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FCC RELEASES STUDY ON TELEPHONE TRENDS

The FCC has released a report entitled Trends in Telephone Service. This report was designed to provide answers to some of the most frequently asked questions about the telephone industry -- questions asked by consumers, members of Congress, other government agencies, telecommunications carriers, and members of the business and academic communities. To this end, the report contains summary information about the size, growth, and development of the telephone industry, including data on market shares, minutes of calling, number of lines, and telephone subscribership. The report also provides information about telephone rates and price changes, consumer expenditures for service, access charges, long distance carriers, the status of local competition, infrastructure, universal service programs, and international telephone traffic.

This report is available for reference in the Common Carrier Bureau Public Reference Room, 1919 M Street, N.W., Room 509. Copies may be purchased by calling International Transcription Services, Inc. (ITS) at (202) 857-3800. The report can also be downloaded from the **FCC-State Link** computer bulletin board at (202) 418-0241 [BBS file name TREND196.ZIP]. The **FCC-State Link** can also be reached by using a gateway feature available through the National Technical Information Service's **FedWorld** system. **FedWorld** can also be reached via direct dial access (703) 321-3339, via internet telnet access (fedworld.gov), or via the World Wide Web (http://www.fedworld.gov).

FCC

For further information, contact the Industry Analysis Division, Common Carrier Bureau, at (202) 418-0940.

TRENDS IN TELEPHONE SERVICE

Industry Analysis Division
Common Carrier Bureau
Federal Communications Commission
May 1996

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INTRODUCTION:

Trends in Telephone Service is published by the Industry Analysis Division of the FCC'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 telephone rates and price changes, consumer expenditures for service, access charges, long distance carriers, the status of local competition, infrastructure, universal service programs, and international telephone traffic.

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. To facilitate further information gathering by consumers and others, we have listed additional sources of information at the end of this report.

TELEPHONE SUBSCRIBERSHIP:

Under contract with the Federal Communications Commission, 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.

Nearly sixteen 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. The Census data also reflect slight, but statistically significant, seasonal variations in penetration rates. This pattern, after allowing for effects of the upward trend in the data, is an increase of 0.2% from November to March, followed by a decrease of 0.1% from March to July, followed by a decrease of 0.1% from July to November.

Because of smaller sample sizes, state-by-state data are subject to greater sampling errors than the national data shown in Table 1. Consequently, the state-by-state data shown in Table 2 are based on annual average penetration rates.

TABLE 1

HOUSEHOLD TELEPHONE SUBSCRIBERSHIP IN THE U.S.

	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

TABLE 2

TELEPHONE PENETRATION BY STATE
(ANNUAL AVERAGE PERCENTAGE OF HOUSEHOLDS WITH TELEPHONE SERVICE)

STATE	1984	1995	CHANGE
ALABAMA	88.4 %	92.2 %	3.7 % *
ALASKA	86.5	93.6	7.1 *
ARIZONA	86.9	93.8	6.8 *
ARKANSAS	86.6	89.4	2.8
CALIFORNIA	92.5	94.5	2.1 *
COLORADO	93.2	96.6	3.4 *
CONNECTICUT	95.5	96.9	1.4
DELAWARE	94.3	96.2	2.0 *
DISTRICT OF COLUMBIA	94.9	90.9	−4.0 **
FLORIDA	88.7	93.9	5.2 *
GEORGIA	86.2	90.0	3.8 *
HAWAII	93.5	94.7	1.2
IDAHO	90.7	95.1	4.4 *
ILLINOIS	94.2	93.6	−0.6
INDIANA	91.6	94.4	2.9 *
IOWA	96.2	96.4	0.2
KANSAS	94.3	93.9	−0.5
KENTUCKY	88.1	92.1	4.0 *
LOUISIANA	89.7	92.6	3.0 *
MAINE	93.4	95.7	2.3 *
MARYLAND	95.7	96.4	0.7
MASSACHUSETTS	95.9	95.9	0.0
MICHIGAN	92.8	95.2	2.3 *
MINNESOTA	95.8	97.3	1.4
MISSISSIPPI	82.4	86.5	4.1 *
MISSOURI	91.5	94.4	2.9 *
MONTANA	91.0	94.2	3.2 *
NEBRASKA	95.7	97.1	1.4
NEVADA	90.4	92.6	2.2
NEW HAMPSHIRE	94.3	96.2	1.9
NEW JERSEY	94.8	92.3	−2.5 **
NEW MEXICO	82.0	86.4	4.4 *
NEW YORK	91.8	92.9	1.1
NORTH CAROLINA	88.3	93.4	5.1 *
NORTH DAKOTA	94.6	97.2	2.6 *
OHIO	92.4	94.0	1.6 *
OKLAHOMA	90.3	91.5	1.3
OREGON	90.6	96.4	5.8 *
PENNSYLVANIA	94.9	96.8	2.0 *
RHODE ISLAND	93.6	96.0	2.4 *
SOUTH CAROLINA	83.7	90.5	6.8 *
SOUTH DAKOTA	93.2	94.3	1.1
TENNESSEE	88.5	93.0	4.5 *
TEXAS	88.4	91.3	2.9 *
UTAH	92.5	97.6	5.1 *
VERMONT	92.3	96.5	4.2 *
VIRGINIA	93.1	95.9	2.9 *
WASHINGTON	93.0	95.7	2.7 *
WEST VIRGINIA	87.7	92.7	5.0 *
WISCONSIN	95.2	97.3	2.1 *
WYOMING	89.9	94.1	4.2 *
TOTAL UNITED STATES	91.6	93.9	2.3 *

* INCREASE IS STATISTICALLY SIGNIFICANT AT THE 95% CONFIDENCE LEVEL.
** DECREASE IS STATISTICALLY SIGNIFICANT AT THE 95% CONFIDENCE LEVEL.

DETAILS MAY NOT ADD DUE TO ROUNDING.

PRICE INDEXES 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. The following material illustrates the range of information available from price indexes.

1. Long Term Trends in Price Indexes:

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 3 shows long-run changes in the Consumer Price Indexes 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 Indexes:

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 both local and long distance services. The annual rate of change is shown in Table 4 for the overall CPI (which measures the impact of inflation on consumers) and the CPI for telephone services. In addition, Table 4 shows the Gross Domestic Product fixed-weight price index prepared by the Bureau of Economic Analysis (which measures inflation throughout the economy).

3. Price Indexes 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, subscriber line charges, and all other consumer expenditures associated with telephone services except long distance 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 indexes of local costs are presented in Table 5.

4. Price Indexes for Long Distance Service:

Price index data is available for intrastate toll and interstate toll services since December 1977. These series are also presented in Table 5.

5. Price Index Limitations:

Price indexes 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, the BLS made major changes to the PPI telephone series and we have no data after July 1995 that is comparable with prior data. Because of these sorts of difficulties, measures of average revenues are sometimes used as alternatives to price indexes.

Table 3

Long–Term Changes for Various Price Indexes *

(Annual Rates of Change)

	1935 – 1995	1985 – 1995
CPI all items	4.1 %	3.5 %
CPI all services	4.5	4.4
CPI telephone services	2.0	1.1
CPI major categories:		
– food & beverages	*	3.5
– housing	*	3.3
– apparel & upkeep	3.1	2.3
– transportation	3.9	2.7
– medical care	5.3	6.9
– entertainment	*	3.6
– other goods & services	*	6.1
CPI public transportation	5.1	4.8
CPI piped gas	3.5	–0.2
CPI electricity	2.4	1.8
CPI sewer & water maintenance	*	5.7
CPI postage	4.3	4.0

* Series not established until after 1935.

