23,734	29,123	4,611	57,468	41.3	50.7	8.0
1987	25,339	27,844	5,336	58,519	43.3	47.6	9.1
1988	26,542	29,724	6,334	62,600	42.4	47.5	10.1
1989	28,060	30,585	7,379	66,024	42.5	46.3	11.2
1990	27,652	30,676	8,464	66,792	41.4	45.9	12.7
1991	27,149	31,331	10,078	68,558	39.6	45.7	14.7
1992	27,066	33,719	11,199	71,983	37.6	46.8	15.6
1993	28,158	34,661	12,470	75,290	37.4	46.0	16.6
1994	28,496	38,262	13,968	80,726	35.3	47.4	17.3
1995	29,147	39,903	16,425	85,475	34.1	46.7	19.2
1996	32,023	42,823	18,515	93,361	34.3	45.9	19.8
1997	32,859	47,716	20,218	100,793	32.6	47.3	20.1
1998	34,699	48,100	22,256	105,055	33.0	45.8	21.2
1999	33,600	54,483	20,163	108,246	31.0	50.4	18.6
2000	33,030	53,055	23,530	109,615	30.1	48.4	21.5
2001	29,530	50,236	19,535	99,301	29.7	50.6	19.7
2002	25,771	42,962	14,277	83,697	30.8	51.3	17.9

Source: Industry Analysis and Technology Division, Wireline Competition Bureau, *Telecommunications Industry Revenues* (March 2004).

Chart 9.1
Toll Revenues by Market Segment
(Dollar Amounts Shown in Billions)

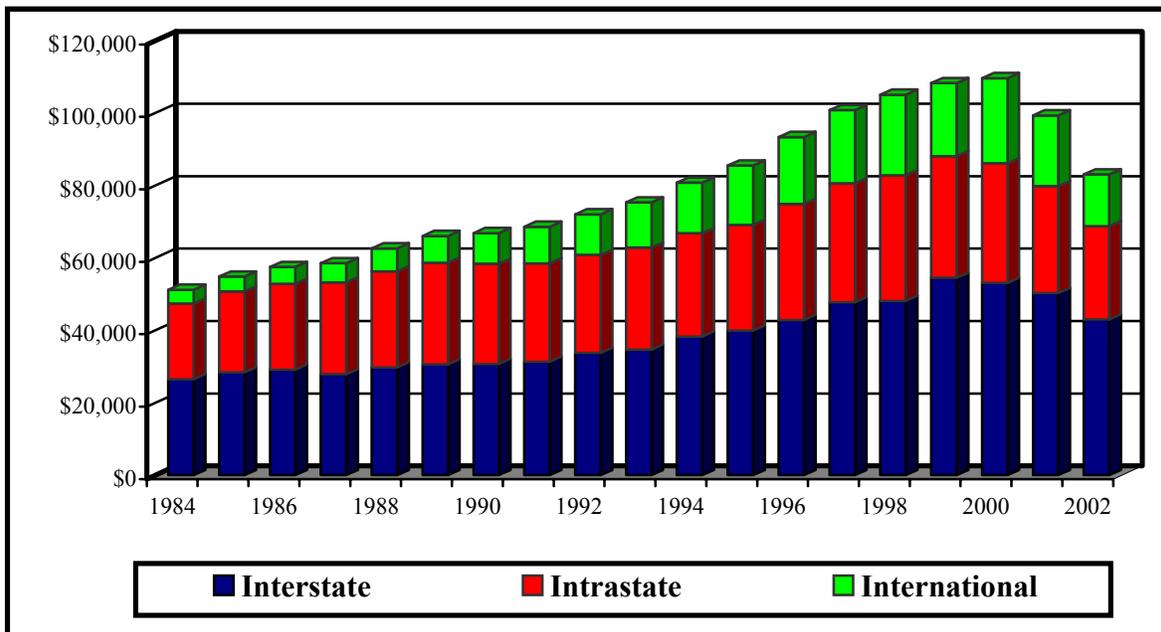


Table 9.3
End-User Toll Revenues
(Dollar Amounts Shown in Millions)

Year	Residential Toll as a Percentage of all End-User Toll Revenues 1/	End-User Toll Revenues 2/	End-User Toll Revenues By Customer Type	
			Residential	Other
1995	47 %	\$74,463	\$34,756	\$39,706
1996	46	81,333	37,096	44,237
1997	46	87,807	40,403	47,404
1998	45	87,845	39,241	48,603
1999	42	93,311	38,828	54,483
2000	37	87,767	32,682	55,085
2001	34	79,302	26,883	52,419
2002	33	67,222	22,256	44,966

1/ Staff estimates are based on market segment data in carrier annual reports to shareholders; average household payments to long distance carriers shown in Table 3.2; and residential toll revenues published by the U.S. Census Bureau in the *Service Annual Survey: 2002*, Table 3.3.11, and previous reports.

2/ Toll services are telecommunications services that enable customers to communicate outside of local exchange calling areas. Toll service revenues include revenues from ordinary long distance, subscriber toll-free, operator service, prepaid calling card, long distance private line, satellite services, and other long distance services. End-user toll revenues consist of toll service revenues from end-user customers, governments, non-profits, *de minimis* resellers, and any other customer that does not contribute directly to universal service.

Source: End-user toll revenues for 1997 through 2002 are taken from Industry Analysis and Technology Division, Wireline Competition Bureau, *Telecommunications Industry Revenues* (March 2004), and previous editions. Figures for 1995 and 1996 are staff estimates.

**Table 9.4
Number of Toll Service Providers**

	TRS Data					TRS & USF Data		FCC Form 499-A Data			
	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
Carriers That Provide Toll Service 1/											
Toll Carriers											
Interexchange Carriers (IXCs)	87	83	97	130	149	151	171	178	212	233	229
Other Toll Carriers											
Operator Service Providers (OSPs)	43	35	29	25	27	32	24	15	20	19	18
Pre-paid Calling Card Providers	NA	NA	NA	8	16	18	20	18	23	27	27
Satellite Service Providers	NA	NA	NA	NA	22	13	13	17	25	34	33
Toll Resellers	178	171	206	260	345	340	388	406	493	558	574
Other Toll Service Providers	<u>15</u>	<u>32</u>	<u>34</u>	<u>30</u>	<u>28</u>	<u>15</u>	<u>31</u>	<u>17</u>	<u>35</u>	<u>69</u>	<u>51</u>
Total Toll Service Providers	323	321	366	453	587	569	647	651	808	940	932
Fixed Local Service, Payphone, and Mobile Service Filers with Toll Service Revenues	NA	NA	NA	NA	NA	1,537	1,740	1,870	1,678	1,884	1,602
All Toll Service Providers	NA	NA	NA	NA	NA	2,106	2,387	2,521	2,486	2,824	2,534

NA - Not available.

1/ Counts of toll carriers represent the numbers of filers that reported telecommunications revenues and that identified themselves using a toll carrier category. Filers that identified themselves as Fixed Local Service, Payphone, and Mobile Service providers were counted as toll providers only if they reported toll service revenues.

Sources: Data filed on FCC Forms 431, 457, and 499-A worksheets. See also: Industry Analysis and Technology Division, Wireline Competition Bureau, *Telecommunications Industry Revenues* (March 2004) and *Telecommunications Provider Locator* (February 2004), available at <http://www.fcc.gov/wcb/stats>.

Table 9.5
Number of Carrier Identification Codes (CICs)
Assigned by the North American Numbering Plan Administrator

Year	Quarter	Number of CICS Assigned	Year	Quarter	Number of CICs Assigned	
					FGB	FGD
1982	First Quarter	11	1993	First Quarter	694 ²	709
	Second Quarter	13		Second Quarter	738	746
	Third Quarter	13		Third Quarter	739	760
	Fourth Quarter	11		Fourth Quarter	753	796
1983	First Quarter	15	1994	First Quarter	781	815
	Second Quarter	25		Second Quarter	795	845
	Third Quarter	33		Third Quarter	805	899 ³
	Fourth Quarter	42		Fourth Quarter	819	947
1984	First Quarter	54	1995	First Quarter	829	1,016
	Second Quarter	86 ¹		Second Quarter	832	1,082
	Third Quarter	121		Third Quarter	843	1,146
	Fourth Quarter	155		Fourth Quarter	852	1,209
1985	First Quarter	182	1996	First Quarter	865	1,253
	Second Quarter	212		Second Quarter	876	1,300
	Third Quarter	236		Third Quarter	875	1,315
	Fourth Quarter	256		Fourth Quarter	878	1,337
1986	First Quarter	276	1997	First Quarter	882	1,395
	Second Quarter	331		Second Quarter	896	1,427
	Third Quarter	361		Third Quarter	908	1,481
	Fourth Quarter	413		Fourth Quarter	909	1,538
1987	First Quarter	444	1998	First Quarter	943	1,557
	Second Quarter	495		Second Quarter	937	1,614
	Third Quarter	530		Third Quarter	943	1,671
	Fourth Quarter	573		Fourth Quarter	952	1,721
1988	First Quarter	602	1999	First Quarter	949	1,842
	Second Quarter	621		Second Quarter	953	1,909
	Third Quarter	601		Third Quarter	954	1,980
	Fourth Quarter	639		Fourth Quarter	956	2,032
1989	First Quarter	685	2000	First Quarter	958	2,093
	Second Quarter	714		Second Quarter	958	2,142
	Third Quarter	730		Third Quarter	937	2,181
	Fourth Quarter	747		Fourth Quarter	911	2,203
1990	First Quarter	774	2001	First Quarter	897	2,232
	Second Quarter	794		Second Quarter	885	2,225
	Third Quarter	817		Third Quarter	876	2,259
	Fourth Quarter	791		Fourth Quarter	853	2,237
1991	First Quarter	745	2002	First Quarter	838	2,231
	Second Quarter	766		Second Quarter	835	2,230
	Third Quarter	783		Third Quarter	838	2,259
	Fourth Quarter	807		Fourth Quarter	836	2,292
1992	First Quarter	786	2003	First Quarter	834	2,349
	Second Quarter	831		Second Quarter	831	2,389
	Third Quarter	840		Third Quarter	829	2,427
	Fourth Quarter	886		Fourth Quarter	821	2,428
			2004	First Quarter	816	2,452

Note: Carrier identification codes (CICs) are used to route and bill calls in the public switched telephone network. CICs are four-digit codes in the format XXXX, where X is any digit from 0 through 9. Entities connect their facilities to access provider's facilities using several different access arrangements, the common ones being Feature Group B (FGB) and Feature Group D (FGD).

¹ Conversion from 2-digit to 3-digit codes.

² Conversion from 3-digit to 4-digit codes.

³ Includes both 3-digit and 4-digit codes.

Source: North American Numbering Plan Administrator

Table 9.6
Toll Revenues of Toll Service Providers and Local Exchange Carriers
(Dollar Amounts Shown in Millions)

Year	Toll Carriers				Local Exchange Carriers		Total Industry Toll Revenues
	AT&T ¹	MCI ²	Sprint	Other Toll Carriers Including Wireless and CLECs ³	Incumbent Local Exchange Carriers		
					Regional Bell Operating Companies	Other Incumbent Local Exchange Carriers	
1984	\$34,935	\$1,761	\$1,052	\$1,007	\$9,037	\$3,364	\$51,156
1985	36,770	2,331	1,509	2,020	9,026	3,159	54,815
1986	36,514	3,372	1,141	3,568	9,599	3,274	57,468
1987	35,219	3,938	2,592	3,034	10,268	3,468	58,519
1988	35,407	4,886	3,405	3,789	10,668	4,445	62,600
1989	34,549	6,717	4,320	5,598	10,549	4,291	66,024
1990	33,880	7,392	5,041	5,789	10,578	4,112	66,792
1991	34,384	8,266	5,378	6,415	10,066	4,049	68,558
1992	35,495	10,520	5,658	10,456	9,718	3,897	75,744
1993	35,731	12,092	6,139	14,806	9,849	3,908	82,525
1994	37,166	13,936	6,805	13,196	9,527	3,848	84,478
1995	38,394	16,564	7,277	16,062	8,189	3,143	89,629
1996	39,264	20,979	7,944	20,256	7,950	3,298	99,691
1997	39,470	23,047	8,595	19,466	7,138	3,077	100,793
1998	40,674	22,192	7,994	24,766	6,857	2,572	105,055
1999	39,964	23,431	9,708	27,097	6,182	1,864	108,246
2000	38,110	22,554	9,038	33,297	5,865	751	109,615
2001	33,942	21,259	8,424	29,903	5,084	688	99,300
2002	27,531	17,659 <i>p</i>	7,077	26,542	4,365	523	83,697

p - preliminary.

¹ AT&T's revenues include the long distance revenues of Alascom (acquired in 1995) and Teleport Communications Group (including ACC Long Distance Corporation) which merged with AT&T in July of 1998.

² LDDS revenues are included beginning in 1992.

³ Includes the in-region Regional Bell Operating Companies' long distance affiliates which began operations in 2000. Also includes wireless toll revenues reported by wireless carriers and toll revenues reported by competitive local exchange carriers. See Table 9.1

Source: See Notes to Table 9.1.

Table 9.7
Shares of Total Toll Service Revenues
All Long Distance Toll Providers, Excl. Incumbent LECs

Year	AT&T	MCI	Sprint	BellSouth ¹	Qwest ¹	SBC ¹	Verizon ¹	All Other Toll Carriers, Wireless and CLECs ²
				Excludes Incumbent Local Exchange Carriers' Operating Companies				
1984	90.1 %	4.5 %	2.7 %					2.6 %
1985	86.3	5.5	2.6					5.6
1986	81.9	7.6	4.3					6.3
1987	78.6	8.8	5.8					6.8
1988	74.6	10.3	7.2					8.0
1989	67.5	12.3	8.4					11.8
1990	65.0	14.5	9.7					10.8
1991	63.2	15.6	9.9					11.3
1992	57.7	16.9	9.1					16.3
1993	52.4	17.6	8.9					21.1
1994	52.7	19.6	9.6					18.1
1995	49.0	23.3	9.3					18.4
1996	44.4	23.6	9.0					23.0
1997	43.6	25.4	9.5					21.5
1998	42.4	23.2	8.4					26.0
1999	39.9	23.4	9.7					27.0
2000	37.0	21.9	8.8		3.0 %	0.2 %	1.1 %	28.1
2001	36.3	22.7	9.0	0.3 %	3.4	0.7	1.5	26.1
2002	34.9	22.4	9.0	0.6	4.1	1.1	1.8	26.1

¹ Figures reported by RBOC long distance affiliates, which may include both in-region and out-of-region long distance service. Some of the RBOC long distance affiliates' revenues fall below the reporting threshold and are therefore included in the all other long distance carriers' market share.

² Includes wireless toll service revenues reported by wireless carriers and toll service revenues reported by competitive local exchange carriers. Excludes toll revenues reported by incumbent local exchange carriers.

Table 9.8
Shares of Total Toll Service Revenues
All Long Distance Toll Providers *

Year	AT&T	MCI	Sprint	BellSouth ¹	Qwest ¹	SBC ¹	Verizon ¹	Bell Incumbent Local Exchange Carriers	Other Incumbent Local Telephone Companies	All Other Toll Carriers, Wireless and CLECs ²
				Includes Incumbent Local Exchange Carriers' Operating Companies						
1984	68.3 %	3.4 %	2.1 %					17.7 %	6.6 %	2.0 %
1985	67.1	4.3	2.0					16.5	5.8	4.4
1986	63.5	5.9	3.3					16.7	5.7	4.9
1987	60.2	6.7	4.4					17.5	5.9	5.2
1988	56.6	7.8	5.4					17.0	7.1	6.1
1989	52.3	9.5	6.5					16.0	6.5	9.1
1990	50.7	11.3	7.5					15.8	6.2	8.4
1991	50.2	12.5	7.8					14.7	5.9	9.0
1992	47.3	13.9	7.5					12.8	5.1	13.4
1993	43.7	14.7	7.4					11.9	4.7	17.6
1994	44.4	16.5	8.1					11.3	4.6	15.2
1995	42.8	20.4	8.1					9.1	3.5	16.0
1996	39.4	20.9	8.0					8.0	3.3	20.4
1997	39.2	22.9	8.5					7.1	3.1	19.3
1998	38.6	21.1	7.6					6.5	2.5	23.7
1999	36.9	21.7	9.0					5.7	1.7	25.0
2000	34.8	20.6	8.3	0.4 %	3.1 %	2.7 %	3.1 %	NA	0.7	26.4
2001	34.2	21.4	8.5	0.7	3.5	3.1	3.4	NA	0.7	24.6
2002	32.9	21.1	8.5	1.0	4.0	3.7	3.7	NA	0.6	24.5

NA - Not applicable

* Includes incumbent local exchange carriers and competitive local exchange carriers.

¹ Figures reported by RBOC long distance affiliates, which may include both in-region and out-of-region long distance service, and local exchange operating companies for the years 2000 and 2001. Some of the RBOC long distance affiliates' revenues fall below the reporting threshold and are therefore included in the all other long distance carriers' market share.

² Includes wireless toll service revenues reported by wireless carriers and toll service revenues reported by competitive local exchange carriers.

Chart 9.2
Market Shares of Three Largest Long Distance Toll Providers
Including ILECs, CLECs and Wireless Carriers

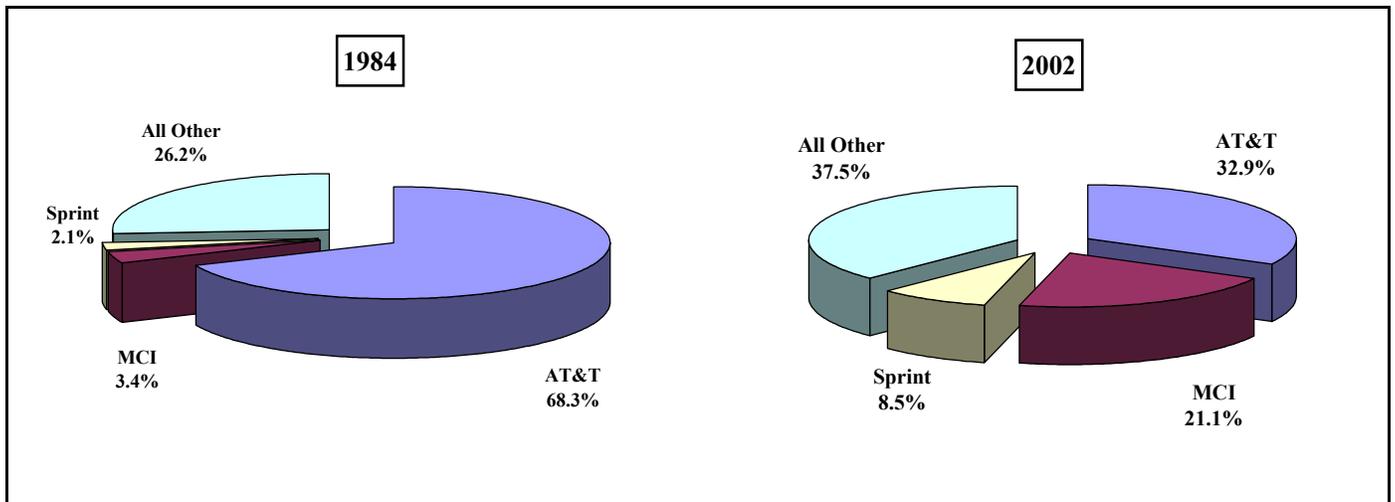
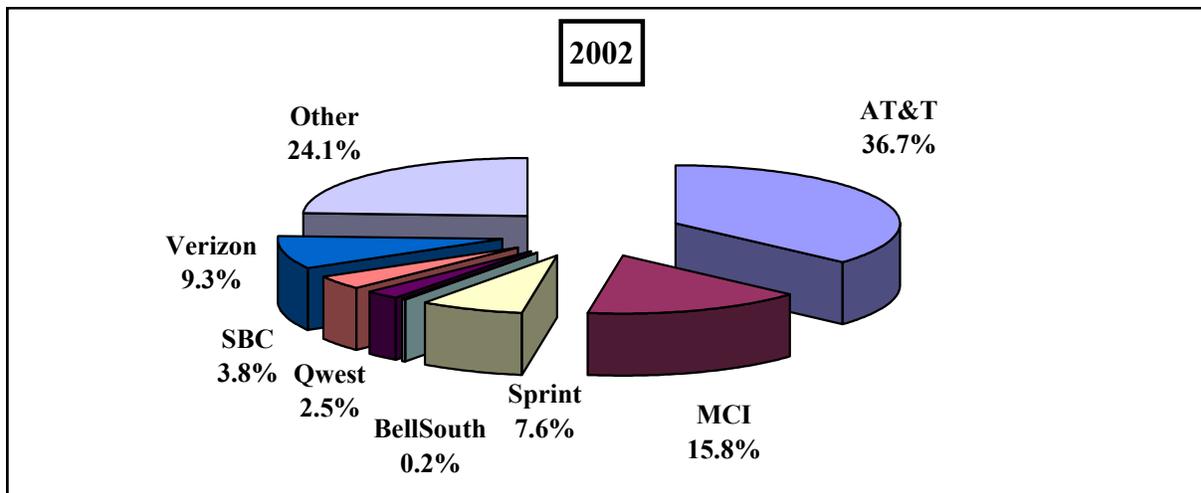


Table 9.9
Residential Market Shares
(1995 - 2002)

	AT&T ¹	MCI ²	Sprint	BellSouth ³	Qwest ⁴	SBC ⁵	Verizon ⁶	Other ⁷
Households⁸								
1995	74.6 %	13.0 %	4.2 %	(7) %	(7) %	(7) %	(7) %	8.2 %
1996	69.9	14.1	5.0	(7)	(7)	(7)	(7)	11.0
1997	67.2	13.2	5.7	(7)	(7)	(7)	(7)	13.8
1998	62.6	15.1	5.7	(7)	(7)	(7)	(7)	16.6
1999	62.5	16.0	6.2	(7)	(7)	(7)	(7)	15.4
2000	51.1	18.0	6.6	0.1	1.6	1.0	4.6	17.0
2001	42.3	18.5	6.8	0.1	2.9	2.6	6.7	20.0
2002	36.7	15.8	7.6	0.2	2.5	3.8	9.3	24.1
Direct Dial IntraLATA Minutes								
1995	8.9 %	2.4 %	4.6 %	(7) %	(7) %	(7) %	(7) %	84.1 %
1996	9.5	5.4	4.4	(7)	(7)	(7)	(7)	80.6
1997	13.9	6.7	3.7	(7)	(7)	(7)	(7)	75.7
1998	15.6	8.7	3.8	(7)	(7)	(7)	(7)	71.8
1999	16.9	12.0	3.6	(7)	(7)	(7)	(7)	67.5
2000	17.3	12.8	5.0	1.6	5.0	18.6	18.0	21.7
2001	15.4	13.2	4.8	1.4	4.3	17.9	17.6	25.3
2002	14.0	11.8	4.8	1.1	2.9	18.5	16.3	30.7
Direct Dial InterLATA Minutes								
1995	69.5 %	16.1 %	5.8 %	(7) %	(7) %	(7) %	(7) %	8.6 %
1996	62.5	15.9	7.1	(7)	(7)	(7)	(7)	14.5
1997	62.4	14.9	6.5	(7)	(7)	(7)	(7)	16.2
1998	58.4	17.0	6.5	(7)	(7)	(7)	(7)	18.1
1999	53.2	20.9	6.6	(7)	(7)	(7)	(7)	19.3
2000	44.7	22.0	7.3	0.1	1.6	0.5	2.5	21.3
2001	36.3	20.5	7.6	0.1	1.9	1.8	3.6	28.1
2002	31.2	18.1	9.0	0.3	1.6	3.1	5.6	31.0

Chart 9.3
Residential Market Shares



Notes for Table 9.9

Note: Market shares are estimates based on sample data. Shares for past years have been revised to take into account mergers and acquisitions and changes in methodology.

¹ AT&T Long Distance, Lucky Dog Phone Co. and ACC Long Distance

² MCI Long Distance, Telecom USA, Touch 1, TTI National, LDDS WorldCom and WorldCom Network Service

³ BellSouth Long Distance and BellSouth Public Communications

⁴ Qwest and U S WEST Long Distance

⁵ Ameritech Communications, Ameritech 800, Pacific Bell, Southwest Long Distance, SBC Long Distance and SNET All Distance

⁶ Bell Atlantic Long Distance, NYNEX/Bell Atlantic North, Verizon Select Services and GTE

⁷ Until 2000, the regional Bell operating companies are not broken out of the "Other" category.

⁸ Each household is assumed to have a single access line (for 2001, only about 8% of households in the sample have more than one access line). These lines are allocated across carriers based on the household's primary long distance carrier which is imputed by the provider of the data, TNS Telecoms. In 1995, 1996, 1999, 2000 and 2001, TNS defined the household's primary long distance carrier. In 1997, a household's primary long distance carrier was determined based on calls made through long distance carriers, and in 1998, a household's primary long distance carrier was determined based on interLATA calls.

Source: Calculated by Industry Analysis and Technology Division staff using survey data from TNS Telecoms *ReQuest Market Monitor*™, *Bill Harvesting*®.

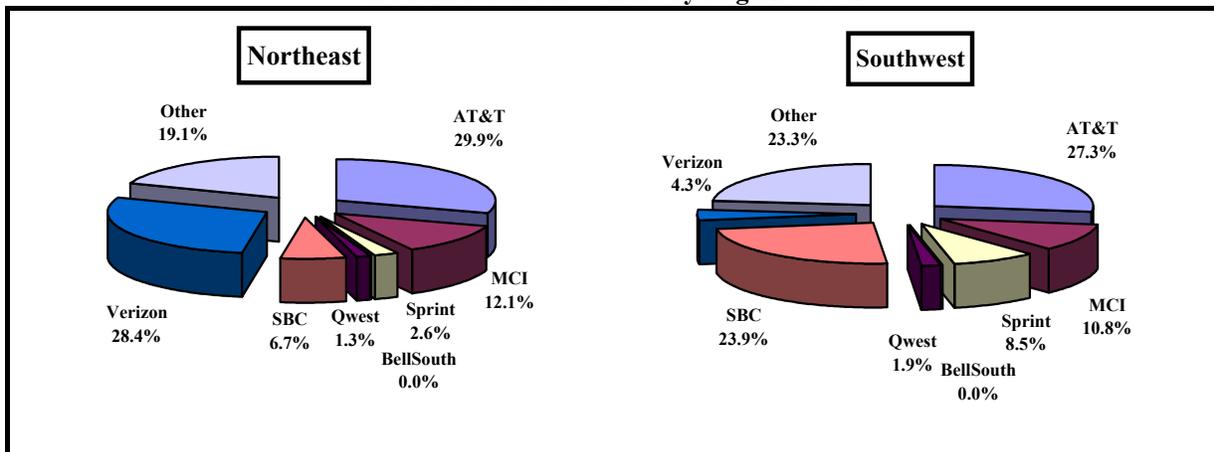
Table 9.10
Residential Market Share
By Region: 2002

Region ¹	AT&T ²	MCI ³	Sprint	BellSouth ⁴	Qwest ⁵	SBC ⁶	Verizon ⁷	Other ⁸	Sample Size
Households									
Southeast	41.3 %	16.6 %	10.9 %	1.2 %	2.1 %	0.1 %	5.4 %	22.4 %	5,895
West	33.9	18.1	6.6	0.0	4.6	0.0	4.0	32.8	4,634
West Coast	39.5	17.3	8.1	0.0	2.2	0.7	10.7	21.5	2,911
Mid-Atlantic	39.2	18.2	7.1	0.0	2.2	0.0	11.7	21.8	4,385
Mid-West	40.9	15.4	7.2	0.0	2.8	0.3	7.9	25.5	5,329
Northeast	29.9	12.1	2.6	0.0	1.3	6.7	28.4	19.1	3,042
Southwest	27.3	10.8	8.5	0.0	1.9	23.9	4.3	23.3	3,692
Total	36.7 %	15.8 %	7.6 %	0.2 %	2.5 %	3.8 %	9.3 %	24.1 %	29,888
Direct Dial IntraLATA Minutes									
Southeast	13.5 %	13.4 %	14.2 %	13.4 %	0.6 %	0.0 %	4.3 %	40.6 %	72,005
West	16.4	16.2	4.7	0.0	16.4	0.0	3.0	43.3	108,717
West Coast	10.1	13.5	2.6	0.0	3.1	41.4	14.2	15.2	164,022
Mid-Atlantic	10.1	9.9	5.3	0.0	0.4	0.0	46.7	27.7	196,626
Mid-West	15.3	10.5	4.4	0.0	0.5	27.9	6.8	34.4	171,491
Northeast	29.7	16.9	0.8	0.0	0.7	7.8	13.0	30.9	76,202
Southwest	11.7	5.7	4.7	0.0	0.3	40.3	3.2	34.1	111,422
Total	14.0 %	11.8 %	4.8 %	1.1 %	2.9 %	18.5 %	16.3 %	30.7 %	900,484
Direct Dial InterLATA Minutes									
Southeast	33.6 %	17.5 %	14.2 %	1.4 %	1.9 %	0.0 %	3.6 %	27.8 %	398,307
West	29.0	22.8	8.2	0.0	0.0	0.0	1.7	38.2	258,900
West Coast	31.6	19.0	9.1	0.0	2.6	0.3	6.8	30.6	231,347
Mid-Atlantic	34.7	20.5	8.7	0.0	2.6	0.0	3.9	29.5	282,984
Mid-West	31.0	18.7	6.7	0.0	1.7	0.0	6.0	35.9	296,070
Northeast	32.8	12.8	4.2	0.0	0.9	6.2	19.2	23.9	187,217
Southwest	24.0	13.3	8.1	0.0	1.5	19.9	2.7	30.4	226,761
Total	31.2 %	18.1 %	9.0 %	0.3 %	1.6 %	3.1 %	5.6 %	31.0 %	1,881,586

Note: Market shares are estimates based on sample data. For footnotes, please see the next page.

Source: Calculated by Industry Analysis and Technology Division staff using survey data from TNS TelecomsReQuest Market Monitor™, Bill Harvesting®.

Chart 9.4
Residential Market Share by Region: 2002



Notes for Table 9.10

¹ Southeast: Alabama, Florida, Georgia, Kentucky, Louisiana, Mississippi, North Carolina, South Carolina and Tennessee

West: Arizona, Colorado, Idaho, Iowa, Minnesota, Montana, Nebraska, New Mexico, North Dakota, Oregon, South Dakota, Utah, Washington and Wyoming

West Coast: California and Nevada

Mid-Atlantic: Delaware, District of Columbia, Maryland, New Jersey, Pennsylvania, Virginia and West Virginia

Mid-West: Illinois, Indiana, Michigan, Ohio and Wisconsin

Northeast: Connecticut, Maine, Massachusetts, New Hampshire, New York, Rhode Island and Vermont

Southwest: Arkansas, Kansas, Missouri, Oklahoma and Texas

² AT&T Long Distance, Lucky Dog Phone Co. and ACC Long Distance

³ MCI Long Distance, Telecom USA, Touch 1, TTI National, LDDS WorldCom and WorldCom Network Service

⁴ BellSouth Long Distance and BellSouth Public Communications

⁵ Qwest and U S WEST Long Distance

⁶ Ameritech Communications, Ameritech 800, Pacific Bell, Southwest Long Distance, SBC Long Distance and SNET All Distance

⁷ Bell Atlantic Long Distance, NYNEX/Bell Atlantic North, Verizon Select Services and GTE

⁸ Households with any other presubscribed carrier. Note that households for which the presubscribed carrier is unknown or could not be determined have been excluded from the sample.

Table 9.11
Regional Bell Operating Companies' Applications
To Provide In-Region InterLATA Service
(Section 271 Applications)

State	Resolution	Date Application Filed	Date Application Resolved
Alabama	Approved	06/20/02	09/18/02
Arkansas	Approved	08/20/01	11/16/01
Arizona	Approved	09/04/03	12/03/03
California	Approved	09/20/02	12/19/02
Colorado	Withdrawn	06/13/02	09/10/02
Colorado	Approved	09/30/02	12/23/02
Connecticut	Approved	04/23/01	07/20/01
Delaware	Approved	06/27/02	09/25/02
District of Columbia	Approved	12/18/02	03/19/03
Florida	Approved	09/20/02	12/19/02
Georgia	Withdrawn	10/02/01	12/20/01
Georgia	Approved	02/14/02	05/15/02
Idaho	Withdrawn	06/13/02	09/10/02
Idaho	Approved	09/30/02	12/23/02
Illinois	Approved	07/17/03	10/15/03
Indiana	Approved	07/17/03	10/15/03
Iowa	Withdrawn	06/13/02	09/10/02
Iowa	Approved	09/30/02	12/23/02
Kansas	Approved	10/26/00	01/22/01
Kentucky	Approved	06/20/02	09/18/02
Louisiana	Denied	11/06/97	02/04/98
Louisiana	Denied	07/09/98	10/13/98
Louisiana	Withdrawn	10/02/01	12/20/01
Louisiana	Approved	02/14/02	05/15/02
Maine	Approved	03/21/02	06/19/02
Maryland	Approved	12/18/02	03/19/03
Massachusetts	Withdrawn	09/22/00	12/18/00
Massachusetts	Approved	01/16/01	04/16/01
Michigan	Approved	06/19/03	09/17/03
Michigan	Withdrawn	01/02/97	02/11/97
Michigan	Denied	05/21/97	08/19/97
Michigan	Withdrawn	01/16/03	04/16/03
Minnesota	Approved	03/28/03	06/26/03
Mississippi	Approved	06/20/02	09/18/02
Missouri	Withdrawn	04/04/01	06/07/01
Missouri	Approved	08/20/01	11/16/01
Montana	Withdrawn	07/12/02	09/10/02

Table 9.11
Regional Bell Operating Companies' Applications
To Provide In-Region InterLATA Service
(Section 271 Applications)

State	Resolution	Date Application Filed	Date Application Resolved
Montana	Approved	09/30/02	12/23/02
Nebraska	Withdrawn	06/13/02	09/10/02
Nebraska	Approved	09/30/02	12/23/02
Nevada	Approved	01/14/03	04/14/03
New Hampshire	Approved	06/27/02	09/25/02
New Jersey	Withdrawn	12/20/01	03/20/02
New Jersey	Approved	03/26/02	06/24/02
New Mexico	Approved	01/15/03	04/15/03
New York	Approved	09/29/99	12/22/99
North Carolina	Approved	06/20/02	09/18/02
North Dakota	Withdrawn	06/13/02	09/10/02
North Dakota	Approved	09/30/02	12/23/02
Ohio	Approved	07/17/03	10/15/03
Oklahoma	Denied	04/11/97	06/26/97
Oklahoma	Approved	10/26/00	01/22/01
Oregon	Approved	01/15/03	04/15/03
Pennsylvania	Approved	06/21/01	09/19/01
Rhode Island	Approved	11/26/01	02/22/02
South Carolina	Denied	09/30/97	12/24/97
South Carolina	Approved	06/20/02	09/18/02
South Dakota	Approved	01/15/03	04/15/03
Tennessee	Approved	09/20/02	12/19/02
Texas	Withdrawn	01/10/00	04/05/00
Texas	Approved	04/05/00	06/30/00
Utah	Withdrawn	07/12/02	09/10/02
Utah	Approved	09/30/02	12/23/02
Vermont	Approved	01/17/02	04/17/02
Virginia	Approved	08/01/02	10/30/02
Washington	Withdrawn	07/12/02	09/10/02
Washington	Approved	09/30/02	12/23/02
West Virginia	Approved	12/18/02	03/19/03
Wisconsin	Approved	07/17/03	10/15/03
Wyoming	Withdrawn	07/12/02	09/10/02
Wyoming	Approved	09/30/02	12/23/02

Table 9.12
Section 271 Approvals
(As of the End of the Quarter)

	States, including the District of Columbia, with Approval	Percentage of Regional Bell Operating Company (RBOC) Lines ¹
1999 September	0	0.0 %
December	1	8.5
2000 March	1	8.5
June	2	15.7
September	2	15.7
December	2	15.7
2001 March	4	17.9
June	5	21.2
September	7	25.9
December	9	28.5
2002 March	10	29.0
June	15	39.1
September	22	46.3
December	35	75.1
2003 March	38	79.0
June	43	82.7
September	44	86.6
December	49	100.0

¹ RBOC lines do not include GTE or SNET.

10 Minutes

As in the case of telephone lines, there are several alternative measures of calling volumes. Most subscribers purchase service with unlimited local calling. As a result, most local calls are not metered. Periodic studies have been used within the telephone industry to estimate the number of calls and calling minutes for a variety of purposes. For example, periodic studies of dial equipment minutes (DEMs) historically were used to estimate the proportion of calling that is interstate and to allocate costs between interstate and intrastate services. However, DEMs are no longer being used for separations purposes because the separations factors are now frozen. Historical data for DEMs can be found in the August 2003 issue of *Trends in Telephone Service*.

1. Interstate Switched Access Minutes

Switched access minutes are those minutes transmitted by long distance carriers that also use the distribution networks of local telephone companies, i.e., calls made on private telecommunications networks and on leased lines are excluded. On ordinary long distance calls, minutes are counted both where the call originates and where the call terminates. Access minutes include only the domestic portion of international calls. WATS and toll-free (800/888/877/866) calls are counted only on one end of the call. WATS calls generate access minutes only at the terminating end of the call and toll-free (800/888/877/866) calls generate access minutes only at the originating end of the call; both types of minutes are counted in the terminating minutes because they are billed at the terminating rate. Originating WATS and terminating toll-free minutes are covered under special access arrangements, and hence are not subject to switched access charges. Finally, switched access minutes include time for incomplete calls and setup time.

Table 10.1 and Chart 10.1 show the total number of interstate switched access minutes handled by all long distance carriers starting with mid-1984, when the data first became available. The number of minutes grew steadily from mid-1984 to 2000 stemming from a combination of overall economic growth and price reductions. Since 2001, interstate switched access minutes have declined, due to a number of reasons including substitution of other services.

2. Billed Access Minutes and Calls

Another measure of usage is the number of interLATA billed access minutes and the number of local calls and toll calls. The large incumbent local exchange companies (ILECs) file data on this as part of their Automated Reporting Management Information System (ARMIS) reports. The individual carrier's data can be obtained from the ARMIS Report 43-08 on the ARMIS web page at www.fcc.gov/wcb/armis.

The number of interLATA access minutes are based on bills sent to interexchange carriers. They include total originating and terminating access minutes of use. Where these data are

unavailable, a statistically valid calculation is sometimes used. The number of local calls refers to the number of originating calls completed or unanswered between points both of which are within the local service area of the calling telephone, or total originating calls minus total originating toll calls. The number of toll calls completed refers to the number of completed calls directed to a point outside the local service area of the calling telephone. IntraLATA toll calls completed (originating) consist of the number of completed toll calls carried by the reporting local operating company within a given local access and transport area (LATA) and interLATA toll calls completed (originating) consist of completed calls directed to and carried by interexchange carriers. More detailed definitions can be found on the ARMIS web site.

Table 10.2 shows historical data on the number of local and toll calls and the number of interLATA billed access minutes for the large ILECs reporting to the Commission. Toll calls are further categorized by intraLATA, interLATA interstate and interLATA intrastate. Interstate and intrastate billed access minutes are also shown.

Table 10.1
Interstate Switched Access Minutes
(In Billions)

Year	Period	Access Minutes	Year	Period	Access Minutes	Year	Period	Access Minutes
1984	Third Quarter	37.5	1991	First Quarter	79.2	1998	First Quarter	124.0
	Fourth Quarter	39.6		Second Quarter	81.9		Second Quarter	131.3
				Third Quarter	82.6		Third Quarter	130.7
				Fourth Quarter	84.4		Fourth Quarter	132.8
			Total 1991	328.0		Total 1998	518.8	
1985	First Quarter	39.6	1992	First Quarter	85.6	1999	First Quarter	135.6
	Second Quarter	41.5		Second Quarter	86.5		Second Quarter	138.1
	Third Quarter	42.8		Third Quarter	87.9		Third Quarter	138.3
	Fourth Quarter	43.3		Fourth Quarter	89.8		Fourth Quarter	140.3
	Total 1985	167.1		Total 1992	349.7		Total 1999	552.3
1986	First Quarter	43.0	1993	First Quarter	90.6	2000	First Quarter	142.6
	Second Quarter	44.8		Second Quarter	91.2		Second Quarter	142.6
	Third Quarter	46.7		Third Quarter	93.6		Third Quarter	141.5
	Fourth Quarter	48.5		Fourth Quarter	95.9		Fourth Quarter	140.2
	Total 1986	183.1		Total 1993	371.2		Total 2000	566.9
1987	First Quarter	51.2	1994	First Quarter	98.7	2001	First Quarter	137.4
	Second Quarter	52.5		Second Quarter	97.9		Second Quarter	136.3
	Third Quarter	55.0		Third Quarter	101.9		Third Quarter	133.1
	Fourth Quarter	57.0		Fourth Quarter	102.9		Fourth Quarter	131.4
	Total 1987	215.7		Total 1994	401.4		Total 2001	538.3
1988	First Quarter	59.0	1995	First Quarter	105.6	2002	First Quarter	124.7
	Second Quarter	59.6		Second Quarter	106.8		Second Quarter	123.9
	Third Quarter	62.1		Third Quarter	109.0		Third Quarter	119.5
	Fourth Quarter	64.0		Fourth Quarter	110.6		Fourth Quarter	118.1
	Total 1988	244.6		Total 1995	431.9		Total 2002	486.1
1989	First Quarter	66.2	1996	First Quarter	115.7	2003	First Quarter	114.2
	Second Quarter	68.5		Second Quarter	114.7		Second Quarter	112.1
	Third Quarter	69.7		Third Quarter	117.5		Third Quarter	110.0
	Fourth Quarter	72.6		Fourth Quarter	120.2		Fourth Quarter	107.8
	Total 1989	277.1		Total 1996	468.1		Total 2003	444.1
1990	First Quarter	74.7	1997	First Quarter	122.1			
	Second Quarter	75.8		Second Quarter	124.4			
	Third Quarter	77.9		Third Quarter	124.9			
	Fourth Quarter	79.1		Fourth Quarter	125.8			
	Total 1990	307.4		Total 1997	497.3			

Source: National Exchange Carrier Association, MOU/Data/Summary of National Exchange Carrier (NECA) Total Pool Results, December 18, 2003. Industry Analysis and Technology Division, Wireline Competition Bureau, *Universal Service Monitoring Report* (December 2003).

