Trends in Telephone Service

Industry Analysis Division
Common Carrier Bureau

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Introduction

Trends in Telephone Service is published by the Industry Analysis Division of the Federal Communications Commission's Common Carrier Bureau. We have designed this report 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, consumer expenditures for service, infrastructure, international telephone traffic, long distance carriers, telephone rates and price changes, 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 Division. In most cases, these other reports give much more detailed information than that provided here. These reports can be accessed from our Internet site, **FCC-State Link**, at <www.fcc.gov/ccb/stats>. In addition, to facilitate further information gathering by consumers and others, we have listed additional sources of information in Appendix A, and we have provided information on contacting the authors of this report in Appendix B.

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

- High-speed lines (over 200 kbps in at least one direction) connecting homes and small businesses to the Internet increased by 63% during the second half of 2000, to a total of 7.1 million lines (or wireless channels) in service from about 4.4 million in June 2000.

- About 4.3 million high-speed lines provided speed of over 200 kbps in both directions, and thus met the Commission's definition of advanced services, compared to about 2.9 million in June 2000.

Local Telephone Competition

- As of December 2000, Competitive Local Exchange Carriers (CLECs) provided 16.4 million (or 8.5%) of the approximately 194 million nationwide local telephone lines that were in service to end users as opposed to 8.3 million (or 4.4%) of nationwide local telephone lines at the end of 1999. This represents a 97% growth in CLEC market size during the year 2000.

- About one-third 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 6.8 million lines on a resale basis at year-end 2000, compared to about 5.7 million lines six months earlier, and they provided about 5.3 million unbundled network element (UNE) loops at the end of the year 2000, an increase of 62% during the six months.

Telephone Rates

- Local phone rates have remained steady. The average monthly local residential charge for service was $20.78 in October 2000 as compared to $19.24 in 1990; for a business with a single phone line, the representative charge for service was $41.80 in October 2000 as compared to $41.21 in October 1990.

Subscribership

- More than twenty million households have been added to the nation's telephone system since November 1983. As of November 2000, 100.2 million households had telephone service.

Toll-Free Numbers

- There are currently four toll-free prefixes in use - 800, 888, 877, and 866 - with almost 24.5 million toll-free numbers assigned as of the end of July 2001.

1 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.[1] 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. Cost recovery on a per-line basis not only reduces the remaining inefficiency in the pricing of long distance access, but allows local companies to recover costs in a competitively neutral manner, consistent with the goals of the 1996 Act.

As part of access charge reform, on May 31, 2000, the FCC eliminated PICCs and

[1] Under the Commission's nomenclature, SLCs are called access charges even though they are collected from customers (end users) rather than long distance carriers.

consolidated them with SLCs and all price-cap local exchange carriers reduced access charges paid by long distance carriers. Also as part of access charge reform, some of the large interexchage carriers agreed to eliminate monthly minimum usage charges. The impact of access charge reform on per-minute access charges by carriers is evident in the data presented in Tables 1.1 through 1.4

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 LECs in the National Exchange Carrier Association (NECA) pool. These LECs control over 98% of the industry's access lines. Current per-line charges and per-minute charges are reported for each of the carriers in Tables 1.3 and 1.4, respectively.

The data in Table 1.2 clearly illustrate the effectiveness of access reform in reducing the prices long distance carriers pay per minute for access to the local telephone companies' networks. Per-minute access prices have continually decreased over time, a trend that continues with implementation of the 1997 and 2000 reforms.

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

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, 2001, the caps on SLCs for primary residential and single-line business, non-primary residential, and multiline business and Centrex lines equal $5.00, $7.00, and $9.20, respectively. For NECA pool companies, the residential SLC cap is $3.50, while the multiline business and Centrex SLC cap equals $6.00.

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 PICC rates for these lines. Therefore, the average multiline business and Centrex PICC rates are reported separately. However, multiline business line counts, used to compute average PICC 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 PICC 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: Industry Analysis Division, *Monitoring Report* and 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 4/	0.23	0.07	0.52	0.26	1.91
07/01/01	12/31/02	0.15	0.07	0.48	0.24	1.71

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.

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: Industry Analysis Division, *Monitoring Report* and access tariff filings.

Table 1.3

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

Company	Rates Effective from 07/01/01 to 12/31/01							2000 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
BellSouth	$5.00	$6.95	$7.84	0.00	0.00	$2.94	$0.32	15,105	2,615	6,675
Cincinnati Bell	5.00	6.07	5.32	0.00	0.00	0.00	0.00	653	86	293
Citizens	4.97	6.80	8.56	0.00	0.00	2.90	0.46	1,379	111	407
Global Crossing	4.71	5.91	8.03	0.00	0.00	1.02	0.28	644	93	264
Iowa Telecom	5.00	7.00	9.20	0.00	0.00	4.31	0.59	99	5	19
Qwest	4.97	6.53	7.87	0.00	0.00	0.69	0.18	10,031	1,864	4,763
SBC	4.75	4.84	5.21	0.00	0.00	0.19	0.04	30,776	6,991	18,550
Sprint	4.91	6.38	7.95	0.00	0.00	2.37	0.44	5,281	828	1,850
Verizon	4.99	6.39	7.37	0.00	0.00	2.19	0.56	33,959	7,059	16,595
Price Caps	4.91	5.93	6.69	0.00	0.00	1.41	0.22	97,927	19,652	49,416
NECA	3.50	NA	5.97	NA	NA	0.00	NA	9,642	NA	2,163
Price Caps and NECA	$4.78	$5.93	$6.66	$0.00	$0.00	$1.35	$0.22	107,569	19,652	51,579

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.

Source: Access tariff filings.

Table 1.4

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

Company	Rates Effective from 7/1/01-12/31/01					Year 2000 Minutes of Use (Millions)		
	Carrier Common Line per Originating Access Minute	Carrier Common Line per Terminating Access Minute	Switched Traffic Sensitive per Access Minute	Switched Non-Traffic Sensitive per Access Minute 2/	Total Charge per Conversation Minute 3/	CCL Originating	CCL Terminating	Local Switching
BellSouth	0.00 ¢	0.00 ¢	0.36 ¢	0.18 ¢	1.10 ¢	27,845	57,012	83,187
Cincinnati Bell	0.00	0.00	0.51	0.21	1.49	1,042	2,162	3,215
Citizens	0.57	0.00	0.87	0.65	3.69	2,747	2,865	5,680
Global Crossing	0.05	0.00	0.61	0.41	2.15	575	1,583	2,160
Iowa Telecom	0.81	0.00	0.84	0.15	2.90	134	185	331
Qwest	0.00	0.00	0.54	0.18	1.47	21,018	39,686	61,107
SBC	0.00	0.00	0.43	0.21	1.30	64,610	92,623	158,985
Sprint	0.03	0.00	0.63	0.17	1.68	10,375	15,681	26,235
Verizon	0.20	0.00	0.44	0.21	1.54	58,300	131,143	190,087
Price Caps	0.07	0.00	0.45	0.21	1.42	186,646	342,940	530,987
NECA	1.00	1.40	1.59	1.43	8.62	16,085	17,824	17,354
All Price Caps and NECA	0.15 ¢	0.07 ¢	0.48 ¢	0.24 ¢	1.71 ¢	202,731	360,764	548,341

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/ 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.

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. Optical fiber technologies are fiber to the subscriber's premises (e.g., fiber-to-the-home, or FTTH). Satellite and fixed terrestrial wireless systems use radio spectrum to communicate with a radio transmitter attached to the subscriber's premises.

Table 2.2. shows advanced services lines (over 200 kbps in both directions) by the above technologies and Table 2.3 shows residential and small business high-speed lines (over 200 kbps in at least one direction) for the above technologies. Table 2.4 shows high-speed lines by state for the above technologies.

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

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

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

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

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

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

NM - Not meaningful due to inconsistencies in reported data.

1/ The mutually exclusive types of technology are, respectively: Asymmetric digital subscriber line (ADSL) technologies, which provide speeds in one direction greater than speeds in the other direction; wireline technologies "other" than ADSL, including traditional telephone company high-speed services and symmetric DSL services that provide equivalent functionality; coaxial cable, including the typical hybrid fiber-coax (HFC) architecture of upgraded cable TV systems; optical fiber to the subscriber's premises (e.g., Fiber-to-the-Home, or FTTH); and satellite and (terrestrial) fixed wireless systems, which use radio spectrum to communicate with a radio transmitter at the subscriber's premises.
2/ Data for June 2000 have been revised.

Source: Form 477 Filings.

Table 2.4
High-Speed Lines by Technology
(Over 200 kbps in at Least One Direction)

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

NA - Not Available.

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

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 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 15 years, despite major changes in the telephone industry and in telephone usage. Average annual expenditures on telephone service increased from $325 per household in 1980 to $849 in 1999.

Bill harvesting data collected by TNS Telecoms, provide information on the telecommunications expenditures of households. 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 2000. Further information on TNS Telecoms and the bill harvesting data can be found in Section 15.

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

Source: Consumer Expenditure Survey, Bureau of Labor Statistics.

Chart 3.1

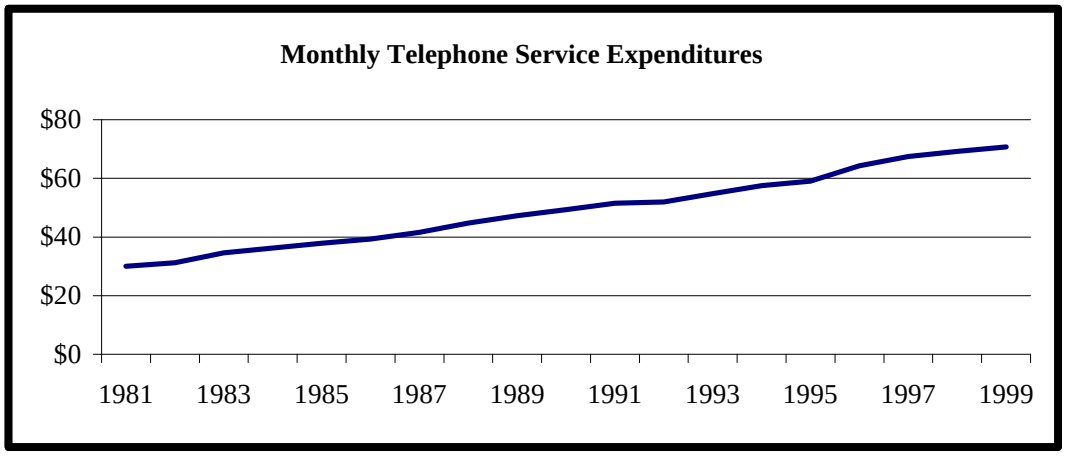


Table 3.2
Average Monthly Household Telecommunications Expenditures by Type of Provider 1/ 2/

	Local Exchange Carriers 3/	Long Distance Carriers	Wireless Carriers	Total
1995	$30	$21	$5	$56
1996	30	21	7	58
1997	32	25	8	65
1998	33	23	10	66
1999	34	21	9	64
2000	35	18	11	63

1/ Household payments to long distance and wireless carriers are based on monthly household bills for those households with wireline telephone service.

2/ This sample does not include households from Alaska and Hawaii.

3/ Includes incumbent local exchange carriers and competitive local exchange carriers. Does not include DSL or other high-speed services.

Source: Calculated by IAD staff with data provided by TNS Telecoms (formerly PNR and Associates), *Telecoms Market Monitor*TM .

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, and 1999-2000) as well as annual reports for 1991, 1993, 1995, 1997, and 1999. 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 1991-2000 for price-cap carriers.

The rates of return were posted at the time of the carrier's individual 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. Copies of the individual carrier's Form 492 reports are on file in the FCC's Reference Information Center, Courtyard Level, 445 12th Street S.W., Washington, D.C.

Table 4.1
Interstate Rate-of-Return Summary *
Years 1991 Through 2000
Price-Cap Companies Reporting FCC Form 492A
(Final Reports for 1991 Through 1999 and Initial Report for 2000)

	Reporting Entity	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
	AT&T Communications 1/	13.40 %	12.77 %	13.49 %	13.26 %						
1	**BellSouth Telephone Companies**	12.62	12.80	13.68	15.92	15.78 %	16.40 %	17.91 %	20.80 %	20.99 %	22.61 %
2	**Qwest Corporation, Including Malheur and El Paso 2/ 3/**	12.40	12.41	13.62	12.40	12.00	13.64	15.41	16.56	19.06	19.78
	SBC Communications, Inc. 4/										
3	Southwestern Bell Telephone Company 5/	10.75	11.80	12.91	13.01	13.38	11.63	10.32	9.91	10.22	14.56
4	Ameritech Operating Companies 5/	13.00	12.79	14.80	13.39	16.78	18.27	18.22	22.59	28.93	29.71
5	Nevada Bell 5/	12.98	14.51	17.44	17.92	17.31	17.75	19.47	16.02	19.26	22.07
6	Pacific Bell 5/	11.85	12.68	12.89	14.93	15.76	17.68	11.98	16.50	21.01	19.30
7	Southern New England Telephone Company 5/	8.56	12.90	11.52	11.34	11.58	11.64	12.70	10.99	12.12	23.91
	Verizon Companies 6/										
8	Bell Atlantic dba Verizon Communications 7/									13.66	13.36
	(Former Bell Atlantic Companies)										
	Bell Atlantic	12.83	12.50	14.01	14.00	13.74	11.24	14.73	13.88		
	Bell Atlantic (NYNEX) 8/		12.50	12.55	11.79	12.12	15.23	13.72	11.40		
	New England Telephone and Telegraph Co.	8.54									
	New York Telephone	9.82									
	(Former GTE Companies) 9/ 10/ 11/										
9	GTE South Inc. (Kentucky - COKY) 12/				5.56	4.79	4.49	6.62	5.97	9.55	32.50
10	GTE South Inc. (N. Carolina - CONC) 12/				10.75	14.16	11.98	16.63	12.78	19.87	17.77
	GTE South Inc. (S. Carolina - COSC) 12/ 21/				9.77	12.32	17.40	25.09	26.14		
11	GTE South Inc. (Virginia - COVA) 12/				23.45	23.18	30.90	33.65	35.19	34.74	40.96
12	GTE Systems of The South (Alabama - COAL) 12/				12.58	11.88	9.69	15.31	7.97	10.88	14.96
	GSTC - South (East South Contel) 12/	9.67	9.90	15.09							
13	GTE North Inc. (Illinois - COIL) 13/				26.48	24.21	36.34	41.14	14.11	41.03	44.39
14	GTE North Inc. (Indiana - COIN) 13/				22.44	23.27	29.02	33.26	34.61	41.40	47.71
	GTE Midwest Inc. (COIA + COSI = COIT) 13/				18.31	22.39	30.39	35.04	38.27	34.16	31/
15	GTE Midwest Inc. (Missouri - COMO+COCM+COEM=COMT) 13/				10.79	9.57	11.97	12.39	12.56	15.29	17.86
	GTE Arkansas, Inc. (COAR+COSA=COAT) 13/				17.44	18.24	19.13	16.13	15.87	16.81	14/
	Contel of Minnesota - COMN 13/				22.12	23.81	32.38	33.81	30.00	32.07	14/
	GSTC - Central (Central Contel) 13/	11.22	10.24	16.28							
16	GTE North Inc. (COPA+COQS=COPT) 15/	12.79	17.11	22.33	32.60	36.38	40.55	36.83	45.97	39.58	40.98
	GTE Alaska, Inc. (Alaska - GTAK)	14.69	14.84	16.13	24.78	22.48	19.44	29.58	26.89	13.34	14/
17	GTE California Inc. (California - GTCA)	12.45	10.73	7.05	9.08	6.95	13.72	17.68	17.19	22.01	26.45
18	GTE California, Inc. (California - COCA) 16/				12.19	16.03	17.63	19.16	22.71	28.28	29.08
19	GTE California, Inc. (Arizona - COAZ) 16/				6.24	2.95	4.15	14.17	13.80	15.57	12.17
20	GTE California, Inc. (Nevada - CONV) 16/				27.39	19.15	25.50	31.44	24.01	20.57	28.79
	Contel of California, Inc. 16/	11.87	8.51	15.43							
21	GTE Florida Inc. (Florida - GTFL)	12.64	9.52	7.36	7.36	8.56	15.17	19.14	14.58	18.93	21.81
22	GTE Hawaiian Telephone Co. Inc. (Hawaii - GTHI)	11.75	8.98	9.18	8.15	7.87	9.42	10.55	15.64	17.62	17.98
23	GTE North/GTE South (GTIL+GLIL=GAIL)	12.65	12.60	13.77	17.12	14.69	18.36	21.59	23.07	22.35	23.95
24	GTE North/Contel Systems of South (GTIN+GLIN=GAIN)	14.16	14.17	14.50	18.21	18.80	26.23	23.61	29.06	32.47	33.87
25	GTE North/Contel Systems of South (GTMI+GLMI=GAMI)	12.89	14.21	9.82	11.10	11.45	14.85	15.33	13.17	15.75	16.50
	GTE Midwest Inc. (IOWA - GTIA) 17/				19.05	16.49	22.68	25.59	23.59	22.71	14/
	Contel of Minnesota - GTMN 17/				(0.04)	(10.88)	(13.13)	4.01	(1.33)	3.56	14/
	GTE North Inc. (Total IA+MN GTE) 17/	9.97	13.69	13.16							
26	GTE Midwest Inc. (Missouri - GTMO)	13.30	13.99	13.48	18.20	17.18	19.84	17.88	16.08	11.82	19.32
	GTE Midwest Inc. (Nebraska - GTNE)	8.70	12.74	13.84	20.35	21.67	28.86	27.35	30.08	35.00	14/
27	GTE North Inc. (Ohio - GTOH)	10.55	12.91	12.66	16.90	17.21	21.20	24.37	21.83	21.70	21.86
28	GTE North Inc. (Pennsylvania - GTPA)	12.82	12.42	11.72	14.81	14.02	18.91	20.62	14.67	21.41	22.06
29	GTE North Inc. (Wisconsin - GTWI)	10.43	13.00	13.85	13.65	13.96	17.99	18.75	16.08	17.85	17.04
30	GTE Northwest Inc. (Oregon - GTOR) 18/ 20/				16.20	18.89	23.50	28.23	27.03	31.56	31.01
31	GTE Northwest Inc. (Washington- GTWA) 18/				13.67	15.87	21.60	24.41	27.33	32.91	33.40
32	GTE Northwest Inc. (West Coast CA - GNCA) 18/				(15.37)	(16.99)	(24.03)	(25.83)	(6.85)	(9.93)	(8.40)
	GTE Northwest Inc. (Total OR+WA+NWCA GTE) 18/	11.83	10.82	9.90							
33	GTE Northwest Inc. (Idaho - GTID) 19/				19.60	20.78	23.94	30.52	30.89	32.24	34.26
	GTE Northwest Inc. (Montana - GTMT) 19/				15.37						
	GTE Northwest Inc. (Total ID + MT GTE) 19/	14.53	17.34	16.00							
34	GTE Northwest Inc. (Washington - COWA) 20/				18.07	22.24	29.43	31.85	30.41	39.17	39.42
	GTE Northwest Inc. (Contel Oregon - COOR) 19/ 20/				9.18						
	GTE Systems of Northwest (Northwest Contel) 20/	8.96	10.26	18.09							
35	GTE South Inc. (Alabama - GTAL) 21/				11.83	11.39	17.68	23.49	17.59	22.23	20.48
36	GTE South Inc. (Kentucky - GTKY) 21/				10.96	13.89	18.46	20.57	22.34	24.03	22.86
37	GTE South Inc. (North Carolina - GTNC) 21/				19.02	14.99	23.83	24.48	27.92	24.85	26.43
	GTE South Inc. (South Carolina - GTSC) 21/				17.60	18.93	25.70	24.06	30.62		
38	GTE South Inc. (GTSC+COSC=GTST) 21/									30.70	31.70
39	GTE South Inc. (Virginia - GTVA) 21/				9.29	10.91	11.07	23.76	20.56	9.94	6.44
	GTE South Inc. (Total South GTE) 21/	11.50	12.61	11.91							
	GTE Southwest Inc. (Arkansas - GTAR) 22/				0.65	(1.57)	(1.97)	3.21	5.17	4.15	14/
	GTE Southwest Inc. (New Mexico - GTNM) 22/				10.00	17.18	24.60	24.21	31.79	39.34	14/
	GTE Southwest Inc. (Oklahoma - GTOK) 22/				6.44	6.70	10.77	14.90	15.97	18.86	14/
40	GTE Southwest Inc. (Texas - GTTX) 22/				7.24	7.11	11.53	14.81	16.43	21.42	21.74
	GTE Southwest Inc. (Total Southwest GTE) 22/	10.22	11.52	9.00							

Table 4.1
Interstate Rate-of-Return Summary *
Years 1991 Through 2000
Price-Cap Companies Reporting FCC Form 492A - Continued
(Final Reports for 1991 Through 1999 and Initial Report for 2000)

	Reporting Entity	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
41	GTE Southwest Inc. (Texas - COTX) 15/	10.22	9.64	17.89	8.29	14.62	22.42	18.10	14.96	17.13	12.87
	GTE Southwest Inc. (New Mexico - CONM) 23/				27.57	47.29	42.53	48.69	47.21	28.68	14/
	Contel of the West dba GTE West (Arizona only - COWZ) 23/				14.86						
	GTE West (West Contel) 23/	10.51	13.81	17.26							
42	Micronesian Telecomms. Corp. (N. Mariana Islands - GTMC) 24/				2.53	7.49	15.49	21.17	34.45	29.24	1.87
	GTE New York (New York Contel) 25/	9.90	8.60	12.10							
	GSTC - North (East North Contel) 25/	10.36	10.15	15.51							
	Sprint										
43	Central Telephone of Nevada 26/		12.44	14.23	18.90	20.46	20.42	17.07	17.79	21.15	19.29
44	Sprint - Florida							20.05	26.14	27.17	27.38
	Central Telephone of Florida 26/		11.44	14.66	15.93	17.16	17.85				
	United Telephone Co. of Florida	13.00	12.27	14.44	17.63	19.28	19.79				
45	Sprint Local Telephone Cos. - Eastern (NJ & PA)	11.71	12.32	13.98	16.12	14.87	17.42	17.36	14.59	20.87	25.62
46	Sprint Local Telephone Cos. - Midwest (MO, KS, MN, NE, WY, TX)							19.97	19.66	17.69	18.88
	Central Telephone of Texas 26/		14.94	16.19	18.39	21.81	21.58				
	United Telephone - Midwest (MO, KS, MN, NE, WY, TX)	14.57	15.35	13.92	17.44	19.64	21.52				
47	Sprint Local Telephone Cos. - North Carolina							16.54	12.55	15.92	22.23
	Central Telephone of North Carolina		11.29	11.97	14.19	15.36	15.75				
	Carolina Telephone And Telegraph Company	11.43	10.14	11.10	15.39	17.77	15.38				
48	Sprint Local Telephone Cos. - Northwest	17.27	17.72	19.39	29.32	34.17	34.55	30.59	32.54	31.86	32.77
49	Sprint Local Telephone Cos. - Southeast (TN, VA, & SC)							17.62	15.87	17.50	23.32
	Central Telephone of Virginia 26/		12.91	15.55	14.30	15.87	17.46				
	United Telephone - Southeast (TN, VA, & SC)	13.66	13.48	13.39	19.17	19.05	20.66				
50	United Telephone Co. of Indiana, Inc.	14.06	14.93	15.55	18.41	20.33	24.30	26.13	24.19	28.98	38.21
51	United Telephone Co. of Ohio	12.75	12.33	13.15	16.54	15.93	16.12	13.91	17.33	20.16	20.03
	Central Telephone of Illinois 26/ 27/		11.54	10.18	18.87	19.55	18.40	18.92			
	All Other Companies										
52	Aliant Communications Company (ALLTEL) 28/		12.36	14.95	15.47	16.09	14.95	12.27	15.02	19.27	12.00
53	Cincinnati Bell Telephone Company 29/							20.04	17.81	25.45	28.95
54	Citizens Telecommunications Cos. (Tariff 1) 30/						15.42	9.77	17.87	16.71	19.68
55	Citizens Telecommunications Cos. (Tariff 2) 30/						13.58	13.25	14.29	15.74	24.05
56	Citizens Telecommunications Cos. (Tariff 3)									15.56	16.12
57	Citizens Telecommunications Cos. (Tariff 4)										30.94
58	Citizens Telecommunications Cos. (Tariff 5)										(11.23)
59	Frontier Telephone of Rochester, Inc. 31/ 32/	11.82	12.11	11.63	12.02	11.87	10.20	13.19	18.37	16.77	18.91
60	Frontier Tier 2 Concurring Companies 32/			16.42	17.69	19.32	26.91	31.93	45.45	43.42	38.95
61	Frontier Communications of Minnesota & Iowa 32/ 33/	13.71	13.65	14.99	19.65	21.90	23.71	28.26	29.28	35.40	33.16
62	VALOR New Mexico #1164										20.57
63	VALOR New Mexico #1193										13.41
64	VALOR Oklahoma										11.17
65	VALOR Texas										6.70
	Maximum Rate of Return	17.27 %	17.72 %	22.33 %	32.60 %	47.29 %	42.53 %	48.69 %	47.21 %	43.42 %	47.71 %
	Minimum Rate of Return	8.54	8.51	7.05	(15.37)	(16.99)	(24.03)	(25.83)	(6.85)	(9.93)	(11.23)
	Weighted Arithmetic Mean	11.78	12.42	13.12	13.58	14.02	15.15	15.60	16.52	18.50	19.53
	Standard Deviation	1.49	0.96	1.76	2.59	3.03	3.64	3.96	5.13	5.96	5.99

* 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. In addition they exclude adjustments, if any, for the previous year's sharing obligation or low-end adjustment.

Notes to Table 4.1

1/ AT&T Communications filed individual reports for 1991-1994 ninety days after end of each calendar year. The local telephone companies filed final reports for each year fifteen months after the calendar year.

2/ U S WEST Communications, Inc. filed a revised report June 16, 1999 to correct the state and local composite tax rate.

3/ The merger between Qwest Communications International, Inc. and U S WEST was effective June 30, 2000.

4/ Southwestern Bell Telephone Co., Nevada Bell, and Pacific Bell filed revised reports June 25, 1999 reflecting the reassignment of expenses and revenues associated with ISP-bound traffic to the intrastate jurisdiction.

5/ Southern New England Telephone Company merged with SBC October 1998. Nevada Bell, and Pacific Bell, and Ameritech merged with SBC October 1999.

6/ Verizon Communications, Inc. was formed in 2000 by the merger of Bell Atlantic Corporation and GTE Corporation.

7/ Bell Atlantic filed revised reports August 12, 1999 reflecting the reassignment of expenses and revenues associated with internet service provider (ISP)-bound traffic to the intrastate jurisdiction. For 1999, Bell Atlantic filed a combined report.

8/ In 1992, NYNEX started to file a combined report.

9/ It should be noted that GTE in 1993 consolidated various study areas so that some individual company reports may not be totally consistent with prior years.

10/ In 1994, GTE reported many study areas by state. For the GTE companies, GTE of Alaska, California, Florida, Hawaii, Illinois, Indiana, Michigan, Missouri, Nebraska, Ohio, Pennsylvania, and Wisconsin are the only study areas that appear consistent between 1993 and 1994.

11/ GTE companies filed revised reports May 28, 1999 to properly report the expenses associated with funding the USAC-USF.

12/ In 1994, GSTC - South (East South Contel) was separated and became GTE South, Inc. (Kentucky only - COKY); GTE South, Inc. (N. Carolina only - CONC); GTE South, Inc. (S. Carolina only - COSC); GTE South, Inc. (Virginia only - COVA); and GTE Systems of the South (COAL only). The property for Georgia, which had also been included in 1993, was sold and not included in 1994.

13/ In 1994, GSTC - Central Region (Central Contel) was separated and became GTE North, Inc. (Illinois Contel); GTE North, Inc. (Indiana Contel); GTE Midwest, Inc. (Contel Iowa COIA + COSI); GTE Midwest, Inc. (Contel Missouri - COMO + COCM + COEM); Total Contel Arkansas (COAR + COSA); and Contel of Minnesota - COMN. In 1996, Total Contel Arkansas was renamed GTE Arkansas, Inc.

14/ Study area was sold.

15/ For the GTE Contel companies, GTE Pennsylvania (Contel) and GTE Texas (Contel) are the two companies that appear consistent between 1993 and 1994. In 1995, GTE of Pennsylvania (Contel) name changed to GTE North, Inc., (COPA + COQS); and GTE Texas (Contel) name changed to GTE Southwest, Inc. (Texas Contel).

16/ In 1994, Contel of California, Inc., was separated and became Contel of California (California only - COCA); Contel of California (AZ only - COAZ); and Contel of Nevada (NV only - CONV). In 1996, names were changed to GTE California, Inc., (California Contel), GTE California, Inc. (Arizona Contel), and GTE California, Inc. (Nevada Contel).

17/ In 1994, GTE of the North, Inc. (Total IA + MN GTE) was separated and became GTE Midwest, Inc. (Iowa only - GTIA) and Contel Minnesota - GTMN.

18/ In 1994, GTE of the Northwest, Inc. (Total OR+WA+NWCA GTE) was separated and became GTE of the Northwest, Inc. (Oregon only - GTOR); GTE of the Northwest, Inc. (Washington only - GTWA); and West Coast Telephone Co. of California - - GNCA. In 1995, GTE of the Northwest, Inc. (Contel Oregon - COOR) merged with GTE of the Northwest, Inc. (Oregon only - - GTOR).

19/ In 1994, GTE of the Northwest, Inc. (Total ID + MT GTE) was separated and became GTE of the Northwest, Inc. (Idaho only - GTID) and GTE of the Northwest, Inc. (Montana only - GTMT). GTE of the Northwest, Inc. (Montana only - GTMT) did not file a 1995 report because its property had been sold.

20/ In 1994, GTE Systems of Northwest (Northwest Contel) was separated and became GTE Northwest, Inc. (Contel Oregon - COOR); and GTE Northwest, Inc. (Contel Washington only - COWA). In 1995, GTE Northwest, Inc. (Contel Oregon - COOR) merged with GTE Northwest, Inc. (Oregon only - GTOR).

21/ In 1994, GTE South, Inc. (Total South GTE) was separated and became GTE South, Inc. (Alabama only - GTAL); GTE South, Inc. (Kentucky only - GTKY); GTE South, Inc. (North Carolina only - GTNC); GTE South, Inc. (South Carolina only - GTSO); and GTE South, Inc. (Virginia only - GTVA). The properties for Georgia, Tennessee, and West Virginia which had been included in GTE South, Inc. in 1993, were not included in 1994 because these properties had been sold. GTSC and COSC were combined in 1999 to form GTST.

22/ In 1994, GTE Southwest, Inc. (Total Southwest GTE) was separated and became GTE Southwest, Inc. (Arkansas only - GTAR); GTE Southwest, Inc. (New Mexico only - GTNM); GTE Southwest, Inc. (Oklahoma only - GTOK); and GTE Southwest Inc. (Texas only - GTTX).

23/ In 1994, GTE West (West Contel) was separated and became Contel of the West (New Mexico only - CONM) and Contel of the West dba GTE West (Arizona only - COWZ). Utah, which had been included in 1993 was not included in 1994; their property was sold. Contel of the West dba GTE West (Arizona only - COWZ) did not file a 1995 report because its property had been sold. In 1995, Contel of the West (New Mexico only - CONM) changed its name to GTE Southwest, Inc., (Contel New Mexico).

24/ Micronesian Telecommunications Corp. filed a rate-of-return report for the first time in 1994.

25/ GTE New York (New York Contel) and GSTC - North (East North Contel) did not file in 1994 because its property was sold.

Notes to Table 4.1 - Continued

26/ The Centel companies and Lincoln Telephone and Telegraph Company reported subject to price caps beginning 7/1/93. Rate of return for 1993 is for the filing period July through December. For 1992, information for these companies is from their final non-price-cap reports, filed 9/30/93 for the two-year 1992 monitoring period, 1991-1992.

27/ Sold to Galatin River Communications, October 31, 1998.

28/ In 1996, Lincoln Telephone and Telegraph Company changed its name to Aliant Communications Company.

29/ Cincinnati Bell Telephone Company went price-cap in 1997.

30/ The Citizens Telecommunications Cos. became price-cap July 1, 1996; its reporting period for 1996 is July 1 - December 31, 1996. Rates for 1996 are from the initial report.

31/ The Rochester Telephone Corporation (now Frontier Telephone of Rochester) and Southern New England Telephone Company reported subject to price caps beginning 7/1/91. The rate-of-return report for each is for the filing period July 1 through December 31, 1991.

32/ The Rochester Telephone Corporation (now Frontier Telephone of Rochester), Rochester Telephone subsidiaries and and Frontier Communications of Minnesota and Iowa (name changed in 1994 from Vista Communications Co. of Minnesota and Iowa) did not have any changes to their original reports so they did not file final reports on March 31, 1995 for 1993.

33/ Reports for Frontier Communications of Minnesota and Iowa, formerly known as Vista Telephone Companies were filed by Rochester Telephone Company as of 7/1/92. For 1992, the rate of return is for 7/1/92-12/31/92 when they reported subject to price-cap regulation. For 1991, Vista filed a rate-of-return report for Vista Telephone Company of Iowa and Vista Telephone Company of Minnesota.

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 (Standard Industrial Classification (SIC) 481) and for a subset of this industry, telephone communications minus radiotelephone (SIC 4813). The difference between these two figures yields the number of employees in the radiotelephone industry (SIC 4812).

SIC 4813 includes establishments primarily engaged in furnishing telephone voice and data communications, except radiotelephone and telephone answering services. SIC 4812 includes establishments primarily engaged in providing two-way radiotelephone communication services, such as cellular telephone service. It also includes telephone paging and beeper services. Neither of these categories includes employees from establishments primarily engaged in furnishing telephone answering services, manufacturing equipment, or engineering and research services.

Table 5.1 and the associated graph show the annual average employment figures in the telephone communications industry separately for SIC 4812 and SIC 4813 from 1951 to 2001. Since 1990, employment in the telephone communications industry has grown modestly. Most of the growth in employment over this period is the result of substantial increases in the radiotelephone industry, which grew at an annual average growth rate of approximately 20%.

BLS also calculates an annual telecommunications industry labor productivity index. The BLS index of labor productivity relates output to the employee hours expended in producing that output. This index, presented in Table 5.2, rose an average 6.0% per year from 1951-1999, with 1999 being the most recent data available. This average labor productivity factor is higher than the average in other industries (typically somewhere around 3 to 4%). This higher than average annual growth rate may be the result of telephone companies utilizing more efficient, advanced technology and increases in human capital. Table 5.2 and the associated graph illustrate the rising trend in telecommunications labor productivity since 1951.

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

Table 5.1

Annual Average Number of Employees in the Telephone Communications Industry
(In Thousands)

Year	Radiotelephone	All Other Telephone	Year	Radiotelephone	All Other Telephone	Year	Radiotelephone	All Other Telephone
1951	15.2	628.8	1969	20.5	849.5	1987	21.1	880.8
1952	16.0	662.4	1970	22.2	919.9	1988	23.2	877.9
1953	16.6	685.6	1971	22.4	929.2	1989 1/	29.9	856.0
1954	16.5	682.3	1972	22.5	933.6	1990	38.2	874.8
1955	16.6	690.1	1973	23.2	958.0	1991	45.6	863.6
1956	17.7	733.5	1974	23.6	977.2	1992	53.1	832.1
1957	18.1	750.1	1975	22.8	943.8	1993	63.1	815.9
1958	17.2	714.9	1976	22.5	930.7	1994	81.0	812.4
1959	16.7	690.4	1977	22.6	934.7	1995	102.5	797.2
1960	16.6	689.4	1978	23.4	971.4	1996	146.9	786.1
1961	16.3	677.0	1979	24.8	1023.4	1997	172.7	820.3
1962	16.2	671.3	1980	25.3	1046.9	1998	164.3	848.5
1963	16.2	669.3	1981	25.3	1052.0	1999	182.7	892.4
1964	16.6	689.5	1982	25.3	1046.5	2000	204.4	927.6
1965	17.3	717.9	1983 1/	23.8	986.5	2001 2/	257.1	971.3
1966	18.3	755.1	1984	22.4	931.0			
1967	19.0	787.5	1985	21.6	899.1			
1968	19.2	793.2	1986 1/	20.7	862.7			

1/ Due to Bell operating company employee strikes in 1983, 1986, and 1989, which lasted one month each, the reported annual average number of workers for those particular years is an average of the eleven months in which workers did not strike.

2/ The 2001 figures are preliminary.

Source: Bureau of Labor Statistics.

Chart 5.1
Annual Average Number of Employees in the Telephone Communications Industry
1951 - 2001

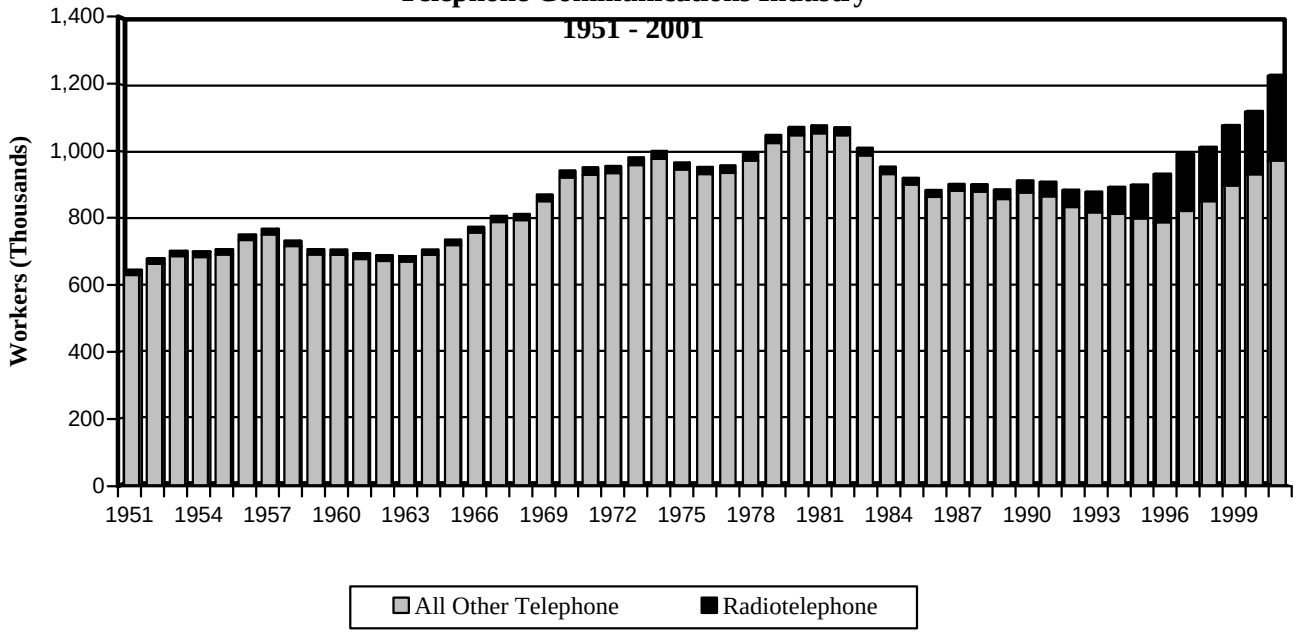


Table 5.2

Labor Productivity Index for the Telephone Communications Industry Measured in Output per Hour (OPH)

(Base Year 1987=100)

Year	OPH Index	Year	OPH Index	Year	OPH Index
1951	12.0	1968	34.7	1985	88.9
1952	12.4	1969	35.3	1986	95.0
1953	12.6	1970	35.6	1987	100.0
1954	13.2	1971	38.3	1988	106.2
1955	14.3	1972	40.1	1989	111.6
1956	14.6	1973	42.7	1990	113.3
1957	16.1	1974	45.0	1991	119.8
1958	18.2	1975	49.3	1992	127.7
1959	20.3	1976	53.6	1993	135.5
1960	21.4	1977	57.3	1994	142.2
1961	23.3	1978	60.6	1995	148.1
1962	24.8	1979	63.5	1996	159.5
1963	26.6	1980	67.6	1997	160.9
1964	27.8	1981	71.1	1998	170.3
1965	28.9	1982	73.8	1999	189.1
1966	30.3	1983	84.6		
1967	32.6	1984	84.5		

Source: Bureau of Labor Statistics.