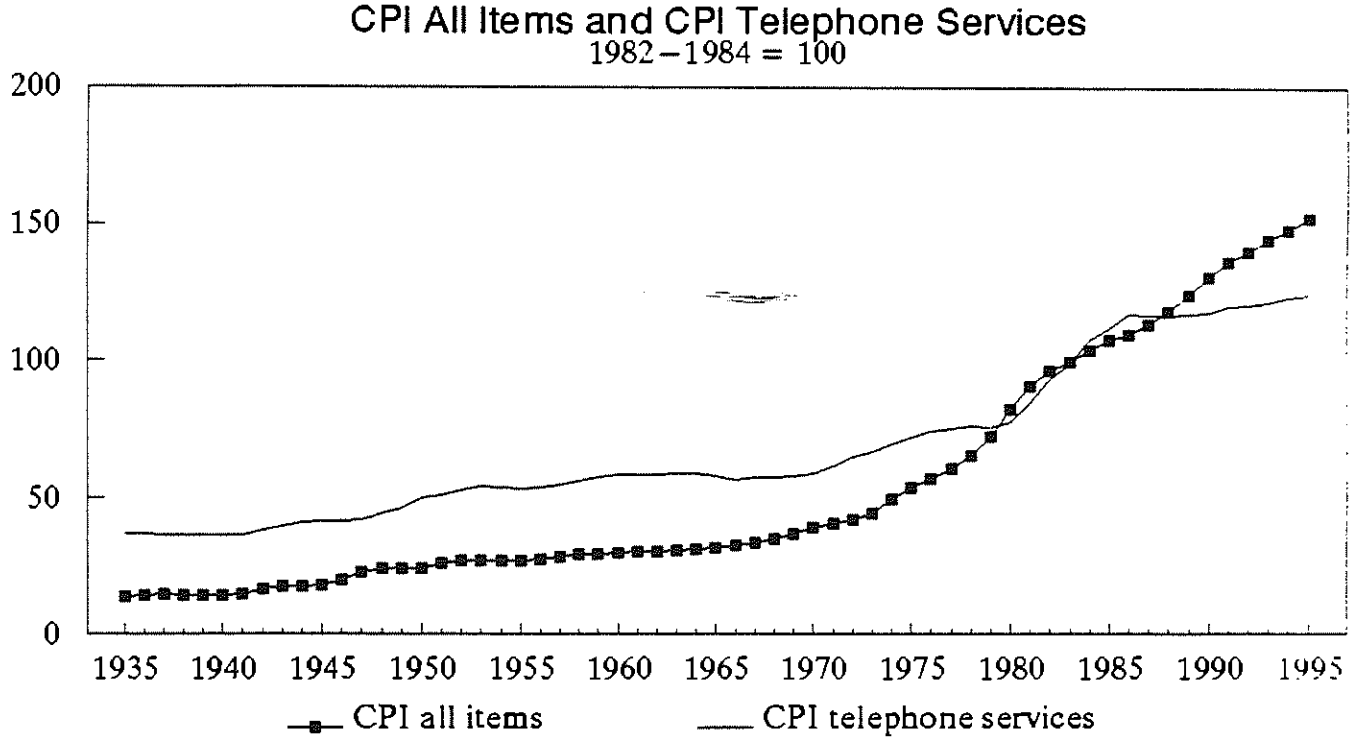


Table 4

Annual Changes in Major Price Indexes

	GDP Fixed Weight Price Index *	CPI: All Items	CPI: Telephone Services
1978	7.2 %	9.0 %	0.9 %
1979	8.8	13.3	0.7
1980	9.8	12.5	4.6
1981	8.5	8.9	11.7
1982	5.0	3.8	7.2
1983	3.5	3.8	3.6
1984	3.4	3.9	9.2
1985	3.5	3.8	4.7
1986	2.6	1.1	2.7
1987	3.4	4.4	−1.3
1988	4.0	4.4	1.3
1989	3.8	4.6	−0.3
1990	4.5	6.1	−0.4
1991	3.2	3.1	3.5
1992	2.6	2.9	−0.3
1993	2.6	2.7	1.8
1994	2.5	2.7	0.7
1995 **	2.6	2.5	1.2

* In 1996, the BEA republished the gross domestic product (GDP) fixed weight price indexes for 1987 through the third quarter of 1995. Data for prior years are not necessarily consistent.