Chart 10.1
Interstate Switched Access Minutes
(In Billions)

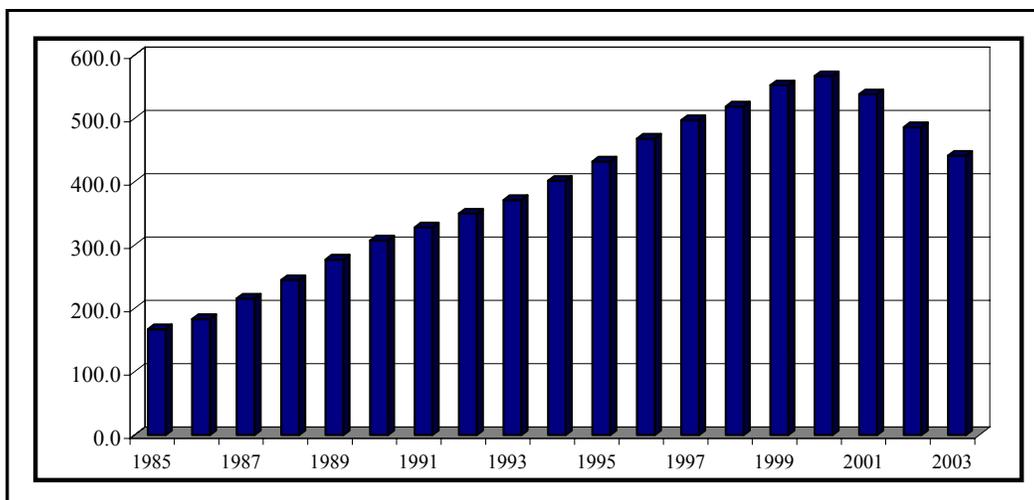


Table 10.2
Telephone Calls and Billed Access Minutes of Large ILECs Reporting to the Commission

Year	Number of Carriers	Number of Telephone Calls (Thousands)						InterLATA Billed Access Minutes (Originating and Terminating) (Thousands)		
		Local Calls	Toll Calls Completed (Originating)					Total	Interstate	Intrastate
			Total	IntraLATA	Total InterLATA	InterLATA Interstate	InterLATA Intrastate			
1984	75	350,391,981	NA	NA	NA	NA	NA	NA	NA	NA
1985	55	365,304,830	NA	NA	NA	NA	NA	NA	NA	NA
1986	57	372,296,473	NA	NA	NA	NA	NA	NA	NA	NA
1987	52	379,864,264	NA	NA	NA	NA	NA	NA	NA	NA
1988	52	379,035,883	67,547,342	18,983,768	48,563,574	36,752,925	11,810,649	NA	NA	NA
1989	51	389,383,322	68,547,451	19,406,222	49,141,229	37,593,867	11,547,362	NA	NA	NA
1990	51	402,492,293	63,359,346	20,263,554	43,095,792	31,888,748	11,207,044	NA	NA	NA
1991	52	416,213,954	67,333,207	23,337,553	43,995,654	32,126,555	11,869,099	405,456,048	305,745,611	99,710,437
1992	54	434,175,743	71,502,090	22,612,572	48,889,518	36,036,032	12,853,486	432,356,515	327,821,281	104,535,234
1993	53	447,473,714	78,077,246	23,757,662	54,319,584	38,746,788	15,572,796	465,270,369	351,022,599	114,247,770
1994	52	465,207,539	83,441,709	23,796,633	59,645,076	43,244,593	16,400,483	500,297,267	374,996,101	125,301,166
1995	53	484,195,345	94,051,667	23,327,801	70,723,866	50,618,771	20,105,095	549,982,263	405,579,546	144,402,717
1996	51	504,131,507	94,905,927	21,376,847	73,529,080	52,677,037	20,852,043	598,563,946	438,772,880	159,791,066
1997	51	522,025,261	98,424,977	21,844,925	76,580,052	54,563,338	22,016,714	647,813,708	469,638,292	178,175,416
1998	52	544,288,934	96,934,938	18,469,316	78,465,622	55,974,210	22,491,412	690,523,467	497,138,901	193,384,566
1999	52	553,853,237	102,245,666	18,116,240	84,129,426	57,806,961	26,322,465	739,042,459	519,272,905	219,769,554
2000	52	536,523,081	105,978,596	16,157,912	89,820,684	59,212,055	30,608,629	792,263,836	535,011,649	257,252,187
2001	52	515,335,676	97,849,444	14,970,794	82,878,650	53,319,645	29,559,005	745,754,124	504,026,109	241,728,015
2002	52	459,302,668	89,997,279	13,339,232	76,658,047	47,968,133	28,689,914	668,089,004	451,602,651	216,486,353

NA - Not available.

Note: Between 1987 and 1988, there were significant changes in the definitions of many of the items in this table due to the implementation of a new Uniform System of Accounts (USOA) in 1988. In 1992, some of these definitions were further refined when the reporting mechanism of the carriers was changed for the filing of 1991 data. For these reasons, there may be inconsistencies in the data reported for 1984-1987 compared to what was reported for 1988, and also between 1988 and subsequent years, as the carriers were adapting to the new USOA and automated reporting requirements.

Source: Industry Analysis and Technology Division, Wireline Competition Division, *Statistics of Communications Common Carriers 2002/2003 Edition* (March 2004). Totals may be understated because certain data pertaining to the carriers included in this table are not available.

11 Mobile Wireless Service

1. Industry Statistics

There are several measures of mobile wireless subscribers. While there are some differences in these data series, they all show significant growth in mobile wireless subscribers. The Commission collects data on the number of wireless subscribers by state as part of the local competition and broadband data gathering program (FCC Form 477). This program requires providers of wireless service to file information twice each year for each state in which they have at least 10,000 subscribers. The Commission also collects data on wireless numbers as part of the data collection on Numbering Resources and Utilization/Forecasting (FCC Form 502). Wireless numbers are a good proxy for wireless subscribers since wireless carriers generally assign only one subscriber per number. The Cellular Telecommunications & Internet Association (CTIA) periodically publishes summary information on the industry. CTIA can be found on the Internet at www.wow-com.com.

Table 11.1 and Chart 11.1 show three measures of mobile wireless subscribers over time. In 1984 there were 92,000 subscribers, as compared with approximately 159 million subscribers as of December 31, 2003. Table 11.2 shows the number of wireless subscribers per state as of June 30, 2003 using data from FCC Form 477. Table 11.3 provides some information on the industry that is published by CTIA. As seen in Table 11.3, the industry's annual revenues rose from less than a half billion in 1984 to over \$87 billion in 2003. The table also shows that the industry had over 205,629 employees as of December 31, 2003, as compared to about 1,000 employees in 1984; and there was a significant drop in the average monthly bill from \$96.83 at the end of 1987 to \$49.91 as of December 2003.

2. Residential Wireless Usage

The summary of residential wireless usage presented in Tables 11.4 through 11.7 is based on calling data captured from a sample of consumer bills by TNS Telecoms. (For additional information on TNS Telecoms, see Appendix B.) While these tables were constructed similar to those describing wireline toll calling patterns in Section 14, the two sets of tables should be compared with caution. In most cases, wireless bills contain an itemization of all calls, rather than just toll calls.¹ As a result, these tables characterize wireless local and long-distance calling where the tables in Section 14 only cover wireline long distance. To provide some frame of reference, wireline distinctions have been imposed on the wireless calling data. That is, we distinguished wireless interstate from intrastate calls.

Table 11.4 shows the estimated distribution of residential wireless calls and minutes over time. The vast majority of both calls and minutes were intrastate. Over time, however, this

¹ In fact, since this analysis generally includes all outgoing wireless calls, many of the calls in the data are not traditional voice calls. The data include calls made to access voicemail, move data, access the Internet, send faxes or text messages, etc.

pattern is clearly weakening. The number of interstate calls rose from 10% to 14% of the total from 2000 to 2002, and interstate minutes rose from 16% to 26% of the total over the same period. We note that these figures are estimates, based on sample data, and the relative distribution may vary in actuality for specific carriers.

A snapshot of the duration of wireless calls is presented in Table 11.5. In the 2002 data shown, wireless calls were brief. Almost 75% of intrastate wireless calls (which, again, represent the vast majority of calls) were less than 2 minutes. Like wireline traffic, the data are extremely right-skewed such that a handful of long calls pull the average call duration far above the median duration. As a measure of central tendency, the median is more representative of the duration of a typical call than is the average in this context.

Tables 11.6 and 11.7 show when wireless intrastate and interstate calls, respectively, were made. Over the years shown, patterns in intrastate calls have changed only slightly. Nighttime minutes gained share from daytime minutes (from about 27% to about 30%), and weekend use rose as a share of total use. Traffic was heaviest on Friday and lightest on Sunday.

Patterns in interstate calling were different. Unlike intrastate calls, interstate calls were generally most likely on the weekend, particularly on Sunday. Further, though both types of calls were more likely during the day than at night, relative to intrastate calls, interstate calls were allocated more to the nighttime hours. Nonetheless, the same forces acting to change intrastate calling patterns over the years shown seem to be having similar, yet more dramatic effects on interstate calling. For example, like intrastate calls, the share of interstate calls made at night increased, but from about 30% of the total in 2000 to 41% in 2002. Similarly, weekend interstate calling rose from about 31% in 2000 to 41% in 2002.

Table 11.1
Measures of Mobile Wireless Telephone Subscribers

	Subscribers (In Thousands)		
	Reported by CTIA	FCC Form 477 ¹	FCC Form 502 ²
1984 December	92		
1985 June	204		
December	340		
1986 June	500		
December	682		
1987 June	884		
December	1,231		
1988 June	1,609		
December	2,069		
1989 June	2,692		
December	3,509		
1990 June	4,369		
December	5,283		
1991 June	6,390		
December	7,557		
1992 June	8,893		
December	11,033		
1993 June	13,067		
December	16,009		
1994 June	19,284		
December	24,134		
1995 June	28,154		
December	33,786		
1996 June	38,195		
December	44,043		
1997 June	48,706		
December	55,312		
1998 June	60,831		
December	69,209		
1999 June	76,285		
December	86,047	79,696	
2000 June	97,036	90,643	
December	109,478	101,043	99,019
2001 June	118,398	114,029	111,734
December	128,375	123,991	128,493
2002 June	134,561	130,751	136,927
December	140,767	138,878	141,776
2003 June	148,066	147,624	151,861
December	158,722		

¹ See Industry Analysis and Technology Division, Wireline Competition Bureau, *Local Telephone Competition: Status as of June 30, 2003* (December 2003). Carriers with under 10,000 lines in a state are not required to report, so FCC Form 477 data are likely to undercount the total number of wireless lines in service.

² See current and previous editions of Industry Analysis and Technology Division, Wireline Competition Bureau, *Numbering Resource Utilization in the United States*.

Source: Cellular Telecommunications & Internet Association (CTIA) and FCC Forms 477 and 502. FCC Form 502 contains assigned wireless numbers.

Chart 11.1
Mobile Wireless Telephone Subscribers
As of December
(Subscribers in Thousands)

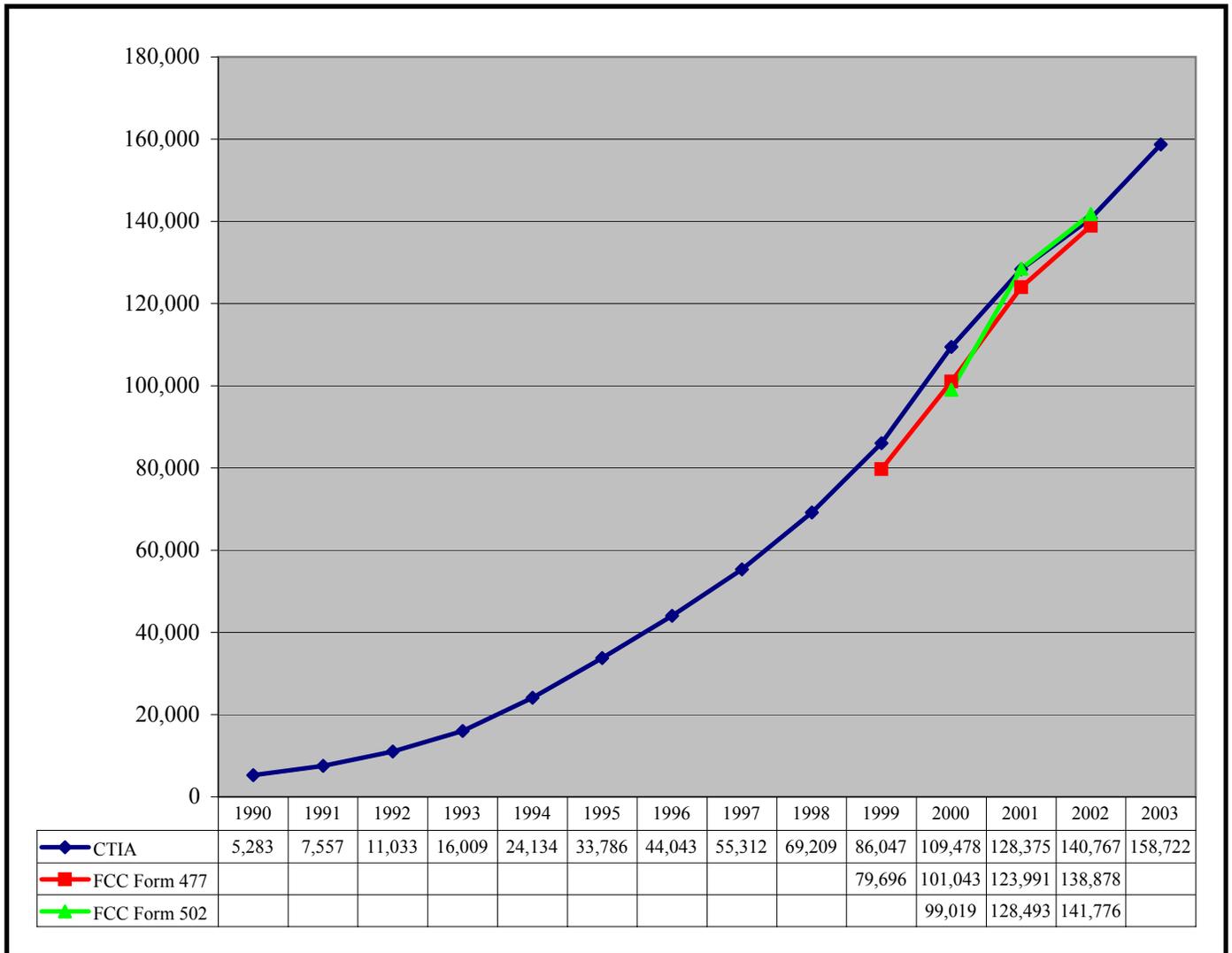


Table 11.2
Mobile Wireless Telephone Subscribers ¹

	Jun 2003 Reporting Carriers ¹	Jun 2003 Percent Resold ²	Subscribers								Percent Change Jun 02 - Jun 03
			Dec 1999	Jun 2000	Dec 2000	Jun 2001	Dec 2001	Jun 2002	Dec 2002	Jun 2003	
Alabama	10	7 %	1,080,410	1,253,084	1,386,294	1,930,631	1,979,075	2,027,845	1,987,254	2,100,557	4 %
Alaska	*	3	165,221	169,892	*	218,424	240,216	242,133	267,630	*	NA
Arizona	13	4	1,125,321	1,624,668	1,855,115	2,018,410	2,171,021	2,412,998	2,520,058	2,643,952	10
Arkansas	7	4	719,919	715,467	743,928	891,275	970,127	1,130,302	1,156,345	1,351,291	20
California	15	5	8,544,941	12,283,369	12,710,520	14,184,625	15,052,203	16,007,376	17,575,105	18,892,619	18
Colorado	9	2	1,552,718	1,654,989	1,856,075	1,983,405	2,145,816	2,247,166	2,358,748	2,426,929	8
Connecticut	6	3	1,077,089	1,136,618	1,277,123	1,418,367	1,639,914	1,577,873	1,694,110	1,791,944	14
Delaware	6	3	270,848	275,219	371,014	389,284	412,611	433,059	438,196	503,353	16
Dist. of Columbia	6	8	346,681	333,815	354,735	382,457	404,489	415,399	472,832	520,182	25
Florida	11	11	5,158,079	4,983,478	6,369,985	7,536,670	8,937,063	8,607,715	9,482,349	10,252,348	19
Georgia	14	6	2,538,983	2,687,238	2,754,784	4,076,119	4,149,717	4,300,831	4,497,576	4,709,288	9
Guam	*	*	*	*	0	*	*	*	*	*	NA
Hawaii	6	1	288,425	454,364	524,291	543,283	595,721	640,247	689,857	732,262	14
Idaho	10	9	271,436	296,066	344,564	398,781	444,864	500,693	536,064	572,406	14
Illinois	10	6	3,922,482	4,309,660	5,143,767	5,621,044	5,631,172	5,409,370	6,476,683	6,834,217	26
Indiana	8	9	1,318,975	1,717,378	1,715,074	1,781,247	1,921,356	2,032,290	2,390,567	2,456,509	21
Iowa	12	9	774,773	975,629	832,106	861,382	1,087,608	1,157,580	1,239,384	1,250,305	8
Kansas	12	3	669,472	724,024	801,293	901,225	956,050	1,061,171	1,117,277	1,195,230	13
Kentucky	10	8	911,700	999,544	1,026,334	1,176,756	1,405,043	1,505,982	1,456,705	1,595,290	6
Louisiana	10	11	1,227,106	1,294,693	1,306,457	1,677,292	1,920,740	2,187,811	2,190,613	2,365,224	8
Maine	5	2	187,003	283,640	359,786	399,616	427,313	457,835	466,896	524,246	15
Maryland	8	3	1,634,625	2,013,058	2,298,651	2,446,818	2,614,216	2,684,441	2,913,943	3,108,086	16
Massachusetts	6	2	1,892,014	2,228,169	2,649,130	2,753,685	2,996,816	3,289,934	3,375,726	3,506,039	7
Michigan	14	7	3,512,813	3,423,535	3,551,719	4,071,091	4,238,399	4,758,538	4,674,980	4,889,269	3
Minnesota	12	7	1,550,411	1,595,560	1,851,430	2,014,317	2,153,857	2,254,895	2,415,033	2,564,783	14
Mississippi	10	13	673,355	509,038	786,577	993,781	1,048,061	1,106,700	1,112,765	1,232,750	11
Missouri	11	5	1,855,452	1,848,775	1,767,411	1,937,684	2,106,599	2,246,430	2,289,831	2,515,325	12
Montana	4	2	*	*	*	*	279,349	291,429	315,512	343,160	18
Nebraska	9	2	576,296	600,885	659,380	712,685	791,799	838,568	867,810	900,744	7
Nevada	8	6	750,335	825,163	684,752	766,581	842,155	895,586	984,486	1,077,380	20
New Hampshire	8	10	280,508	309,263	387,264	445,181	492,390	529,795	525,689	598,504	13
New Jersey	6	2	2,289,181	2,750,024	3,575,130	3,896,778	4,283,643	4,531,457	4,587,640	5,392,240	19
New Mexico	10	11	363,827	395,111	443,343	619,582	660,849	735,107	780,855	828,869	13
New York	12	4	4,833,816	5,016,524	5,918,136	6,749,096	7,429,249	7,915,526	8,937,683	8,829,070	12
North Carolina	11	7	2,536,068	2,730,178	3,105,811	3,377,331	3,767,598	4,610,120	4,094,715	4,305,521	-7
North Dakota	*	*	*	*	*	*	*	245,578	*	*	NA
Ohio	14	4	3,237,786	3,278,960	4,150,498	4,255,934	4,739,795	4,887,376	5,212,204	5,659,459	16
Oklahoma	13	3	826,637	979,513	1,124,214	1,200,234	1,288,357	1,366,475	1,440,970	1,574,588	15
Oregon	10	4	914,848	1,082,425	1,201,207	1,268,909	1,399,279	1,473,883	1,682,343	1,682,036	14
Pennsylvania	10	4	2,767,474	3,850,372	4,129,186	4,378,216	4,849,085	4,987,067	5,258,844	5,681,653	14
Puerto Rico	5	17	*	1,090,005	757,613	1,374,747	1,128,736	1,136,619	1,516,808	1,401,599	23
Rhode Island	6	3	279,304	313,550	355,889	401,805	456,059	463,636	515,547	527,366	14
South Carolina	11	16	1,137,232	1,236,338	1,392,586	1,502,345	1,752,457	1,830,516	1,896,369	2,041,541	12
South Dakota	5	7	*	*	*	*	278,646	292,210	325,114	344,825	18
Tennessee	13	4	1,529,054	1,876,444	1,985,851	2,251,208	2,510,978	2,660,068	2,674,566	2,800,735	5
Texas	19	6	5,792,453	6,705,423	7,548,537	8,294,338	9,156,187	9,650,715	10,133,280	10,776,234	12
Utah	9	3	643,824	692,006	750,244	833,492	919,002	970,854	1,052,522	1,094,563	13
Vermont	*	*	*	*	*	*	*	*	*	*	NA
Virgin Islands	*	*	*	0	0	*	*	*	*	*	NA
Virginia	11	4	2,262,567	2,447,687	2,708,342	3,059,420	3,270,165	3,429,450	3,753,106	3,879,582	13
Washington	11	4	1,873,475	2,144,767	2,286,082	2,493,214	2,706,030	2,849,043	2,869,784	3,102,750	9
West Virginia	10	11	241,265	347,916	392,384	452,036	498,811	549,722	576,503	579,983	6
Wisconsin	10	7	1,525,818	1,342,908	1,698,520	2,008,679	2,229,389	2,523,956	2,396,562	2,533,215	0
Wyoming	5	2	127,634	*	*	173,939	194,665	168,232	191,939	276,344	64
Nationwide	85	6 %	79,696,083	90,643,058	101,043,219	114,028,928	123,990,857	130,751,459	138,878,293	147,623,734	13 %

NA -- Not applicable.

* Data withheld to maintain firm confidentiality.

¹ Carriers with under 10,000 subscribers in a state were not required to report.

² Percentage of mobile wireless subscribers receiving their service from a mobile wireless reseller.

Source: Industry Analysis and Technology Division, Wireline Competition Bureau, *Local Telephone Competition: Status as of June 30, 2003* (December 2003).

Table 11.3
Mobile Wireless Telephone Service: Industry Survey Results
(As Reported by Cellular Telecommunications & Internet Association)

		Estimates for Total Industry							Average Monthly Bill	Average Minutes of Use per Month
		Subscribers	Six-Month Revenues (Thousands)	Roamer Service Revenues (Thousands)	Cell Sites	Employees	Cumulative Capital Investment (Thousands)			
1984	December	91,600	\$178,085		346	1,404	\$354,760			
1985	June	203,600	176,231		599	1,697	588,751			
	December	340,213	306,197		913	2,727	911,167			
1986	June	500,000	360,585		1,194	3,556	1,140,163			
	December	681,825	462,467		1,531	4,334	1,436,753			
1987	June	883,778	479,514		1,732	5,656	1,724,348			
	December	1,230,855	672,005		2,305	7,147	2,234,635	\$96.83		
1988	June	1,608,697	886,075		2,789	9,154	2,589,589	95.00		
	December	2,069,441	1,073,473	\$89,331	3,209	11,400	3,274,105	98.02		
1989	June	2,691,793	1,406,463	121,368	3,577	13,719	3,675,473	85.52		
	December	3,508,944	1,934,132	173,199	4,169	15,927	4,480,142	89.30		
1990	June	4,368,686	2,126,362	192,350	4,768	18,973	5,211,765	83.94		
	December	5,283,055	2,422,458	263,660	5,616	21,382	6,281,596	80.90		
1991	June	6,380,053	2,653,505	302,329	6,685	25,545	7,429,739	74.56		
	December	7,557,148	3,055,017	401,325	7,847	26,327	8,671,544	72.74		
1992	June	8,892,535	3,633,285	436,725	8,901	30,595	9,276,139	68.51		
	December	11,032,753	4,189,441	537,146	10,307	34,348	11,262,070	68.68		
1993	June	13,067,318	4,819,259	587,347	11,551	36,501	12,775,967	67.31		
	December	16,009,461	6,072,906	774,266	12,824	39,775	13,956,356	61.48	140	
1994	June	19,283,306	6,519,030	778,116	14,740	45,606	16,107,921	58.65		
	December	24,134,421	7,710,890	1,052,666	17,920	53,902	18,938,677	56.21	119	
1995	June	28,154,414	8,740,352	1,120,337	19,833	60,624	21,709,286	52.42		
	December	33,785,661	10,331,614	1,422,233	22,663	68,165	24,080,466	51.00	119	
1996	June	38,195,466	11,194,247	1,314,943	24,802	73,365	26,707,046	48.84		
	December	44,042,992	12,440,724	1,465,992	30,045	84,161	32,573,522	47.70	125	
1997	June	48,705,553	13,134,551	1,392,440	38,650	97,039	37,454,294	43.86		
	December	55,312,293	14,351,082	1,581,765	51,600	109,387	46,057,910	42.78	117	
1998	June	60,831,431	15,286,660	1,584,891	57,674	113,111	50,178,812	39.88		
	December	69,209,321	17,846,515	1,915,578	65,887	134,754	60,542,774	39.43	136	
1999	June	76,284,753	19,368,304	1,922,416	74,157	141,929	66,782,827	40.24		
	December	86,047,003	20,650,185	2,163,001	81,698	155,817	71,264,865	41.24	185	
2000	June	97,035,925	24,645,365	1,971,625	95,733	159,645	76,652,358	45.15		
	December	109,478,031	27,820,655	1,911,356	104,288	184,449	89,624,387	45.27	255	
2001	June	118,397,734	30,905,721	1,727,058	114,059	186,317	99,728,965	45.56		
	December	128,374,512	34,410,513	2,209,387	127,540	203,580	105,030,101	47.37	380	
2002	June	134,561,370	36,707,086	1,846,267	131,350	186,956	118,418,677	47.42		
	December	140,766,842	39,801,101	2,049,245	139,338	192,410	126,922,347	48.40	427	
2003	June	148,065,824	41,384,171	1,825,243	147,719	187,169	134,147,049	49.46		
	December	158,721,981	46,239,922	1,941,024	162,986	205,629	145,866,914	49.91	NA	

NA - Not available.

Source: Cellular Telecommunications & Internet Association (CTIA).

Table 11.4
Distribution of Residential Wireless Calls and Minutes ¹

Type	2000	2001	2002
Calls			
Intrastate	85 %	83 %	81 %
Interstate	10	12	14
Others ²	5	5	5
Total Calls in Sample	229,329	327,295	495,825
Minutes			
Intrastate	81 %	76 %	72 %
Interstate	16	22	26
Others ²	2	2	2
Total Minutes in Sample	592,253	944,135	1,605,977

Note: Individual figures may not add to totals due to rounding.

¹ Outgoing, itemized calls only.

² Inter-, intrastate status could not be determined.

Source: Calculated by Industry Analysis and Technology Division staff using survey data from TNS Telecoms *ReQuest Market Monitor*TM, *Bill Harvesting*[®].

Table 11.5
Duration of Residential Wireless Calls: 2002 ¹

Duration of Call (Minutes)	Intrastate	Interstate	All Calls
1	51.7 %	39.4 %	50.1 %
2	22.4	18.9	21.9
3	8.4	7.4	8.3
4	4.5	4.8	4.5
5	2.9	3.4	2.9
6	2.0	2.8	2.1
7	1.4	2.2	1.5
8	1.1	1.9	1.2
9	0.8	1.7	0.9
10	0.7	1.4	0.8
11-15	2.0	5.1	2.4
16-20	0.9	3.2	1.2
21-25	0.5	2.1	0.7
26-30	0.3	1.5	0.4
31-45	0.4	2.3	0.6
46-60	0.1	0.9	0.2
> 60	0.1	0.9	0.2
Average Duration	2.9	6.3	3.3
Median Duration	1.0	2.0	1.0
Sample Size	397,153	61,480	458,633

Note: Individual figures may not add to totals due to rounding.

¹ Outgoing, itemized calls only. All 7-digit dialed calls are considered intrastate. Toll-free (800, 888, 877, 866) type calls and calls for which a cross-state distinction could not be made were excluded from this analysis.

Source: Calculated by Industry Analysis and Technology Division staff using survey data from TNS Telecoms *ReQuest Market Monitor*™, Bill Harvesting®.

Table 11.6
Distribution of Residential Intrastate Wireless Minutes
By Day and Time ¹

2002

Day	7:00 AM - 6:59 PM	7:00 PM - 6:59 AM	Total
Monday	9.6 %	4.2 %	13.8 %
Tuesday	9.8	4.5	14.3
Wednesday	10.0	4.4	14.5
Thursday	10.1	4.5	14.7
Friday	10.8	4.5	15.3
Saturday	10.9	4.1	15.0
Sunday	8.3	4.1	12.4
Total	69.6 %	30.4 %	100.0 %

Calls in sample = 395,592

2001

Day	7:00 AM - 6:59 PM	7:00 PM - 6:59 AM	Total
Monday	10.3 %	3.7 %	14.0 %
Tuesday	10.8	4.2	14.9
Wednesday	10.8	4.2	15.0
Thursday	10.9	4.3	15.2
Friday	11.9	4.3	16.1
Saturday	10.2	3.7	13.9
Sunday	7.2	3.6	10.8
Total	72.0 %	28.0 %	100.0 %

Calls in sample = 267,383

2000

Day	7:00 AM - 6:59 PM	7:00 PM - 6:59 AM	Total
Monday	10.4 %	3.8 %	14.2 %
Tuesday	10.5	3.8	14.3
Wednesday	11.0	3.9	14.9
Thursday	11.3	3.9	15.3
Friday	12.2	4.2	16.3
Saturday	10.1	3.8	13.9
Sunday	7.7	3.5	11.2
Total	73.1 %	26.9 %	100.0 %

Calls in sample = 190,227

Note: Individual figures may not add to totals due to rounding.

¹ Outgoing, itemized calls only. All 7-digit dialed calls are considered intrastate. Toll-free (800, 888, 877, 866) type calls and calls for which a cross-state distinction could not be made were excluded from this analysis.

Source: Calculated by Industry Analysis and Technology Division staff using survey data from TNS Telecoms *ReQuest Market Monitor*TM, *Bill Harvesting*[®].

Table 11.7
Distribution of Residential Interstate Wireless Minutes
By Day and Time ¹

2002

Day	7:00 AM - 6:59 PM	7:00 PM - 6:59 AM	Total
Monday	6.3 %	5.7 %	12.0 %
Tuesday	6.3	5.8	12.1
Wednesday	6.1	6.1	12.2
Thursday	6.3	5.5	11.8
Friday	6.2	4.9	11.1
Saturday	13.1	5.3	18.4
Sunday	14.7	7.6	22.3
Total	59.0 %	41.0 %	100.0 %

Calls in sample = 61,480

2001

Day	7:00 AM - 6:59 PM	7:00 PM - 6:59 AM	Total
Monday	7.5 %	5.3 %	%
Tuesday	7.1	5.6	12.7
Wednesday	8.1	5.3	13.4
Thursday	7.8	5.5	13.3
Friday	7.5	4.9	12.4
Saturday	11.1	4.7	15.8
Sunday	12.5	7.1	19.6
Total	61.6 %	38.4 %	87.2 %

Calls in sample = 33,026

2000

Day	7:00 AM - 6:59 PM	7:00 PM - 6:59 AM	Total
Monday	8.6 %	4.7 %	13.3 %
Tuesday	9.1	4.9	14.0
Wednesday	9.5	4.0	13.5
Thursday	10.5	3.8	14.3
Friday	9.5	4.0	13.6
Saturday	12.1	3.4	15.5
Sunday	11.0	4.8	15.9
Total	70.4 %	29.6 %	100.0 %

Calls in sample = 19,823

Note: Individual figures may not add to totals due to rounding.

¹ Outgoing, itemized calls only. All 7-digit dialed calls are considered intrastate. Toll-free (800, 888, 877, 866) type calls and calls for which a cross-state distinction could not be made were excluded from this analysis.

Source: Calculated by Industry Analysis and Technology Division staff using survey data from TNS Telecoms *ReQuest Market Monitor*TM, *Bill Harvesting*[®].

12 Price Indices for Telephone Services

The Bureau of Labor Statistics (BLS) collects a variety of information on telephone service as part of three separate programs -- the Consumer Price Index (CPI), the Producer Price Index (PPI), and the Consumer Expenditure Survey. They can be found on the Internet at www.bls.gov. The following material illustrates the range of information available from price indices.

1. Long-Term Trends in Price Indices

A price index for telephone service was first published in 1935. Since that time, telephone prices have tended to increase at a slower pace than most other prices. Table 12.1 shows long-term changes in the consumer price indices for all items, all services, telephone services, each of the seven major categories that currently constitute the overall CPI, and several services that are often characterized as being public utilities. Chart 12.1 shows the CPI telephone services trend as compared to the CPI all items trend from 1953 through 2003.

2. Comprehensive Price Indices

The CPI index of telephone services is based on a market basket intended to represent the telephone-related expenditures of a typical urban household. It includes local, long distance, and cellular services. The annual rates of change are shown in Table 12.2 and the associated chart for the overall CPI (which measures the impact of inflation on consumers) and the CPI for telephone services. Beginning in 1987, the CPI for all items has consistently been higher than the CPI for telephone services as shown in Table 12.2. In addition, Table 12.2 shows the gross domestic product chain-type price index (which measures inflation throughout the economy) prepared by the Department of Commerce's Bureau of Economic Analysis. Chart 12.2 shows the annual percentage changes for the overall CPI and CPI for telephone services.

3. Price Indices for Local Service

The CPI index of local telephone charges is based on a broadly defined market basket that includes: monthly service charges, message unit charges, leased equipment, installation, service enhancements (such as tone dialing and call waiting), taxes, and subscriber line charges. In contrast, the PPI index of monthly residential rates is much more narrowly defined. It is based only on monthly service charges for residential service, optional touch-tone service, and subscriber line charges. It excludes taxes, charges for special services such as call waiting, and all other expenditures. The annual rates of change for these indices of local costs are presented in Table 12.3 and Chart 12.3.

4. Price Indices for Long Distance Service

Price indices are available for intrastate toll and interstate toll services. These series are also presented in Table 12.3 and Chart 12.3.

5. Price-Index Limitations

Price indices are less reliable when industries are changing rapidly. For example, in 1992, long distance carriers began to increase basic rates while greatly expanding their range of discount offerings. The fixed market basket of toll calls measured for the CPI did not fully reflect these discounts. In 1995, BLS made major changes to the PPI telephone series, and there are no data after July 1995 comparable with prior data. Because of these sorts of difficulties, measures of average revenues are sometimes used as alternatives to price indices.

Table 12.1
Long-Term Changes for Various Price Indices
(Annual Rates of Change)

	1953 - 2003	1993 - 2003
CPI All Items	3.9 %	2.4 %
CPI All Services	4.9	3.2
CPI Telephone Services ¹	1.7	0.3
CPI Major Categories:		
- Food & Beverages	*	2.5
- Housing	*	2.7
- Apparel	2.1	-1.0
- Transportation	3.6	1.9
- Medical Care	5.9	4.0
- Recreation	*	1.7
- Other Goods & Services	*	4.5
CPI Public Transportation	5.2	2.3
CPI Utility Natural Gas Service	5.1	4.6
CPI Electricity	3.3	1.0
CPI Sewer & Water Maintenance	5.6	3.3
CPI Postage	4.8	2.8

* Series not established until after 1953.

¹ The CPI telephone service index was revised in December of 1997.

Source: Bureau of Labor Statistics.

Chart 12.1
CPI All Items and CPI Telephone Services
Base Periods: 1982-84 = 100

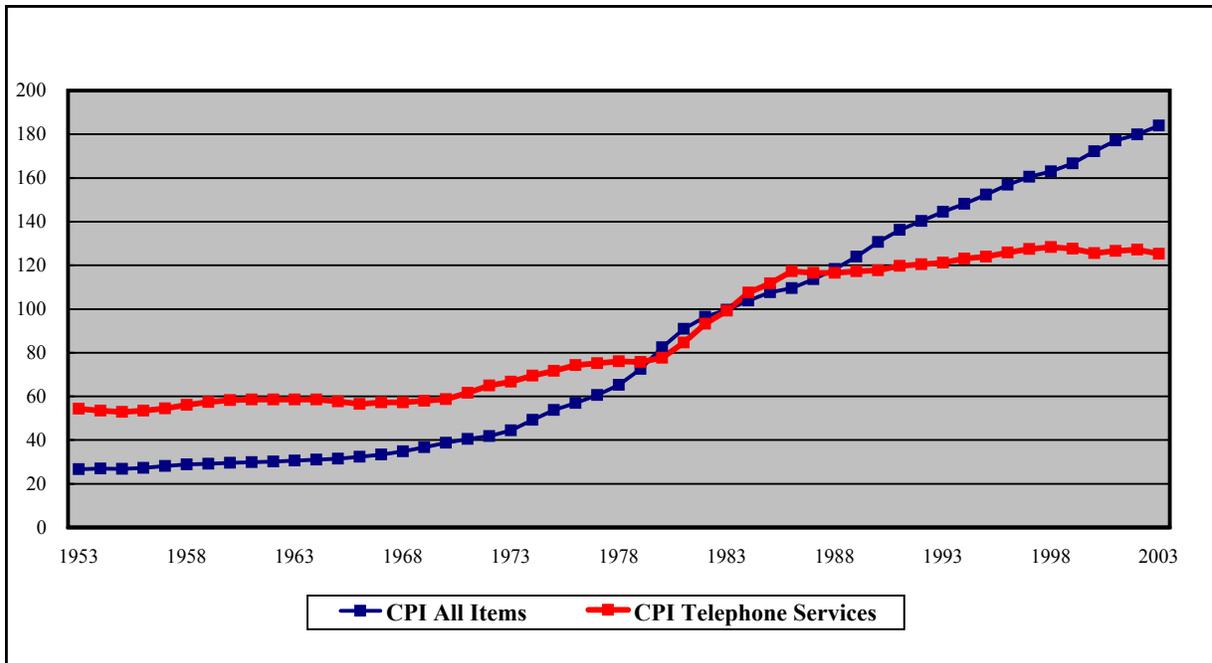


Table 12.2
Annual Changes in Major Price Indices

	GDP Chain-Type Price Index	CPI - All Items	CPI - Telephone Services
1978	5.6 %	9.0 %	0.9 %
1979	3.2	13.3	0.7
1980	-0.2	12.5	4.6
1981	2.5	8.9	11.7
1982	-1.9	3.8	7.2
1983	4.5	3.8	3.6
1984	7.2	3.9	9.2
1985	4.1	3.8	4.7
1986	3.5	1.1	2.7
1987	3.4	4.4	-1.3
1988	4.1	4.4	1.3
1989	3.5	4.6	-0.3
1990	1.9	6.1	-0.4
1991	-0.2	3.1	3.5
1992	3.3	2.9	-0.3
1993	2.7	2.7	1.8
1994	4.0	2.7	0.7
1995	2.5	2.5	1.2
1996	3.7	3.3	2.1
1997	4.5	1.7	0.2
1998	4.2	1.6	0.3 *
1999	4.5	2.7	0.4
2000	3.7	3.4	-2.3
2001	0.5	2.8	0.8
2002	2.2	1.6	0.4
2003	3.1	2.3	-1.4

* The CPI telephone service index was revised in December of 1997.
Sources: Bureau of Labor Statistics and Bureau of Economic Analysis.