Chart 5.2
Telephone Communications Industry
(SIC 481) Labor Productivity Index

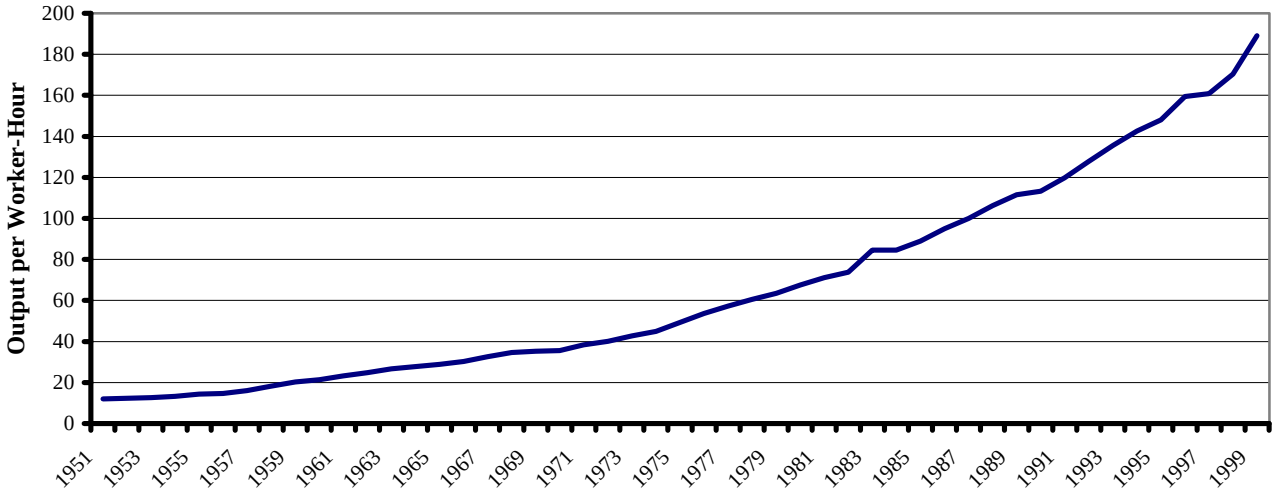


Table 5.3
Number of Telecommunications Service Providers That Are Small Businesses

Service Provider Category	Number of Form 499-A Filers	Filers that in Combination with Affiliates Have 1,500 or Fewer Employees 1/	Filers that in Combination with Affiliates Have More Than 1,500 Employees 1/
Incumbent Local Exchange Carriers (ILECs)	1,335	1,037	298
Competitive Access Providers (CAPs) and Competitive Local Exchange Carriers (CLECs)	349	297	52
Local Resellers	87	86	1
Other Local Exchange Carriers	60	56	4
All Competitors of ILECs	496	439	57
Total: Fixed Local Service Providers	1,831	1,476	355
Total: Payphone Providers	758	755	3
Wireless Telephony Including Cellular, Personal Communications Service (PCS) and SMR Telephony Carriers	806	323	483
Paging & Messaging Service	427	407	20
Specialized Mobile Radio (SMR) Dispatch	212	211	1
Wireless Data Service Providers	6	5	1
Other Mobile Service Providers	44	43	1
Total: Wireless Service Providers	1,495	989	506
Interexchange Carriers (IXCs)	204	163	41
Operator Service Providers (OSPs)	21	20	1
Prepaid Calling Card Providers	21	20	1
Satellite Service Carriers	21	16	5
Toll Resellers	454	423	31
Other Toll Carriers	17	15	2
Total: Toll Service Providers	738	656	82
All Filers	4,822	3,875	947

1/ Estimates were based on gross revenues information filed April 1, 2000 on FCC Form 499-A worksheets, combined with employment information obtained from ARMIS and Securities and Exchange Commission filings as well as industry employment estimates published by the Bureau of Labor Statistics. Actual Form 499-A filings are not available to the public. For this table, filers were considered to be affiliated based on information published in the Industry Analysis Division, *Carrier Locator.* The estimates do not reflect affiliates that do not provide telecommunications services or that operate only in foreign countries.

Source: Form 499-A filers from Industry Analysis Division, *Carrier Locator.*

6 International Telephone Service

International telecommunications has become an increasingly important segment of the telecommunications market. International telephone calling -- propelled by technological innovation, increased international trade and travel, and stable or declining international telephone rates -- has skyrocketed. The number of calls made from the United States to other countries increased from 200 million in 1980 to 5.2 billion in 1999. Americans spent about $14 billion on international calls in 1999. On average, carriers billed 51 cents per minute for international calls in 1999, a decline of more than 50% since 1980. International private line revenues have also increased since 1980, but telex and telegraph services declined substantially over the same period. These trends are shown in Table 6.1.

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 $4.6 billion in 1999. 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 Japan -- currently account for about 44% of the international calls billed in the United States.

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 1999 by using their own facilities or lines leased from other carriers. These carriers provided $14.5 billion of international telephone service between the U.S. and foreign points and $1.2 billion of international private line service. Table 6.4 shows the U.S.-billed revenues for each of the 56 carriers. Together, AT&T, MCI WorldCom, and Sprint, accounted for 90% of the international service billed in the United States.

In addition to the 56 carriers that owned or leased facilities, about 450 carriers reported the resale of international message telephone service. These carriers reported $4.5 billion of resale revenue in 1999. 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 **FCC-State Link** web page.

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

	Telephone Service					Other Services			
			Billed Revenues			Billed Revenues			
	Minutes	Messages	Total	Per Minute 1/	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	3,350	411	3,435	1.03	8.37	415	45	172	
1986	3,917	482	3,891	0.99	8.07	390	42	175	
1987	4,480	570	4,559	1.02	8.00	360	35	191	
1988	5,190	687	5,507	1.06	8.02	310	30	194	
1989	6,109	835	6,517	1.07	7.80	243	27	208	
1990	7,215	984	7,626	1.06	7.75	196	24	201	
1991	8,986	1,371	9,096	1.01	6.63	200	15	303	$23
1992	10,156	1,643	10,179	1.00	6.20	155	16	313	24
1993	11,393	1,926	11,353	1.00	5.89	135	12	365	23
1994	13,393	2,313	12,255	0.92	5.30	123	12	432	55
1995	15,837	2,821	13,990	0.88	4.96	119	6	432	55
1996	19,119	3,485	14,079	0.74	4.04	119	5	649	26
1997	22,611	4,233	15,135	0.67	3.58	110	4	840	36
1998	24,026	4,439	14,154	0.59	3.19	64	2	902	21
1999	28,132	5,249	14,435	0.51	2.75	57	2	1,196	30

Note: Data represent traffic and circuits from domestic U.S. points to foreign points.

1/ Billed revenue per minute for international service differs in Table 14.5 and Table 6.1. Data in Table 14.5 are based on traffic to foreign points for all U.S. carriers serving all U.S. points and staff estimates of end-user revenues. Data for Table 6.1 are based on traffic for domestic U.S. points only and revenues billed by underlying carriers. The domestic U.S. includes Puerto Rico but excludes American Samoa, Guam, the Northern Mariana Islands, and the U.S. Virgin Islands.

Source: Industry Analysis Division, *Section 43.61 International Telecommunications Data.*

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

	Billed Revenues	Owed to Foreign Carriers	Retained Revenues	Due from Foreign Carriers	Net Settlements	Net Revenues	Average per Minute: Settlement Owed to Foreign Carriers for U.S. Billed Calls	Average per Minute: Settlement Due from Foreign Carriers for Foreign Billed Calls	Average per Minute: U.S. Carrier Net Revenues All Traffic
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	3,435	2,369	1,066	1,239	(1,130)	2,305	0.71	0.55	0.41
1986	3,891	2,802	1,089	1,387	(1,414)	2,476	0.72	0.56	0.39
1987	4,559	3,309	1,250	1,634	(1,675)	2,884	0.74	0.61	0.39
1988	5,507	3,868	1,640	1,840	(2,028)	3,480	0.75	0.62	0.41
1989	6,517	4,513	2,004	2,115	(2,398)	4,119	0.74	0.61	0.42
1990	7,626	5,079	2,547	2,317	(2,762)	4,863	0.70	0.60	0.42
1991	9,096	5,792	3,304	2,493 1/	(3,298)	5,798	0.64	0.49	0.42 2/
1992	10,179	5,945	4,234	2,601 1/	(3,344)	6,835	0.59	0.46	0.43 2/
1993	11,353	6,327	5,027	2,678 1/	(3,649)	7,704	0.56	0.43	0.44 2/
1994	12,255	6,947	5,308	2,658 1/	(4,289)	7,966	0.52	0.40	0.39 2/
1995	13,990	7,559	6,432	2,623 1/	(4,936)	9,054	0.48	0.35	0.39 2/
1996	14,079	8,206	5,873	2,560 1/	(5,645)	8,434	0.43	0.30	0.30 2/
1997	15,135	8,016	7,119	2,572 1/	(5,444)	9,691	0.35	0.26	0.30 2/
1998	14,154	6,985	7,169	2,512 1/	(4,473)	9,681	0.29	0.21	0.27 2/
1999	14,435	6,329	8,106	1,764 1/	(4,566)	9,869	0.22	0.15	0.25 2/

Note: Data are for traffic between domestic U.S. points and foreign points.

1/ Includes net settlement receipts for transiting traffic.

2/ Includes transiting traffic.

Source: Industry Analysis Division, *Trends in the International Telecommunications Industry; Section 43.61 International Telecommunications Data.*

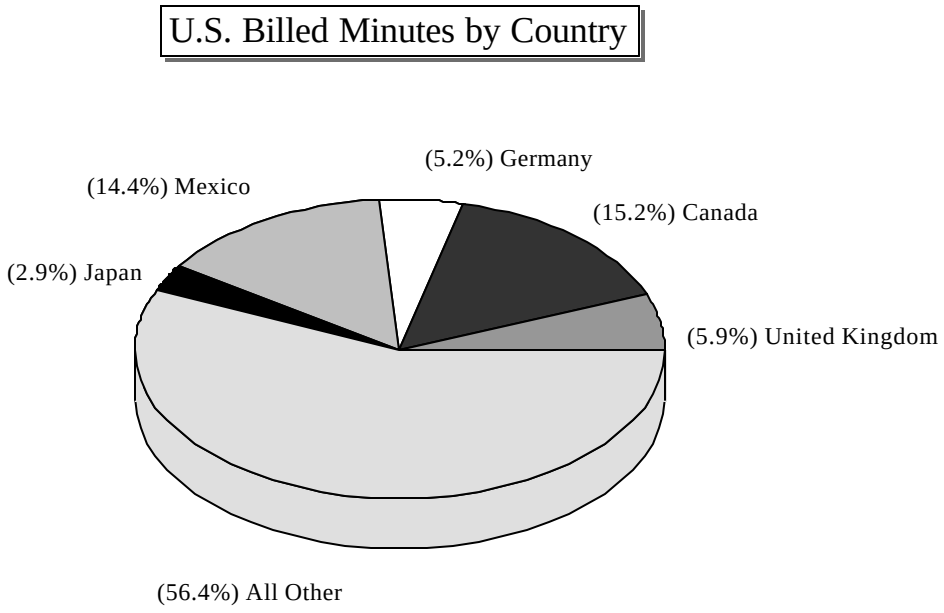
Table 6.3
International Message Telephone Service for 1999
(Figures Rounded to the Nearest Million)

Region of the World 1/	Traffic Billed in the United States					Traffic Billed in Foreign Countries				Total U.S. Carrier Retained Revenues
						Originating or Terminating in the United States			Transiting	
	Number of Messages	Number of Minutes	U.S. Carrier Revenues	Owed to Foreign Carriers	Retained Revenues	Number of Messages	Number of Minutes	Due from Foreign Carriers	Retained Revenues	
Africa	180	907	$645	$401	$244	26	110	$59	$18	$321
Asia	837	4,860	3,089	1,723	1,366	223	983	275	13	1,655
Caribbean	300	1,909	956	643	313	88	351	124	7	443
Eastern Europe	163	1,074	593	266	327	25	108	34	6	367
Middle East	171	933	664	388	276	91	354	113	12	401
North and Central America	1,678	9,219	3,843	1,487	2,356	1,316	5,157	526	22	2,904
Oceania	110	589	356	150	205	60	537	50	12	268
South America	402	2,050	1,271	618	653	101	455	154	11	818
Western Europe	1,428	6,693	3,028	652	2,376	740	2,611	227	104	2,707
Other Regions	1	4	13	15	(3)	*	6	1	*	(2)
Total for Foreign Points	5,249	28,132	14,435	6,329	8,106	2,661	10,631	1,558	205	9,869
Total for U.S. Points	20	106	21	13	8	8	42	5	*	13
Total for all International Points	5,269	28,238	$14,456	$6,342	$8,114	2,669	10,672	$1,563	$206	$9,883

* Denotes values that are less than half a million.

1/ The region totals include all traffic reported by carriers serving Alaska, Hawaii, Puerto Rico, and the conterminous United States, and include traffic between these points and offshore U.S. points such as Guam and the U.S. Virgin Islands. This traffic shown separately as the total for U.S. points, and also is included in the total for all international points. The total for all international points also includes traffic originating in American Samoa and the Northern Mariana Islands, which are excluded from the region totals.

Chart 6.1



Source: Industry Analysis Division, *Section 43.61 International Telecommunications Data*.

Table 6.4
U.S. Billed Revenues of Facilities-Based and Facilities-Resale Carriers in 1999 1/
(Revenue Amounts Shown in Millions)

	International Service			Total International Billed Revenues
	Telephone	Private Line	Telex, Telegraph, and Other Miscellaneous	
ABS-CBN Telecom North America, Inc.	$6			$6
AM Telecom, LLC				
American Samoa Telecomm. Authority	2			2
American Tower Corp.		$46		46
Andrew Telecom, Inc.	1	2		2
AT&T Corp.	6,755	556	$33	7,344
BellSouth Corporation	8			8
Communication TeleSys. Int'l./WorldxChange	25			25
COMSAT Corporation		46		46
DirectNet Telecommunications	10	2		12
Energis (Switzerland) AG		1		1
Far East Gateway, Inc.	*			*
Fedex International Transmission Corporation		*		*
GE American Communications, Inc.		6		6
Geocomm Corporation		*		*
GTE Corporation	51	4	*	55
Harris Corporation	*			*
IDT Corporation	23			23
IMPSAT USA, Inc.		16		16
International Exchange Networks, Ltd.	2	15		16
Iridium North America			10	10
IT&E Overseas, Inc.	19	3		22
Japan Telecom America, Inc.	3	*		3
KDD America, Inc.	2	4		6
KPN-INS, Inc.	16			16
LC Communications - International Telecom Inc.	3			3
Level 3 Communications, LLC		1		1
Local Communications Network, Inc.		4		4
Madge.web International (C.I.) Limited		4		4
Masatepe Communications, U.S.A., L.L.C.	1			1
MCI WorldCom, Inc.	5,056	372	25	5,453
Medley International Teleport, Inc.			1	1
Melbourne International Comm., Ltd.	*	2		3
Metromedia Fiber Network Services, Inc.		1		1
Mobile Satellite Communications, Inc.		1	*	1
Norlight Telecommunications, Inc.		*		*
ntta.com, inc.		3		3
Pacific Gateway Exchange, Inc.	60	*		60
PanAmSat Comm. Carrier Services, Inc.		*		*
Primus Telecommunications, Inc.	241			241
PSO, Inc. d/b/a Canal Uno			*	*
RSL Communications, Ltd.	107	*		108
Satellite Communication Systems, Inc.	*	3		3
SBC Communications, Inc.	2	2		4
Sprint	1,379	120	16	1,514
Star Telecommunications, Inc.	140			140
Startcomm Corporation	*			*
Startec Global Communications Corp.	75			75
Telecomunicaciones Ultramarinas-Puerto Rico		1		1
Telefonica Larga Distancia, Inc. (TLD)	19	2		21
Telstra Incorporated	*			*
TRICOM USA, Inc.	9			9
V-SAT Telecom, Inc.	*	*		*
Viatel, Inc.	212			212
Williams Communications, Inc.			5	5
World Access (FaciliCom International L.L.C.)	276			276
Total All Carriers 2/	$14,506	$1,216	$89	$15,812

* 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 revenues for American Samoa, Guam, the Northern Mariana Islands, and the U.S. Virgin Islands. Other tables in this section exclude this traffic. The data shown in this table include $50 million of revenues billed in these points as well as $21 million of revenues for calls between the domestic United States and these points.

Source: Industry Analysis Division, *Section 43.61 International Telecommunications Data.*

Table 6.5
Top Providers of Pure Resale International MTS in 1999

	Number of Messages	Number of Minutes	U.S. Carrier Revenues	Percent of Total IMTS Resale Revenues
Access Authority, Inc.	9,762,704	69,902,160	$20,870,738	0.46 %
ACS Systems, Inc. d.b.a LD Exchange.com	44,781,532	203,974,633	58,847,458	1.30
ALLTEL Corporation	1,459,787	10,844,746	5,451,108	0.12
AT&T Corp.	141,932,631	884,898,390	254,016,193	5.61
BellSouth Corporation	34,045,495	106,471,859	28,799,468	0.64
Broadwing Companies	56,820,588	220,064,637	51,128,611	1.13
Business Telecom, Inc. (BTI)	9,102,584	45,516,432	12,553,650	0.28
CapRock Telecommunications Corporation	25,518,740	176,080,786	43,391,366	0.96
Capsule Communications d.b.a. US WATS, Inc.	10,394,537	29,554,920	8,751,116	0.19
Communication TeleSystems Int'l., d/b/a CTS and WorldxChange	150,245,283	1,032,966,114	192,876,638	4.26
DirectNet Telecommunications	50,822,341	272,088,214	75,924,324	1.68
eGlobe	3,148,536	30,418,884	7,549,525	0.17
Elephant Talk, Inc.	5,100,331	61,203,977	20,080,033	0.44
EqualNet Corporation	1,244,525	24,890,502	7,778,282	0.17
Global Crossing Telecommunications, Inc.	70,554,799	285,041,392	232,194,464	5.13
Globalcom, Inc.	1,222,766	24,455,318	7,642,287	0.17
GTE	26,143,969	171,350,567	151,444,931	3.34
Heritage Communications Corporation	8,105,820	84,071,750	9,510,190	0.21
Intellicall Operator Services, Inc., d/b/a ILD	1,559,620	16,696,575	5,571,310	0.12
Intermedia Communications, Inc.	1,491,609	29,832,176	9,322,555	0.21
Interoute Telecommunications, Inc.incl. American Telecom, Inc.	10,604,886	147,036,505	33,525,465	0.74
Lightyear Communications, Inc.	9,014,712	36,347,332	14,261,265	0.31
McLeodUSA	7,075,098	25,276,847	8,952,586	0.20
Netmoves Corp.	8,435,329	15,066,065	8,589,085	0.19
NET-tel Corporation	2,907,033	58,140,659	18,168,956	0.40
Network Plus, Inc.	56,781,157	181,699,704	62,751,000	1.39
NOS Communications, Inc.	9,447,895	76,807,277	26,239,729	0.58
Progress International, L.L.C. (Progress)	4,297,747	28,365,131	7,341,038	0.16
Qwest Communications Corporation incl. LCI International	108,301,660	492,344,044	177,850,185	3.93
Rapid Link USA, Inc.	20,955,533	180,068,686	24,240,358	0.54
RSL COM U.S.A., Inc.	78,967,849	579,213,182	126,721,682	2.80
SBC Communications, Inc. incl. SNET and CCPR Services	37,098,762	125,668,884	70,706,293	1.56
Sprint	102,531,423	533,332,140	243,736,675	5.38
Star Telecommunications, Inc. incl. PT-1	601,503,888	4,135,593,245	922,797,050	20.38
Startec Global Communications Corporation incl. PCI Com.	7,991,148	59,762,003	20,495,290	0.45
Talk.com Holding Corp.	10,631,048	212,620,960	66,444,050	1.47
Teleglobe Companies incl Excel and Long Distance Wholesale Club	30,155,007	268,579,480	164,506,371	3.63
Teligent	26,667,030	50,003,799	7,752,479	0.17
U S West Communications, Inc.	6,239,560	124,791,200	38,997,250	0.86
United States Cellular Corporation	20,693,200	37,522,689	17,024,260	0.38
URSUS Telecom Corporation	5,201,718	19,096,929	12,547,739	0.28
USA Global Link, Inc.	6,369,622	32,541,627	10,526,082	0.23
USC Telecom, Inc.	2,042,191	40,843,814	12,763,692	0.28
VarTec Telecom, Inc.	17,583,515	67,676,456	62,434,785	1.38
Verizon Wireless	56,536,041	211,282,250	49,806,763	1.10
VoiceStream Wireless Corporation incl. Omnipoint Corporation	2,899,603	7,793,712	5,624,342	0.12
Winstar Communications, Inc.	3,053,257	10,767,053	5,378,260	0.12
Working Assets Long Distance	2,862,837	23,551,832	15,121,203	0.33
World Access Telecommunications Group, Inc.	211,462,004	1,238,406,098	329,380,477	7.28
WorldCom, Inc.	387,182,338	1,858,724,000	618,211,602	13.65
Total for 329 Carriers Not Shown Above 1/	84,074,165	389,107,995	140,937,100	3.11
Total for all Reporting Carriers	2,593,025,453	15,048,355,630	$4,527,537,359	100.00 %

1/ Data are consolidated for affiliated carriers. A total of 379 companies made a total of 451 filings. The 50 companies shown in the table represent 85 filings.

Source: Industry Analysis Division, *Section 43.61 International Telecommunications Data.*

7 Lifeline and LinkUp Programs

In 1984, the FCC, in conjunction with the states and local telephone companies, established a Lifeline program designed to promote universal service by providing low-income individuals with monthly discounts on the monthly cost of telephone service. In 1987, the FCC adopted LinkUp America, a program designed to help low-income households pay the initial costs of commencing service. In June 2000, the Commission further expanded the Lifeline and LinkUp programs to address the needs of those living on tribal lands.

The LinkUp America program, which supports affordable connection to the network, has added 10.6 million telephone subscribers since 1987. In 2000, an estimated 5.9 million subscribers paid reduced local rates under the Lifeline program.

The Commission's rules are designed to satisfy the 1996 Telecommunications Act which mandates "affordable" rates for "low-income consumers" in all regions of the nation. The rules also make the contribution and distribution of low-income support competitively and technologically neutral by requiring equitable and nondiscriminatory contributions from all providers of interstate telecommunications services, and by allowing all eligible telecommunications carriers to receive support for offering Lifeline and LinkUp service.

1. Lifeline and LinkUp Support

In states that provide state Lifeline support, Lifeline and LinkUp are available to all subscribers who meet those state standards. Although states have some latitude in selecting means tests, state commissions must establish narrowly targeted qualification criteria that are based solely on income or factors directly related to income for its low-income residents to be eligible for Lifeline and LinkUp. In addition, a state with eligible residents of tribal lands must ensure that its qualification criteria are reasonably designed to apply to eligible residents of tribal lands within the state. To receive Lifeline and LinkUp in a state that does not mandate state Lifeline support, consumers must certify that they participate in 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 subscribers living on tribal lands qualify to receive federal Lifeline support if: (1) they qualify under state criteria in a state that provides Lifeline support; (2) they certify that they receive benefits from one of the five federal programs listed above; or (3) they 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).

2. Lifeline Support

Under the Commission's rules, there are four tiers of federal Lifeline support. The first tier represents a waiver of the federal subscriber line charge, which may range from $3.50 to $5.00 per month. All eligible subscribers receive first tier support. Second tier support is a $1.75 per month reduction in the basic local rate, and it is available if all relevant non-federal regulatory authorities approve such a reduction. (All fifty states have approved.)

The third tier of federal support is based on the amount of additional state support mandated by the relevant state or otherwise provided by carriers. Federal support is available to match one half of the non-federal support provided, up to a maximum of $1.75 in federal support, assuming that the carrier has all necessary approvals to pass on the full amount of this total support in discounts to subscribers.

Eligible subscribers living on tribal lands also qualify to receive a fourth tier of Lifeline support if they meet the eligibility standards described above. Tier four support provides up to an additional $25 per month towards reducing basic local service rates. This enhanced support should bring basic monthly rates down to $1 for most Lifeline customers on tribal lands.

3. LinkUp Support

The Commission's LinkUp program provides qualified low-income individuals with a federally-financed 50% discount (up to a maximum $30 discount) on initial connection charges. These subscribers also may choose to schedule deferred payments of up to $200 over a one-year period, with the customary interest charges paid by federal support.

In addition, eligible residents of tribal lands may receive support to fully cover any charges between $60 and $130, representing up to a maximum of $100 in discounts on initial connection charges of $130 or more.

4. Services

Basic service must include, at a minimum: single-party service, voice-grade access to the public switched telephone network, Dual Tone Multifrequency signaling or its functional digital equivalent, access to emergency services, access to operator services, access to interexchange service, access to directory assistance, and toll limitation. The federal program compensates eligible telecommunications carriers for toll limitation based on the carrier's incremental cost of providing toll-limitation services (TLS).

The FCC monitors subscriber participation and telephone usage to determine program benefits and costs. Historical tables for subscribership and carrier payments by state can be downloaded from the *Monitoring Report's* section of the **FCC-State Link** web site, <www.fcc.gov/ccb/stats>.

Table 7.1 reports Lifeline monthly support by state or jurisdiction as of April 2001. The table shows 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 7.1 indicates both the federal and state combined "minimum" local rate reduction. This table does not reflect changes in support that resulted from the implementation of the *CALLS* order.

Table 7.2 reports annual historical Lifeline subscribership data by state or jurisdiction for years 1989 through 2000. Historical data from the inception of the program in 1985 through 1988 may be found on the *Monitoring Report's* section of the **FCC-State Link** web site as mentioned above.

Table 7.3 reports annual historical LinkUp subscribership data by state or jurisdiction for years 1989 through 2000. LinkUp program participation was first certified in 1987. Historical data for 1987 and 1988 are available in the *Monitoring Report's* section of the **FCC-State Link** web site as mentioned above.

Table 7.4 reports annual historical Lifeline payments to carriers in each state or jurisdiction and shows total reimbursements to each state or jurisdiction. The report provides Lifeline support totals for payments made to subscribers through local rate discounts. The payments shown in these tables include TLS and PICC data; however, these tables do not include state or local rate contributions.

Table 7.5 reports annual historical data for the LinkUp connection assistance payments to carriers in each state or jurisdiction. The LinkUp program includes connection discounts reflected in the reimbursements to local carriers.

Table 7.6 reports low-income support, by state or jurisdiction, for Lifeline and LinkUp payments between January 1998 and December 2000. Total carrier payments data include local rate reductions for the presubscribed interexchange carrier charges (PICCs), and the carrier's incremental cost of providing toll-limitation services in each state or jurisdiction. American Indian and Native American tribal data are also reported in this table showing the 2000 data. Data are not available for previous years due to the October 2000 implementation of $1.00 rate. Data will appear only for states where eligible subscribers living on tribal lands qualify to receive low-income support.

Table 7.1
Lifeline Monthly Support by State or Jurisdiction
(As of April 2001)

State or Jurisdiction	Basic Federal Support	Additional State Support	Federal Match	Total Federal Support	Total Federal and State Support
Alabama	$6.10	$3.50	$1.75	$7.85	$11.35
Alaska	6.10	3.50	1.75	7.85	11.35
American Samoa	6.10	0.00	0.00	6.10	6.10
Arizona	6.10	3.50	1.14	7.24	10.74
Arkansas	6.10	0.00	0.00	6.10	6.10
California	6.10	3.50	1.75	7.85	11.35
Colorado	6.10	3.50	1.75	7.85	11.35
Connecticut	6.10	1.17	0.58	6.68	7.85
Delaware	6.10	0.00	0.00	6.10	6.10
District of Columbia	6.10	3.50	1.75	7.85	11.35
Florida	6.10	3.50	1.75	7.85	11.35
Georgia	6.10	3.50	1.75	7.85	11.35
Guam	6.10	3.50	1.75	7.85	11.35
Hawaii	6.10	0.00	0.00	6.10	6.10
Idaho	6.10	3.50	1.75	7.85	11.35
Illinois	6.10	1.50	0.75	6.85	8.35
Indiana	6.10	0.00	0.00	6.10	6.10
Iowa	6.10	0.00	0.00	6.10	6.10
Kansas	6.10	3.50	1.75	7.85	11.35
Kentucky	6.10	3.50	1.75	7.85	11.35
Louisiana	6.10	0.00	0.00	6.10	6.10
Maine	6.10	3.50	1.75	7.85	11.35
Maryland	6.10	3.50	1.75	7.85	11.35
Massachusetts	6.10	6.00	1.75	7.85	13.85
Michigan	6.10	2.00	1.00	7.10	9.10
Minnesota	6.10	0.00	0.00	6.10	6.10
Mississippi	6.10	3.50	1.75	7.85	11.35
Missouri	6.10	0.00	0.00	6.10	6.10
Montana	6.10	3.50	1.75	7.85	11.35
Nebraska	6.10	3.50	1.75	7.85	11.35
Nevada	6.10	3.50	1.75	7.85	11.35
New Hampshire	6.10	0.00	0.00	6.10	6.10
New Jersey	6.10	0.00	0.00	6.10	6.10
New Mexico	6.10	3.50	1.75	7.85	11.35
New York	6.10	3.50	1.75	7.85	11.35
North Carolina	6.10	3.50	1.75	7.85	11.35
North Dakota	6.10	3.50	1.75	7.85	11.35
Northern Mariana Islands	6.10	0.00	0.00	6.10	6.10
Ohio	6.10	0.00	0.00	6.10	6.10
Oklahoma	6.10	1.17	0.58	6.68	7.85
Oregon	6.10	3.50	1.75	7.85	11.35
Pennsylvania	6.10	2.50	1.25	7.35	9.85
Puerto Rico	6.10	0.00	0.00	6.10	6.10
Rhode Island	6.10	3.50	1.75	7.85	11.35
South Carolina	6.10	3.50	1.75	7.85	11.35
South Dakota	6.10	0.00	0.00	6.10	6.10
Tennessee	6.10	3.50	1.75	7.85	11.35
Texas	6.10	3.50	1.75	7.85	11.35
Utah	6.10	3.50	1.75	7.85	11.35
Vermont	6.10	3.50	1.75	7.85	11.35
Virginia	6.10	3.50	1.75	7.85	11.35
Virgin Islands	6.10	7.05	1.75	7.85	14.90
Washington	6.10	3.50	1.75	7.85	11.35
West Virginia	6.10	2.00	1.00	7.10	9.10
Wisconsin	6.10	1.17	0.58	6.68	7.85
Wyoming	6.10	3.50	1.75	7.85	11.35

Source: Universal Service Administrative Company (USAC).

Table 7.2
Lifeline Assistance - Subscribers by State or Jurisdiction

State or Jurisdiction	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
Alabama	0	0	0	0	0	0	2,648	11,052	14,346	17,201	18,676	21,488
Alaska	0	0	0	0	0	887	1,445	1,684	1,761	2,530	4,321	8,897
American Samoa	0	0	0	0	0	0	0	0	0	156	427	657
Arizona	5,959	6,723	6,214	5,748	7,587	9,146	9,820	10,679	9,438	21,461	22,118	25,264
Arkansas	6,262	6,703	7,295	7,479	7,370	6,859	7,988	9,730	8,926	8,870	8,843	9,228
California	1,467,859	1,578,458	1,792,884	2,000,234	2,327,740	2,534,160	2,817,982	3,032,960	3,000,571	3,105,855	3,157,706	3,196,661
Colorado	0	9,897	17,871	20,110	18,814	18,136	16,992	22,195	22,452	21,950	23,995	26,644
Connecticut	0	0	0	0	15,294	50,510	62,982	62,610	61,683	59,547	61,437	64,745
Delaware	0	0	0	0	0	0	0	0	0	368	606	756
District of Columbia	2,964	2,894	2,866	5,422	12,344	11,572	10,252	9,888	7,580	9,404	10,593	11,236
Florida	0	0	0	0	0	61,442	108,431	134,258	129,723	131,749	129,980	134,263
Georgia	0	0	31,681	58,497	67,112	72,548	79,545	79,606	75,341	73,660	74,825	73,037
Guam	0	0	0	0	0	0	0	0	0	313	905	2,033
Hawaii	6,378	6,081	5,950	5,862	6,005	6,200	6,444	6,731	6,465	9,008	12,590	15,381
Idaho	7,861	8,186	8,411	8,149	8,212	7,090	7,347	7,526	7,408	6,907	14,780	19,696
Illinois	0	0	0	0	26	0	0	0	0	29,104	49,347	57,821
Indiana	0	0	0	0	0	0	0	0	0	12,439	19,058	19,471
Iowa	0	0	0	0	0	0	0	0	0	2,460	6,105	11,832
Kansas	0	0	0	0	0	0	0	0	0	4,260	5,591	8,540
Kentucky	26	0	0	0	0	0	0	0	0	5,044	25,040	39,550
Louisiana	0	0	0	0	0	0	0	0	0	5,838	10,435	15,476
Maine	33,308	44,392	53,020	63,411	70,029	68,482	62,949	61,177	63,553	63,407	67,401	75,186
Maryland	2,930	5,465	5,203	5,395	5,228	5,226	4,663	4,028	3,964	3,784	3,885	3,948
Massachusetts	0	87,285	131,635	143,216	160,221	165,723	167,182	162,384	156,294	161,657	167,699	165,520
Michigan	41,121	66,053	96,044	116,398	130,586	138,870	135,599	131,786	129,337	129,208	132,432	141,536
Minnesota	45,625	57,529	57,075	51,151	55,380	59,431	51,089	48,494	47,575	49,073	54,787	54,717
Mississippi	0	0	2,153	2,405	4,493	8,438	9,717	9,282	8,321	10,471	13,370	16,694
Missouri	15,187	14,639	16,980	17,295	17,356	15,807	13,897	11,272	10,368	7,885	10,709	18,980
Montana	5,023	5,507	5,405	5,698	6,617	6,744	6,813	8,031	7,613	7,963	9,570	11,060
Nebraska	0	0	0	0	0	0	0	0	0	9,650	11,434	14,728
Nevada	4,497	5,702	5,748	6,339	7,528	8,927	9,408	8,472	9,284	3,438	10,551	17,486
New Hampshire	0	0	0	0	0	0	0	0	0	2,581	5,205	6,453
New Jersey	0	0	0	0	0	0	0	0	0	5,478	6,434	29,095
New Mexico	11,722	12,770	15,190	18,660	28,742	32,244	28,380	30,075	30,314	30,816	32,843	36,859
New York	271,386	327,808	393,684	456,174	522,684	592,705	705,871	756,657	698,267	703,001	657,267	586,742
North Carolina	15,852	14,996	15,812	21,208	23,496	23,446	22,791	23,086	22,595	29,640	44,434	62,475
North Dakota	0	10,037	10,610	10,664	10,029	9,411	8,657	7,146	7,369	10,895	11,968	13,196
Northern Mariana Is.	0	0	0	0	0	0	0	0	0	192	494	427
Ohio	15,420	14,885	15,712	33,450	44,801	47,126	54,706	58,392	60,366	69,358	109,202	167,212
Oklahoma	0	0	0	0	0	0	0	532	532	1,521	2,454	17,101
Oregon	22,330	21,551	23,064	25,229	28,305	30,475	35,820	34,804	31,213	27,953	28,934	30,371
Pennsylvania	0	0	0	0	0	0	0	4,797	7,114	23,202	40,168	48,644
Puerto Rico	0	0	0	0	0	0	0	0	0	10,168	16,895	17,720
Rhode Island	14,017	15,757	23,765	26,906	38,672	39,992	40,835	42,524	43,881	45,066	46,244	47,412
South Carolina	0	0	0	0	0	0	10,624	16,498	18,386	22,222	21,091	20,820
South Dakota	4,657	4,764	4,924	5,018	5,076	3,561	3,690	3,718	3,708	10,698	11,532	13,255
Tennessee	0	0	0	18,749	20,419	20,721	19,934	19,926	18,819	22,915	30,347	38,839
Texas	21,055	33,698	48,453	96,405	103,232	136,352	165,609	190,095	193,444	210,672	236,934	258,810
Utah	14,746	16,006	21,565	27,717	28,379	28,157	26,930	24,088	22,625	20,096	19,237	19,394
Vermont	17,013	18,044	20,661	21,895	22,973	24,322	25,624	24,791	25,356	26,475	28,464	29,740
Virgin Islands	0	0	0	0	316	594	253	296	471	567	402	511
Virginia	14,895	16,201	17,365	19,143	21,293	22,100	20,744	22,180	23,187	22,040	22,306	21,658
Washington	34,685	49,985	68,235	74,879	85,571	90,148	87,276	84,149	63,965	61,563	61,809	68,142
West Virginia	4,930	4,490	4,262	4,115	4,160	4,704	4,230	4,336	5,164	5,320	5,546	5,294
Wisconsin	31	7	54,137	55,829	54,576	59,744	58,071	50,714	50,894	42,514	59,331	62,715
Wyoming	0	0	416	1,366	1,271	1,119	818	776	864	1,113	1,337	1,363
Industry Total	2,107,739	2,466,513	2,984,290	3,440,216	3,971,937	4,423,119	4,914,056	5,233,425	5,110,537 1/	5,380,726	5,640,094 2/	5,886,779 2/

1/ Subscriber data was not actually collected in 1997. USAC used estimated number of subscribers for all states.

2/ Average number of subscribers reported for 1999 through 2000 for companies requesting reimbursement (including true-ups through March 2001). 99% of all eligible companies have reported to USAC for reimbursement at this time.

Source: Universal Service Administrative Company (USAC).

Table 7.3
LinkUp Assistance - Subscribers by State or Jurisdiction

State or Jurisdiction	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
Alabama	1,810	1,927	2,182	1,381	736	308	276	362	NA	2,277	1,590	1,462
Alaska	0	0	0	0	0	395	777	732	NA	917	982	752
American Samoa	0	0	0	0	0	0	0	0	NA	122	89	53
Arizona	138	416	206	88	257	367	387	906	NA	528	4,805	4,884
Arkansas	4,846	5,240	6,522	7,067	12,082	16,124	8,549	11,577	NA	8,183	5,395	3,270
California	0	180	0	0	0	0	0	0	NA	1,542,297	1,325,904	1,216,706
Colorado	0	585	1,749	1,614	1,257	859	593	2,216	NA	2,537	1,278	1,113
Connecticut	2,737	3,499	6,661	9,164	10,316	17,176	18,410	13,934	NA	8,938	6,829	4,442
Delaware	0	0	0	0	0	0	7	406	NA	132	62	48
District of Columbia	531	514	510	1,145	1,863	1,675	1,920	1,784	NA	26	28	3
Florida	3,924	3,342	3,824	4,690	2,811	2,290	1,639	3,831	NA	9,799	9,266	9,652
Georgia	0	0	13,052	28,108	21,446	20,753	20,656	15,368	NA	10,701	8,723	4,348
Guam	0	0	0	0	0	0	0	0	NA	201	703	787
Hawaii	87	905	1,326	1,708	2,047	2,746	3,989	3,276	NA	6,408	10,126	10,511
Idaho	64	240	362	396	465	658	571	671	NA	793	1,231	2,169
Illinois	3,963	23,213	11,721	0	21,278	24,365	15,794	10,077	NA	12,304	12,934	12,949
Indiana	1,681	1,475	2,747	4,939	4,782	5,010	3,001	4,318	NA	4,605	5,507	5,978
Iowa	5,997	6,228	5,522	5,221	4,784	4,382	3,249	2,575	NA	2,093	1,449	1,158
Kansas	613	722	582	635	557	493	435	421	NA	1,385	1,483	3,014
Kentucky	6,951	6,633	8,931	11,660	10,963	11,819	13,902	14,173	NA	7,550	9,815	8,368
Louisiana	17,186	28,356	18,693	12,992	7,053	4,943	3,275	1,571	NA	3,911	1,358	989
Maine	7,244	10,128	12,132	5,576	14,450	19,363	14,798	20,783	NA	21,640	25,887	26,133
Maryland	243	4,985	3,540	3,168	2,772	2,837	2,613	2,091	NA	1,264	908	637
Massachusetts	0	8,569	4,366	4,661	17,390	19,464	18,601	11,727	NA	5,864	10,036	6,795
Michigan	7,572	23,675	36,639	40,339	36,512	34,640	26,198	20,097	NA	18,587	19,501	19,215
Minnesota	734	949	787	427	443	1,871	834	832	NA	1,058	521	354
Mississippi	1,558	1,663	1,369	932	2,371	4,236	4,151	2,974	NA	1,819	1,224	952
Missouri	2,067	1,105	840	766	735	1,633	742	627	NA	4,777	1,150	6,510
Montana	1,624	1,607	1,157	1,181	1,291	1,253	988	1,909	NA	1,676	1,539	2,014
Nebraska	438	526	688	878	650	522	496	331	NA	707	1,181	1,947
Nevada	79	324	487	562	866	685	708	640	NA	117	3,284	3,615
New Hampshire	351	407	1,009	1,544	1,805	1,570	1,312	1,246	NA	1,315	1,374	827
New Jersey	452	524	580	696	565	567	342	237	NA	1,541	474	1,086
New Mexico	2,461	3,173	4,178	5,848	9,963	12,600	12,277	9,171	NA	7,894	7,552	3,134
New York	44,221	188,182	241,477	290,856	238,856	290,922	327,123	346,089	NA	199,181	53,961	41,660
North Carolina	4,661	2,100	2,348	2,175	1,762	1,207	841	569	NA	2,408	3,237	3,474
North Dakota	499	313	373	337	398	355	355	220	NA	1,446	1,026	1,115
Northern Mariana Islands	0	0	0	0	0	0	0	0	NA	1,475	3,891	2,704
Ohio	11,838	11,157	18,239	37,191	46,028	40,071	29,338	23,196	NA	19,058	25,880	47,801
Oklahoma	0	728	1,582	1,271	1,281	1,087	1,040	1,260	NA	3,121	1,496	3,827
Oregon	1,352	3,664	3,657	4,588	6,335	7,144	8,043	7,862	NA	5,901	4,863	8,335
Pennsylvania	13,702	79,532	85,695	97,585	94,897	100,651	99,105	92,128	NA	63,713	54,251	28,728
Puerto Rico	2,519	5,523	4,308	3,886	3,138	3,455	4,116	3,640	NA	3,870	1,783	1,210
Rhode Island	584	1,023	960	1,483	2,002	2,808	2,728	2,100	NA	1,766	1,565	1,375
South Carolina	3,037	1,535	2,265	1,897	2,113	2,053	1,495	1,158	NA	2,270	2,052	1,699
South Dakota	1,038	542	443	439	362	451	369	221	NA	2,330	1,698	2,083
Tennessee	6,613	3,278	5,418	4,126	5,203	5,004	3,561	3,684	NA	4,190	6,023	5,139
Texas	15,553	22,587	30,915	41,381	44,184	66,010	72,210	75,708	NA	121,794	121,925	117,985
Utah	1,043	387	1,781	6,286	4,843	3,758	3,525	5,584	NA	2,880	2,061	1,242
Vermont	0	1,349	2,073	2,104	2,217	2,485	2,074	1,396	NA	1,366	1,500	2,384
Virgin Islands	0	0	0	0	38	111	35	13	NA	199	106	100
Virginia	5,957	9,598	14,642	14,523	15,701	15,797	15,847	14,428	NA	10,261	7,702	4,619
Washington	0	3,787	30,134	34,413	37,419	43,429	41,462	45,284	NA	27,780	27,456	29,003
West Virginia	481	327	363	322	586	577	657	997	NA	488	865	759
Wisconsin	17,555	36,444	40,515	40,942	37,380	34,903	28,209	21,937	NA	25,933	27,187	23,629
Wyoming	500	169	95	94	109	82	56	17	NA	21	50	199
Industry Total	206,504	513,335	639,645	743,285	737,362	837,964	823,679	808,354	NA 1/	2,195,417 2/	1,834,766 2/	1,694,945 2/

NA - Not Available.