** The 1995 GDP price index changes are measured third quarter through third quarter.

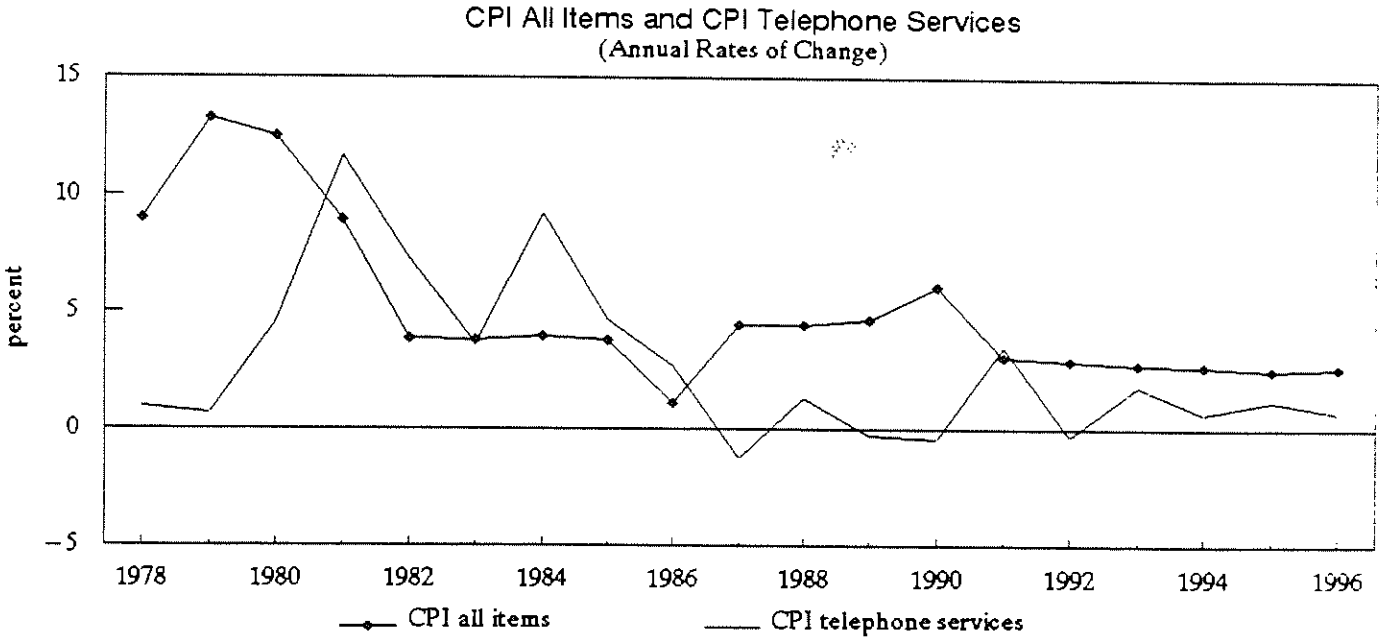


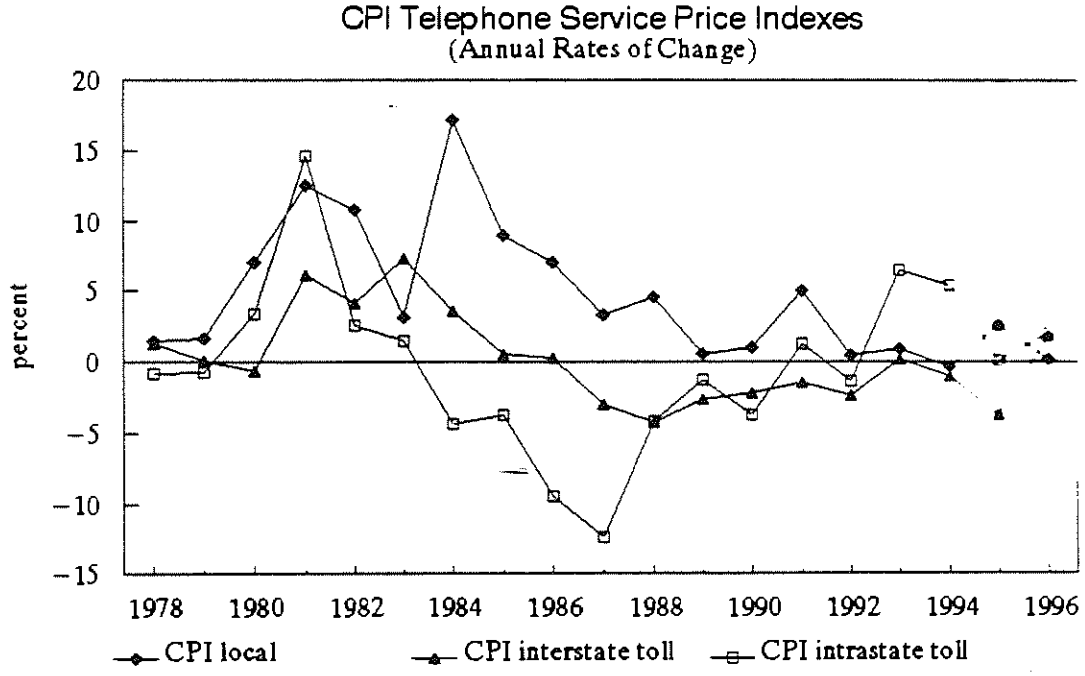
Table 5

Annual Changes in Price Indexes for Local and Long Distance Telephone Services

	Local Residential Service		Toll Service *			
	CPI: all local charges	PPI: Monthly Service Charges	Interstate Toll Calls		Intrastate Toll Calls	
			CPI	PPI	CPI	PPI
1978	1.4 %	3.1 %	−0.8 %	0.0 %	1.3 %	0.1 %
1979	1.7	1.6	−0.7	−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	2.6	3.9	4.2	1.7
1983	3.1	0.2	1.5	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	−3.7
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	**	0.1	**	−3.8	**

* CPI toll indexes represent rates for households. PPI toll indexes represent rate changes for both business and residential consumers.

** Comparable PPI indexes were last published for July 1995



PRICE LEVELS:

1. Local Rate Levels:

The price indexes maintained by the Bureau of Labor Statistics indicate percentage changes in the price of telephone services. The 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 the BLS in constructing the Consumer Price Index.

Table 6 presents average local rates for residential customers. In October 1994, the national average for flat-rate residential service was $19.00 monthly, including taxes and subscriber line charges.

In most cities, consumers can subscribe to a service with a lower recurring charge than the cost of unlimited one-party service. Lower priced service options include party-line service and measured service. As of October 1994, the national average for the lowest generally available recurring charge was $6.55. The average minimum monthly bill, including subscriber line charges and taxes, was $11.58.

Table 6 also shows rates for a single-line business customer. These rates are representative of the cost of a local access line for small businesses.

2. Long Distance Rates:

In Table 7, AT&T's basic schedule prices for directly dialed long distance calls are shown for January 1984 and April 1996. Higher charges apply to other types of calls such as those using operator assistance. Lower prices are available through calling plans and other volume discounts. In 1993, AT&T first began to charge different rates to residential and business customers. Since 1984, AT&T's basic schedule charges for directly dialed interstate calls have been reduced about 30%.

Table 8 contains AT&T's average revenue per minute for interstate calls. Since 1984, this figure has declined from 32 cents per minute to 18 cents per minute -- a drop of 40%.

Table 6

National Averages for Local Telephone Rates

	October Data											
	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994
Residential rates*												
Unlimited service	$10.50	$12.10	$12.17	$12.58	$12.44	$12.32	$12.30	$12.39	$13.10	$13.12	$13.22	$13.24
Subscriber line charges	0.00	0.00	1.01	2.04	2.66	2.67	3.53	3.55	3.56	3.55	3.55	3.55
Taxes including 911 charges	1.08	1.25	1.36	1.51	1.56	1.58	1.70	1.85	2.00	2.03	2.17	2.21
Total	11.58	13.35	14.54	16.13	16.66	16.57	17.53	17.79	18.66	18.70	18.94	19.00
Lowest generally available rate	5.37	5.62	5.75	5.96	5.81	5.67	5.67	5.68	6.18	6.22	6.43	6.55
Subscriber line charges	0.00	0.00	1.01	2.04	2.66	2.67	3.53	3.55	3.56	3.55	3.55	3.55
Taxes including 911 charges	0.56	0.58	0.70	0.84	0.94	0.91	1.03	1.15	1.28	1.31	1.45	1.48
Total	5.93	6.20	7.46	8.84	9.41	9.25	10.23	10.38	11.02	11.08	11.43	11.58
Basic Connection***	35.01	43.71	44.32	45.63	44.04	42.94	42.71	43.06	42.00	41.52	41.38	41.28
Taxes	1.75	2.19	2.22	2.28	2.20	2.11	2.24	2.32	2.19	2.18	2.21	2.27
Total	36.76	45.90	46.54	47.91	46.24	45.05	44.95	45.38	44.19	43.70	43.59	43.55
Business rates **												
Representative rate	29.16	32.74	33.42	34.26	33.71	31.03	31.06	30.97	32.29	32.45	32.70	32.34
Touch-Tone service	**	**	**	**	**	2.45	2.43	2.35	1.84	1.71	1.67	1.22
Subscriber line charges	0.00	0.00	1.01	2.04	2.68	2.69	3.55	3.57	3.57	3.56	3.57	3.57
Taxes including 911 charges	3.35	3.77	3.96	4.17	4.18	3.95	4.21	4.32	4.42	4.57	4.63	4.61
Total	32.51	36.51	38.39	40.47	40.57	40.12	41.25	41.21	42.12	42.29	42.57	41.74
Average charge for 5 minute same zone daytime business call	0.085	0.090	0.090	0.092	0.092	0.091	0.093	0.093	0.091	0.093	0.094	0.093
Basic Connection***	56.04	68.84	70.82	72.94	72.15	70.48	71.05	71.36	72.75	72.55	71.41	69.92
Touch-Tone service	**	**	**	**	**	2.03	1.70	1.89	1.13	1.19	1.17	0.92
Taxes	3.08	3.79	3.90	4.01	3.97	3.92	4.06	4.15	4.32	4.33	4.25	4.13
Total	59.12	72.63	74.72	76.95	76.12	76.43	76.81	77.40	78.20	78.07	76.83	74.97
5 minute payphone call	0.168	0.212	0.222	0.223	0.226	0.228	0.228	0.228	0.228	0.228	0.235	0.238

* The residential rates shown in this table do not include additional charges for touch-tone service.

** The representative rate is based on the single-line rate for unlimited service where that service is offered, and the measured service rate plus additional charges for the first 200 five-minute messages in other cities. The representative business rate includes the additional monthly cost for touch-tone service for 1983 through 1987. The additional charge is shown separately thereafter.

*** Connection charges do not include drop line and block charges. Residential connection charges do not include additional charges for touch-tone service. Business connection charges for 1983 through 1987 include the additional connection charge for installing touch-tone service. The charge is shown separately thereafter.