Chart 12.2
Percent Change in CPI All Items and CPI Telephone Services

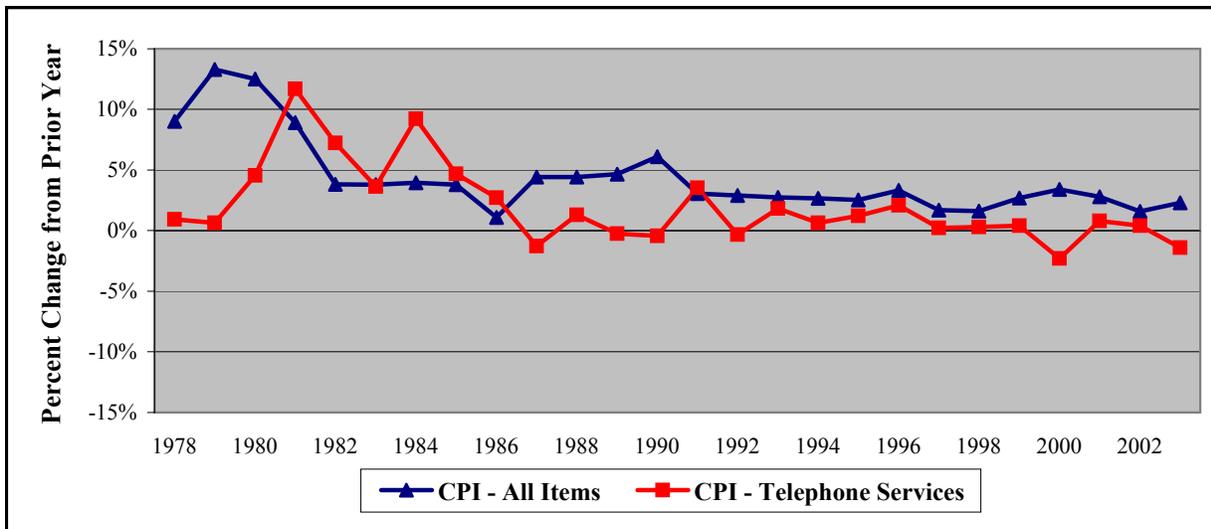


Table 12.3
Annual Changes in Price Indices
for Local and Long Distance Telephone Services

	Local Residential Service		Toll Service ¹			
	CPI	PPI	Interstate		Intrastate	
			CPI	PPI	CPI	PPI
1978	1.4 %	3.1 %	-0.7 %	0.0 %	1.3 %	0.1 %
1979	1.7	1.6	-0.8	-0.9	0.1	-0.7
1980	7.0	7.1	3.4	5.5	-0.6	2.3
1981	12.6	15.6	14.6	15.9	6.2	8.0
1982	10.8	9.0	2.7	3.9	4.2	1.7
1983	3.1	0.2	1.4	0.0	7.4	3.9
1984	17.2	10.4	-4.3	-5.1	3.6	3.8
1985	8.9	12.4	-3.7	-3.0	0.6	2.1
1986	7.1	8.9	-9.4	-10.0	0.3	-3.5
1987	3.3	2.6	-12.4	-11.8	-3.0	-3.0
1988	4.5	4.6	-4.2	-2.1	-4.2	-3.8
1989	0.6	1.9	-1.3	-1.7	-2.6	0.5
1990	1.0	1.5	-3.7	-0.1	-2.2	-2.2
1991	5.1	2.1	1.3	-1.3	-1.5	-2.6
1992	0.5	-0.2	-1.3	1.0	-2.4	1.3
1993	1.0	0.8	6.5	3.8	0.2	-1.1
1994	-0.3	0.7	5.4	6.1	-1.0	-1.4
1995	2.6	²	0.1	²	-3.8	²
1996	0.9	0.2	3.7	0.7	6.1	0.9
1997	1.0	0.2	-4.3	7.8	2.8	-4.3
1998	1.3	-0.1	-0.8	-0.4	1.5	-3.7
1999	2.8	0.2	-0.7	2.3	-1.6	-2.7
2000	5.5	1.6	-11.2	-4.3	-6.0	0.1
2001	5.2	2.2	-4.0	-5.5	-2.9	0.7
2002	4.5	2.2	-4.7	-17.7	-3.7	0.8
2003	4.1	1.7 ³	-8.2	-1.1 ³	-8.8	-9.0 ³

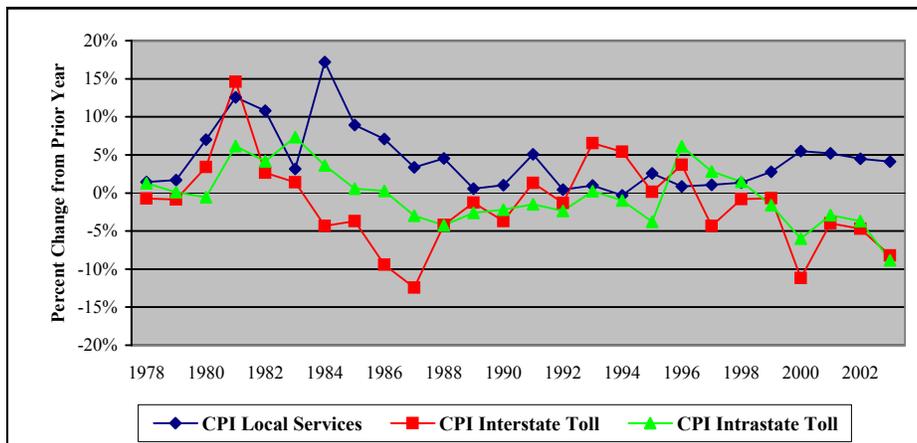
¹ The CPI toll indices represent rates for households. Through 1994, PPI toll indices represent rate changes for both business and residential consumers. Since 1995, PPI indices reflect rates for residential customers.

² The PPI telephone indices were revised in June of 1995. The series are not comparable.

³ Preliminary and subject to revision.

Source: Bureau of Labor Statistics.

Chart 12.3
CPI Telephone Service Price Indices



13 Price Levels

1. Local Rates

The price indices maintained by the Bureau of Labor Statistics indicate percentage changes in the price of telephone services. BLS does not publish actual rate levels. Calculations of average rates are based on surveys by FCC staff. These surveys use the same sampling areas and weights used by BLS in constructing the Consumer Price Index.

Table 13.1 presents average local rates for residential customers in urban areas. In October 2002 the monthly charge was \$23.38, while the average charge for connecting phone service was \$42.39.

Table 13.2 presents average local rates for a business with a single phone line in an urban area. In October 2002, the representative monthly charge was \$43.59 while the charge for connecting phone service was \$72.35.

Table 13.3 presents the average local rate for a residential phone line from 1940 to 2002. The table shows, after adjusting for inflation, the price of a local exchange line declined from 1940 through the early 1980s. Inflation adjusted local rates have risen since then, principally because of the addition of subscriber line charges. These charges concurrently raised local rates and lowered toll rates.

2. Long Distance Rates

Table 13.4 contains measures of average revenue per minute (ARPM) for long distance calls. Estimates of ARPM are often used interchangeably with estimates of the average price. From 1984 to 2002 the cost of long distance calling dropped from 32 cents per minute to 9 cents per minute. The average price of 9 cents per minute represents a mix of international calling (28 cents per minute) and domestic interstate calling (7 cents per minute). The decline in prices since 1984 is more than 80% after adjusting for the impact of inflation.

Chart 13.1 shows that on a per minute basis, the cost of access and of contributing to universal service support has declined over time. These declines account for much of the decrease in interstate toll rates.

Table 13.1
Average Residential Rates for Local Service in Urban Areas, 1986-2002
(As of October 15)

	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
Representative Monthly Charge ¹	\$12.58	\$12.44	\$12.32	\$12.30	\$12.36	\$13.03	\$13.05	\$13.16	\$13.19	\$13.62	\$13.71	\$13.67	\$13.75	\$13.77	\$13.64	\$14.49	\$14.55
Subscriber Line Charges	2.04	2.66	2.67	3.53	3.55	3.56	3.55	3.55	3.55	3.54	3.54	3.53	3.52	3.58	4.50	5.05	5.64
Additional Monthly Charge for Touch-Tone Service	1.57	1.52	1.54	1.52	1.33	1.06	0.97	0.94	0.77	0.44	0.30	0.25	0.10	0.09	0.06	0.04	0.04
Taxes, 911, and Other Charges	1.51	1.56	1.58	1.70	2.00	2.12	2.15	2.29	2.31	2.41	2.40	2.42	2.39	2.48	2.57	3.03	3.14
Total Monthly Charge	\$17.70	\$18.18	\$18.11	\$19.05	\$19.24	\$19.77	\$19.72	\$19.95	\$19.81	\$20.01	\$19.95	\$19.88	\$19.76	\$19.93	\$20.78	\$22.62	\$23.38
Basic Connection Charge	\$45.63	\$44.04	\$42.94	\$43.06	\$43.06	\$42.00	\$41.50	\$41.38	\$41.28	\$40.91	\$41.11	\$41.04	\$41.24	\$41.26	\$41.45	\$40.02	\$39.57
Additional Connection Charge for Touch-Tone Service	1.34	1.31	1.55	1.76	1.77	1.27	1.22	1.23	0.85	0.23	0.23	0.17	0.12	0.12	0.12	0.12	0.12
Taxes, 911, and Other Charges	2.28	2.20	2.11	2.44	2.32	2.30	2.29	2.30	2.33	2.44	2.36	2.46	2.38	2.57	2.53	2.81	2.70
Total Connection Charge	\$49.25	\$47.55	\$46.60	\$47.26	\$47.15	\$45.57	\$45.01	\$44.92	\$44.46	\$43.58	\$43.70	\$43.67	\$43.74	\$43.95	\$44.10	\$42.95	\$42.39
Additional Charge if Drop Line and Connection Block Needed	NA	NA	\$6.04	\$6.07	\$6.89	\$6.89	\$6.50	\$7.29	\$6.74	\$5.90	\$5.74	\$5.65	\$5.64	\$5.86	\$5.84	\$5.84	\$5.85
Lowest-Cost Inside Wiring Maintenance Plan	\$0.58	\$0.85	\$0.89	\$1.07	\$1.07	\$1.20	\$1.25	\$1.31	\$1.45	\$1.52	\$1.78	\$1.68	\$2.22	\$2.66	\$3.03	\$3.62	\$3.61

NA - Not Available.

¹ Rates are based on flat-rate service where available, and measured/message service with one hundred 5-minute, same-zone, business-day calls elsewhere. As of 2001, all 95 cities in the *Urban Rates Survey* offered flat-rate residential service, which made measuring the cost of such calls unnecessary.

Source: Industry Analysis and Technology Division, Wireline Competition Bureau, *Reference Book of Rates, Price Indices, and Household Expenditures for Telephone Service* (July 2003).

Table 13.2
Average Local Rates for Businesses with a Single Line in Urban Areas, 1989 - 2002
(As of October 15)

	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
Monthly Representative Service Charge ¹	\$31.06	\$30.97	\$32.29	\$32.45	\$32.70	\$32.25	\$32.48	\$32.58	\$32.76	\$32.44	\$32.41	\$32.18	\$31.88	\$32.12
Subscriber Line Charges	3.55	3.57	3.57	3.56	3.57	3.57	3.57	3.54	3.54	3.54	3.52	4.39	4.91	5.38
Extra for Touch-Tone Service	2.43	2.35	1.84	1.71	1.67	1.21	0.97	0.82	0.38	0.32	0.25	0.19	0.18	0.14
Taxes, 911, and Other Charges	4.21	4.32	4.42	4.57	4.63	4.61	4.79	4.87	4.99	4.97	5.03	5.04	5.45	5.95
Total Monthly Charge	\$41.25	\$41.21	\$42.12	\$42.29	\$42.57	\$41.64	\$41.80	\$41.81	\$41.67	\$41.27	\$41.21	\$41.80	\$42.43	\$43.59
Monthly Charge for Flat-Rate Service	\$33.04	\$33.29	\$34.12	\$34.06	\$34.85	\$34.39	\$34.45	\$34.42	\$34.68	\$34.39	\$33.73	\$33.45	\$32.02	\$33.34
Subscriber Line Charges	3.65	3.69	3.70	3.70	3.70	3.70	3.69	3.61	3.61	3.56	3.50	4.35	4.77	5.73
Extra for Touch-Tone Service	2.12	2.11	1.87	1.84	1.76	1.12	1.00	0.89	0.53	0.49	0.47	0.43	0.39	0.30
Taxes, 911, and Other Charges	4.90	4.98	5.22	5.34	5.50	5.36	5.58	5.55	5.58	5.63	5.49	5.68	5.98	6.88
Total Monthly Charge for Flat-Rate Service	\$43.71	\$44.07	\$44.91	\$44.94	\$45.81	\$44.57	\$44.71	\$44.47	\$44.39	\$44.07	\$43.20	\$43.90	\$43.15	\$46.25
Number of Sample Cities with Flat-Rate Service	59	56	54	54	54	53	53	53	53	54	54	54	56	56
Monthly Charge for Measured/Message Service	\$16.18	\$16.17	\$16.76	\$16.55	\$16.60	\$16.74	\$17.06	\$17.26	\$17.28	\$17.16	\$17.06	\$16.92	\$17.16	\$17.44
200 Five-Minute Same-Zone Business-Day Calls	16.11	16.19	16.70	17.23	17.57	17.38	17.15	17.10	17.18	17.15	17.24	17.63	17.56	17.24
Subscriber Line Charges	3.54	3.55	3.55	3.54	3.55	3.55	3.54	3.51	3.51	3.53	3.52	4.39	4.90	5.33
Extra for Touch-Tone Service	2.48	2.39	1.87	1.73	1.68	1.22	0.98	0.83	0.39	0.33	0.25	0.20	0.19	0.14
Taxes, Including 911 Charges	4.41	4.53	4.56	4.77	4.86	4.83	5.01	5.13	5.22	5.19	5.28	5.32	5.76	6.26
Total Monthly Charge for Measured/Message Service	\$42.72	\$42.83	\$43.44	\$43.82	\$44.26	\$43.72	\$43.75	\$43.84	\$43.57	\$43.35	\$43.35	\$44.45	\$45.57	\$46.40
Number of Sample Cities with Measured/Message Service	83	83	84	84	84	87	87	86	85	85	85	85	85	86
Cost of a Five-Minute Same-Zone Business-Day Call	\$0.09	\$0.09	\$0.09	\$0.09	\$0.09	\$0.09	\$0.09	\$0.09	\$0.09	\$0.09	\$0.09	\$0.10	\$0.09	\$0.09
Basic Connection Charge	\$71.05	\$71.36	\$72.75	\$72.55	\$71.41	\$69.88	\$67.87	\$68.47	\$68.67	\$65.83	\$67.87	\$67.77	\$67.04	\$67.25
Additional Connection Charge for Touch-Tone Service	1.70	1.89	1.13	1.19	1.17	0.92	0.27	0.17	0.17	0.12	0.12	0.12	0.12	0.12
Taxes, Including 911 Charges	4.06	4.15	4.32	4.33	4.25	4.13	4.17	4.20	4.45	4.13	4.53	4.40	4.69	4.97
Total Connection Charge	\$76.81	\$77.40	\$78.20	\$78.07	\$76.83	\$74.93	\$72.31	\$72.85	\$73.29	\$70.09	\$72.55	\$72.29	\$71.86	\$72.35
Additional Charge if Drop Line and Connection Block Needed	\$5.92	\$7.87	\$6.90	\$6.83	\$6.64	\$6.49	\$7.28	\$6.98	\$6.54	\$6.54	\$6.65	\$6.62	\$6.62	\$6.63
Lowest-Cost Inside Wiring Maintenance Plan	\$1.78	\$1.91	\$2.05	\$2.03	\$2.08	\$2.26	\$2.39	\$2.63	\$2.84	\$3.04	\$3.53	\$3.92	\$4.86	\$4.95

¹ Rates are based on flat-rate service where available, and measured/message service with 200 five-minute, same-zone, business-day calls elsewhere

Source: Industry Analysis and Technology Division, Wireline Competition Bureau, *Reference Book of Rates, Price Indices, and Household Expenditures for Telephone Service* (July 2003).

Table 13.3
Average Rate for a Residential Access Line

	Consumer Price Index	Average Rate for a Residential Access Line			Consumer Price Index	Average Rate for a Residential Access Line	
	All Goods and Services (1982-1984 = 100)	Survey Rate	Restated in 2002 Dollars		All Goods and Services (1982-1984 = 100)	Survey Rate	Restated in 2002 Dollars
1940	14.0	\$3.67	\$47.16	1980	82.4	\$8.61	\$18.80
1941	14.7	3.67	44.91	1981	90.9	9.16	18.13
1942	16.3	3.64	40.17	1982	96.5	10.18	18.98
1943	17.3	3.64	37.85	1983	99.6	13.58	24.53
1944	17.6	3.66	37.41	1984	103.9	15.18	26.28
1945	18.0	3.67	36.68	1985	107.6	16.26	27.19
1946	19.5	3.67	33.86	1986	109.6	17.70	29.05
1947	22.3	3.70	29.85	1987	113.6	18.18	28.79
1948	24.1	3.91	29.19	1988	118.3	18.11	27.54
1949	23.8	4.02	30.39	1989	124.0	19.05	27.64
1950	24.1	4.29	32.02	1990	130.7	19.24	26.48
1951	26.0	4.48	31.00	1991	136.2	19.77	26.11
1952	26.5	4.62	31.36	1992	140.3	19.72	25.29
1953	26.7	4.93	33.22	1993	144.5	19.95	24.84
1954	26.9	5.10	34.11	1994	148.2	19.81	24.05
1955	26.8	5.19	34.84	1995	152.4	20.01	23.62
1956	27.2	5.24	34.66	1996	156.9	19.95	22.87
1957	28.1	5.28	33.80	1997	160.5	19.88	22.28
1958	28.9	5.36	33.37	1998	163.0	19.76	21.81
1959	29.1	5.51	34.06	1999	166.6	19.93	21.52
1960	29.6	5.55	33.73	2000	172.2	20.78	21.71
1961	29.9	5.61	33.75	2001	177.1	22.62	22.98
1962	30.2	5.62	33.48	2002	179.9	23.33	23.33
1963	30.6	5.65	33.22				
1964	31.0	5.66	32.85				
1965	31.5	5.67	32.38				
1966	32.4	5.64	31.32				
1967	33.4	5.60	30.16				
1968	34.8	5.61	29.00				
1969	36.7	5.68	27.84				
1970	38.8	5.76	26.71				
1971	40.5	6.04	26.83				
1972	41.8	6.38	27.46				
1973	44.4	6.69	27.11				
1974	49.3	7.08	25.84				
1975	53.8	7.32	24.48				
1976	56.9	7.81	24.69				
1977	60.6	8.07	23.96				
1978	65.2	8.31	22.93				
1979	72.6	8.40	20.81				

Sources: Averages for 1940 through 1982 are from an AT&T local rate survey and represent January 1 rates. These averages exclude taxes and are for rotary service including the cost of a telephone. See *Reference Book of Rates, Price Indices and Expenditures for Telephone Service*, Common Carrier Bureau, October 1995. Starting in 1983, averages are from the *Urban Rates Survey* and represent October 15 rates. These averages include taxes and are for touch tone service but do not include telephone rental charges or any unbundled inside wiring maintenance plan charges.

Table 13.4
Average Revenue per Minute

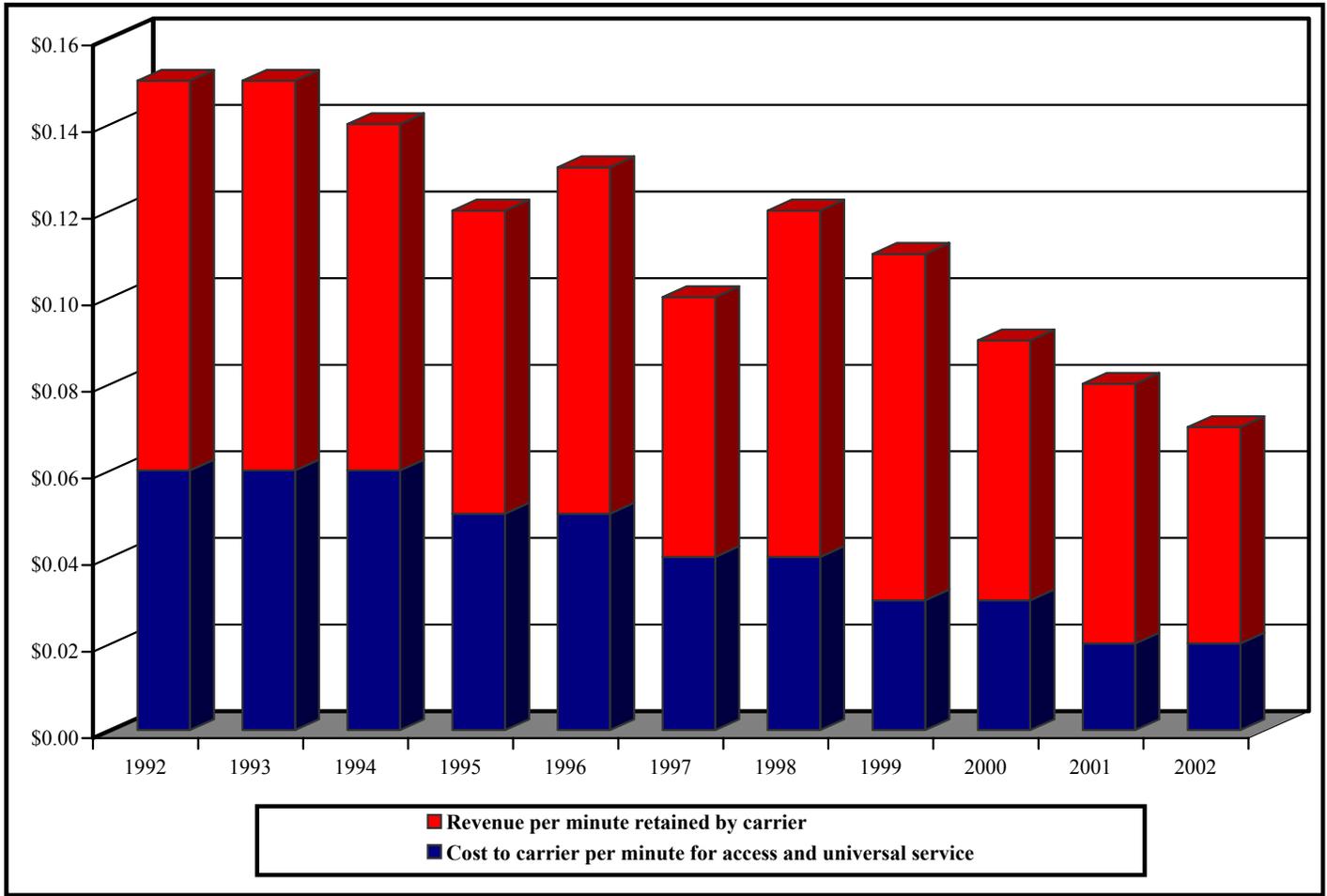
	Consumer Price Index All Goods and Services (1982-1984 = 100)	Average Revenue Per Minute for Interstate and International Calls			Consumer Price Index All Goods and Services (1982-1984 = 100)	Average Revenue Per Minute for Interstate and International Calls				
			Restated in 2002 Dollars			Interstate and International Calls		International Calls 1/	Interstate Calls	
							Restated in 2002 Dollars			Net of Access and Universal Service Cost
1930	16.7	\$0.27	\$2.96	1970	38.8	\$0.23	\$1.07			
1931	15.2	0.27	3.19	1971	40.5	0.25	1.09			
1932	13.7	0.26	3.45	1972	41.8	0.24	1.05			
1933	13.0	0.28	3.81	1973	44.4	0.25	1.03			
1934	13.4	0.27	3.65	1974	49.3	0.26	0.94			
1935	13.7	0.27	3.49	1975	53.8	0.27	0.91			
1936	13.9	0.25	3.25	1976	56.9	0.29	0.90			
1937	14.4	0.22	2.71	1977	60.6	0.28	0.85			
1938	14.1	0.21	2.73	1978	65.2	0.29	0.79			
1939	13.9	0.22	2.79	1979	72.6	0.29	0.72			
1940	14.0	0.21	2.70	1980	82.4	0.30	0.66			
1941	14.7	0.21	2.54	1981	90.9	0.33	0.65			
1942	16.3	0.22	2.38	1982	96.5	0.34	0.64			
1943	17.3	0.21	2.19	1983	99.6	0.35	0.63			
1944	17.6	0.22	2.20	1984	103.9	0.32	0.56			
1945	18.0	0.21	2.12	1985	107.6	0.31	0.51			
1946	19.5	0.20	1.82	1986	109.6	0.28	0.46			
1947	22.3	0.19	1.54	1987	113.6	0.25	0.39			
1948	24.1	0.19	1.39	1988	118.3	0.23	0.36			
1949	23.8	0.19	1.42	1989	124.0	0.22	0.32			
1950	24.1	0.19	1.44	1990	130.7	0.20	0.28			
1951	26.0	0.20	1.39	1991	136.2	0.20	0.26			
1952	26.5	0.20	1.37	1992	140.3	0.19	0.25	\$1.01	\$0.15	\$0.09
1953	26.7	0.21	1.40	1993	144.5	0.19	0.24	1.02	0.15	0.09
1954	26.9	0.22	1.49	1994	148.2	0.18	0.22	0.93	0.14	0.08
1955	26.8	0.23	1.54	1995	152.4	0.17	0.20	0.91	0.12	0.07
1956	27.2	0.23	1.55	1996	156.9	0.16	0.19	0.76	0.12	0.08
1957	28.1	0.24	1.52	1997	160.5	0.15	0.16	0.69	0.11	0.06
1958	28.9	0.24	1.49	1998	163.0	0.14	0.16	0.58	0.11	0.08
1959	29.1	0.24	1.50	1999	166.6	0.14	0.15	0.54	0.11	0.08
1960	29.6	0.24	1.47	2000	172.2	0.12	0.12	0.52	0.09	0.06
1961	29.9	0.25	1.50	2001	177.1	0.10	0.11	0.35	0.08	0.06
1962	30.2	0.25	1.51	2002	179.9	0.09	0.09	0.28	0.07	0.05
1963	30.6	0.25	1.46							
1964	31.0	0.25	1.45							
1965	31.5	0.24	1.37							
1966	32.4	0.24	1.35							
1967	33.4	0.24	1.31							
1968	34.8	0.24	1.22							
1969	36.7	0.24	1.18							

Note: Data for some prior years have been revised.

1/ Billed revenue per minute for international service differs in Table 6.1 and Table 13.4. Data in Table 6.1 are calculated using all U.S. billed minutes and revenues. Data for Table 13.4 represent charges for most U.S. billed calls that originate or terminate in the United States. International-to-international revenues and reorigination, country-beyond and country-direct minutes are not included in this table.

Sources: Estimates for 1930 through 1981 are based on information in AT&T's *Long Lines Statistics*, 1930-1963, 1946-1970, and 1960-1981, and appear to represent data for the conterminous U.S. only. Data prior to 1946 may not be comparable. Data for 1982 and 1983 were estimated using BLS price index changes. Data for 1984 through 1991 were supplied by AT&T. Starting with 1992, data are from the Industry Analysis and Technology Division, Wireline Competition Bureau, *Telecommunications Industry Revenues* (March 2004), available at www.fcc.gov/web/stats.

Chart 13.1
Revenue per Minute for Interstate Calls



Item	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
Revenue per minute retained by carrier	\$0.09	\$0.09	\$0.08	\$0.07	\$0.08	\$0.06	\$0.08	\$0.08	\$0.06	\$0.06	\$0.05
Cost to carrier per minute for access and universal service	\$0.06	\$0.06	\$0.06	\$0.05	\$0.05	\$0.04	\$0.04	\$0.03	\$0.03	\$0.02	\$0.02

14 Residential Telephone Usage

Bill Harvesting® data collected by TNS Telecoms provides information on actual usage in the residential telecom market as collected from the actual telecommunications bills of households. TNS Telecoms (TNS), a telecommunications market information firm, conducts nationwide surveys and Bill Harvesting® on a quarterly basis from over 120,000 households each year. These surveys, in which households are asked to mail copies of their phone bills for one month to TNS, are called Bill Harvesting studies. The company has donated databases containing information on residential phone usage to the Commission.

The Bill Harvesting data reflect calls itemized on residential telephone bills. Thus, 800 and 800-like calls made from the residence are not included, nor are collect calls made from the residence. In contrast, 800 and 800-like calls received, and shown on the household monthly bill, are included, as are collect calls received.

Table 14.1 shows the percentage of residential long distance telephone usage that is intrastate, interstate and international. In 2002, 35% of residential toll phone calls were interstate as opposed to 47% of minutes. Table 14.2 shows the average number of toll minutes on residential phone bills that are intrastate, interstate and international from 1995-2002.

Table 14.3 shows the distribution of residential long distance calls by call duration. The average interstate residential call lasts about nine minutes, although over one-third of interstate toll calls last one minute or less. Tables 14.4 and 14.5 show the duration and the average distance (sometimes called length of haul) of residential intrastate and interstate long distance calls, respectively. The average distance of an interstate call is 692 miles, as opposed to 52 miles for an intrastate call.

Table 14.6 shows the percentage of residential long distance minutes by day of week and time of day. In the 2002 survey, 39% of residential minutes were on weekdays between 7:00 a.m. and 7:00 p.m., and 33% of residential minutes were on weekends.

Table 14.1
Distribution of Residential Toll Calls and Minutes

Type	1995	1996	1997	1998	1999	2000	2001	2002
Calls								
IntraLATA-Intrastate	41 %	40 %	38 %	38 %	39 %	39 %	42 %	44 %
InterLATA-Intrastate	19	18	19	19	18	17	18	17
IntraLATA-Interstate	1	1	1	1	1	1	1	1
InterLATA-Interstate	37	35	37	36	37	36	36	34
International	1	1	1	1	1	1	1	1
Others ¹	2	5	5	4	4	5	2	2
Total Calls in Sample	197,787	165,465	483,685	578,850	474,408	538,337	456,328	427,781
Minutes								
IntraLATA-Intrastate	28 %	29 %	27 %	27 %	28 %	29 %	30 %	32 %
InterLATA-Intrastate	18	18	18	18	17	17	18	18
IntraLATA-Interstate	1	1	1	1	1	1	1	1
InterLATA-Interstate	50	47	49	49	49	47	48	46
International	2	1	1	1	2	2	2	2
Others ¹	1	4	4	3	3	5	1	1
Total Minutes in Sample	1,493,674	1,210,675	3,673,315	4,330,888	3,544,905	4,030,643	3,319,982	2,992,644

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

¹ Toll-free (800, 888, 877, 866) calls billed to residential customers, 900 calls and calls that cannot be classified.

Source: Calculated by Industry Analysis and Technology Division staff using survey data from TNS Telecoms *ReQuest Market Monitor*TM, *Bill Harvesting*[®].

Table 14.2
Average Residential Monthly Toll Minutes

Type	1995	1996	1997	1998	1999	2000	2001	2002
IntraLATA-Intrastate	40	41	41	40	36	33	32	28
InterLATA-Intrastate	26	26	27	26	23	19	19	16
IntraLATA-Interstate	1	1	1	1	1	1	1	1
InterLATA-Interstate	71	67	73	71	65	55	51	41
International	3	1	2	2	2	2	2	2
Others ¹	1	6	6	5	4	5	1	1
All Types	143	143	149	144	131	116	105	90

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

¹ Toll-free (800, 888, 877, 866) minutes billed to residential customers, 900 minutes and minutes for calls that cannot be classified.

Source: Calculated by Industry Analysis and Technology Division staff using survey data from TNS Telecoms *ReQuest Market Monitor*TM, *Bill Harvesting*[®].

Table 14.3
Distribution of Residential Long Distance Call Durations: 2002 ¹

Duration of Call (Minutes)	Intrastate	Interstate	All Calls
1	45.1 %	35.2 %	41.4 %
2	13.1	9.6	11.8
3	8.1	7.1	7.7
4	4.8	4.1	4.6
5	3.4	3.4	3.4
6	2.8	2.8	2.8
7	2.2	2.4	2.3
8	1.8	2.2	2.0
9	1.6	2.0	1.7
10	3.6	4.9	4.1
11-15	4.8	7.5	5.8
16-20	2.8	5.2	3.7
21-25	1.7	3.6	2.5
26-30	1.2	2.5	1.7
31-45	1.7	4.2	2.6
46-60	0.6	1.7	1.0
> 60	0.6	1.6	1.0
Average Duration	5.6	9.4	7.1
Median Duration	2.0	3.0	2
Sample Size	231,835	139,400	371,235

¹ The sample includes domestic, directly dialed calls.

Source: Calculated by Industry Analysis and Technology Division staff using survey data from TNS Telecoms *ReQuest Market Monitor*TM, *Bill Harvesting*[®] .

Table 14.4
Duration and Distance of Intrastate Toll Calls ¹

	Duration (In Minutes)		Distance (In Miles)	
	Average	Median	Average	Median
1995	6.0	2.0	53	26
1996	6.0	2.0	55	28
1997	6.2	2.0	56	28
1998	6.0	2.0	55	29
1999	6.0	2.0	54	29
2000	6.1	2.0	54	28
2001	5.9	2.0	53	29
2002	5.6	2.0	52	28

¹ Direct-dial calls carried by long distance carriers and local exchange carriers. Includes only domestic calls.

Source: Calculated by Industry Analysis and Technology Division staff using survey data from TNS Telecoms *ReQuest Market Monitor*TM, *Bill Harvesting*[®].

Table 14.5
Duration and Distance of Interstate Toll Calls ¹

	Duration (In Minutes)		Distance (In Miles)	
	Average	Median	Average	Median
1995	10.6	4.0	689	507
1996	10.0	4.0	670	473
1997	10.3	4.0	695	480
1998	10.3	4.0	691	493
1999	10.0	3.9	693	501
2000	10.0	4.0	706	524
2001	9.7	3.0	686	501
2002	9.4	3.0	692	489

¹ Direct-dial calls carried by long distance carriers and local exchange carriers. Includes only domestic calls.

Source: Calculated by Industry Analysis and Technology Division staff using survey data from TNS Telecoms *ReQuest Market Monitor*TM, *Bill Harvesting*[®].

Table 14.6
Distribution of Residential Long Distance Minutes
By Day and Time ¹

2002

Day	7am-6:59pm	7pm-6:59am	Total
Monday	8.3 %	6.0 %	14.3 %
Tuesday	8.2	6.0	14.2
Wednesday	7.5	5.9	13.4
Thursday	7.5	5.7	13.1
Friday	7.5	4.7	12.2
Saturday	9.8	4.3	14.1
Sunday	11.9	6.7	18.6
Total	60.6 %	39.4 %	100.0 %

¹ Based on a sample of 215,687 directly dialed, interLATA calls.

Source: Calculated by Industry Analysis and Technology Division staff using survey data from TNS Telecoms *ReQuest Market Monitor*TM, *Bill Harvesting*[®].

15 Revenues

In 1993, the Commission required all carriers with interstate revenues to begin filing an annual Telecommunications Relay Service (TRS) Fund Worksheet. Because revenues derived from providing access to the interstate network are considered to be interstate, virtually all carriers were required to file information. Starting in 1997, larger carriers were required to file Universal Service Fund (USF) worksheets, which contain similar information but with breakouts for revenues from service provided for resale and for service provided to end users. End-user revenues include revenues associated with services to end users and do not include resale (carrier's carrier) revenues. Carrier's carrier revenues are sales of telecommunications to universal service contributors for resale in the form of telecommunications. Filers report all other revenues as end-user revenues.¹ On April 1, 2000, carriers first filed an FCC Form 499-A Telecommunications Reporting Worksheet to report prior year revenue data for TRS, USF, North American Numbering Planning Administration, and local number portability contribution purposes. The FCC Form 499-A superseded the older reporting requirements and is now filed to satisfy carrier registration requirements at the Commission as well. Beginning in 2001, many telecommunications providers also had to file the quarterly FCC Form 499-Q.

Table 15.1 shows the major components of telecommunications revenues for 1997 through 2003: carrier's carrier revenues and end-user revenues for local, wireless, and toll service. Chart 15.1 shows the trend of the end-user revenue percentages for local, wireless and toll services. Table 15.2 shows how revenues by type of service have changed over time. The table highlights how some significant changes in the revenue levels from 1996 to 1997 are due to major reporting changes. Table 15.3 shows the number of telecommunications service providers by principal type of business. Table 15.4 contains revenues for 1992 through 2002 by type of carrier. Additional revenue detail can be found in the latest *Telecommunications Industry Revenues* report (March 2004 edition).

The publication *Telecommunications Provider Locator* (February 2004 edition) lists 4,748 carriers that filed a FCC Form 499-A worksheet in 2003. It also contains an address and contact telephone number for each carrier.

State-level telephone revenues are estimated using data from various editions of *Telecommunications Industry Revenues*, *Statistics of Communications Common Carriers*, *Local Telephone Competition*, access filings to the FCC, and the *Statistical Abstract to the United*

¹ Carrier's carrier revenues and end-user revenues are defined in the FCC Form 499 instructions. Carrier's carrier revenues includes, for example, most access services that local exchange carriers provide to toll carriers. Sales to *de minimis* carriers and to others that are exempt from universal service contribution requirements, however, must be classified as end-user revenues. Note that filers contribute to the universal service funding mechanism based on certain types of end-user revenues.

*States.*² Table 15.5 provides estimates of telecommunications revenues by state for 1995 to 2002. Table 15.6 provides estimates of end-user and carrier's carrier revenues by state for 2002. Table 15.7 provides estimates of telecommunications revenues for incumbent local exchange carriers, competitive local exchange carriers, and mobile wireless carriers by state; it also provides estimates for subscriber line charges, access, and toll services for 2002.

² See Industry Analysis and Technology Division, Wireline Competition Bureau, *Monitoring Report* (October 2002), Industry Analysis Division, Common Carrier Bureau, *State-by-State Telephone Revenues and Universal Service Data* (April 2001), and previous editions for discussion of the methodology. Estimates for 2002 use a similar methodology as those used in 2001.

Table 15.1
Telecommunications Industry Revenues¹
(Dollar Amounts Shown in Millions)

	1997	1998	1999	2000	2001	2002	Preliminary 2003
Carrier's Carrier Revenues ²							
Local Service ³	\$28,289	\$29,374	\$33,156	\$36,621	\$40,108	\$38,412	\$38,041
Wireless Service	2,752	3,060	4,652	5,144	6,180	5,020	5,086
Toll Service	11,598	13,448	14,934	21,849	19,999	16,476	18,654
Intrastate	16,201	18,892	22,293	25,553	27,848	25,770	27,347
Interstate and International ⁴	26,562	27,114	30,449	38,060	38,439	34,138	34,434
Total	42,639	45,882	52,742	63,613	66,287	59,907	61,781
End User Revenues ²							
Local Service ³	69,137	75,189	78,608	84,526	87,704	88,712	90,141
Wireless Service	30,199	33,714	43,843	56,857	68,507	76,501	84,770
Toll Service	89,193	91,607	93,311	87,767	79,302	67,222	59,028
Intrastate	117,454	123,216	134,919	147,465	155,347	154,815	153,708
Interstate and International ⁴	70,952	77,170	80,844	81,685	80,165	77,619	80,231
Total	188,406	200,386	215,763	229,149	235,513	232,434	233,939
Total Revenues							
Local Service ³	97,426	104,563	111,764	121,147	127,812	127,123	128,181
Wireless Service	32,951	36,775	48,495	62,000	74,687	81,521	89,857
Toll Service	100,791	105,055	108,246	109,615	99,301	83,697	77,682
Intrastate	133,655	142,108	157,212	173,018	183,195	180,585	181,055
Interstate and International ⁴	97,514	104,284	111,293	119,745	118,605	111,756	114,665
Total	\$231,168	\$246,392	\$268,505	\$292,762	\$301,800	\$292,341	\$295,720

Note: Detail may not add to totals due to rounding.

¹ Data include revenues for *de minimis* filers as well as for other carriers that are exempt from universal service contribution requirements.

² Carrier's carrier revenues are reported on the FCC Form 499-A as sales to other universal service contributors for resale. This includes, for example, access services that local exchange carriers provide to toll carriers. Sales to *de minimis* resellers, end-user customers, governments, non-profits, and any other non-contributors are treated as end-user revenues. Filers contribute to the universal service funding mechanisms based on their end-user revenues.

³ Payphone revenues are included with local service revenues in this table.

⁴ Revenues from calls that both originate and terminate in foreign points are reported as end-user revenues, and are included in this table, but are not included in the universal service contribution base.

Source: Industry Analysis and Technology Division, Wireline Competition Bureau, *Telecommunications Industry Revenues* (March 2004).

Preliminary 2003 data are based on FCC Form 499-Q filings and are based on type of filer rather than type of service.