1/ Subscriber data was not actually collected in 1997.

2/ Subscribers are reported for January through December 2000 for companies requesting reimbursement. Only 95% of all eligible companies have reported at this time.

Source: Universal Service Administrative Company (USAC).

Table 7.4

Lifeline Assistance Annual Payments by State or Jurisdiction

State or Jurisdiction	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	Cumulative Total
Alabama	$0	$0	$0	$0	$0	$0	$56,744	$372,371	$602,521	$1,449,303	$1,590,349	$1,907,509	$5,978,797
Alaska	0	0	0	0	0	24,330	55,101	69,116	73,941	205,701	383,225	582,693	1,394,107
American Samoa	0	0	0	0	0	0	0	0	0	8,167	26,893	41,388	76,448
Arizona	117,744	136,518	127,419	144,290	188,216	307,699	346,595	383,752	396,391	1,606,287	1,720,671	2,045,764	7,521,346
Arkansas	251,116	276,742	301,087	316,837	310,979	295,293	301,808	362,497	374,881	585,933	594,392	596,488	4,568,053
California	29,082,569	32,228,252	36,072,671	40,381,514	47,512,283	52,461,134	57,460,181	62,231,440	63,011,988	244,372,788	249,506,436	264,488,604	1,178,809,860
Colorado	405,491	173,248	751,056	843,519	802,077	775,750	727,801	829,354	942,972	1,861,235	2,077,456	2,407,587	12,597,546
Connecticut	0	0	0	0	57,033	1,493,569	2,586,972	2,660,608	2,590,702	3,660,711	4,344,924	4,895,998	22,290,517
Delaware	0	0	0	0	0	0	0	0	0	23,198	38,185	51,796	113,179
District of Columbia	112,180	99,980	90,500	128,348	312,684	429,396	313,998	293,322	318,368	769,414	876,337	952,218	4,696,745
Florida	0	0	0	0	0	1,290,282	4,396,137	5,191,213	5,448,368	10,368,040	10,962,971	11,943,361	49,600,372
Georgia	0	0	794,088	2,247,925	2,764,461	3,003,777	3,315,787	3,383,638	3,164,320	6,187,332	6,313,688	6,461,239	37,636,255
Guam	0	0	0	0	0	0	0	0	0	18,061	68,177	170,743	256,981
Hawaii	203,052	198,943	186,490	182,555	190,166	196,554	202,107	273,471	271,524	551,150	805,625	1,074,352	4,335,989
Idaho	328,732	347,270	358,515	355,127	349,344	328,583	321,830	320,845	311,156	576,367	1,306,602	1,823,306	6,727,677
Illinois	0	18	414,457	0	0	0	0	0	0	1,856,606	3,285,371	4,419,690	9,976,142
Indiana	0	0	0	0	0	0	0	0	0	795,195	1,231,284	1,205,989	3,232,468
Iowa	0	0	0	0	0	0	0	0	0	161,566	409,513	751,517	1,322,596
Kansas	0	0	0	0	0	0	0	0	38	340,226	474,877	779,530	1,594,671
Kentucky	0	0	0	0	0	0	0	0	0	315,271	2,128,575	3,482,650	5,926,496
Louisiana	0	0	0	0	0	0	0	0	0	379,066	681,067	1,071,618	2,131,751
Maine	1,324,559	1,720,591	2,165,485	2,605,855	2,902,206	2,959,351	2,652,482	2,737,366	2,669,234	5,338,338	5,711,223	6,750,824	39,537,514
Maryland	120,042	220,346	216,947	213,303	221,574	218,052	211,819	180,079	166,473	317,814	326,288	352,177	2,764,914
Massachusetts	0	2,552,254	5,126,895	5,996,798	6,598,801	7,064,939	7,146,757	6,952,050	6,564,336	13,628,125	14,207,842	14,821,315	90,660,112
Michigan	433,487	1,348,992	2,163,526	2,742,396	3,081,708	3,351,293	3,288,234	3,203,533	3,104,079	9,761,204	10,059,023	11,399,192	53,936,667
Minnesota	1,658,815	2,256,567	2,416,108	2,258,780	2,295,299	2,332,178	2,170,211	2,080,597	1,998,168	3,534,194	3,471,610	3,650,772	30,123,299
Mississippi	0	0	16,962	29,506	109,841	339,633	399,633	401,106	349,468	887,098	1,136,422	1,489,290	5,158,959
Missouri	633,736	620,605	648,102	711,138	699,011	653,539	590,212	486,547	435,466	551,102	754,501	1,466,029	8,249,988
Montana	192,095	234,696	228,885	234,046	266,870	281,441	290,312	328,627	319,745	677,995	824,313	932,381	4,811,406
Nebraska	0	0	0	0	0	0	0	0	0	619,118	820,980	1,225,081	2,665,179
Nevada	113,400	122,289	134,038	147,595	172,658	194,440	206,654	196,662	215,016	214,714	754,020	1,319,500	3,790,986
New Hampshire	0	0	0	0	0	0	0	0	0	162,362	331,956	443,404	937,722
New Jersey	0	0	0	0	0	0	0	0	0	343,979	404,857	2,026,134	2,774,970
New Mexico	465,455	528,392	615,450	744,810	1,167,110	1,357,828	1,216,787	1,264,979	1,273,169	2,620,225	2,875,410	3,170,204	17,299,819
New York	8,917,964	11,253,994	15,649,754	18,295,637	20,970,135	23,844,744	27,188,016	30,924,772	29,327,216	54,776,809	51,473,090	48,410,705	341,032,836
North Carolina	681,469	637,444	647,593	875,130	962,905	1,003,092	922,046	972,403	948,969	2,443,601	3,755,587	5,637,945	19,488,184
North Dakota	159	299,829	438,302	447,187	421,896	412,255	378,733	333,434	309,496	876,274	960,538	1,016,245	5,894,348
Northern Mariana Islands	0	0	0	0	0	0	0	0	0	10,659	30,391	29,576	70,626
Ohio	643,659	643,996	650,084	1,304,827	1,963,353	2,293,070	2,409,791	2,366,359	2,535,383	5,390,963	8,113,627	13,118,285	41,433,397
Oklahoma	0	0	0	0	0	0	0	10	900	106,526	173,816	800,828	1,082,080
Oregon	891,600	894,729	944,221	1,044,746	1,175,398	1,262,606	1,499,920	1,479,004	1,310,954	2,381,568	2,484,518	2,750,033	18,119,297
Pennsylvania	0	0	0	0	0	0	0	87,639	298,771	1,742,564	3,043,969	3,941,186	9,114,129
Puerto Rico	0	0	0	0	0	0	0	0	0	587,156	1,064,389	1,116,360	2,767,905
Rhode Island	571,349	643,660	960,213	1,111,414	1,487,776	1,693,628	1,713,982	1,772,985	1,843,008	3,776,998	3,898,361	4,191,937	23,665,311
South Carolina	0	0	0	0	0	0	264,326	647,296	772,226	1,825,532	1,735,670	1,776,712	7,021,762
South Dakota	190,399	201,953	207,281	211,499	214,402	160,110	156,115	152,834	155,737	674,584	742,425	875,153	3,942,492
Tennessee	0	0	0	506,187	844,079	881,488	837,524	841,342	790,409	1,874,811	2,527,805	3,385,607	12,489,252
Texas	800,535	1,120,002	1,736,759	3,576,193	4,181,609	5,335,092	6,723,118	7,776,103	8,124,667	17,624,701	20,341,821	23,137,460	100,478,060
Utah	381,945	609,049	874,025	1,161,879	1,203,870	1,208,738	1,179,200	1,057,483	950,263	1,699,274	1,665,098	1,771,270	13,762,094
Vermont	691,848	755,646	858,766	924,333	979,697	1,041,838	1,094,178	1,039,649	1,064,932	2,214,987	2,403,381	2,645,685	15,714,940
Virgin Islands	0	0	0	0	5,753	29,075	22,459	14,293	19,779	49,229	40,225	44,910	225,723
Virginia	599,744	669,972	704,087	782,585	907,400	920,012	912,437	911,374	973,851	1,789,384	1,860,517	1,910,157	12,941,520
Washington	858,824	1,474,869	2,199,086	2,524,658	2,997,455	2,966,094	2,813,846	2,743,597	2,686,537	4,182,773	4,962,458	6,131,336	36,541,533
West Virginia	206,163	192,927	181,082	175,309	188,356	206,594	190,638	176,422	216,891	367,974	383,484	393,823	2,879,663
Wisconsin	117	234	217,958	482,544	521,821	617,261	676,880	653,204	610,732	2,768,442	3,882,741	4,459,226	14,891,160
Wyoming	0	0	5,833	57,652	54,640	49,077	36,101	33,007	36,306	93,464	113,024	122,227	601,331
Industry Total	$50,878,248 1/	$62,464,007 1/	$79,103,725 1/	$93,766,122 1/	$109,082,866 1/	$123,283,835 1/	$137,277,472 1/	$148,186,383 1/	$147,579,351 1/	$422,006,158 1/	$446,161,998 1/	$487,867,009 2/	$2,307,657,174

1/ Payments are final and not subject to further adjustment.

2/ Dollars reported are for companies requesting reimbursement. Approximately 99% have reported at this time. Data include true-ups submitted through April 2001. Lifeline dollars for 1998, 1999, and 2000 include toll-limitation services (TLS) and presubscribed interexchange carrier charges (PICCs).

Source: Universal Service Administrative Company (USAC).

Table 7.5
LinkUp Assistance Annual Payments by State or Jurisdiction

State or Jurisdiction	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	Cumulative Total
Alabama	$36,757	$41,125	$47,246	$30,322	$16,881	$7,021	$5,467	$6,661	$9,738	$37,868	$28,882	$28,540	$296,508
Alaska	0	0	0	0	0	8,541	16,530	14,673	10,485	18,647	24,494	15,766	109,136
American Samoa	NA	NA	NA	NA	NA	NA	NA	NA	NA	3,660	2,670	1,590	7,920
Arizona	2,815	9,260	4,792	2,054	6,000	8,533	23,340	22,359	23,234	12,473	112,999	106,410	334,269
Arkansas	92,263	102,651	128,727	152,380	304,253	337,111	164,617	232,383	221,128	142,354	101,090	61,903	2,040,860
California	0	0	0	0	0	0	0	0	0	28,628,622	24,003,283	20,961,605	73,593,510
Colorado	0	15,586	47,146	43,867	34,417	15,065	10,498	38,773	48,230	44,545	22,506	19,572	340,205
Connecticut	51,674	66,848	125,749	169,970	205,974	386,459	414,224	313,522	256,225	201,089	153,651	99,947	2,445,332
Delaware	0	0	0	0	0	0	126	7,308	8,268	2,376	1,116	864	20,058
District of Columbia	8,955	7,909	7,848	17,611	27,500	22,288	27,760	27,102	27,399	400	430	46	175,248
Florida	85,917	76,242	82,224	113,225	69,296	73,744	88,707	100,275	87,753	196,450	188,233	202,121	1,364,187
Georgia	0	0	277,968	604,321	461,379	449,418	444,097	330,076	146,239	204,709	167,716	85,708	3,171,631
Guam	0	0	0	0	0	0	0	0	0	3,521	12,304	13,775	29,600
Hawaii	1,968	13,660	14,969	19,168	24,428	33,051	46,507	37,856	34,115	145,251	229,187	237,604	837,764
Idaho	839	4,136	5,860	6,407	7,418	10,578	8,985	9,861	18,754	11,539	16,029	31,130	131,536
Illinois	106,872	628,664	320,216	0	555,206	617,419	477,288	282,633	232,685	318,391	332,878	330,179	4,202,431
Indiana	36,987	35,646	63,398	119,317	112,484	117,045	71,478	40,189	58,703	103,940	127,536	173,754	1,060,477
Iowa	107,881	115,069	99,478	92,333	81,214	74,162	56,111	40,437	18,771	29,421	21,116	18,927	754,920
Kansas	11,367	14,320	10,914	11,530	10,673	9,573	8,141	8,429	35,655	26,737	28,662	58,456	234,457
Kentucky	168,846	174,698	191,793	245,518	233,258	262,990	263,666	274,776	175,728	143,852	186,399	156,138	2,477,662
Louisiana	490,741	838,721	551,215	386,163	210,409	147,015	76,603	38,121	15,288	74,074	26,208	20,876	2,875,434
Maine	160,899	222,351	271,175	120,532	321,595	430,941	327,363	461,108	522,810	477,470	574,103	580,616	4,470,963
Maryland	5,840	118,647	85,142	81,999	71,223	52,782	63,008	50,178	46,278	30,336	21,760	15,289	642,482
Massachusetts	0	140,028	76,355	86,415	322,410	366,427	344,862	217,417	131,948	108,720	186,067	123,288	2,103,937
Michigan	172,430	501,015	761,801	840,265	786,106	720,903	472,243	224,317	477,688	384,073	405,941	400,017	6,146,799
Minnesota	11,131	11,455	12,644	12,660	38,742	35,475	8,435	7,622	14,189	15,793	6,078	4,431	178,655
Mississippi	39,512	29,533	26,277	17,743	45,472	81,156	94,989	67,873	31,033	38,302	24,647	20,981	517,518
Missouri	42,064	19,760	14,615	17,047	27,775	23,702	12,190	10,308	9,880	83,766	18,640	116,109	395,856
Montana	35,833	35,615	25,154	25,074	26,475	19,726	13,413	24,502	24,304	22,356	20,819	29,283	302,554
Nebraska	6,996	7,964	11,267	15,382	11,950	9,001	6,892	5,253	4,391	9,542	17,312	28,993	134,943
Nevada	390	3,004	9,338	10,999	15,107	11,838	11,691	13,445	8,605	1,902	55,557	61,441	203,317
New Hampshire	7,107	8,510	21,420	36,328	44,199	42,146	32,147	30,530	31,583	26,155	26,750	16,111	322,986
New Jersey	9,232	10,755	12,054	14,502	11,745	11,814	8,106	4,995	3,844	33,071	10,043	22,951	153,112
New Mexico	61,605	79,198	107,467	152,371	304,961	262,693	131,859	137,238	128,193	116,668	114,304	44,316	1,640,873
New York	1,026,301	4,483,514	5,962,604	6,611,528	7,243,113	8,120,361	8,972,155	9,586,748	5,604,194	5,480,654	1,470,599	1,130,276	65,692,047
North Carolina	66,490	31,302	33,805	32,761	24,042	19,718	13,958	9,510	8,720	38,545	51,344	55,486	385,681
North Dakota	7,493	5,082	6,182	5,713	6,682	5,534	5,636	3,491	17,922	23,026	16,357	17,665	120,783
Northern Mariana Islands	0	0	0	0	0	0	0	0	0	5,887	11,435	8,879	26,201
Ohio	226,194	204,433	311,997	650,806	775,582	690,334	515,674	394,796	374,183	322,012	422,074	806,733	5,694,818
Oklahoma	0	15,826	35,077	27,986	28,251	23,936	20,142	22,082	33,908	47,878	30,464	80,619	366,169
Oregon	10,643	23,262	22,801	31,834	46,035	54,485	57,728	53,338	51,816	46,222	39,955	76,671	514,790
Pennsylvania	273,123	1,592,565	1,743,115	1,976,702	1,904,903	2,022,887	1,969,372	1,850,064	1,735,564	1,257,631	1,043,649	531,581	17,901,156
Puerto Rico	44,084	91,784	72,561	65,986	54,826	57,950	69,244	76,381	83,138	68,116	31,208	22,598	737,876
Rhode Island	8,498	14,527	13,634	21,059	28,427	38,416	45,309	35,531	25,226	29,878	26,478	23,267	310,250
South Carolina	62,420	38,303	34,894	36,759	40,434	38,405	30,035	21,851	19,639	42,591	39,047	32,120	436,498
South Dakota	18,167	9,368	7,755	7,685	6,349	5,641	4,614	2,765	2,257	29,490	22,426	30,466	146,983
Tennessee	137,758	73,824	62,690	69,673	86,711	85,071	89,617	60,589	22,082	78,322	108,680	106,034	981,051
Texas	424,313	636,839	591,565	811,837	825,340	1,258,838	1,371,343	1,632,153	1,517,075	2,244,255	2,325,072	2,257,220	15,895,850
Utah	18,515	6,870	31,614	111,578	85,963	35,478	32,798	74,404	53,213	36,078	25,804	15,404	527,719
Vermont	0	22,132	34,041	34,358	36,314	40,478	34,039	24,863	19,126	24,174	26,545	42,223	338,293
Virgin Islands	0	0	0	0	1,012	2,584	1,001	317	1,392	2,005	1,004	1,763	11,078
Virginia	122,944	173,149	267,462	289,381	323,486	248,128	292,190	269,695	267,013	183,002	141,017	86,434	2,663,901
Washington	1,179	59,277	467,920	532,652	561,632	668,199	693,528	676,482	623,757	417,353	424,733	494,540	5,621,252
West Virginia	8,050	7,002	7,878	7,366	11,983	16,145	15,119	14,508	16,102	8,966	12,814	10,024	135,957
Wisconsin	256,423	526,066	581,758	569,079	537,514	490,668	426,278	356,626	370,939	378,836	450,289	537,180	5,481,656
Wyoming	10,098	3,510	1,865	1,934	2,180	1,449	938	342	400	338	893	3,609	27,556
Industry Total	$4,479,614 1/	$11,351,005 1/	$13,705,470 1/	$15,342,180 1/	$17,019,329 1/	$18,573,322 1/	$18,392,061 1/	$18,246,756 1/	$13,710,810 1/	$42,463,332	1/ $33,991,297	2/ $30,459,529	2/ $237,734,705

NA - Not Available.

1/ Payments are final and are not subject to further adjustment.

2/ Dollars reported are for companies requesting reimbursement. Approximately 99% have reported at this time. Data includes true-ups through April 2001.

Source: Universal Service Administrative Company (USAC).

Table 7.6
Universal Service Payments
(January 1998 - December 1998)

State or Jurisdiction	Lifeline Non-Tribal	LinkUp Non-Tribal	TLS	PICCs	Total
Alabama	$1,430,879	$37,868	$2,119	$16,305	$1,487,171
Alaska	191,057	18,647	14,584	60	224,348
American Samoa	8,167	3,660	0	0	11,827
Arizona	1,591,648	12,473	13,621	1,018	1,618,760
Arkansas	579,956	142,354	2,837	3,140	728,287
California	241,532,455	28,628,622	2,077,337	762,996	273,001,410
Colorado	1,834,312	44,545	18,578	8,345	1,905,780
Connecticut	3,611,946	201,089	27,447	21,318	3,861,800
Delaware	23,198	2,376	0	0	25,574
District of Columbia	769,414	400	0	0	769,814
Florida	10,286,854	196,450	10,707	70,479	10,564,490
Georgia	6,129,384	204,709	8,052	49,896	6,392,041
Guam	18,061	3,521	0	0	21,582
Hawaii	551,000	145,251	0	150	696,401
Idaho	571,493	11,539	3,877	997	587,906
Illinois	1,838,320	318,391	995	17,291	2,174,997
Indiana	783,774	103,940	1,533	9,888	899,135
Iowa	148,518	29,421	11,232	1,816	190,987
Kansas	337,249	26,737	993	1,984	366,963
Kentucky	305,764	143,852	4,200	5,307	459,123
Louisiana	366,776	74,074	1,433	10,857	453,140
Maine	5,299,276	477,470	19,660	19,402	5,815,808
Maryland	317,814	30,336	0	0	348,150
Massachusetts	13,572,243	108,720	0	55,882	13,736,845
Michigan	9,678,929	384,073	8,773	73,502	10,145,277
Minnesota	3,530,029	15,793	3,233	932	3,549,987
Mississippi	876,569	38,302	1,234	9,295	925,400
Missouri	545,925	83,766	2,683	2,494	634,868
Montana	665,529	22,356	10,524	1,942	700,351
Nebraska	603,067	9,542	12,640	3,411	628,660
Nevada	214,291	1,902	410	13	216,616
New Hampshire	161,489	26,155	0	873	188,517
New Jersey	343,628	33,071	351	0	377,050
New Mexico	2,517,906	116,668	70,603	31,716	2,736,893
New York	53,807,308	5,480,654	74	969,427	60,257,463
North Carolina	2,427,820	38,545	2,416	13,365	2,482,146
North Dakota	861,146	23,026	10,603	4,525	899,300
Northern Mariana Islands	10,659	5,887	0	0	16,546
Ohio	5,270,380	322,012	21,328	99,255	5,712,975
Oklahoma	104,566	47,878	883	1,077	154,404
Oregon	2,351,543	46,222	19,739	10,286	2,427,790
Pennsylvania	1,741,674	1,257,631	90	800	3,000,195
Puerto Rico	587,156	68,116	0	0	655,272
Rhode Island	3,753,152	29,878	0	23,846	3,806,876
South Carolina	1,798,292	42,591	6,134	21,106	1,868,123
South Dakota	656,428	29,490	14,889	3,267	704,074
Tennessee	1,863,198	78,322	1,364	10,249	1,953,133
Texas	17,082,669	2,244,255	173,804	368,228	19,868,956
Utah	1,665,232	36,078	24,856	9,186	1,735,352
Vermont	2,211,542	24,174	487	2,958	2,239,161
Virgin Islands	49,229	2,005	0	0	51,234
Virginia	1,788,279	183,002	478	627	1,972,386
Washington	4,059,632	417,353	89,905	33,236	4,600,126
West Virginia	367,951	8,966	0	23	376,940
Wisconsin	2,716,657	378,836	3,037	48,748	3,147,278
Wyoming	92,881	338	456	127	93,802
Industry Total	$416,504,314	$42,463,332	$2,700,199	$2,801,645	$464,469,490

Note: These dollars represent submitted claims to USAC for the time period January 1998 through December 1998, including true-ups reported to date. Verizon-NJ and Sprint-NJ were granted Eligible Telecommunications Carrier (ETC) status retroactive to January 1998. Nevada Bell did not receive ETC status until December 1998 and began reporting Lifeline starting in January 1999.

Source: Universal Service Administration Company (USAC).

Table 7.6
Universal Service Payments - Continued
(January 1999 - December 1999)

State or Jurisdiction	Lifeline Non-Tribal	LinkUp Non-Tribal	TLS	PICCs	Total
Alabama	$1,563,850	$28,882	$2,175	$24,324	$1,619,231
Alaska	353,682	24,494	29,075	468	407,719
American Samoa	26,893	2,670	0	0	29,563
Arizona	1,618,554	112,999	69,449	32,668	1,833,670
Arkansas	584,481	101,090	2,315	7,596	695,482
California	246,181,577	24,003,283	2,268,441	1,056,418	273,509,719
Colorado	2,015,411	22,506	37,514	24,531	2,099,962
Connecticut	4,298,141	153,651	22,820	23,963	4,498,575
Delaware	38,185	1,116	0	0	39,301
District of Columbia	876,337	430	0	0	876,767
Florida	10,838,023	188,233	16,581	108,367	11,151,204
Georgia	6,213,460	167,716	10,594	89,634	6,481,404
Guam	68,177	12,304	0	0	80,481
Hawaii	797,072	229,187	3,520	5,033	1,034,812
Idaho	1,264,737	16,029	24,355	17,510	1,322,631
Illinois	3,236,547	332,878	2,085	46,739	3,618,249
Indiana	1,204,783	127,536	2,801	23,700	1,358,820
Iowa	384,652	21,116	15,981	8,880	430,629
Kansas	465,671	28,662	2,279	6,927	503,539
Kentucky	2,091,160	186,399	9,103	28,312	2,314,974
Louisiana	656,564	26,208	1,985	22,518	707,275
Maine	5,646,395	574,103	8,086	56,742	6,285,326
Maryland	326,288	21,760	0	0	348,048
Massachusetts	14,086,751	186,067	0	121,091	14,393,909
Michigan	9,933,108	405,941	9,234	116,681	10,464,964
Minnesota	3,454,859	6,078	10,887	5,864	3,477,688
Mississippi	1,114,842	24,647	2,003	19,577	1,161,069
Missouri	740,625	18,640	4,310	9,566	773,141
Montana	800,802	20,819	18,143	5,368	845,132
Nebraska	797,127	17,312	15,183	8,670	838,292
Nevada	747,742	55,557	2,562	3,716	809,577
New Hampshire	327,542	26,750	0	4,414	358,706
New Jersey	404,504	10,043	353	0	414,900
New Mexico	2,727,036	114,304	80,826	67,548	2,989,714
New York	50,318,021	1,470,599	3,613	1,151,456	52,943,689
North Carolina	3,721,083	51,344	5,429	29,075	3,806,931
North Dakota	935,573	16,357	15,270	9,695	976,895
Northern Mariana Islands	30,391	11,435	0	0	41,826
Ohio	7,842,922	422,074	39,250	231,455	8,535,701
Oklahoma	169,874	30,464	1,166	2,776	204,280
Oregon	2,437,301	39,955	20,675	26,542	2,524,473
Pennsylvania	3,042,089	1,043,649	28	1,852	4,087,618
Puerto Rico	1,064,389	31,208	0	0	1,095,597
Rhode Island	3,851,306	26,478	0	47,055	3,924,839
South Carolina	1,696,546	39,047	10,849	28,275	1,774,717
South Dakota	723,332	22,426	9,546	9,547	764,851
Tennessee	2,491,886	108,680	7,171	28,748	2,636,485
Texas	19,380,081	2,325,072	203,308	758,432	22,666,893
Utah	1,615,497	25,804	31,258	18,343	1,690,902
Vermont	2,392,069	26,545	2,779	8,533	2,429,926
Virgin Islands	40,225	1,004	0	0	41,229
Virginia	1,858,516	141,017	751	1,250	2,001,534
Washington	4,782,832	424,733	105,612	74,014	5,387,191
West Virginia	382,514	12,814	871	99	396,298
Wisconsin	3,802,028	450,289	4,985	75,728	4,333,030
Wyoming	111,837	893	794	393	113,917
Industry Total	$438,575,890	$33,991,297	$3,136,015	$4,450,093	$480,153,295

Note: These dollars represent submitted claims to USAC for the time period January 1999 through December 1999, including true-ups reported to date.

Source: Universal Service Administration Company (USAC).

Table 7.6
Universal Service Payments - Continued
January 2000 - December 2000

State or Jurisdiction	Lifeline		LinkUp		TLS	PICCs	Total
	Non-Tribal	Tribal	Non-Tribal	Tribal			
Alabama	$1,887,401	$0	$28,540	$0	$2,528	$17,580	$1,936,049
Alaska	504,720	58,392	12,193	3,573	18,949	632	598,459
American Samoa	41,388	-	1,590	-	-	-	42,978
Arizona	1,898,881	32,801	101,134	5,276	81,773	32,309	2,152,174
Arkansas	586,944	-	61,903	-	3,213	6,331	658,391
California	261,895,128	307	20,961,533	72	1,841,377	751,792	285,450,209
Colorado	2,358,725	68	19,572	-	27,949	20,845	2,427,159
Connecticut	4,852,942	-	99,947	-	27,660	15,396	4,995,945
Delaware	51,668	-	864	-	128	-	52,660
District of Columbia	952,110	-	46	-	108	-	952,264
Florida	11,844,957	4	202,121	-	21,765	76,635	12,145,482
Georgia	6,391,416	-	85,708	-	10,274	59,549	6,546,947
Guam	170,743	-	13,775	-	-	-	184,518
Hawaii	1,058,126	-	237,604	-	-	16,226	1,311,956
Idaho	1,767,511	126	31,130	-	38,088	17,581	1,854,436
Illinois	4,381,869	-	330,179	-	1,412	36,409	4,749,869
Indiana	1,186,839	-	173,754	-	2,719	16,431	1,379,743
Iowa	722,242	-	18,927	-	20,727	8,548	770,444
Kansas	767,211	-	58,456	-	5,349	6,970	837,986
Kentucky	3,442,855	-	156,138	-	14,389	25,406	3,638,788
Louisiana	1,051,428	-	20,876	-	2,500	17,690	1,092,494
Maine	6,689,275	228	580,213	403	10,133	51,188	7,331,440
Maryland	351,760	-	15,289	-	417	-	367,466
Massachusetts	14,724,979	-	123,288	-	-	96,336	14,944,603
Michigan	11,311,056	24	400,017	-	8,381	79,731	11,799,209
Minnesota	3,631,357	494	4,431	-	12,966	5,955	3,655,203
Mississippi	1,470,386	-	20,981	-	2,972	15,932	1,510,271
Missouri	1,426,473	-	116,109	-	19,758	19,798	1,582,138
Montana	886,432	19,611	21,911	7,372	22,405	3,933	961,664
Nebraska	1,188,853	1,978	28,824	169	27,183	7,067	1,254,074
Nevada	1,305,766	598	61,370	71	9,261	3,875	1,380,941
New Hampshire	439,221	-	16,111	-	-	4,183	459,515
New Jersey	2,025,566	-	22,951	-	568	-	2,049,085
New Mexico	3,028,392	11,411	43,546	770	80,732	49,669	3,214,520
New York	47,786,738	50	1,130,193	83	7,097	616,820	49,540,981
North Carolina	5,603,699	6	55,486	-	11,694	22,546	5,693,431
North Dakota	981,297	7,392	17,495	170	18,655	8,901	1,033,910
Northern Mariana Islands	29,576	-	8,879	-	-	-	38,455
Ohio	12,843,487	-	806,733	-	68,374	206,424	13,925,018
Oklahoma	504,504	283,269	79,986	633	9,908	3,147	881,447
Oregon	2,707,045	84	76,671	-	20,206	22,698	2,826,704
Pennsylvania	3,939,054	-	531,581	-	32	2,100	4,472,767
Puerto Rico	1,116,360	-	22,598	-	-	-	1,138,958
Rhode Island	4,155,000	-	23,267	-	-	36,937	4,215,204
South Carolina	1,744,499	99	32,120	-	13,455	18,659	1,808,832
South Dakota	804,289	47,954	25,434	5,032	14,455	8,455	905,619
Tennessee	3,345,313	-	106,034	-	17,450	22,844	3,491,641
Texas	22,365,281	38	2,257,220	-	181,143	590,998	25,394,680
Utah	1,724,117	62	15,395	9	32,202	14,889	1,786,674
Vermont	2,634,678	-	42,223	-	2,828	8,179	2,687,908
Virgin Islands	44,910	-	1,763	-	-	-	46,673
Virginia	1,906,937	-	86,434	-	1,992	1,228	1,996,591
Washington	5,933,141	14,817	459,040	35,500	115,748	67,630	6,625,876
West Virginia	390,479	-	10,024	-	3,271	73	403,847
Wisconsin	4,402,612	203	537,180	-	5,691	50,720	4,996,406
Wyoming	118,962	1,305	3,555	54	1,436	524	125,836
Industry Total	$481,376,598	$481,321	$30,400,342	$59,187	$2,841,321	$3,167,769	$518,326,538

Note: These dollars represent submitted claims to USAC for the time period January 2000 through December 2000, including true-ups reported to date. District of Columbia has, as of December 2000, been compensated for Lifeline programs as Eligible Telecommunications Carrier (ETC) status has finally been granted retroactive to January 1998.

Source: Universal Service Administration Company (USAC).

8 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. Line growth over time, averaging about 3% per year, has historically reflected growth in the population and the economy. In recent years, the growth in lines has increased as households have added additional lines.

Table 8.1 shows the nation's total number of telephone lines using three alternative measures. One measure is the number of local loops, which is a way of counting lines that is used to determine the amount of Universal Service Fund payments to local exchange carriers. A second measure is the number of presubscribed lines, which were used before 1998 to determine the amount of payments by the interexchange carriers to support the Universal Service Fund and the Lifeline and LinkUp programs. The third measure, access lines, represents estimates for the whole industry based on data filed with the Commission by large local exchange carriers.

Table 8.2 shows the number of local exchange operating areas (study areas) and loops in each state, and shows breakdowns by loops for price-cap and average-schedule companies. Table 8.3 shows the number of loops by holding companies.

Table 8.4 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 8.4 shows that the percentage of additional lines for households with telephone service has increased dramatically, from about 3% in 1988 to about 29% in 1999.

Long distance carriers are required to pay payphone owners $0.24 for every completed dial-around call (calls where the consumer chooses the long distance carrier over the payphone's presubscribed long distance carrier).[2] Because of this requirement, several long distance carriers employ the National Payphone Clearinghouse to administer payments on their behalf. On an annual basis, the National Payphone Clearinghouse supplies the FCC with data that allows the number of payphones in each state to be calculated. Table 8.5 shows the number of payphones owned by LECs and by independent payphone operators in each state at the end of the first quarter of 1999, 2000,and 2001 respectively. The number of payphones is broken down by whether the payphones are served by an RBOC or by another LEC.

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

Table 8.1

Total U.S. Telephone Lines

Year End	Presubscribed Lines	Annual Growth (%)	Local Loops	Annual Growth (%)	Access Lines	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	113,880,538	
1985			115,985,813	3.1	117,434,802	3.1 %
1986			118,289,121	2.0	120,781,565	2.8
1987	121,466,500		122,789,249	3.8	124,678,710	3.2
1988	124,360,829	2.4 %	127,086,765	3.5	126,953,616	1.8
1989	128,482,479	3.3	131,504,568	3.5	130,915,695	3.1
1990	132,408,608	3.1	136,114,201	3.5	134,743,029	2.9
1991	135,286,582	2.2	139,412,884	2.4	139,672,703	3.7
1992	138,725,040	2.5	143,341,581	2.8	142,428,028	2.0
1993	142,809,280	2.9	148,106,159	3.3	147,095,681	3.3
1994	148,479,328	4.0	153,447,946	3.6	151,607,529	3.1
1995	152,601,177	2.8	159,658,662	4.0	158,219,924	4.4
1996	158,672,243	4.0	166,445,580	4.3	165,420,650	4.6
1997	NA	NA	173,868,033	4.5	173,705,523	5.0
1998	NA	NA	179,846,360	3.4	180,471,261	3.9
1999	NA	NA	184,985,055	2.9	186,260,652	3.2

NA - Not Available.

Source: Presubscribed lines and local loops: National Exchange Carrier Association.
Access Lines: *Statistics of Communications Common Carriers*, 1999 edition, Table 4.10, after inflating access lines of reporting carriers to represent the total industry.

Table 8.2
Telephone Loops of Incumbent Local Exchange Carriers by State
(As of December 31, 1999)

		Price Cap		Non-Price Cap		
	Study Areas	Bell Company Loops	Other Company Loops	Average Schedule Company Loops	Other Company Loops	Total Loops
Alabama	28	2,000,061	323,533	52,741	145,298	2,521,633
Alaska	25	0	23,493	226	434,981	458,700
American Somoa	1	0	0	10,506	0	10,506
Arizona	16	2,774,707	162,506	0	34,337	2,971,550
Arkansas	28	1,039,166	222,076	25,768	214,271	1,501,281
California	22	17,782,239	4,749,226	0	204,992	22,736,457
Colorado	28	2,737,393	0	3,288	123,489	2,864,170
Connecticut	2	2,411,062	0	24,144	0	2,435,206
Delaware	1	582,735	0	0	0	582,735
District of Columbia	1	926,875	0	0	0	926,875
Florida	12	6,686,776	4,439,100	0	183,683	11,309,559
Georgia	36	4,338,146	28,652	76,750	765,277	5,208,825
Guam	1	0	0	0	77,609	77,609
Hawaii	2	0	722,147	0	269	722,416
Idaho	21	529,331	156,648	5,014	42,307	733,300
Illinois	56	7,089,259	970,306	43,616	227,244	8,330,425
Indiana	42	2,280,543	1,242,839	93,824	64,078	3,681,284
Iowa	153	1,088,216	349,338	199,238	40,837	1,677,629
Kansas	39	1,445,327	145,017	21,327	108,435	1,720,106
Kentucky	19	1,240,607	760,175	142,721	48,085	2,191,588
Louisiana	20	2,396,531	0	9,964	179,284	2,585,779
Maine	20	718,057	0	36,539	107,339	861,935
Maryland	2	3,833,217	0	7,714	0	3,840,931
Massachusetts	3	4,582,859	0	2,964	1,159	4,586,982
Michigan	39	5,514,290	809,602	35,278	172,044	6,531,214
Minnesota	88	2,246,696	424,521	235,467	163,035	3,069,719
Mississippi	19	1,326,316	6,321	23,931	63,474	1,420,042
Missouri	43	2,716,232	726,282	21,206	162,963	3,626,683
Montana	18	366,557	8,742	4,129	159,005	538,433
Nebraska	41	508,081	384,729	29,554	84,103	1,006,467
Nevada	14	358,700	926,999	0	31,879	1,317,578
New Hampshire	10	818,682	0	2,164	54,456	875,302
New Jersey	3	6,519,258	219,929	0	10,492	6,749,679
New Mexico	15	811,430	99,748	0	43,318	954,496
New York	44	11,466,333	1,067,356	21,518	263,337	12,818,544
North Carolina	26	2,544,247	1,828,529	253,485	467,061	5,093,322
North Dakota	24	253,914	0	63,272	100,680	417,866
Northern Mariana Islands	1	0	24,945	0	0	24,945
Ohio	42	4,133,557	2,346,160	65,313	460,929	7,005,959
Oklahoma	39	1,724,420	121,945	5,791	233,530	2,085,686
Oregon	33	1,395,086	575,748	11,922	146,252	2,129,008
Pennsylvania	36	6,530,158	1,109,767	576,536	252,360	8,468,821
Puerto Rico	2	0	0	0	1,294,704	1,294,704
Rhode Island	1	678,123	0	0	0	678,123
South Carolina	27	1,503,586	320,727	77,107	428,067	2,329,487
South Dakota	31	280,323	0	95,463	53,611	429,397
Tennessee	25	2,743,845	354,059	143,060	206,426	3,447,390
Texas	57	10,192,419	2,404,248	9,652	568,084	13,174,403
Utah	13	1,117,319	23,317	4,932	30,801	1,176,369
Vermont	10	352,186	0	4,384	59,697	416,267
Virgin Islands	1	0	0	0	67,229	67,229
Virginia	21	3,629,926	1,016,550	97,479	18,157	4,762,112
Washington	23	2,527,498	955,970	4,124	261,316	3,748,908
West Virginia	10	848,375	149,635	8,445	7,654	1,014,109
Wisconsin	88	2,207,612	591,493	217,039	462,125	3,478,269
Wyoming	10	247,234	7,508	0	42,301	297,043
Total	1,432	142,045,510	30,799,886	2,767,595	9,372,064	184,985,055

Source: NECA universal service filings.