Table 7

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			Business		
		January 1984	April 1996	Percentage change	January 1984	April 1996	Percentage change
1 – 10	Day	$0.96	$1.25	30.2 %	$0.96	$1.26	31.3 %
	Evening	0.57	0.70	22.8	0.57	0.80	40.4
	Night & Weekend	0.38	0.60	57.9	0.38	0.80	110.5
11 – 22	Day	1.28	1.30	1.6	1.28	1.26	–1.6
	Evening	0.76	0.75	–1.3	0.76	0.80	5.3
	Night & Weekend	0.51	0.65	27.5	0.51	0.80	56.9
23 – 55	Day	1.60	1.35	–15.6	1.60	1.26	–21.3
	Evening	0.96	0.80	–16.7	0.96	0.80	–16.7
	Night & Weekend	0.64	0.65	1.6	0.64	0.80	25.0
56 – 124	Day	2.05	1.35	–34.1	2.05	1.38	–32.7
	Evening	1.22	0.80	–34.4	1.22	0.86	–29.5
	Night & Weekend	0.82	0.70	–14.6	0.82	0.86	4.9
125 – 292	Day	2.14	1.40	–34.6	2.14	1.38	–35.5
	Evening	1.28	0.80	–37.5	1.28	0.86	–32.8
	Night & Weekend	0.85	0.70	–17.6	0.85	0.86	1.2
293 – 430	Day	2.27	1.40	–38.3	2.27	1.38	–39.2
	Evening	1.36	0.90	–33.8	1.36	0.86	–36.8
	Night & Weekend	0.90	0.70	–22.2	0.90	0.86	–4.4
431 – 925	Day	2.34	1.40	–40.2	2.34	1.38	–41.0
	Evening	1.40	0.90	–35.7	1.40	0.86	–38.6
	Night & Weekend	0.93	0.75	–19.4	0.93	0.86	–7.5
926 – 1910	Day	2.40	1.40	–41.7	2.40	1.48	–38.3
	Evening	1.44	0.90	–37.5	1.44	0.92	–36.1
	Night & Weekend	0.96	0.75	–21.9	0.96	0.92	–4.2
1911 – 3000	Day	2.70	1.50	–44.4	2.70	1.48	–45.2
	Evening	1.62	0.90	–44.4	1.62	0.92	–43.2
	Night & Weekend	1.08	0.80	–25.9	1.08	0.92	–14.8
3001 – 4250	Day	2.80	1.60	–42.9	2.80	1.73	–38.2
	Evening	1.68	1.10	–34.5	1.68	1.21	–28.0
	Night & Weekend	1.12	0.85	–24.1	1.12	1.21	8.0
4251 – 5750	Day	2.91	1.75	–39.9	2.91	1.90	–34.7
	Evening	1.74	1.15	–33.9	1.74	1.26	–27.6
	Night & Weekend	1.16	0.85	–26.7	1.16	1.26	8.6

* AT&T initiated a new rate structure for business customers on July 1, 1993. The rate structure consolidates mileage bands and replaces the evening and night & weekend periods with a single off–peak period. The new rates are shown in the old rate structure for the purposes of comparison.

Table 8

Average Revenue Per Minute
AT&T Communications
Interstate Switched Service

Year	Average Revenue Per Minute
1984	32.3 ¢
1985	30.8
1986	28.0
1987	24.5
1988	23.4
1989	21.8
1990	20.1
1991	19.7
1992	19.4
1993	18.9
1994	18.1

CONSUMER EXPENDITURES:

The Bureau of Labor Statistics conducts surveys of consumer expenditures, in part, to develop weights for CPI indexes. Table 9 shows expenditures for telephone service for all consumer units. Average annual expenditures on telephone service increased from $325 per household in 1980 to $690 in 1994.

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.

The information on average telephone expenditures can be used to estimate the average monthly bills for households with telephone service. This average was about $61 per month for 1994. Monthly bills have increased significantly since 1980, due partly to higher local rates, but primarily due to more long distance calling. Residential toll calling grew by about 10% a year between 1985 and 1989 -- a period when toll rates declined dramatically. The average American household now spends more on long distance service than on basic local service, reflecting the growth in long distance calling since the AT&T divestiture in 1984.

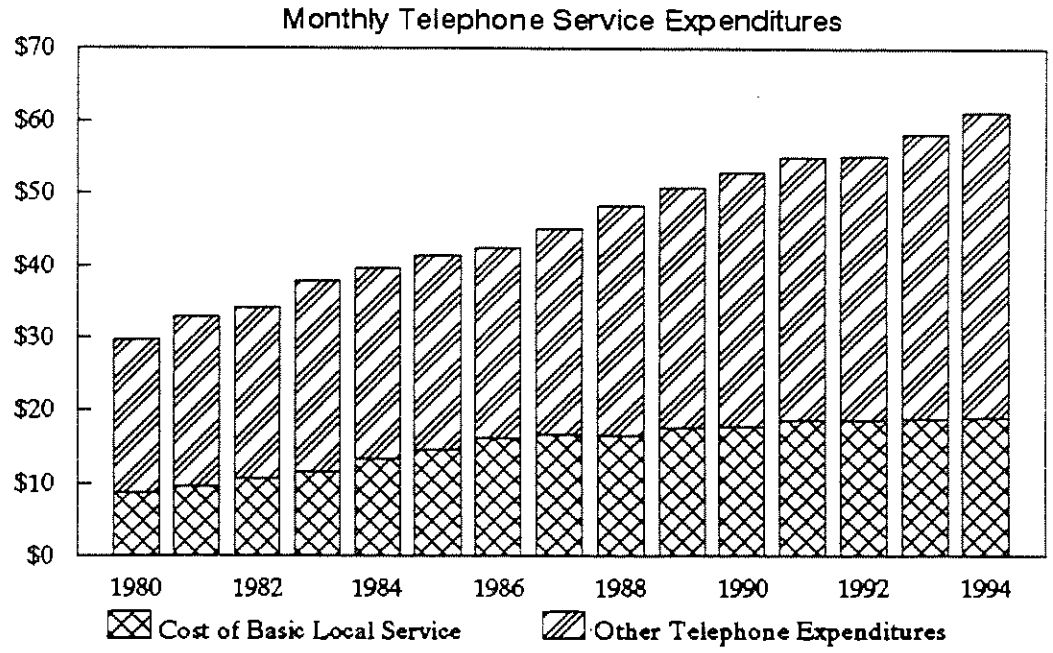
Table 9

Telephone Service Expenditures

Year	Annual Expenditures (Average for All Households)		Monthly Expenditures (Households with Telephone Service)		
	Telephone Expenditures	Percentage of Total Expenditures	Basic Local Service Charge *	Toll and Other Telephone Expenditures **	Total Telephone Expenditures
1980	$325	1.9 %	$8.74	$21	$30
1981	360	2.1	9.71	23	33
1982	375	2.1	10.75	23	34
1983	415	2.1	11.58	26	38
1984	435	2.0	13.35	26	40
1985	455	1.9	14.54	27	41
1986	471	2.0	16.11	26	43
1987	499	2.0	16.66	28	45
1988	537	2.1	16.57	32	48
1989	567	2.0	17.53	33	51
1990	592	2.1	17.79	35	53
1991	618	2.1	18.66	36	55
1992	623	2.1	18.70	37	55
1993	658	2.1	18.94	39	58
1994	690	2.2	19.00	42	61

* Monthly service charges for unlimited local service, taxes, and subscriber line charges.

** Calculated as total monthly bill minus the cost of basic local service. Figures may not add due to rounding. The "Toll and Other" category is primarily toll, but also includes charges for equipment, additional access lines, connection, touch-tone, call waiting, 900 service, directory listings, etc.



STATE TELEPHONE RATE CASES:

The actions of state regulatory commissions once provided important indicators of future changes in telephone rates. Rate cases completed by the state commissions tended to result in immediate rate changes. At the same time, the amount of rate relief requested by local telephone companies, but not yet acted upon by state commissions, provided an indicator of future rate changes.

Because it typically took more than a year for a rate case to be completed, the level of pending cases served as an indicator of the rate changes for local and intrastate toll rates during the next year. In recent years, however, more and more states have moved away from traditional rate of return regulation and adopted alternative regulatory approaches. As a result, changes in telephone rates are no longer as closely linked to rate cases. Consequently, the FCC discontinued its reporting requirement on state rate cases in 1995.