Chart 15.1
End-User Telecommunications Revenues

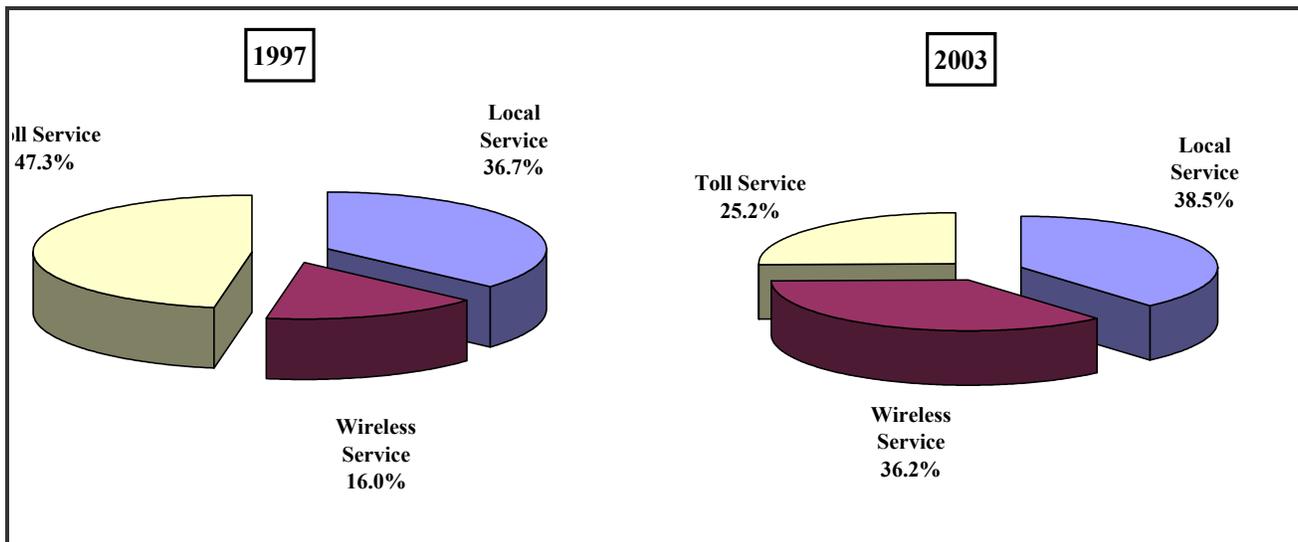


Table 15.2
Telecommunications Revenues Reported by Type of Service
(Dollar Amounts Shown in Millions)

Telecommunications Revenues	TRS Data					Universal Service & TRS Data		FCC Form 499-A Data			
	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
Local Exchange	\$39,235	\$40,176	\$42,245	\$45,194	\$48,717	\$53,771	\$59,245	\$64,940	\$69,947	\$72,346	\$71,320
Pay Telephone 1/						2,182	2,536	2,218	1,932	1,585	1,192
Local Private Line 2/	1,049	1,088	1,138	1,226	1,616	8,282	10,403	12,914	16,864	21,966	23,070
Other Local 3/	7,687	8,002	8,302	10,428	10,543	2,847	2,179	2,501	3,249	3,391	3,418
Subscriber Line Charges 2/ Access 2/	29,353	30,832	32,759	33,911	35,641	8,327	11,052	10,826	11,563	12,127	12,758
Universal Service Surcharges on Local Service Bills 4/ Additional Revenues from TRS Worksheets						21,423	18,449	18,105	17,017	15,096	13,955
							103	260	575	1,301	1,410
Total Local Service Revenues	77,324	80,098	84,443	90,759	96,516	97,426	104,563	111,764	121,147	127,812	127,123
Wireless Service	7,285	10,237	14,293	18,759	26,049	32,760	36,240	48,117	61,505	74,006	80,678
Universal Service Surcharges on Local Service Bills 4/ Additional Revenues from TRS Worksheets							345	379	495	681	842
						189	189				
Total Wireless Service Revenues	7,285	10,237	14,293	18,759	26,049	32,950	36,775	48,495	62,000	74,687	81,521
Operator 1/ Non-Operator Switched Toll	9,465	10,772	10,539	11,170	10,975	12,002	12,205	10,049	11,406	10,389	7,902
Long Distance Private Line	54,448	60,591	61,468	65,217	73,751	72,059	74,168	78,389	75,183	65,325	54,475
Other Long Distance	7,783	8,067	9,043	9,719	10,665	10,504	11,952	13,169	16,189	16,402	15,108
Universal Service Surcharges on Local Service Bills 4/ Additional Revenues from TRS Worksheets	4,048	3,095	3,428	3,523	4,299	4,695	3,386	3,656	3,372	3,259	2,445
							1,810	2,983	3,467	3,927	3,767
Total Toll Service Revenues	75,744	82,525	84,478	89,629	99,691	100,793	105,055	108,246	109,615	99,301	83,697
Non-Telecommunications Revenues Formerly Reported as Other Local and Wireless Revenues 3/	(6,944)	(7,518)	(8,324)	(9,071)	(10,474)						
Total Telecommunications Revenues 3/	153,409	165,342	174,890	190,076	211,782	231,168	246,392	268,505	292,762	301,799	292,341
Non-Telecommunications Revenues 3/ Total Reported Revenues	6,944	7,518	8,324	9,071	10,474	25,633	27,944	33,144	42,261	48,036	60,406
	160,353	172,860	183,214	199,147	222,256	256,801	272,019	301,648	335,023	349,835	352,747
Service Reported as:											
Intrastate 3/	82,379	89,409	94,278	103,852	117,375	133,654	142,108	157,212	173,018	183,195	180,585
Interstate and International	71,030	75,933	80,611	86,224	94,407	97,514	104,284	111,293	119,745	118,605	111,756
Total Telecommunications Revenues 3/	\$153,409	\$165,342	\$174,890	\$190,076	\$211,782	\$231,168	\$246,392	\$268,505	\$292,762	\$301,799	\$292,341

Note: Detail may not add to totals due to rounding.

- 1/ TRS filers generally reported pay telephone revenues as local service revenues, access revenues or operator toll revenues. The Universal Service and FCC Form 499-A worksheets contain a separate category for payphone coin revenues. Starting in 1997, payphone revenues include payphone compensation received from toll carriers.
- 2/ TRS Worksheet filers generally reported special access revenues as access revenues. Reporting changes implemented with the Universal Service Worksheet explain the increase in local private line revenues and the fall in access revenues shown for 1997. TRS Worksheet filers included subscriber line charges with other access charges. For the years 1992 - 1996, these revenues have been disaggregated by assuming that the end-user access revenues in Table 4.2 of *Statistics of Communications Common Carriers* represents 93% of industry total subscriber line charge revenues. Universal Service Worksheet filers report subscriber line charges in a separate category. The increase from 1997 to 1998 represents PICC charges levied by ILECs as well as \$1.2 billion of PICC pass-through charges levied by toll carriers.
- 3/ Significant amounts of enhanced services, billing and collection, CPE and other non-telecommunications revenues were reported in the TRS mobile and other local service categories through 1996. Universal Service Worksheet filers report these revenues in the non-telecommunications category. For prior years, the amounts of non-telecommunications revenues reported as mobile and other local revenues were estimated as 70% of the amounts that Tier 1 ILECs reported in ARMIS as miscellaneous and nonregulated revenues (currently account 5200 + account 5280) and 10% of amounts reported as mobile service revenue.
- 4/ Charges on end-user bills identified as recovering state or federal universal service contributions are reported separately from local, wireless and toll revenues. Reported amounts are apportioned between local, wireless and toll service based on the proportions of local, wireless and toll intrastate and interstate revenues by type of carrier.

Source: Industry Analysis and Technology Division, Wireline Competition Bureau, *Telecommunications Industry Revenues* (March 2004).

Table 15.3
Number of Interstate Telecommunications Providers
By Principal Type of Business

Service Provider Category 1/ 2/	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
Incumbent Local Exchange Carriers (ILECs) 3/	1,274	1,281	1,347	1,347	1,376	1,410	1,348	1,318	1,335	1,335	1,310
Competitive Access Providers (CAPs) and Competitive Local Exchange Carriers (CLECs)	19	20	30	57	94	129	212	298	479	511	451
Local Resellers					8	11	54	73	105	132	100
Other Local Exchange Carriers					17	7	10	23	23	26	64
Total: Competitors of ILECs	19	20	30	57	119	147	276	394	607	669	615
Total: Fixed Local Service Providers 4/	1,293	1,301	1,377	1,404	1,495	1,557	1,624	1,712	1,942	2,004	1,925
Payphone Providers	113	163	197	271	533	509	615	704	699	751	606
Wireless Telephony Including Cellular, Personal Communications Service (PCS) and SMR Telephony Carriers	715	798	790	792	853	732	808	784	783	670	422
Paging & Messaging Service	114	126	117	138	200	137	303	391	425	425	346
Specialized Mobile Radio (SMR) Dispatch					163	99	119	199	191	182	138
Wireless Data Service Providers and Other Mobile Service Providers					1	1	28	45	31	29	21
Total: Wireless Service Providers	829	924	907	930	1,217	969	1,258	1,419	1,430	1,306	927
Interexchange Carriers (IXCs)	87	83	97	130	149	151	171	178	212	233	229
Operator Service Providers (OSPs)	43	35	29	25	27	32	24	15	20	19	18
Prepaid Calling Card Providers				8	16	18	20	18	23	27	27
Satellite Service Carriers					22	13	13	17	25	34	33
Toll Resellers	178	171	206	260	345	340	388	406	493	558	574
Other Toll Carriers	15	32	34	30	28	15	31	17	35	69	51
Total: Toll Service Providers	323	321	366	453	587	569	647	651	808	940	932
All Filers	2,558	2,709	2,847	3,058	3,832	3,604	4,144	4,486	4,879	5,001	4,390

- 1/ Starting in 1993, filers have been asked to select for themselves a service provider category that best describes their operations. The choices have changed over the years; for example, most satellite service providers identified themselves as other toll carriers in their 1997 TRS worksheets because that worksheet did not contain a separate category for satellite service providers.
- 2/ Counts are based on the numbers of filers actually reporting revenues. Counts dropped in 2002 because many affiliated filers were permitted to make consolidated filings.
- 3/ Fewer incumbent local exchange carriers filed in 1998 than in 1997 because of consolidation of study areas.
- 4/ The total number of local service providers shown in Table 8.7 differs from the total fixed local service providers shown in Table 15.3 because the number shown in Table 8.7 includes filers that self identify as mobile or toll providers, but that report some local exchange service revenues. The number of telecommunications providers shown in Table 15.3 also differs from the numbers shown in Table 5.3 because Table 5.3 includes all filers, including new filers that reported no revenues for 2002.

Source: Industry Analysis and Technology Division, Wireline Competition Bureau, *Telecommunications Provider Locator* (February 2004 and prior editions) and FCC Form 499-A filings.

Table 15.4
Gross Revenues Reported by Type of Carrier
(Dollars Shown in Millions)

Service Provider Category 1/	TRS Worksheet Data					Universal Service & TRS Data		FCC Form 499 Data			
	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
Incumbent Local Exchange Carriers 2/ Competitive Access Providers (CAPs) and Competitive Local Exchange Carriers (CLECs)	\$91,584	\$95,228	\$98,431	\$102,820	\$107,905	\$105,154	\$108,234	\$112,216	\$116,158	\$117,885	\$114,990
Local Resellers	69	191	281	623	1,011	1,919	3,348	5,652	9,814	12,998	13,043
Other Local Exchange Carriers						206	410	511	879	1,393	1,538
Private Carriers						157	36	171	11	329	406
Shared-Tenant Service Providers						112	147	87	39	15	281
Total: Competitors of ILECs	69	191	281	623	1,011	2,481	4,034	6,508	10,945	14,781	15,309
Total: Fixed Local Service Providers	91,835	95,595	99,011	103,792	109,273	107,634	112,268	118,725	127,103	132,666	130,300
Total: Payphone Providers	183	175	300	349	357	933	1,101	1,213	972	836	641
Wireless Telephony Including Cellular, Personal Communications Service (PCS) and SMR Telephony Carriers 2/ Paging & Messaging Service 2/ Specialized Mobile Radio (SMR) Dispatch	6,718	9,215	13,259	17,208	23,778	29,944	33,139	46,513	59,823	71,887	78,568
Wireless Data Service Providers and Other Mobile Service Providers	670	964	938	1,419	2,121	225	731	221	164	110	220
Total: Wireless Service Providers	7,387	10,179	14,197	18,627	25,900	33,030	37,032	50,152	63,280	74,596	80,467
Interexchange Carriers (IXCs)	57,341	61,118	66,381	70,938	79,057	79,080	83,443	87,570	87,311	81,272	68,146
Operator Service Providers (OSPs)	558	695	536	500	461	603	590	337	635	611	554
Prepaid Calling Card Providers				16	238	519	888	866	727	133	460
Satellite Service Carriers						1,011	475	280	336	373	406
Toll Resellers	1,293	1,869	2,840	4,220	6,564	8,010	9,885	9,211	10,641	8,797	9,279
Other Toll Carriers	2,186	711	709	773	577	348	710	150	1,758	2,516	2,089
Total: Toll Service Providers	61,378	64,393	70,466	76,447	86,896	89,570	95,992	98,414	101,407	93,702	80,934
Non-Telecommunications Revenues in Prior-Year Data 2/	(6,944)	(7,518)	(8,324)	(9,071)	(10,474)						
Other Adjustments 3/	(248)	2,693	(461)	280	187	0	0	0	0	0	0
Total Telecommunications Revenues	\$153,409	\$165,342	\$174,890	\$190,076	\$211,782	\$231,168	\$246,392	\$268,505	\$292,762	\$301,799	\$292,341

1/ Filers are asked to select for themselves a service provider category that best describes their operations. The choices have changed over the years. For example, most satellite service providers identified themselves as other toll carriers in their 1997 Form 431 TRS worksheets because that worksheet did not contain a separate category for satellite service providers.

2/ Significant amounts of enhanced service, billing and collection, CPE and other non-telecommunications revenues were reported on TRS worksheets by incumbent local exchange carriers (ILECs) and wireless carriers through 1996. Universal Service Worksheet filers report these revenues in the non-telecommunications category. For prior years, the amounts of non-telecommunications revenues reported as mobile and other local revenues were estimated as 70% of the amounts that Tier 1 ILECs reported in ARMIS as miscellaneous and nonregulated revenues (currently account 5200 + account 5280) and 10% of amounts reported as mobile service revenues.

3/ Other adjustments include some amounts withheld to preserve confidentiality and revisions made after the initial publication of the data.

Source: Industry Analysis and Technology Division, Wireline Competition Bureau, *Telecommunications Industry Revenues* (March 2004).

Table 15.5
Total Telecommunications Revenues by State
(Dollar Amounts Shown in Millions)

	1995	1996	1997	1998	1999	2000	2001	2002 ^p	Percent Change 1995-2002
Alabama	\$2,668	\$2,946	\$3,205	\$3,394	\$3,712	\$4,008	\$4,314	\$4,075	53 %
Alaska	464	518	561	590	664	717	770	778	68
American Samoa	NA	NA	NA	NA	NA	NA	13	13	NA
Arizona	2,842	3,249	3,667	3,958	4,359	4,972	5,205	5,005	76
Arkansas	1,534	1,719	1,885	2,005	2,303	2,315	2,593	2,449	60
California	22,379	25,100	27,236	28,692	29,384	33,577	35,398	34,846	56
Colorado	3,128	3,526	4,006	4,260	4,826	5,290	5,515	5,257	68
Connecticut	2,765	2,943	3,266	3,173	3,405	3,924	4,020	3,840	39
Delaware	492	567	627	685	788	875	883	869	77
District of Columbia	886	955	1,049	1,085	1,581	1,648	1,383	1,346	52
Florida	11,582	12,972	14,161	15,042	17,223	18,308	18,849	18,109	56
Georgia	5,335	6,004	6,849	7,469	8,479	8,919	9,627	9,392	76
Guam	NA	85	97	103	99	108	122	119	NA
Hawaii	775	841	930	969	1,009	1,177	1,207	1,193	54
Idaho	791	908	967	1,010	1,092	1,210	1,245	1,246	57
Illinois	7,916	8,920	10,069	10,948	11,983	13,516	12,860	12,073	53
Indiana	3,804	4,192	4,536	4,810	5,099	5,552	5,524	5,385	42
Iowa	1,888	2,039	2,163	2,268	2,441	2,340	2,652	2,529	34
Kansas	1,829	2,017	2,165	2,304	2,588	2,571	2,656	2,472	35
Kentucky	2,353	2,629	2,861	3,060	3,426	3,573	3,665	3,278	39
Louisiana	2,703	2,946	3,192	3,432	3,913	3,964	4,274	4,192	55
Maine	869	976	996	1,105	1,195	1,328	1,387	1,365	57
Maryland	3,767	4,234	4,625	4,911	5,176	5,783	6,202	6,016	60
Massachusetts	4,988	5,455	6,010	6,338	6,561	7,428	7,367	7,066	42
Michigan	6,444	7,246	7,983	8,523	9,530	9,937	9,889	9,759	51
Minnesota	3,064	3,461	3,864	4,115	4,617	4,877	4,934	4,743	55
Mississippi	1,584	1,734	1,877	2,017	2,283	2,486	2,633	2,586	63
Missouri	3,623	4,017	4,389	4,613	5,442	5,688	6,067	5,439	50
Montana	640	709	756	780	897	937	903	916	43
Nebraska	1,296	1,428	1,540	1,587	1,737	1,760	1,865	1,845	42
Nevada	1,099	1,324	1,489	1,592	1,884	1,954	2,160	2,167	97
New Hampshire	989	1,118	1,208	1,246	1,313	1,429	1,419	1,396	41
New Jersey	7,091	7,927	8,707	9,366	9,558	10,670	10,689	10,207	44
New Mexico	1,121	1,262	1,370	1,433	1,518	1,515	1,656	1,617	44
New York	14,983	16,026	17,120	17,935	19,700	20,903	21,771	21,186	41
North Carolina	5,394	6,104	6,613	7,297	8,006	8,619	8,811	8,310	54
North Dakota	481	587	596	599	660	731	699	678	41
Northern Mariana Islands	15	18	21	30	34	32	43	46	208
Ohio	7,457	8,219	8,823	9,396	9,952	10,902	10,708	10,545	41
Oklahoma	1,996	2,179	2,410	2,552	2,727	2,915	3,116	3,106	56
Oregon	2,238	2,502	2,720	2,905	3,123	3,159	3,480	3,371	51
Pennsylvania	7,961	8,867	9,588	10,309	10,770	12,200	12,578	12,253	54
Puerto Rico	1,244	1,405	1,606	1,467	2,051	1,971	2,598	2,349	89
Rhode Island	686	761	839	859	946	1,012	989	971	42
South Carolina	2,653	2,849	3,053	3,393	3,790	4,047	4,147	4,120	55
South Dakota	488	584	602	635	716	763	712	688	41
Tennessee	3,467	3,880	4,302	4,553	4,928	5,256	5,574	5,381	55
Texas	12,871	14,563	15,943	17,576	19,032	21,405	21,617	21,403	66
Utah	1,112	1,284	1,443	1,557	1,790	1,998	2,090	2,001	80
Vermont	424	547	575	602	684	717	659	643	52
Virgin Islands	74	93	101	109	122	129	145	157	113
Virginia	5,061	5,646	6,179	6,576	7,020	8,013	8,506	8,111	60
Washington	3,995	4,438	4,613	5,080	5,703	6,253	6,260	6,172	55
West Virginia	1,143	1,240	1,337	1,383	1,437	1,625	1,735	1,665	46
Wisconsin	3,258	3,621	3,927	4,234	4,719	5,195	5,027	5,026	54
Wyoming	366	402	449	462	513	563	587	571	56
Total	\$190,076	\$211,782	\$231,168	\$246,392	\$268,505	\$292,762	\$301,799	\$292,341	54 %

^p indicates preliminary.

NA - Not available.

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

Source: Industry Analysis and Technology Division, Wireline Competition Bureau, *Monitoring Report* (December 2003), and Industry Analysis Division, Common Carrier Bureau, *State-by-State Telephone Revenues and Universal Service Data (April 2001)*. Estimates for 2002 use a methodology that is similar to that used in 2001.

Table 15.6
Telecommunications Revenues by State: 2002
(Dollar Amounts Shown in Millions)

	End User			Carrier's Carrier			Total: End User + Carrier's Carrier			
	Interstate	Intrastate	Total	Interstate	Intrastate	Total	Interstate	Intrastate	Total	Percent of Total
Alabama	\$1,043	\$2,311	\$3,354	\$427	\$294	\$721	\$1,470	\$2,605	\$4,075	1.39 %
Alaska	227	388	614	100	65	164	326	452	778	0.27
American Samoa	2	9	11	1	1	2	3	10	13	0.00
Arizona	1,570	2,425	3,995	625	384	1,010	2,195	2,809	5,005	1.71
Arkansas	651	1,274	1,926	300	223	523	951	1,497	2,449	0.84
California	8,130	19,512	27,641	3,541	3,664	7,205	11,670	23,176	34,846	11.92
Colorado	1,487	2,676	4,163	674	420	1,094	2,162	3,096	5,257	1.80
Connecticut	1,184	1,889	3,074	530	236	766	1,714	2,125	3,840	1.31
Delaware	299	396	696	124	49	173	423	446	869	0.30
Dist. of Columbia	417	589	1,006	266	74	340	683	663	1,346	0.46
Florida	5,126	9,172	14,298	2,154	1,657	3,811	7,280	10,829	18,109	6.19
Georgia	2,449	5,040	7,489	1,185	718	1,904	3,634	5,758	9,392	3.21
Guam	33	61	94	14	10	25	47	71	119	0.04
Hawaii	341	623	964	134	95	229	475	718	1,193	0.41
Idaho	390	573	963	188	94	283	579	667	1,246	0.43
Illinois	3,213	6,544	9,757	1,293	1,023	2,316	4,506	7,567	12,073	4.13
Indiana	1,488	2,829	4,318	592	475	1,067	2,080	3,304	5,385	1.84
Iowa	713	1,284	1,996	315	218	533	1,027	1,502	2,529	0.87
Kansas	699	1,262	1,961	329	182	511	1,029	1,443	2,472	0.85
Kentucky	877	1,813	2,689	353	235	588	1,230	2,048	3,278	1.12
Louisiana	1,045	2,388	3,434	428	330	758	1,473	2,719	4,192	1.43
Maine	374	715	1,089	178	99	276	551	813	1,365	0.47
Maryland	1,798	3,029	4,827	729	461	1,190	2,526	3,490	6,016	2.06
Massachusetts	1,942	3,703	5,644	885	536	1,421	2,827	4,239	7,066	2.42
Michigan	2,344	5,486	7,830	942	987	1,929	3,286	6,473	9,759	3.34
Minnesota	1,297	2,463	3,760	590	394	984	1,887	2,857	4,743	1.62
Mississippi	642	1,484	2,125	280	182	461	921	1,665	2,586	0.88
Missouri	1,466	2,788	4,255	681	503	1,184	2,147	3,291	5,439	1.86
Montana	278	431	709	117	89	206	395	520	916	0.31
Nebraska	457	978	1,434	222	188	410	679	1,166	1,845	0.63
Nevada	763	982	1,745	296	126	422	1,059	1,108	2,167	0.74
New Hampshire	440	660	1,100	192	104	296	632	764	1,396	0.48
New Jersey	3,109	4,979	8,087	1,339	780	2,119	4,448	5,759	10,207	3.49
New Mexico	511	766	1,277	204	136	340	715	902	1,617	0.55
New York	5,180	11,639	16,819	2,483	1,884	4,367	7,663	13,523	21,186	7.25
North Carolina	2,284	4,341	6,625	945	739	1,685	3,230	5,080	8,310	2.84
North Dakota	181	334	515	96	66	162	277	401	678	0.23
N. Mariana Islands	16	19	35	7	3	10	23	22	46	0.02
Ohio	2,676	5,738	8,414	1,131	1,000	2,131	3,807	6,738	10,545	3.61
Oklahoma	846	1,643	2,489	378	239	617	1,224	1,881	3,106	1.06
Oregon	996	1,645	2,641	453	277	730	1,449	1,922	3,371	1.15
Pennsylvania	3,273	6,314	9,587	1,429	1,236	2,666	4,703	7,550	12,253	4.19
Puerto Rico	462	1,421	1,883	246	219	465	708	1,640	2,349	0.80
Rhode Island	292	500	792	112	67	179	404	567	971	0.33
South Carolina	1,086	2,239	3,326	451	344	795	1,537	2,583	4,120	1.41
South Dakota	194	335	529	92	67	159	286	402	688	0.24
Tennessee	1,441	2,975	4,415	589	376	965	2,030	3,351	5,381	1.84
Texas	4,969	11,944	16,913	2,397	2,093	4,490	7,366	14,037	21,403	7.32
Utah	571	1,016	1,587	262	153	415	833	1,169	2,001	0.68
Vermont	210	293	503	96	45	141	306	338	643	0.22
Virgin Islands	61	60	120	27	10	37	87	70	157	0.05
Virginia	2,370	3,936	6,306	1,075	730	1,805	3,445	4,666	8,111	2.77
Washington	1,719	3,067	4,786	797	589	1,386	2,516	3,656	6,172	2.11
West Virginia	486	823	1,308	224	133	357	709	956	1,665	0.57
Wisconsin	1,329	2,742	4,071	533	423	956	1,862	3,164	5,026	1.72
Wyoming	172	272	445	85	41	127	258	313	571	0.20
Total	\$77,619	\$154,815	\$232,434	\$34,137	\$25,770	\$59,907	\$111,756	\$180,585	\$292,341	100.00 %

Note: Figures are preliminary and may not add to totals due to rounding.

Source: Estimates for 2002 use a methodology similar to that used in 2002. See Industry Analysis and Technology Division, Wireline Competition Bureau, *Monitoring Report* (December 2003).

Table 15.7
Telecommunications Revenues by Type of Service: 2002
(Dollar Amounts Shown in Millions)

	Mobile						Total
	ILECs ¹	CLECs	Wireless	SLCs ²	Access	Toll	
Alabama	\$1,354	\$84	\$1,236	\$179	\$254	\$968	\$4,075
Alaska	NA	NA	NA	NA	NA	NA	778
American Samoa	NA	NA	NA	NA	NA	NA	13
Arizona	1,240	250	1,446	266	426	1,377	5,005
Arkansas	707	61	606	97	252	727	2,449
California	7,701	1,521	10,448	1,261	3,423	10,491	34,846
Colorado	1,555	306	1,365	254	482	1,295	5,257
Connecticut	932	157	987	174	347	1,242	3,840
Delaware	208	27	235	46	73	278	869
District of Columbia	359	114	305	46	202	322	1,346
Florida	4,533	730	5,005	925	1,788	5,128	18,109
Georgia	2,846	497	2,630	382	847	2,191	9,392
Guam	NA	NA	NA	NA	NA	NA	119
Hawaii	314	27	398	65	103	287	1,193
Idaho	315	19	328	64	157	363	1,246
Illinois	2,966	1,034	3,579	464	852	3,177	12,073
Indiana	1,479	178	1,410	285	449	1,584	5,385
Iowa	609	134	726	113	248	699	2,529
Kansas	710	124	621	95	221	700	2,472
Kentucky	1,051	50	990	140	211	836	3,278
Louisiana	1,434	81	1,217	204	282	974	4,192
Maine	366	42	296	62	127	472	1,365
Maryland	1,549	164	1,689	285	496	1,834	6,016
Massachusetts	1,498	519	1,919	335	632	2,163	7,066
Michigan	2,201	854	2,993	393	809	2,509	9,759
Minnesota	1,221	313	1,423	204	446	1,137	4,743
Mississippi	1,022	16	650	112	160	626	2,586
Missouri	1,451	197	1,527	227	598	1,440	5,439
Montana	242	14	207	49	103	301	916
Nebraska	523	112	502	67	202	437	1,845
Nevada	485	101	631	89	153	709	2,167
New Hampshire	280	77	340	65	136	497	1,396
New Jersey	2,001	280	2,679	510	1,037	3,699	10,207
New Mexico	415	10	442	92	165	493	1,617
New York	5,980	2,296	5,314	850	1,714	5,032	21,186
North Carolina	2,328	232	2,281	409	746	2,314	8,310
North Dakota	185	32	164	28	91	178	678
N. Mariana Islands	NA	NA	NA	NA	NA	NA	46
Ohio	2,908	360	3,009	480	955	2,833	10,545
Oklahoma	873	143	867	126	261	835	3,106
Oregon	847	109	927	173	371	945	3,371
Pennsylvania	2,630	937	3,195	592	1,259	3,640	12,253
Puerto Rico	627	35	932	66	271	418	2,349
Rhode Island	205	84	292	46	59	285	971
South Carolina	1,307	85	1,122	185	323	1,098	4,120
South Dakota	167	26	184	30	86	194	688
Tennessee	1,687	174	1,631	258	348	1,283	5,381
Texas	6,252	1,530	6,026	793	2,033	4,769	21,403
Utah	499	114	603	95	197	493	2,001
Vermont	189	14	108	33	65	234	643
Virgin Islands	NA	NA	NA	NA	NA	NA	157
Virginia	1,842	393	2,130	374	896	2,476	8,111
Washington	1,441	253	1,703	316	746	1,713	6,172
West Virginia	515	26	353	85	170	515	1,665
Wisconsin	1,396	296	1,371	231	359	1,373	5,026
Wyoming	158	22	140	27	65	161	571
Total	\$75,869	\$15,309	\$81,478	\$12,802	\$26,806	\$80,072	\$292,341

NA - Not Applicable.

Note: Figures are preliminary and may not add to totals due to rounding.

¹ Excludes subscriber line charges.

² Includes ILECs' USF pass-thru charges.

³ Totals in the first six columns include revenues for locations not estimated.

Source: Estimates for 2002 use a methodology that is similar to that used in 2001. See Industry Analysis and Technology Division, Wireline Competition Bureau, *Monitoring Report* (December 2003).

16 Subscribership

Under contract with the FCC, the Bureau of the Census includes questions on telephones as part of its Current Population Survey (CPS). This survey, which monitors demographic trends between the decennial censuses, has several strengths: it is conducted regularly by an expert agency, the sample is very large, and the questions are consistent. Thus, changes in the results can be compared over time with a great deal of confidence.

Almost twenty-nine million households have been added to the nation's telephone system since these surveys began in November 1983, reflecting both an increase in the total number of households and a small, but statistically significant, increase in the percentage of households that subscribe to telephone service.

Because of smaller sample sizes, state-by-state data, shown in Table 16.2, are subject to greater sampling errors than the national data shown in Table 16.1. Additional information can be found in the *Telephone Penetration* and *Telephone Subscribership* reports available on the Internet on the **FCC-State Link** web page at www.fcc.gov/wcb/stats.

Table 16.3 reports telephone subscribership on American Indian Reservations and Off-Reservation Trust Lands. Statistics from the 2000 Decennial Census estimated that 67.9% of all American Indian households living on American Indian Reservations and Off-Reservation Trust Lands had telephone service. The study can be found in the *Local and Long Distance Telephone Industries* section of the **FCC-State Link**.

Historical estimates for the United States, using the decennial census population counts, are shown in Table 16.4. Prior to 1980, historical estimates of telephone penetration were based on a comparison of the number of residential main stations to the number of households. These estimates became less reliable at that point because of the emergence of an increasing number of households with multiple phone lines. In the 1980 decennial census, the question "Do you have a telephone?" was added to the long-form questionnaire. The 1980 and 1990 percentages in Table 16.4 are based on those responses. In the 2000 decennial census, the question was changed to "Is there telephone service available in this [housing unit] from which you can both make and receive calls?" The question was changed in 2000 to avoid the possible bias from having a phone but no service. With the telephone companies no longer owning the telephone instruments beginning in 1984, it is possible for someone to have a telephone but not have service. The decennial census percentage in 2000 reported in Table 16.4 is still higher than the CPS percentage reported in Table 16.1.

The Bureau of the Census also includes questions on computers and Internet use as part of its Current Population Survey. Using this information, the National Telecommunications and Information Administration (NTIA) has periodically published a report examining which American households have access to telephones, computers, and the Internet, and which do not. Chart 16.1 shows the percent of households with a telephone, computer, and Internet use for 1994, 1997, 1998, August 2000 and September 2001. The percent of households may differ

from Table 16.1 because a different monthly survey was used. The most recent NTIA report, *A Nation Online: How Americans Are Expanding Their Use of the Internet*, finds that the number of Americans connected to the nation's information infrastructure is soaring. NTIA's web site can be accessed at www.ntia.doc.gov.

Table 16.1
Household Telephone Subscribership in the United States

	Households (Millions)	Households with Telephones (Millions)	Percentage with Telephones	Households without Telephones (Millions)	Percentage without Telephones
1983 November	85.8	78.4	91.4 %	7.4	8.6 %
1984 March	86.0	78.9	91.8	7.1	8.2
July	86.6	79.3	91.6	7.3	8.4
November	87.4	79.9	91.4	7.5	8.6
1985 March	87.4	80.2	91.8	7.2	8.2
July	88.2	81.0	91.8	7.2	8.2
November	88.8	81.6	91.9	7.2	8.1
1986 March	89.0	82.1	92.2	6.9	7.8
July	89.5	82.5	92.2	7.0	7.8
November	89.9	83.1	92.4	6.8	7.6
1987 March	90.2	83.4	92.5	6.8	7.5
July	90.7	83.7	92.3	7.0	7.7
November	91.3	84.3	92.3	7.0	7.7
1988 March	91.8	85.3	92.9	6.5	7.1
July	92.4	85.7	92.8	6.7	7.2
November	92.6	85.7	92.5	6.9	7.5
1989 March	93.6	87.0	93.0	6.6	7.0
July	93.8	87.5	93.3	6.3	6.7
November	93.9	87.3	93.0	6.6	7.0
1990 March	94.2	87.9	93.3	6.3	6.7
July	94.8	88.4	93.3	6.4	6.7
November	94.7	88.4	93.3	6.3	6.7
1991 March	95.3	89.2	93.6	6.1	6.4
July	95.5	89.1	93.3	6.4	6.7
November	95.7	89.4	93.4	6.3	6.6
1992 March	96.6	90.7	93.9	5.9	6.1
July	96.6	90.6	93.8	6.0	6.2
November	97.0	91.0	93.8	6.0	6.2
1993 March	97.3	91.6	94.2	5.7	5.8
July	97.9	92.2	94.2	5.7	5.8
November	98.8	93.0	94.2	5.8	5.8
1994 March	98.1	92.1	93.9	6.0	6.1
July	98.6	92.4	93.7	6.2	6.3
November	99.8	93.7	93.8	6.2	6.2
1995 March	99.9	93.8	93.9	6.1	6.1
July	100.0	94.0	94.0	6.0	6.0
November	100.4	94.2	93.9	6.2	6.1
1996 March	100.6	94.4	93.8	6.2	6.2
July	101.2	95.0	93.9	6.1	6.1
November	101.3	95.1	93.9	6.2	6.1
1997 March	102.0	95.8	93.9	6.2	6.1
July	102.3	96.1	93.9	6.2	6.1
November	102.8	96.5	93.8	6.3	6.2
1998 March	103.4	97.4	94.1	6.1	5.9
July	103.4	97.3	94.1	6.1	5.9
November	104.1	98.0	94.2	6.1	5.8
1999 March	104.8	98.5	94.0	6.3	6.0
July	105.1	99.2	94.4	5.9	5.6
November	105.4	99.1	94.1	6.3	5.9
2000 March	105.3	99.6	94.6	5.7	5.4
July	105.8	99.8	94.4	5.9	5.6
November	106.5	100.2	94.1	6.3	5.9
2001 March	107.0	101.1	94.6	5.8	5.4
July	106.9	101.7	95.1	5.2	4.9
November	107.7	102.2	94.9	5.5	5.1
2002 March	108.3	103.4	95.5	4.8	4.5
July	108.5	103.2	95.1	5.3	4.9
November	109.0	104.0	95.3	5.1	4.7
2003 March	112.1	107.1	95.5	5.0	4.5
July	112.1	106.8	95.2	5.3	4.8
November	113.1	107.1	94.7	6.0	5.3

Source: Industry Analysis and Technology Division, Wireline Competition Bureau, *Telephone Subscribership in the United States* (January 2004).

Table 16.2
Telephone Penetration by State
(Annual Average Percentage of Households with Telephone Service)

State	1984	2003	Change
Alabama	88.4 %	91.7 %	3.3 % *
Alaska	86.5	96.8	10.3 *
Arizona	86.9	95.1	8.2 *
Arkansas	86.6	91.0	4.5 *
California	92.5	97.1	4.6 *
Colorado	93.2	96.8	3.6 *
Connecticut	95.5	96.8	1.3
Delaware	94.3	96.6	2.3 *
District of Columbia	94.9	95.3	0.4
Florida	88.7	94.6	5.9 *
Georgia	86.2	93.7	7.6 *
Hawaii	93.5	97.3	3.8 *
Idaho	90.7	94.5	3.8 *
Illinois	94.2	91.7	-2.5 #
Indiana	91.6	93.5	1.9 *
Iowa	96.2	96.8	0.6
Kansas	94.3	95.9	1.5
Kentucky	88.1	94.6	6.4 *
Louisiana	89.7	93.2	3.5 *
Maine	93.4	97.8	4.3 *
Maryland	95.7	97.7	2.0 *
Massachusetts	95.9	97.6	1.7 *
Michigan	92.8	94.3	1.5 *
Minnesota	95.8	96.9	1.0
Mississippi	82.4	91.7	9.3 *
Missouri	91.5	95.9	4.4 *
Montana	91.0	93.2	2.3 *
Nebraska	95.7	96.0	0.3
Nevada	90.4	94.5	4.1 *
New Hampshire	94.3	97.6	3.3 *
New Jersey	94.8	96.3	1.5 *
New Mexico	82.0	91.7	9.6 *
New York	91.8	95.2	3.4 *
North Carolina	88.3	94.1	5.8 *
North Dakota	94.6	94.1	-0.5
Ohio	92.4	96.3	3.8 *
Oklahoma	90.3	91.6	1.3
Oregon	90.6	96.5	5.9 *
Pennsylvania	94.9	97.0	2.2 *
Rhode Island	93.6	96.9	3.3 *
South Carolina	83.7	93.2	9.6 *
South Dakota	93.2	94.1	0.9
Tennessee	88.5	94.2	5.7 *
Texas	88.4	93.6	5.2 *
Utah	92.5	97.1	4.5 *
Vermont	92.3	97.0	4.8 *
Virginia	93.1	95.5	2.4 *
Washington	93.0	96.6	3.6 *
West Virginia	87.7	94.3	6.6 *
Wisconsin	95.2	96.1	0.9
Wyoming	89.9	93.8	4.0 *
Total United States	91.6 %	95.1 %	3.5 % *

Note: Differences may not appear to equal changes due to rounding.

* Increase is statistically significant at the 95% confidence level.

Decrease is statistically significant at the 95% confidence level.

Source: Industry Analysis and Technology Division, Wireline Competition Bureau, *Telephone Subscribership in the United States* (January 2004).