Table 8.3
Telephone Loops of Incumbent Local Exchange Carriers by Holding
(As of December 31, 1999)

Holding Companies	Loops	Percent of Loops
Verizon Communications 2/	62,276,224	33.67 %
SBC Communications	58,918,970	31.85
BellSouth Telecommunications, Inc.	24,780,115	13.40
Qwest Communications Corporation	16,883,785	9.13
Sprint Corporation	7,874,408	4.26
ALLTEL Corporation	2,271,645	1.23
CenturyTel, Inc.	1,264,311	0.68
Global Crossing Ltd.	1,126,253	0.61
Citizens Communications Company	1,011,101	0.55
Cincinnati Bell, Inc.	998,991	0.54
TDS Telecommunications Corporation	588,355	0.32
Alaska Communications Systems Holding, Inc.	329,876	0.18
C-TEC Corporation	297,405	0.16
Madison River Telephone Company	148,614	0.08
MJD Communications	140,031	0.08
North State Telephone Company	133,533	0.07
Rock Hill Telephone Company	123,806	0.07
Roseville Telephone Company	123,520	0.07
The Concord Telephone Company	118,218	0.06
TXU Communications	117,268	0.06
Consolidated Communications, Inc.	88,953	0.05
Horry Telephone Cooperative, Inc.	86,423	0.05
Conestoga Enterprises, Inc.	80,169	0.04
North Pittsburgh Telephone Company	79,042	0.04
Guam Telephone Authority	77,609	0.04
Hargray Communications Group, Inc.	67,645	0.04
Virgin Islands Telephone Corporation	67,229	0.04
Denver & Ephrata Telephone Company	59,395	0.03
Farmers Telephone Cooperative, Inc.	57,255	0.03
Matanuska Telephone Association	56,575	0.03
Pioneer	50,282	0.03
GTC, Inc.	49,710	0.03
Chorus Communications Group	43,543	0.02
Fort Bend Communication Company	41,677	0.02
Mankato Citizens Telephone Company	40,573	0.02
Lynch Telephone Corporation	40,437	0.02
Coastal Utilities, Inc.	39,332	0.02
East Ascension Telephone Company, Inc.	39,289	0.02
CFW Communication Companies	38,342	0.02
Atlantic Telephone Membership Corporation	38,083	0.02
Twin Lake Telephone Cooperative	36,574	0.02
SRT Service Corporation	35,985	0.02
Ben Lomand Rural Telephone Cooperative, Inc.	35,813	0.02
The Chilliclothe Telephone Company	35,566	0.02
Golden West Telecommunications	35,384	0.02
Telephone Electronics Corporation	35,102	0.02
Lexington Communications, Inc.	34,739	0.02
Guadalupe Valley Telephone Cooperative	34,713	0.02
Skyline Telephone Membership Corporation	34,663	0.02
Great Plains Communication, Inc.	34,478	0.02
Smithville Telephone Company, Inc.	33,333	0.02
Wood County Telephone Company	30,921	0.02
Yadkin Valley Telephone	30,785	0.02
Eastex Telephone Cooperative, Inc.	30,748	0.02
Ollig Utilities	28,233	0.02
Brandenburg Telephone Company	27,652	0.01
South Central Rural Telephone Cooperative	27,596	0.01
Millington Telephone Company, Inc.	26,336	0.01
Kerrville Telephone Company	25,645	0.01
Grand River Mutual Telephone Corporation	25,520	0.01
All Other Companies	3,677,277	1.99
Total	184,985,055	100.00 %

1/ Includes incumbent local exchange carrier's loops for holding companies with more than 25,000 loops.

2/ Includes Bell Atlantic Corporation and GTE Corporation.

Source: NECA universal service filings.

Table 8.4

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	111.6	54.6	166.2	95.1	16.5	17.3
1997	115.6	58.7	174.3	96.5	19.1	19.8
1998	119.9	64.1	183.9	98.0	21.9	22.3
1999	127.8	66.1	193.9	99.1	28.6	28.9

1/ Total loops are from the Universal Service Fund subscriber line counts provided by the National Exchange Carrier Association. Guam, the Northern Mariana Islands, Puerto Rico, and the U.S. Virgin Islands totals have been removed. Total loops have been divided between residential and non-residential using the ratio of residential to non-residential access lines reported in iStatistics of Communications Common Carriers. Those totals also exclude Puerto Rico, but cover only the carriers that file ARMIS reports (of which there are none for 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 Association for Local Telecommunications Services (ALTS) and New Paradigm Resources Group.

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

Source: FCC staff estimates.

Table 8.5
Number of Payphones Owned by LECs and Independent Operators
(As of March 31, 1999)

State	RBOC Territories[1]		All Other LEC Territories		Total	Total	Grand
	LEC Owned	Independent	LEC Owned	Independent	LEC Owned	Independent	Total
Alabama	15,475	7,435	252	707	15,727	8,142	23,869
Alaska	0	0	1,477	866	1,477	866	2,343
Arizona	16,540	12,547	84	5,028	16,624	17,575	34,199
Arkansas	15,024	1,833	435	438	15,459	2,271	17,730
California	183,098	93,553	2,270	15,813	185,368	109,366	294,734
Colorado	15,944	9,919	187	1,101	16,131	11,020	27,151
Connecticut	23,217	30	0	309	23,217	339	23,556
Delaware	4,804	908	0	0	4,804	908	5,712
District of Columbia	8,034	2,332	0	0	8,034	2,332	10,366
Florida	49,112	46,392	13,131	12,015	62,243	58,407	120,650
Georgia	33,382	17,834	1,925	3,312	35,307	21,146	56,453
Hawaii	7,984	686	0	0	7,984	686	8,670
Idaho	3,945	2,370	362	354	4,307	2,724	7,031
Illinois	77,064	30,946	200	122	77,264	31,068	108,332
Indiana	31,566	7,678	2,238	1,902	33,804	9,580	43,384
Iowa	6,657	4,154	663	312	7,320	4,466	11,786
Kansas	15,844	1,619	1,679	525	17,523	2,144	19,667
Kentucky	11,187	13,324	274	1,767	11,461	15,091	26,552
Louisiana	15,521	9,351	337	2,326	15,858	11,677	27,535
Maine	6,093	784	348	299	6,441	1,083	7,524
Maryland	31,978	10,422	55	154	32,033	10,576	42,609
Massachusetts	43,766	9,308	10	670	43,776	9,978	53,754
Michigan	65,367	21,151	620	1,088	65,987	22,239	88,226
Minnesota	12,193	3,870	2,029	2,806	14,222	6,676	20,898
Mississippi	11,416	4,305	118	362	11,534	4,667	16,201
Missouri	34,959	6,376	2,910	1,400	37,869	7,776	45,645
Montana	2,620	1,674	430	867	3,050	2,541	5,591
Nebraska	3,432	2,172	3,365	585	6,797	2,757	9,554
Nevada	4,213	1,400	1,592	16,304	5,805	17,704	23,509
New Hampshire	6,253	1,394	108	183	6,361	1,577	7,938
New Jersey	71,334	23,214	2,260	2,547	73,594	25,761	99,355
New Mexico	6,852	3,985	65	777	6,917	4,762	11,679
New York	107,491	49,677	588	28,461	108,079	78,138	186,217
North Carolina	15,572	17,502	10,252	13,304	25,824	30,806	56,630
North Dakota	746	1,091	102	993	848	2,084	2,932
Ohio	6,250	17,440	6,433	2,931	12,683	20,371	33,054
Oklahoma	22,654	2,008	1,003	2,034	23,657	4,042	27,699
Oregon	11,683	7,902	870	1,443	12,553	9,345	21,898
Pennsylvania	56,627	21,433	8,188	4,065	64,815	25,498	90,313
Rhode Island	5,713	1,884	0	5	5,713	1,889	7,602
South Carolina	14,048	7,975	1,129	2,981	15,177	10,956	26,133
South Dakota	2,480	845	438	164	2,918	1,009	3,927
Tennessee	17,111	12,036	2,765	3,426	19,876	15,462	35,338
Texas	106,514	37,587	2,678	16,268	109,192	53,855	163,047
Utah	7,118	3,575	125	528	7,243	4,103	11,346
Vermont	3,194	320	99	101	3,293	421	3,714
Virginia	35,280	19,841	3,221	3,534	38,501	23,375	61,876
Washington	21,432	11,137	803	2,274	22,235	13,411	35,646
West Virginia	8,873	1,364	309	944	9,182	2,308	11,490
Wisconsin	25,304	4,925	1,946	4,537	27,250	9,462	36,712
Wyoming	2,499	995	118	137	2,617	1,132	3,749
Totals	1,305,463	572,503	80,491	163,069	1,385,954	735,572	2,121,526

See footnote(s) at end of table.

Table 8.5
Number of Payphones Owned by LECs and Independent Operators - Continued
(As of March 31, 2000)

State	RBOC Territories		All Other LEC Territories		Total	Total	Grand
	LEC Owned	Independent	LEC Owned	Independent	LEC Owned	Independent	Total
Alabama	14,347	8,171	247	1,472	14,594	9,643	24,237
Alaska	0	0	1,058	3,525	1,058	3,525	4,583
Arizona	16,212	14,518	132	2,501	16,344	17,019	33,363
Arkansas	13,251	2,229	271	1,203	13,522	3,432	16,954
California	170,456	92,062	1,730	3,708	172,186	95,770	267,956
Colorado	15,502	9,934	214	1,385	15,716	11,319	27,035
Connecticut	21,570	4,195	0	176	21,570	4,371	25,941
Delaware	4,612	1,082	0	0	4,612	1,082	5,694
District of Columbia	7,750	2,755	0	0	7,750	2,755	10,505
Florida	46,090	51,208	9,150	12,759	55,240	63,967	119,207
Georgia	30,530	21,921	635	8,433	31,165	30,354	61,519
Hawaii	7,784	1,159	0	0	7,784	1,159	8,943
Idaho	3,756	2,470	280	348	4,036	2,818	6,854
Illinois	72,615	30,837	1,109	1,807	73,724	32,644	106,368
Indiana	30,612	8,343	2,228	1,246	32,840	9,589	42,429
Iowa	6,512	3,663	732	276	7,244	3,939	11,183
Kansas	13,574	1,543	989	843	14,563	2,386	16,949
Kentucky	10,240	7,961	114	918	10,354	8,879	19,233
Louisiana	14,140	12,071	118	1,506	14,258	13,577	27,835
Maine	6,047	892	36	521	6,083	1,413	7,496
Maryland	31,182	12,094	50	10	31,232	12,104	43,336
Massachusetts	42,015	10,912	8	99	42,023	11,011	53,034
Michigan	60,795	20,790	519	1,055	61,314	21,845	83,159
Minnesota	8,317	4,884	1,969	1,661	10,286	6,545	16,831
Mississippi	10,748	4,806	74	573	10,822	5,379	16,201
Missouri	31,292	6,760	2,356	2,102	33,648	8,862	42,510
Montana	2,617	1,517	579	1,171	3,196	2,688	5,884
Nebraska	3,299	2,116	609	3,644	3,908	5,760	9,668
Nevada	3,924	1,603	1,636	10,341	5,560	11,944	17,504
New Hampshire	6,229	1,582	74	247	6,303	1,829	8,132
New Jersey	68,858	24,363	2,225	335	71,083	24,698	95,781
New Mexico	6,356	4,296	57	665	6,413	4,961	11,374
New York	106,298	59,456	570	4,774	106,868	64,230	171,098
North Carolina	14,820	10,573	9,954	10,596	24,774	21,169	45,943
North Dakota	720	873	59	855	779	1,728	2,507
Ohio	48,872	11,061	4,832	6,501	53,704	17,562	71,266
Oklahoma	19,338	5,175	564	1,087	19,902	6,262	26,164
Oregon	11,265	7,914	461	2,019	11,726	9,933	21,659
Pennsylvania	55,064	22,635	6,010	6,894	61,074	29,529	90,603
Rhode Island	5,487	2,228	0	1,220	5,487	3,448	8,935
South Carolina	12,125	10,220	1,889	4,210	14,014	14,430	28,444
South Dakota	2,343	727	381	875	2,724	1,602	4,326
Tennessee	18,348	14,775	2,715	3,091	21,063	17,866	38,929
Texas	92,033	49,707	1,963	4,017	93,996	53,724	147,720
Utah	7,182	3,395	125	764	7,307	4,159	11,466
Vermont	3,010	424	0	327	3,010	751	3,761
Virginia	33,443	19,018	2,858	2,302	36,301	21,320	57,621
Washington	21,048	10,557	600	2,163	21,648	12,720	34,368
West Virginia	8,643	1,770	339	952	8,982	2,722	11,704
Wisconsin	23,280	6,096	1,033	4,974	24,313	11,070	35,383
Wyoming	2,347	1,063	256	202	2,603	1,265	3,868
Totals	1,244,535	633,022	63,808	122,353	1,308,343	755,375	2,063,718

See footnote(s) at end of table.

Table 8.5
Number of Payphones Owned by LECs and Independent Operators - Continued
(As of March 31, 2001)

State	RBOC Territories		All Other LEC Territories		Total	Total	Grand
	LEC Owned	Independent	LEC Owned	Independent	LEC Owned	Independent	Total
Alabama	13,158	6,937	467	1,332	13,625	8,269	21,894
Alaska	0	0	1,217	3,377	1,217	3,377	4,594
Arizona	18,788	15,031	803	2,704	19,591	17,735	37,326
Arkansas	10,216	1,563	1,675	1,552	11,891	3,115	15,006
California	137,535	103,245	1,885	3,915	139,420	107,160	246,580
Colorado	15,380	9,363	196	924	15,576	10,287	25,863
Connecticut	19,835	4,360	0	2	19,835	4,362	24,197
Delaware	4,473	960	0	0	4,473	960	5,433
District of Columbia	7,362	1,273	0	0	7,362	1,273	8,635
Florida	42,019	45,822	7,714	11,658	49,733	57,480	107,213
Georgia	27,920	20,403	3,532	6,367	31,452	26,770	58,222
Hawaii	7,068	1,128	0	0	7,068	1,128	8,196
Idaho	3,623	2,304	260	248	3,883	2,552	6,435
Illinois	62,280	29,263	1,515	2,087	63,795	31,350	95,145
Indiana	26,901	7,766	2,187	1,260	29,088	9,026	38,114
Iowa	6,307	2,837	705	306	7,012	3,143	10,155
Kansas	11,707	2,272	950	952	12,657	3,224	15,881
Kentucky	9,055	8,021	2,263	1,905	11,318	9,926	21,244
Louisiana	13,370	11,343	156	1,421	13,526	12,764	26,290
Maine	5,937	682	50	311	5,987	993	6,980
Maryland	31,492	6,233	49	9	31,541	6,242	37,783
Massachusetts	39,148	10,581	8	1,239	39,156	11,820	50,976
Michigan	48,830	18,735	709	1,087	49,539	19,822	69,361
Minnesota	11,279	4,528	2,438	2,376	13,717	6,904	20,621
Mississippi	10,115	4,495	186	499	10,301	4,994	15,295
Missouri	23,827	6,842	2,906	2,968	26,733	9,810	36,543
Montana	2,615	1,426	609	1,023	3,224	2,449	5,673
Nebraska	3,187	1,703	637	4,012	3,824	5,715	9,539
Nevada	3,514	1,716	2,016	9,760	5,530	11,476	17,006
New Hampshire	5,963	1,565	103	220	6,066	1,785	7,851
New Jersey	66,213	16,991	1,937	1,392	68,150	18,383	86,533
New Mexico	5,951	3,455	302	670	6,253	4,125	10,378
New York	103,168	52,436	11,284	8,157	114,452	60,593	175,045
North Carolina	13,434	10,176	8,314	11,674	21,748	21,850	43,598
North Dakota	650	763	73	817	723	1,580	2,303
Ohio	41,298	10,924	9,458	7,170	50,756	18,094	68,850
Oklahoma	15,302	4,600	1,343	1,076	16,645	5,676	22,321
Oregon	10,676	7,580	486	2,038	11,162	9,618	20,780
Pennsylvania	52,279	20,595	6,765	4,570	59,044	25,165	84,209
Rhode Island	5,126	2,368	0	793	5,126	3,161	8,287
South Carolina	10,850	9,097	2,159	3,947	13,009	13,044	26,053
South Dakota	2,343	785	410	826	2,753	1,611	4,364
Tennessee	14,458	11,846	2,618	2,671	17,076	14,517	31,593
Texas	75,275	51,552	2,013	6,407	77,288	57,959	135,247
Utah	7,398	3,246	156	578	7,554	3,824	11,378
Vermont	2,865	398	44	286	2,909	684	3,593
Virginia	30,899	13,757	2,523	2,199	33,422	15,956	49,378
Washington	20,521	10,566	792	2,395	21,313	12,961	34,274
West Virginia	7,901	1,751	665	700	8,566	2,451	11,017
Wisconsin	19,454	5,578	1,552	6,039	21,006	11,617	32,623
Wyoming	2,412	917	269	167	2,681	1,084	3,765
Totals	1,131,377	571,778	88,399	128,086	1,219,776	699,864	1,919,640

[1] Although Bell Atlantic and GTE had not merged as of March 31, 1999, their data were combined so that comparisons across years could be made.

Source: Raw data provided by National Payphone Clearinghouse. Rollups performed by the Industry Analysis Division of the FCC.

9 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 calling 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 incrementally powerful 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 so-called UNE-platform that combines the loop with ILEC switching services. (Here, we use the term "UNE loop" to refer to these and other combinations of ILEC unbundled network elements that include the UNE loop.) 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 Telephone Service Lines

Table 9.1 shows that, as of December 31, 2000, CLECs provided 16.4 million (or 8.5%) of the approximately 194 million nationwide local telephone service lines to end-user customers, according to information reported semiannually in the Commission's "Local Competition and Broadband" data collection program (FCC Form 477). By contrast, CLECs provided 8.3 million (or 4.4%) of nationwide local telephone service lines at the end of 1999. This represents a 97% growth in CLEC market size during the year 2000. Table 9.2 indicates that about 60% of the CLEC local telephone lines served medium and large business, institutional, and government customers at the end of the year 2000. By contrast, about 20% of the ILEC local telephone lines served such customers.

About one-third of CLEC end-user customer lines are served over "local loop" facilities that the CLECs own, according to information CLECs report to the Commission, which is summarized in Table 9.3. To serve the remainder of their local telephone service lines, CLECs resell the services of ILECs or use UNE loops that they lease from other carriers. As shown in Table 9.4, ILECs reported providing other carriers about 6.8 million lines on a resale basis, at year-end 2000, compared to over 5 million UNE loops. The number of UNE loops provided to CLECs has increased rapidly since the end of 1997 (when the Commission began to survey large ILECs for this information) and increased by 62% during the last half of the year 2000.

The Commission's semiannual data collection provides information about CLEC local telephone service lines (and thus the CLEC share of total end-user customer lines in service) in individual states.

See Table 9.5. Relatively large numbers of CLEC lines are associated with the more populous states. With respect to the calculated CLEC share of local telephone lines in service, however, relatively large values are reported for some less populous states, such as Kansas, Louisiana, and Minnesota, as well as for some more populous states, such as New York and Texas.

2. CLEC Share of Local Telephone Service Revenues

Table 9.6 shows that carriers competing with the ILECs nearly doubled their local telephone service revenues from 1998 to 1999 – from $3.5 billion to $6.3 billion. The share of nationwide local telephone service revenues claimed by the competitors increased from 3.5% in 1998 to 5.8% in 1999.

3. Telephone Numbers Transferred Among Carriers

Table 9.7 presents information on telephone numbers "ported" (transferred) from one telephone switch to another (usually between carriers). Telephone numbers are transferred between local switches for a variety of reasons. For instance, some telephone numbers are ported from one carrier to another as part of a telephone number conservation measure known as number pooling, which is where carriers with spare telephone numbers port large blocks of numbers to a carrier in need of numbers. Such quantities appear in the first set of columns in Table 9.7.

Telephone numbers are also ported between carriers for other reasons, including, in particular, accommodating customers who switch local telephone service providers and wish to keep their same telephone numbers. Quantities of telephone numbers transferred between local telephone companies to accommodate customer requests and for other, non-pooling, reasons appear in the second set of columns. Over 11.8 million such telephone numbers were transferred as of June 1, 2001. Most, but not all of those 11.8 million numbers, were ported from ILECs to CLECs, but some of them were ported from CLECs to ILECs, and others from CLECs to CLECs.

Finally, carriers sometimes port numbers to themselves, to enable telephone customers to be hooked up to a switch that had no other available telephone numbers. Such quantities appear in the third set of columns. In all, as of June 1, 2001, over 15.4 million telephone numbers had been transferred.

This information is developed from the telephone number porting database, managed by the Local Number Portability Administrator (currently NeuStar, Inc.). The database contains all telephone numbers that are ported at that point in time. (In order to protect consumer privacy, the commission receives the information in such a way that prevents it from determining if a particular telephone number has been ported or not.) If a telephone number is ported a second time, the database contains only the information from the most recent port. Monthly "snapshots" of the database are taken, which allow the Commission to determine the number of telephone numbers that have been ported, the reason those numbers were ported, and the date that the telephone-number record in the database was created. For most telephone-number records, the date reflects the date that the telephone number was most recently ported. Some records, however, have been affected by area code changes, so the date reflects not the porting date, but the date the telephone-number record was updated to account for the area code change. Although not perfect, sequential snapshots of the database should help quantify both the number of customer lines served by competitive local telephone carriers over time, and telephone number churn. Table 9.7 shows the same information at three different points in time – June 1, 2001,

January 1, 2001, and January 1, 2000.

Table 9.1
Total End-User Lines Reported

	ILEC Lines	CLEC Lines	Total	CLEC Share
December 1999	181,307,695	8,318,244	189,625,939	4.4%
June 2000	178,864,907	12,746,924	191,611,831	6.7
December 2000	177,420,655	16,397,393	193,818,048	8.5

Source: Industry Analysis Division, *Local Telephone Competition: Status as of December 31, 2000.*

Table 9.2
End-User Lines by Customer Type

	ILECs			CLECs		
	Residential & Small Business	Other 1/	% Residential & Small Business	Residential & Small Business	Other 1/	% Residential & Small Business
December 1999	143,388,368	37,919,327	79%	3,373,662	4,944,582	41%
June 2000	140,486,770	38,378,137	79	4,597,807	8,149,117	36
December 2000	139,765,099	37,655,556	79	6,688,062	9,709,331	41

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

Source: Industry Analysis Division, *Local Telephone Competition: Status as of December 31, 2000.*

Table 9.3
Reporting Competitive Local Exchange Carriers
(End-User Lines in Thousands)

Date	CLECs Reporting	Total End-User Lines	Acquired Lines 1/	Percent	CLEC Owned Lines	Percent
December 1999	81	8,318	5,471	65.8 %	2,847	34.2 %
June 2000	76	12,747	8,443	66.2	4,304	33.8
December 2000	87	16,397	10,649	64.9	5,748	35.1

1/ Lines acquired from other carriers as UNE loops or under resale arrangements.
Source: Industry Analysis Division, *Local Telephone Competition: Status as of December 31, 2000.*

Table 9.4
Reporting Incumbent Local Exchange Carriers
(Lines in Thousands)

Date 1/	ILECs Reporting	Total Lines	End-User Lines	Lines Provided to Other Carriers			
				Lines Resold	UNE Loops Leased	Total	Percent of Total Lines
December 1997	9	159,008	157,132	1,743	133	1,876	1.2 %
June 1998	8	161,810	159,118	2,448	244	2,692	1.7
December 1998	7	164,614	161,191	3,062	361	3,423	2.1
June 1999	7	167,177	162,909	3,583	685	4,268	2.6
December 1999	168	187,431	181,308	4,649	1,474	6,123	3.3
June 2000	160	187,784	178,865	5,662	3,257	8,919	4.7
December 2000	170	189,512	177,421	6,822	5,269	12,091	6.4

1/ Data for December 1997 through June 1999 are from Common Carrier Bureau voluntary surveys. Data for December 1999 and June 2000 are from FCC Form 477 filings.
Source: Industry Analysis Division, *Local Telephone Competition: Status as of December 31, 2000.*

Table 9.5
End-User Lines Served by Reporting Local Exchange Carriers
(As of December 31, 2000)

State	ILECs	CLECs	Total	CLEC Share
Alabama	2,351,704	191,299	2,543,003	8 %
Alaska	481,684	*	*	*
Arizona	3,073,779	146,480	3,220,259	5
Arkansas	1,733,035	*	*	*
California	23,467,042	1,492,585	24,959,627	6
Colorado	2,833,948	286,955	3,120,903	9
Connecticut	2,422,012	154,349	2,576,361	6
Delaware	555,913	*	*	*
District of Columbia	922,531	94,850	1,017,381	9
Florida	11,079,693	1,007,756	12,087,449	8
Georgia	4,820,788	551,316	5,372,104	10
Hawaii	744,205	0	744,205	0
Idaho	733,580	*	*	*
Illinois	7,887,152	831,917	8,719,069	10
Indiana	3,576,825	209,660	3,786,485	6
Iowa	1,413,303	164,069	1,577,372	10
Kansas	1,520,616	220,328	1,740,944	13
Kentucky	2,122,021	56,392	2,178,413	3
Louisiana	2,415,935	380,947	2,796,882	14
Maine	804,652	*	*	*
Maryland	3,802,622	165,502	3,968,124	4
Massachusetts	4,252,502	509,731	4,762,233	11
Michigan	6,283,406	382,073	6,665,479	6
Minnesota	2,961,241	503,775	3,465,016	15
Mississippi	1,304,145	68,891	1,373,036	5
Missouri	3,485,411	203,537	3,688,948	6
Montana	529,878	*	*	*
Nebraska	949,217	*	*	*
Nevada	1,394,708	*	*	*
New Hampshire	805,143	52,137	857,280	6
New Jersey	6,747,131	323,680	7,070,811	5
New Mexico	957,195	*	*	*
New York	10,962,969	2,769,814	13,732,783	20
North Carolina	5,071,853	286,436	5,358,289	5
North Dakota	317,270	*	*	*
Ohio	6,935,139	264,461	7,199,600	4
Oklahoma	1,636,845	102,456	1,739,301	6
Oregon	2,109,510	70,221	2,179,731	3
Pennsylvania	8,017,391	870,618	8,888,009	10
Puerto Rico	1,299,291	*	*	*
Rhode Island	627,784	*	*	*
South Carolina	2,260,645	108,233	2,368,878	5
South Dakota	309,349	*	*	*
Tennessee	3,291,602	296,281	3,587,883	8
Texas	12,063,098	1,687,586	13,750,684	12
Utah	1,174,625	114,649	1,289,274	9
Vermont	400,929	*	*	*
Virgin Islands	NA	0	0	0
Virginia	4,317,626	414,432	4,732,058	9
Washington	3,784,183	309,482	4,093,665	8
West Virginia	927,432	*	*	*
Wisconsin	3,223,663	321,720	3,545,383	9
Wyoming	256,434	*	*	*
Nationwide	177,420,655	16,397,393	193,818,048	8 %

NA - Not Applicable

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

* Data withheld to maintain firm confidentiality.

Source: Industry Analysis Division, *Local Telephone Competition: Status as of December 31, 2000.*

Table 9.6
Nationwide Local Service Revenues and New Competitors' Share 1/
(Dollar Amounts Shown in Millions)

	TRS Data				TRS & USF Data		Form 499-A Data
	1993	1994	1995	1996	1997	1998	1999
Number of Local Competitors							
RBOCs & Other Incumbent LECs	1,281	1,347	1,347	1,376	1,410	1,348	1,335
CAPs & CLECs	20	30	57	94	129	212	349
Local Resellers, Shared Tenant, Private Carriers, & Other Local	NA	NA	NA	25	18	64	147
All Other Carriers Reporting Local Exchange Service Revenues	NA	NA	NA	74	109	133	143
Total	1,301	1,377	1,404	1,569	1,666	1,757	1,974
Local Service Revenues 2/							
Incumbent LECs							
Bell Operating Companies 3/	$58,838	$61,415	$65,485	$70,290	$68,028	$69,801	$76,586
Other Incumbent LECs 3/	20,894	22,507	24,269	24,899	24,960	26,989	26,084
Total 3/	79,732	83,922	89,754	95,189	92,988	96,790	102,670
Local Service Competitors							
CAPs & CLECs	174	269	595	949	1,556	2,393	4,505
Local Resellers, Shared Tenant, Private Carriers, & Other Local	NA	NA	NA	NA	224	329	522
All Other Carriers (Local Exchange Service Revenues Only) 4/	46	32	56	59	381	809	1,319
Total	220	301	651	1,008	2,161	3,530	6,347
Total	$79,952	$84,224	$90,405	$96,197	$95,149	$100,320	$109,016
Share of Local Service Revenues							
Incumbent LECs							
Bell Operating Companies	73.6%	72.9%	72.4%	73.1%	71.5%	69.6%	70.3%
Other Incumbent LECs	26.1%	26.7%	26.8%	25.9%	26.2%	26.9%	23.9%
Total	99.7%	99.6%	99.3%	99.0%	97.7%	96.5%	94.2%
Local Service Competitors							
CAPs & CLECs	0.2%	0.3%	0.7%	1.0%	1.6%	2.4%	4.1%
Local Resellers, Shared Tenant, Private Carriers, & Other Local	NA	NA	NA	NA	0.2%	0.3%	0.5%
All Other Carriers	0.1%	0.0%	0.1%	0.1%	0.4%	0.8%	1.2%
Total	0.3%	0.4%	0.7%	1.0%	2.3%	3.5%	5.8%
Total Telecommunications Revenues (Including Payphone, Mobile, & Toll Service)							
Incumbent LECs 3/	$95,228	$98,431	$102,820	$107,905	$105,154	$108,234	$112,216
Local Competitors	191	274	637	1,012	2,481	4,034	6,508
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

NA - Not Available.

1/ Some previously published data have been revised. Some breakouts are not available prior to 1997 due to differences in how data were reported.

2/ 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 4/. 1998 revenues for carriers that filed TRS worksheets but not universal service worksheets was estimated using 1998 TRS worksheets. These worksheets contain carrier revenue data for calendar year 1997.

3/ 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.

4/ 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, and 499-A worksheets. Industry Analysis Division, *Telecommunications Industry Revenues.*

Table 9.7
Telephone Numbers Transferred or Ported[1]
(Telephone Numbers that Remained Ported as of January 1, 2000)

Originally Ported During		Transferred Between Carriers				Transferred Within Same Carrier		Total Numbers Transferred
		Pooling		Customer Requests and Other Reasons				
Year	Month	Numbers Ported	Cumulative	Numbers Ported	Cumulative	Numbers Ported	Cumulative	
1997	December	0	0	80	80	0	0	80
1998	January	0	0	202	282	0	0	282
	February	0	0	11	293	0	0	293
	March	13	13	231	524	0	0	537
	April	16	29	547	1,071	0	0	1,100
	May	20	49	1,975	3,046	0	0	3,095
	June	27	76	5,257	8,303	0	0	8,379
	July	616	692	14,494	22,797	761	761	24,250
	August	1,723	2,415	29,918	52,715	2,192	2,953	58,083
	September	2,209	4,624	36,011	88,726	1,000	3,953	97,303
	October	3,462	8,086	100,992	189,718	1,000	4,953	202,757
	November	12,467	20,553	108,952	298,670	0	4,953	324,176
	December	21,736	42,289	147,071	445,741	2,947	7,900	495,930
1999	January	7,038	49,327	158,256	603,997	8,041	15,941	669,265
	February	6,614	55,941	180,952	784,949	4,000	19,941	860,831
	March	8,236	64,177	214,692	999,641	44,599	64,540	1,128,358
	April	10,078	74,255	225,649	1,225,290	58,743	123,283	1,422,828
	May	16,428	90,683	246,746	1,472,036	6,862	130,145	1,692,864
	June	21,850	112,533	298,309	1,770,345	41,914	172,059	2,054,937
	July	19,369	131,902	296,385	2,066,730	15,002	187,061	2,385,693
	August	38,539	170,441	318,941	2,385,671	13,811	200,872	2,756,984
	September	48,739	219,180	341,902	2,727,573	21,997	222,869	3,169,622
	October	47,161	266,341	397,897	3,125,470	18,999	241,868	3,633,679
	November	67,299	333,640	352,942	3,478,412	18,999	260,867	4,072,919
	December	40,936	374,576	430,141	3,908,553	7,000	267,867	4,550,996

See footnote(s) at end of table.

Table 9.7

Telephone Numbers Transferred or Ported[1] - Continued
(Telephone Numbers that Remained Ported as of January 1, 2001)

Originally Ported During		Transferred Between Carriers				Transferred Within Same Carrier		Total Numbers Transferred
		Pooling		Customer Requests and Other Reasons				
Year	Month	Numbers Ported	Cumulative	Numbers Ported	Cumulative	Numbers Ported	Cumulative	
1997	December	0	0	80	80	0	0	80
1998	January	0	0	202	282	0	0	282
	February	0	0	4	286	0	0	286
	March	11	11	227	513	0	0	524
	April	16	27	477	990	0	0	1,017
	May	10	37	1,833	2,823	0	0	2,860
	June	15	52	4,388	7,211	0	0	7,263
	July	387	439	12,003	19,214	761	761	20,414
	August	1,024	1,463	16,761	35,975	2,192	2,953	40,391
	September	977	2,440	25,795	61,770	0	2,953	67,163
	October	2,032	4,472	76,847	138,617	1,000	3,953	147,042
	November	1,854	6,326	88,481	227,098	0	3,953	237,377
	December	12,031	18,357	98,265	325,363	2,947	6,900	350,620
1999	January	1,669	20,026	115,830	441,193	8,009	14,909	476,128
	February	1,520	21,546	136,472	577,665	3,998	18,907	618,118
	March	3,015	24,561	170,355	748,020	43,638	62,545	835,126
	April	3,210	27,771	186,457	934,477	52,883	115,428	1,077,676
	May	5,794	33,565	192,003	1,126,480	6,814	122,242	1,282,287
	June	11,709	45,274	230,662	1,357,142	41,660	163,902	1,566,318
	July	5,677	50,951	232,604	1,589,746	14,948	178,850	1,819,547
	August	22,305	73,256	244,051	1,833,797	13,669	192,519	2,099,572
	September	20,494	93,750	249,961	2,083,758	21,726	214,245	2,391,753
	October	26,437	120,187	303,478	2,387,236	18,958	233,203	2,740,626
	November	49,914	170,101	287,792	2,675,028	17,657	250,860	3,095,989
	December	24,457	194,558	339,180	3,014,208	6,854	257,714	3,466,480
2000	January	31,495	226,053	312,501	3,326,709	10,459	268,173	3,820,935
	February	44,564	270,617	353,516	3,680,225	49,940	318,113	4,268,955
	March	41,965	312,582	381,718	4,061,943	24,808	342,921	4,717,446
	April	75,207	387,789	345,852	4,407,795	107,703	450,624	5,246,208
	May	72,097	459,886	382,138	4,789,933	116,975	567,599	5,817,418
	June	96,610	556,496	409,202	5,199,135	64,880	632,479	6,388,110
	July	84,329	640,825	369,708	5,568,843	70,980	703,459	6,913,127
	August	70,614	711,439	433,900	6,002,743	102,263	805,722	7,519,904
	September	41,154	752,593	485,944	6,488,687	64,803	870,525	8,111,805
	October	82,796	835,389	520,694	7,009,381	111,046	981,571	8,826,341
	November	60,131	895,520	495,679	7,505,060	139,000	1,120,571	9,521,151
	December	51,303	946,823	580,047	8,085,107	72,954	1,193,525	10,225,455

See footnote(s) at end of table.

Table 9.7

Telephone Numbers Transferred or Ported[1] - Contintued

(Telephone Numbers that Remained Ported as of June 1, 2001)

Originally Ported During		Transferred Between Carriers				Transferred Within Same Carrier		Total Numbers Transferred
		Pooling		Customer Requests and Other Reasons				
Year	Month	Numbers Ported	Cumulative	Numbers Ported	Cumulative	Numbers Ported	Cumulative	
1997	December	0	0	80	80	0	0	80
1998	January	0	0	202	282	0	0	282
	February	0	0	8	290	0	0	290
	March	12	12	229	519	0	0	531
	April	16	28	474	993	0	0	1,021
	May	16	44	1,696	2,689	0	0	2,733
	June	19	63	4,272	6,961	0	0	7,024
	July	356	419	12,657	19,618	761	761	20,798
	August	1,114	1,533	24,490	44,108	2,192	2,953	48,594
	September	1,524	3,057	31,125	75,233	0	2,953	81,243
	October	2,552	5,609	85,841	161,074	1,000	3,953	170,636
	November	11,297	16,906	97,487	258,561	0	3,953	279,420
	December	20,795	37,701	124,608	383,169	2,947	6,900	427,770
1999	January	5,852	43,553	133,788	516,957	7,869	14,769	575,279
	February	4,482	48,035	155,213	672,170	3,998	18,767	738,972
	March	6,871	54,906	179,709	851,879	43,377	62,144	968,929
	April	7,379	62,285	193,591	1,045,470	48,471	110,615	1,218,370
	May	15,069	77,354	217,100	1,262,570	6,763	117,378	1,457,302
	June	18,454	95,808	258,799	1,521,369	41,641	159,019	1,776,196
	July	11,383	107,191	262,947	1,784,316	13,944	172,963	2,064,470
	August	33,151	140,342	281,763	2,066,079	13,647	186,610	2,393,031
	September	42,682	183,024	292,543	2,358,622	21,687	208,297	2,749,943
	October	35,926	218,950	357,426	2,716,048	18,821	227,118	3,162,116
	November	57,236	276,186	312,822	3,028,870	17,626	244,744	3,549,800
	December	34,452	310,638	383,310	3,412,180	6,840	251,584	3,974,402
2000	January	36,169	346,807	330,112	3,742,292	10,357	261,941	4,351,040
	February	51,431	398,238	380,411	4,122,703	43,929	305,870	4,826,811
	March	52,097	450,335	415,145	4,537,848	24,729	330,599	5,318,782
	April	80,194	530,529	378,204	4,916,052	103,398	433,997	5,880,578
	May	75,310	605,839	412,396	5,328,448	116,968	550,965	6,485,252
	June	107,459	713,298	444,683	5,773,131	62,800	613,765	7,100,194
	July	95,098	808,396	400,654	6,173,785	67,980	681,745	7,663,926
	August	76,472	884,868	473,180	6,646,965	99,246	780,991	8,312,824
	September	58,733	943,601	504,009	7,150,974	54,599	835,590	8,930,165
	October	93,278	1,036,879	550,264	7,701,238	99,044	934,634	9,672,751
	November	63,404	1,100,283	522,147	8,223,385	130,000	1,064,634	10,388,302
	December	64,207	1,164,490	598,026	8,821,411	67,960	1,132,594	11,118,495
2001	January	104,381	1,268,871	559,836	9,381,247	187,726	1,320,320	11,970,438
	February	84,196	1,353,067	536,369	9,917,616	61,948	1,382,268	12,652,951
	March	122,681	1,475,748	649,482	10,567,098	100,898	1,483,166	13,526,012
	April	197,132	1,672,880	581,602	11,148,700	208,438	1,691,604	14,513,184
	May	118,245	1,791,125	702,679	11,851,379	130,540	1,822,144	15,464,648

[1] Some telephone numbers are ported to another carrier, and then sent back to the original carrier. During the time the telephone number is ported, the number will be included in this table. When the number is sent back to the original carrier, it will no longer be included in this table.

Source: Raw data from Local Number Portability Administrator (NeuStar, Inc.). Rollups performed by the Industry Analysis Division, FCC.

10 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.

More than 700 companies now offer 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. Nevertheless, the Commission continues to monitor the long distance market, in part because the market for toll services remains more highly concentrated than many industries.

1. Toll Revenues

In 2000, long distance carriers generated over $100 billion in toll revenues. Local telephone companies also provide toll service, primarily intrastate calls, and usually within their local service territories. In 2000, local telephone companies provided about $8 billion of toll service. When combined, the total long distance market was more than $108 billion. These revenues are shown in Table 10.1.

Toll calls can be divided into three jurisdictional categories—intrastate calls, domestic interstate calls, and international calls. The revenues for each of the three types are shown in Table 10.2. Of considerable interest is the enormous growth (more than 500%) in international revenues from 1984 to 1999.

Toll revenues can also be divided between residential and nonresidential services, as in Table 10.3. In 1999, residential customers generated about 42% of toll revenues.

2. Number of Companies

The number and types of carriers reporting long distance revenues are shown in Table 10.4. The Telecommunications Reporting Worksheet (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 1999, 655 filers identified their primary activity as a toll carrier and 1,777 other carriers reported long distance revenues even though the provision of long distance service is not their primary line of business.

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 currently assigned by the North American Numbering Plan Administration (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 10.5.

During the late 1980s and 1990s, alternative sources for developing counts of long distance carriers became available. Starting in 1987, information on the number of telephone lines presubscribed to each long distance carrier was collected by NECA because FCC rules required NECA to recover certain expenses from the larger long distance carriers. Pursuant to the 1996 Act, the FCC changed its rules on universal service, and as a result, NECA stopped collecting this information. Information for December 1996 is the last presubscribed line data collected by NECA. Table 10.6 shows several alternative measures of long distance carrier development.

3. Long Distance Market Shares

A generation ago, when the Bell System was still intact, AT&T's local telephone companies provided most local service. At that time, there were no good means of segregating true economic costs of local and long distance services of AT&T's integrated network. 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). Thus, they were precluded from offering toll service that crossed the boundaries of their service territories. As a result, two separate and distinct toll markets emerged.

At 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. It also included most 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, intraLATA 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 blurred as customers can now select among competing carriers for their intraLATA calls. In addition, the restrictions preventing AT&T's former affiliates from providing interLATA service were modified by the Telecommunications Act of 1996.

Long-term trends in toll revenues are shown in Table 10.7. Over time, AT&T and the operating companies that previously monopolized telephone service have lost market share to new entrants. By 2000, carriers not even in existence a generation ago accounted for more than half of all long distance telephone toll revenues.

Table 10.8 shows market share information based on the revenues of those firms identified as primarily being long distance carriers. AT&T's 1984 toll revenues were about 90% of those reported by all long distance carriers. By 2000, AT&T's revenues had declined to less than 40% of those reported by all long distance carriers and since 1995, AT&T is no longer regulated as a "dominant" carrier.

Table 10.9 shows market share information based on all toll revenues, including the long distance services provided by local exchange carriers. This broader classification increasingly becomes the relevant classification of the market as these carriers increase their participation in a nationwide market. By any measure, the long-term trends have shown increasing competition and decreasing concentration.

4. Residential Toll Revenues

Bill harvesting data collected by TNS Telecoms (TNS) provides information on market shares in the long distance residential market, as opposed to the overall market for toll service. The bill harvesting data also provide information on the market shares of long distance carriers by state. Section 15 gives further information on TNS and the bill harvesting data. Table 10.10, which is based on this information, presents nationwide market shares of access lines, residential toll revenue and direct dial minutes from 1995 to 2000. In addition, Table 10.11 presents market shares of residential direct-dial minutes by state for 2000. These tables present long distance market shares for AT&T, MCI WorldCom, and Sprint.