TABLE 10

STATE TELEPHONE RATE CASES
(MILLIONS OF DOLLARS)

	REVENUE INCREASES REQUESTED	REVENUE CHANGES ORDERED	REQUESTED INCREASES PENDING
1985 FIRST QUARTER	$977	$246	$3,779
SECOND QUARTER	172	315	3,316
THIRD QUARTER	108	287	2,664
FOURTH QUARTER	370	307	1,437
1986 FIRST QUARTER	155	58	766
SECOND QUARTER	250	58	362
THIRD QUARTER	230	173	316
FOURTH QUARTER	9	1	323
1987 FIRST QUARTER	7	(33)	67
SECOND QUARTER	19	(112)	48
THIRD QUARTER	62	(94)	94
FOURTH QUARTER	58	(280)	125
1988 FIRST QUARTER	46	(215)	149
SECOND QUARTER	155	(232)	302
THIRD QUARTER	141	(388)	377
FOURTH QUARTER	15	(531)	199
1989 FIRST QUARTER	52	(204)	141
SECOND QUARTER	26	(108)	149
THIRD QUARTER	363	(49)	490
FOURTH QUARTER	6	(478)	420
1990 FIRST QUARTER	898	(135)	904
SECOND QUARTER	58	(110)	955
THIRD QUARTER	129	(317)	1,038
FOURTH QUARTER	24	110	230
1991 FIRST QUARTER	184	3	343
SECOND QUARTER	98	8	330
THIRD QUARTER	45	76	196
FOURTH QUARTER	54	(174)	104
1992 FIRST QUARTER	0	(126)	104
SECOND QUARTER	146	(91)	208
THIRD QUARTER	50	(173)	158
FOURTH QUARTER	10	(41)	160
1993 FIRST QUARTER	40	(56)	127
SECOND QUARTER	61	5	123
THIRD QUARTER	128	(11)	251
FOURTH QUARTER	24	(428)	213
1994 FIRST QUARTER	0	(157)	213
SECOND QUARTER	28	(96)	230
THIRD QUARTER	0	(125)	179
FOURTH QUARTER	0	(399)	179
1995 FIRST QUARTER	366	(16)	406
SECOND QUARTER	0	(76)	366
ANNUAL DATA:			
1985	1,627	1,155	1,437
1986	644	290	323
1987	146	(519)	125
1988	358	(1,366)	199
1989	447	(839)	420
1990	1,109	(451)	230
1991	381	(87)	104
1992	205	(431)	160
1993	252	(490)	213
1994	28	(777)	179

CHANGES IN LOCAL TELEPHONE TECHNOLOGY:

1. Central Office Technology:

During the 1980's, 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, in addition, 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 is shown in Table 11.

The use of digital technology has allowed local telephone companies to equip almost all of their offices for the provision of "equal access" to competing long distance carriers. Newer signaling systems have been developed that permit calls to be set up more quickly and efficiently. In the late 1980's, telephone company offices began to be converted to the newest system, "Signaling System 7." For several years the telephone industry has been working on 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 lines actually equipped with this technology has grown far less rapidly than originally expected. The number of Bell operating company offices and the lines served by offices with these features are shown in Table 12. Of course, not all of the lines served by ISDN compatible offices are actually receiving ISDN service.

2. Transmission Technology:

The Bell operating companies file voluminous data on technology as part of their ARMIS reports (ARMIS is an acronym for the Automated Reporting Management Information System.) Each telephone company has a network of transmission paths or "carrier links" tying together their serving offices. As indicated in Table 13, fiber optic cables have rapidly replaced copper to provide these links. During the first half of the 1990's, the proportion of fiber rose to over 80%.

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 1990's, copper wire still links more than 90% of customers to the network local distribution facilities.

TABLE 11

CENTRAL OFFICES AND ACCESS LINES BY TECHNOLOGY (BELL OPERATING COMPANIES)

YEAR END	TOTAL OFFICES	ELECTRO-MECHANICAL OFFICES		ANALOG STORED PROGRAM CONTROL OFFICES		DIGITAL STORED PROGRAM CONTROL 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	9,957	1,148	11.5	2,167	21.8	6,642	66.7
1992	10,069	615	6.1	1,924	19.1	7,530	74.8
1993	10,083	291	2.9	1,554	15.4	8,238	81.7
1994	10,021	95	0.9	1,133	11.3	8,793	87.7

ACCESS LINES SERVED BY TYPE OF OFFICE (THOUSANDS)

YEAR END	TOTAL OFFICES	ELECTRO-MECHANICAL OFFICES		ANALOG STORED PROGRAM CONTROL OFFICES		DIGITAL STORED PROGRAM CONTROL 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	107,387	1,876	1.7	53,450	49.8	52,061	48.5
1992	109,994	717	0.7	48,952	44.5	60,325	54.8
1993	113,369	264	0.2	41,912	37.0	71,193	62.8
1994	117,313	115	0.1	33,175	28.3	84,023	71.6

SOURCE: 1980-89 REPORTED IN CC DOCKET 89-624.
1990-94 REPORTED IN ARMIS 43-07.
BECAUSE OF THE DIFFERING SOURCES, THE DATA FOR 1989 AND EARLIER YEARS MAY NOT BE ENTIRELY CONSISTENT WITH THE DATA FOR 1990 AND LATER YEARS.

TABLE 12

FEATURES AVAILABLE IN CENTRAL OFFICES (BELL OPERATING COMPANIES)

YEAR END	TOTAL OFFICES	EQUAL ACCESS OFFICES		SIGNALING SYSTEM 7 OFFICES*		ISDN OFFICES	
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	9,957	8,601	86.4	3,670	36.9	920	9.2
1992	10,069	9,292	92.3	5,437	54.0	1,219	12.1
1993	10,083	9,697	96.2	6,688	66.3	1,874	18.6
1994	10,021	9,933	99.1	8,334	83.2	2,391	23.9

EQUIPPED ACCESS LINES BY TYPE OF OFFICE (THOUSANDS)

YEAR END	TOTAL OFFICES	EQUAL ACCESS OFFICES		SIGNALING SYSTEM 7 OFFICES*		ISDN OFFICES**	
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	107,387	105,413	98.2	57,327	53.4	20,567	19.2
1992	109,994	109,006	99.1	77,102	70.1	28,375	25.8
1993	113,369	112,992	99.7	92,492	81.6	39,875	35.2
1994	117,313	117,266	100.0	109,585	93.4	56,849	48.5

SOURCE: 1980–89 REPORTED IN CC DOCKET 89–624.
1990–94 REPORTED IN ARMIS 43–07.
BECAUSE OF THE DIFFERING SOURCES, THE DATA FOR 1989 AND EARLIER YEARS MAY NOT BE ENTIRELY CONSISTENT WITH THE DATA FOR 1990 AND LATER YEARS.

* SIGNALING SYSTEM 7 SWITCH (SS7–317)
** ISDN BASIC ACCESS LINE CAPACITY REPORTED FOR 1990–1994.

TABLE 13

LOCAL TRANSMISSION TECHNOLOGY
(BELL OPERATING COMPANIES)

MAJOR INTEROFFICE TRANSMISSION LINKS

YEAR END	TOTAL	COPPER		FIBER		RADIO	
1990	2,895,117	1,092,041	37.7 %	1,737,984	60.0 %	65,092	2.2 %
1991	3,283,956	1,048,545	31.9	2,154,043	65.6	81,368	2.5
1992	3,570,147	869,052	24.3	2,610,185	73.1	90,910	2.5
1993	4,020,454	803,035	20.0	3,126,737	77.8	90,682	2.3
1994	4,520,274	569,428	12.6	3,843,414	85.0	107,432	2.4

WORKING TELECOMMUNICATIONS CHANNELS

YEAR END	TOTAL	COPPER		FIBER		OTHER	
1990	122,564,474 *	106,373,173	86.8 %	3,545,583	2.9 %	0	0.0 %
1991	118,654,346	114,046,815	96.1	4,605,184	3.9	2,347	0.0
1992	120,847,400	114,609,435	94.8	6,237,727	5.2	238	0.0
1993	122,666,232	114,860,025	93.6	7,804,780	6.4	1,427	0.0
1994	128,784,487	118,863,296	92.3	9,919,751	7.7	1,440	0.0

SOURCE: 1990–94 REPORTED IN ARMIS 43–07.

* INCLUDES SOME OTHER CHANNELS.

EQUAL ACCESS:

The Bell operating companies serve more than 75% of the nation's telephone lines. Under the Modification of Final Judgment that settled the AT&T antitrust case, the Bell operating companies are obligated to offer equal access to all long distance carriers. The Bell companies have converted almost all of their lines to equal access, although there are a few lines at smaller, older offices where equal access is being provided as the offices are converted to more modern equipment. Independent telephone companies, which serve almost 25% of the nation's lines, are converting offices to equal access at a less rapid pace, but have converted about 90% of their lines. Overall, more than 98% of the nation's telephone lines have been converted to equal access.