Table 16.3
Telephone Subscribership on American Indian Reservations
And Off-Reservation Trust Land: Federal
(2000 Census)

State	All Housing Units		American Indian	
	Penetration ¹	Occupied Housing Units	Penetration ¹	Occupied Housing Units ¹
Alabama	84.8 %	92	88.1 %	59
Alaska	96.5	491	95.9	416
Arizona	55.3	47,412	49.9	41,307
California	92.8	21,001	83.2	5,189
Colorado	93.5	4,588	82.7	893
Connecticut	100.0	90	100.0	88
Florida	95.8	1,277	91.2	408
Idaho	95.1	11,370	89.3	2,206
Iowa	90.3	237	88.5	174
Kansas	95.1	2,122	89.7	380
Louisiana	91.9	209	91.5	177
Maine	95.0	762	94.5	652
Massachusetts	100.0	27	100.0	19
Michigan	97.4	12,537	92.9	1,596
Minnesota	93.0	12,292	86.4	5,007
Mississippi	62.6	1,326	56.5	1,051
Montana	92.1	20,772	87.1	9,899
Nebraska	91.0	2,838	79.8	1,041
Nevada	90.3	3,023	89.6	2,608
New Mexico	65.2	40,635	52.5	27,821
New York	94.7	5,271	94.8	2,444
North Carolina	91.0	2,619	89.9	2,079
North Dakota	89.1	6,799	85.6	4,869
Oklahoma	95.2	16,617	90.8	1,976
Oregon	93.3	2,069	90.7	1,362
Rhode Island	100.0	19	100.0	3
South Carolina	97.7	172	97.3	148
South Dakota	84.6	17,082	75.7	10,095
Texas	75.3	384	72.6	336
Utah	82.6	7,807	52.7	2,502
Washington	95.9	39,502	89.3	7,495
Wisconsin	96.0	12,394	90.1	4,491
Wyoming	91.7	8,373	75.0	1,663
Total	83.1 %	302,208	67.9 %	140,454

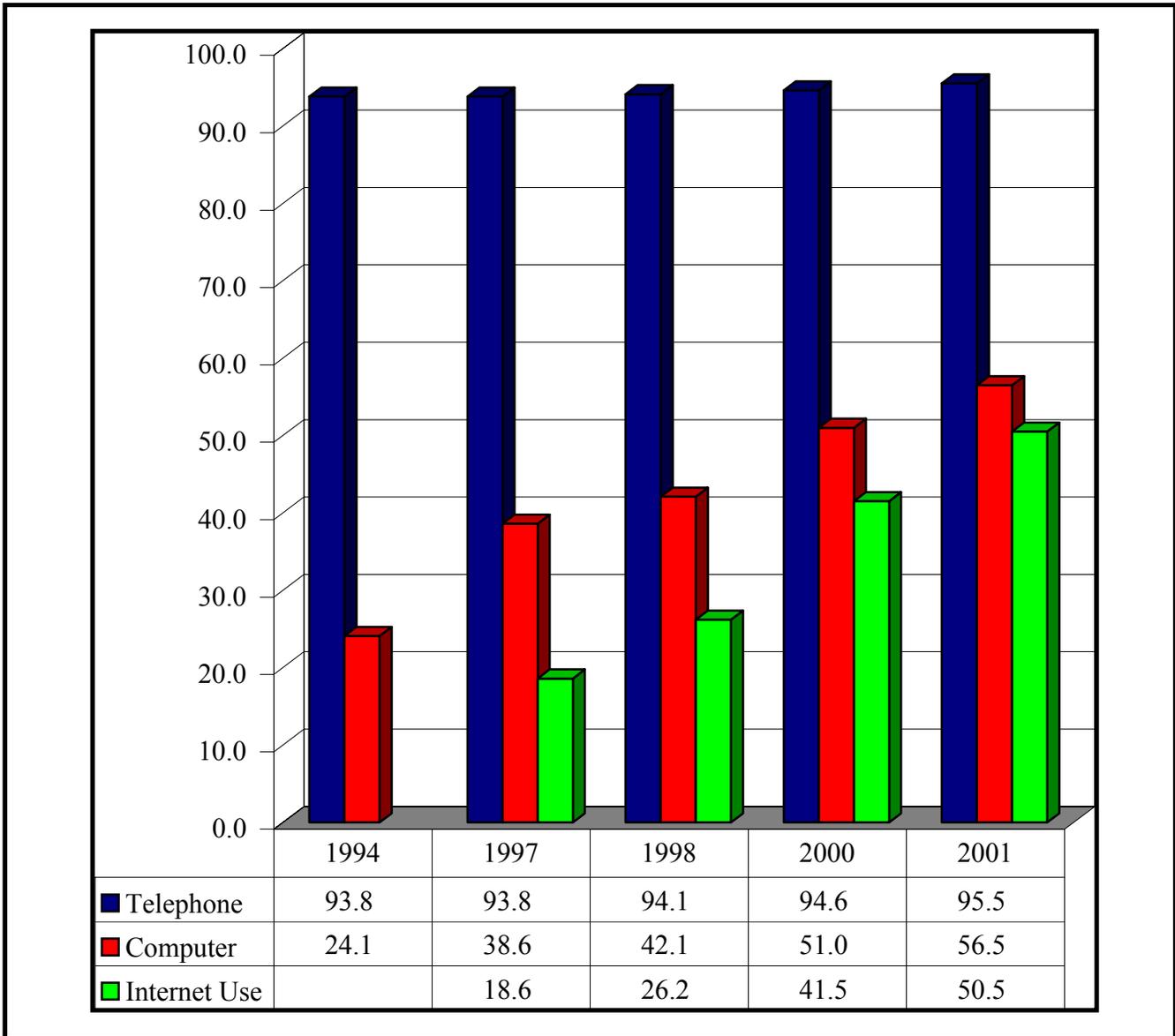
¹ Some of the reservations are in multiple states. For these reservations, occupied housing units with and without telephone service are allocated to the states based on the number of occupied housing units that are in each state. Census document GCT-H8 has data on the number of occupied housing units in each state by reservation.

Table 16.4
Historical Telephone Penetration Estimates

Year	Percentage of Households with Telephones	Access Lines per 100 Population
1920	35.0 %	9.6
1930	40.9	12.5
1940	36.9	12.7
1950	61.8	21.7
1960	78.3	27.6
1970	90.5	35.0
1980	92.9	44.8
1990	94.8	54.3
2000	97.6	66.4

Sources: FCC staff estimates based on data from the U.S. Census Bureau, *Historical Statistics of the United States, Colonial Times to 1970*, Part 2, page 783, for all percentage data except 1980 to 2000, which are from the decennial censuses. Access line data for 1920 through 1970 are estimated by multiplying the number of telephones by the proportion of main plus equivalent main stations to total telephones for the Bell System. Prior to 1950, the 1950 proportion is used. For 1980 to 2000, local loops for the states and the District of Columbia are used.

Chart 16.1
Percent of U.S. Households
With a Telephone, Computer, and Internet Use



Source: National Telecommunications and Information Administration (NTIA) and U.S. Census Bureau, *Current Population Survey*.

17 Technology Development

The Bell operating companies (BOCs) file data on technology as part of their Automated Reporting Management Information System (ARMIS) reports. The data contained in Tables 17.1, 17.2 and 17.4 are from the BOCs' ARMIS 43-07 reports, and the data contained in Table 17.3 are from the ARMIS 43-05 report. The individual carrier's data can be obtained from the ARMIS web page at www.fcc.gov/wcb/armis/db. Selected holding company statistics from the ARMIS 43-07 can be found in our *Monitoring* report on the **FCC-State Link** web page.

1. Central Office Technology

Telephone companies replaced most of their older electromechanical switches with stored program control switches during the 1980s. In a stored program control (SPC) switch, switch operations are controlled by a program stored in switch memory and executed by one or more switch processors. Operation of such systems can be altered significantly by changing the stored program. Stored program control switches may use either analog or digital technology. However, switches with the most current technologies are digital. Beginning in the late 1970s, telephone companies began replacing older analog switches with newer digital ones. Nonetheless, analog SPC and even electromechanical switching may still be found in some companies, particularly among the small rural carriers. The deployment of switching by the BOCs is shown in Table 17.1.

Newer signaling systems have been developed which permit calls to be set up more quickly and efficiently, and which allow certain new services to be deployed. In the late 1980s, telephone company switching offices began to be converted to Signaling System 7. As shown in Table 17.2, Signaling System 7 has been deployed almost everywhere. Telephone companies began introducing integrated systems digital network (ISDN) capabilities shortly after Signaling System 7. One of the attractions of ISDN was that ordinary local telephone lines (copper loops) could transport high-speed data between computers. The number of BOCs switching offices and the lines served by offices with ISDN are shown in Table 17.2. Information about broadband deployment is contained in Chapter 2, *Advanced Telecommunications*.

Table 17.3 provides some additional measures of switches. It shows line counts of switches from 1996 to 2002 for the following categories: switches with under 1,000 lines; 1,000 - 4,999 lines; 5,000 - 9,999 lines; 10,000 - 19,999 lines; and 20,000 lines or more. The table also breaks out switches based on their being in a Metropolitan Statistical Area (MSA) or non-MSA.

2. Transmission Technology

Each telephone company has a network of transmission paths or carrier links tying together its switching offices. As indicated in Table 17.4, fiber optic cables have rapidly

replaced copper to provide these links.¹ From 1990 to 2001, the proportion of fiber digital transmission links in the network increased from 60% to over 97%.

Although fiber technology was first used for interoffice transmission facilities, the technology is now being deployed between customers and their serving local switching office. The number of working channels provides a rough approximation of the number of transmission paths that are in service between customers and the telephone company offices serving those customers. The number of fiber working channels provided partly or totally on fiber increased from 2.9% in 1990 to 35.3% in 2002. In 1990, copper wire linked about 86.8% of customers to the first point of switching, and in 2002 copper linked 64.7% of customers.²

3. Equal Access

Equal access refers to a class of service whereby all long distance service providers receive equivalent connections to the local exchange carrier's network. Where a local exchange carrier serves customers using equal-access switches, those customers can utilize their preferred long distance provider by dialing "1" plus the ten-digit telephone number they want to reach.

The conversion of lines by local exchange carriers to equal access started in 1984; by the end of 1996, over 99% of the nation's lines were served by equal access switches. A table tracing this process through time can be found in the equal-access section of the *Trends* report released in July 1998.

Despite the fact that more than 99% of the nation's customers are now provided with equal access, there still are some central offices where equal access is not yet available. Because the non-equal-access offices tend to be smaller offices, the percentage of converted offices is significantly smaller than the percentage of converted lines. Table 17.5 shows the number of central office wire centers in each state that had been converted to equal access as of January 1, 2004. The table is derived from NECA's Tariff 4 database, which is updated by local exchange carriers. In some cases, there is a lag between an office converting to equal access and that change being reflected in the database. Thus, in some cases, the data continue to show some offices not yet converted to equal access even in states where equal access is reported to be available to all customers.

The National Exchange Carrier Association periodically conducts a survey of some 1,000 small, mostly rural telephone companies³. The most recent survey focuses on the small

¹ A carrier link is defined as a segment of a carrier-derived interoffice transmission facility between points at which either a change in carrier technology (i.e., analog, digital) or transmission medium (i.e., copper, fiber, or radio) occurs. This table includes only those carrier links provided on digital technologies.

² Working Channels are reported in 4 kHz bandwidth (single voice channel) equivalents.

³ National Exchange Carrier Association (NECA), *Fulfilling the Digital Dream, 2003 Access Market Survey*.

companies' efforts to bring advanced services to their customers. Table 17.6 shows selected network capabilities of survey respondents by state for the 2003 survey. In addition to the number of central offices and access lines, the table also shows the percentage of companies equipped with ATM and the percentage of central offices equipped for equal access.

4. Telecommunications Patents

Another measure of developing technology is the number of U.S. patents. The U.S. Patent and Trademark Office maintains a file of over six million distinct U.S. patents granted. These patents are categorized by technology. Chart 17.1 shows the number of patents granted for telecommunications from 1990 to 2003. The information presented profiles U.S. patent activity in the general field of telecommunications. It includes all U.S. patent documents, except reissued patents, granted between January 1990 and December 31, 2003 which have been classified as follows:

Class 370, *Multiplex Communications*, is the generic class for multiplexing or duplexing systems, methods, or apparatus.

Class 375, *Pulse or Digital Communications*, is the generic class for pulse or digital communication systems using electrical or electromagnetic signals. Such communication includes transmitting an intelligence-bearing signal from one point to another in the form of discrete variations in some parameter of the electrical or electromagnetic signal.

Class 379, *Telephonic Communications*, includes systems, processes and instruments for the two-way electrical transmission of intelligible audio information having arbitrary content over a link (including an electrical conductor) between spaced apart locations, so as to enable conversation there between, and intended for the private use of a listener or a group of listeners. Also included are switching, signaling or signal transmission systems, processes and instruments peculiar to, or specified as for a telephone or a telephone system.

Class 455, *Telecommunications*, is the generic class for modulated carrier wave communications.

Data for prior years differ from the August 2003 *Trends* report. Revisions to prior-year data reflect annual reclassification of patent categories. For example, if a patent type was reclassified in 1998, the data for prior years have been recalculated based on this reclassification.

5. Capital Expenditures

The FCC does not systematically collect information on capital expenditures from most carriers. Table 17.7 provides annual estimates of expenditures for structures and equipment for telecommunications carriers, taken from the U.S. Census Bureau, *Annual Capital Expenditures* survey. Chart 17.2 combines this expenditure data with FCC collected revenue data to show that for each dollar of revenue collected from end users in 2002, carriers invested 26 cents in structures and equipment.

**Table 17.1
Central Offices and Access Lines by Technology
(Bell Operating Companies)**

Year End	Total Offices	Electromechanical Offices		Analog Stored Program Controlled Offices		Digital Stored Program Controlled Offices	
1980	9,195	6,842	74.41 %	2,353	25.59 %	0	0.00 %
1981	9,198	6,647	72.27	2,527	27.47	24	0.26
1982	9,173	6,357	69.30	2,736	29.83	80	0.87
1983	9,156	6,075	66.35	2,910	31.78	171	1.87
1984	9,102	5,714	62.78	3,041	33.41	347	3.81
1985	9,124	5,244	57.47	3,020	33.10	860	9.43
1986	9,167	4,604	50.22	2,943	32.10	1,620	17.67
1987	9,190	3,819	41.56	2,833	30.83	2,538	27.62
1988	9,300	3,031	32.59	2,692	28.95	3,577	38.46
1989	9,338	2,416	25.87	2,519	26.98	4,403	47.15
1990	9,872	1,646	16.67	2,410	24.41	5,816	58.91
1991	9,951	1,148	11.54	2,167	21.78	6,636	66.69
1992	10,069	615	6.11	1,924	19.11	7,530	74.78
1993	10,089	296	2.93	1,554	15.40	8,239	81.66
1994	10,023	95	0.95	1,133	11.30	8,795	87.75
1995	10,051	60	0.60	976	9.71	9,015	89.69
1996	9,966	1	0.01	718	7.20	9,247	92.79
1997	9,965	0	0.00	548	5.50	9,417	94.50
1998	9,788	0	0.00	431	4.40	9,357	95.60
1999 ¹	9,968	0	0.00	320	3.21	9,648	96.79
2000 ²	15,092	0	0.00	203	1.35	14,889	98.65
2001	15,109	0	0.00	139	0.92	14,970	99.08
2002	14,352 ³	4	4	107	0.75	14,245 ³	99.25
Access Lines Served by Type of Office (Thousands)							
Year End	All Offices	Electromechanical Offices		Analog Stored Program Controlled Offices		Digital Stored Program Controlled Offices	
1980	81,032	44,930	55.45 %	36,092	44.54 %	10	0.01 %
1981	82,581	40,425	48.95	42,099	50.98	57	0.07
1982	83,819	36,813	43.92	46,803	55.84	203	0.24
1983	86,186	32,652	37.89	52,919	61.40	615	0.71
1984	88,630	30,074	33.93	56,404	63.64	2,151	2.43
1985	91,455	24,778	27.09	58,532	64.00	8,145	8.91
1986	93,630	19,491	20.82	59,252	63.28	14,886	15.90
1987	96,593	14,205	14.71	59,442	61.54	22,946	23.76
1988	99,564	8,707	8.74	60,364	60.63	30,493	30.63
1989	102,684	5,646	5.50	58,846	57.31	38,192	37.19
1990	105,641	3,216	3.04	56,973	53.93	45,452	43.02
1991	107,388	1,876	1.75	53,450	49.77	52,061	48.48
1992	109,997	717	0.65	48,952	44.50	60,324	54.84
1993	113,368	264	0.23	41,912	36.97	71,192	62.80
1994	117,345	115	0.10	33,191	28.28	84,040	71.62
1995	122,266	63	0.05	29,031	23.74	93,172	76.20
1996	125,844	1	0.00	24,559	19.52	101,283	80.48
1997	131,722	0	0.00	21,219	16.11	110,503	83.89
1998	136,426	0	0.00	16,688	12.23	119,738	87.77
1999 ¹	141,763	0	0.00	11,925	8.41	129,838	91.59
2000 ²	160,557	0	0.00	7,317	4.56	153,240	95.44
2001	155,543	0	0.00	4,810	3.09	150,732	96.91
2002	148,292 ³	4	4	3,283	2.21	145,009 ³	97.79

Note: Because of different sources, the data for 1989 and earlier years may not be consistent with the data for 1990 and later years

¹ Southern New England Telephone Company merged with SBC Communications October 26, 1998. Their data are included in this table starting with 1999.

² Large increase in 2000 is due to the merger of Bell Atlantic and GTE.

³ The decrease in the number of switches and their associated lines from 2001 to 2002 is basically due to the sale of a number of study areas by Verizon.

⁴ For 2002, the Commission eliminated the requirement that the Bell operating companies file electromechanical switch data. See 2000 Biennial Regulatory Review – Comprehensive Review of the Accounting Requirements and ARMIS Reporting Requirements for Incumbent Local Exchange Carriers : Phase 2, et al., CC Docket Nos. 00-199, 99-301, 97-212, 80-286. Report and Order in CC Docket Nos. 00-199, 97-212, and 80-286, Further Notice of Proposed Rulemaking in CC Docket Nos. 00-199, 99-301, and 80-286, 16 FCC Rcd 19911, 19770-72, paras. 161-165 (2001).

Sources: 1980-1989 reported in CC Docket 89-624.

1990-2002 reported in ARMIS 43-07.

Table 17.2
Features Available in Central Offices
(Bell Operating Companies)

Year End	Total Offices	Equal Access Offices		Signaling System 7 Offices ¹		ISDN Offices ²	
1980	9,195	0	0.00 %	0	0.00 %	0	0.0 %
1981	9,198	0	0.00	0	0.00	0	0.0
1982	9,173	0	0.00	0	0.00	0	0.0
1983	9,156	0	0.00	0	0.00	0	0.0
1984	9,102	124	1.36	0	0.00	0	0.0
1985	9,124	1,891	20.73	0	0.00	0	0.0
1986	9,167	3,623	39.52	0	0.00	0	0.0
1987	9,190	4,823	52.48	29	0.32	4	0.0
1988	9,300	6,071	65.28	435	4.68	82	0.9
1989	9,338	6,788	72.69	931	9.97	179	1.9
1990	9,872	7,950	80.53	2,428	24.59	600	6.1
1991	9,951	8,601	86.43	3,670	36.88	920	9.2
1992	10,069	9,281	92.17	5,392	53.55	1,219	12.1
1993	10,089	9,697	96.11	6,688	66.29	1,874	18.6
1994	10,023	9,934	99.11	8,334	83.15	2,400	23.9
1995	10,051	9,978	99.27	8,977	89.31	2,868	28.5
1996	9,966	9,845	98.79	9,286	93.18	3,329	33.4
1997	9,965	9,936	99.71	9,688	97.22	3,902	39.2
1998	9,788	9,765	99.77	9,643	98.52	4,146	42.4
1999 ³	9,968	9,925	99.57	9,844	98.76	4,424	44.4
2000 ⁴	15,092	15,053	99.74	14,837	98.31	5,413	35.9
2001	15,109	15,106	99.98	14,969	99.07	5,465	36.2
2002	14,352 ⁵	15,106 ⁶	99.98 ⁶	14,258 ^{5 6}	99.35	5,664	39.5
Equipped Access Lines by Type of Office (Thousands)							
Year End	All Offices	Equal Access Offices		Signaling System 7 Offices ¹		ISDN Offices ²	
1980	81,032	0	0.00 %	0	0.00 %	0	0.00 %
1981	82,581	0	0.00	0	0.00	0	0.00
1982	83,819	0	0.00	0	0.00	0	0.00
1983	86,186	146	0.17	0	0.00	0	0.00
1984	88,630	9,350	10.55	0	0.00	0	0.00
1985	91,455	49,241	53.84	0	0.00	0	0.00
1986	93,630	70,543	75.34	0	0.00	0	0.00
1987	96,593	81,743	84.63	1,035	1.07	12	0.01
1988	99,564	91,809	92.21	10,325	10.37	47	0.05
1989	102,684	97,410	94.86	21,917	21.34	111	0.11
1990	105,641	102,429	96.96	40,026	37.89	13,970	13.22
1991	107,388	105,413	98.16	57,321	53.38	20,567	19.15
1992	109,997	109,006	99.10	76,480	69.53	28,375	25.80
1993	113,368	112,993	99.67	92,493	81.59	39,875	35.17
1994	117,345	117,266	99.93	109,465	93.28	56,546	48.19
1995	122,266	122,210	99.95	116,568	95.34	71,274	58.29
1996	125,844	125,843	100.00	122,343	97.22	85,434	67.89
1997	131,722	131,722	100.00	130,778	99.28	95,956	72.85
1998	136,426	136,426	100.00	136,246	99.87	106,834	78.31
1999 ³	141,763	141,763	100.00	141,685	99.94	113,999	80.42
2000 ⁴	160,557	160,557	100.00	160,303	99.84	132,844	82.74
2001	155,543	155,543	100.00	155,363	99.88	129,075	82.98
2002	148,292 ⁵	155,543 ⁶	100.00 ⁶	155,363 ⁶	99.88 ⁶	124,451 ⁵	83.92

Note: Because of different sources, the data for 1989 and earlier years may not be consistent with the data for 1990 and later years

¹ Signaling System 7 Switch (SS7-317).

² ISDN basic access line capacity reported for 1990-2001. Note that not all lines served by ISDN-compatible switching offices actually receive ISDN service.

³ Southern New England Telephone Company merged with SBC Communications October 26, 1998. Their data are included in this table starting with 1999.

⁴ Large increase in 2000 is due to the merger of Bell Atlantic and GTE.

⁵ The decrease in the number of switches and their associated lines from 2001 to 2002 is basically due to the sale of a number of study areas by Verizon.

⁶ The Bell operating companies are no longer required to file equal access offices' data. See *2000 Biennial Regulatory Review – Comprehensive Review of the Accounting Requirements and ARMIS Reporting Requirements for Incumbent Local Exchange Carriers: Phase 2*, et al., CC Docket Nos. 00-199, 99-301, 97-212, 80-286, Report and Order in CC Docket Nos. 00-199, 97-212, and 80-286, Further Notice of Proposed Rulemaking in CC Docket Nos. 00-199, 99-301, and 80-286, 16 FCC Rcd 19911, 19770-72, paras. 161-165 (2001).

Sources: 1980-1989 reported in CC Docket 89-624

1990-2002 reported in ARMIS 43-07.

Table 17.3
Switches by Metropolitan Statistical Area (MSA) and Non-MSA
And Switches by Line Counts

Year	Total Switches MSA	Total Switches Non-MSA	Total Switches MSA and Non-MSA	Switches with Under 1,000 Lines	Switches with 1,000 - 4,999 Lines	Switches with 5,000 - 9,999 Lines	Switches with 10,000 - 19,999 Lines	Switches with 20,000 or More Lines
1996	8,711	7,426	16,137	4,594	5,758	1,770	1,431	2,584
1997	9,138	7,199	16,337	4,476	5,843	1,786	1,518	2,714
1998	9,011	7,492	16,503	4,374	6,027	1,821	1,527	2,754
1999	9,165	7,452	16,617	4,319	5,898	1,915	1,613	2,873
2000	9,058	6,340	15,398	3,472	5,538	1,869	1,632	2,888
2001	8,996	6,377	15,373	3,402	5,481	1,873	1,678	2,938
2002	9,578	7,251	16,829	4,753	5,733	1,891	1,654	2,798

Note: The number of switches in Table 17.3 differs from Tables 17.1 and 17.2. Tables 17.1 and 17.2 are derived from the ARMIS 43-07, which is filed by the regional Bell operating companies. Table 17.3 is derived from the ARMIS 43-05, which is filed by incumbent local exchange carriers subject to price-cap regulation.

Table 17.4
Local Transmission Technology
(Bell Operating Companies)
Digital Transmission Links

Year End	Total	Copper		Fiber		Radio	
1990 ¹	2,895,117	1,092,041	37.7 %	1,737,984	60.0 %	65,092	2.2 %
1991	3,271,023	1,039,316	31.8	2,154,043	65.9	77,664	2.4
1992	3,564,847	864,931	24.3	2,610,185	73.2	89,731	2.5
1993	4,159,574	805,290	19.4	3,264,106	78.5	90,175	2.2
1994	4,495,728	568,197	12.6	3,846,394	85.6	81,137	1.8
1995	5,828,645	485,909	8.3	5,274,173	90.5	68,563	1.2
1996	7,955,574	433,758	5.5	7,477,395	94.0	44,421	0.6
1997	10,067,498	413,204	4.1	9,610,601	95.5	43,693	0.4
1998	13,558,832	420,488	3.1	13,099,829	96.6	38,515	0.3
1999	17,662,105	518,331	2.9	17,104,970	96.8	38,804	0.2
2000 ²	24,334,009	771,385	3.2	23,523,610	96.7	39,014	0.2
2001	31,177,682	860,180	2.8	30,282,540	97.1	34,962	0.1
2002	³						

Note: A carrier link is defined as a segment of a carrier-derived interoffice transmission facility between points at which either a change in carrier technology (i.e., analog, digital) or transmission medium (i.e., copper, fiber, or radio) occurs. This table includes only those carrier links provided on digital technologies.

¹ 1990 contains some analog links.

² Large increase in 2000 is due to the merger of Bell Atlantic and GTE.

³ For 2002, the Commission eliminated the requirement that the Bell operating companies file digital transmission links data. See 2000 Biennial Regulatory Review – Comprehensive Review of the Accounting Requirements and ARMIS Reporting Requirements for Incumbent Local Exchange Carriers: Phase 2, et al., CC Docket Nos. 00-199, 99-301, 97-212, 80-286, Report and Order in CC Docket Nos. 00-199, 97-212, and 80-286, Further Notice of Proposed Rulemaking in CC Docket Nos. 00-199, 99-301, and 80-286, 16 FCC Rcd 19911, 19770-72, paras. 161-165 (2001).

Working Telecommunications Channels
(Thousands)

Year End	Total	Copper		Fiber		Radio	
1990	122,564 ¹	106,373	86.8 %	3,546	2.9 %	0	0.0 %
1991	118,654	114,047	96.1	4,605	3.9	2	0.0
1992	120,848	114,609	94.8	6,238	5.2	1	0.0
1993	124,191	115,496	93.0	8,694	7.0	1	0.0
1994	130,192	118,437	91.0	11,755	9.0	0	0.0
1995	136,231	122,975	90.3	13,255	9.7	0	0.0
1996	142,824	125,595	87.9	17,228	12.1	1	0.0
1997	149,429	128,436	86.0	20,992	14.0	0	0.0
1998	172,916	134,629	77.9	38,286	22.1	0	0.0
1999 ²	186,387	138,691	74.4	47,696	25.6	0	0.0
2000 ³	218,928	157,840	72.1	61,086	27.9	2	0.0
2001	228,705	152,441	66.7	76,263	33.3	2	0.0
2002	223,976	144,956	64.7	79,018	35.3	1	0.0

Note: Working Channels are reported in 4 kHz bandwidth (single-voice channel) equivalents.

¹ Includes some other channels.

² Southern New England Telephone Company merged with SBC Communications October 26, 1998. Their data are included in this table starting with 1999.

³ Large increase in 2000 is due to the merger of Bell Atlantic and GTE.

Source: ARMIS 43-07 report.

Table 17.5
Central Offices Converted to Equal Access 1/
(As of January 1, 2004)

	Bell Company Central Offices			Other ILEC Central Offices			CLEC Central Offices			All Central Offices	
	Equal Access	Non-Equal Access	% Equal Access	Equal Access	Non-Equal Access	% Equal Access	Equal Access	Non-Equal Access	% Equal Access	Total Offices	% Equal Access
Alabama	148	0	100.0 %	218	0	100.0 %	29	0	100.0 %	395	100.0 %
Alaska	0	0	NA	82	177	31.7	0	0	NA	259	31.7
Arizona	146	0	100.0	103	6	94.5	32	1	97.0	288	97.6
Arkansas	136	0	100.0	259	2	99.2	23	0	100.0	420	99.5
California	902	2	99.8	92	2	97.9	192	2	99.0	1,192	99.5
Colorado	165	1	99.4	101	8	92.7	37	0	100.0	312	97.1
Connecticut	127	0	100.0	2	0	100.0	20	0	100.0	149	100.0
Delaware	33	0	100.0	0	0	NA	2	0	100.0	35	100.0
District of Columbia	19	0	100.0	0	0	NA	25	0	100.0	44	100.0
Florida	287	0	100.0	175	2	98.9	220	0	100.0	684	99.7
Georgia	181	0	100.0	241	5	98.0	80	0	100.0	507	99.0
Guam	0	0	NA	18	0	100.0	0	0	NA	18	100.0
Hawaii	86	0	100.0	6	0	100.0	2	0	100.0	94	100.0
Idaho	97	0	100.0	81	6	93.1	9	0	100.0	193	96.9
Illinois	696	4	99.4	323	8	97.6	67	2	97.1	1,100	98.7
Indiana	387	2	99.5	187	0	100.0	49	0	100.0	625	99.7
Iowa	135	0	100.0	673	2	99.7	37	0	100.0	847	99.8
Kansas	171	2	98.8	344	4	98.9	26	0	100.0	547	98.9
Kentucky	178	0	100.0	199	0	100.0	32	0	100.0	409	100.0
Louisiana	228	0	100.0	90	0	100.0	29	0	100.0	347	100.0
Maine	143	1	99.3	106	8	93.0	4	0	100.0	262	96.6
Maryland	212	0	100.0	1	0	100.0	40	0	100.0	253	100.0
Massachusetts	274	2	99.3	3	0	100.0	47	0	100.0	326	99.4
Michigan	541	7	98.7	157	5	96.9	47	0	100.0	757	98.4
Minnesota	157	0	100.0	549	4	99.3	112	0	100.0	822	99.5
Mississippi	206	0	100.0	61	1	98.4	17	0	100.0	285	99.6
Missouri	215	3	98.6	436	45	90.6	52	0	100.0	751	93.6
Montana	76	0	100.0	199	1	99.5	18	0	100.0	294	99.7
Nebraska	69	0	100.0	389	0	100.0	14	0	100.0	472	100.0
Nevada	55	0	100.0	50	15	76.9	14	0	100.0	134	88.8
New Hampshire	125	1	99.2	27	1	96.4	9	0	100.0	163	98.8
New Jersey	206	0	100.0	28	0	100.0	47	0	100.0	281	100.0
New Mexico	65	0	100.0	88	34	72.1	9	0	100.0	196	82.7
New York	526	1	99.8	304	6	98.1	114	0	100.0	951	99.3
North Carolina	182	0	100.0	321	1	99.7	81	0	100.0	585	99.8
North Dakota	27	0	100.0	243	19	92.7	12	0	100.0	301	93.7
Ohio	489	19	96.3	340	4	98.8	86	1	98.9	939	97.4
Oklahoma	208	2	99.0	296	19	94.0	23	0	100.0	548	96.2
Oregon	136	0	100.0	151	0	100.0	35	0	100.0	322	100.0
Pennsylvania	505	0	100.0	304	31	90.7	100	0	100.0	940	96.7
Puerto Rico	0	0	NA	86	0	100.0	0	0	NA	86	100.0
Rhode Island	30	0	100.0	0	0	NA	6	0	100.0	36	100.0
South Carolina	156	0	100.0	122	0	100.0	38	0	100.0	316	100.0
South Dakota	42	0	100.0	201	8	96.2	8	0	100.0	259	96.9
Tennessee	195	0	100.0	166	0	100.0	40	0	100.0	401	100.0
Texas	794	2	99.7	690	12	98.3	200	4	98.0	1,702	98.9
Utah	64	0	100.0	78	18	81.3	16	0	100.0	176	89.8
Vermont	90	2	97.8	42	0	100.0	2	0	100.0	136	98.5
Virgin Islands	0	0	NA	5	0	100.0	0	0	NA	5	100.0
Virginia	326	0	100.0	134	7	95.0	68	0	100.0	535	98.7
Washington	220	0	100.0	147	2	98.7	49	0	100.0	418	99.5
West Virginia	145	0	100.0	83	6	93.3	4	0	100.0	238	97.5
Wisconsin	225	5	97.8	410	0	100.0	55	0	100.0	695	99.3
Wyoming	26	0	100.0	34	23	59.6	3	0	100.0	86	73.3
Total United States	10,852	56	99.5 %	9,445	492	95.0 %	2,281	10	99.6 %	23,136	97.6 %

NA - Not applicable.

1/ Some companies do not report information on their remote switches in Tariff No. 4. As a result, central office counts may be lower than reported in other sources.

Source: NECA FCC Tariff No. 4 database.

Table 17.6
Status of Selected Network Capabilities of 2003 Access Market Survey Respondents
(Updated Mid 2003)

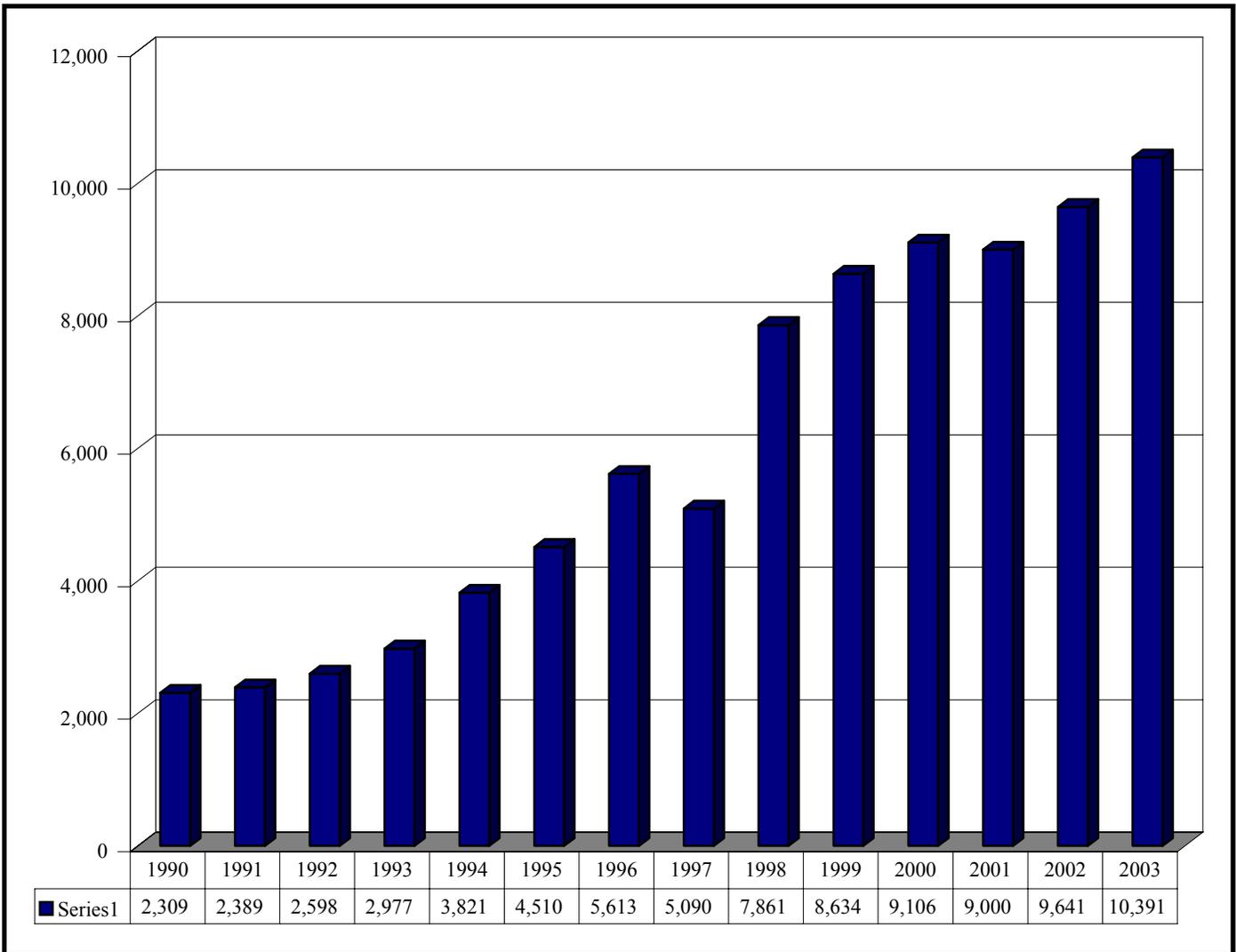
Jurisdiction	Companies	Offices	Access Lines	Equipped for DSL				Percent Companies Equipped with ATM	Central Offices Equipped for Equal Access ²
				Central Offices	Switches	Companies ¹	Access Lines		
Alabama	21	82	121,879	71	86.59 %	71.43 %	86.13 %	19.05 %	98.78 %
Alaska	23	320	265,386	284	88.75	73.91	95.19	8.70	42.81
Arizona	13	54	38,936	35	64.81	53.85	71.56	7.69	100.00
Arkansas	23	209	335,160	186	89.00	78.26	94.06	43.48	99.52
California	14	46	85,122	32	69.57	64.29	76.44	7.14	93.48
Colorado	25	53	49,277	42	79.25	76.00	92.67	8.00	98.11
Connecticut	1	2	25,844	2	100.00	100.00	100.00	0.00	100.00
Florida	6	25	81,589	25	100.00	100.00	100.00	0.00	52.00
Georgia	28	109	326,852	62	62.39	67.86	70.38	7.14	95.41
Guam	1	18	66,251	-	0.00	0.00	0.00	0.00	100.00
Hawaii	1	9	954	9	100.00	100.00	100.00	0.00	100.00
Idaho	15	65	45,401	40	61.54	60.00	62.96	20.00	100.00
Illinois	19	55	30,035	46	83.64	57.89	74.17	0.00	98.18
Indiana	34	81	131,910	62	76.54	76.47	76.37	17.65	100.00
Iowa	143	332	210,561	283	85.24	78.32	84.92	6.99	95.18
Kansas	33	202	115,152	173	85.64	81.82	93.45	18.18	99.01
Kentucky	14	95	173,593	76	80.00	78.57	74.29	21.43	96.84
Louisiana	18	100	152,711	91	91.00	83.33	90.74	61.11	99.00
Maine	22	120	150,291	83	69.17	63.64	64.86	13.64	99.17
Maryland	1	1	7,781	1	100.00	100.00	100.00	0.00	100.00
Massachusetts	2	2	4,173	2	100.00	100.00	100.00	0.00	100.00
Michigan	32	100	110,595	65	65.00	71.88	81.68	18.75	97.00
Minnesota	76	319	315,243	215	67.40	61.84	75.43	10.53	99.69
Mississippi	15	59	75,882	30	50.85	53.33	64.08	13.33	93.22
Missouri	34	287	227,463	260	90.59	67.65	90.95	17.65	97.56
Montana	15	212	97,789	186	87.74	93.33	79.84	13.33	89.62
Nebraska	36	146	73,961	114	78.08	75.00	75.78	5.56	100.00
Nevada	7	30	32,154	17	56.67	57.14	81.58	28.57	86.67
New Hampshire	7	22	41,006	20	90.91	71.43	96.52	28.57	95.45
New Mexico	12	78	44,688	62	79.49	58.33	81.97	25.00	98.72
New York	29	80	158,945	55	68.75	72.41	67.29	24.14	98.75
North Carolina	16	63	290,110	55	87.30	68.75	91.74	37.50	95.24
North Dakota	27	246	156,277	216	87.80	70.37	91.74	33.33	99.19
Ohio	31	66	201,971	34	51.52	77.42	28.20	0.00	100.00
Oklahoma	34	276	204,626	137	49.64	61.76	57.71	11.76	99.28
Oregon	26	55	75,661	46	83.64	88.46	97.54	0.00	100.00
Pennsylvania	19	128	570,664	45	35.16	84.21	41.34	15.79	100.00
South Carolina	14	56	135,064	46	82.14	85.71	86.63	28.57	100.00
South Dakota	25	173	111,401	135	78.03	84.00	81.17	20.00	99.42
Tennessee	20	129	335,877	88	68.22	75.00	75.40	50.00	96.12
Texas	48	335	274,835	249	74.33	70.83	77.92	16.67	98.21
Utah	12	57	70,772	57	100.00	100.00	100.00	0.00	100.00
Vermont	9	45	64,780	29	64.44	77.78	66.00	55.56	100.00
Virginia	15	49	80,697	36	73.47	66.67	73.45	6.67	97.96
Washington	17	45	86,615	32	71.11	70.59	78.05	11.76	100.00
West Virginia	6	13	16,464	8	61.54	50.00	67.12	0.00	100.00
Wisconsin	74	336	549,897	267	79.46	68.92	85.60	27.03	100.00
Wyoming	6	27	25,072	25	92.59	66.67	86.72	0.00	96.30
Totals	1,119	5,412	6,847,367	4,140	76.02 %	73.23 %	78.95 %	15.84 %	95.96 %

¹ "Percent of Companies" indicates that the service is available at those companies, not that all customers at each of those companies subscribe to that service.

² Equal access gives customers a choice of long distance carrier. Although not a new service, NECA continues to track progress toward the goal of 100% equal access capability.

Source: National Exchange Carrier Association, *Fulfilling the Digital Dream*; survey of more than 1,000 small, mostly rural telephone companies.

**Chart 17.1
Telecommunications Patents**



Note: 1996 total reflects one-time change in law affecting patents.

Source: U.S. Patent and Trademark Office, *Patent Counts by Class by Year, January 1977 - December 2003*, Telecommunications Classes 370, 375, 379 and 455, (March 2004).