5. Section 271 Applications

Section 271 of the Communications Act requires 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 BOC must demonstrate that it satisfies the 14-point competitive checklist, that it will comply with the separate affiliate and nondiscrimination requirements of section 272, and that requested authorization is consistent with the public interest, convenience, and necessity. After a BOC files a section 271 application with the Commission, the Commission has 90 days to determine whether a BOC has taken the statutorily required steps to open its local telecommunications markets to competition.

A BOC applicant must demonstrate either that: A) one or more unaffiliated competing providers of local telephone service to residential and business subscribers is connected to the BOC's network, and that such local telephone service is 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 has requested to connect to a BOC's network, the BOC has 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”).

Table 10.12 shows the states in which the BOCs have filed section 271 applications, the date the application was filed, and the application’s resolution date and outcome. At this time, five BOC section 271 applications have been authorized in six states. On December 12, 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. The second application approved by the Commission was SBC for Texas, authorized on June 30, 2000. Kansas and Oklahoma became the third and fourth states to be approved with the Commission authorizing their joint application on January 22, 2001. The approval of Verizon’s application for Massachusetts on April 16, 2001 and for Connecticut on July 20, 2001 made them the fifth and sixth states to be approved.

Since the passage of the 96 Act, the FCC has denied five long distance applications, and now has approved applications for long distance entry into six states. As of July 25, 2001, there is one pending long distance application before the Commission, Verizon’s for Pennsylvania (filed June 21, 2001). The companies approved must continue to comply with the section 271 checklist requirements as the Commission has a number of enforcement tools at its disposal, including imposing penalties or suspension of approval. Additional information on section 271 applications can be found on the Commission’s web site at <www.fcc.gov/Bureaus/Common_Carrier/in-region_applications/>.

Table 10.1
Total Toll Service Revenues by Carrier *
(Dollar Amounts Shown in Millions)

Company	1984	1985	1986	1987	1988	1989	1990	1991	1992
AT&T Companies 1/									
AT&T Communications, Inc.	$34,935	$36,770	$36,514	$35,219	$35,407	$34,549	$33,880	$34,384	$35,495
Alascom, Inc.	255	271	267	262	272	278	259	338	333
Teleport Communications Group, Inc.									
ACC Long Distance Corp.									
WorldCom Companies 2/ 3/									
WorldCom, Inc.									
MCI Telecommunications Corp.	1,761	2,331	3,372	3,938	4,886	6,171	7,392	8,266	9,719
Telecom*USA	105	201	291	396	524	713			
WorldCom, Inc.						110	154	263	801
Advanced Telecommunications Corp.	72	86	124	162	178	326	342	356	
Metromedia Communications Corp.						127	381	369	369
ITT Communication Services, Inc.	161	241	282	287	379	404			
Comsystems Network Services							130	131	135
Wiltel, Inc.						300	376	405	494
MFS Intelenet, Inc.									
Sprint Companies 4/ 5/									
Sprint Communications Co.			1,141	2,592	3,405	4,320	5,041	5,378	5,658
GTE Sprint	1,052	1,122	779						
US Telecom		387	212						
Qwest Companies 6/									
LCI Int'l Telecom Corp. d/b/a Qwest Comm. Svcs.						197	215	208	243
Qwest Communications Corp.									
USLD Communications, Inc.									
Concert Global Networks USA, LLC 7/									
Global Crossing Companies 8/									
Global Crossing Telecommunications, Inc.		309	450	395	394	334	326	347	376
Lexitel		127							
Global Crossing Bandwidth, Inc.									
Global Crossing North American Networks, Inc.						104	142	155	168
Frontier Comm. - North Central Region, Inc.									
International Exchange Network, Ltd. (IXnet, Inc.)									
BCE, Inc. (Bell Canada Enterprise Companies) 9/									
Teleglobe USA, Inc.									
Excel Communications, Inc.									
Excel Telecommunications, Inc.									
Telco Communications Group, Inc.									
eMeritus Communications, Inc.									
Long Distance Wholesale Club									
Verizon Companies									
Bell Atlantic Comm, Inc. d/b/a Verizon Long Dist.									
Verizon Select Services, Inc.									
IDT Corporation									
VarTec Telecom, Inc.									
World Access, Inc. 10/									
WorldxChange Communications									
FaciliCom International									
Star Companies 11/									
Star Telecommunications, Inc.									
PT-1 Communications, Inc.									
PT-1 Long Distance, Inc.									
Broadwing Companies 12/									
Broadwing Communications Services, Inc.									
Broadwing Telecommunications, Inc.									
Cable & Wireless USA, Inc.		146	171	180	218	275	359	406	495
Viatel Companies 13/									
Viatel, Inc.									
Viatel Services, Inc.									
McLeodUSA Telecommunications									
Intermedia Communications, Inc.									
Talk.com Holding Corp.									
Williams Communications, Inc.									
RSL Companies 14/									
RSL Communications, Ltd.									
RSL COM USA, Inc.									
RSL COM Primecall, Inc.									
Westinghouse Communications									
Primus Companies 15/									
Primus Telecommunications, Inc.									
Telegroup, Inc.									
Trescom International, Inc.									
Pacific Gateway Exchange 16/									
Business Telecom, Inc. 17/									
ITC^Deltacom Communications, Inc.									
NOSVA Limited Partnership									
Network Plus, Inc.									
Startec Global Operating Company									
General Communication, Inc.									
Evercom Systems, Inc.									
SNET America, Inc.									
Americatel Corporation									
Lightyear Communications, Inc.									
ALLTEL Communications, Inc.									
New Global Telecom, Inc.									
Electric Lightwave									
Touch America Services, Inc.									
Covista Communications									
Working Assets Funding Service, Inc.									
Norlight Telecommunications									
Others 18/	414	639	992	1,352	1,823	2,976	3,105	3,437	4,082
Total Long Distance Carriers	38,755	42,630	44,595	44,783	47,487	51,184	52,102	54,443	58,368
Bell Operating Companies	9,037	9,026	9,599	10,268	10,668	10,549	10,578	10,066	9,718
Other Incumbent Local Telephone Cos. 18/	3,364	3,159	3,274	3,468	4,445	4,291	4,112	4,049	3,897
CAPs, CLECs, & Other Local Telephone Cos. 18/									
Total Local Exchange Carriers	12,401	12,185	12,873	13,736	15,113	14,840	14,690	14,115	13,615
Total Toll Service Revenues	$51,156	$54,815	$57,468	$58,519	$62,600	$66,024	$66,792	$68,558	$71,983

* Includes intrastate, interstate and international toll revenues. # Year 2000 totals are based on staff estimates.

See notes following Table 10.1.

Table 10.1
Total Toll Service Revenues by Carrier * - Continued
(Dollar Amounts Shown in Thousands)

Company	1993	1994	1995	1996	1997	1998	1999	2000 #
AT&T Companies 1/								
AT&T Communications, Inc.	$35,731	$37,166	$38,069	$39,264	$39,470	$40,551	$39,680	$37,647
Alascom, Inc.	320	329	325					
Teleport Communications Group, Inc.							284	464
ACC Long Distance Corp.				118	122	123		
WorldCom Companies 2/ 3/								
WorldCom, Inc.						22,192	23,431	22,554
MCI Telecommunications Corp.	10,947	11,715	14,617	16,372	17,150			
Telecom*USA								
WorldCom, Inc.	1,145	2,221	3,640	4,485	5,897			
Advanced Telecommunications Corp.								
Metromedia Communications Corp.	297							
ITT Communication Services, Inc.								
Comsystems Network Services	116							
Wiltel, Inc.	664	917						
MFS Intelenet, Inc.			118	122				
Sprint Companies 4/ 5/								
Sprint Communications Co.	6,139	6,805	7,277	7,944	8,595	7,994	9,708	9,038
GTE Sprint								
US Telecom								
Qwest Companies 6/								
LCI Int'l Telecom Corp. d/b/a Qwest Comm. Svcs.	317	453	671	1,103	1,001	1,664	1,394	1,271
Qwest Communications Corp.						320	517	1,773
USLD Communications, Inc.	100	136	155	188	241	279	216	
Concert Global Networks USA, LLC 7/								2,472
Global Crossing Companies 8/								
Global Crossing Telecommunications, Inc.	436	568	827	1,119	775	874	874	801
Lexitel								
Global Crossing Bandwidth, Inc.		144	127		324	539	692	1,555
Global Crossing North American Networks, Inc.	213	306	309	323	223			196
Frontier Comm. - North Central Region, Inc.		123	133	121				
International Exchange Network, Ltd. (IXnet, Inc.)								131
BCE, Inc. (Bell Canada Enterprise Companies) 9/								
Teleglobe USA, Inc.						275	557	282
Excel Communications, Inc.								
Excel Telecommunications, Inc.		156	363	1,091	1,179	1,219	942	703
Telco Communications Group, Inc.								
eMeritus Communications, Inc.			215	429	379	264	260	169
Long Distance Wholesale Club					176	121	131	
Verizon Companies								
Bell Atlantic Comm, Inc. d/b/a Verizon Long Dist.								130
Verizon Select Services, Inc.					340	607	834	1,004
IDT Corporation						376	850	945
VarTec Telecom, Inc.		107	125	470	820	836	819	923
World Access, Inc. 10/								914
WorldxChange Communications			115	196	345	308	374	
FaciliCom International						164	202	
Star Companies 11/								
Star Telecommunications, Inc.				140	253	401	443	296
PT-1 Communications, Inc.				117	358	494	482	270
PT-1 Long Distance, Inc.								241
Broadwing Companies 12/								
Broadwing Communications Services, Inc.					258	724	453	574
Broadwing Telecommunications, Inc.							150	202
Cable & Wireless USA, Inc.	557	654	700	919	1,066	953	913	770
Viatel Companies 13/								
Viatel, Inc.							333	247
Viatel Services, Inc.							324	335
McLeodUSA Telecommunications							232	448
Intermedia Communications, Inc.						380	516	444
Talk.com Holding Corp.			180	232	305	426	398	428
Williams Communications, Inc.					227	126	184	413
RSL Companies 14/								
RSL Communications, Ltd.					192			
RSL COM USA, Inc.						171	270	362
RSL COM Primecall, Inc.						130	160	
Westinghouse Communications						127		
Primus Companies 15/								
Primus Telecommunications, Inc.						176	240	338
Telegroup, Inc.			129	213	337	384		
Trescom International, Inc.				140	158			
Pacific Gateway Exchange 16/				162	299	466	680	298
Business Telecom, Inc. 17/			115	149	195	212	260	271
ITC^Deltacom Communications, Inc.						122	172	270
NOSVA Limited Partnership							191	258
Network Plus, Inc.							153	236
Startec Global Operating Company						160	261	215
General Communication, Inc.	92	106	120	143	158	175	184	211
Evercom Systems, Inc.							205	206
SNET America, Inc.					142	162	186	189
Americatel Corporation							129	188
Lightyear Communications, Inc.						180	189	176
ALLTEL Communications, Inc.							120	175
New Global Telecom, Inc.							134	151
Electric Lightwave								145
Touch America Services, Inc.								140
Covista Communications					123	137	140	134
Working Assets Funding Service, Inc.						131	140	132
Norlight Telecommunications								119
Others 18/	4,459	5,445	5,813	6,553	8,920	9,453	8,781	8,393
Total Long Distance Carriers	61,533	67,351	74,143	82,113	90,028	94,396	98,788	100,247
Bell Operating Companies	9,849	9,527	8,189	7,950	7,138	6,857	6,182	5,865
Other Incumbent Local Telephone Cos. 18/	3,908	3,848	3,143	3,298	3,077	2,572	1,864	734
CAPs, CLECs, & Other Local Telephone Cos. 18/					550	1,230	1,412	1,335
Total Local Exchange Carriers	13,757	13,375	11,332	11,248	10,765	10,659	9,458	7,934
Total Toll Service Revenues	$75,290	$80,726	$85,475	$93,361	$100,793	$105,055	$108,246	$108,181

* Includes intrastate, interstate and international toll revenues.
# Year 2000 totals are based on staff estimates.

See notes following Table 10.1.

Notes for Table 10.1

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/ MCI WorldCom's revenues were revised for 1998 to exclude enhanced services and to be consistent with revenues reported for 1999.

3/ 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. MCI Communications Corp. and Telecom*USA merged during 1989 and began reporting consolidated revenues in 1990. Metromedia Communications Corp. and ITT Communications Services, Inc., merged during 1988, but reported 1989 revenue separately. LDDS Communications, Inc., and Advanced Telecommunications Corp. merged in 1992. In 1993, LDDS merged with Metromedia Communications 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 Intelenet Decenber 31, 1996.

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. The information shown for GTE Sprint and US Telecom for 1986 is for January 1 - June 30. The information shown for Sprint Communications Corp. (then US Sprint) for 1986 is for July 1 - December 31. 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 revenue statements for the year. Qwest Communications Corp. merged with LCI and USLD Communications, Inc., in June of 1998, and each of the three affiliated companies filed a separate revenue statement for 1998.

7/ Concert Global Networks USA, LLC is a joint venture of AT&T Corporation and British Telecommunications.

8/ Global Crossing Ltd. acquired Frontier Corporation September 28, 1999. In 1994, RCI Long Distance, Inc., changed its name to Frontier Corporation.

9/ Bell Canada Enterprise (BCE) acquired Teleglobe, Inc. on November 1, 2000. eMeritus Communications was formerly known as Telco Business Solutions, Inc. (previously Telco Holdings, Inc.) Teleglobe USA, Inc., merged with Excel Telecommunications, Inc., and its affiliate merged with Excel Telecommunications, Inc., and its affiliate in November of 1998. Excel Telecommunications acquired Telco Holdings in October of 1997.

10/ World Access, Inc. aquired WorldxChange Communications December 19, 2000. FaciliCom merged into World Access, Inc. on December 7, 1999. World Access and five of its subsidiaries, including WorldxChange and FaciliCom, filed Chapter 11 bankruptcy procedings in Illinois on April 24, 2001.

11/ Star Telecommunications' s revenues for 1996 - 1998 have been prorated to reflect the decrease in revised revenues reported for 1999. Star filed Chapter 11 bankruptcy procedings in California on March 13, 2001.

12/ Cincinnati Bell Inc., merged with IXC Communications, Inc., on November 9, 1999 and soon began doing business as Broadwing, Inc.

13/ Viatel, Inc. filed Chapter 11 bankruptcy procedings in Delaware on May 2, 2001. They discontinued offering service in the United States at that time. Revenues for year 2000 are from their Form 499-A filings.

14/ RSL COM USA bought Westinghouse Communications in August 1998. RSL COM USA filed Chapter 11bankruptcy procedings in New York on March 16, 2001.

15/ Primus Telecommunications, Inc. acquired TresCom International, Inc., in 1998.

16/ Pacific Gateway Exchange filed Chapter 11 bankruptcy procedings in California on December 29, 2001. Revenues are for year ended December 31, 2000 and are from their Form 8-K filed May 30, 2001.

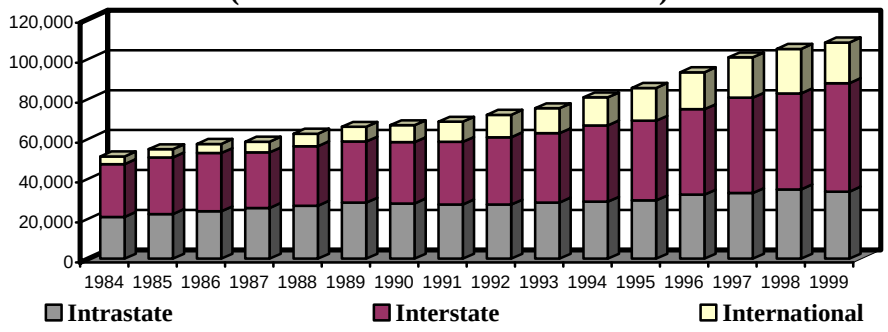
17/ Data for 1996 taken from the Annual Report to the Colorado Public Utilities Commission from telecommunications carriers regulated pursuant to §40-15-301 C.R.S.

18/ Estimated by FCC staff.

Table 10.2
Intrastate, Interstate, and International Toll Revenues
(Dollar Amounts Shown in Millions)

	Toll Revenues				As Percentage of Total Toll Revenues		
		Domestic		Total Toll		Domestic	
Year	Intrastate	Interstate	International	Revenues	Intrastate	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	54,306	20,340	108,246	31.0	50.4	18.6

Chart 10.1
Toll Revenues by Market Segment
(Dollar Amounts Shown in Billions)



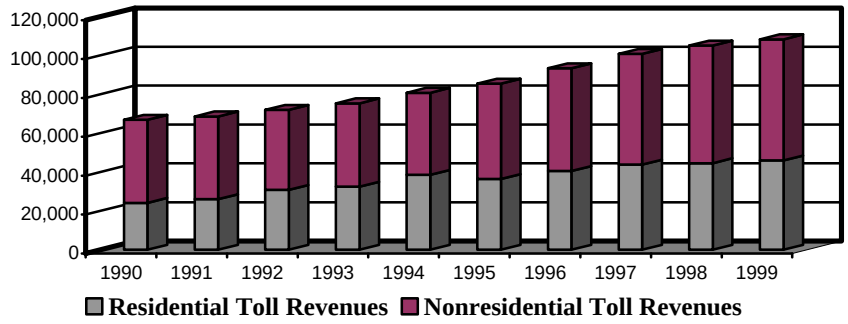
Average Annual Growth Rate (1984-1999): 5.1%

Table 10.3
Residential and Nonresidential Toll Revenues
(Dollar Amounts Shown in Millions)

Year	Toll Revenues		Total Toll Revenues	As Percentage of Total Toll Revenues	
	Residential	Nonresidential		Residential	Nonresidential
1990	$24,089	$42,703	$66,792	36.1 %	63.9 %
1991	26,028	42,530	68,558	38.0	62.0
1992	30,816	41,167	71,983	42.8	57.2
1993	32,408	42,882	75,290	43.0	57.0
1994	38,526	42,200	80,726	47.7	52.3
1995	36,361	49,114	85,475	42.5	57.5
1996	40,461	52,900	93,361	43.3	56.7
1997	43,754	57,039	100,793	43.4	56.6
1998	44,543	60,512	105,055	42.4	57.6
1999	45,896	62,350	108,246	42.4	57.6

1/ 1999 residential/nonresidential breakdown projected from 1998 data.

Chart 10.2
Residential and Nonresidential Toll Revenues
(Dollar Amounts Shown in Billions)



Residential Average Annual Growth Rate (1990-1999): 7.4%
Nonresidential Average Annual Growth Rate (1990-1999): 3.9%

Table 10.4
Number of Toll Carriers

	TRS Data				TRS & USF Data		Form 499-A Data
	1993	1994	1995	1996	1997	1998	1999
Carriers That Provide Toll Service							
Toll Carriers							
Interexchange Carriers (IXCs)	83	97	130	149	151	171	204
Other Toll Carriers							
Operator Service Providers (OSPs)	35	29	25	27	32	24	21
Pre-paid Calling Card Providers	NA	NA	8	16	18	20	21
Satellite Service Carriers	NA	NA	NA	22	13	13	21
Toll Resellers	171	206	260	345	340	388	457
Other Toll Carriers	32	34	30	28	15	31	17
Total Toll Carriers	321	366	453	587	569	647	741
Fixed Local Service, Payphone, and Mobile Service Carriers Reporting Toll Service Revenues	NA	NA	NA	NA	1,537	1,740	1,870
Total	NA	NA	NA	NA	2,106	2,387	2,611

NA - Not Available.

Note: Some previously published data have been revised.

Sources: Data filed in response to 47 CFR §43.21(c) and data filed on FCC Forms 431, 457, and 499-A worksheets. See also: Industry Analysis Division, *Telecommunications Industry Revenues,* and *Carrier Locator: Interstate Service Providers.*

Table 10.5

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

Year	Quarter	Number of CICS Assigned
1982	First Quarter	11
	Second Quarter	13
	Third Quarter	13
	Fourth Quarter	11
1983	First Quarter	15
	Second Quarter	25
	Third Quarter	33
	Fourth Quarter	42
1984	First Quarter	54
	Second Quarter	86 1/
	Third Quarter	121
	Fourth Quarter	155
1985	First Quarter	182
	Second Quarter	212
	Third Quarter	236
	Fourth Quarter	256
1986	First Quarter	276
	Second Quarter	331
	Third Quarter	361
	Fourth Quarter	413
1987	First Quarter	444
	Second Quarter	495
	Third Quarter	530
	Fourth Quarter	573
1988	First Quarter	602
	Second Quarter	621
	Third Quarter	601
	Fourth Quarter	639
1989	First Quarter	685
	Second Quarter	714
	Third Quarter	730
	Fourth Quarter	747
1990	First Quarter	774
	Second Quarter	794
	Third Quarter	817
	Fourth Quarter	791
1991	First Quarter	745
	Second Quarter	766
	Third Quarter	783
	Fourth Quarter	807
1992	First Quarter	786
	Second Quarter	831
	Third Quarter	840
	Fourth Quarter	886

Year	Quarter	FGB	FGD
1993	First Quarter	694 2/	709
	Second Quarter	738	746
	Third Quarter	739	760
	Fourth Quarter	753	796
1994	First Quarter	781	815
	Second Quarter	795	845
	Third Quarter	805	899 3/
	Fourth Quarter	819	947
1995	First Quarter	829	1,016
	Second Quarter	832	1,082
	Third Quarter	843	1,146
	Fourth Quarter	852	1,209
1996	First Quarter	865	1,253
	Second Quarter	876	1,300
	Third Quarter	875	1,315
	Fourth Quarter	878	1,337
1997	First Quarter	882	1,395
	Second Quarter	896	1,427
	Third Quarter	908	1,481
	Fourth Quarter	909	1,538
1998	First Quarter	943	1,557
	Second Quarter	937	1,614
	Third Quarter	943	1,671
	Fourth Quarter	952	1,721
1999	First Quarter	949	1,842
	Second Quarter	953	1,909
	Third Quarter	954	1,980
	Fourth Quarter	956	2,032
2000	First Quarter	958	2,093
	Second Quarter	958	2,142
	Third Quarter	937	2,181
	Fourth Quarter	911	2,203
2001	First Quarter	897	2,232
	Second Quarter	885	2,225

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.

Table 10.6

Alternative Measures of Long Distance Carrier Development

Year	Month	Carriers with Presubscribed Lines	Carriers Purchasing Equal Access 1/	Firms with Carrier Identification Codes	Firms Purchasing Access	Carriers Filing TRS Worksheets 2/
1986	March	*	169	231	*	*
	June	*	183	276	*	*
	September	*	190	302	506	*
	December	*	210	334	533	*
1987	March	*	211	360	561	*
	June	*	213	397	*	*
	September	*	224	421	*	*
	December	223	239	451	540	*
1988	March	*	238	471	511	*
	June	242	248	489	519	*
	September	*	256	464	506	*
	December	253	266	493	510	*
1989	March	*	274	520	519	*
	June	276	287	544	*	*
	September	*	304	560	*	*
	December	302	318	577	514	*
1990	March	*	289	594	512	*
	June	314	288	611	506	*
	September	*	304	636	511	*
	December	325	304	601	499	*
1991	March	*	306	571	505	*
	June	355	327	597	542	*
	September	*	337	605	538	*
	December	388	351	631	576	*
1992	March	*	361	616	595	*
	June	425	370	659	577	*
	September	*	379	654	587	*
	December	414	394	692	599	*
1993	March	*	*	*	*	*
	June	412	401	*	*	*
	September	*	401	*	*	*
	December	436	420	*	*	321
1994	March	*	433	*	*	*
	June	454	444	*	*	*
	September	*	458	*	*	*
	December	511	465	*	*	366
1995	March	*	*	*	*	*
	June	549	*	*	*	*
	September	*	*	*	*	*
	December	583	*	*	*	453
1996	March	*	*	*	*	*
	June	582	*	*	*	*
	September	*	*	*	*	*
	December	621	*	*	*	587
1997	December 3/	*	*	*	*	569
1998	December	*	*	*	*	647
1999	December	*	*	*	*	738

* Data not available.

1/ Data for the periods prior to March 1990 include a small number of firms purchasing equal access that were not carriers.

2/ Includes interexchange carriers, operator service providers, other toll carriers, pay card providers, and toll resellers.

3/ The number of carriers with presubscribed lines is no longer available. The only measure available after December 1996 is the number of carriers filing TRS annual worksheets. One company that had filed about fifty separate worksheets in 1996 filed only one consolidated worksheet for 1997. Starting in 1997, the measure used is the number of filers submitting Telecommunications Reporting Worksheets (FCC Form 499-A).

Table 10.7
Toll Revenues of AT&T, ILECs and Other Toll Service Providers
(Dollar Amounts Shown in Millions)

Year	Long Distance Carriers		Local Exchange Carriers		Total Industry Toll Revenues
	AT&T 1/ 2/ 3/	Other Long Distance Carriers	Incumbent Local Exchange Carriers	Competitive Local Exchange Carriers	
1976	$19,800	$67			$19,867
1977	22,429	146			22,575
1978	25,891	188			26,079
1979	29,262	289			29,551
1980	32,855	480			33,335
1981	38,309	871			39,180
1982	42,332	1,587			43,919
1983	44,298	2,672			46,970
1984	35,190	3,565	$12,401		51,156
1985	37,041	5,589	12,185		54,815
1986	36,782	7,813	12,873		57,468
1987	35,481	9,302	13,736		58,519
1988	35,679	11,807	15,113		62,600
1989	34,827	16,160	14,840		66,024
1990	34,139	17,748	14,690		66,792
1991	34,722	19,513	14,115		68,558
1992	35,828	22,297	13,615		71,983
1993	36,051	24,660	13,757		75,290
1994	37,495	29,856	13,375		80,726
1995	38,394	35,749	11,332		85,475
1996	39,382	42,769	11,248		93,361
1997	39,592	50,558	10,215	$550	100,793
1998	40,674	53,722	9,429	1,230	105,055
1999	39,964	58,824	8,046	1,412	108,246
2000	38,111	62,136	6,599	1,335	108,181

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 1998.

2/ Prior to 1984, AT&T and Alascom toll revenues include local exchange carrier toll revenues, which reported separately to the FCC.

3/ For year 2000, revenues for AT&T do not include their share of Concert Global Networks USA, Inc. Table 10.1, footnote 7.)

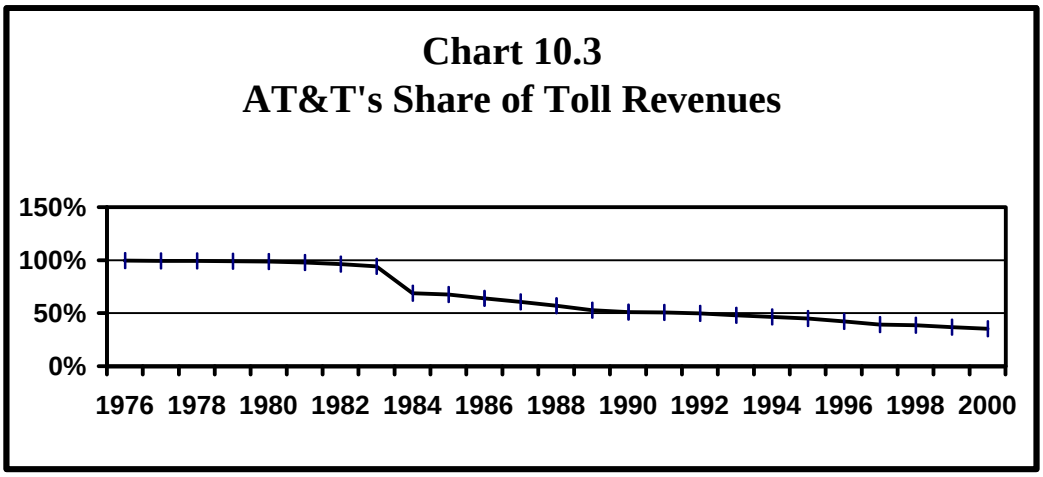


Table 10.8
Share of Total Toll Service Revenues - Long Distance Carriers Only 1/

Year	AT&T	MCI WorldCom	Sprint	All Other Long Distance Carriers
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	60.8	18.1	9.7	11.5
1993	58.1	19.7	10.0	12.3
1994	55.2	20.7	10.1	14.0
1995	51.8	24.6	9.8	13.8
1996	47.9	25.4	9.7	17.0
1997	43.8	25.7	9.5	19.8
1998	43.1	23.5	8.5	24.9
1999	40.5	23.7	9.8	26.0
2000	38.0 2/	22.5	9.0	30.5

1/ Excludes independent local exchange carriers and competitive local exchange carriers.
2/ For year 2000, AT&T's market share does not reflect revenues from their share of Concert Global Networks USA, LLC. (See Table 10.1, footnote 7.)

Table 10.9
Share of Total Toll Service Revenues - All Long Distance Toll Providers 1/

Year	AT&T	MCI WorldCom	Sprint	All Other Long Distance Carriers	Bell Operating Companies	Other Local Telephone Companies
1984	68.3 %	3.4 %	2.1 %	2.0 %	17.7 %	6.6 %
1985	67.1	4.3	2.0	4.4	16.5	5.8
1986	63.5	5.9	3.3	4.9	16.7	5.7
1987	60.2	6.7	4.4	5.2	17.5	5.9
1988	56.6	7.8	5.4	6.1	17.0	7.1
1989	52.3	9.5	6.5	9.1	16.0	6.5
1990	50.7	11.3	7.5	8.4	15.8	6.2
1991	50.2	12.5	7.8	9.0	14.7	5.9
1992	49.3	14.6	7.9	9.3	13.5	5.4
1993	47.5	16.0	8.2	10.1	13.1	5.2
1994	46.0	17.3	8.4	11.7	11.8	4.8
1995	44.9	21.4	8.5	12.0	9.6	3.7
1996	42.1	22.4	8.5	15.0	8.5	3.5
1997	39.2	22.9	8.5	18.8	7.1	3.6
1998	38.7	21.1	7.6	22.4	6.5	3.6
1999	36.9	21.7	9.0	23.7	5.7	3.0
2000	35.2 2/	20.8	8.4	28.2	5.4	2.0

1/ Includes independent local exchange carriers and competitive local exchange carriers.
2/ For year 2000, AT&T's market share does not reflect revenues from their share of Concert Global Netwo
(See Table 10.1, footnote 7.)

Table 10.10
Residential Market Share: 1995 - 2000

	AT&T	WorldCom 1/	Sprint	Other
Access Lines 2/				
1995	74.6 %	13.0 %	4.2 %	8.2 %
1996	69.9	14.1	5.0	11.0
1997	67.2	13.2	5.7	13.8
1998	62.6	15.1	5.7	16.6
1999	62.5	16.0	6.2	15.4
2000	53.3	18.1	6.9	21.8
Toll Revenues				
1995	68.5 %	14.6 %	5.6 %	11.3 %
1996	63.3	16.0	6.6	14.1
1997	61.1	16.6	5.6	16.7
1998	58.3	18.4	5.7	17.6
1999	56.1	21.6	6.2	16.1
2000	48.4	22.2	6.8	22.6
Direct-Dial Minutes				
1995	69.5 %	16.1 %	5.8 %	8.6 %
1996	62.5	15.9	7.1	14.5
1997	62.4	14.9	6.5	16.2
1998	58.4	17.0	6.5	18.1
1999	53.2	20.9	6.6	19.3
2000	44.7	21.3	7.3	26.6

Note: Market shares for past years have been revised to take into account mergers and acquisitions and changes in methodology.

1/ In 1995 for MCI only. In 1996, includes MCI and LDDS.

2/ In 1995, 1996, 1999 and 2000, TNS Telcoms 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 IAD staff with data provided by TNS Telecoms (formerly PNR and Associates), *Telecoms Market MonitorTM* .

Table 10.11
Market Shares of Residential Direct Dial-Minutes by State: 2000 1/

	AT&T	WorldCom	Sprint	Other	Minutes 2/
Alabama	55.5 %	22.6 %	3.3 %	18.5 %	37,875
Arizona	45.3	28.3	6.6	19.8	63,686
Arkansas	41.7	18.8	5.6	33.9	26,107
California	42.6	21.4	6.7	29.4	245,219
Colorado	40.5	22.3	3.4	33.8	44,148
Connecticut	29.1	8.5	3.8	58.6	16,536
Delaware	26.1	27.1	8.2	38.6	5,076
District of Columbia	25.5	50.8	13.2	10.6	5,488
Florida	49.4	21.5	9.1	20.0	223,503
Georgia	48.7	29.3	3.3	18.8	62,360
Idaho	35.1	19.9	6.7	38.3	17,348
Illinois	46.3	22.0	6.4	25.3	102,295
Indiana	51.9	17.6	7.2	23.3	54,944
Iowa	40.7	25.0	4.5	29.8	34,979
Kansas	34.1	12.5	19.2	34.1	19,707
Kentucky	49.5	15.5	7.9	27.1	35,217
Louisiana	49.2	16.4	5.1	29.4	34,739
Maine	43.5	22.0	4.2	30.3	5,812
Maryland	39.6	32.3	5.8	22.3	62,912
Massachusetts	57.4	20.3	10.1	12.1	25,218
Michigan	51.8	15.4	9.3	23.6	89,987
Minnesota	46.1	23.7	7.8	22.4	56,207
Mississippi	59.0	25.3	2.7	13.0	22,046
Missouri	46.5	11.2	12.4	29.9	26,396
Montana	44.0	11.3	5.0	39.7	13,359
Nebraska	41.7	24.8	8.9	24.6	18,079
Nevada	37.2	20.4	11.9	30.4	25,971
New Hampshire	47.1	21.1	13.3	18.6	8,065
New Jersey	55.5	21.1	6.6	16.8	70,028
New Mexico	40.7	25.9	5.2	28.2	15,963
New York	38.2	23.8	5.8	32.1	153,660
North Carolina	53.1	16.6	11.3	19.0	74,305
North Dakota	19.7	30.4	6.8	43.1	11,491
Ohio	44.7	17.6	8.9	28.8	111,411
Oklahoma	42.2	17.1	5.2	35.5	26,516
Oregon	48.8	18.0	1.3	31.9	41,791
Pennsylvania	40.6	25.5	6.4	27.5	109,935
Rhode Island	38.8	16.8	21.6	22.9	5,474
South Carolina	39.7	18.5	9.9	32.0	43,129
South Dakota	40.9	17.0	3.0	39.1	6,914
Tennessee	49.1	20.5	7.4	23.0	55,678
Texas	33.7	18.5	10.0	37.7	126,653
Utah	58.3	17.4	4.1	20.2	14,197
Vermont	47.5	21.8	2.6	28.1	5,958
Virginia	41.1	24.1	9.7	25.0	82,380
Washington	43.1	20.9	7.3	28.6	54,701
West Virginia	57.5	23.9	0.4	18.1	16,295
Wisconsin	44.3	20.7	6.2	28.9	85,598
Wyoming	55.4	17.9	5.1	21.6	9,493
Total	44.7	21.3	7.3	26.6	2,504,849

1/ Based on interLATA toll calls.

2/ Total minutes of direct-dial toll calling in the Bill Harvesting study. Caution should be used in interpreting market shares for states with few minutes, where sample sizes are generally small.

Source: Calculated by IAD staff with data provided by TNS Telecoms (formerly PNR and Associates), *Telecoms Market MonitorTM* .

Table 10.12
BOC Applications to Provide In-Region InterLATA Service *
(Section 271 Applications)

State	Resolution	Date Application Filed	Date Application Resolved
Connecticut	**Approved**	**04/23/01**	**07/20/01**
Kansas	**Approved**	**10/26/00**	**01/22/01**
Louisiana	Denied	11/06/97	02/04/98
Louisiana	Denied	07/09/98	10/13/98
Massachusetts	Withdrawn	09/22/00	12/18/00
Massachusetts	**Approved**	**01/16/01**	**04/16/01**
Michigan	Withdrawn	01/02/97	02/11/97
Michigan	Denied	05/21/97	08/19/97
Missouri	Withdrawn	04/04/01	06/07/01
New York	**Approved**	**09/29/99**	**12/22/99**
Oklahoma	Denied	04/11/97	06/26/97
Oklahoma	**Approved**	**10/26/00**	**01/22/01**
Pennsylvania	*Pending*	*06/21/01*	*1/*
South Carolina	Denied	09/30/97	12/24/97
Texas	Withdrawn	01/10/00	04/05/00
Texas	**Approved**	**04/05/00**	**06/30/00**

* As of August 17, 2001.

1/ Statutory deadline for Commission action is September 19, 2001.

11 Minutes

1. Dial Equipment 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 calls are not metered and estimates of total calling are subject to wide margins of error. Periodic studies are 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) are used to estimate the proportion of calling that is interstate and to allocate costs between interstate and intrastate services.

DEMs, which are shown in Table 11.1, are measured as calls that enter and leave telephone switches; therefore, two DEMs are counted for every conversation minute. (Individual company and state data can be found in our *Monitoring Report* on the **FCC-State Link** web page.) Until recently, the volume of local calling grew at approximately the same rate as the number of local telephone lines. In contrast, the volume of long distance calling surged as prices fell. As a result, a greater portion of calls are long distance. Intrastate toll minutes increased from 8% of all minutes in 1980 to 10% in 1999. During that same period, interstate calling minutes increased from 8% of the total to 13%.

As shown in Table 11.2, the average telephone line is used primarily for local calling and is used about an hour per day for all calls (local, intrastate toll, and interstate toll). The level of local calling has remained relatively constant for a long period of time. In recent years, however, it has begun to surge due to the introduction of facsimile machines, computer modems, and other devices that use telephone lines. Increases in local and long distance calling have caused the total usage per line to increase from 46 minutes per day in 1980 to 65 minutes per day in 1999.

2. Switched Access Minutes

An alternative measure of interstate calling became available in 1984. Switched access minutes are those minutes transmitted by long distance carriers that also use the distribution networks of local telephone companies. The measure includes minutes associated with ordinary long distance calls and the "open end" of WATS and 800-like calls. It excludes calls made on private telecommunications systems, on leased lines, and minutes on the "closed end" of WATS and 800-like calls. On ordinary long distance calls, minutes are counted both where the call originates and where the call terminates.

Table 11.3 shows the total number of interstate switched access minutes handled by all long distance carriers. The number of minutes has grown steadily since mid-1984, stemming from a combination of overall economic growth and price reductions. Premium minutes have grown rapidly, reflecting both strong underlying traffic growth and the conversion of offices to equal access. Non-premium minutes (principally minutes handled by AT&T's competitors in areas where equal access has not yet been provided) continue to decline as the process of conversion to equal access nears completion.

Telephone industry traffic experts often argue that dial equipment minutes represent the best

available information on the proportions of different types of calls, while access minutes are the most accurate available data on the volume of interstate calling. However, it is not clear why reported changes in access minutes are not entirely consistent with reported changes in dial equipment minutes.

Table 11.1

Dial Equipment Minutes
(Minutes Shown in Billions)

	Local	Intrastate Toll	Interstate Toll	Total
1980	1,458	141	133	1,733
1981	1,492	151	144	1,787
1982	1,540	158	154	1,853
1983	1,587	166	169	1,923
1984	1,639	198	208	2,045
1985	1,673	222	250	2,145
1986	1,699	237	270	2,207
1987	1,713	253	295	2,261
1988	1,795	269	321	2,384
1989	1,829	286	344	2,459
1990	1,846	298	353	2,497
1991	1,859	302	366	2,527
1992	1,926	311	381	2,618
1993	2,027	316	396	2,739
1994	2,126	327	420	2,873
1995	2,224	346	454	3,025
1996	2,389	370	486	3,245
1997	2,683	404	525	3,611
1998	2,982	420	553	3,955
1999	3,379	451	585	4,414
Increase Over Prior Year				
1981	2 %	7 %	8 %	3 %
1982	3	5	7	4
1983	3	5	10	4
1984	3	19	23	6
1985	2	12	20	5
1986	2	7	8	3
1987	1	7	9	2
1988	5	6	9	5
1989	2	6	7	3
1990	1	4	3	2
1991	1	1	4	1
1992	4	3	4	4
1993	5	2	4	5
1994	5	3	6	5
1995	5	6	8	5
1996	7	7	7	7
1997	12	9	8	11
1998	11	4	5	10
1999	13	7	6	12
Percent Distribution				
1980	84 %	8 %	8 %	100 %
1981	83	8	8	100
1982	83	9	8	100
1983	83	9	9	100
1984	80	10	10	100
1985	78	10	12	100
1986	77	11	12	100
1987	76	11	13	100
1988	75	11	13	100
1989	74	12	14	100
1990	74	12	14	100
1991	74	12	14	100
1992	74	12	15	100
1993	74	12	14	100
1994	74	11	15	100
1995	74	11	15	100
1996	74	11	15	100
1997	74	11	15	100
1998	75	11	14	100
1999	77	10	13	100

Source: National Exchange Carrier Association.