Table 14 shows the number of telephone lines and the percentage of these lines converted to equal access since divestiture. Bell companies converted almost half of their lines between December 1984 and December 1985, and an additional 40% in the next three years. Including independents, the United States reached 98% equal access conversion by the end of 1994.

Table 15 shows the number of central office wire centers in each state that had been converted to equal access as of October 25, 1995. 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 continues to show some offices not yet converted to equal access even in states where equal access is reported to be available to all customers. Because the non-equal access offices tend to be smaller offices, the percentage of converted lines is significantly greater than the percentage of converted offices.

TABLE 14

DEVELOPMENT OF EQUAL ACCESS

(ACCESS LINES IN THOUSANDS)

	BELL COMPANIES		OTHER COMPANIES		TOTAL	
	LINES	% EQUAL ACCESS	LINES	% EQUAL ACCESS	LINES	% EQUAL ACCESS
1984 JUNE	84,321	0.0	26,278	0.0	110,599	0.0
DECEMBER	85,457	3.8	26,633	1.0	112,090	3.1
1985 JUNE	86,609	26.9	26,992	2.5	113,601	21.1
DECEMBER	87,777	50.9	27,355	3.4	115,132	39.6
1986 JUNE	88,960	61.9	27,724	13.6	116,684	50.4
DECEMBER	90,159	74.3	28,098	28.0	118,257	63.3
1987 JUNE	91,374	77.7	28,477	37.7	119,851	68.2
DECEMBER	92,606	84.7	28,860	47.8	121,467	75.9
1988 JUNE	93,520	87.4	29,145	51.6	122,665	78.9
DECEMBER	94,813	91.3	29,548	56.3	124,361	83.0
1989 JUNE	96,632	93.4	30,115	59.6	126,747	85.4
DECEMBER	98,214	94.1	30,268	60.8	128,482	86.2
1990 JUNE	99,815	95.0	30,962	63.8	130,777	87.6
DECEMBER	100,993	96.8	31,416	70.6	132,409	90.6
1991 JUNE	102,027	97.4	31,870	73.5	133,896	91 7
DECEMBER	103,102	98.4	32,185	77.5	135,287	93.4
1992 JUNE	104,060	98.9	32,643	80.7	136,704	94 5
DECEMBER	105,744	99.3	32,981	84.5	138,725	95 8
1993 JUNE	107,084	99.4	33,531	86.6	140,615	96 3
DECEMBER	108,847	99.6	33,963	89.1	142,809	97 1
1994 JUNE	110,583	99.8	34,646	90.6	145,229	97 6
DECEMBER	113,092	99.9	35,387	92.2	148,479	98 0

TABLE 15

CENTRAL OFFICES CONVERTED TO EQUAL ACCESS AS OF MAY 1, 1996

	Bell Company Central Offices			Other Central Offices			Bell & Other Central Offices	
	Equal Access	Non-Equal Access	% Equal Access	Equal Access	Non-Equal Access	% Equal Access	Total Offices	% Equal Access
Alabama	151	0	100.0%	201	20	91.0%	372	94.6%
Alaska	0	0	N.A.	37	217	14.6	254	14.6
Arizona	153	1	99.4	45	60	42.9	259	76.4
Arkansas	138	8	94.5	201	47	81.0	394	86.0
California	737	0	100.0	383	19	95.3	1139	98.3
Colorado	184	2	98.9	78	40	66.1	304	86.2
Connecticut	2	0	100.0	141	0	100.0	143	100.0
Delaware	35	0	100.0	0	0	N.A.	35	100.0
District of Columbia	35	5	87.5	0	0	N.A.	40	87.5
Florida	211	0	100.0	275	18	93.9	504	96.4
Georgia	255	0	100.0	223	28	88.8	506	94.5
Hawaii	0	0	N.A.	81	21	79.4	102	79.4
Idaho	93	0	100.0	74	29	71.8	196	85.2
Illinois	260	54	82.8	588	160	78.6	1062	79.8
Indiana	170	5	97.1	378	40	90.4	593	92.4
Iowa	171	0	100.0	574	86	87.0	831	89.7
Kansas	176	12	93.6	247	168	59.5	603	70.1
Kentucky	179	0	100.0	196	24	89.1	399	94.0
Louisiana	233	0	100.0	76	28	73.1	337	91.7
Maine	146	1	99.3	98	22	81.7	267	91.4
Maryland	214	21	91.1	1	0	100.0	236	91.1
Massachusetts	283	2	99.3	2	1	66.7	288	99.0
Michigan	330	30	91.7	300	72	80.6	732	86.1
Minnesota	226	0	100.0	457	71	86.6	754	90.6
Mississippi	206	0	100.0	27	32	45.8	265	87.9
Missouri	274	11	96.1	234	276	45.9	795	63.9
Montana	81	0	100.0	105	97	52.0	283	65.7
Nebraska	107	0	100.0	276	94	74.6	477	80.3
Nevada	21	29	42.0	52	21	71.2	123	59.3
New Hampshire	126	1	99.2	26	5	83.9	158	96.2
New Jersey	264	1	99.6	23	5	82.1	293	98.0
New Mexico	75	0	100.0	56	62	47.5	193	67.9
New York	613	1	99.8	299	20	93.7	933	97.7
North Carolina	145	0	100.0	348	26	93.0	519	95.0
North Dakota	115	0	100.0	70	116	37.6	301	61.5
Ohio	236	18	92.9	482	132	78.5	868	82.7
Oklahoma	208	10	95.4	242	71	77.3	531	84.7
Oregon	89	0	100.0	200	25	88.9	314	92.0
Pennsylvania	412	0	100.0	375	77	83.0	864	91.1
Puerto Rico	0	0	N.A.	89	0	100.0	89	100.0
Rhode Island	31	0	100.0	0	0	N.A.	31	100.0
South Carolina	120	0	100.0	155	3	98.1	278	98.9
South Dakota	113	0	100.0	134	20	87.0	267	92.5
Tennessee	204	0	100.0	129	52	71.3	385	86.5
Texas	640	29	95.7	806	78	91.2	1553	93.1
Utah	85	2	97.7	40	41	49.4	168	74.4
Vermont	93	2	97.9	34	10	77.3	139	91.4
Virgin Islands	0	0	N.A.	0	6	0.0	6	0.0
Virginia	237	10	96.0	244	11	95.7	502	95.8
Washington	135	0	100.0	243	28	89.7	406	93.1
West Virginia	158	2	98.8	77	12	86.5	249	94.4
Wisconsin	143	1	99.3	484	26	94.9	654	95.9
Wyoming	30	0	100.0	16	43	27.1	89	51.7
Total United States	9,343	258	97.3%	9,922	2,560	79.5%	22,083	87.2%

* The Information in this table is based on the NECA FCC Tariff No. 4 database. 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.

TELEPHONE 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 easily reconcile data from different statistical series, they are not usually large enough to affect comparisons among companies or trends over time.

Table 16 shows the nation's total number of telephone lines using two alternative measures. "Local loops" is a way of counting lines that is used to determine the amount of Universal Service Fund payments to local exchange carriers. Presubscribed lines are used to determine the amount of payments by the interexchange carriers to support the Universal Service Fund and the Lifeline and Link-Up programs. With virtually all businesses having telephone lines and more than 90% of the nation's households having telephone service, the growth in the number of lines tends to reflect growth in the population and the economy, averaging about 3% per year.

Table 17 shows the number of local exchange carriers and access lines in each state, and shows breakdowns for equal access and non-equal access lines.

Table 18 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 18 shows that the percentage of additional lines for households with telephone service has increased dramatically, from about 3% in 1988 to about 12% in 1994.