Table 17.7
Capital Expenditures for Structures and Equipment 1/
(Expenditure Amounts Shown in Millions)

		NAICS Code 2/	1995	1996	1997	1998	1999	2000	2001	2002	
Wireline Telecommunications Carriers		51331									
Expenditures for Structures											
New						\$10,652	3/	\$18,021	\$14,482	\$7,820	
Used						<u>12</u>	<u>3/</u>	<u>205</u>	<u>18</u>	<u>1</u>	
Total						10,664	17,309	18,226	14,500	7,821	
Expenditures for Equipment											
New						39,828	3/	55,902	57,436	26,986	
Used						<u>78</u>	<u>3/</u>	<u>77</u>	<u>38</u>	<u>12</u>	
Total						<u>39,905</u>	<u>42,442</u>	<u>55,980</u>	<u>57,474</u>	<u>26,998</u>	
Total Expenditures for Structures and Equipment						<u>\$50,570</u>	<u>\$59,752</u>	<u>\$74,206</u>	<u>\$71,974</u>	<u>\$34,819</u>	
Wireless Telecommunications Carriers Except Satellite		51332									
Expenditures for Structures											
New						\$2,387	\$5,026	\$7,674	\$11,313	\$8,245	
Used						*	<u>3</u>	<u>58</u>	<u>8</u>	<u>7</u>	
Total						2,387	5,030	7,732	11,321	8,252	
Expenditures for Equipment											
New						5,841	9,350	17,589	12,695	12,210	
Used						<u>6</u>	<u>43</u>	<u>161</u>	<u>13</u>	<u>29</u>	
Total						<u>5,841</u>	<u>9,393</u>	<u>17,750</u>	<u>12,708</u>	<u>12,238</u>	
Total Expenditures for Structures and Equipment						<u>\$8,228</u>	<u>\$14,422</u>	<u>\$25,482</u>	<u>\$24,028</u>	<u>\$20,490</u>	
Telecommunications Resellers, Satellite, and Other Telecommunications		51333, 51334 and 51339									
Expenditures for Structures											
New						\$2,089	\$1,410	\$1,951	\$2,233	\$1,556	
Used						*	<u>4</u>	<u>3</u>	<u>5</u>	<u>3</u>	
Total						2,089	1,414	1,954	2,238	1,560	
Expenditures for Equipment											
New						4,188	8,795	11,495	7,288	4,119	
Used						<u>4</u>	<u>49</u>	<u>164</u>	<u>78</u>	<u>12</u>	
Total						<u>4,192</u>	<u>8,845</u>	<u>11,659</u>	<u>7,367</u>	<u>4,131</u>	
Total Expenditures for Structures and Equipment						<u>\$6,281</u>	<u>\$10,259</u>	<u>\$13,613</u>	<u>\$9,605</u>	<u>\$5,691</u>	
Telephone and Other Communications Services											
Expenditures for Structures											
New		\$6,545	\$9,193	\$9,672	\$15,128	3/	\$27,646	\$28,028	\$17,621		
Used		<u>263</u>	<u>185</u>	<u>218</u>	<u>12</u>	<u>3/</u>	<u>266</u>	<u>31</u>	<u>11</u>		
Total		6,809	9,378	9,890	15,140	23,753	27,912	28,059	17,633		
Expenditures for Equipment											
New		30,802	37,985	46,667	49,857	3/	84,986	77,419	43,315		
Used		<u>138</u>	<u>299</u>	<u>406</u>	<u>88</u>	<u>3/</u>	<u>402</u>	<u>129</u>	<u>53</u>		
Total		<u>30,939</u>	<u>38,283</u>	<u>47,074</u>	<u>49,938</u>	<u>60,680</u>	<u>85,389</u>	<u>77,549</u>	<u>43,367</u>		
Total Expenditures for Structures and Equipment		<u>\$37,799</u>	<u>\$47,661</u>	<u>\$56,963</u>	<u>\$65,079</u>	<u>\$84,433</u>	<u>\$113,301</u>	<u>\$105,607</u>	<u>\$61,000</u>		

Note: Detail may not add to totals shown due to rounding.

* Represents amounts greater than \$0 but less than \$500,000.

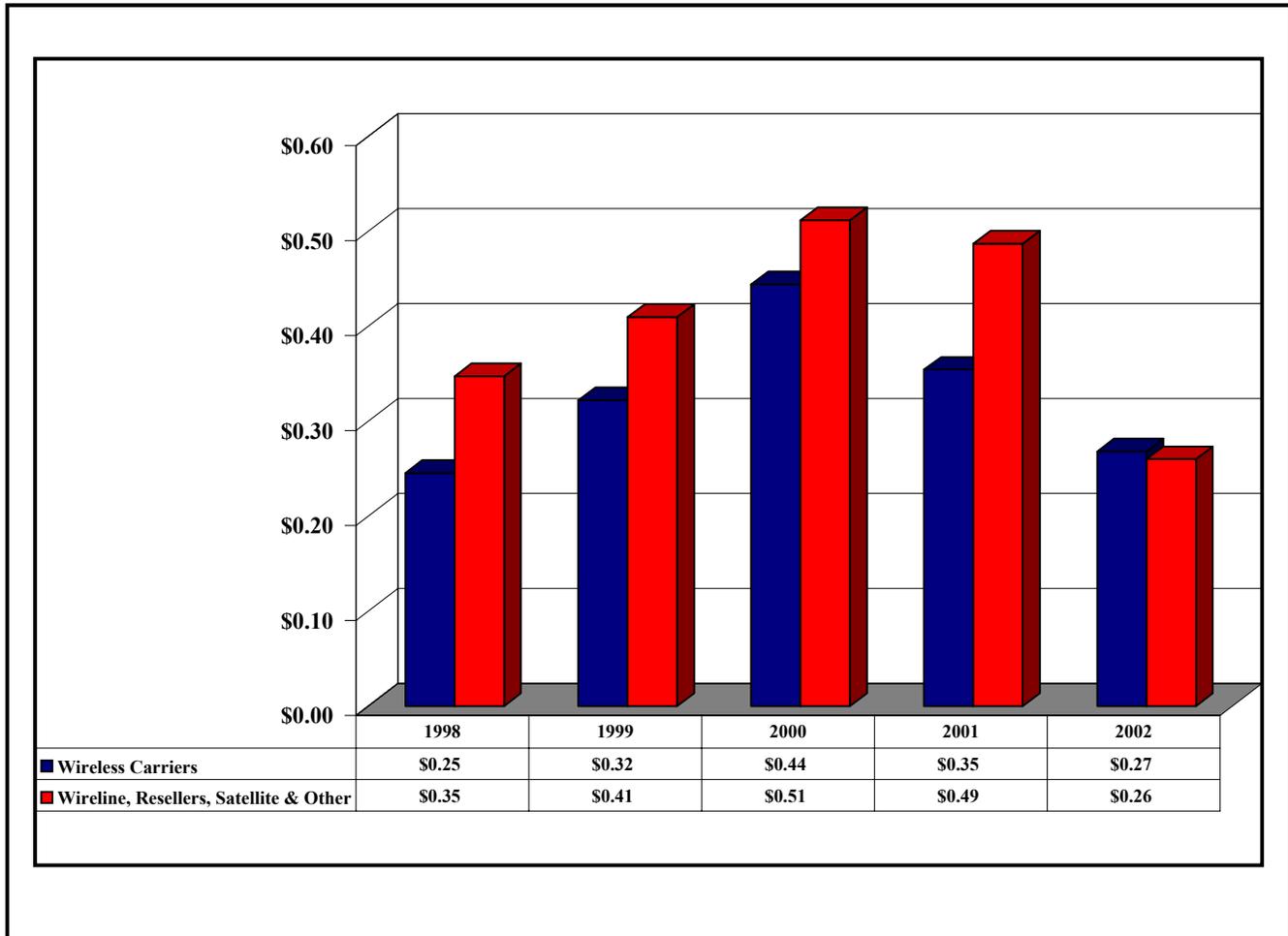
1/ Capital expenditures include capitalized computer software, capitalized interest during construction and expenditures for land development and improvement. Capital expenditures exclude equipment acquired under operating leases, good will, and expenditures for subsidiaries and branches located outside the United States.

2/ For 1995 through 1997, data represent Standard Industrial Classification (SIC) industries 481, 482, and 489. Starting in 1998, data are based on the North American Industry Classification System (NAICS).

3/ Data withheld by the Census Bureau to maintain firm confidentiality.

Source: U.S. Census Bureau, *Annual Capital Expenditures*. Some 2001 data are revised.

Chart 17.2
Capital Expenditures for Structures and Equipment by Carrier
Per Dollar of End-User Telecommunications Revenues *



Note: These end-user revenue totals represent amounts billed by type of carrier and differ from the totals in Table 15.1, which show end-user revenues by type of service.

* The chart incorporates the following end-user revenue data (\$ millions)

	1998	1999	2000	2001	2002
Wireless	\$33,573	\$44,804	\$57,429	\$67,896	\$76,501
Wireline & Resellers	163,879	170,959	171,720	167,617	155,933
Total	\$197,452	\$215,763	\$229,149	\$235,513	\$232,434

Source: U.S. Census Bureau, *Annual Capital Expenditures*; Industry Analysis and Technology Division, Wireline Competition Bureau, *Telecommunications Industry Revenues* (March 2004).

18 Telephone Numbers

In 1994, many area codes were nearing exhaustion as demand for telephone numbers continued to rise. Adding new area codes was difficult because some older telephone equipment was designed to recognize only area codes with a middle digit of 0 or 1, and the supply of those area codes was dwindling. On January 1, 1995, the restriction on the middle digit was removed, and 640 new area codes were made available. During 1995, fourteen new area codes were assigned -- the largest single-year expansion of area codes in decades. Twenty area codes were added in 1996, forty-four in 1997, twenty in 1998, twenty-four in 1999, thirteen in 2000, twenty-six in 2001, nine in 2002, and three were added in 2003. There are two new codes scheduled to be added the second half of 2004. The above counts of area code activation are for the contiguous United States, offshore points, Canada, and the Caribbean. Table 18.1 shows historical area code information by state from 1947 to 2003. The changes in area codes from 1984 to April 2003 are shown in Table 18.2. Area codes are assigned by the North American Numbering Plan Administration (NANPA), which is part of Neustar, Inc.

Toll-free service was first introduced in 1967 by AT&T. On May 1, 1993, procedures for routing toll-free (800) calls were changed and 800 numbers were made "portable." This enables customers to change service providers while still retaining the same 800 number. There has been tremendous growth in the toll-free market. In March 1996, a second toll-free calling code (888) was placed in service; the third toll-free calling code (877) went into effect April 4, 1998; and the fourth toll-free calling code (866) went into effect July 29, 2000. The growth of toll-free telephone numbers for the four toll-free codes (800, 888, 877, and 866) is shown in Table 18.3 and Chart 18.1. Tables 18.4 through 18.7 show the growth of each individual toll-free code: 800, 888, 877, and 866, respectively. The next toll-free code scheduled for service is 855, which was scheduled for November 18, 2000, but has been delayed. Database Service Management, Inc./Team DSMI, a subsidiary of Telcordia Technologies, Inc., maintains the Toll-Free Service Management System for the United States and Canada, a portability system for toll-free numbers.

Dialing patterns differ from state to state. For instance, in some states, callers making local calls within an area code are required to only dial the 7-digit phone number. In other states, callers making local calls must dial the ten-digit phone number (area code plus the phone number). Finally, in some states, local callers must dial a "1" before dialing the area code plus the phone number. Each state's public utilities commission (or public service commission) determines the calling pattern for each area code in their state. The dialing pattern for area codes are listed in area code planning letters, which are available on the North American Numbering Plan Administrator's web site at www.nanpa.com.

For both local and domestic toll calls, there are two basic types of calls: those within an area code and those between area codes. Table 18.8 shows the dialing patterns for all four types of calls. The last column of Table 18.8 indicates whether all toll calls in that state require callers to dial a "1" before the telephone number.

**Table 18.1
Area Codes by State
(1947 - 2004)**

Area Code	State/Jurisdiction	Area Code Opened	Area Code	State/Jurisdiction	Area Code	Area Code	State/Jurisdiction	Area Code Opened	Area Code	State/ Jurisdiction	Area Code Opened	Area Code	State/ Jurisdiction	Area Code Opened
205	Alabama	Jan-47	727	Florida	Jul-98	413	Massachusetts	Jan-47	716	New York	Jan-47	931	Tennessee	Sep-97
334	Alabama	Jan-95	863	Florida	Sep-99	617	Massachusetts	Jan-47	914	New York	Jan-47	865	Tennessee	Nov-99
256	Alabama	Mar-98	321	Florida	Nov-99	508	Massachusetts	Jul-88	516	New York	Jan-51	731	Tennessee	Feb-01
251	Alabama	Jun-01	386	Florida	Feb-01	781	Massachusetts	Sep-97	607	New York	Jan-54	214	Texas	Jan-47
907	Alaska	Jan-57	754	Florida	Aug-01	978	Massachusetts	Sep-97	718	New York	Sep-84	512	Texas	Jan-47
602	Arizona	Jan-47	772	Florida	Feb-02	339	Massachusetts	May-01	917	New York	Jan-92	713	Texas	Jan-47
520	Arizona	Mar-95	239	Florida	Mar-02	351	Massachusetts	May-01	646	New York	Jul-99	915	Texas	Jan-47
480	Arizona	Mar-99	404	Georgia	Jan-47	774	Massachusetts	May-01	347	New York	Oct-99	817	Texas	Jan-53
623	Arizona	Mar-99	912	Georgia	Jan-54	857	Massachusetts	May-01	631	New York	Nov-99	806	Texas	Jan-57
928	Arizona	Jun-01	706	Georgia	May-92	313	Michigan	Jan-47	845	New York	Jun-00	409	Texas	Nov-82
501	Arkansas	Jan-47	770	Georgia	Aug-95	517	Michigan	Jan-47	585	New York	Nov-01	903	Texas	Nov-90
870	Arkansas	Apr-97	678	Georgia	Jan-98	616	Michigan	Jan-47	704	North Carolina	Jan-47	210	Texas	Nov-92
479	Arkansas	Jan-02	229	Georgia	Aug-00	906	Michigan	Jan-61	919	North Carolina	Jan-54	972	Texas	Sep-96
213	California	Jan-47	478	Georgia	Aug-00	810	Michigan	Dec-93	910	North Carolina	Nov-93	281	Texas	Nov-96
415	California	Jan-47	671	Guam	Jul-97	248	Michigan	May-97	336	North Carolina	Dec-97	254	Texas	May-97
916	California	Jan-47	808	Hawaii	Jan-57	734	Michigan	Dec-97	252	North Carolina	Mar-98	940	Texas	May-97
714	California	Jan-51	208	Idaho	Jan-47	231	Michigan	Jun-99	828	North Carolina	Mar-98	830	Texas	Jul-97
805	California	Jan-57	217	Illinois	Jan-47	989	Michigan	Apr-01	980	North Carolina	Apr-01	956	Texas	Jul-97
209	California	Jan-58	312	Illinois	Jan-47	586	Michigan	Sep-01	701	North Dakota	Jan-47	832	Texas	Jan-99
408	California	Jan-59	618	Illinois	Jan-47	269	Michigan	Jul-02	670	Northern Marianas Is.	Jul-97	361	Texas	Feb-99
707	California	Jan-59	815	Illinois	Jan-47	947	Michigan	Sep-02	216	Ohio	Jan-47	469	Texas	Jul-99
619	California	Jan-82	309	Illinois	Jan-57	218	Minnesota	Jan-47	419	Ohio	Jan-47	979	Texas	Feb-00
818	California	Jan-84	708	Illinois	Nov-89	612	Minnesota	Jan-47	513	Ohio	Jan-47	936	Texas	Feb-00
510	California	Sep-91	847	Illinois	Jan-96	507	Minnesota	Jan-54	614	Ohio	Jan-47	682	Texas	Oct-00
310	California	Nov-91	630	Illinois	Aug-96	320	Minnesota	Mar-96	330	Ohio	Mar-96	430	Texas	Feb-03
909	California	Nov-92	773	Illinois	Oct-96	651	Minnesota	Jul-98	937	Ohio	Sep-96	325	Texas	Apr-03
562	California	Jan-97	224	Illinois	Jan-02	763	Minnesota	Feb-00	440	Ohio	Aug-97	432	Texas	Apr-03
760	California	Mar-97	219	Indiana	Jan-47	952	Minnesota	Feb-00	740	Ohio	Dec-97	340	US Virgin Islands	Jan-97
626	California	Jun-97	317	Indiana	Jan-47	601	Mississippi	Jan-47	234	Ohio	Oct-00	801	Utah	Jan-47
650	California	Aug-97	812	Indiana	Jan-47	228	Mississippi	Sep-97	567	Ohio	Jan-02	435	Utah	Sep-97
530	California	Nov-97	765	Indiana	Feb-97	662	Mississippi	Apr-99	405	Oklahoma	Jan-47	802	Vermont	Jan-47
925	California	Mar-98	260	Indiana	Jan-02	314	Missouri	Jan-47	918	Oklahoma	Jan-53	703	Virginia	Jan-47
949	California	Apr-98	574	Indiana	Jan-02	816	Missouri	Jan-47	580	Oklahoma	Nov-97	804	Virginia	Jun-73
323	California	Jun-98	319	Iowa	Jan-47	417	Missouri	Jan-50	503	Oregon	Jan-47	540	Virginia	Jul-95
831	California	Jul-98	515	Iowa	Jan-47	573	Missouri	Jan-96	541	Oregon	Nov-95	757	Virginia	Jul-96
559	California	Nov-98	712	Iowa	Jan-47	660	Missouri	Oct-97	971	Oregon	Oct-00	571	Virginia	Mar-00
661	California	Feb-99	641	Iowa	Jul-00	636	Missouri	May-99	215	Pennsylvania	Jan-47	434	Virginia	Jun-01
858	California	Jun-99	563	Iowa	Mar-01	406	Montana	Jan-47	412	Pennsylvania	Jan-47	276	Virginia	Sep-01
303	Colorado	Jan-47	316	Kansas	Jan-47	402	Nebraska	Jan-47	717	Pennsylvania	Jan-47	206	Washington	Jan-47
719	Colorado	Mar-88	913	Kansas	Jan-47	308	Nebraska	Jan-55	814	Pennsylvania	Jan-47	509	Washington	Jan-57
970	Colorado	Apr-95	785	Kansas	Jul-97	702	Nevada	Jan-47	610	Pennsylvania	Jan-94	360	Washington	Jan-95
720	Colorado	Jun-98	620	Kansas	Feb-01	775	Nevada	Dec-98	724	Pennsylvania	Feb-98	253	Washington	Apr-97
203	Connecticut	Jan-47	502	Kentucky	Jan-47	603	New Hampshire	Jan-47	570	Pennsylvania	Dec-98	425	Washington	Apr-97
860	Connecticut	Aug-95	606	Kentucky	Jan-55	201	New Jersey	Jan-47	484	Pennsylvania	Jun-99	304	West Virginia	Jan-47
302	Delaware	Jan-47	270	Kentucky	Apr-99	609	New Jersey	Jan-57	267	Pennsylvania	Jul-99	414	Wisconsin	Jan-47
202	District of Columbia	Jan-47	859	Kentucky	Apr-00	908	New Jersey	Nov-90	878	Pennsylvania	Aug-01	715	Wisconsin	Jan-47
305	Florida	Jan-47	504	Louisiana	Jan-47	732	New Jersey	Jun-97	787	Puerto Rico	Mar-96	608	Wisconsin	Jan-55
813	Florida	Jan-53	318	Louisiana	Jan-57	973	New Jersey	Jun-97	939	Puerto Rico	Sep-01	920	Wisconsin	Jul-97
904	Florida	Jan-65	225	Louisiana	Aug-98	856	New Jersey	Jun-99	401	Rhode Island	Jan-47	262	Wisconsin	Sep-99
407	Florida	Apr-88	337	Louisiana	Oct-99	551	New Jersey	Dec-01	803	South Carolina	Jan-47	307	Wyoming	Jan-47
941	Florida	May-95	985	Louisiana	Feb-01	848	New Jersey	Dec-01	864	South Carolina	Dec-95			
954	Florida	Sep-95	207	Maine	Jan-47	862	New Jersey	Dec-01	843	South Carolina	Mar-98			
352	Florida	Dec-95	301	Maryland	Jan-47	505	New Mexico	Jan-47	605	South Dakota	Jan-47			
561	Florida	May-96	410	Maryland	Oct-91	212	New York	Jan-47	901	Tennessee	Jan-47			
850	Florida	Jun-97	240	Maryland	Jun-97	315	New York	Jan-47	615	Tennessee	Jan-54			
786	Florida	Mar-98	443	Maryland	Jun-97	518	New York	Jan-47	423	Tennessee	Sep-95			

Table 18.2
Area Code Assignments
(1999-2004)

Location	Date	Previous Code	Added Code
Texas (Houston)	1/99	281	832
Texas (Houston)	1/99	713	832
Alberta	1/99	403	780
California	2/99	805	661
Texas	2/99	512	361
Arizona	3/99	602	480
Arizona	3/99	602	623
Kentucky	4/99	502	270
Mississippi	4/99	601	662
Missouri	5/99	314	636
Michigan	6/99	616	231
Pennsylvania	6/99	215	267
Pennsylvania	6/99	610	484
California	6/99	619	858
New Jersey	6/99	609	856
New York (Manhattan)	7/99	212	646
Texas (Dallas)	7/99	214	469
Texas (Dallas)	7/99	972	469
Florida	9/99	941	863
Wisconsin	9/99	414	262
Louisiana	10/99	318	337
Florida	11/99	407	321
New York	11/99	516	631
Tennessee	11/99	423	865
Texas	2/00	409	936
Texas	2/00	409	979
Minnesota	2/00	612	763
Minnesota	2/00	612	952
Virginia	3/00	703	571
Kentucky	4/00	606	859
New York	6/00	914	845
Iowa	7/00	515	641
Georgia	8/00	912	478
Georgia	8/00	912	229
Oregon	10/00	503	971
Texas	10/00	817	682
Ohio	10/00	330	234
Kansas	2/01	316	620
Tennessee	2/01	901	731
Louisiana	2/01	504	985
Florida	2/01	904	386
Ontario	3/01	416	647
Iowa	3/01	319	563
North Carolina	4/01	704	980
Michigan	4/01	517	989

Table 18.2
Area Code Assignments -- Continued
(1999-2004)

Location	Date	Previous Code	Added Code
Massachusetts	5/01	781	339
Massachusetts	5/01	978	351
Massachusetts	5/01	508	774
Massachusetts	5/01	617	857
Virginia	6/01	804	434
Ontario	6/01	905	289
Alabama	6/01	334	251
Arizona	6/01	520	928
Florida	8/01	954	754
Pennsylvania	8/01	412	878
Virginia	9/01	540	276
Puerto Rico	9/01	787	939
Michigan	9/01	810	586
British Columbia	11/01	604	778
New York	11/01	716	585
New Jersey	12/01	201	551
New Jersey	12/01	732	848
New Jersey	12/01	973	862
Ohio	1/02	419	567
Illinois	1/02	847	224
Indiana	1/02	219	260
Indiana	1/02	219	574
Arkansas	1/02	501	479
Florida	2/02	561	772
Florida	3/02	941	239
Michigan	7/02	616	269
Michigan	9/02	248	947
Texas	2/03	903	430
Texas	4/03	915	325
Texas	4/03	915	432
California	7/04		951
American Samoa	10/04		684

NA - Not applicable.

Note: For years 1984 - 1998, see Industry Analysis Division, Wireline Competition Bureau, *Trends in Telephone Service* (August 2003).

Source: North American Numbering Plan Administrator (NANPA), which can be accessed at www.nanpa.com.

Table 18.3

**Telephone Numbers Assigned for Toll-Free Service (800, 888, 877, 866)
(Summary December 1993 - March 2004)**

Year	Month	Working Toll-Free Numbers	Miscellaneous Toll-Free Numbers ¹	Total Toll-Free Numbers Assigned	Spare Toll-Free Numbers Still Available
1993	December	3,155,955	731,438	3,887,393	3,822,607
1994	December	4,948,605	763,235	5,711,840	1,998,160
1995	December	6,700,576	286,487	6,987,063	722,937
1996	December	9,527,982	945,671	10,473,653	5,216,347
1997	December	12,980,714	996,449	13,977,163	1,712,837
1998	December	16,200,883	965,466	17,166,349	6,503,651
1999	December	19,677,001	1,101,964	20,778,965	2,891,035
2000	December	23,022,015	1,178,096	24,200,111	7,449,889
2001	December	23,453,029	1,027,973	24,481,002	7,168,998
2002	December	22,496,215	1,347,805	23,547,447	8,837,185
2003	December	21,108,662	1,300,961	22,050,182	9,599,818
2004	March	21,363,124	1,051,982	22,127,206	9,522,794

Note: For individual month assignments through June 2003, see Industry Analysis and Technology Division, Wireline Competition Bureau, *Trends in Telephone Service* (August 2003).

* Toll-free (800) service was initially offered by AT&T in 1967. On May 1, 1993, procedures for routing toll-free calls were changed and 800 numbers were made "portable" so customers who switched service providers could retain their numbers. Due to the growth in toll-free numbers, a new toll-free calling code, 888, was added in March 1996, which made it possible to assign about 8 million new toll-free numbers. A third toll-free calling code, 877, was added in April 1998; and a fourth toll-free code, 866, was added in July 2000.

¹ Miscellaneous numbers include those in the 800, 888, 877, and 866 service management systems maintained by Database Service Management, Inc., and categorized as reserved, assigned but not yet activated, recently disconnected, or suspended.

**Chart 18.1
Working Toll-Free Numbers
(Numbers in Millions)**

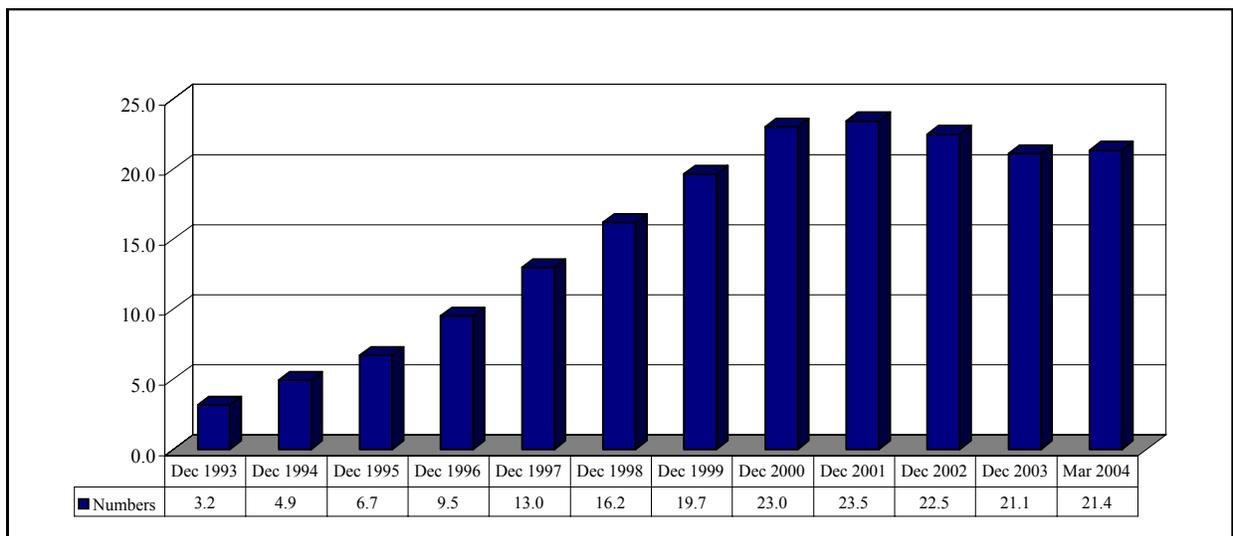


Table 18.4
Telephone Numbers Assigned for 800 Toll-Free Service

Year	Month	Working 800 Numbers	Miscellaneous 800 Numbers ¹	Total 800 Numbers Assigned	Spare 800 Numbers Still Available
1993	June	2,589,123	722,006	3,311,129	4,398,871
	September	2,818,262	639,547	3,457,809	4,252,191
	December	3,155,955	731,438	3,887,393	3,822,607
1994	March	3,516,620	743,813	4,260,433	3,449,567
	June	3,933,037	792,698	4,725,735	2,984,265
	September	4,506,014	841,381	5,347,395	2,362,605
	December	4,948,605	763,235	5,711,840	1,998,160
1995	March	5,528,723	793,771	6,322,494	1,387,506
	June	6,340,534	481,633	6,822,167	887,833
	September	6,503,018	437,215	6,940,233	769,767
	December	6,700,576	286,487	6,987,063	722,937
1996	March	6,907,098	293,244	7,200,342	509,658
	June	6,986,821	324,899	7,311,720	398,280
	September	7,119,167	310,562	7,429,729	280,271
	December	7,272,819	343,905	7,616,724	93,276
1997	March	7,402,769	305,362	7,708,131	1,869
	June	7,415,591	293,802	7,709,393	607
	September	7,427,717	280,668	7,708,385	1,615
	December	7,429,160	267,429	7,696,589	13,411
1998	March	7,455,240	249,964	7,705,204	4,796
	June	7,480,468	227,041	7,707,509	2,491
	September	7,489,271	219,080	7,708,351	1,649
	December	7,487,529	215,267	7,702,796	7,204
1999	March	7,498,527	204,515	7,703,042	6,958
	June	7,502,118	207,061	7,709,179	821
	September	7,523,302	185,363	7,708,665	1,335
	December	7,505,737	202,416	7,708,153	1,847
2000	March	7,516,391	193,246	7,709,637	363
	June	7,570,082	139,444	7,709,526	474
	September	7,572,091	137,705	7,709,796	204
	December	7,566,810	132,887	7,699,697	10,303
2001	March	7,434,621	264,967	7,699,588	10,412
	June	7,357,279	242,106	7,599,385	110,615
	September	7,383,111	164,881	7,547,992	162,008
	December	7,370,055	184,689	7,554,744	155,256
2002	March	7,181,636	400,955	7,582,591	127,409
	June	7,234,847	475,153	7,516,852	193,148
	September	7,200,821	509,179	7,378,544	331,456
	December	7,210,159	499,841	7,413,427	296,573
2003	March	7,182,120	527,880	7,406,656	303,344
	June	7,171,068	538,932	7,405,644	304,356
	September	7,031,806	678,194	7,254,652	455,348
	December	7,089,752	620,248	7,350,559	359,441
2004	March	7,187,381	522,619	7,422,100	287,900

See Table 18.3 notes.

Table 18.5
Telephone Numbers Assigned for 888 Toll-Free Service

Year	Month	Working 888 Numbers	Miscellaneous 888 Numbers ¹	Total 888 Numbers Assigned	Spare 888 Numbers Still Available
1996	March	267,874	568,574	836,448	7,143,552
	June	922,849	544,079	1,466,928	6,513,072
	September	1,641,519	590,345	2,231,864	5,748,136
	December	2,255,163	601,766	2,856,929	5,123,071
1997	March	2,857,608	661,164	3,518,772	4,461,228
	June	3,660,984	681,981	4,342,965	3,637,035
	September	4,776,688	774,431	5,551,119	2,428,881
	December	5,551,554	729,020	6,280,574	1,699,426
1998	March	6,167,479	728,415	6,895,894	1,084,106
	June	6,591,764	665,496	7,257,260	722,740
	September	6,898,718	612,254	7,510,972	469,028
	December	7,146,159	515,009	7,661,168	318,832
1999	March	7,278,531	495,904	7,774,435	205,565
	June	7,428,424	231,697	7,660,121	319,879
	September	7,601,867	211,318	7,813,185	166,815
	December	7,643,158	324,405	7,967,563	12,437
2000	March	7,685,423	230,035	7,915,458	64,542
	June	7,789,986	140,658	7,930,644	49,356
	September	7,806,252	173,588	7,979,840	160
	December	7,789,188	177,328	7,966,516	13,484
2001	March	7,616,189	355,451	7,971,640	8,360
	June	7,548,761	270,198	7,818,959	161,041
	September	7,508,100	203,518	7,711,618	268,382
	December	7,452,071	190,727	7,642,798	337,202
2002	March	6,964,624	577,910	7,542,534	437,466
	June	6,629,862	354,771	6,984,633	995,367
	September	6,682,043	92,050	6,774,093	1,205,907
	December	6,610,191	154,015	6,764,206	1,215,794
2003	March	6,408,723	324,558	6,733,281	1,246,719
	June	6,228,846	251,701	6,480,547	1,499,453
	September	5,818,266	216,862	6,035,128	1,944,872
	December	5,711,949	250,662	5,962,611	2,017,389
2004	March	5,680,105	133,824	5,813,929	2,166,071

See Table 18.3 notes.

Table 18.6
Telephone Numbers Assigned for 877 Toll-Free Service

Year	Month	Working 877 Numbers	Miscellaneous 877 Numbers ¹	Total 877 Numbers Assigned	Spare 877 Numbers Still Available
1998	June	552,037	209,967	762,004	7,217,996
	September	1,072,046	206,714	1,278,760	6,701,240
	December	1,567,195	235,190	1,802,385	6,177,615
1999	March	2,141,228	329,044	2,470,272	5,509,728
	June	2,899,466	410,026	3,309,492	4,670,508
	September	3,755,361	436,433	4,191,794	3,788,206
	December	4,528,106	575,143	5,103,249	2,876,751
2000	March	5,436,297	598,702	6,034,999	1,945,001
	June	6,317,507	402,858	6,720,365	1,259,635
	September	6,539,180	496,015	7,035,195	944,805
	December	6,391,285	719,333	7,110,618	869,382
2001	March	6,289,079	469,980	6,759,059	1,220,941
	June	6,094,898	715,097	6,809,995	1,170,005
	September	6,163,297	489,084	6,652,381	1,327,619
	December	6,214,863	345,468	6,560,331	1,419,669
2002	March	6,174,529	340,472	6,515,001	1,464,999
	June	6,016,107	267,320	6,283,427	1,696,573
	September	5,656,158	275,722	5,931,880	2,048,120
	December	5,448,276	421,984	5,870,260	2,109,740
2003	March	5,132,413	579,240	5,711,653	2,268,347
	June	4,791,792	376,236	5,168,028	2,811,972
	September	4,617,147	170,787	4,787,934	3,192,066
	December	4,536,366	191,410	4,727,776	3,252,224
2004	March	4,528,716	163,856	4,692,572	3,287,428

See Table 18.3 notes.

Table 18.7
Telephone Numbers Assigned for 866 Toll-Free Service

Year	Month	Working 866 Numbers	Miscellaneous 866 Numbers ¹	Total 866 Numbers Assigned	Spare 866 Numbers Still Available
2000	September	672,250	155,646	827,896	7,152,104
	December	1,274,732	148,548	1,423,280	6,556,720
2001	March	1,652,602	361,888	2,014,490	5,965,510
	June	1,944,520	362,880	2,307,400	5,672,600
	September	2,256,792	308,801	2,565,593	5,414,407
	December	2,416,040	307,089	2,723,129	5,256,871
2002	March	2,640,414	321,530	2,961,944	5,018,056
	June	2,864,605	219,232	3,083,837	4,896,163
	September	2,977,379	244,297	3,221,676	4,758,324
	December	3,227,589	271,965	3,499,554	4,480,446
2003	March	3,461,686	299,700	3,761,386	4,218,614
	June	3,486,674	420,477	3,907,151	4,072,849
	September	3,609,244	265,446	3,874,690	4,105,310
	December	3,770,595	238,641	4,009,236	3,970,764
2004	March	3,966,922	231,683	4,198,605	3,781,395

See Table 18.3 notes.

Table 18.8
Dialing Patterns of the United States
Number of Digits Necessary to Dial Local and Toll Calls
(As of January 2004)

State	Local Calls		Toll Calls		Toll Calls Require Dialing 1 +
	Within Same Area Code	Between Area Codes	Within Same Area Code	Between Area Codes	
Alabama	7	10	1 + 10	1 + 10	Yes
Alaska	7	1 + 10	1 + 10	1 + 10	Yes
Arizona	7	10	1 + 10	1 + 10	Yes
Arkansas	7	10	1 + 10	1 + 10	Yes
California	7	1 + 10	7	1 + 10	No
Colorado	7 ¹	10 ²	1 + 10	1 + 10	Yes
Connecticut	7	10	1 + 10	1 + 10	Yes
Delaware	7	10	1 + 10	1 + 10	Yes
District of Columbia	7	10	NA	1 + 10	Yes
Florida	7 ³	10	1 + 10	1 + 10	Yes
Georgia	7 ⁴	10	1 + 10	1 + 10	Yes
Hawaii	7	NA	1 + 10	1 + 10	Yes
Idaho	7	7	1 + 10	1 + 10	Yes
Illinois	7 ⁵	1 + 10	1 + 10	1 + 10	Yes
Indiana	7	10	1 + 10	1 + 10	Yes
Iowa	7	10	1 + 10	1 + 10	Yes
Kansas	7	10	1 + 10	1 + 10	Yes
Kentucky	7	10 ⁶	1 + 10	1 + 10	Yes
Louisiana	7	10	1 + 10	1 + 10	Yes
Maine	7	1 + 10	1 + 10	1 + 10	Yes
Maryland	10	10	1 + 10	1 + 10	Yes
Massachusetts	10 ⁷	10	1 + 10	1 + 10	Yes
Michigan	7 ⁸	1 + 10 ⁹	1 + 10	1 + 10	Yes
Minnesota	7	10 ¹⁰	1 + 10	1 + 10	Yes
Mississippi	7	10	1 + 10	1 + 10	Yes
Missouri	7	10	1 + 10	1 + 10	Yes
Montana	7	7	1 + 10	1 + 10	Yes
Nebraska	7	7	1 + 10	1 + 10	Yes
Nevada	7	10	1 + 10	1 + 10	Yes
New Hampshire	7	1 + 10	7	1 + 10	No
New Jersey	10 ¹¹	1 + 10	10 ¹¹	1 + 10	No
New Mexico	7	NA	1 + 10	1 + 10	Yes
New York	7 ¹²	1 + 10	7 ¹²	1 + 10	No
North Carolina	7 ¹³	1 + 10	10	1 + 10	Yes
North Dakota	7	7	1 + 10	1 + 10	Yes
Ohio	7 ¹⁴	10	1 + 10	1 + 10	Yes
Oklahoma	7	7	1 + 10	1 + 10	Yes
Oregon	10 ¹⁵	10	1 + 10	1 + 10	Yes
Pennsylvania	10 ¹⁶	1 + 10 ¹⁷	1 + 10 ¹⁶	1 + 10	No
Rhode Island	7	1 + 10	7	1 + 10	No
South Carolina	7	10	1 + 10	1 + 10	Yes
South Dakota	7	7	1 + 10	1 + 10	Yes
Tennessee	7	10 ¹⁸	1 + 10	1 + 10	Yes
Texas	7 ¹⁹	10	1 + 10	1 + 10	Yes
Utah	7	10 ²⁰	1 + 10	1 + 10	Yes
Vermont	7	1 + 10	1 + 10	1 + 10	Yes
Virginia	7 ²¹	10	1 + 10	1 + 10	Yes
Washington	7	10	1 + 10	1 + 10	Yes
West Virginia	7	7	1 + 10	1 + 10	Yes
Wisconsin	7	1 + 10	1 + 10	1 + 10	Yes
Wyoming	7	7	1 + 10	1 + 10	Yes

NA - Not Applicable.

Source: Planning letters for individual area codes. Planning letters are available at www.nanpa.com.

Notes to Table 18.8.

- ¹ In area codes 303 and 720, 10-digit dialing is used.
- ² In area code 970, 7-digit dialing may be used.
- ³ In area codes 305, 321, 407, 754, 786, and 954, 10-digit dialing is used.
- ⁴ In area codes 404, 678, and 770, 10-digit dialing is used.
- ⁵ In area codes 224 and 847, 1+ 10-digit dialing is used.
- ⁶ In area codes 270 and 502, 7-digit dialing is used.
- ⁷ In area code 413, 7-digit dialing is used.
- ⁸ In area codes 248 and 947, 10-digit dialing is used.
- ⁹ In area code 248, 1 + 10-digit dialing is used.
- ¹⁰ In area codes 218, 320, and 507, 7-digit dialing is used.
- ¹¹ In area codes 609, 856, and 908, 7-digit dialing is used.
- ¹² In area codes 212, 347, 646, 718, and 917, 1+10 digit dialing is used.
- ¹³ In area codes 704 and 980, 10-digit dialing is used.
- ¹⁴ In area codes 234, 330, 419, and 567, 10-digit dialing is used.
- ¹⁵ In area code 541, 7-digit dialing is used.
- ¹⁶ In area codes 570, 717, and 814, 7-digit dialing is used.
- ¹⁷ In some area codes, local calls to some other area codes may be dialed using 10 digits.
- ¹⁸ In area codes 615 and 931, 7-digit dialing is used.
- ¹⁹ In area codes 214, 281, 430, 469, 682, 713, 817, 832, 903, and 972, 10-digit dialing is used.
- ²⁰ In area code 435, 7-digit dialing is used.

19 Universal Service

1. Overview

There are four major universal service support mechanisms: 1) High Cost, 2) Low Income, including Lifeline and Link-Up, 3) Schools and Libraries, and 4) Rural Health Care.¹ High Cost support enables carriers with above-average costs to recover some of these costs from the support mechanisms, allowing these carriers to lower their end-user rates and/or to receive less money from state universal support mechanisms.

The Lifeline program promotes increased telephone subscribership by providing low-income households with discounts on the monthly cost of telephone service. The Link-Up America program promotes telephone subscribership by helping low-income households pay the initial costs of commencing telephone service.

Schools and Libraries support enables eligible schools and libraries to obtain eligible services, including telecommunications services, at discounted rates. Rural Health Care support allows rural health care providers to purchase telecommunications services at comparable urban rates.

Table 19.1 shows universal service support disbursements for 2003.² Chart 19.1 shows this information graphically. Table 19.2 and Chart 19.2 show the type of service providers that received universal service support in 2003.

2. High Cost

The High Cost support mechanisms include embedded high-cost loop (HCL) support,³ safety net additive support (SNAS), safety valve support (SVS), long-term support (LTS), local switching support (LSS), forward-looking, high-cost model (HCM) support, interstate access support (IAS) for price-cap carriers, and interstate common line support (ICLS) for rate-of-return carriers.