Table 11.2

Line Usage Per Day
(Dial Equipment Minutes per Local Loop)

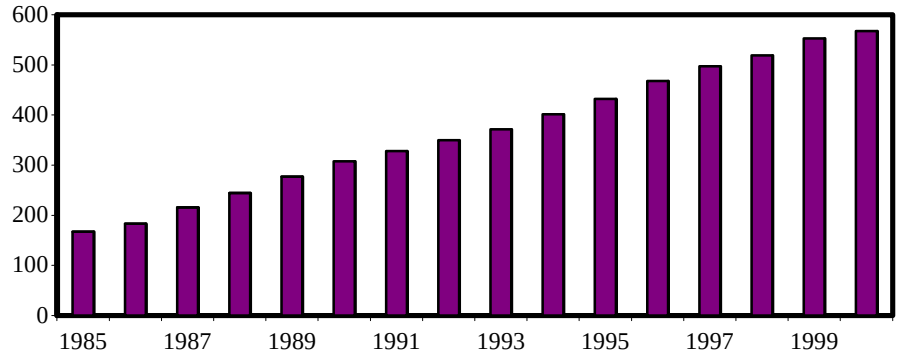
	Local	Intrastate Toll	Interstate Toll	Total
1980	39	4	4	46
1981	39	4	4	46
1982	39	4	4	47
1983	39	4	4	48
1984	40	5	5	50
1985	40	5	6	51
1986	39	5	6	51
1987	38	6	7	50
1988	39	6	7	51
1989	38	6	7	51
1990	37	6	7	50
1991	37	6	7	50
1992	37	6	7	50
1993	37	6	7	51
1994	38	6	8	51
1995	38	6	8	52
1996	39	6	8	53
1997	42	6	8	57
1998	45	6	8	60
1999	50	7	9	65
Increase Over Prior Year				
1981	-1 %	4 %	5 %	0 %
1982	1	3	5	2
1983	0	2	7	1
1984	1	17	21	4
1985	-1	9	17	2
1986	0	5	6	1
1987	-3	3	5	-1
1988	1	2	5	2
1989	-1	3	4	0
1990	-2	1	-1	-2
1991	-2	-1	1	-1
1992	0	0	1	0
1993	2	-1	1	2
1994	1	0	3	1
1995	1	2	4	1
1996	3	2	2	3
1997	8	5	4	7
1998	7	1	2	6
1999	10	4	3	9

Table 11.3
Interstate Switched Access Minutes
(In Billions)

Year	Period	Access Minutes	Year	Period	Access Minutes	Year	Period	Access Minutes
			1990	First Quarter	74.7	1996	First Quarter	115.7
				Second Quarter	75.8		Second Quarter	114.7
1984	Third Quarter	37.5		Third Quarter	77.9		Third Quarter	117.5
	Fourth Quarter	39.6		Fourth Quarter	79.1		Fourth Quarter	120.2
				Total 1990	307.4		Total 1996	468.1
1985	First Quarter	39.6	1991	First Quarter	79.2	1997	First Quarter	122.1
	Second Quarter	41.5		Second Quarter	81.9		Second Quarter	124.4
	Third Quarter	42.8		Third Quarter	82.6		Third Quarter	124.9
	Fourth Quarter	43.3		Fourth Quarter	84.4		Fourth Quarter	125.8
	Total 1985	167.1		Total 1991	328.0		Total 1997	497.3
1986	First Quarter	43.0	1992	First Quarter	85.6	1998	First Quarter	124.0
	Second Quarter	44.8		Second Quarter	86.5		Second Quarter	131.3
	Third Quarter	46.7		Third Quarter	87.9		Third Quarter	130.7
	Fourth Quarter	48.5		Fourth Quarter	89.8		Fourth Quarter	132.8
	Total 1986	183.1		Total 1992	349.7		Total 1998	518.8
1987	First Quarter	51.2	1993	First Quarter	90.6	1999	First Quarter	136.0
	Second Quarter	52.5		Second Quarter	91.2		Second Quarter	138.2
	Third Quarter	55.0		Third Quarter	93.6		Third Quarter	138.2
	Fourth Quarter	57.0		Fourth Quarter	95.9		Fourth Quarter	140.2
	Total 1987	215.7		Total 1993	371.2		Total 1999	552.7
1988	First Quarter	59.0	1994	First Quarter	98.7	2000	First Quarter	142.9
	Second Quarter	59.6		Second Quarter	97.9		Second Quarter	142.9
	Third Quarter	62.1		Third Quarter	101.9		Third Quarter	141.3
	Fourth Quarter	64.0		Fourth Quarter	102.9		Fourth Quarter	140.3
	Total 1988	244.6		Total 1994	401.4		Total 2000	567.4
1989	First Quarter	66.2	1995	First Quarter	105.6	2001	First Quarter	139.6
	Second Quarter	68.5		Second Quarter	106.8			
	Third Quarter	69.7		Third Quarter	109.0			
	Fourth Quarter	72.6		Fourth Quarter	110.6			
	Total 1989	277.1		Total 1995	431.9			

Source: *FCC Monitoring Report.*

Chart 11.1
Interstate Switched Access Minutes
(In Billions)



12 Mobile Wireless Service

The Commission collects data on the number of wireless subscribers per state as part of a recently adopted local competition and broadband data gathering program (FCC Form 477). The new program requires providers of wireless service to file information twice each year for each state in which they have at least 10,000 subscribers. Table 12.1 shows the number of wireless subscribers per state as of December 31, 2000.

The Cellular Telecommunications & Internet Association (CTIA) periodically publishes summary information on the industry; a selection of which is shown in Tables 12.2 and 12.3. CTIA can be found on the Internet at <www.wow-com.com>.

The wireless industry has grown dramatically. Table 12.2 shows that there were 92,000 subscribers in 1984, as compared with over 109 million subscribers as of December 2000. As seen in Table 12.3, the industry's annual revenues rose from less than a half billion in 1984 to over $50 billion in 2000. The table also shows that the industry had nearly 185,000 employees as of December 2000, 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 $45.27 as of December 2000.

Table 12.1
Mobile Wireless Telephone Subscribers
(As of December 31, 2000)

State	Dec 2000 Reporting Carriers 1/	Dec 2000 Percent Resold 2/	Subscribers Dec 1999	Subscribers June 2000	Subscribers Dec 2000	Percent Change Dec 1999 - Dec 2000
Alabama	9	1%	1,080,410	1,253,084	1,386,294	28%
Alaska	*	*	165,221	169,892	*	*
Arizona	11	7	1,125,321	1,624,668	1,829,695	63
Arkansas	5	2	719,919	715,467	743,928	3
California	10	5	8,544,941	12,283,369	12,649,508	48
Colorado	8	4	1,552,718	1,654,989	1,856,075	20
Connecticut	6	7	1,077,089	1,136,618	1,277,123	19
Delaware	6	0	270,848	275,219	371,014	37
District of Columbia	6	10	910,116	333,815	928,962	2
Florida	9	6	5,158,079	4,983,478	6,369,985	23
Georgia	11	6	2,538,983	2,687,238	2,739,000	8
Hawaii	7	0	288,425	454,364	524,291	82
Idaho	4	23	271,436	296,066	344,564	27
Illinois	10	10	3,922,482	4,309,660	5,143,767	31
Indiana	10	6	1,318,975	1,717,378	1,715,074	30
Iowa	7	62	774,773	975,629	832,106	7
Kansas	10	4	669,472	724,024	801,293	20
Kentucky	10	2	911,700	999,544	1,026,334	13
Louisiana	11	4	1,227,106	1,294,693	1,306,457	6
Maine	5	32	187,003	283,640	359,786	92
Maryland	7	6	1,473,494	2,013,058	1,894,251	29
Massachusetts	6	4	1,892,014	2,228,169	2,649,130	40
Michigan	11	9	3,512,813	3,423,535	3,488,826	- 1
Minnesota	13	4	1,550,411	1,595,560	1,851,430	19
Mississippi	7	0	673,355	509,038	786,577	17
Missouri	8	8	1,855,452	1,848,775	1,767,411	- 5
Montana	*	12	*	*	*	*
Nebraska	5	1	576,296	600,885	659,380	14
Nevada	6	3	750,335	825,163	684,752	- 9
New Hampshire	8	35	280,508	309,263	387,264	38
New Jersey	6	2	2,289,181	2,750,024	3,575,130	56
New Mexico	5	41	363,827	395,111	443,343	22
New York	7	11	4,833,816	5,016,524	5,873,965	22
North Carolina	11	13	2,536,068	2,730,178	3,105,811	22
North Dakota	*	2	*	*	*	*
Ohio	12	6	3,237,786	3,278,960	4,015,476	24
Oklahoma	12	13	826,637	979,513	1,732,994	110
Oregon	8	11	914,848	1,082,425	1,201,207	31
Pennsylvania	11	6	2,767,474	3,850,372	4,031,031	46
Puerto Rico	4	27	*	1,090,005	926,448	*
Rhode Island	6	39	279,304	313,550	355,889	27
South Carolina	9	7	1,137,232	1,236,338	1,392,586	22
South Dakota	*	3	*	*	*	*
Tennessee	11	10	1,529,054	1,876,444	1,985,851	30
Texas	19	8	5,792,453	6,705,423	7,489,180	29
Utah	8	5	643,824	692,006	750,244	17
Vermont	*	13	*	*	*	*
Virgin Islands	0	NA	*	0	0	NA
Virginia	12	8	1,860,262	2,447,687	2,450,289	32
Washington	9	8	1,873,475	2,144,767	2,286,082	22
West Virginia	7	23	241,265	347,916	392,384	63
Wisconsin	11	43	1,525,818	1,342,908	1,698,520	11
Wyoming	4	1	127,634	*	165,353	*
Nationwide	77	9%	79,696,083	90,643,058	101,212,054	27%

NA - Not Available.

* 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 Division, *Local Telephone Competition: Status as of December 31, 2000.* (December 2000 data revised.)

Table 12.2

Wireless Telephone Subscribers
(As Reported by Cellular Telecommunications & Internet Assn.)

		Number of Systems	Subscribers
1984	December	32	91,600
1985	June	65	203,600
	December	102	340,213
1986	June	129	500,000
	December	166	681,825
1987	June	206	883,778
	December	312	1,230,855
1988	June	420	1,608,697
	December	517	2,069,441
1989	June	559	2,691,793
	December	584	3,508,944
1990	June	592	4,368,686
	December	751	5,283,055
1991	June	1,029	6,390,053
	December	1,252	7,557,148
1992	June	1,483	8,892,535
	December	1,506	11,032,753
1993	June	1,523	13,067,318
	December	1,529	16,009,461
1994	June	1,550	19,283,506
	December	1,581	24,134,421
1995	June	1,581	28,154,415
	December	1,627	33,785,661
1996	June	1,629	38,195,466
	December	1,740	44,042,992
1997	June	2,005	48,705,553
	December	2,228	55,312,293
1998	June	2,300	60,831,431
	December	3,073	69,209,321
1999	June	3,447	76,284,753
	December	3,518	86,047,003
2000	June	2,306 1/	97,035,925
	December	2,440	109,478,031

1/ The drop in the number of systems from December 1999 to June 2000 was due to the reclassification of Nextel's systems from city-by-city to consolidated MSAs and BTAs.

Source: Cellular Telecommunications & Internet Association (CTIA).

Table 12.3

Wireless Telephone Service: Industry Survey Results
(As Reported by Cellular Telecommunications & Internet Assn.)

		Survey Results		Estimates for Total Industry		
		Number of Systems Responding	Percent of Industry Surveyed	Employees	Six-Month Revenues (Thousands)	Average Monthly Bill
1984	December	32	100.0 %	1,404	$178,085	
1985	June	65	100.0	1,697	176,231	
	December	101	100.0	2,727	306,197	
1986	June	122	96.0	3,556	360,585	
	December	160	95.3	4,334	462,467	
1987	June	192	88.0	5,656	479,514	
	December	297	97.2	7,147	672,005	$96.83
1988	June	409	99.9	9,154	886,075	95.00
	December	496	99.1	11,400	1,073,473	98.02
1989	June	513	99.1	13,719	1,406,463	85.52
	December	546	98.8	15,927	1,934,132	89.30
1990	June	554	98.8	18,973	2,126,362	83.94
	December	663	98.2	21,382	2,422,458	80.90
1991	June	905	96.4	25,545	2,653,505	74.56
	December	1,005	96.5	26,327	3,055,017	72.74
1992	June	1,129	96.3	30,595	3,633,285	68.51
	December	1,189	93.4	34,348	4,189,441	68.68
1993	June	1,110	92.2	36,501	4,819,259	67.31
	December	1,287	92.3	39,775	6,072,906	61.48
1994	June	1,242	92.7	45,606	6,519,030	58.65
	December	1,371	93.2	53,902	7,710,890	56.21
1995	June	1,330	93.9	60,624	8,740,352	52.42
	December	1,392	93.0	68,165	10,331,614	51.00
1996	June	1,346	92.2	73,365	11,194,247	48.84
	December	1,422	92.4	84,161	12,440,724	47.70
1997	June	1,785	94.9	97,039	13,134,551	43.86
	December	2,017	94.9	109,387	14,351,082	42.78
1998	June	2,026	94.7	113,111	15,286,660	39.88
	December	2,869	93.3	134,754	17,846,515	39.43
1999	June	3,175	95.6	141,929	19,368,304	40.24
	December	3,216	93.4	155,817	20,650,185	41.24
2000	June	1,949 1/	91.8	159,645	24,645,365	45.15
	December	2,111	94.7	184,449	27,820,655	45.27

1/ The drop in the number of systems from December 1999 to June 2000 was due to the reclassification of Nextel's systems from city-by-city to consolidated MSAs and BTAs.

Source: Cellular Telecommunications & Internet Association (CTIA).

13 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 <http://stats/bls.gov/blshome.html>. 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 13.1 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.

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 rate of change is shown in Table 13.2 for the overall CPI (which measures the impact of inflation on consumers) and the CPI for telephone services. In addition, Table 13.2 shows the gross domestic product chain-type price index (which measures inflation throughout the economy) prepared by the Bureau of Economic Analysis.

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 13.3.

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 13.3.

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 13.1
Long-Term Changes for Various Price Indices
(Annual Rates of Change)

	1935 - 2000	1989 - 2000
CPI All Items	3.8 %	3.1 %
CPI All Services	4.3	3.6
CPI Telephone Services 1/	1.4	0.6
CPI Major Categories:		
- Food & Beverages	*	2.7
- Housing	*	3.0
- Apparel	2.6	0.9
- Transportation	3.6	3.4
- Medical Care	5.0	5.2
- Recreation 2/	*	1.9
- Other Goods & Services	*	5.9
CPI Public Transportation	4.9	4.5
CPI Utility Natural Gas Service	3.5	2.8
CPI Electricity	1.7	1.0
CPI Sewer & Water Maintenance	*	4.5
CPI Postage	3.9	3.5

* Series not established until after 1935.
1/ The CPI telephone service index was revised in December of 1997.
2/ Series not established until 1993. Figure reflects annual change between 1993 and 2000.

Source: Bureau of Labor Statistics.

Table 13.2
Annual Changes in Major Price Indices

	GDP Chain-Type Price Index	CPI - All Items	CPI - Telephone Services
1978	7.4 %	9.0 %	0.9 %
1979	8.3	13.3	0.7
1980	9.6	12.5	4.6
1981	8.3	8.9	11.7
1982	5.1	3.8	7.2
1983	3.6	3.8	3.6
1984	3.5	3.9	9.2
1985	3.0	3.8	4.7
1986	2.2	1.1	2.7
1987	3.1	4.4	-1.3
1988	3.7	4.4	1.3
1989	3.6	4.6	-0.3
1990	4.1	6.1	-0.4
1991	2.8	3.1	3.5
1992	2.2	2.9	-0.3
1993	2.7	2.7	1.8
1994	2.0	2.7	0.7
1995	2.1	2.5	1.2
1996	1.7	3.3	2.1
1997	1.6	1.7	0.2
1998	1.3	1.6	0.3 *
1999	1.6	2.7	0.4
2000	2.4	3.4	-2.3

* CPI telephone service index was revised in December of 1997.

Sources: Bureau of Labor Statistics and Bureau of Economic Analysis.

Chart 13.1

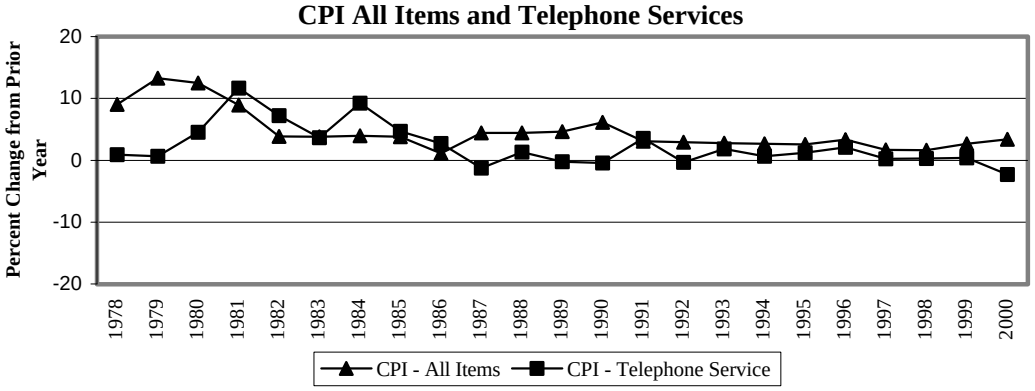


Table 13.3
Annual Changes in Price Indices for Local and Long Distance Telephone Services

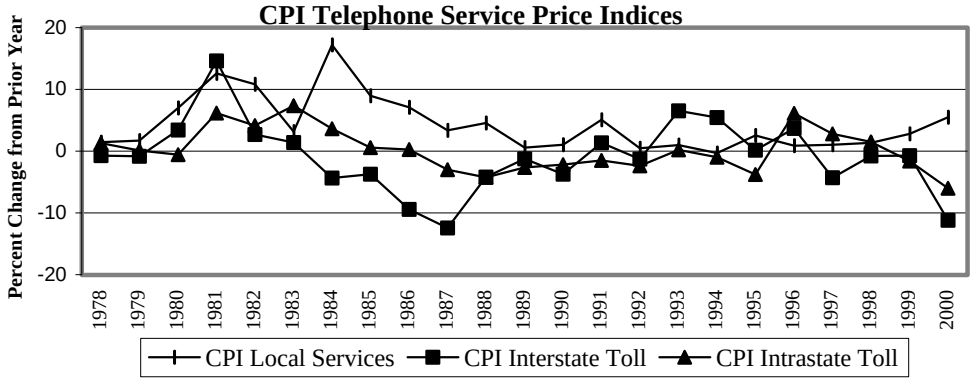
	Local Residential Service		Toll Service 1/			
			Interstate		Intrastate	
	CPI	PPI	CPI	PPI	CPI	PPI
1978	1.4 %	3.1 %	-0.7 %	0.0 %	1.3 %	0.1 %
1979	1.7	1.6	-0.8	-0.9	0.1	-0.7
1980	7.0	7.1	3.4	5.5	-0.6	2.3
1981	12.6	15.6	14.6	15.9	6.2	8.0
1982	10.8	9.0	2.7	3.9	4.2	1.7
1983	3.1	0.2	1.4	0.0	7.4	3.9
1984	17.2	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	2.5	6.1	0.5
1997	1.0	0.2	-4.3	3.6	2.8	-4.0
1998	1.3	-0.1	-0.8	0.0	1.5	-3.3
1999	2.8	0.2	-0.7	1.2	-1.6	-2.0
2000	5.5	1.6	-11.2	4.5	-6.0	6.4

1/ 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. Due to month-to-month variation in the new PPI indices, PPI price levels are determined using a five-month weighted average.

Source: Bureau of Labor Statistics.

Chart 13.2



14 Price Levels

1. Local Rate Levels

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 14.1 presents average local rates for residential customers in urban areas. In October 2000, the monthly charge was $20.78, while the average charge for connecting phone service was $44.10.

Table 14.2 presents average local rates for a business with a single phone line in an urban area. In October 2000, the representative monthly charge was $41.80 while the charge for connecting phone service was $72.29.

2. Long Distance Rates

AT&T's *basic schedule prices* are shown in Table 14.3. Currently most calls are charged lower prices reflecting calling plans and volume discounts. Calls requiring operator services are charged higher rates. Nevertheless, only basic schedule rates were available for many years and are therefore available for such direct comparisons over a long period of time.

Tables 14.4 and 14.5 contain measures of Average Revenue per Minute (APRM) for long distance calls. Estimates of APRM are often used interchangeably with estimates of the average price. From 1984 to 1999, the cost of long distance calling dropped from 32 cents per minute to 14 cents per minute. The average price of 14 cents per minute represents a mix of international calling (56 cents per minute) and domestic interstate calling (11 cents per minute). The decline in prices since 1984 is more than 70% after adjusting for the impact of inflation.

Table 14.1
Average Residential Rates for Local Service in Urban Areas, 1986-2000
(as of October 15, 1986-2000)

	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
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
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
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
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
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**
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
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
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
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**
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
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

NA - Not Available.

1/ Rate is based upon flat-rate service where available, and measured/message service with 100 five-minute, same-zone business-day calls elsewhere.

Source: Urban Rates Survey.

Table 14.2
Average Local Rates for Businesses with a Single Line in Urban Areas
(As of October 15, 1989-2000)

	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
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
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
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
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
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**
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
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
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
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
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**
Number of Sample Cities with Flat-Rate Service	59	56	54	54	54	53	53	53	53	54	54	54
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
200 Five-Minute Business-Day Same-Zone 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
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
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
Taxes, 911, and Other 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
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**
Number of Sample Cities with Measured/Message Service	83	83	84	84	84	87	87	86	85	85	85	85
Cost of a Five-Minute Business-Day Same-Zone 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
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
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
Tax	4.06	4.15	4.32	4.33	4.25	4.13	4.17	4.20	4.45	4.13	4.53	4.40
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**
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
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

1/ Rate is based upon flat-rate service where available, and measured/message service with 200 five-minute, same-zone business-day calls elsewhere.

Source: Urban Rates Survey.

Table 14.3

Changes in the Price of Directly Dialed Five-Minute Long Distance Calls (AT&T Basic Rate Schedules)

Calling Distance (In Airline Miles, Rate Center to Rate Center)		Residential 1/			Business 2/		
		January 1984	July 2001	Percentage Change	January 1984	July 2001	Percentage Change
1 - 10	Day	$0.96	$1.50	56.3 %	$0.96	$2.69	180.2 %
	Evening	0.57	1.25	119.3	0.57	2.69	371.9
	Night & Weekend	0.38	0.80	110.5	0.38	2.69	607.9
11 - 22	Day	1.28	1.50	17.2	1.28	2.69	110.2
	Evening	0.76	1.25	64.5	0.76	2.69	253.9
	Night & Weekend	0.51	0.80	56.9	0.51	2.69	427.5
23 - 55	Day	1.60	1.50	(6.3)	1.60	2.69	68.1
	Evening	0.96	1.25	30.2	0.96	2.69	180.2
	Night & Weekend	0.64	0.80	25.0	0.64	2.69	320.3
56 - 124	Day	2.05	1.50	(26.8)	2.05	2.69	31.2
	Evening	1.22	1.25	2.5	1.22	2.69	120.5
	Night & Weekend	0.82	0.80	(2.4)	0.82	2.69	228.0
125 - 292	Day	2.14	1.50	(29.9)	2.14	2.69	25.7
	Evening	1.28	1.25	(2.3)	1.28	2.69	110.2
	Night & Weekend	0.85	0.80	(5.9)	0.85	2.69	216.5
293 - 430	Day	2.27	1.50	(33.9)	2.27	2.69	18.5
	Evening	1.36	1.25	(8.1)	1.36	2.69	97.8
	Night & Weekend	0.90	0.80	(11.1)	0.90	2.69	198.9
431 - 925	Day	2.34	1.50	(35.9)	2.34	2.69	15.0
	Evening	1.40	1.25	(10.7)	1.40	2.69	92.1
	Night & Weekend	0.93	0.80	(14.0)	0.93	2.69	189.2
926 - 1910	Day	2.40	1.50	(37.5)	2.40	2.69	12.1
	Evening	1.44	1.25	(13.2)	1.44	2.69	86.8
	Night & Weekend	0.96	0.80	(16.7)	0.96	2.69	180.2
1911 - 3000	Day	2.70	1.50	(44.4)	2.70	2.69	(0.4)
	Evening	1.62	1.25	(22.8)	1.62	2.69	66.0
	Night & Weekend	1.08	0.80	(25.9)	1.08	2.69	149.1
3001 - 4250	Day	2.80	1.50	(46.4)	2.80	2.69	(3.9)
	Evening	1.68	1.25	(25.6)	1.68	2.69	60.1
	Night & Weekend	1.12	0.80	(28.6)	1.12	2.69	140.2
4251 - 5750	Day	2.91	1.50	(48.5)	2.91	2.69	(7.6)
	Evening	1.74	1.25	(28.2)	1.74	2.69	54.6
	Night & Weekend	1.16	0.80	(31.0)	1.16	2.69	131.9

1/ AT&T initiated a new rate structure for residential customers on November 8, 1997. The new rate structure eliminates mileage bands and implements weekday-peak and off-peak time bands and a weekend band. The new rates are shown in the old rate structure for the purposes of comparison.

2/ AT&T initiated a new rate structure for business customers on November 5, 1997. The rate structure eliminates mileage, time-of-day, and day-of-week bands. The new rates are shown in the old rate structure for the purposes of comparison.

Source: Tariffs on file at FCC.

Table 14.4
Average Revenue per Minute

	AT&T	All Carriers		
	All Interstate and International Switched Services	All Interstate and International Switched Services	International Switched Services 1/	All Interstate Switched Services
1984	$0.32			
1985	0.31			
1986	0.28			
1987	0.25			
1988	0.23			
1989	0.22			
1990	0.20			
1991	0.20			
1992	0.19	$0.19	$1.04	$0.15
1993	0.19	0.19	1.03	0.15
1994	0.18	0.18	0.96	0.14
1995	NA	0.17	0.92	0.13
1996	NA	0.16	0.78	0.12
1997	NA	0.15	0.71	0.11
1998	NA	0.14	0.68	0.11
1999	NA	0.14	0.56	0.11

NA - Not Available

Note: Data for some prior years have been revised.

1/ Billed revenue per minute for international service differs in Table 6.1 and Table 14.4. Data in Table 6.1 are based on revenues billed by underlying carriers. Data for Table 14.4 are based on staff estimates of end-user revenues.

Sources: AT&T information provided by AT&T. Other estimates from Industry Analysis Division, *Telecommunications Industry Revenues.*

Table 14.5
Indicators of Long Distance Prices

	Average Revenue per Minute for Interstate and International Calls 1/	AT&T Charge per Minute for a 10-Minute Day Rate 200-Mile Call (Basic Rates)	Consumer Price Index: All Goods and Services (1982-1984 = 100)	Restated in 1999 Dollars	
				Revenue per Minute	Basic Rate 200-Mile Call Charge per Minute
1930	$0.27	$0.35	16.7	$2.74	$3.49
1931	0.27	0.35	15.2	2.95	3.84
1932	0.26	0.35	13.7	3.19	4.26
1933	0.28	0.35	13.0	3.53	4.49
1934	0.27	0.35	13.4	3.38	4.35
1935	0.27	0.35	13.7	3.23	4.26
1936	0.25	0.35	13.9	3.01	4.19
1937	0.22	0.35	14.4	2.51	4.05
1938	0.21	0.26	14.1	2.53	3.01
1939	0.22	0.26	13.9	2.59	3.06
1940	0.21	0.26	14.0	2.50	3.03
1941	0.21	0.26	14.7	2.35	2.89
1942	0.22	0.26	16.3	2.21	2.61
1943	0.21	0.22	17.3	2.03	2.12
1944	0.22	0.22	17.6	2.04	2.08
1945	0.21	0.22	18.0	1.96	2.04
1946	0.20	0.22	19.5	1.69	1.88
1947	0.19	0.22	22.3	1.43	1.64
1948	0.19	0.22	24.1	1.29	1.52
1949	0.19	0.22	23.8	1.32	1.54
1950	0.19	0.22	24.1	1.33	1.52
1951	0.20	0.22	26.0	1.29	1.41
1952	0.20	0.22	26.5	1.27	1.38
1953	0.21	0.22	26.7	1.30	1.37
1954	0.22	0.22	26.9	1.38	1.36
1955	0.23	0.22	26.8	1.43	1.37
1956	0.23	0.22	27.2	1.43	1.35
1957	0.24	0.22	28.1	1.41	1.30
1958	0.24	0.22	28.9	1.38	1.27
1959	0.24	0.22	29.1	1.38	1.26
1960	0.24	0.22	29.6	1.36	1.24
1961	0.25	0.22	29.9	1.39	1.23
1962	0.25	0.22	30.2	1.40	1.21
1963	0.25	0.22	30.6	1.35	1.20
1964	0.25	0.22	31.0	1.34	1.18
1965	0.24	0.22	31.5	1.27	1.16
1966	0.24	0.22	32.4	1.25	1.13
1967	0.24	0.22	33.4	1.21	1.10
1968	0.24	0.22	34.8	1.13	1.05
1969	0.24	0.22	36.7	1.09	1.00

1/ Estimates for 1930 through 1981 are based on information in AT&T *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 Industry Analysis Division, *Telecommunications Industry Revenue*.

Table 14.5
Indicators of Long Distance Prices - Continued

	Average Revenue per Minute for Interstate and International Calls 1/	AT&T Charge per Minute for a 10-Minute Day Rate 200-Mile Call (Basic Rates)	Consumer Price Index: All Goods and Services (1982-1984 = 100)	Restated in 1999 Dollars	
				Revenue per Minute	Basic Rate 200-Mile Call Charge per Minute
1970	$0.23	$0.22	38.8	$0.99	$0.92
1971	0.25	0.21	40.5	1.01	0.86
1972	0.24	0.23	41.8	0.97	0.93
1973	0.25	0.23	44.4	0.95	0.88
1974	0.26	0.25	49.3	0.87	0.84
1975	0.27	0.25	53.8	0.85	0.77
1976	0.29	0.32	56.9	0.83	0.92
1977	0.28	0.33	60.6	0.78	0.89
1978	0.29	0.33	65.2	0.73	0.85
1979	0.29	0.33	72.6	0.67	0.77
1980	0.30	0.33	82.4	0.61	0.68
1981	0.33	0.35	90.9	0.60	0.65
1982	0.34	0.41	96.5	0.59	0.70
1983	0.35	0.41	99.6	0.58	0.68
1984	0.32	0.41	103.9	0.52	0.66
1985	0.31	0.39	107.6	0.48	0.60
1986	0.28	0.31	109.6	0.43	0.48
1987	0.25	0.27	113.6	0.36	0.39
1988	0.23	0.25	118.3	0.33	0.35
1989	0.22	0.23	124.0	0.29	0.31
1990	0.20	0.22	130.7	0.26	0.27
1991	0.20	0.21	136.2	0.24	0.26
1992	0.19	0.21	140.3	0.23	0.25
1993	0.19	0.22	144.5	0.22	0.25
1994	0.18	0.24	148.2	0.20	0.27
1995	0.17	0.27	152.4	0.19	0.30
1996	0.16	0.28	156.9	0.17	0.30
1997	0.15	0.29	160.5	0.15	0.30
1998	0.14	0.28	163.0	0.15	0.29
1999	0.14	0.26	166.6	0.14	0.26

1/ Estimates for 1930 through 1981 are based on information in AT&T *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 Industry Analysis Division, *Telecommunications Industry Revenue*.

15 Residential Telephone Usage

Bill harvesting data collected by TNS Telecoms (TNS) provide information on phone usage in the long distance residential market, as opposed to the overall market for toll service. TNS, an economic research and consulting firm located in Jenkinstown, Pennsylvania, conducts nationwide surveys of residential telephone usage and household expenditures on telephone service. 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 15.1 shows the percentage of residential long distance telephone usage that is intrastate, interstate and international. In 2000, 37% of residential toll phone calls were interstate as opposed to 48% of minutes. Table 15.2 shows the average number of minutes on household telephone bills from 1995-2000.

Table 15.3 shows the distribution of residential long distance calls by call duration. The average interstate residential call lasts ten minutes, although about one-third of interstate toll calls last one minute or less. Tables 15.4 and 15.5 show the duration and length of haul of residential long distance calls. The average distance of an interstate call is 708 miles, as opposed to 54 miles for an intrastate call.

Table 15.6 shows the percentage of residential long distance minutes by day of week. In the 2000 survey, 34% of residential minutes were on weekdays between 7:00 a.m. and 7:00 p.m., and 36% of residential minutes were on weekends.

Table 15.1
Distribution of Residential Toll Calls and Minutes

Type	1995	1996	1997	1998	1999	2000
Calls						
IntraLATA-Intrastate	41 %	40 %	38 %	38 %	39 %	39 %
InterLATA-Intrastate	19	18	19	19	18	17
IntraLATA-Interstate	1	1	1	1	1	1
InterLATA-Interstate	37	35	37	36	37	36
International	1	1	1	1	1	1
Others 1/	2	5	5	4	4	5
Total Calls in Sample	197,787	165,465	483,685	578,850	474,408	538,337
Minutes						
IntraLATA-Intrastate	28 %	29 %	27 %	27 %	28 %	29 %
InterLATA-Intrastate	18	18	18	18	17	17
IntraLATA-Interstate	1	1	1	1	1	1
InterLATA-Interstate	50	47	49	49	49	47
International	2	1	1	1	2	2
Others 1/	1	4	4	3	3	5
Total Minutes in Sample	1,493,674	1,210,675	3,673,315	4,330,888	3,544,905	4,030,602

Note: Figures may not add due to rounding.

1/ Toll-free calls billed to residential customers, 900 calls and calls that cannot be classified.
Source: Calculated by IAD staff with data provided by TNS Telecoms (formerly PNR and Associates), *Telecoms Market MonitorTM.*

Table 15.2
Average Residential Monthly Toll Calling

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

Sample Size: 26,999 households.

Note: Figures may not add due to rounding.

1/ Toll-free calls billed to residential customers, 900 calls and calls that cannot be classified.
Source: Calculated by IAD staff with data provided by TNS Telecoms (formerly PNR and Associates), *Telecoms Market MonitorTM.*

Table 15.3
Duration of Residential Long Distance Calls: 2000 1/

Duration of Call (In Minutes)	Intrastate	Interstate	All Calls
1	41.6 %	32.8 %	38.0 %
2	13.8	9.6	12.1
3	8.2	7.1	7.8
4	5.1	4.1	4.7
5	3.8	3.4	3.6
6	3.0	3.0	3.0
7	2.4	2.6	2.5
8	2.1	2.4	2.2
9	1.7	2.1	1.9
10	3.1	4.0	3.5
11-15	5.3	8.2	6.5
16-20	3.2	5.7	4.2
21-25	2.0	4.1	2.8
26-30	1.3	2.9	1.9
31-45	2.0	4.6	3.1
46-60	0.7	1.8	1.2
Greater Than 60	0.6	1.6	1.0
Average Duration	6.1	10.0	7.7
Median Duration	2.0	4.0	2.0

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

Source: Calculated by IAD staff with data provided by TNS Telecoms (formerly PNR and Associates), *Telecoms Market MonitorTM.*

Table 15.4
Duration and Length of Haul of Intrastate Toll Calls 1/

	Duration (in Minutes)		Length of Haul (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

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

Source: Calculated by IAD staff with data provided by TNS Telecoms (formerly PNR and Associates), *Telecoms Market MonitorTM.*

Table 15.5
Duration and Length of Haul of Interstate Toll Calls 1/

	Duration (in Minutes)		Length of Haul (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	702	507
2000	10.0	4.0	708	525

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

Source: Calculated by IAD staff with data provided by TNS Telecoms (formerly PNR and Associates), *Telecoms Market MonitorTM.*

Table 15.6
Distribution of Residential Long Distance Minutes by Day of Week in 2000 1/

Day	7:00 AM-6:59 PM	7:00 PM-6:59 AM	Total
Monday	7.2 %	6.2 %	13.4 %
Tuesday	6.8	6.2	13.0
Wednesday	6.5	6.1	12.6
Thursday	6.9	6.2	13.2
Friday	6.9	4.8	11.7
Saturday	10.4	4.5	14.9
Sunday	13.5	7.7	21.2
Total	58.2 %	41.8 %	100.0 %

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

Source: Calculated by IAD staff with data provided by TNS Telecoms (formerly PNR and Associates), *Telecoms Market Monit*

16 Revenues

Since 1993, all carriers with interstate revenues have been required to file 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 are 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. For year ended 1999, the TRS and USF filing information were both combined on the Form 499-A, Telecommunications Reporting Worksheet. Also, reported on the Form 499-A are data pertaining to North American Numbering Planning Administration and local number portability programs.

Table 16.1 shows the major components of telecommunications revenues for 1999: carrier's carrier revenues and end-user revenues for local, wireless, and toll service. Table 16.2 shows how local, wireless, and toll revenues 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. The number of carriers filing the Form 499-A for 1999 and for 1992 - 1998 those paying into the TRS fund by principal type of business are shown in Table 16.3. Table 16.4 contains revenues for 1992 - 1999 by type of carrier. Additional revenue detail can be found in the latest *Monitoring* and *Telecommunications Industry Revenues* reports.

The publication *Carrier Locator: Interstate Service Providers* lists 4,822 carriers that filed a Form 499-A worksheet in 2000. It also contains an address and contact telephone number for each carrier. (The 2000 worksheets contained data for 1999.)

Table 16.5 provides estimates of industry telephone revenues by state for 1995-1999. Table 16.5 also provides estimates for end-user and carrier's carrier revenues for 1999. Nationwide telephone revenues from *Telecommunications Industry Revenue: 1999* is allocated to each state using data from the *Statistics of Communications Common Carriers*, the *Statistical Abstract of the United States*, and from *Local Telephone Competition*.

Table 16.1
Telecommunications Industry Revenues: 1999 1/
(Dollar Amounts Shown in Millions)

	Carrier's Carrier Revenues 2/	End-User Revenues 2/	Total Revenues
Local Service	$33,156	$78,608	$111,764
Wireless Service	4,652	43,843	48,495
Toll Service	14,934	93,311	108,246
Total	52,742	215,763	268,505
Service Reported as:			
Intrastate	22,293	134,919	157,212
Interstate and International 3/	30,449	80,844	111,293
Total	$52,742	$215,763	$268,505

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

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

2/ Carrier's carrier revenues are reported on the 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 carriers*, 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/ Revenues from calls that both originate and terminate in foreign points are reported as end-user revenues, but are not included in the universal service contribution base.

Source: Industry Analysis Division, *Telecommunications Industry Revenues*.

Table 16.2
Telecommunications Revenues Reported by Type of Service
(Dollar Amounts Shown in Millions)

	TRS Data					Universal Service & TRS Data		Form 499-A Data
Telecommunications Revenues	**1992**	**1993**	**1994**	**1995**	**1996**	**1997**	**1998**	**1999**
Local Exchange	$39,235	$40,176	$42,245	$45,194	$48,717	$53,771	$59,245	$62,840
Pay Telephone 1/						2,182	2,536	2,218
Local Private Line 2/	1,049	1,088	1,138	1,226	1,616	8,282	10,403	12,914
Other Local 3/	7,687	8,002	8,302	10,428	10,543	2,847	2,179	4,601
Subscriber Line Charges 2/						8,327	11,052	10,826
Access 2/	29,353	30,832	32,759	33,911	35,641	21,423	18,449	18,105
Universal Service Surcharges on Local Service Bills 4/							103	260
Additional Revenues from TRS Worksheets						595	595	
Total Local Service Revenues	77,324	80,098	84,443	90,759	96,516	97,426	104,563	111,764
Wireless Service	7,285	10,237	14,293	18,759	26,049	32,760	36,240	48,117
Universal Service Surcharges on Wireless Service Bills 4/							345	379
Additional Revenues from TRS Worksheets						189	189	
Total Wireless Service Revenues	7,285	10,237	14,293	18,759	26,049	32,950	36,775	48,495
Operator 1/	9,465	10,772	10,539	11,170	10,975	12,002	12,205	10,049
Non-Operator Switched Toll	54,448	60,591	61,468	65,217	73,751	72,059	74,168	78,389
Long Distance Private Line	7,783	8,067	9,043	9,719	10,665	10,504	11,952	13,169
Other Long Distance	4,048	3,095	3,428	3,523	4,299	4,695	3,386	3,656
Universal Service Surcharges on Toll Service Bills 4/							1,810	2,983
Additional Revenues from TRS Worksheets						1,532	1,532	
Total Toll Service Revenues	75,744	82,525	84,478	89,629	99,691	100,793	105,055	108,246
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
Non-Telecommunications Revenues 3/	6,944	7,518	8,324	9,071	10,474	25,633	27,944	33,144
Total Reported Revenues	160,353	172,860	183,214	199,147	222,256	256,801	272,019	301,648
Service Reported as:								
Intrastate 3/	82,379	89,409	94,278	103,852	117,375	133,654	142,108	157,212
Interstate and International	71,030	75,933	80,611	86,224	94,407	97,514	104,284	111,293
Total Telecommunications Revenues 3/	$153,409	$165,342	$174,890	$190,076	$211,782	$231,168	$246,392	$268,505

Note: Some data for prior years have been revised. 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 Form 499-A worksheets contain a separate category for payphone coin revenues. Starting in 1997, payphone revenues includes 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. Universal Service Worksheet filers report subscriber line charges in a separate category. The increase from 1997 to 1998 represents PICCs levied by ILECs as well as $1.2 billion of PICC pass-through charges levied by toll carriers.

3/ Significant amounts of enhanced service, 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 revenues. "Tier 1" refers to the largest ILECs, currently those with more than $117 million in revenues.

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.

Sources: Data for 1992 through 1996 summarized from FCC Form 431 TRS worksheets. Data for 1997 and 1998 primarily based on FCC Form 457, Universal Service worksheets, with data from 1997 TRS worksheets used for service providers not required to file a Universal Service Worksheet. Data for 1999 summarized from FCC Form 499-A Telecommunications Reporting worksheets, which replaced both the Form 431 and the Form 457.