Table 16

Total U.S. Telephone Lines

YEAR	Presubscribed Lines	Annual Growth (%)	Local Loops	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
1985			115,985,813	3.1
1986			118,289,121	2.0
1987	121,466,500		122,789,249	3.8
1988	124,360,829	2.4	127,086,765	3.5
1989	128,482,479	3.3	131,504,568	3.5
1990	132,408,608	3.1	136,114,201	3.5
1991	135,286,582	2.2	139,412,884	2.4
1992	138,725,040	2.5	143,424,300	2.9
1993	142,809,280	2.9	148,192,303	3.3
1994	148,479,328	4.0	153,657,189	3.7

TABLE 17

TELEPHONE LINES BY STATE AS OF JUNE 30, 1995

STATE NAME	NUMBER OF TELEPHONE COMPANIES	BELL COMPANY LINES			OTHER COMPANY LINES			TOTAL LINES	% EQUAL ACCESS
		EQUAL ACCESS	NON-EQUAL ACCESS	% EQUAL ACCESS	EQUAL ACCESS	NON-EQUAL ACCESS	% EQUAL ACCESS		
ALABAMA	30	1,720,405	0	100.00	368,883	44,450	89.25	2,133,738	97.92
ALASKA	25	0	0	N.A.	291,849	43,487	87.03	335,336	87.03
ARIZONA	14	2,055,217	833	99.96	122,831	19,601	86.24	2,198,482	99.07
ARKANSAS	29	847,121	0	100.00	330,994	50,763	86.70	1,228,878	95.87
CALIFORNIA	22	14,884,871	0	100.00	3,785,313	20,277	99.47	18,690,461	99.89
COLORADO	27	2,100,482	193	99.99	66,515	28,437	70.05	2,195,627	98.70
CONNECTICUT	2	0	0	N.A.	1,924,783	0	100.00	1,924,783	100.00
DELAWARE	1	448,707	0	100.00	0	0	N.A.	448,707	100.00
DISTRICT OF COLUMBIA	1	775,955	0	100.00	0	0	N.A.	775,955	100.00
FLORIDA	13	5,218,514	0	100.00	3,593,221	28,224	99.22	8,839,959	99.68
GEORGIA	36	3,344,006	0	100.00	541,996	100,627	84.34	3,986,629	97.48
HAWAII	1	0	0	N.A.	555,733	42,833	92.84	598,566	92.84
IDAHO	20	430,497	0	100.00	132,845	12,179	91.60	575,521	97.88
ILLINOIS	56	5,792,233	0	100.00	1,062,650	109,443	90.66	6,964,326	98.43
INDIANA	42	1,882,439	0	100.00	1,073,676	51,866	95.39	3,007,981	98.28
IOWA	153	962,350	0	100.00	445,616	47,623	90.34	1,455,589	96.73
KANSAS	39	1,169,272	0	100.00	152,386	80,438	65.45	1,402,096	94.26
KENTUCKY	19	1,066,419	0	100.00	729,496	17,442	97.66	1,813,357	99.04
LOUISIANA	20	2,015,599	0	100.00	126,164	28,980	81.32	2,170,743	98.66
MAINE	19	613,385	0	100.00	106,436	9,264	91.99	729,085	98.73
MARYLAND	2	2,992,592	0	100.00	5,478	0	100.00	2,998,070	100.00
MASSACHUSETTS	3	3,932,628	0	100.00	982	2,583	27.55	3,936,193	99.93
MICHIGAN	38	4,671,699	0	100.00	738,769	94,999	88.61	5,505,467	98.27
MINNESOTA	90	1,937,092	0	100.00	573,837	65,200	89.80	2,576,129	97.47
MISSISSIPPI	19	1,116,026	0	100.00	44,174	29,895	59.64	1,190,095	97.49
MISSOURI	44	2,201,970	0	100.00	562,367	158,719	77.99	2,923,056	94.57
MONTANA	18	317,795	0	100.00	90,587	50,983	63.99	459,365	88.90
NEBRASKA	42	487,894	0	100.00	367,862	43,163	89.50	898,919	95.20
NEVADA	13	254,574	17,415	93.60	666,781	5,907	99.12	944,677	97.53
NEW HAMPSHIRE	12	665,332	0	100.00	40,127	2,783	93.51	708,242	99.61
NEW JERSEY	3	5,275,308	0	100.00	168,334	7,380	95.80	5,451,022	99.86
NEW MEXICO	14	668,141	0	100.00	91,630	16,875	84.45	776,646	97.83
NEW YORK	44	10,000,414	0	100.00	1,127,817	7,622	99.33	11,135,853	99.93
NORTH CAROLINA	26	1,934,999	0	100.00	1,927,501	20,724	98.94	3,883,224	99.47
NORTH DAKOTA	24	245,444	0	100.00	60,293	42,141	58.86	347,878	87.89
OHIO	42	3,560,125	0	100.00	2,226,883	154,327	93.52	5,941,335	97.40
OKLAHOMA	39	1,420,484	89,531	94.07	235,124	60,686	79.48	1,805,825	91.68
OREGON	33	1,170,790	0	100.00	513,411	18,403	96.54	1,702,604	98.92
PENNSYLVANIA	37	5,356,761	0	100.00	1,502,969	57,344	96.32	6,917,074	99.17
RHODE ISLAND	1	573,103	0	100.00	0	0	N.A.	573,103	100.00
SOUTH CAROLINA	28	1,245,099	0	100.00	606,649	5,654	99.08	1,857,402	99.70
SOUTH DAKOTA	31	288,158	0	100.00	75,074	7,367	91.06	370,599	98.01
TENNESSEE	25	2,321,646	0	100.00	478,103	81,750	85.40	2,881,499	97.16
TEXAS	56	7,744,663	1,206	99.98	1,958,044	175,331	91.78	9,879,244	98.21
UTAH	13	856,607	1,418	99.83	31,521	9,237	77.34	898,783	98.81
VERMONT	9	290,503	0	100.00	47,163	8,930	84.08	346,596	97.42
VIRGINIA	21	2,797,952	0	100.00	857,474	17,413	98.01	3,672,839	99.53
WASHINGTON	22	2,138,160	0	100.00	882,909	39,580	95.71	3,060,649	98.71
WEST VIRGINIA	10	706,948	0	100.00	133,812	7,695	94.56	848,455	99.09
WISCONSIN	93	1,998,391	0	100.00	929,633	36,019	96.27	2,964,043	98.78
WYOMING	10	212,660	5,032	97.69	17,457	26,296	39.90	261,445	88.02
UNITED STATES	1,431 *	114,711,430	115,628	99.90	32,374,152	1,990,940	94.21	149,192,150	98.59
MICRONESIA	1	0	0	N.A.	14,224	0	100.00	14,224	100.00
PUERTO RICO	2	0	0	N.A.	1,082,191	112	99.99	1,082,303	99.99
VIRGIN ISLANDS	1	0	0	N.A.	56,375	0	100.00	56,375	100.00
GRAND TOTAL	1,435 *	114,711,430	115,628	99.90	33,526,942	1,991,052	94.39	150,345,052	98.60

* This figure overstates the actual number of operating companies because many operating companies serve more than one state. There are about 1,300 separate operating companies.

TABLE 18

Percentage of 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	9.2
1993	101.9	45.2	147.1	93.0	8.8	9.5
1994	105.2	47.2	152.4	93.7	11.5	12.3

1/ Total loops are from the Universal Service Fund subscriber line loop counts provided by the National Exchange Carrier Association. Micronesia, 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 *Statistics of Communications Common Carriers*. Those totals also exclude Puerto Rico and the U.S. Virgin Islands, but cover only the carriers that file ARMIS reports.

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

TELEPHONE NUMBERS:

In 1994, many area codes were stretched to their limit as demand for telephone numbers continued to rise. Adding new area codes became 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 numbers was dwindling. On January 1, 1995, the restriction on the middle digit was removed, and 640 new area codes were made available. During 1995, 15 new area codes were assigned -- the largest single-year expansion of area codes in decades. Many more new area codes are expected in 1996. The changes in area codes are shown in Table 19.

On May 1, 1993, procedures for routing 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 800 market. The few remaining unassigned 800 numbers are expected to run out this year. The growth of 800 telephone numbers is shown in Table 20. In March 1996, a second toll free calling code -- 888 -- was placed in service.