¹ Additional information on universal service mechanisms is available in the *2003 Universal Service Monitoring Report* (December 2003). See <http://www.fcc.gov/wcb/iatd/monitor.html>.

² The schools and libraries mechanism and the rural health care mechanism operate on a school-year basis rather than a calendar-year basis, so for the purposes of Table 19.1, Funding Year 2002 (July 1, 2002 through June 30, 2003) disbursements were used for these two mechanisms. The majority of Funding Year 2002 disbursements for these two mechanisms were made in calendar year 2003.

³ This was formerly referred to as the Universal Service Fund, and still bears that name in the Commission rules. It is now referred to as high-cost loop support to avoid confusion with the new, more comprehensive universal service support mechanisms that the Commission developed to implement the 1996 Act. See 47 C.F.R. § 36.601.

The HCL support provides assistance to companies with above average non-traffic-sensitive local loop costs – terminology that refers to the costs of providing loops connecting customers and their serving telephone company central office. The safety net mechanism provides assistance to companies that have large increases in telecommunications plant in service. Safety valve provides additional assistance to rural carriers that make substantial investment after acquiring exchanges.

LTS historically has provided assistance to members of the NECA common line pool. It explicitly offsets the portion of their access charges designed to recover their common line costs. LSS provides assistance to LECs with study areas of 50,000 or fewer access lines to help defray their higher switching costs. The HCM provides assistance for non-rural carriers based on their forward-looking costs of providing supported services as determined by the Commission's cost model. The IAS mechanism provides support to price-cap carriers to replace the implicit support previously collected through interstate access charges. The ICLS mechanism converts support implicit in the access rate structure of rate-of-return carriers to explicit and portable support. ICLS recovers any shortfall between the allowed common line revenues of rate of return carriers and their subscriber line charge revenues. LTS will be merged into ICLS as of July 1, 2004.

Table 19.3 shows HCL support, LTS, LSS, HCM support, IAS, ICLS, and SNAS payments from 1986 to 2004. Table 19.4 shows payments by state for 2003. Chart 19.3 shows the growth of the high-cost support fund payments for the same time period.

3. Low-Income Support: Lifeline and Link-Up

The Lifeline program promotes increased telephone subscribership by providing low-income households with discounts on the monthly cost of telephone service. The Link-Up America program increases telephone subscribership by helping low-income households pay the initial costs of commencing telephone service, which can surpass \$100.

The Lifeline program was created in 1984, and the Link-Up program was created in 1987. For both of these, the rules were later modified to make the distribution of low-income support competitively and technologically neutral by allowing all eligible telecommunications carriers to receive support for providing Lifeline and Link-Up service. In June 2000, the Commission further expanded the Lifeline and Link-Up programs to address the needs of households on tribal lands.⁴

Eligibility requirements for Lifeline and Link-Up vary from state to state. In those states that have their own Lifeline program, the state creates its own eligibility requirements. Those criteria must be based solely on income or factors directly related to income. In addition, a state commission must ensure that its qualification criteria are reasonably designed to reach eligible residents of tribal lands within the state. In those states that do not have their own Lifeline

⁴ *Federal-State Joint Board on Universal Service; Promoting Deployment and Subscribership in Unserved and Underserved Areas, Including Tribal and Insular Areas*, Twelfth Report and Order, and Further Notice of Proposed Rulemaking, CC Docket No. 96-45, FCC 00-208, 15 FCC Rcd 12,208 (2000).

program, Lifeline eligibility requirements are set by the FCC. Households must certify that they participate in at least one of the following five federal programs: Medicaid, food stamps, Supplemental Security Income (SSI), federal public housing assistance, or the Low-Income Home Energy Assistance Program (LIHEAP).

Eligible consumers living on tribal lands can receive federal Lifeline support if they (a) meet their state's Lifeline eligibility requirements; (b) certify that they are enrolled in one of the five federal programs listed above; or (c) participate in one of the following federal assistance programs: Bureau of Indian Affairs (BIA) general assistance program, tribally administered Temporary Assistance for Needy Families (TANF), National School Lunch Program's free lunch program, or Head Start (meeting the income-qualifying standard).

Under the Commission's rules, there are four tiers of federal Lifeline support.⁵ The first tier represents a monthly waiver of the federal subscriber line charge. The federal subscriber line charge ranges between \$3.50 and \$6.50, varying by state and the carrier providing service. Second-tier support is a flat \$1.75 per month reduction in the basic local rate. All Lifeline subscribers receive at least the first two tiers. The third tier of federal support is based on the amount of additional support mandated by the relevant state or otherwise provided by carriers. Federal support is available to match one-half of the tier-three support provided, up to a maximum of \$1.75 in federal support. Eligible subscribers living on tribal lands also qualify to receive a fourth tier of Lifeline support. Tier-four support provides up to an additional \$25 per month towards reducing basic local service rates down to \$1 per month.

The Commission's Link-Up program provides qualified low-income individuals with a federally financed 50% discount on initial connection charges. Link-Up subscribers also may choose to schedule deferred payments of up to \$200 over a one-year period, with the customary interest charges paid through federal support.

Table 19.5 shows the minimum, maximum and average monthly Lifeline support over the twelve-month period ending December 31, 2002, by state or jurisdictions. The table contains both federal and state support, and indicates the additional contribution from the federal program to reduce local rates where states have authorized statewide or carrier specific intrastate local rate reductions.

Table 19.6 contains historical Lifeline subscriber and Link-Up beneficiary data for 1987 through 2003. Table 19.7 presents tribal and non-tribal lifeline subscriber and Link-Up beneficiary data by state for 2002.

Table 19.8 and Chart 19.4 contain annual historical low-income support payments for years 1988 through 2003. Table 19.9 shows low-income support payments by state for 2003.

4. Schools and Libraries

⁵ In addition, the lifeline program compensates eligible telecommunication carriers for toll limitation service (TLS). Between January 1998 and June 2000, carriers were compensated for the presubscribed interexchange carrier charge (PICCs).

The schools and libraries support mechanism also known as the “E Rate” enables schools and libraries to obtain eligible services at discounted rates. Eligible schools and libraries receive telecommunications services, Internet access, and internal connections at discounts that range from 20 percent to 90 percent. The level of the discount is generally based on the percentage of students eligible for the national school lunch program, or in the case of libraries, the percentage of students eligible for the national school lunch program in the school district where the library is located. In addition, schools and libraries located in rural areas receive an additional discount.

Table 19.10 shows funding commitments and disbursements to schools and libraries by funding year since 1998. The commitments and disbursements are shown by the type of service funded (internal connections, Internet access, and telecommunications). Chart 19.5 graphically shows the total schools and libraries funds committed and disbursed. Table 19.11 shows, on a state-by-state basis, funding commitments to schools and libraries for the July 1, 2002 through June 30, 2003 funding year.

5. Rural Health Care

Rural Health Care support is designed to allow rural health care providers to purchase telecommunications services at rates that exist in the nearest large city. Historically, the Commission defined "nearest large city" as the closest city in the state with a population of at least 50,000. In addition, any rural health care provider that cannot obtain toll-free Internet access is entitled to receive the lesser of \$180 of toll charges per month, or the toll charges incurred for 30 hours per month, for telecommunications access to an Internet service provider. In November 2003, the Commission amended its rules to provide support for 25% of the cost of Internet access for rural health care providers, and modified other aspects of these rules.

Table 19.12 and Chart 19.6 show rural health care fund disbursements by service speed since 1998. Table 19.13 shows rural health care fund disbursements by service speed and on a state-by-state basis for the funding period July 1, 2002 through June 30, 2003.

6. Contributions to the Universal Service Fund

Carriers contribute to universal support mechanisms based on interstate and international end-user revenues. Since November 1999, all contributions to USF are based on interstate end-user revenues. Table 19.14 shows interstate and intrastate contribution rates since the first quarter of 1998. Table 19.15 shows changes in the shares of contributions over time by type of service provider. Shares have changed because of differential pricing and growth trends and because wireless carriers now report a greater share of their revenues as interstate revenues.

Table 19.1
Universal Service Support Mechanisms
(Dollars in Thousands)

Mechanism	2002		2003	
	Disbursements	Percent of Total	Disbursements	Percent of Total
High-Cost Support	\$2,977,955	56.3 %	\$3,273,225	57.5 %
High-Cost Loop (HCL) Support	1,057,591	20.0	1,090,673	19.1
Long-Term Support (LTS)	492,819	9.3	504,089	8.9
Local Switching Support (LSS)	391,142	7.4	420,154	7.4
High-Cost Model (HCM) Support	226,443	4.3	231,025	4.1
Interstate Access Support (IAS)	625,188	11.8	621,741	10.9
Interstate Common Line Support (ICLS)	184,772	3.5	399,420	7.0
Safety Net Additive Support (SNAS)	0	0.0	6,125	0.1
Low-Income Support	673,080	12.7	713,129	12.5
School and Libraries *	1,620,181	30.6	1,686,000 <i>e</i>	29.6
Rural Health Care *	19,689	0.4	23,349 <i>p</i>	0.4
All Universal Service Support	\$5,290,905	100.0 %	\$5,695,703	100.0 %

e indicates estimate.

p indicates preliminary.

* Schools and libraries, and rural health care programs operate on a school year rather than a calendar year. Amounts for those programs in 2002 are for July 1, 2001 to June 30, 2002, and figures for 2003 are for July 1, 2002 to June 30, 2003.

Note: Figures may not add due to rounding.

Source: Universal Service Administration Company (USAC).

Chart 19.1
Distribution of Universal Service Payments

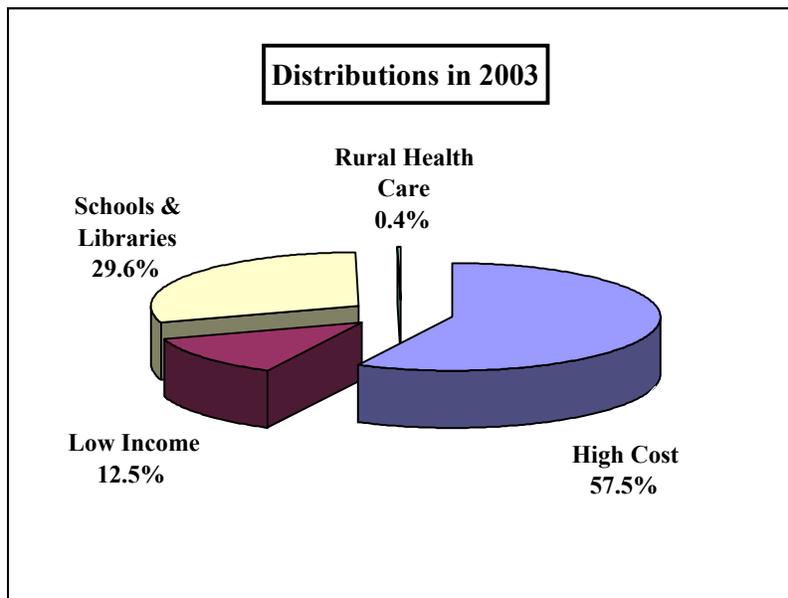


Table 19.2
Universal Service Support Received by Service Provider Type: 2003
(Dollars in Thousands)

	High Cost	Low Income	Rural Health Care	Schools and Libraries	Total	Percent of Total
Local Exchange Carriers	\$3,141,344	\$688,356	\$434	\$542,626	\$4,372,760	77.6 %
Non-Traditional Providers ¹	0	0	0	727,182	727,182	12.9
Cellular/PCS Providers	126,234	19,431	0	29,614	175,279	3.1
Competitive Access Providers	5,647	5,343	46	72,049	83,085	1.5
Internet Service Providers	0	0	0	77,868	77,868	1.4
Interexchange Providers	0	0	2,079	72,257	74,336	1.3
Other Providers ²	0	0	8	122,503	122,511	2.2
Total	\$3,273,225	\$713,129	\$2,567	\$1,644,099	\$5,633,020	100.0 %

Source: *USAC 2003 Annual Report* (March 2004).

¹ Non-traditional providers provide eligible software, hardware, and network devices.

² Other providers' services include local resale, operator service, other local, other mobile, other toll, paging and messaging, payphone service, pre-paid calling card, private service, satellite service, shared tenant service, specialized mobile service, toll resale, and wireless data.

Chart 19.2
Universal Service Support Received by Service Provider Type

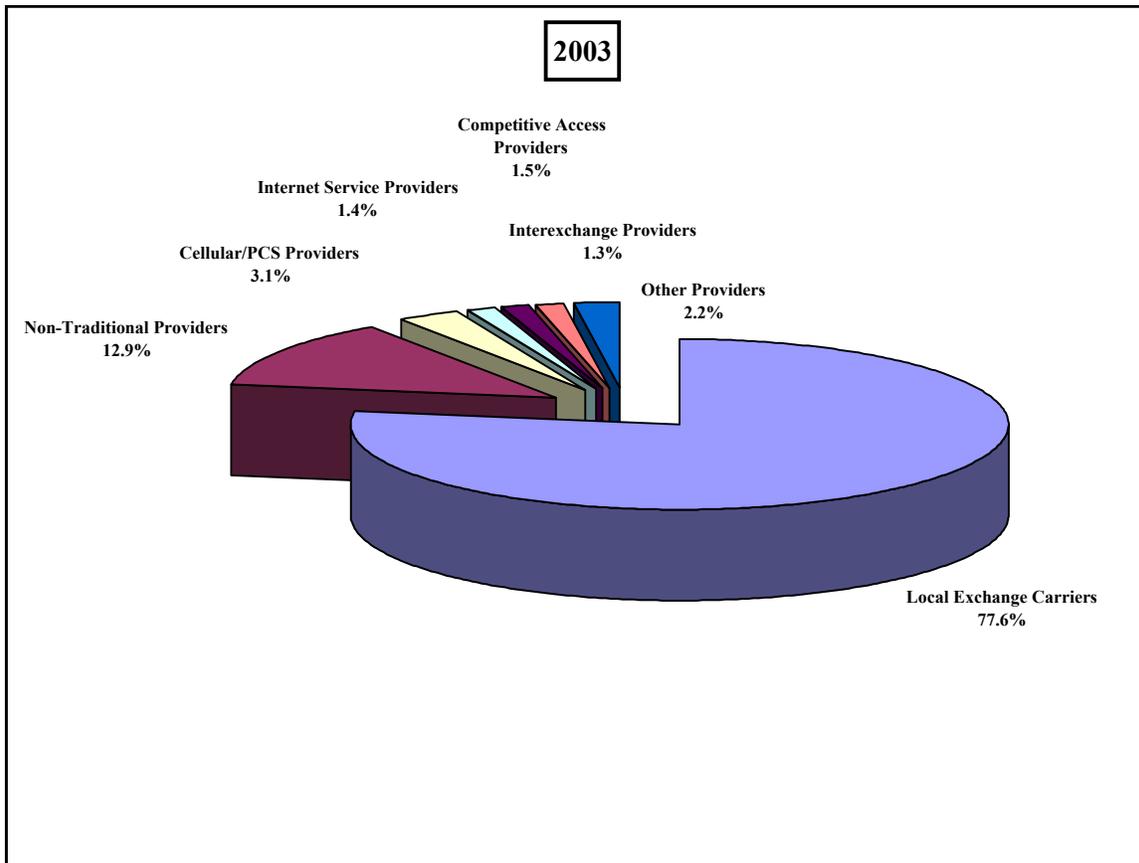


Table 19.3
High-Cost Support Fund Payment History
(In Millions of Dollars)

Year	High-Cost		Local Switching Support	High-Cost Model Support	Interstate Access Support	Interstate Common Line Support	Safety Net Additive Support	Total Support	Cumulative Payments
	Loop Support	Long-Term Support							
1986	\$56	\$0	NA	\$0	\$0	\$0	\$0	\$56	\$56
1987	126	0	NA	0	0	0	0	126	181
1988	183	0	NA	0	0	0	0	183	365
1989	265	236	NA	0	0	0	0	500	865
1990	339	263	NA	0	0	0	0	602	1,467
1991	485	272	NA	0	0	0	0	757	2,223
1992	609	306	NA	0	0	0	0	915	3,138
1993	705	323	\$311	0	0	0	0	1,339	4,477
1994	725	347	304	0	0	0	0	1,376	5,853
1995	750	382	325	0	0	0	0	1,457	7,310
1996	763	426	348	0	0	0	0	1,536	8,846
1997	794	470	351	0	0	0	0	1,614	10,460
1998	827	476	390	0	0	0	0	1,694	12,154
1999	864	473	380	0	0	0	0	1,718	13,872
2000	872	479	385	220	283	0	0	2,239	16,111
2001	964	493	390	200	574	0	0	2,621	18,731
2002	1,058	493	391	226	625	185	0	2,978	21,709
2003	1,091	504	420	231	622	399	6	3,273	24,982
2004	1,204	567	460	278	647	455	11	3,621	28,604

NA - Not Available.

Source: Industry Analysis and Technology Division, Wireline Competition Bureau, *2003 Universal Service Monitoring Report* (December 2003). The 2002 and 2003 figures are primarily taken from the *USAC 2003 Annual Report* (March 2004). Estimates of payments for 2004 are primarily taken from USAC report, *Federal Universal Service Support Mechanisms Fund Size Projections for the Second Quarter of 2004*, filed January 30, 2004 with the Commission.

Chart 19.3
Total High-Cost Support Fund Payment
(In Millions of Dollars)

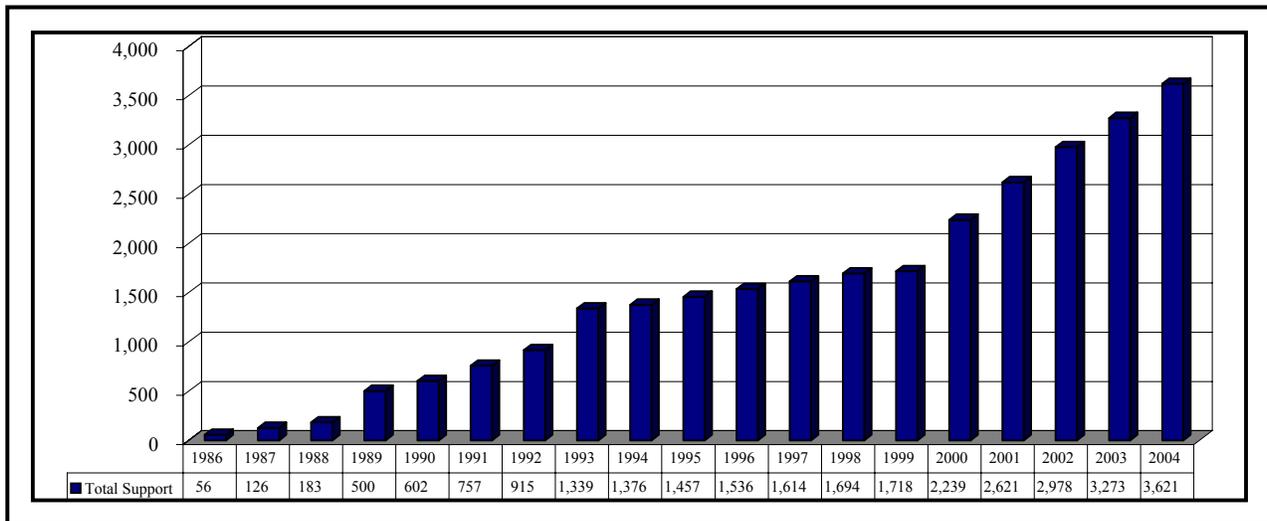


Table 19.4
High-Cost Support Payments by State: 2003
(In Thousands of Dollars)

	High-Cost Loop Support	Long-Term Loop Support	Local Switching Support	High-Cost Model Support	Interstate Access Support	Interstate Common Line Support	Safety Net Additive Support	Total Support
Alabama	\$18,641	\$7,571	\$7,207	\$41,606	\$11,300	\$5,757	\$195	\$92,278
Alaska	42,865	18,052	12,466	0	0	12,168	156	85,708
American Samoa ¹	-2	275	497	0	1,151	91	0	2,012
Arizona	30,528	3,453	9,899	0	19,690	5,842	0	69,412
Arkansas	60,894	14,134	7,256	0	8,015	23,389	292	113,980
California	33,316	12,636	6,568	0	32,220	6,185	0	90,924
Colorado	34,675	13,237	4,915	0	17,424	4,602	16	74,869
Connecticut	0	173	932	0	765	374	0	2,245
Delaware	0	0	0	0	3,489	0	0	3,489
District of Columbia	0	0	0	0	0	0	0	0
Florida	11,951	5,075	4,680	0	52,345	5,412	0	79,463
Georgia	53,212	18,707	15,156	0	13,037	15,857	203	116,172
Guam	1,438	2,573	0	0	0	0	0	4,011
Hawaii	3,020	84	1,423	0	2,159	4,571	5	11,263
Idaho	20,746	3,643	8,841	0	15,481	4,494	81	53,286
Illinois	12,462	6,431	12,309	0	12,664	8,003	225	52,095
Indiana	8,072	5,432	8,767	0	25,113	5,977	90	53,450
Iowa	14,750	10,026	22,507	0	6,716	17,819	572	72,390
Kansas	59,964	12,294	13,375	0	5,139	17,494	204	108,470
Kentucky	19,943	4,996	5,593	3,178	17,609	8,780	164	60,264
Louisiana	50,881	16,890	5,903	0	10,084	6,389	49	90,195
Maine	7,176	6,301	8,508	5,318	156	4,580	0	32,039
Maryland	375	97	763	0	1,677	659	104	3,675
Massachusetts	156	108	984	0	172	292	0	1,712
Michigan	22,855	10,373	8,283	0	357	4,066	52	45,985
Minnesota	27,024	13,211	16,384	0	5,313	17,512	689	80,133
Mississippi	21,027	5,332	3,613	119,334	17,220	4,131	5	170,660
Missouri	42,329	10,386	6,586	0	15,419	16,261	165	91,145
Montana	27,467	10,630	8,961	11,023	969	8,356	1	67,407
Nebraska	13,885	4,044	11,289	0	5,572	8,826	155	43,770
Nevada	8,307	1,048	8,226	0	11,047	2,606	145	31,378
New Hampshire	868	1,562	5,091	0	3,523	1,382	0	12,425
New Jersey	0	-	967	0	375	0	0	1,342
New Mexico	19,582	6,806	8,711	0	9,232	4,822	78	49,231
New York	9,845	6,402	16,720	0	16,929	3,239	0	53,134
North Carolina	11,975	12,180	6,079	0	33,846	7,693	0	71,773
North Dakota	18,496	8,093	14,929	0	761	12,764	60	55,103
Northern Mariana Islands	808	0	546	0	273	0	0	1,627
Ohio	9,498	5,468	4,762	0	15,200	3,719	376	39,022
Oklahoma	52,590	16,497	16,295	0	6,331	12,045	193	103,950
Oregon	26,107	9,808	8,517	0	21,785	5,882	16	72,114
Pennsylvania	1,682	14,653	6,364	0	18,902	14,380	21	56,002
Puerto Rico	3,332	96,297	0	0	0	1,530	0	101,159
Rhode Island	0	0	0	0	46	0	0	46
South Carolina	28,104	11,457	9,219	0	14,701	20,007	455	83,944
South Dakota	17,813	6,417	11,884	0	172	11,564	59	47,909
Tennessee	17,926	10,695	8,690	0	8,773	7,764	90	53,939
Texas	100,156	28,928	19,928	0	41,354	15,932	324	206,622
Utah	8,821	1,581	5,406	0	2,327	5,670	44	23,849
Vermont	5,756	2,538	4,605	9,157	2,146	3,882	0	28,084
Virgin Islands	14,371	7,657	0	0	0	8,148	0	30,176
Virginia	4,410	3,490	6,432	0	59,526	3,328	117	77,303
Washington	28,334	15,565	7,548	0	25,561	4,792	0	81,800
West Virginia	22,148	1,128	4,794	31,296	19,580	1,184	39	80,169
Wisconsin	24,980	14,342	25,501	0	256	26,052	631	91,763
Wyoming	15,112	5,312	5,276	10,113	7,840	3,146	57	46,856
Total	\$1,090,673	\$504,089	\$420,154	\$231,025	\$621,741	\$399,420	\$6,125	\$3,273,225

¹ The reason American Samoa received a negative \$2,000 in HCL support in 2003 is due to prior period adjustments.

Source: The 2003 figures are primarily taken from *USAC 2003 Annual Report* (March 2004) and staff estimates based on USAC filings.

Table 19.5
Lifeline Monthly Support by State or Jurisdiction
(As of December 31, 2002)

	Basic Federal Support ¹			Additional State Support			Federal Match			Total Federal Support			Total Federal and State Support		
	Min.	Max.	Avg.	Min.	Max.	Avg.	Min.	Max.	Avg.	Min.	Max.	Avg.	Min.	Max.	Avg.
Alabama	\$6.75	\$7.75	\$7.74	\$0.00	\$3.50	\$3.18	\$0.00	\$1.75	\$1.59	\$6.75	\$9.50	\$9.33	\$6.75	\$13.00	\$12.51
Alaska	7.75	7.75	7.75	3.50	3.50	3.50	1.75	1.75	1.75	9.50	9.50	9.50	13.00	13.00	13.00
American Samoa	7.75	7.75	7.75	0.00	0.00	0.00	0.00	0.00	0.00	7.75	7.75	7.75	7.75	7.75	7.75
Arizona	7.28	7.75	7.55	0.00	3.50	2.62	0.00	1.75	1.31	7.28	9.50	8.86	7.28	13.00	11.48
Arkansas	7.02	7.75	7.25	0.00	3.50	0.92	0.00	1.75	0.46	7.02	9.50	7.71	7.02	13.00	7.71
California	5.25	7.75	6.55	2.16	3.50	2.43	1.08	1.75	1.22	6.33	9.50	7.76	8.49	13.00	10.20
Colorado	7.75	7.75	7.75	0.00	3.50	3.49	0.00	1.75	1.75	7.75	9.50	9.50	7.75	13.00	12.99
Connecticut	6.10	7.53	7.53	1.16	1.16	1.16	0.58	0.58	0.58	6.68	8.11	8.11	7.84	9.27	9.27
Delaware	7.75	7.75	7.75	2.30	2.30	2.30	1.15	1.15	1.15	8.90	8.90	8.90	11.20	11.20	11.20
District of Columbia	5.61	5.61	5.61	3.50	3.50	3.50	1.75	1.75	1.75	7.36	7.36	7.36	10.86	10.86	10.86
Florida	7.75	7.75	7.75	3.04	3.50	3.50	1.52	1.75	1.75	9.27	9.50	9.50	12.31	13.00	12.99
Georgia	7.75	7.75	7.75	0.00	3.50	3.43	0.00	1.75	1.71	7.75	9.50	9.46	7.75	13.00	12.89
Guam	7.75	7.75	7.75	3.50	3.50	3.50	1.75	1.75	1.75	9.50	9.50	9.50	13.00	13.00	13.00
Hawaii	7.75	7.75	7.75	0.00	0.00	0.00	0.00	0.00	0.00	7.75	7.75	7.75	7.75	7.75	7.75
Idaho	6.75	7.75	7.75	0.00	3.50	3.48	0.00	1.75	1.74	6.75	9.50	9.49	6.75	13.00	12.97
Illinois	6.24	7.75	6.65	0.00	3.50	1.65	0.00	1.75	0.82	6.24	9.50	7.47	6.24	13.00	9.12
Indiana	7.27	7.75	7.38	0.00	0.66	0.51	0.00	0.33	0.25	7.27	8.08	7.64	7.27	8.74	8.15
Iowa	5.25	7.75	6.92	0.00	3.50	0.03	0.00	1.75	0.01	5.25	9.50	6.93	5.25	13.00	6.96
Kansas	5.25	7.75	7.07	0.00	3.50	3.50	0.00	1.75	1.75	5.25	9.50	8.82	5.25	13.00	12.31
Kentucky	6.94	7.75	7.67	2.56	3.50	3.48	1.28	1.75	1.74	8.22	9.50	9.41	10.78	13.00	12.89
Louisiana	6.75	7.75	7.75	0.00	0.00	0.00	0.00	0.00	0.00	6.75	7.75	7.75	6.75	7.75	7.75
Maine	7.75	7.75	7.75	2.28	3.50	3.48	1.14	1.75	1.74	8.89	9.50	9.49	11.17	13.00	12.98
Maryland	7.43	7.75	7.43	0.84	3.50	3.50	0.42	1.75	1.75	7.85	9.50	9.18	8.69	13.00	12.68
Massachusetts	6.75	7.75	7.75	6.00	6.00	6.00	1.75	1.75	1.75	8.50	9.50	9.50	14.50	15.50	15.50
Michigan	7.09	7.75	7.19	0.00	2.04	2.01	0.00	1.02	1.01	7.09	8.77	8.19	7.09	10.81	10.21
Minnesota	6.75	7.75	7.05	0.00	0.00	0.00	0.00	0.00	0.00	6.75	7.75	7.05	6.75	7.75	7.05
Mississippi	6.75	7.75	7.75	0.00	3.50	3.39	0.00	1.75	1.69	6.75	9.50	9.44	6.75	13.00	12.83
Missouri	7.02	7.75	7.11	0.00	1.14	1.00	0.00	0.57	0.50	7.02	8.32	7.61	7.02	9.46	8.61
Montana	7.75	7.75	7.75	0.00	3.50	3.09	0.00	1.75	1.54	7.75	9.50	9.29	7.75	13.00	12.38
Nebraska	6.61	7.75	7.08	0.00	3.50	3.48	0.00	1.75	1.74	6.61	9.50	8.82	6.61	13.00	12.30
Nevada	5.25	7.75	6.39	0.00	3.50	3.03	0.00	1.75	1.51	5.25	9.50	7.91	5.25	13.00	10.94
New Hampshire	7.75	7.75	7.75	0.00	0.00	0.00	0.00	0.00	0.00	7.75	7.75	7.75	7.75	7.75	7.75
New Jersey	7.42	7.75	7.74	0.00	1.76	1.75	0.00	0.88	0.87	7.42	8.63	8.62	7.42	10.39	10.36
New Mexico	5.25	7.75	7.68	0.00	3.50	3.33	0.00	1.75	1.66	5.25	9.50	9.35	5.25	13.00	12.68
New York	6.44	7.75	7.67	0.00	3.50	3.19	0.00	1.75	1.60	6.44	9.50	9.27	6.44	13.00	12.46
North Carolina	7.75	7.75	7.75	3.50	3.50	3.50	1.75	1.75	1.75	9.50	9.50	9.50	13.00	13.00	13.00
North Dakota	5.25	7.75	7.72	0.00	3.50	2.25	0.00	1.75	1.12	5.25	9.50	8.84	5.25	13.00	11.09
N. Marianna Islands	6.75	6.75	6.75	0.00	0.00	0.00	0.00	0.00	0.00	6.75	6.75	6.75	6.75	6.75	6.75
Ohio	6.94	7.75	7.27	0.00	3.50	0.96	0.00	1.75	0.48	6.94	9.50	7.75	6.94	13.00	8.71
Oklahoma	5.25	7.75	7.15	0.00	1.16	1.13	0.00	0.58	0.57	5.25	8.33	7.72	5.25	9.49	8.85
Oregon	7.75	7.75	7.75	3.50	3.50	3.50	1.75	1.75	1.75	9.50	9.50	9.50	13.00	13.00	13.00
Pennsylvania	6.01	7.75	7.72	0.00	2.50	1.20	0.00	1.25	0.60	6.01	9.00	8.32	6.01	11.50	9.52
Puerto Rico	6.75	7.75	7.75	3.30	3.50	3.31	1.65	1.75	1.66	8.40	9.50	9.41	11.70	13.00	12.72
Rhode Island	7.75	7.75	7.75	3.40	3.40	3.40	1.70	1.70	1.70	9.45	9.45	9.45	12.85	12.85	12.85
South Carolina	7.61	7.75	7.75	0.00	3.50	3.49	0.00	1.75	1.74	7.61	9.50	9.49	7.61	13.00	12.98
South Dakota	5.25	7.75	7.03	0.00	0.00	0.00	0.00	0.00	0.00	5.25	7.75	7.03	5.25	7.75	7.03
Tennessee	7.28	7.75	7.71	0.00	3.50	3.23	0.00	1.75	1.62	7.28	9.50	9.33	7.28	13.00	12.56
Texas	5.25	7.75	7.13	0.00	3.50	3.16	0.00	1.75	1.58	5.25	9.50	8.71	5.25	13.00	11.87
Utah	7.75	7.75	7.75	3.50	3.50	3.50	1.75	1.75	1.75	9.50	9.50	9.50	13.00	13.00	13.00
Vermont	7.75	7.75	7.75	2.70	3.50	3.48	1.35	1.75	1.74	9.10	9.50	9.49	11.80	13.00	12.97
Virginia	7.26	7.75	7.51	1.76	3.50	3.35	0.88	1.75	1.68	8.14	9.50	9.19	9.90	13.00	12.54
Washington	6.75	7.75	7.75	0.00	3.50	3.30	0.00	1.75	1.65	6.75	9.50	9.40	6.75	13.00	12.69
West Virginia	7.75	7.75	7.75	0.00	1.42	1.28	0.00	0.71	0.64	7.75	8.46	8.39	7.75	9.88	9.67
Wisconsin	6.81	7.75	7.08	0.00	3.50	1.21	0.00	1.75	0.60	6.81	9.50	7.68	6.81	13.00	8.89
Wyoming	7.75	7.75	7.75	0.00	3.50	3.50	0.00	1.75	1.75	7.75	9.50	9.50	7.75	13.00	13.00
Nationwide	\$5.25	\$7.75	\$7.02	\$0.00	\$6.00	\$2.58	\$0.00	\$1.75	\$1.26	\$5.25	\$9.50	\$8.28	\$5.25	\$15.50	\$10.86

Note: This table reflects only non-tribal support

¹ Basic federal support includes both Tier 1 and Tier 2 support. See text for definitions.

Source: Universal Service Administrative Company (USAC).

Table 19.6
Lifeline Subscribers and Link-Up Beneficiaries

Year	Lifeline			Link-Up		
	Non-Tribal	Tribal	Total	Non-Tribal	Tribal	Total
1987			1,063,443			7,953
1988			1,828,862			105,758
1989			2,115,288			206,656
1990			2,466,513			513,155
1991			2,984,290			639,645
1992			3,440,216			743,285
1993			3,971,937			737,362
1994			4,423,119			837,964
1995			4,914,056			823,679
1996			5,233,425			808,354
1997 ¹			5,110,537			NA
1998			5,380,726			2,195,417
1999			5,640,094			1,834,766
2000	5,871,619	18,692	5,890,311	1,689,867	2,038	1,691,905
2001	6,144,089	56,820	6,200,909	1,670,260	23,355	1,693,615
2002	6,518,364	112,191	6,630,555	1,646,100	29,901	1,676,001
2003 ²	6,427,601	143,535	6,571,136	1,644,160	23,027	1,667,187

NA - Not available.

¹ Subscriber data were not actually collected in 1997. Lifeline subscribership data were estimated by USAC.

² Data estimates are based on data received from USAC for the first nine months of 2003.

Source: Universal Service Administrative Company (USAC).

Table 19.7
Lifeline Subscribers and Link-Up Beneficiaries by State or Jurisdiction: 2002

	Lifeline			Link-Up		
	Non-Tribal	Tribal	Total	Non-Tribal	Tribal	Total
Alabama	27,274	0	27,274	1,158	0	1,158
Alaska	12,223	11,375	23,598	2,343	1,180	3,523
American Samoa	757	0	757	41	0	41
Arizona	50,093	24,328	74,421	2,147	15,608	17,755
Arkansas	12,414	0	12,414	5,737	0	5,737
California	3,218,218	147	3,218,365	1,072,698	7	1,072,705
Colorado	29,838	35	29,873	651	4	655
Connecticut	57,992	0	57,992	4,137	0	4,137
Delaware	2,203	0	2,203	1,462	0	1,462
District of Columbia	13,547	0	13,547	46	0	46
Florida	142,705	0	142,705	13,339	0	13,339
Georgia	68,217	0	68,217	4,439	0	4,439
Guam	2,954	0	2,954	1,392	0	1,392
Hawaii	14,136	0	14,136	5,880	0	5,880
Idaho	27,547	112	27,659	1,012	11	1,023
Illinois	87,381	0	87,381	43,514	0	43,514
Indiana	40,496	0	40,496	21,517	0	21,517
Iowa	19,233	3	19,236	2,677	0	2,677
Kansas	13,883	0	13,883	3,435	0	3,435
Kentucky	60,733	0	60,733	8,873	0	8,873
Louisiana	21,308	0	21,308	1,812	0	1,812
Maine	84,702	495	85,197	26,616	85	26,701
Maryland	4,028	0	4,028	133	0	133
Massachusetts	163,026	1	163,027	3,134	0	3,134
Michigan	118,113	204	118,317	28,379	5	28,384
Minnesota	47,530	255	47,785	490	22	512
Mississippi	22,606	0	22,606	825	0	825
Missouri	35,873	4	35,877	8,556	1	8,557
Montana	13,349	2,545	15,894	738	1,052	1,790
Nebraska	15,098	196	15,294	2,240	28	2,268
Nevada	37,797	112	37,909	6,020	9	6,029
New Hampshire	7,255	0	7,255	440	0	440
New Jersey	47,198	0	47,198	2,093	0	2,093
New Mexico	44,495	3,170	47,665	1,261	1,959	3,220
New York	495,605	179	495,784	58,404	6	58,410
North Carolina	100,563	3	100,566	3,976	0	3,976
North Dakota	17,530	1,945	19,475	1,941	505	2,446
Northern Mariana Islands	481	0	481	890	0	890
Ohio	278,335	0	278,335	60,264	0	60,264
Oklahoma	67,386	51,860	119,246	12,939	2,473	15,412
Oregon	36,448	119	36,567	7,790	29	7,819
Pennsylvania	97,505	0	97,505	62,236	0	62,236
Puerto Rico	59,493	0	59,493	8,408	0	8,408
Rhode Island	45,892	0	45,892	446	0	446
South Carolina	21,891	5	21,896	1,905	0	1,905
South Dakota	19,595	8,469	28,064	2,166	4,338	6,504
Tennessee	49,074	0	49,074	6,190	0	6,190
Texas	429,478	2,083	431,561	71,327	44	71,371
Utah	19,482	76	19,558	752	40	792
Vermont	29,621	0	29,621	2,109	0	2,109
Virgin Islands	0	0	0	0	0	0
Virginia	21,575	0	21,575	727	0	727
Washington	87,145	4,072	91,217	41,640	2,470	44,110
West Virginia	4,932	0	4,932	399	0	399
Wisconsin	70,210	152	70,362	22,271	0	22,271
Wyoming	1,901	246	2,147	85	25	110
Industry Totals	6,518,364	112,191	6,630,555	1,646,100	29,901	1,676,001

Note: Starting in October 2000, low-income subscribers are listed as either tribal or non-tribal due to implementation of the *Tribal Order*. These dollars represent USAC data for the time period January 2002 through December 2002, updated January 2004.

Source: Universal Service Administrative Company (USAC).

Table 19.8
Low-Income Support Payments

Year	Lifeline					Link-Up			Total
	Non-Tribal	Tribal	TLS ³	PICCs ⁴	Total	Non-Tribal	Tribal	Total	
1988	\$31,952,241	\$0	\$0	\$0	\$31,952,241	\$1,991,148	\$0	\$1,991,148	\$33,943,389
1989	50,878,248	0	0	0	50,878,248	4,479,614	0	4,479,614	55,357,862
1990	62,464,007	0	0	0	62,464,007	11,351,005	0	11,351,005	73,815,012
1991	79,103,725	0	0	0	79,103,725	13,705,470	0	13,705,470	92,809,195
1992	93,766,122	0	0	0	93,766,122	15,342,180	0	15,342,180	109,108,302
1993	109,082,866	0	0	0	109,082,866	17,019,329	0	17,019,329	126,102,195
1994	123,283,835	0	0	0	123,283,835	18,573,322	0	18,573,322	141,857,157
1995	137,277,472	0	0	0	137,277,472	18,392,061	0	18,392,061	155,669,533
1996	148,186,383	0	0	0	148,186,383	18,246,756	0	18,246,756	166,433,139
1997	147,579,351	0	0	0	147,579,351	13,710,810	0	13,710,810	161,290,161
1998 ¹	416,504,314	0	2,700,199	2,801,645	422,006,158	42,463,332	0	42,463,332	464,469,490
1999	438,575,890	0	3,136,015	4,450,093	446,161,998	33,991,297	0	33,991,297	480,153,295
2000	482,045,184	507,783	2,853,787	3,167,769	488,574,523	30,371,085	61,589	30,432,674	519,007,197
2001	548,421,200	6,960,051	3,234,494	0	558,615,745	30,318,199	533,555	30,851,754	589,467,499
2002	623,030,297	17,954,805	3,872,990	0	644,858,092	30,169,910	832,659	31,002,569	675,860,661
2003 ²	654,286,343	24,069,657	4,430,000	0	682,786,000	29,742,167	600,833	30,342,000	713,129,000

¹ Effective in 1998, the federal Lifeline support mechanism was expanded so that a basic level of assistance would be provided in all states. Additional federal support is also provided wherever a state chooses to provide matching assistance. Prior to the expansion, states were required to match all federal support with their own state support, and if the state provided no support, then no federal support was available in that state. The basic level of federal support was also increased in 1998.