Table 16.3
Number of Interstate Telecommunications Providers
By Principal Type of Business

Service Provider Category 1/	1992	1993	1994	1995	1996	1997	1998	1999
Incumbent Local Exchange Carriers (ILECs) 2/		1,281	1,347	1,347	1,376	1,410	1,348	1,335
Competitive Access Providers (CAPs) and Competitive Local Exchange Carriers (CLECs)		20	30	57	94	129	212	349
Local Resellers					8	11	54	87
Other Local Exchange Carriers					17	7	10	60
Total: Competitors of ILECs		20	30	57	119	147	276	496
Total: Fixed Local Service Providers		1,301	1,377	1,404	1,495	1,557	1,624	1,831
Payphone Providers		163	197	271	533	509	615	758
Wireless Telephony Including Cellular, Personal Communications Service (PCS) and SMR Telephony Carriers		798	790	792	853	732	808	806
Paging & Messaging Service		126	117	138	200	137	303	427
Specialized Mobile Radio (SMR) Dispatch					163	99	119	212
Wireless Data Service Providers					1	1	5	6
Other Mobile Service Providers							23	44
Total: Wireless Service Providers		924	907	930	1,217	969	1,235	1,495
Interexchange Carriers (IXCs)		83	97	130	149	151	171	204
Operator Service Providers (OSPs)		35	29	25	27	32	24	21
Prepaid Calling Card Providers				8	16	18	20	21
Satellite Service Carriers					22	13	13	21
Toll Resellers		171	206	260	345	340	388	454
Other Toll Carriers		32	34	30	28	15	31	17
Total: Toll Service Providers		321	366	453	587	569	647	738
All Filers	2,558	2,709	2,847	3,058	3,832	3,604	4,121	4,822

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 there was no separate category for satellite service providers.

2/ Fewer incumbent local exchange carriers filed in 1998 than in 1997 because of the consolidation of study areas.

Source: Industry Analysis Division, *Carrier Locator: Interstate Service Providers*.

Table 16.4
Gross Revenues Reported by Type of Carrier
(Dollars Shown in Millions)

	TRS Worksheet Data					Universal Service & TRS Data		Form 499-A Data
Service Provider Category 1/	**1992**	**1993**	**1994**	**1995**	**1996**	**1997**	**1998**	**1999**
Incumbent Local Exchange Carriers 2/	$91,584	$95,228	$98,431	$102,820	$107,905	$105,154	$108,234	$112,216
Competitive Access Providers (CAPs) and Competitive Local Exchange Carriers (CLECs)	69	191	281	623	1,011	1,919	3,348	5,652
Local Resellers						206	410	511
Other Local Exchange Carriers						157	36	171
Private Carriers						112	147	87
Shared-Tenant Service Providers						87	93	87
Total: Competitors of ILECs	69	191	281	623	1,011	2,481	4,034	6,508
Total: Fixed Local Service Providers	91,835	95,595	99,011	103,792	109,273	107,634	112,268	118,725
Total: Payphone Providers	183	175	300	349	357	933	1,101	1,213
Wireless Telephony Including Cellular, Personal Communications Service (PCS) and SMR Telephony Carriers 2/	6,718	9,215	13,259	17,208	23,778	29,944	33,139	46,513
Paging & Messaging Service 2/						2,861	3,161	3,232
Specialized Mobile Radio (SMR) Dispatch								186
Wireless Data Service Providers								63
Other Mobile Service Providers	670	964	938	1,419	2,121	225	731	159
Total: Wireless Service Providers	7,387	10,179	14,197	18,627	25,900	33,030	37,032	50,152
Interexchange Carriers (IXCs)	57,341	61,118	66,381	70,938	79,057	79,080	83,443	87,570
Operator Service Providers (OSPs)	558	695	536	500	461	603	590	337
Prepaid Calling Card Providers				16	238	519	888	866
Satellite Service Carriers						1,011	475	280
Toll Resellers	1,293	1,869	2,840	4,220	6,564	8,010	9,885	9,211
Other Toll Carriers	2,186	711	709	773	577	348	710	150
Total: Toll Service Providers	61,378	64,393	70,466	76,447	86,896	89,570	95,992	98,414
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
Total Telecommunications Revenues	$153,409	$165,342	$174,890	$190,076	$211,782	$231,168	$246,392	$268,505

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 TRS worksheets because there was no separate category for satellite service providers.

2/ Significant amounts of enhanced services, 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. "Tier 1" refers to the largest ILECs, currently those with more than $117 million in revenues.

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

Source: Industry Analysis Division, *Telecommunications Industry Revenues*.

Table 16.5
Telephone Revenues by State
(Revenue in Millions of Dollars)

State Name	1995 Total	1996 Total	1997 Total	1998 Total	1999 Carrier's Carrier	1999 End User	1999 Total	1999 Percent of Total	Percent Change 1995-1999
Alabama	$2,668	$2,946	$3,205	$3,394	$674	$3,037	$3,712	1.38 %	39.1 %
Alaska	464	518	561	590	130	534	664	0.25	43.2
Arizona	2,842	3,249	3,667	3,958	875	3,485	4,359	1.62	53.4
Arkansas	1,534	1,719	1,885	2,005	449	1,854	2,303	0.86	50.1
California	22,379	25,100	27,236	28,692	5,793	23,591	29,384	10.94	31.3
Colorado	3,128	3,526	4,006	4,260	909	3,917	4,826	1.80	54.3
Connecticut	2,765	2,943	3,266	3,173	616	2,789	3,405	1.27	23.1
Delaware	492	567	627	685	131	657	788	0.29	60.1
District of Columbi	886	955	1,049	1,085	285	1,297	1,581	0.59	78.4
Florida	11,582	12,972	14,161	15,042	3,459	13,763	17,223	6.41	48.7
Georgia	5,335	6,004	6,849	7,469	1,597	6,882	8,479	3.16	58.9
Guam	NA	85	97	103	18	81	99	0.04	NA
Hawaii	775	841	930	969	210	799	1,009	0.38	30.2
Idaho	791	908	967	1,010	240	852	1,092	0.41	38.0
Illinois	7,916	8,920	10,069	10,948	2,105	9,878	11,983	4.46	51.4
Indiana	3,804	4,192	4,536	4,810	1,061	4,037	5,099	1.90	34.0
Iowa	1,888	2,039	2,163	2,268	520	1,921	2,441	0.91	29.3
Kansas	1,829	2,017	2,165	2,304	501	2,086	2,588	0.96	41.5
Kentucky	2,353	2,629	2,861	3,060	711	2,715	3,426	1.28	45.6
Louisiana	2,703	2,946	3,192	3,432	698	3,215	3,913	1.46	44.7
Maine	869	976	996	1,105	243	951	1,195	0.44	37.5
Maryland	3,767	4,234	4,625	4,911	917	4,259	5,176	1.93	37.4
Massachusetts	4,988	5,455	6,010	6,338	1,206	5,355	6,561	2.44	31.5
Michigan	6,444	7,246	7,983	8,523	1,721	7,809	9,530	3.55	47.9
Minnesota	3,064	3,461	3,864	4,115	950	3,667	4,617	1.72	50.7
Mississippi	1,584	1,734	1,877	2,017	395	1,888	2,283	0.85	44.1
Missouri	3,623	4,017	4,389	4,613	1,145	4,298	5,442	2.03	50.2
Montana	640	709	756	780	187	709	897	0.33	40.1
Nebraska	1,296	1,428	1,540	1,587	366	1,371	1,737	0.65	34.0
Nevada	1,099	1,324	1,489	1,592	338	1,547	1,884	0.70	71.5
New Hampshire	989	1,118	1,208	1,246	265	1,049	1,313	0.49	32.7
New Jersey	7,091	7,927	8,707	9,366	1,853	7,705	9,558	3.56	34.8
New Mexico	1,121	1,262	1,370	1,433	331	1,187	1,518	0.57	35.5
New York	14,983	16,026	17,120	17,935	3,860	15,840	19,700	7.34	31.5
North Carolina	5,394	6,104	6,613	7,297	1,639	6,367	8,006	2.98	48.4
North Dakota	481	587	596	599	143	517	660	0.25	37.1
N. Mariana Islands	15	18	21	30	6	27	34	0.01	127.6
Ohio	7,457	8,219	8,823	9,396	1,940	8,011	9,952	3.71	33.4
Oklahoma	1,996	2,179	2,410	2,552	486	2,241	2,727	1.02	36.6
Oregon	2,238	2,502	2,720	2,905	656	2,468	3,123	1.16	39.6
Pennsylvania	7,961	8,867	9,588	10,309	2,193	8,577	10,770	4.01	35.3
Puerto Rico	1,244	1,405	1,606	1,467	434	1,616	2,051	0.76	64.8
Rhode Island	686	761	839	859	172	774	946	0.35	38.0
South Carolina	2,653	2,849	3,053	3,393	720	3,070	3,790	1.41	42.9
South Dakota	488	584	602	635	154	562	716	0.27	46.6
Tennessee	3,467	3,880	4,302	4,553	884	4,044	4,928	1.84	42.2
Texas	12,871	14,563	15,943	17,576	4,095	14,937	19,032	7.09	47.9
Utah	1,112	1,284	1,443	1,557	344	1,447	1,790	0.67	61.0
Vermont	424	547	575	602	140	544	684	0.25	61.2
Virgin Islands	74	93	101	109	26	96	122	0.05	48.3
Virginia	5,061	5,646	6,179	6,576	1,443	5,577	7,020	2.61	38.7
Washington	3,995	4,438	4,613	5,080	1,213	4,490	5,703	2.12	42.7
West Virginia	1,143	1,240	1,337	1,383	304	1,133	1,437	0.54	25.8
Wisconsin	3,258	3,621	3,927	4,234	883	3,837	4,719	1.76	44.9
Wyoming	366	402	449	462	109	404	513	0.19	40.3
Grand Total	$190,076	$211,782	$231,168	$246,392	$52,743	$215,762	$268,505	100.00 %	41.3 %

NA - Not Available.

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

Source: Industry Analysis Division, *State-by-State Telephone Revenues and Universal Service Data*.

17 Subscribership

Under contract with the FCC, the Bureau of the Census includes questions on telephones as part of its Current Population Survey. 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.

More than twenty 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 are subject to greater sampling errors than the national data shown in Table 17.1. Consequently, the state-by-state data shown in Table 17.2 are based on annual average penetration rates. Additional information can be found in the *Telephone Penetration* and *Telephone Subscribership* reports available on the **FCC-State Link** web page.

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 17.3 are based on those responses. With the telephone companies no longer owning the telephone instruments, however, it is possible for someone to have a telephone but not have service. This may account for some of the discrepancy between the 1990 percentages in Tables 17.1 and 17.3.

For other countries of the world, telephone development is often measured as the number of access lines per 100 people. This measure includes both residential and business lines. Historical estimates for the United States, using the decennial census population counts, are shown in Table 17.3.

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 released its third report examining which American households have access to telephones, computers, and the Internet, and which do not. Chart 17.1 shows the percent of households with a telephone, computer, and Internet use for 1994, 1997, 1998 and August 2000. The percent of households may differ from Table 17.1 since a different monthly survey was used. The NTIA report, *Falling Through the Net: Toward Digital Inclusion*, finds that the number of Americans connected to the nation's information infrastructure is soaring. According to the latest report by NTIA, the rapid swing to new technologies is happening with most groups of Americans, "regardless of income, education, race or ethnicity location, age or gender." Their conclusion is that "digital inclusion is a reasonable goal." NTIA's web site can be accessed at <www.ntia.doc.gov>.

Table 17.1
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

Source: Industry Analysis Division, *Telephone Subscribership in the United States.*

Table 17.2

Telephone Penetration by State

(Annual Average Percentage of Households with Telephone Service)

State	1984	2000	Change
Alabama	88.4 %	91.9 %	3.4 % *
Alaska	86.5	94.3	7.8 *
Arizona	86.9	93.9	7.0 *
Arkansas	86.6	88.6	2.0
California	92.5	95.8	3.4 *
Colorado	93.2	96.3	3.0 *
Connecticut	95.5	96.4	0.9
Delaware	94.3	96.3	2.0 *
District of Columbia	94.9	93.2	-1.7
Florida	88.7	92.1	3.4 *
Georgia	86.2	91.1	4.9 *
Hawaii	93.5	94.7	1.2
Idaho	90.7	93.9	3.2 *
Illinois	94.2	91.5	-2.6 †
Indiana	91.6	94.5	2.9 *
Iowa	96.2	96.2	0.0
Kansas	94.3	94.8	0.5
Kentucky	88.1	93.3	5.2 *
Louisiana	89.7	92.6	2.9 *
Maine	93.4	97.9	4.4 *
Maryland	95.7	95.0	-0.7
Massachusetts	95.9	94.6	-1.3 †
Michigan	92.8	95.0	2.1 *
Minnesota	95.8	97.4	1.6 *
Mississippi	82.4	89.2	6.8 *
Missouri	91.5	95.8	4.3 *
Montana	91.0	94.6	3.6 *
Nebraska	95.7	97.3	1.7 *
Nevada	90.4	94.0	3.6 *
New Hampshire	94.3	97.7	3.3 *
New Jersey	94.8	94.6	-0.2
New Mexico	82.0	91.2	9.2 *
New York	91.8	95.1	3.3 *
North Carolina	88.3	93.9	5.6 *
North Dakota	94.6	95.8	1.2 *
Ohio	92.4	94.8	2.4 *
Oklahoma	90.3	91.2	0.9
Oregon	90.6	94.8	4.2 *
Pennsylvania	94.9	96.6	1.8 *
Rhode Island	93.6	94.9	1.3
South Carolina	83.7	93.2	9.5 *
South Dakota	93.2	94.3	1.1
Tennessee	88.5	95.5	7.0 *
Texas	88.4	93.5	5.1 *
Utah	92.5	95.9	3.4 *
Vermont	92.3	95.6	3.3 *
Virginia	93.1	95.4	2.3 *
Washington	93.0	94.9	1.9 *
West Virginia	87.7	94.0	6.3 *
Wisconsin	95.2	94.8	-0.4
Wyoming	89.9	94.7	4.9 *
Total United States	91.6 %	94.4 %	2.8 % *

Note: Changes may not be the same as calculated differences, due to rounding.

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

Source: Industry Analysis Division, *Telephone Subscribership in the United States.*

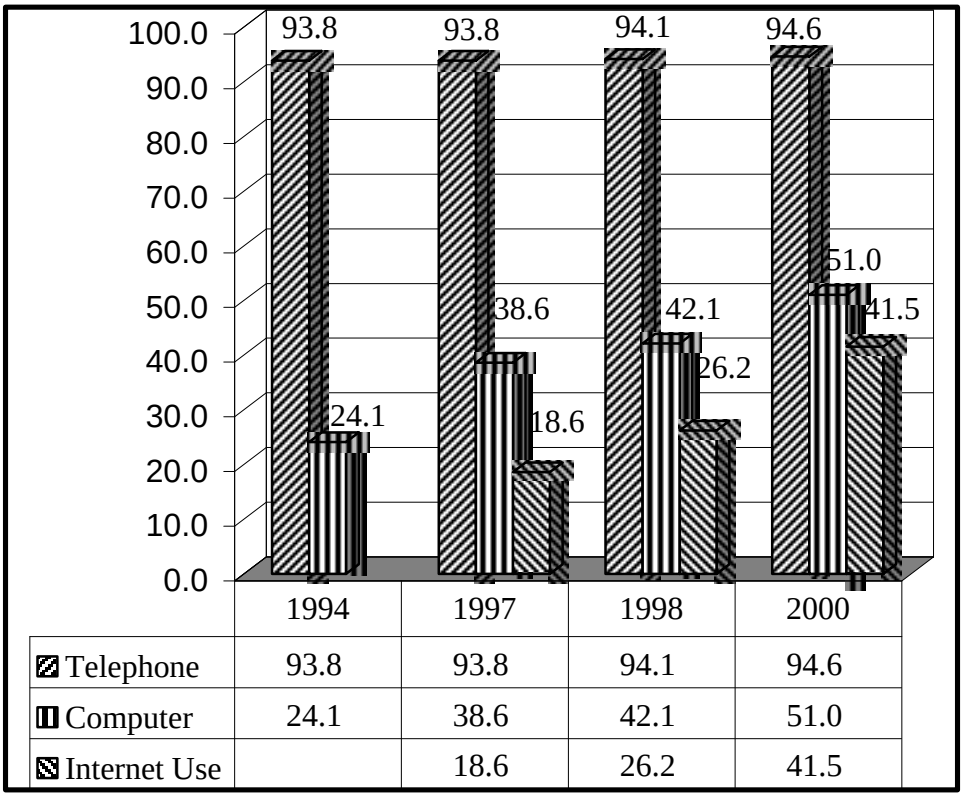
Table 17.3

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	46.2
1990	94.8	54.8

Sources: FCC staff estimates based on data from the Bureau of the Census, *Historical Statistics of the United States, Colonial Times to 1970* , Part 2, page 783, for all percentage data except 1980 and 1990, 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 and 1990, access lines reported by USTA are used.

Chart 17.1
Percent of U.S. Households with a Telephone, Computer, and Internet Use



	1994	1997	1998	2000
Telephone	93.8	93.8	94.1	94.6
Computer	24.1	38.6	42.1	51.0
Internet Use		18.6	26.2	41.5

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

18 Technology Development

1. Central Office Technology

During the 1980s, telephone companies replaced most of their older electromechanical switches with computerized equipment. In the telephone industry, these computers are referred to as stored program control switches. Switches with the most current technologies are fully digital. That is, computers are used to switch calls and telephone conversations are converted to a digital form before being passed through the switch and later reconverted to their original analog form. Some offices are of an intermediate variety: the switching function is done by computer but the calls continue to be processed in their analog form. The spread of these technologies throughout the Bell operating companies (BOCs) is shown in Table 18.1.

Newer signaling systems have been developed which permit calls to be set up more quickly and efficiently. In the late 1980s, telephone company switching offices began to be converted to the newest signaling system, Signaling System 7. This was followed by an integrated systems digital network (ISDN). One of the attractions of ISDN is that ordinary local telephone lines (copper loops) can transport high-speed data between computers and handle more than one telephone conversation at a time. The number of BOCs switching offices and the lines served by offices with these features are shown in Table 18.2. Of course, not all of the lines served by ISDN-compatible switching offices are actually receiving ISDN service.

The newest service available, xDSL (digital subscriber loop) service, offers broadband digital capability using special terminal equipment that enhances the capability of existing copper access lines. Availability of ISDN services for Internet access along with the availability of xDSL services should tend to drive down the cost of ISDN services further.

2. Transmission Technology

The BOCs file data on technology as part of their ARMIS reports. (ARMIS is an acronym for the Automated Reporting Management Information System.) The data contained in Tables 18.1 - 18.3 are from the BOC's ARMIS 43-07 reports. The individual carrier's data can be obtained from the ARMIS web page at <www.fcc.gov/ccb/armis/db>. Selected holding company statistics from the ARMIS 43-07 can be found in our *Infrastructure* report on the **FCC-State Link** web page. Each telephone company has a network of transmission paths or carrier links tying together their switching offices. As indicated in Table 18.3, fiber optic cables have rapidly replaced copper to provide these links. From 1990 to 2000, the proportion of fiber has grown from 60% to 97%.

Although fiber technology was first used for interoffice transmission facilities, the technology is now being deployed closer to customers. The number of working channels provides an approximation of the number of transmission paths between customers and the telephone company offices serving those customers. Although the number of fiber channels nearly tripled during the first half of the 1990s, in 2000 copper wire still linked about 80% of customers to the first point of switching.

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.

For equal access to take place, the local exchange carrier had to convert its lines to equal access. 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 had been converted to equal access. A table tracing this process though time can be found in the equal-access section in 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 many 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 18.4 shows the number of central office wire centers in each state that had been converted to equal access as of May 1, 2001. 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.

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 6 million distinct U.S. patents granted. These patents are categorized by technology. Chart 18.1 shows the number of patents granted for telecommunications from 1990 to 2000. The information presented profiles U.S. patent activity in the general field of telecommunications. It includes all U.S. patent documents, excepting reissued patents, granted between January 1990 and December 31, 2000, 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 therebetween, 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 March 2000 *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.

Table 18.1

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	74.4 %	2,353	25.6 %	0	0.0 %
1981	9,198	6,647	72.3	2,527	27.5	24	0.3
1982	9,173	6,357	69.3	2,736	29.8	80	0.9
1983	9,156	6,075	66.3	2,910	31.8	171	1.9
1984	9,102	5,714	62.8	3,041	33.4	347	3.8
1985	9,124	5,244	57.5	3,020	33.1	860	9.4
1986	9,167	4,604	50.2	2,943	32.1	1,620	17.7
1987	9,190	3,819	41.6	2,833	30.8	2,538	27.6
1988	9,300	3,031	32.6	2,692	28.9	3,577	38.5
1989	9,338	2,416	25.9	2,519	27.0	4,403	47.2
1990	9,872	1,646	16.7	2,410	24.4	5,816	58.9
1991	9,951	1,148	11.5	2,167	21.8	6,636	66.7
1992	10,069	615	6.1	1,924	19.1	7,530	74.8
1993	10,089	296	2.9	1,554	15.4	8,239	81.7
1994	10,023	95	0.9	1,133	11.3	8,795	87.7
1995	10,051	60	0.6	976	9.7	9,015	89.7
1996	9,966	1	0.0	718	7.2	9,247	92.8
1997	9,965	0	0.0	548	5.5	9,417	94.5
1998	9,791	0	0.0	431	4.4	9,360	95.6
1999 1/	9,968	0	0.0	320	3.2	9,648	96.8
2000 2/	15,092	0	0.0	203	1.3	14,889	98.7

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	55.4 %	36,092	44.5 %	10	0.0 %
1981	82,581	40,425	49.0	42,099	51.0	57	0.1
1982	83,819	36,813	43.9	46,803	55.8	203	0.2
1983	86,186	32,652	37.9	52,919	61.4	615	0.7
1984	88,630	30,074	33.9	56,404	63.6	2,151	2.4
1985	91,455	24,778	27.1	58,532	64.0	8,145	8.9
1986	93,630	19,491	20.8	59,252	63.3	14,886	15.9
1987	96,593	14,205	14.7	59,442	61.5	22,946	23.8
1988	99,564	8,707	8.7	60,364	60.6	30,493	30.6
1989	102,684	5,646	5.5	58,846	57.3	38,192	37.2
1990	105,641	3,216	3.0	56,973	53.9	45,452	43.0
1991	107,389	1,876	1.7	53,450	49.8	52,062	48.5
1992	109,995	717	0.7	48,959	44.5	60,324	54.8
1993	113,368	264	0.2	41,912	37.0	71,192	62.8
1994	117,345	115	0.1	33,191	28.3	84,040	71.6
1995	122,266	63	0.1	29,031	23.7	93,172	76.2
1996	125,846	1	0.0	24,561	19.5	101,283	80.5
1997	131,722	0	0.0	21,219	16.1	110,503	83.9
1998	136,426	0	0.0	16,688	12.2	119,738	87.8
1999 1/	141,763	0	0.0	11,925	8.4	129,838	91.6
2000 2/	160,925	0	0.0	7,317	4.5	153,609	95.5

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 due to the merger of Bell Atlantic and GTE.

Sources: 1980-1989 reported in CC Docket 89-624.
1990-2000 reported in ARMIS 43-07.

Table 18.2

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	0.0 %	0	0.0 %	0	0.0 %
1981	9,198	0	0.0	0	0.0	0	0.0
1982	9,173	0	0.0	0	0.0	0	0.0
1983	9,156	0	0.0	0	0.0	0	0.0
1984	9,102	124	1.4	0	0.0	0	0.0
1985	9,124	1,891	20.7	0	0.0	0	0.0
1986	9,167	3,623	39.5	0	0.0	0	0.0
1987	9,190	4,823	52.5	29	0.3	4	0.0
1988	9,300	6,071	65.3	435	4.7	82	0.9
1989	9,338	6,788	72.7	931	10.0	179	1.9
1990	9,872	7,950	80.5	2,428	24.6	600	6.1
1991	9,951	8,601	86.4	3,670	36.9	920	9.2
1992	10,069	9,281	92.2	5,392	53.6	1,219	12.1
1993	10,089	9,697	96.1	6,688	66.3	1,874	18.6
1994	10,023	9,933	99.1	8,334	83.1	2,400	23.9
1995	10,051	9,978	99.3	8,977	89.3	2,868	28.5
1996	9,966	9,845	98.8	9,286	93.2	3,329	33.4
1997	9,965	9,936	99.7	9,688	97.2	3,902	39.2
1998	9,791	9,768	99.8	9,646	98.5	4,146	42.3
1999 3/	9,968	9,864	99.0	9,844	98.8	4,426	44.4
2000 4/	15,092	15,053	99.7	14,837	98.3	5,415	35.9

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	0.0 %	0	0.0 %	0	0.0 %
1981	82,581	0	0.0	0	0.0	0	0.0
1982	83,819	0	0.0	0	0.0	0	0.0
1983	86,186	146	0.2	0	0.0	0	0.0
1984	88,630	9,350	10.5	0	0.0	0	0.0
1985	91,455	49,241	53.8	0	0.0	0	0.0
1986	93,630	70,543	75.3	0	0.0	0	0.0
1987	96,593	81,743	84.6	1,035	1.1	12	0.0
1988	99,564	91,809	92.2	10,325	10.4	47	0.0
1989	102,684	97,410	94.9	21,917	21.3	111	0.1
1990	105,641	102,429	97.0	40,026	37.9	13,970	13.2
1991	107,389	105,415	98.2	57,322	53.4	20,565	19.2
1992	109,995	109,007	99.1	76,486	69.5	28,376	25.8
1993	113,368	112,993	99.7	92,493	81.6	39,875	35.2
1994	117,345	117,266	99.9	109,465	93.3	56,546	48.2
1995	122,266	122,210	100.0	116,568	95.3	71,274	58.3
1996	125,846	125,845	100.0	122,344	97.2	85,435	67.9
1997	131,722	131,722	100.0	130,778	99.3	95,956	72.8
1998	136,426	136,426	100.0	135,981	99.7	106,834	78.3
1999 3/	141,763	141,763	100.0	141,685	99.9	113,999	80.4
2000 4/	160,925	160,925	100.0	160,608	99.8	132,848	82.6

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

1/ Signaling System 7 Switch (SS7-317).
2/ ISDN basic access line capacity reported for 1990-2000.
3/ Southern New England Telephone Company merged with SBC Communications October 26, 1998. Thei data are included in this table starting with 1999.
4/ Large increase in 2000 due to the merger of Bell Atlantic and GTE.

Sources: 1980-1989 reported in CC Docket 89-624.
1990-2000 reported in ARMIS 43-07.

Table 18.3

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

1/ 1990 contains some analog links.
2/ Large increase in 2000 due to the merger of Bell Atlantic and GTE.

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	11,754	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	160,621	131,867	82.1	28,753	17.9	0	0.0
1999 2/	171,079	135,569	79.2	35,510	20.8	0	0.0
2000 3/	196,414	153,624	78.2	42,575	21.7	215	0.1

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 due to the merger of Bell Atlantic and GTE.

Source: ARMIS 43-07 report.

Table 18.4
Central Offices Converted to Equal Access 1/
(As of August 1, 2000)

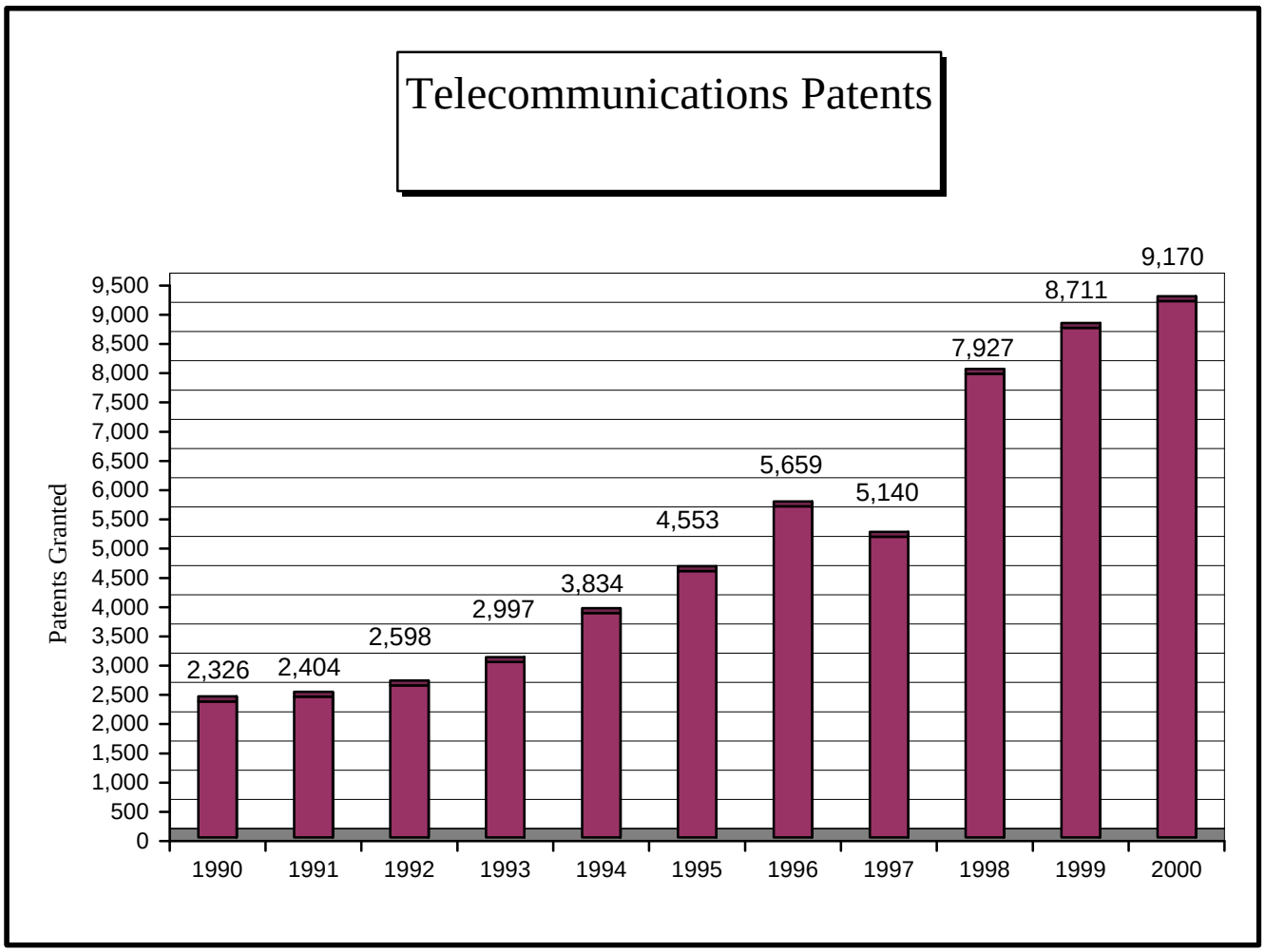
	ILEC Central Offices			CLEC Central Offices			All Central Offices	
	Equal Access	Non-Equal Access	% Equal Access	Equal Access	Non-Equal Access	% Equal Access	Total Offices	% Equal Access
Alabama	358	4	98.9 %	34	6	85.0 %	402	97.5 %
Alaska	53	201	20.9	0	0	NA	254	20.9
Arizona	239	9	96.4	23	4	85.2	275	95.3
Arkansas	405	2	99.5	25	2	92.6	434	99.1
California	992	18	98.2	320	35	90.1	1,365	96.1
Colorado	276	9	96.8	27	4	87.1	316	95.9
Connecticut	130	0	100.0	22	2	91.7	154	98.7
Delaware	33	0	100.0	3	2	60.0	38	94.7
District of Columbia	19	0	100.0	22	2	91.7	43	95.3
Florida	475	2	99.6	236	18	92.9	731	97.3
Georgia	417	10	97.7	103	12	89.6	542	95.9
Guam	18	0	100.0	0	0	NA	18	100.0
Hawaii	93	0	100.0	1	0	100.0	94	100.0
Idaho	171	15	91.9	8	1	88.9	195	91.8
Illinois	1,007	26	97.5	86	13	86.9	1,132	96.6
Indiana	574	2	99.7	35	10	77.8	621	98.1
Iowa	807	3	99.6	32	7	82.1	849	98.8
Kansas	561	9	98.4	15	5	75.0	590	97.6
Kentucky	375	18	95.4	13	7	65.0	413	93.9
Louisiana	328	2	99.4	36	4	90.0	370	98.4
Maine	248	10	96.1	6	1	85.7	265	95.8
Maryland	213	0	100.0	37	5	88.1	255	98.0
Massachusetts	277	2	99.3	63	5	92.6	347	98.0
Michigan	695	17	97.6	37	7	84.1	756	96.8
Minnesota	707	4	99.4	90	10	90.0	811	98.3
Mississippi	260	8	97.0	15	4	78.9	287	95.8
Missouri	650	48	93.1	53	9	85.5	760	92.5
Montana	274	1	99.6	15	4	78.9	294	98.3
Nebraska	460	4	99.1	11	4	73.3	479	98.3
Nevada	103	15	87.3	25	2	92.6	145	88.3
New Hampshire	152	2	98.7	15	1	93.8	170	98.2
New Jersey	234	0	100.0	42	8	84.0	284	97.2
New Mexico	148	39	79.1	3	1	75.0	191	79.1
New York	824	16	98.1	95	16	85.6	951	96.6
North Carolina	493	12	97.6	67	15	81.7	587	95.4
North Dakota	270	20	93.1	12	3	80.0	305	92.5
Ohio	814	39	95.4	80	9	89.9	942	94.9
Oklahoma	502	23	95.6	20	2	90.9	547	95.4
Oregon	282	5	98.3	22	4	84.6	313	97.1
Pennsylvania	806	32	96.2	99	13	88.4	950	95.3
Puerto Rico	86	0	100.0	1	0	100.0	87	100.0
Rhode Island	30	0	100.0	5	1	83.3	36	97.2
South Carolina	276	2	99.3	17	5	77.3	300	97.7
South Dakota	245	9	96.5	5	2	71.4	261	95.8
Tennessee	355	9	97.5	38	4	90.5	406	96.8
Texas	1,483	26	98.3	583	26	95.7	2,118	97.5
Utah	147	18	89.1	9	4	69.2	178	87.6
Vermont	132	2	98.5	2	0	100.0	136	98.5
Virgin Islands	5	0	100.0	0	0	NA	5	100.0
Virginia	461	7	98.5	49	10	83.1	527	96.8
Washington	359	8	97.8	58	5	92.1	430	97.0
West Virginia	228	6	97.4	6	2	75.0	242	96.7
Wisconsin	635	5	99.2	46	6	88.5	692	98.4
Wyoming	63	23	73.3	2	2	50.0	90	72.2
Total United States	20,248	742	96.5 %	2,669	324	89.2 %	23,983	95.6 %

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.

Chart 18.1



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

Source: U.S. Patent and Trademark Office, *Technology Profile Report - Telecommunications, Classes 370, 375, 379 and 455.*

19 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. Nineteen area codes were added in 1996, forty-three in 1997, twenty in 1998, twenty-four codes in 1999, thirteen in 2000, and sixteen codes have been added in 2001. The above counts of area code activation are for the contiguous United States, offshore points, Canada, and the Caribbean. The changes in area codes from 1984 to 2001 are shown in Table 19.1. 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." The new system enables customers to change service providers while still retaining the same 800 number. There has been tremendous growth in the toll-free market. The growth of toll-free telephone numbers is shown in Table 19.2. 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 next toll-free code scheduled for service is 855, which was scheduled for November 18, 2000, but has been delayed. Database Service Management, Inc., a subsidiary of Telcordia Technologies, Inc., maintains the database on 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 19.3 shows the dialing patterns for all four types of calls. The last column of Table 19.3 indicates whether all toll calls in that state require callers to dial a “1” before the telephone number.

Table 19.1

Area Code Assignments (1984-2001)

Location	Date	Previous Code	Added Code
California	1/84	213	818
New York	9/84	212	718
Colorado	3/88	303	719
Florida	4/88	305	407
Massachusetts	7/88	617	508
Illinois	11/89	312	708
New Jersey	11/90	201	908
Texas	11/90	214	903
California	9/91	415	510
Maryland	10/91	301	410
California	11/91	213	310
New York	1/92	212	917
New York	1/92	718	917
Georgia	5/92	404	706
New York	7/92	212	718
Texas	11/92	512	210
California	11/92	714	909
Ontario	10/93	416	905
North Carolina	11/93	919	910
Michigan	12/93	313	810
Pennsylvania	1/94	215	610
Alabama	1/95	205	334
Washington	1/95	206	360
Arizona	3/95	602	520
Colorado	4/95	303	970
Florida (Tampa)	5/95	813	941
Virginia	7/95	703	540
Georgia (Atlanta)	8/95	404	770
Connecticut	8/95	203	860
Florida (Miami)	9/95	305	954
Tennessee	9/95	615	423
Bermuda	10/95	809	441
Oregon	11/95	503	541
South Carolina	12/95	803	864
Florida (North)	12/95	904	352
Missouri	1/96	314	573
Illinois (Chicago)	1/96	708	847
Puerto Rico	3/96	809	787
Ohio	3/96	216	330
Minnesota	3/96	612	320
Antigua	4/96	809	268
Florida (Southeast)	5/96	407	561
Barbados	7/96	809	246
St. Lucia	7/96	809	758
Virginia	7/96	804	757

Table 19.1

Area Code Assignments -- Continued
(1984-2001)

Location	Date	Previous Code	Added Code
Montserrat	7/96	809	664
Illinois (Chicago)	8/96	708	630
Cayman Islands	9/96	809	345
Texas (Dallas)	9/96	214	972
Ohio	9/96	513	937
Bahamas	10/96	809	242
St. Kitts & Nevis	10/96	809	869
Illinois	10/96	312	773
British Columbia	10/96	604	250
Texas (Houston)	11/96	713	281
California (Southern)	1/97	310	562
Indiana	2/97	317	765
California	3/97	619	760
Anguilla	3/97	809	264
Arkansas	4/97	501	870
Washington State	4/97	206	253
Washington State	4/97	206	425
Jamaica	5/97	809	876
Michigan	5/97	810	248
Texas	5/97	817	254
Texas	5/97	817	940
Turks & Caicos	6/97	809	649
Trinidad/Tobago	6/97	809	868
Maryland	6/97	301	240
Maryland	6/97	410	443
New Jersey	6/97	201	973
New Jersey	6/97	908	732
U.S. Virgin Islands	6/97	809	340
California	6/97	818	626
Florida	6/97	904	850
Guam	7/97	NA	671
Commonwealth of the Northern Mariana Islands	7/97	NA	670
Texas	7/97	210	830
Texas	7/97	210	956
Kansas	7/97	913	785
Wisconsin	7/97	414	920
California	8/97	415	650
Ohio	8/97	216	440
Massachusetts	9/97	617	781
Massachusetts	9/97	508	978
Tennessee	9/97	615	931
Mississippi	9/97	601	228
Utah	9/97	801	435
Dominica	10/97	809	767
British Virgin Islands	10/97	809	284

Table 19.1

Area Code Assignments -- Continued (1984-2001)

Location	Date	Previous Code	Added Code
Missouri	10/97	816	660
Yukon & Northwest Territories	10/97	403	867
Yukon & Northwest Territories	10/97	819	867
Grenada	10/97	809	473
California	11/97	916	530
Oklahoma	11/97	405	580
Ohio	12/97	614	740
Michigan	12/97	313	734
North Carolina	12/97	910	336
Georgia (Atlanta)	1/98	770	678
Pennsylvania	2/98	412	724
Florida	3/98	305	786
California	3/98	510	925
South Carolina	3/98	803	843
North Carolina	3/98	704	828
North Carolina	3/98	919	252
Alabama	3/98	205	256
California	4/98	714	949
Colorado	2/98	303	720
St. Vincent & the Grenadines	6/98	809	784
California (Los Angeles)	6/98	213	323
Quebec	6/98	514	450
Florida	7/98	813	727
California	7/98	408	831
Minnesota	7/98	612	651
Louisiana	8/98	504	225
California	11/98	209	559
Pennsylvania	12/98	717	570
Nevada	12/98	702	775
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

Table 19.1

Area Code Assignments -- Continued
(1984-2001)

Location	Date	Previous Code	Added Code
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
California	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	234	330
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
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

Source: North American Numbering Plan Administration (NANPA).

Table 19.2

Telephone Numbers Assigned for Toll-Free Service *
(Summary December 1993 - 2000 and July 2001)

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	July	23,035,980	1,422,494	24,458,474	7,191,526

Table 19.2

Telephone Numbers Assigned for Toll-Free Service *
800 Toll-Free Service

Year	Month	Working 800 Numbers	Miscellaneous 800 Numbers 1/	Total 800 Numbers Assigned	Spare 800 Numbers Still Available
1993	April	2,448,985	642,725	3,091,710	4,618,290
	May	2,511,933	708,192	3,220,125	4,489,875
	June	2,589,123	722,006	3,311,129	4,398,871
	July	2,675,483	705,416	3,380,899	4,329,101
	August	2,738,259	701,009	3,439,268	4,270,732
	September	2,818,262	639,547	3,457,809	4,252,191
	October	2,891,994	660,544	3,552,538	4,157,462
	November	3,083,250	728,514	3,811,764	3,898,236
	December	3,155,955	731,438	3,887,393	3,822,607
1994	January	3,257,540	580,216	3,837,756	3,872,244
	February	3,381,646	731,005	4,112,651	3,597,349
	March	3,516,620	743,813	4,260,433	3,449,567
	April	3,659,129	699,212	4,358,341	3,351,659
	May	3,793,865	738,767	4,532,632	3,177,368
	June	3,933,037	792,698	4,725,735	2,984,265
	July	4,099,174	699,803	4,798,977	2,911,023
	August	4,312,486	807,881	5,120,367	2,589,633
	September	4,506,014	841,381	5,347,395	2,362,605
	October	4,611,014	871,684	5,482,698	2,227,302
	November	4,817,854	875,416	5,693,270	2,016,730
	December	4,948,605	763,235	5,711,840	1,998,160
1995	January	5,096,646	807,294	5,903,940	1,806,060
	February	5,278,800	811,221	6,090,021	1,619,979
	March	5,528,723	793,771	6,322,494	1,387,506
	April	5,741,780	797,902	6,539,682	1,170,318
	May	5,980,848	843,093	6,823,941	886,059
	June	6,340,534	481,633	6,822,167	887,833
	July	6,402,785	443,717	6,846,502	863,498
	August	6,428,120	442,270	6,870,390	839,610
	September	6,503,018	437,215	6,940,233	769,767
	October	6,583,344	396,605	6,979,949	730,051
	November	6,647,880	310,043	6,957,923	752,077
	December	6,700,576	286,487	6,987,063	722,937
1996	January	6,766,607	297,001	7,063,608	646,392
	February	6,861,093	335,557	7,196,650	513,350
	March	6,907,098	293,244	7,200,342	509,658
	April	6,934,085	280,927	7,215,012	494,988
	May	6,943,620	333,140	7,276,760	433,240
	June	6,986,821	324,899	7,311,720	398,280
	July	7,022,309	339,900	7,362,209	347,791
	August	7,074,772	311,273	7,386,045	323,955
	September	7,119,167	310,562	7,429,729	280,271
	October	7,185,135	325,088	7,510,223	199,777
	November	7,242,377	337,502	7,579,879	130,121
	December	7,272,819	343,905	7,616,724	93,276

Table 19.2

Telephone Numbers Assigned for Toll-Free Service * -- Continued
800 Toll-Free Service

Year	Month	Working 800 Numbers	Miscellaneous 800 Numbers 1/	Total 800 Numbers Assigned	Spare 800 Numbers Still Available
1997	January	7,333,632	323,804	7,657,436	52,564
	February	7,388,696	318,571	7,707,267	2,733
	March	7,402,769	305,362	7,708,131	1,869
	April	7,411,118	296,925	7,708,043	1,957
	May	7,411,291	294,320	7,705,611	4,389
	June	7,415,591	293,802	7,709,393	607
	July	7,421,288	283,794	7,705,082	4,918
	August	7,430,733	276,024	7,706,757	3,243
	September	7,427,717	280,668	7,708,385	1,615
	October	7,433,483	276,490	7,709,973	27
	November	7,423,662	276,576	7,700,238	9,762
	December	7,429,160	267,429	7,696,589	13,411
1998	January	7,431,789	264,143	7,695,932	14,068
	February	7,445,338	257,493	7,702,831	7,169
	March	7,455,240	249,964	7,705,204	4,796
	April	7,464,692	232,462	7,697,154	12,846
	May	7,476,270	228,409	7,704,679	5,321
	June	7,480,468	227,041	7,707,509	2,491
	July	7,485,866	221,078	7,706,944	3,056
	August	7,483,417	224,242	7,707,659	2,341
	September	7,489,271	219,080	7,708,351	1,649
	October	7,479,005	229,889	7,708,894	1,106
	November	7,478,913	228,892	7,707,805	2,195
	December	7,487,529	215,267	7,702,796	7,204
1999	January	7,498,435	194,520	7,692,955	17,045
	February	7,504,256	192,068	7,696,324	13,676
	March	7,498,527	204,515	7,703,042	6,958
	April	7,506,452	202,241	7,708,693	1,307
	May	7,504,523	204,751	7,709,274	726
	June	7,502,118	207,061	7,709,179	821
	July	7,512,928	196,345	7,709,273	727
	August	7,514,686	194,434	7,709,120	880
	September	7,523,302	185,363	7,708,665	1,335
	October	7,493,898	215,756	7,709,654	346
	November	7,499,343	210,266	7,709,609	391
	December	7,505,737	202,416	7,708,153	1,847
2000	January	7,486,650	223,367	7,710,017	N.A.
	February	7,490,980	198,506	7,689,486	20,514
	March	7,516,391	193,246	7,709,637	363
	April	7,531,395	177,779	7,709,174	826
	May	7,547,157	158,776	7,705,933	4,067
	June	7,570,082	139,444	7,709,526	474
	July	7,576,696	132,065	7,708,761	1,239
	August	7,558,277	151,720	7,709,997	3
	September	7,752,091	(42,295)	7,709,796	204
	October	7,578,617	131,366	7,709,983	17
	November	7,563,824	135,636	7,699,460	10,540
	December	7,566,810	132,887	7,699,697	10,303
2001	January	7,483,975	215,316	7,699,291	10,709
	February	7,450,121	248,257	7,698,378	11,622
	March	7,434,621	264,967	7,699,588	10,412
	April	7,407,530	292,123	7,699,653	10,347
	May	7,410,426	261,585	7,672,011	37,989
	June	7,357,279	242,106	7,599,385	110,615
	July	7,336,672	222,085	7,558,757	151,243

Table 19.2

TelephoneNumbers Assigned for Toll-Free Service * -- Continued
888 Toll-Free Service

Year	Month	Working 888 Numbers	Miscellaneous 888 Numbers 1/	Total 888 Numbers Assigned	Spare 888 Numbers Still Available
1996	February	67,399	560,598	627,997	7,352,003
	March	267,874	568,574	836,448	7,143,552
	April	442,005	565,402	1,007,407	6,972,593
	May	707,374	542,428	1,249,802	6,730,198
	June	922,849	544,079	1,466,928	6,513,072
	July	1,157,770	549,845	1,707,615	6,272,385
	August	1,437,660	576,399	2,014,059	5,965,941
	September	1,641,519	590,345	2,231,864	5,748,136
	October	1,886,663	629,365	2,516,028	5,463,972
	November	2,074,600	622,375	2,696,975	5,283,025
	December	2,255,163	601,766	2,856,929	5,123,071
1997	January	2,457,250	591,533	3,048,783	4,931,217
	February	2,654,984	629,997	3,284,981	4,695,019
	March	2,857,608	661,164	3,518,772	4,461,228
	April	3,097,015	646,709	3,743,724	4,236,276
	May	3,399,856	657,615	4,057,471	3,922,529
	June	3,660,984	681,981	4,342,965	3,637,035
	July	3,990,769	696,331	4,687,100	3,292,900
	August	4,345,910	742,755	5,088,665	2,891,335
	September	4,776,688	774,431	5,551,119	2,428,881
	October	5,139,455	726,515	5,865,970	2,114,030
	November	5,353,989	699,223	6,053,212	1,926,788
	December	5,551,554	729,020	6,280,574	1,699,426
1998	January	5,760,023	719,289	6,479,312	1,500,688
	February	5,968,391	723,679	6,692,070	1,287,930
	March	6,167,479	728,415	6,895,894	1,084,106
	April	6,373,603	690,041	7,063,644	916,356
	May	6,493,156	672,776	7,165,932	814,068
	June	6,591,764	665,496	7,257,260	722,740
	July	6,705,902	661,085	7,366,987	613,013
	August	6,790,315	669,486	7,459,801	520,199
	September	6,898,718	612,254	7,510,972	469,028
	October	7,012,860	573,695	7,586,555	393,445
	November	7,054,472	572,759	7,627,231	352,769
	December	7,146,159	515,009	7,661,168	318,832

Table 19.2

Telephone Numbers Assigned for Toll-Free Service * -- Continued
888 Toll-Free Service

Year	Month	Working 888 Numbers	Miscellaneous 888 Numbers 1/	Total 888 Numbers Assigned	Spare 888 Numbers Still Available
1999	January	7,196,336	510,057	7,706,393	273,607
	February	7,249,001	493,132	7,742,133	237,867
	March	7,278,531	495,904	7,774,435	205,565
	April	7,324,847	234,588	7,559,435	420,565
	May	7,385,748	216,196	7,601,944	378,056
	June	7,428,424	231,697	7,660,121	319,879
	July	7,487,759	231,884	7,719,643	260,357
	August	7,546,299	233,286	7,779,585	200,415
	September	7,601,867	211,318	7,813,185	166,815
	October	7,542,131	341,720	7,883,851	96,149
	November	7,592,293	342,918	7,935,211	44,789
	December	7,643,158	324,405	7,967,563	12,437
2000	January	7,615,927	363,960	7,979,887	113
	February	7,627,138	247,788	7,874,926	105,074
	March	7,685,423	230,035	7,915,458	64,542
	April	7,717,002	229,345	7,946,347	33,653
	May	7,758,684	157,984	7,916,668	63,332
	June	7,789,986	140,658	7,930,644	49,356
	July	7,820,147	141,713	7,961,860	18,140
	August	7,806,064	167,935	7,973,999	6,001
	September	7,806,252	173,588	7,979,840	160
	October	7,804,668	175,332	7,980,000	0
	November	7,795,241	172,827	7,968,068	11,932
	December	7,789,188	177,328	7,966,516	13,484
2001	January	7,647,783	324,097	7,971,880	8,120
	February	7,628,543	345,775	7,974,318	5,682
	March	7,616,189	355,451	7,971,640	8,360
	April	7,601,821	344,060	7,945,881	34,119
	May	7,573,372	264,492	7,837,864	142,136
	June	7,548,761	270,198	7,818,959	161,041
	July	7,540,276	254,940	7,795,216	184,784

Table 19.2

Telephone Numbers Assigned for Toll-Free Service * -- Continued
877 Toll-Free Service

Year	Month	Working 877 Numbers	Miscellaneous 877 Numbers 1/	Total 877 Numbers Assigned	Spare 877 Numbers Still Available
1998	April	168,300	276,169	444,469	7,535,531
	May	354,303	256,712	611,015	7,368,985
	June	552,037	209,967	762,004	7,217,996
	July	759,971	179,830	939,801	7,040,199
	August	918,956	201,087	1,120,043	6,859,957
	September	1,072,046	206,714	1,278,760	6,701,240
	October	1,259,620	277,038	1,536,658	6,443,342
	November	1,386,726	292,264	1,678,990	6,301,010
	December	1,567,195	235,190	1,802,385	6,177,615
1999	January	1,712,675	233,863	1,946,538	6,033,462
	February	1,920,715	299,430	2,220,145	5,759,855
	March	2,141,228	329,044	2,470,272	5,509,728
	April	2,410,517	403,711	2,814,228	5,165,772
	May	2,678,075	407,450	3,085,525	4,894,475
	June	2,899,466	410,026	3,309,492	4,670,508
	July	3,140,981	491,644	3,632,625	4,347,375
	August	3,472,534	456,372	3,928,906	4,051,094
	September	3,755,361	436,433	4,191,794	3,788,206
	October	4,008,681	486,968	4,495,649	3,484,351
	November	4,304,159	505,179	4,809,338	3,170,662
	December	4,528,106	575,143	5,103,249	2,876,751
2000	January	4,882,111	573,482	5,455,593	2,524,407
	February	5,118,387	659,479	5,777,866	2,202,134
	March	5,436,297	598,702	6,034,999	1,945,001
	April	5,764,078	520,951	6,285,029	1,694,971
	May	6,098,025	469,486	6,567,511	1,412,489
	June	6,317,507	402,858	6,720,365	1,259,635
	July	6,608,186	391,545	6,999,731	980,269
	August	6,636,282	385,065	7,021,347	958,653
	September	6,539,180	496,015	7,035,195	944,805
	October	6,475,202	622,384	7,097,586	882,414
	November	6,436,613	657,271	7,093,884	886,116
	December	6,391,285	719,333	7,110,618	869,382
2001	January	6,425,413	612,539	7,037,952	942,048
	February	6,369,360	559,994	6,929,354	1,050,646
	March	6,289,079	469,980	6,759,059	1,220,941
	April	6,249,330	537,570	6,786,900	1,193,100
	May	6,191,049	611,661	6,802,710	1,177,290
	June	6,094,898	715,097	6,809,995	1,170,005
	July	6,147,253	602,984	6,750,237	1,229,763

Table 19.2

Telephone Numbers Assigned for Toll-Free Service * -- Continued
866 Toll-Free Service

Year	Month	Working 866 Numbers	Miscellaneous 866 Numbers 1/	Total 866 Numbers Assigned	Spare 866 Numbers Still Available
2000	July	8,714	135,238	143,952	7,836,048
	August	384,164	213,442	597,606	7,382,394
	September	672,250	155,646	827,896	7,152,104
	October	931,620	161,091	1,092,711	6,887,289
	November	1,200,025	139,026	1,339,051	6,640,949
	December	1,274,732	148,548	1,423,280	6,556,720
2001	January	1,485,551	190,096	1,675,647	6,304,353
	February	1,597,785	224,368	1,822,153	6,157,847
	March	1,652,602	361,888	2,014,490	5,965,510
	April	1,726,291	356,526	2,082,817	5,897,183
	May	1,868,490	345,639	2,214,129	5,765,871
	June	1,944,520	362,880	2,307,400	5,672,600
	July	2,011,779	342,485	2,354,264	5,625,736

* Toll-free (800) service was initially offered by AT&T in 1967. On May 3, 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 giving the ability 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 Nov. 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.

Table 19.3
Dialing Patterns of the United States
Number of Digits Necessary to Dial Local and Toll Calls
(As of March 2001)

State	Local Calls Within Same Area Code	Local Calls Between Area Codes	Toll Calls Within Same Area Code	Toll Calls Between Area Codes	Toll Calls Require Dialing 1 +
Alabama	7	7 [1]	1 + 10	1 + 10	Yes
Alaska	7	1 + 10	1 + 10	1 + 10	Yes
Arizona	7	10 [2]	1 + 10	1 + 10	Yes
Arkansas	7	7	1 + 10	1 + 10	Yes
California	7	1 + 10	7	1 + 10	No
Colorado	7 [3]	10 [4]	1 + 10	1 + 10	Yes
Connecticut	7 [5]	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 [6]	10	1 + 10	1 + 10	Yes
Georgia	7 [7]	10	1 + 10	1 + 10	Yes
Hawaii	7	NA	1 + 10	1 + 10	Yes
Idaho	7	7	1 + 10	1 + 10	Yes
Illinois	7 [8]	1 + 10	1 + 10	1 + 10	Yes
Indiana	7	7	1 + 10	1 + 10	Yes
Iowa	7	10 [9]	1 + 10	1 + 10	Yes
Kansas	7	7 [10]	1 + 10	1 + 10	Yes
Kentucky	7	7	1 + 10	1 + 10	Yes
Louisiana	7	1 + 10 [11]	1 + 10	1 + 10	Yes
Maine	7	1 + 10	1 + 10	1 + 10	Yes
Maryland	10	10	1 + 10	1 + 10	Yes
Massachusetts	10 [12]	10	1 + 10	1 + 10	Yes
Michigan	7 [13]	1 + 10 [14]	1 + 10	1 + 10	Yes
Minnesota	7	10 [15]	1 + 10	1 + 10	Yes
Mississippi	7	7	1 + 10	1 + 10	Yes
Missouri	7 [16]	1+10 [17]	10 [18]	1 + 10	No
Montana	7	7	1 + 10	1 + 10	Yes
Nebraska	7	7	1 + 10	1 + 10	Yes
Nevada	7	1 + 10	1 + 10	1 + 10	Yes
New Hampshire	7	1 + 10	7	1 + 10	No
New Jersey	7 [19]	1 + 10	7 [19]	1 + 10	No
New Mexico	7	7	1 + 10	1 + 10	Yes
New York	7	1 + 10	7	1 + 10	No
North Carolina	10	10	1 + 10	1 + 10	Yes
North Dakota	7	7	1 + 10	1 + 10	Yes
Ohio	7 [20]	1 + 10 [21]	1 + 10	1 + 10	Yes
Oklahoma	7	7	1 + 10	1 + 10	Yes
Oregon	10 [22]	10 [22]	1 + 10	1 + 10	Yes
Pennsylvania	10 [23]	10 [24]	7 [23]	1 + 10	No
Rhode Island	7	1 + 10	7	1 + 10	No
South Dakota	7	7	1 + 10	1 + 10	Yes
Tennessee	7	7 [25]	1 + 10	1 + 10	Yes
Texas	7 [26]	10	1 + 10	1 + 10	Yes
Utah	7	10 [27]	1 + 10	1 + 10	Yes
Virginia	7 [28]	10 [29]	1 + 10	1 + 10	Yes
Washington	7 [30]	10 [31]	1 + 10	1 + 10	Yes
West Virginia	7	1 + 10	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 19.3

[1] In area code 251 1+10-digit dialing is used.

[2] In area code 520 7-digit dialing is used.

[3] In area codes 303 and 720, 10-digit dialing is used.

[4] In area code 970 7-digit dialing is used.

[5] In area codes 475 and 959, 10-digit dialing is used.

[6] In area codes 305, 321, 407 and 786, 10-digit dialing is used.

[7] In area codes 404, 470, 678 and 770, 10-digit dialing is used.

[8] In area codes 224, 331, 464 and 847, 10-digit dialing is used.

[9] In area codes 319 and 712, 7-digit dialing is used.

[10] In area codes 316 and 620, 10-digit dialing is used.

[11] In area codes 504 and 985, 10-digit dialing is used

[12] In area code 413 7-digit dialing is used.

[13] In area codes 679 and 947, 10-digit dialing is used.

[14] In area code 989 10-digit dialing is used.

[15] In area codes 218, 330 and 507, 7-digit dialing is used.

[16] In area codes 557 and 975, 10-digit dialing is used.

[17] In area codes 314, 557 and 975, 10-digit dialing is used.

[18] In area codes 557 and 975, 1+10-digit dialing is used.

[19] In area codes 551, 848 and 862, 10-digit dialing is used.

[20] In area codes 234, 330, 419 and 567, 10-digit dialing is used.

[21] In area codes 419 and 567, 10-digit dialing is used.

[22] In area code 541 7-digit dialing is used.

[23] In area codes 412, 570, 717, 724 and 814, 7-digit dialing is used.

[24] In area codes 412, 570, 717, 724 and 814, 1+10-digit dialing is used.

[25] In area code 731 10-digit dialing is used.

[26] In area codes 214, 281, 469, 682, 713, 817, 832 and 972, 10-digit dialing is used.

[27] In area code 435, 7-digit dialing is used.

[28] In area codes 571 and 703, 10-digit dialing is used.

[29] In area code 434, 10-digit dialing is used.

[30] In area codes 360 and 564, 10-digit dialing is used.

[31] In area code 509, 7-digit dialing is used.

20 Universal Service

The high-cost support mechanisms enable areas with very high costs to recover some of these costs from the support mechanisms, leaving a smaller remainder of the costs to be recovered through end-user rates. In this manner, the high-cost support mechanisms are intended to hold down rates and thereby further one of the most important goals of federal and state regulation -- the preservation and advancement of universal telephone service.

There currently are five high-cost support mechanisms. These include three existing mechanisms for embedded high-cost loop (HCL) support[1], long-term support (LTS), and local switching support (LSS). Two new mechanisms have been added since our last report. These are the forward-looking high-cost model support and the interstate access universal service support.

The universal service fund (USF) high-cost loop support provides assistance to companies with above average non-traffic-sensitive local loop costs -- a term that refers to the costs of providing the loop connection between the customers and the central office. The second high-cost support mechanism, LTS, is also related to non-traffic-sensitive costs. LTS provides support to members of the NECA common line pool, to allow them to charge a below-cost carrier common line rate. The third high-cost support mechanism, LSS, is related to traffic-sensitive local switching costs. LSS provides support to LECs with study areas of 50,000 or fewer access lines to help defray the higher switching cost of small LECs.

In October 1999, the Commission adopted the fourth mechanism, a new high-cost support mechanism for non-rural carriers. The new mechanism is based on the forward-looking costs of providing supported services as determined by the Commission's cost model. For each state, the cost model calculates the wire center average forward-looking cost per line incurred by non-rural carriers to provide supported services. These wire center average costs are then averaged at the statewide level to determine the statewide average forward-looking cost per line. The forward-looking support mechanism provides support to non-rural carriers in those states that have a statewide average forward-looking cost per line greater than the national benchmark, which is set at 135 percent of the national average forward-looking cost per line.[2]

On May 31, 2000, the Commission established the fifth mechanism, an explicit interstate access universal service support mechanism for price-cap carriers to replace the implicit support previously collected through interstate access charges. Like LTS, the purpose of this new mechanism is to

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[1] 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 CFR § 36.601.

[2] *But cf. Qwest Corp. v. FCC*, 2001 WL 864222 (10th Cir. July 31, 2001) (reversing and remanding the Ninth Order of the FCC "because it does not provide sufficient reasoning or record evidence to support [the] reasonableness [of its decision].")

provide explicit support to ensure reasonably affordable interstate rates. This is in contrast to the Commission's other high-cost support mechanisms, which provide support to enable states to ensure reasonably affordable and comparable intrastate rates.

Table 20.1 shows USF, LTS, LSS, forward-looking high-cost model support, and interstate access universal service support payments from 1986 to 2000. Table 20.2 shows projected payments by state for 2000. It should be noted that these projections do not include subsequent quarterly true-ups.

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 based on eligibility for the national school lunch program, location in a rural area, and the total amount of money requested by all schools and libraries. These schools and libraries are eligible to receive support for services that qualify as telecommunications services, Internet access, or internal connections.

The portion of universal service support designated for health care providers is designed to allow rural health care providers to purchase telecommunications services at the same rates that health care providers located in urban areas pay for these services. The Commission's universal service rules permit eligible health care providers to receive support for any telecommunications service and for distance charges for the distance between the rural health care provider and the nearest large city. The Commission defined "nearest large city" as the closest city in the state with a population of at least 50,000. In addition, any 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.

Table 20.3 shows, on a state-by-state basis, funding commitments to schools and libraries for the July 1, 1999 - June 30, 2000 funding year. The commitments are broken down by type of service that was funded. Table 20.4 shows, on a state-by-state basis, funding commitments and funding authorizations to rural health care providers for the same period. Funding authorizations represent the penultimate step before actual disbursement of funds, and reflect actual disbursements to providers in those states.

Carriers contribute to universal service based on their end-user revenues. Since November 1999, all contributions to USF are based on interstate end-user revenues. Table 20.5 shows interstate and intrastate contribution rates since the first quarter of 1998.

Table 20.1
Universal Service Fund Payment History
(In Millions of Dollars)

Year	High-Cost Loop Support	Long-Term Support	Switching Support	New High-Cost Model Support	Interstate Access Support	Total Support	Cumulative Payments
1986	$56	$0	NA	$0	$0	$56	$56
1987	126	0	NA	0	0	126	181
1988	183	0	NA	0	0	183	365
1989	265	236	NA	0	0	500	865
1990	339	263	NA	0	0	602	1,467
1991	485	272	NA	0	0	757	2,223
1992	609	306	NA	0	0	915	3,138
1993	705	323	$311	0	0	1,339	4,477
1994	725	347	304	0	0	1,376	5,853
1995	750	382	325	0	0	1,457	7,310
1996	763	426	348	0	0	1,536	8,846
1997	794	470	351	0	0	1,614	10,460
1998	827	473	413	0	0	1,712	12,173
1999	864	473	383	0	0	1,720	13,893
2000	872	479	391	219	276	2,237	16,130

NA - Not Available.

Sources: Industry Analysis Division, *Monitoring Report* and USAC filings.

Table 20.2

Projected High-Cost Support Payments by State: 2000

(In Thousands of Dollars)

	High-Cost Loop Support	Long-Term Loop Support	Local Switching Support	New High-Cost Model Support	Interstate Access Support	Total Support
Alabama	$13,188	$7,335	$6,554	$51,744	$8,830	$87,650
Alaska	38,841	16,954	15,444	0	0	71,240
American Somoa	0	258	333	0	0	591
Arizona	19,902	3,111	10,327	0	2,075	35,414
Arkansas	46,309	15,394	7,767	0	3,417	72,887
California	28,553	13,271	7,454	0	16,413	65,692
Colorado	28,096	12,112	4,031	0	8,130	52,369
Connecticut	0	163	723	0	0	886
Delaware	0	0	0	0	195	195
District of Columbia	0	0	0	0	0	0
Florida	10,582	5,321	3,756	0	30,807	50,466
Georgia	42,691	17,863	12,907	0	6,066	79,527
Guam	1,319	1,946	0	0	0	3,266
Hawaii	379	159	786	0	732	2,055
Idaho	18,866	3,459	6,609	0	6,916	35,850
Illinois	6,704	6,212	11,884	0	6,593	31,393
Indiana	4,921	5,134	9,040	0	11,637	30,731
Iowa	4,381	7,237	15,023	0	3,790	30,431
Kansas	38,856	11,452	13,599	0	3,336	67,243
Kentucky	9,496	4,899	4,965	1,212	9,033	29,606
Louisiana	43,967	16,729	6,710	0	5,441	72,848
Maine	6,038	6,009	7,474	10,776	417	30,713
Maryland	0	91	461	0	1,842	2,394
Massachusetts	21	102	470	0	675	1,269
Michigan	21,791	9,821	7,869	0	90	39,571
Minnesota	16,598	12,154	17,305	0	2,037	48,094
Mississippi	14,507	5,076	3,802	103,707	5,959	133,052
Missouri	39,819	10,660	8,185	0	7,715	66,380
Montana	25,241	10,009	9,332	1,542	267	46,391
Nebraska	8,071	3,861	11,089	0	599	23,621
Nevada	4,420	916	6,354	0	2,990	14,680
New Hampshire	1,147	1,512	4,893	0	992	8,544
New Jersey	0	0	970	0	2,534	3,504
New Mexico	18,576	6,160	9,122	0	3,843	37,701
New York	14,992	6,806	18,518	0	12,706	53,021
North Carolina	10,577	12,053	5,935	0	5,739	34,304
North Dakota	7,991	5,982	10,478	0	517	24,969
Northern Mariana Islands	2,457	0	727	0	126	3,310
Ohio	5,822	5,213	4,654	0	3,897	19,587
Oklahoma	32,957	16,412	13,178	0	3,395	65,942
Oregon	22,444	9,254	7,366	0	7,824	46,888
Pennsylvania	1,095	14,137	7,010	0	6,570	28,812
Puerto Rico	51,970	91,622	0	0	0	143,591
Rhode Island	0	0	0	0	25	25
South Carolina	20,182	11,098	10,728	0	8,334	50,342
South Dakota	5,946	5,040	9,934	0	33	20,953
Tennessee	11,913	10,393	7,550	0	4,496	34,352
Texas	69,832	29,651	18,153	0	18,810	136,446
Utah	3,908	1,488	5,367	0	1,584	12,347
Vermont	3,397	2,389	4,836	15,104	188	25,913
Virgin Islands	16,947	7,206	0	0	0	24,153
Virginia	4,369	3,342	4,096	0	25,319	37,126
Washington	23,499	13,268	5,845	0	8,646	51,259
West Virginia	17,540	1,061	3,534	31,235	9,691	63,061
Wisconsin	17,633	12,832	22,103	0	1,292	53,860
Wyoming	13,730	4,501	5,584	3,612	2,959	30,386
Total	$872,481	$479,134	$390,833	$218,931	$275,523	$2,236,901

Sources: Industry Analysis Division, *Monitoring Report* and USAC filings.

Table 20.3
Schools and Libraries Funding Commitments by State and by Type of Service
(Funding Period: July 1, 1999 Through June 30, 2000
Funds Committed Through February 24, 2001)[1]

	Internal Connections		Internet Access		Telecom. & Dedicated		Totals	
State/Territory	Funds Committed	Funding Commitments	Funds Committed	Funding Commitments	Funds Committed	Funding Commitments	Funds Committed	Funding Commitments
Alabama	$16,458,562	696	$3,272,547	216	$6,476,305	730	$26,207,413	1,642
Alaska	3,450,841	211	621,959	57	7,499,734	356	11,572,535	624
American Samoa	1,179,617	2	1,046,886	2	477,318	1	2,703,821	5
Arizona	30,888,694	775	1,233,584	168	6,026,777	657	38,149,055	1,600
Arkansas	3,298,168	260	2,579,882	34	4,437,482	644	10,315,531	938
California	177,529,778	4,028	8,413,523	459	49,520,150	2,298	235,463,452	6,785
Colorado	3,820,026	280	658,597	185	7,873,912	972	12,352,535	1,437
Connecticut	24,219,918	370	1,590,919	146	6,298,082	617	32,108,919	1,133
Delaware	33,192	14	35,155	8	1,303,015	157	1,371,361	179
District of Columbia	4,990,872	88	449,666	60	3,987,419	360	9,427,956	508
Florida	40,661,640	2,267	4,954,982	161	28,085,059	1,184	73,701,681	3,612
Georgia	66,763,537	1,302	4,631,124	162	19,651,987	652	91,046,648	2,116
Hawaii	3,502,481	621	281,952	16	1,542,166	623	5,326,598	1,260
Idaho	2,528,245	151	367,141	109	1,832,226	314	4,727,611	574
Illinois	132,720,646	1,668	3,571,923	505	25,070,170	2,581	161,362,739	4,754
Indiana	9,375,757	356	1,922,715	177	11,503,616	1,601	22,802,089	2,134
Iowa	3,659,353	586	910,413	421	3,380,352	1,249	7,950,118	2,256
Kansas	7,541,237	305	1,485,631	346	5,902,400	940	14,929,268	1,591
Kentucky	42,424,395	1,731	1,423,001	115	13,068,542	1,042	56,915,938	2,888
Louisiana	22,981,410	1,482	4,876,371	208	9,734,905	1,008	37,592,687	2,698
Maine	1,447,201	268	247,379	26	1,919,460	503	3,614,040	797
Maryland	10,477,378	209	827,698	84	10,743,738	347	22,048,815	640
Massachusetts	19,271,003	574	1,575,100	273	12,152,732	945	32,998,835	1,792
Michigan	51,093,826	1,895	5,491,306	495	22,285,146	2,108	78,870,278	4,498
Minnesota	14,413,890	628	1,380,954	196	13,601,737	1,237	29,396,581	2,061
Mississippi	16,660,744	1,276	2,027,063	217	11,910,503	962	30,598,310	2,455
Missouri	9,105,392	1,330	9,284,241	2,402	10,375,549	1,178	28,765,182	4,910
Montana	1,349,474	171	586,848	266	1,783,877	642	3,720,198	1,079
Nebraska	919,884	97	512,112	193	5,259,355	1,121	6,691,352	1,411
Nevada	117,670	5	87,282	14	2,932,278	95	3,137,231	114
New Hampshire	185,136	61	204,434	77	878,973	331	1,268,543	469
New Jersey	24,854,126	804	2,574,228	364	16,474,573	1,379	43,902,927	2,547
New Mexico	22,916,532	221	740,844	83	5,448,714	214	29,106,091	518
New York	104,860,594	2,878	15,486,192	799	72,256,892	5,499	192,603,678	9,176
North Carolina	18,499,774	725	3,711,385	298	14,466,076	1,011	36,677,235	2,034
North Dakota	657,866	239	216,656	83	1,311,431	444	2,185,954	766
Northern Mariana Is.	0	0	9,757	1	85,643	15	95,401	16
Ohio	21,800,665	973	4,938,518	1,075	16,408,561	1,828	43,147,744	3,876
Oklahoma	20,376,022	999	3,596,435	425	9,953,398	1,963	33,925,855	3,387
Oregon	4,226,385	415	592,420	105	6,106,533	664	10,925,337	1,184
Pennsylvania	34,306,167	754	3,501,410	556	18,463,096	2,416	56,270,673	3,726
Puerto Rico	42,178,990	155	8,248,795	113	16,851,991	204	67,279,777	472
Rhode Island	4,004,239	184	401,588	37	3,418,082	201	7,823,910	422
South Carolina	16,625,160	878	229,899	17	11,801,061	312	28,656,120	1,207
South Dakota	586,268	175	519,169	163	1,008,608	333	2,114,045	671
Tennessee	31,132,713	2,786	18,395,529	282	13,236,277	597	62,764,519	3,665
Texas	88,424,026	2,656	5,364,396	654	41,147,783	2,330	134,936,206	5,640
Utah	428,430	53	2,028,688	91	3,271,463	309	5,728,582	453
Vermont	199,444	81	280,625	99	1,108,464	454	1,588,533	634
Virgin Islands	2,044,407	11	220,321	7	82,789	9	2,347,516	27
Virginia	10,109,017	460	1,832,619	194	13,235,293	704	25,176,929	1,358
Washington	19,717,373	1,110	543,581	110	12,505,611	1,067	32,766,565	2,287
West Virginia	4,540,641	2,023	2,294,972	1,095	2,524,791	1,905	9,360,404	5,023
Wisconsin	10,092,504	467	2,985,766	378	12,983,446	1,111	26,061,716	1,956
Wyoming	2,941,437	126	180,353	75	1,846,414	275	4,968,205	476
Totals	$1,208,592,749	42,880	$145,446,537	14,902	$603,511,956	52,699	$1,957,551,242	110,481

[1] Because of the appeals process, funding commitments have been made after the program year ended on June 30, 2000.

Source: USAC data. Rollups performed by the Industry Analysis Division, FCC.

Table 20.4
Rural Health Care Funding Commitments and Authorizations for Payment by State
(Funding Period: July 1, 1999 Through June 30, 2000
Activity Through December 31, 2000)

State	Total Funds Committed	Commitments to Providers	Total Funds Authorized for Payment	Authorizations for Providers
Alabama	$0	0	$0	0
Alaska	4,662,920	120	1,271,530	36
Arizona	171,961	21	34,138	10
Arkansas	85,194	25	10,731	10
California	87,663	14	85,711	13
Colorado	48,531	10	0	0
Connecticut	0	0	0	0
Delaware	0	0	0	0
District of Columbia	0	0	0	0
Florida	0	0	0	0
Georgia	0	0	0	0
Hawaii	86,491	10	85,358	9
Idaho	26,501	6	8,975	1
Illinois	64,289	12	0	0
Indiana	0	0	0	0
Iowa	20,070	14	3,551	2
Kansas	138,223	51	82,598	46
Kentucky	0	0	0	0
Louisiana	3,958	1	0	0
Maine	0	0	0	0
Maryland	0	0	0	0
Massachusetts	0	0	0	0
Michigan	112,672	15	4,430	1
Minnesota	229,771	56	35,224	8
Mississippi	30,023	9	4,034	2
Missouri	36,550	7	16,371	4
Montana	135,713	27	71,124	13
Nebraska	264,679	13	224,613	9
Nevada	0	0	0	0
New Hampshire	18,463	5	0	0
New Jersey	0	0	0	0
New Mexico	135,942	40	26,289	7
New York	168	1	0	0
North Carolina	81,856	14	37,036	8
North Dakota	53,647	16	4,155	1
Ohio	31,761	8	24,946	5
Oklahoma	9,931	3	9,931	3
Oregon	4,993	3	4,993	3
Pennsylvania	0	0	0	0
Rhode Island	0	0	0	0
South Carolina	9,943	2	4,636	1
South Dakota	37,725	22	15,435	6
Tennessee	5,052	3	0	0
Texas	93,606	18	6,821	7
Utah	0	0	0	0
Vermont	29	1	0	0
Virginia	3,608	1	0	0
Washington	18,095	10	8,660	6
West Virginia	804	2	0	0
Wisconsin	4,157	6	0	0
Wyoming	715	1	0	0
Totals	$6,715,704	567	$2,081,290	211

Source: USAC data. Rollups performed by the Industry Analysis Division, FCC.

Table 20.5
Universal Service Fund Factors

Year	Period	Factors for Interstate End-User Revenues			Factors for Intrastate End-User Revenues		
		High-Cost & Low-Income Support	Schools, Libraries, & Rural Health Care Support	All Support	High-Cost & Low-Income Support	Schools, Libraries, & Rural Health Care Support	All Support
1998	First Quarter	3.19 %	0.72 %	3.91 %	0.00 %	0.72 %	0.72 %
	Second Quarter	3.14	0.76	3.90	0.00	0.76	0.76
	Third Quarter	3.14	0.75	3.89	0.00	0.75	0.75
	Fourth Quarter	3.18	0.75	3.93	0.00	0.75	0.75
1999	First Quarter	3.18	0.58	3.76	0.00	0.58	0.58
	Second Quarter	3.05	0.57	3.62	0.00	0.57	0.57
	Third Quarter	2.94	0.99	3.93	0.00	0.99	0.99
	Fourth Quarter	2.89	1.10	3.99	0.00	1.10	1.10
2000	First Quarter	3.27	2.61	5.88	0.00	0.00	0.00
	Second Quarter	3.21	2.50	5.71	0.00	0.00	0.00
	Third Quarter	3.77	1.77	5.54	0.00	0.00	0.00
	Fourth Quarter	3.88	1.79	5.67	0.00	0.00	0.00
2001	First Quarter	4.07	2.61	6.68	0.00	0.00	0.00
	Second Quarter	4.18	2.70	6.88	0.00	0.00	0.00
	Third Quarter	4.15	2.74	6.89	0.00	0.00	0.00

Chart 20.1
Interstate Universal Service Fund Factors

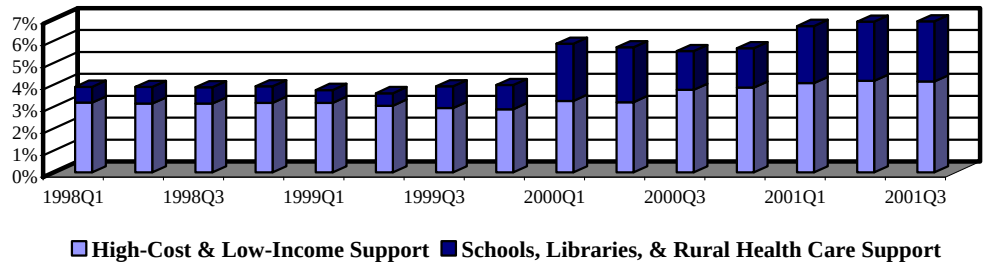
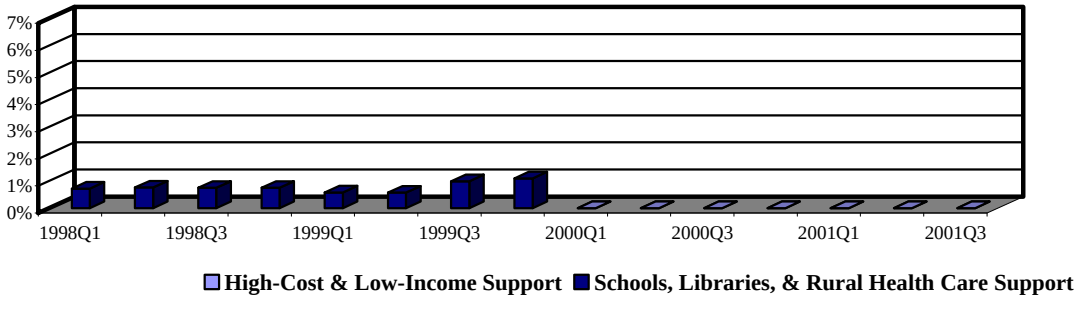


Chart 20.2
Intrastate Universal Service Fund Factors



Source: Quarterly public notices on universal service contribution factors in CC Docket 96-45.

21 Appendix A – 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/ccb/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, International Transcription Services, Inc. (ITS), 202-857-3800.

Additional information on regulated carriers, including investments, revenues, expenses, and earnings, is contained in the annual *Statistics of Communications Common Carriers*. The 60th Anniversary edition (1999/2000) can be purchased from the U.S. Government Printing Office (202-512-1800) and 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 Division's *Carrier Locator*, which can also be downloaded from the **FCC-State Link**.

The information on consumer expenditures (Table 3.1), employment (Tables 5.1 and 5.2), and price indices (Tables 13.1 - 13.3) comes from the Bureau of Labor Statistics and can be found on the Internet at <www.bls.gov/blshome.htm>.

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 Division and can also be found on the **FCC-State Link**.

Table 10.5, on carrier identification codes, and Table 19.1, 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 12.2 and 12.3 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 containing information on residential phone usage to the Commission. TNS has granted the Commission permission to use these databases for research

purposes and to publish the results. The 1995 survey is known as *Bill Harvesting II* and the 1996 survey, *Bill Harvesting III*. The expanded 1997 survey, which contains over twice as many observations, was conducted by both TNS Telecoms and by Market Facts, Inc. and is known as *TLC MarketShare Monitor*. Tables 10.9 10.10, and 15.1 - 15.6 come from these databases. For additional information, TNS Telecoms can be contacted by phone at (215) 886-9200, and by e-mail at info@pnr.com. Their address is 101 Greenwood Avenue, Suite 502, Jenkinstown, PA 19046.

Copies of NTIA's report *Falling Through the Net: Toward Digital Inclusion* 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 18.1-18.3 contain information from the ARMIS 43-07 reports for the BOCs. Individual carrier information can be obtained from the ARMIS web page at <www.fcc.gov/ccb/armis/db>.

Chart 18.1 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 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. Annually, it publishes and sells statistical publications such as *Statistics of the Local Exchange Carriers*. USTA can be found on the Internet at www.usta.org>.

The Alliance 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 2001*, is also available on their web site.

22 Appendix B – Contacting the Report Authors

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

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Consumer Expenditures	Keith Brown
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Employment	Katie Rangos
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Customer Response

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