² Tribal and non-tribal payments are estimated for 2003.

³ TLS is an abbreviation for toll limitation service.

⁴ Carriers no longer charge residential Presubscribed Interexchange Access Charge (PICCs) as of July 1, 2000.

Source: Universal Service Administrative Company (USAC).

Chart 19.4
Lifeline and Link-Up Support Payments
(Dollar Amounts in Millions)

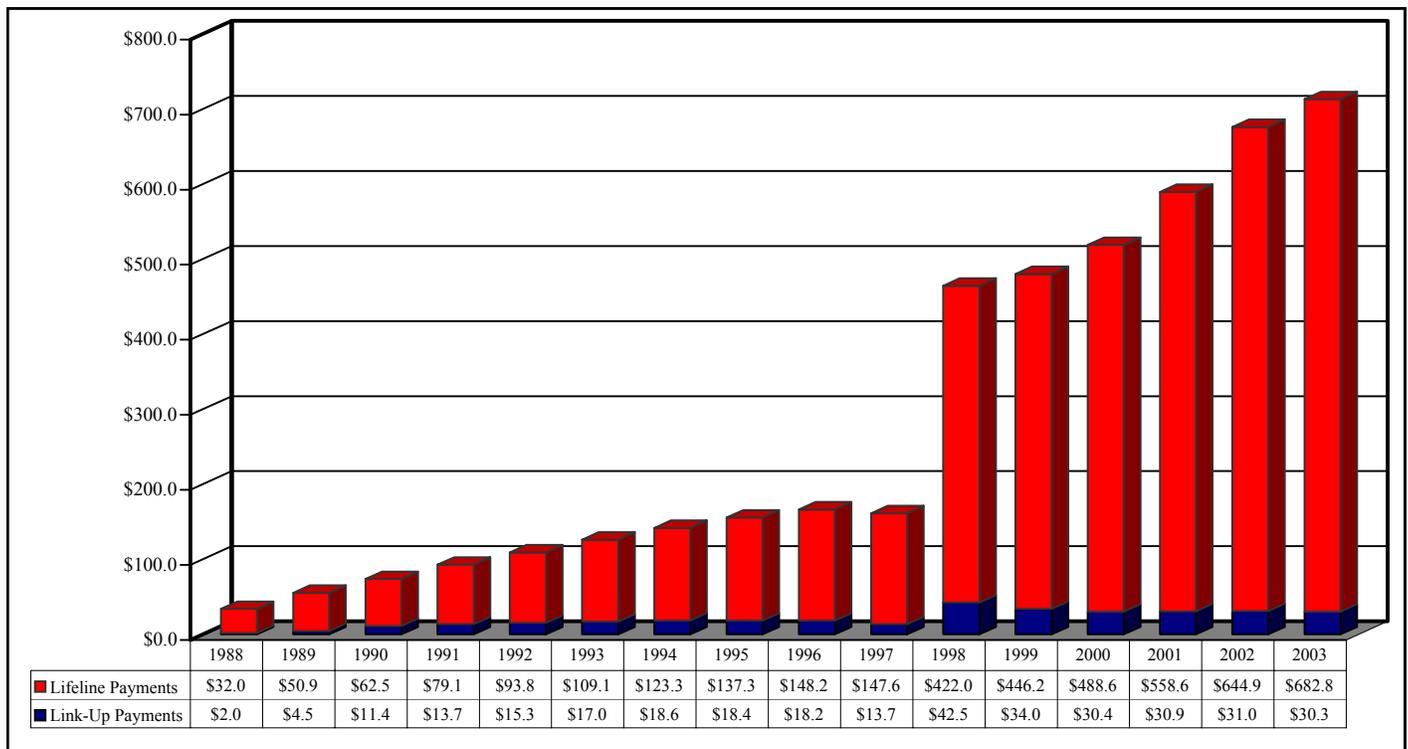


Table 19.9
Low-Income Support Payments by State or Jurisdiction: 2003
(In thousands of Dollars)

	Lifeline				Link-Up			Total
	Non-Tribal	Tribal	TLS	Total	Non-Tribal	Tribal	Total	
Alabama	\$2,983	\$0	\$12	\$2,995	\$19	\$0	\$19	\$3,014
Alaska	1,828	1,171	71	3,070	54	39	93	3,163
American Samoa	60	0	0	60	1	0	1	61
Arizona	6,823	9,710	248	16,781	53	214	267	17,048
Arkansas	1,578	0	24	1,602	102	0	102	1,704
California	281,840	28	2,579	284,447	18,441	0	18,441	302,888
Colorado	3,742	7	28	3,777	13	0	13	3,790
Connecticut	5,561	0	4	5,565	143	0	143	5,708
Delaware	296	0	0	296	18	0	18	314
District of Columbia	1,054	0	0	1,054	5	0	5	1,059
Florida	16,281	0	56	16,337	326	0	326	16,663
Georgia	7,769	0	125	7,894	134	0	134	8,028
Guam	371	0	7	378	22	0	22	400
Hawaii	989	0	0	989	45	0	45	1,034
Idaho	3,337	18	30	3,385	18	0	18	3,403
Illinois	8,769	0	89	8,858	678	0	678	9,536
Indiana	4,206	0	1	4,207	314	0	314	4,521
Iowa	3,772	0	45	3,817	56	0	56	3,873
Kansas	1,548	0	2	1,550	82	0	82	1,632
Kentucky	6,244	0	143	6,387	224	0	224	6,611
Louisiana	2,064	0	4	2,068	38	0	38	2,106
Maine	9,606	40	21	9,667	550	1	551	10,218
Maryland	428	0	0	428	22	0	22	450
Massachusetts	17,543	4	0	17,547	13	0	13	17,560
Michigan	11,161	39	5	11,205	257	0	257	11,462
Minnesota	4,376	36	17	4,429	13	6	19	4,448
Mississippi	2,749	0	5	2,754	27	0	27	2,781
Missouri	3,440	0	17	3,457	190	0	190	3,647
Montana	1,564	365	32	1,961	6	21	27	1,988
Nebraska	1,694	28	48	1,770	31	1	32	1,802
Nevada	4,040	10	19	4,069	121	0	121	4,190
New Hampshire	687	0	0	687	2	0	2	689
New Jersey	9,664	0	1	9,665	52	0	52	9,717
New Mexico	5,713	824	117	6,654	18	17	35	6,689
New York	52,446	5	15	52,466	1,150	0	1,150	53,616
North Carolina	12,873	0	48	12,921	98	0	98	13,019
North Dakota	2,071	272	17	2,360	46	48	94	2,454
Northern Mariana Islands	54	0	0	54	7	0	7	61
Ohio	28,653	0	94	28,747	707	0	707	29,454
Oklahoma	7,324	7,814	95	15,233	573	24	597	15,830
Oregon	4,792	25	25	4,842	90	1	91	4,933
Pennsylvania	11,488	0	0	11,488	1,040	0	1,040	12,528
Puerto Rico	10,210	0	0	10,210	201	0	201	10,411
Rhode Island	5,173	0	0	5,173	5	0	5	5,178
South Carolina	2,681	1	29	2,711	48	0	48	2,759
South Dakota	1,730	1,921	42	3,693	21	190	211	3,904
Tennessee	5,840	0	40	5,880	80	0	80	5,960
Texas	48,141	140	105	48,386	1,757	0	1,757	50,143
Utah	2,428	11	32	2,471	10	1	11	2,482
Vermont	3,264	0	5	3,269	24	0	24	3,293
Virgin Islands	0	0	0	0	0	0	0	0
Virginia	2,140	0	1	2,141	45	0	45	2,186
Washington	11,471	1,492	118	13,081	1,126	38	1,164	14,245
West Virginia	526	0	5	531	16	0	16	547
Wisconsin	6,949	22	3	6,974	608	0	608	7,582
Wyoming	252	87	3	342	1	1	2	344
Industry Totals	\$654,286	\$24,070	\$4,430	\$682,783	\$29,742	\$601	\$30,342	\$713,129

Note: These dollars represent submitted claims to USAC for the time period January 2002 through December 2002, updated January 2004.

Source: USAC 2003 Annual Report (March 2004), and staff estimates.

Table 19.10
Schools and Libraries Funding by Type of Service
(Funds Committed and Disbursed Through February 17, 2004) ¹

Funding Period	Internal Connections		Internet Access		Telecommunications		Totals	
	Funds Committed	Funds Disbursed	Funds Committed	Funds Disbursed	Funds Committed	Funds Disbursed	Funds Committed	Funds Disbursed
Jan-98 to Jun-99	\$904,386,787	\$798,208,150	\$134,184,887	\$95,364,346	\$676,047,345	\$507,899,148	\$1,714,619,018	\$1,401,471,644
Jul-99 to Jun-00	1,372,492,469	1,114,734,471	149,361,962	95,859,183	635,021,298	453,920,048	2,156,875,729	1,664,513,702
Jul-00 to Jun-01	1,155,174,580	1,035,724,847	219,961,572	134,598,527	718,655,095	471,683,203	2,093,791,248	1,642,006,577
Jul-01 to Jun-02	1,224,325,270	957,821,692	225,769,359	147,972,497	762,422,285	514,387,174	2,212,516,915	1,620,181,363
Jul-02 to Jun-03	1,116,618,999	571,546,322	228,805,891	146,464,229	862,318,032	536,553,775	2,207,742,922	1,254,564,326
Jul-03 to Jun-04	781,272,160	53,680,034	195,228,746	25,794,417	728,079,095	52,062,869	1,704,580,002	131,537,321

¹ Because of the appeals process, funding commitments and disbursements can be made after the program years end. The above amounts differ slightly from similar categories reported in the *USAC 2003 Annual Report* (March 2004) due to ongoing true-ups to tabulations compiled at different points in time.

Source: USAC data. Rollups performed by the Industry Analysis and Technology Division staff, Wireline Competition Bureau, FCC.

Chart 19.5
Total Schools and Libraries Funds Committed and Disbursed
(Amounts in Billions)

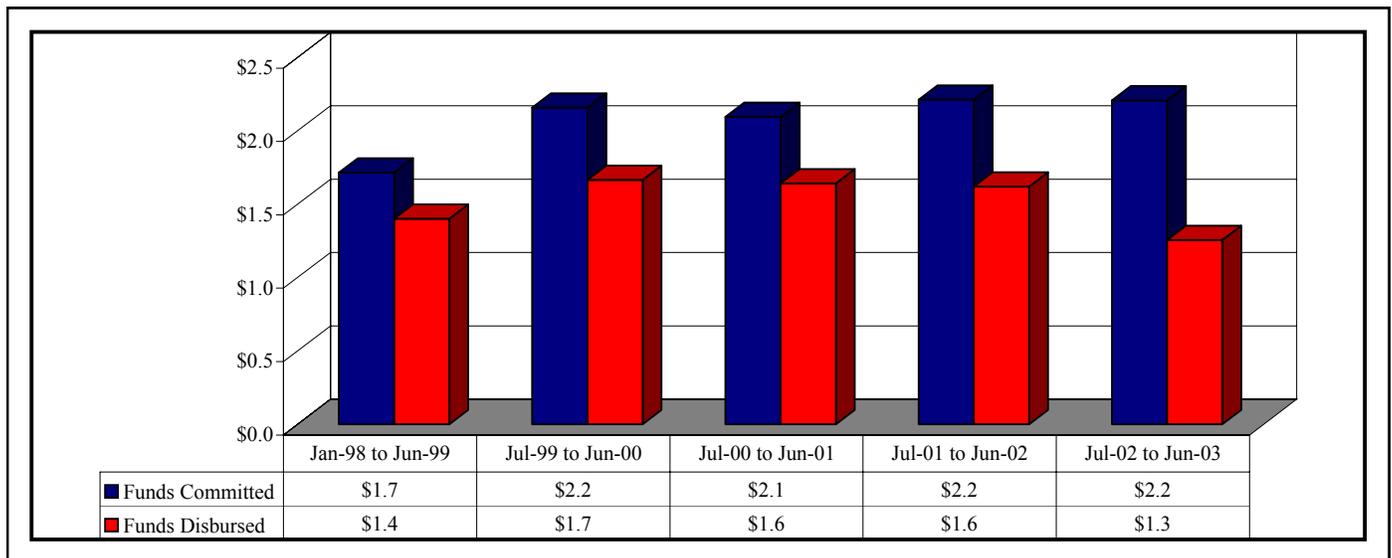


Table 19.11
Schools and Libraries Funding by State and by Type of Service
(Funding Period: July 1, 2002 Through June 30, 2003
Activity Through February 17, 2004) ¹

State/Territory	Internal Connections		Internet Access		Telecom. and Dedicated		Totals	
	Funds Committed	Funds Disbursed	Funds Committed	Funds Disbursed	Funds Committed	Funds Disbursed	Funds Committed	Funds Disbursed
Alabama	\$6,591,557	\$3,290,289	\$9,714,386	\$7,997,630	\$9,524,479	\$6,391,865	\$25,830,423	\$17,679,784
Alaska	527,436	271,070	6,336,597	5,489,854	7,260,733	5,945,859	14,124,766	11,706,783
American Samoa	88,237	0	0	0	2,504,426	2,385,820	2,592,663	2,385,820
Arizona	28,620,567	15,445,285	4,199,241	2,024,697	12,203,072	7,082,550	45,022,880	24,552,532
Arkansas	4,969,123	3,872,169	7,374,181	4,448,742	8,697,802	4,279,983	21,041,106	12,600,895
California	128,163,344	60,337,732	16,451,231	9,335,544	105,201,916	41,566,745	249,816,492	111,240,022
Colorado	14,652,965	12,777,151	1,214,984	727,521	8,002,044	5,402,530	23,869,994	18,907,202
Connecticut	14,738,189	7,033,277	3,211,855	2,345,220	6,468,153	4,998,915	24,418,197	14,377,412
Delaware	15,120	7,560	33,821	18,155	1,634,553	896,279	1,683,494	921,994
District of Columbia	33,408,495	469,132	276,594	226,999	7,866,774	414,383	41,551,863	1,110,513
Florida	10,534,963	5,826,026	5,204,880	2,436,393	39,457,702	29,962,442	55,197,545	38,224,861
Georgia	17,054,189	11,265,446	8,440,015	3,887,053	34,307,795	27,627,850	59,801,999	42,780,349
Guam	935,419	0	419,990	278,938	621,052	448,093	1,976,462	727,031
Hawaii	289,505	188,219	360,488	189,369	2,382,531	962,537	3,032,524	1,340,125
Idaho	1,787,900	593,978	772,476	426,639	2,100,155	1,345,312	4,660,531	2,365,930
Illinois	46,518,847	16,178,544	4,122,831	1,948,652	35,000,560	22,277,206	85,642,238	40,404,401
Indiana	3,465,469	2,795,994	11,232,664	6,292,930	10,487,654	7,741,430	25,185,787	16,830,355
Iowa	182,103	60,827	1,864,181	1,167,811	8,522,127	5,593,333	10,568,412	6,821,971
Kansas	1,419,377	956,715	3,351,033	2,041,025	8,719,614	6,595,930	13,490,024	9,593,670
Kentucky	12,470,936	1,433,689	2,581,682	1,128,963	15,214,394	7,618,379	30,267,012	10,181,031
Louisiana	7,074,052	4,327,219	3,367,541	3,137,769	12,551,516	9,941,070	22,993,109	17,406,058
Maine	213,794	169,215	127,446	67,980	3,460,333	2,167,411	3,801,573	2,404,606
Maryland	5,677,424	2,370,668	2,174,199	1,152,450	11,127,061	6,516,443	18,978,684	10,039,561
Massachusetts	19,523,433	11,889,750	3,901,454	2,840,324	15,982,394	9,720,977	39,407,280	24,451,052
Michigan	21,739,990	2,435,660	7,967,684	6,323,592	28,408,262	14,132,158	58,115,936	22,891,411
Minnesota	2,815,403	1,610,156	5,671,943	3,140,509	14,233,911	9,185,542	22,721,257	13,936,207
Mississippi	13,715,245	8,289,269	2,109,489	1,249,191	19,707,109	12,240,468	35,531,843	21,778,929
Missouri	35,855,555	23,350,876	3,523,930	1,335,697	25,977,057	14,320,187	65,356,542	39,006,760
Montana	528,347	463,088	996,445	765,550	2,494,650	1,910,360	4,019,442	3,138,999
Nebraska	136,920	100,571	1,259,805	911,840	6,273,849	4,508,912	7,670,574	5,521,323
Nevada	29,995	0	290,454	204,404	5,228,427	3,407,740	5,548,876	3,612,144
New Hampshire	159,189	73,082	499,535	387,720	1,049,330	754,021	1,708,054	1,214,822
New Jersey	24,750,453	9,543,528	4,188,408	2,563,133	21,166,909	12,573,912	50,105,770	24,680,573
New Mexico	18,935,323	10,908,297	1,724,168	1,083,836	6,853,167	3,290,323	27,512,658	15,282,457
New York	273,168,854	143,588,793	14,048,015	7,071,515	100,869,297	64,784,260	388,086,166	215,444,568
North Carolina	13,692,124	5,947,506	15,232,029	13,513,334	17,696,574	12,949,404	46,620,726	32,410,244
North Dakota	1,002,682	558,929	305,244	284,190	3,161,083	2,797,764	4,469,009	3,640,882
Northern Mariana Islands	627,632	591,441	396,692	377,532	225,653	184,304	1,249,977	1,153,276
Ohio	14,638,014	4,859,124	14,230,140	11,960,697	29,263,568	16,084,580	58,131,722	32,904,401
Oklahoma	18,796,473	8,864,079	6,585,567	4,147,432	11,346,667	7,396,373	36,728,707	20,407,883
Oregon	1,509,856	1,277,165	2,450,028	1,176,123	10,025,980	5,925,949	13,985,864	8,379,238
Pennsylvania	44,752,373	23,854,399	8,581,183	6,449,220	31,873,962	22,002,568	85,207,518	52,306,188
Puerto Rico	0	0	0	0	137,686	0	137,686	0
Rhode Island	4,944,955	2,540,274	1,239,826	705,983	3,717,795	3,343,499	9,902,576	6,589,755
South Carolina	50,528,863	23,099,580	1,745,120	1,078,171	15,965,316	12,392,677	68,239,299	36,570,427
South Dakota	1,078,387	473,650	381,994	217,397	1,402,922	916,958	2,863,303	1,608,006
Tennessee	2,630,510	1,705,508	13,789,973	6,229,260	7,478,798	5,853,106	23,899,281	13,787,875
Texas	190,992,833	123,451,074	13,167,697	8,057,407	63,402,656	39,347,365	267,563,186	170,855,846
Utah	562,610	203,786	1,784,052	1,152,316	5,154,119	3,792,909	7,500,781	5,149,011
Vermont	13,057	10,964	587,166	363,097	1,069,013	682,715	1,669,236	1,056,776
Virgin Islands	950,918	417,174	34,047	13,045	103,594	16,295	1,088,559	446,513
Virginia	4,090,533	2,335,634	4,072,470	2,703,028	17,885,797	12,806,014	26,048,800	17,844,676
Washington	2,979,464	1,774,617	1,640,597	810,823	13,718,574	9,689,203	18,338,634	12,274,643
West Virginia	2,254,581	390,742	216,567	186,409	5,675,181	3,782,632	8,146,328	4,359,783
Wisconsin	9,609,964	7,080,336	3,141,292	2,284,832	19,030,317	16,018,207	31,781,573	25,383,374
Wyoming	205,450	187,062	210,564	106,287	2,421,966	1,580,032	2,837,981	1,873,381
Totals	\$1,116,618,999	\$571,546,322	\$228,805,891	\$146,464,229	\$862,318,032	\$536,553,775	\$2,207,742,922	\$1,254,564,326

¹ Because of the appeals process, funding commitments have been made after the program year ended on June 30, 2003. The above amounts differ slightly from similar categories reported in the *USAC 2003 Annual Report* (March 2004) due to ongoing true-ups to tabulations compiled at different points in time.

Source: USAC data. Rollups performed by the Industry Analysis and Technology Division staff, Wireline Competition Bureau, FCC.

Table 19.12
Rural Health Care Fund Disbursements by Service Speed
(Activity Through February 17, 2004) ¹

Funding Period	Voice Grade ²	Broadband ²		Other Service or Speed Unknown ²	Total
	56K to 199K	200K to 1.49Mb	1.5Mb and Faster		
Jan-98 to Jun-99	\$206,851	\$881,762	\$2,309,358	\$247	\$3,398,219
Jul-99 to Jun-00	585,381	1,270,709	5,206,497	58,132	7,120,719
Jul-00 to Jun-01	625,334	3,128,161	7,000,742	204	10,754,442
Jul-01 to Jun-02	319,580	8,305,379	11,063,665	204	19,688,828
Jul-02 to Jun-03	451,583	11,449,172	11,447,311	365	23,348,430
Jul-03 to Jun-04	44,658	4,943,954	2,123,622	0	7,112,234

¹ Because of the appeals process, funding commitments and disbursements can be made after the program year's end. The above amounts differ slightly from similar categories reported in the *USAC 2003 Annual Report* (March 2004) due to ongoing true-ups to tabulations compiled at different points in time.

² USAC data contain a short description of the services the health care providers receive. These service descriptions are rolled up into the categories above. Some inferences were made when service speed was not clearly indicated. For example, frame relay was assumed to be broadband in the range of 200 Kbps to 1.5 Mbps, even though some frame relay service speeds may be faster.

Source: USAC data. Rollups performed by the Industry Analysis and Technology Division staff, Wireline Competition Bureau, FCC.

Chart 19.6
Rural Health Care Fund Disbursements by Service Speed
(Amounts in Millions)

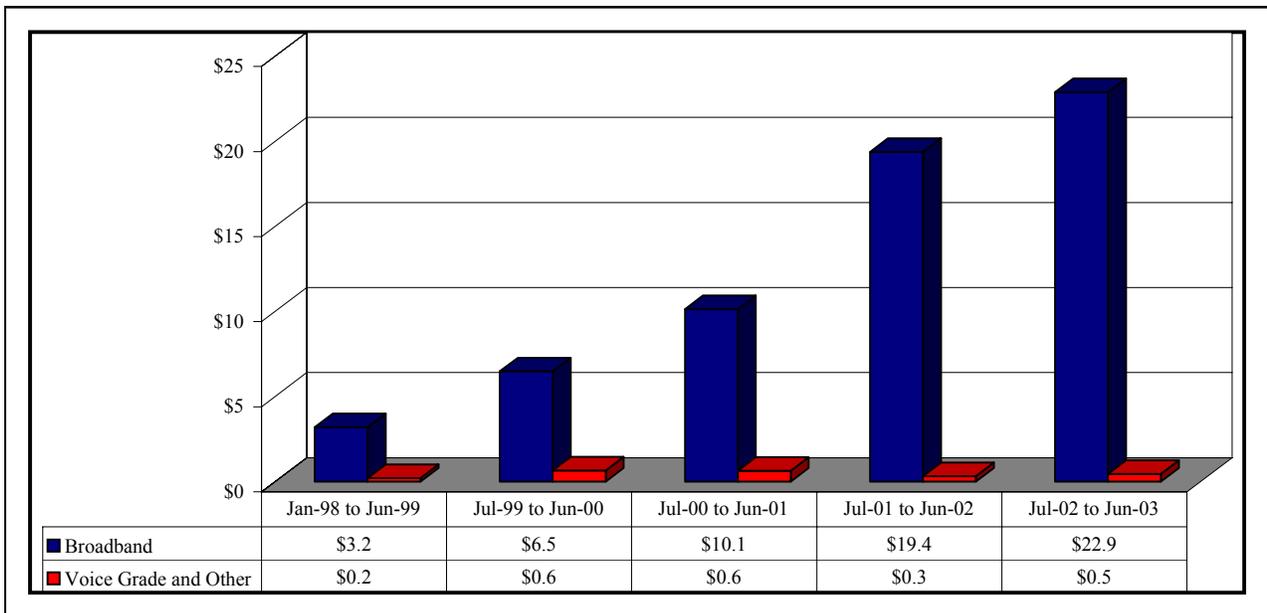


Table 19.13
Rural Health Care Fund Disbursements by Service Speed and by State
(Funding Period: July 1, 2002 Through June 30, 2003
Activity Through February 17, 2004) ¹

State	Voice Grade ²	Broadband ²		Other Service or Speed Unknown ²	Total
	56K to 199K	200K to 1.49Mb	1.5Mb and Faster		
Alabama	\$0	\$153	\$25,816	\$0	\$25,969
Alaska	0	9,027,336	4,981,010	0	14,008,346
American Samoa	0	0	0	0	0
Arizona	0	154,531	1,025,455	0	1,179,985
Arkansas	4,160	5,483	59,621	0	69,264
California	181,726	120,677	52,286	0	354,689
Colorado	2,432	0	138,226	0	140,658
Connecticut	0	0	0	0	0
Delaware	0	0	0	0	0
District of Columbia	0	0	0	0	0
Florida	0	193,659	55,727	0	249,386
Georgia	0	0	43,465	0	43,465
Guam	0	0	0	0	0
Hawaii	0	0	230,975	0	230,975
Idaho	0	78,152	32,271	0	110,423
Illinois	0	11,257	103,386	0	114,643
Indiana	0	1,194	10,129	0	11,323
Iowa	530	32,239	127,917	0	160,686
Kansas	32,039	77,106	119,077	0	228,222
Kentucky	36,223	306,810	197,912	0	540,945
Louisiana	0	1,552	0	0	1,552
Maine	41,856	1,616	0	0	43,472
Maryland	0	0	0	0	0
Massachusetts	0	0	0	0	0
Michigan	16,492	32,093	639,201	0	687,786
Minnesota	3,234	355,846	535,155	83	894,318
Mississippi	14,937	22,002	43,689	0	80,628
Missouri	0	19,223	30,659	0	49,883
Montana	1,769	18,233	490,427	0	510,429
Nebraska	0	71,485	477,771	0	549,256
Nevada	0	41,344	23,993	0	65,337
New Hampshire	0	0	0	0	0
New Jersey	0	0	0	0	0
New Mexico	0	161,345	73,384	0	234,729
New York	0	1,129	19,491	0	20,620
North Carolina	0	22,658	173,823	0	196,481
North Dakota	25,325	56,297	396,580	0	478,202
Northern Mariana Islands	0	0	0	0	0
Ohio	173	4,632	59,340	0	64,145
Oklahoma	0	9,544	66,128	282	75,955
Oregon	0	20,111	35,472	0	55,583
Pennsylvania	1,566	0	10,645	0	12,211
Puerto Rico	0	0	0	0	0
Rhode Island	0	0	0	0	0
South Carolina	4,644	0	16,330	0	20,974
South Dakota	5,840	99,297	269,523	0	374,660
Tennessee	9,596	50,299	21,838	0	81,733
Texas	1,726	1,841	17,091	0	20,658
Utah	0	110,786	289,536	0	400,322
Vermont	0	0	0	0	0
Virgin Islands	1,128	0	65,081	0	66,209
Virginia	0	77,709	117,709	0	195,418
Washington	1,267	26,690	50,376	0	78,333
West Virginia	0	41,365	7,657	0	49,022
Wisconsin	64,918	143,498	207,734	0	416,150
Wyoming	0	49,980	105,407	0	155,387
Totals	\$451,583	\$11,449,172	\$11,447,311	\$365	\$23,348,430

¹ Because of the appeals process, funding commitments have been made after the program year ended on June 30, 2003. The above amounts differ slightly from similar categories reported in the *USAC 2003 Annual Report* (March 2004) due to ongoing true-ups to tabulations compiled at different points in time.

² USAC data contain a short description of the services the health care providers receive. These service descriptions are rolled up into the categories above. Some inferences were made when service speed was not clearly indicated. For example, frame relay was assumed to be broadband in the range of 200 Kbps to 1.5 Mbps, even though some frame relay service speeds may be faster.

Source: USAC data. Rollups performed by the Industry Analysis and Technology Division staff, Wireline Competition Bureau, FCC.

**Table 19.14
Universal Service Fund Contribution Factors**

Year	Quarter	Factors for Interstate End-User Revenues	Factors for Intrastate End-User Revenues ¹
1998	First Quarter	3.19 %	0.72 %
	Second Quarter	3.14	0.76
	Third Quarter	3.14	0.75
	Fourth Quarter	3.18	0.75
1999	First Quarter	3.18	0.58
	Second Quarter	3.05	0.57
	Third Quarter	2.94	0.99
	Fourth Quarter	2.887 5.8995 ²	1.10
2000	First Quarter	5.8770	
	Second Quarter	5.7101	
	Third Quarter	5.5360	
	Fourth Quarter	5.6688	
2001	First Quarter	6.6827	
	Second Quarter	6.8823	
	Third Quarter	6.8941	
	Fourth Quarter	6.9187	
2002	First Quarter	6.8086	
	Second Quarter	7.2805	
	Third Quarter ³	7.2805	
	Fourth Quarter	7.2805	
2003	First Quarter	7.2805	
	Second Quarter ⁴	9.1	
	Third Quarter	9.5	
	Fourth Quarter	9.2	
2004	First Quarter	8.7	
	Second Quarter	8.7	

¹ Initially, contributions for the schools and libraries and rural health care support mechanisms were based on interstate, international, and intrastate end-user telecommunications revenues, while contributions for high-cost and low-income support mechanisms were based on interstate and international end-user telecommunications revenues. See *Federal-State Joint Board on Universal Service*, CC Docket No. 96-45, Report and Order, 12 FCC Rcd 8776, 9200-05 (1997). Following a decision by the United States Court of Appeals for the Fifth Circuit, the Commission established a single contribution base for all universal service support mechanisms based on interstate and international revenues. See *Federal-State Joint Board on Universal Service, Access Charge Reform*, Sixteenth Order on Reconsideration and Eighth Report and Order in CC Docket No. 96-45 and Sixth Report and Order in CC Docket No. 96-262, 15 FCC Rcd 1679, 1685-86, para. 15 (1999) (*Eighth Report and Order*).

² Consistent with the Eighth Report and Order, the Wireline Competition Bureau (formerly Common Carrier Bureau) issued a single universal service contribution factor for November and December 1999. Effective November 1, 1999, this single contribution factor superseded the fourth quarter 1999 contribution factors previously announced by the Bureau on September 10, 1999. See Proposed Fourth Quarter 1999 Universal Service Contribution Factors, CC Docket No. 96-45, Public Notice, DA 99-2109 (Com. Car. Bur., rel. Oct. 8, 1999); See Proposed Fourth Quarter 1999 Universal Service Contribution Factors, CC Docket No. 96-45, Public Notice, DA 99-1857 (Com. Car. Bur., rel. Sept. 10, 1999).

³ In the Schools First Report and Order, the Commission concluded that unused funds from the schools and libraries support mechanism would be applied to stabilize the collection requirement for universal service for the third and fourth quarters of 2002, and the first quarter of 2003, as necessary. (See *Schools and Libraries Universal Service Support Mechanism*, CC Docket No. 2-6, First Report and Order, 17 FCC Rcd 11521 (2002).)

⁴ Beginning with the second quarter of 2003, carriers contribute based on projected, collected, end-user interstate and international telecommunications revenues. Previously, carriers contributed based on historical, gross-billed revenues. The Commission also released an Order and Second Order on Reconsideration, which, inter alia, directed the Wireline Competition Bureau to announce the universal service contribution factor as a percentage rounded up to the nearest tenth of one percent. (See *Federal Joint Board on Universal Service, 1998 Biennial Regulatory Review - Streamlined Contributor Reporting Requirements Associated with Administration of Telecommunications Relay Service, North American Numbering Plan, Local Number Portability, and Universal Service Support Mechanisms, Telecommunications Services for Individuals with Hearing and Speech Disabilities, and the American with Disabilities Act of 1990, Administration of the North American Numbering Plan and North American Numbering Plan Cost Recovery Contribution Factor and Fund Size, Number Resource Optimization, Telephone Number Portability, Truth-in-Billing and Billing Format*, Order and Second Order on Reconsideration, CC Docket Nos. 96-45, 98-171, 90-571, 92-237, 99-200, 95-116, 98-170, FCC 03-58 (rel. March 14, 2003), at para. 22.)

Source: Quarterly Public Notices on universal service contribution factors in CC Docket 96-45.

Table 19.15
Share of Universal Service Contributions 1/
By Principal Type of Contributor Using Traditional Carrier Categories 2/

Service Provider Category	1997	1998	1999	2000	2001	2002	FCC Form 499-Q November 2003	
							Q3 2003	Q1 2004 Projected
Regional Bell Operating Companies (RBOCs) Including CLEC Affiliates.	11.7 %	14.4 %	14.3 %	16.2 %	18.3 %	19.9 %	19.3 %	19.8 %
Incumbent Local Exchange Carriers (ILECs) Other Than RBOCs	2.6	1.4	1.5	1.7	2.1	2.8	3.6	3.9
Competitive Local Exchange Carriers (CLECs) Local Resellers and Other Local Carriers Other Than RBOCs	0.8	1.3	2.6	2.2	2.7	3.3	3.2	3.3
Total: Fixed Local Service Providers	15.1	17.1	18.5	20.1	23.1	26.0	26.2	27.0
Payphone Providers	0.0	0.1	0.1	0.1	0.1	0.0	0.0	0.0
Wireless Service Providers	3.3	5.1	6.6	9.2	12.0	17.2	24.5	26.8
RBOC Toll Service Providers	1.7	1.7	2.0	2.3	3.0	3.4	7.2	6.3
Other Toll Service Providers	79.9	76.0	72.9	68.3	61.9	53.3	42.1	39.8
Total: Toll Service Providers	81.6	77.7	74.9	70.6	64.9	56.7	49.3	46.1
Total All Filers	100.0 %	100.0 %	100.0 %	100.0 %	100.0 %	100.0 %	100.0 %	100.0 %

1/ For years 1997 through 2002, the percentages are based on shares of reported subject interstate and international end-user billed revenues. The percentages shown for the third quarter of 2003 are based on historic revenues reported in November 2003 FCC Form 499-Q filings. The percentages shown for the first quarter of 2004 are based on projected collected revenues in the same filings. Calculations exclude revenues for calls that both originate and terminate in foreign points. Calculations for years 1999 through 2002 include revenues for all filers. *De minimis* carriers were exempt from filing FCC Form 457 worksheets and are now exempt from filing FCC Form 499-Q worksheets. However, it is not unusual for *de minimis* companies to file worksheets and over 400 *de minimis* entities filed the FCC Form 499-Q in November 2003.

2/ The FCC Form 499-A asks each filer to identify a single category of communications business that best describes its operations. The service provider categories listed on FCC Form 499-A correspond to traditional breakdowns of the industry.

Source: 1997 and 1998: FCC Form 457 filings; 1999 through 2002: FCC Form 499-A filings; 2003 and 2004: November 2003 FCC Form 499-Q filings.

20 Appendix A – List of Publications by Industry Analysis and Technology Division

Most recent release dates are shown in parentheses:

High-Speed Services for Internet Access: Status as of June 30, 2003 (December 2003).

Infrastructure of the Local Operating Companies (October 2000).

2002 International Telecommunications Data (March 2004).

Local Telephone Competition: Status as of June 30, 2003 (December 2003).

Numbering Resource Utilization in the United States (December 2003).

December 2003 Monitoring Report (December 2003).

Quality of Service of Service Report of the Local Operating Companies (February 2004).

Reference Book of Rates, Price Indices, and Expenditures for Telephone Service (July 2003)

State-by-State Telephone Revenues and Universal Service Data (April 2001).

Statistics of Communications Common Carriers, 2002/2003 Edition (March 2004).

Statistics of the Long Distance Telecommunications Industry (May 2003).

Telecommunications Industry Revenues: 2002 (March 2004).

Telecommunications Provider Locator (February 2004).

Telephone Penetration by Income by State (February 2004).

Telephone Subscribership in the United States (January 2004).

Telephone Subscribership on American Indian Reservations and Off-Reservations Trust Lands (May 2003).

Trends in the International Telecommunications Industry (April 2001).

Trends in Telephone Service (August 2003).

21 Appendix B – Sources of Telecommunications Information

The information in this report and, in many cases, more detailed information can be downloaded from the **FCC-State Link** Internet site at www.fcc.gov/wcb/stats.

Printed copies of various statistical reports are available for reference in the FCC's Reference Information Center, Courtyard Level, 445 12th Street, S.W., and from the Commission's duplicating contractor, Qualex International, 202-863-2893.

Additional information on regulated carriers, including investments, revenues, expenses, and earnings, is contained in the annual *Statistics of Communications Common Carriers*. The 2002/2003 edition can be found on the **FCC-State Link**.

Filings with the Securities and Exchange Commission, such as the annual reports on Form 10-K, can be downloaded from the Edgar Internet site at www.sec.gov.

The names, addresses and telephone numbers for companies in the telephone industry are published in the Industry Analysis and Technology Division's *Telecommunications Provider Locator*, which can also be downloaded from the **FCC-State Link**.

In April 2001, the Commission began requiring all new and existing telecommunications carriers providing interstate telecommunications services to register with the FCC using the FCC Form 499-A. Carriers file the form with the Commission's data collection agent, the National Exchange Carrier Association. Copies of the form can be downloaded from the Internet at www.fcc.gov/formpage.html. Information on registered companies can be found on the Internet at <http://gullfoss2.fcc.gov/cib/form499/499a.cfm>.

The information on consumer expenditures (Table 3.1), employment (Tables 5.1 and 5.2), and price indices (Tables 12.1 - 12.3) comes from the Bureau of Labor Statistics and can be found on the Internet at www.bls.gov.

FCC rules require carriers to provide more detailed traffic data about international telephone service than about domestic service. Because of delays in international settlements, such information is typically received by the Commission much later than domestic data and is usually published separately. Tables 6.1 - 6.5 contain summary information on international telephone service. More detailed international data are available from *International Telecommunications Data* and *Trends in the International Telecommunications Industry*, both of which are published by the Industry Analysis and Technology Division and can also be found on the **FCC-State Link**.

Table 9.5, on carrier identification codes, and Tables 18.1 and 18.2, on area codes, come from the North American Numbering Plan Administration (NANPA), which is part of Neustar, Inc. Additional information on NANPA can be found on the Internet at www.nanpa.com.

The information on wireless telephone service shown in Tables 11.1 and 11.3 was prepared from data received from the Cellular Telecommunications & Internet Association (CTIA), 1133 21st Street N.W., Washington, D.C. 20036, 202-785-0081. CTIA can be found on the Internet at www.wow-com.com.

TNS Telecoms (TNS) has donated databases to the Commission containing information on residential phone usage collected from actual consumer telecommunications bills. TNS Telecoms has granted the Commission permission to use these databases for research purposes and to publish the industry level results. TNS Telecoms has been monitoring the telecommunications market since 1995 through both the ReQuest® consumer survey and Bill Harvesting® in the residential market and the BusinessWave® business survey in the business market. Tables 9.9, 9.10, and 14.1 - 14.6 are developed from these databases. For additional information, visit www.tnstelecoms.com or contact them at 1-866-811-TNST or by e-mail at contact@tnstelecoms.com. Their address is 101 Greenwood Avenue, Suite 502, Jenkintown, PA 19046.

Copies of NTIA's report *A Nation Online: How Americans Are Expanding Their Use of the Internet* can be obtained through NTIA's web site at www.ntia.doc.gov or by contacting NTIA's Office of Public Affairs at (202) 482-7002.

Tables 17.1, 17.2, and 17.4 contain information from the ARMIS 43-07 reports for the BOCs. Table 17.3 contains information from the ARMIS 43-05. Individual carrier information can be obtained from the ARMIS web page at www.fcc.gov/wcb/armis.

Chart 17.1 shows the number of patents granted for telecommunications. Additional information on U.S. patents can be found on the Internet at www.uspto.gov.

The National Exchange Carrier Association (NECA) administers access charge revenue pooling for about 1,150 local telephone companies. Their headquarters is located at 80 South Jefferson Road, Whippany, NJ 07981-1009, and they can be reached at 800-228-8597. NECA's website can be found on the Internet at www.neca.org.

The United States Telecom Association (USTA) (1401 H Street N.W., Washington, D.C. 20005, 202-326-7300) represents most incumbent local telephone companies. Like many trade associations, it collects information from each of its members. It publishes and sells various reports including an annual publication on *Phone Facts*. USTA's website can be found on the Internet at www.usta.org.

The Association for Local Telecommunications Services (ALTS) (888 17th Street N.W., Suite 900, Washington, D.C. 20006, 202-969-2587) represents many of the competitive local exchange carriers. They can be found on the Internet at www.alts.org. Their annual report, *The State of Local Competition 2003*, is also available on their web site.

22 Appendix C – Contacting the Report Authors

Trends in Telephone Service was prepared by the Industry Analysis and Technology Division, Wireline Competition Bureau, Federal Communications Commission. Principal authors of the report can be contacted at their electronic mail addresses or by calling the Industry Analysis and Technology Division at 202-418-0940. Users of TTY equipment should call 202-418-0484.

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Consumer Expenditures	Paul Zimmerman
Rate of Return	Katie Rangos
Employment	Ken Lynch or Katie Rangos
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Lines.....	Alex Belinfante or Jim Eisner
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