TABLE 19

NEW AREA CODES -- 1995 AND 1996

LOCATION	DATE	CURRENT CODE	ADDED CODE
ALABAMA	1/95	205	334
WASHINGTON	1/95	206	360
TEXAS	3/95	713	281
ARIZONA	3/95	602	520
COLORADO	4/95	303	970
FLORIDA	5/95	813	941
VIRGINIA	7/95	703	540
GEORGIA	8/95	404	770
CONNECTICUT	8/95	203	860
FLORIDA	9/95	305	954
TENNESSEE	9/95	615	423
BERMUDA	10/95	809	441
OREGON	11/95	503	514
SOUTH CAROLINA	12/95	803	864
FLORIDA	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
FLORIDA	5/96	407	561
BARBADOS	7/96	809	246
ILLINOIS (CHICAGO)	8/96	708	630
BAHAMAS	10/96	809	242
ILLINOIS (CHICAGO)	10/96	312	773
BRITISH COLUMBIA	10/96	604	250

TABLE 20
TELEPHONE NUMBERS ASSIGNED FOR 800 SERVICE*
(REPORTED AT THE END OF THE MONTH SHOWN)

YEAR	MONTH	WORKING 800 NUMBERS	MISC* 800 NUMBERS	800 NUMBERS IN USE	SPARE 800 NUMBERS
1993	APRIL	2,448,985	642,725	3,091,710	4,538,290
	MAY	2,511,933	708,192	3,220,125	4,409,875
	JUNE	2,589,123	722,006	3,311,129	4,318,871
	JULY	2,675,483	705,416	3,380,899	4,249,101
	AUGUST	2,738,259	701,009	3,439,268	4,190,732
	SEPTEMBER	2,818,262	639,547	3,457,809	4,172,191
	OCTOBER	2,891,994	660,544	3,552,538	4,077,462
	NOVEMBER	3,083,250	728,514	3,811,764	3,818,236
	DECEMBER	3,155,955	731,438	3,887,393	3,742,607
1994	JANUARY	3,257,540	580,216	3,837,756	3,792,244
	FEBRUARY	3,381,646	731,005	4,112,651	3,517,349
	MARCH	3,516,620	743,813	4,260,433	3,369,567
	APRIL	3,659,129	699,212	4,358,341	3,271,659
	MAY	3,793,865	738,767	4,532,632	3,097,368
	JUNE	3,933,037	792,698	4,725,735	2,904,265
	JULY	4,099,174	699,803	4,798,977	2,831,023
	AUGUST	4,312,486	807,881	5,120,367	2,509,633
	SEPTEMBER	4,506,014	841,381	5,347,395	2,282,605
	OCTOBER	4,611,014	871,684	5,482,698	2,147,302
	NOVEMBER	4,817,854	875,416	5,693,270	1,936,730
	DECEMBER	4,948,605	763,235	5,711,840	1,918,160
1995	JANUARY	5,096,646	807,294	5,903,940	1,726,060
	FEBRUARY	5,278,800	811,221	6,090,021	1,539,979
	MARCH	5,528,723	793,771	6,322,494	1,307,506
	APRIL	5,741,780	797,902	6,539,682	1,090,318
	MAY	5,980,848	843,093	6,823,941	806,059
	JUNE	6,340,534	481,633	6,822,167	807,833
	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

* MISCELLANEOUS NUMBERS INCLUDE THOSE CATEGORIZED AS RESERVED, ASSIGNED BUT NOT YET ACTIVATED, RECENTLY DISCONNECTED, OR SUSPENDED.

MINUTES OF CALLING:

1. Dial Equipment Minutes:

As in the case of telephone lines, there are many 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.

Dial equipment minutes are shown in Table 21. Dial equipment minutes are measured as calls enter and leave telephone switches. Therefore, two DEM minutes are counted for every conversation minute. The volume of local calls has grown 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 11% in 1994. During that same period, interstate calling minutes increased from 8% of the total to 15%.

As shown in Table 22, the average telephone line is used primarily for local calling and is used somewhat less than an hour per day. The level of local calling has remained relatively constant for a long period of time despite the introduction of facsimile machines, computer modems and other devices that affect usage. Increases in long distance calling have caused the total usage per line to increase from 46 minutes in 1980 to 52 minutes in 1994.

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-like calls. It excludes calls made on private telecommunications systems, on leased lines, and minutes on the "closed end" of WATS-like calls. On ordinary long distance calls, minutes are counted both where the call originates and where the call terminates.

Table 23 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, price reductions, and extensive advertising. 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, for reasons that are far from clear, reported changes in access minutes are not entirely consistent with reported changes in dial equipment minutes.

TABLE 21

DIAL EQUIPMENT MINUTES
(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	1,854	300	355	2,510
1991	1,868	304	368	2,540
1992	1,950	318	387	2,654
1993	2,052	323	402	2,777
1994	2,142	331	424	2,898
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	5	3	2
1991	1	1	4	1
1992	4	5	5	4
1993	5	2	4	5
1994	4	2	5	4
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	73	12	15	100
1993	74	12	14	100
1994	74	11	15	100

TABLE 22

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	51
1991	37	6	7	50
1992	37	6	7	51
1993	38	6	7	51
1994	38	6	8	52
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	−0	−1
1991	−2	−1	1	−1
1992	1	1	2	1
1993	2	−1	1	2
1994	1	−1	2	1

TABLE 23

INTERSTATE SWITCHED ACCESS MINUTES
(FIGURES SHOWN IN BILLIONS)

	PREMIUM MINUTES	NON–PREMIUM MINUTES	TOTAL MINUTES
1984 THIRD QUARTER	32.0	5.5	37.5
FOURTH QUARTER	33.6	6.0	39.6
1985 FIRST QUARTER	32.9	6.6	39.6
SECOND QUARTER	34.9	6.6	41.5
THIRD QUARTER	36.6	6.2	42.8
FOURTH QUARTER	38.0	5.3	43.3
1986 FIRST QUARTER	38.8	4.3	43.0
SECOND QUARTER	41.0	3.8	44.8
THIRD QUARTER	43.2	3.5	46.7
FOURTH QUARTER	45.5	3.0	48.5
1987 FIRST QUARTER	48.0	3.2	51.2
SECOND QUARTER	49.3	3.1	52.5
THIRD QUARTER	52.1	2.9	55.0
FOURTH QUARTER	54.4	2.6	57.0
1988 FIRST QUARTER	56.6	2.4	59.0
SECOND QUARTER	57.3	2.3	59.6
THIRD QUARTER	59.8	2.3	62.1
FOURTH QUARTER	61.8	2.2	64.0
1989 FIRST QUARTER	64.1	2.1	66.2
SECOND QUARTER	66.5	2.0	68.5
THIRD QUARTER	67.7	2.0	69.7
FOURTH QUARTER	70.7	1.9	72.6
1990 FIRST QUARTER	72.9	1.9	74.7
SECOND QUARTER	74.0	1.8	75.8
THIRD QUARTER	76.1	1.8	77.9
FOURTH QUARTER	77.4	1.6	79.1
1991 FIRST QUARTER	77.7	1.5	79.2
SECOND QUARTER	80.4	1.5	81.9
THIRD QUARTER	81.2	1.4	82.6
FOURTH QUARTER	83.0	1.4	84.4
1992 FIRST QUARTER	84.5	1.2	85.6
SECOND QUARTER	85.4	1.1	86.5
THIRD QUARTER	86.8	1.0	87.9
FOURTH QUARTER	88.8	1.0	89.8
1993 FIRST QUARTER	89.8	0.9	90.6
SECOND QUARTER	90.4	0.8	91.2
THIRD QUARTER	92.9	0.7	93.6
FOURTH QUARTER	95.2	0.6	95.9
1994 FIRST QUARTER	98.1	0.6	98.7
SECOND QUARTER	97.4	0.5	97.9
THIRD QUARTER	101.4	0.5	102.0
FOURTH QUARTER	102.2	0.5	102.7
1995 FIRST QUARTER	105.5	0.5	105.9
SECOND QUARTER	106.5	0.4	107.0
THIRD QUARTER	108.6	0.4	109.0
FOURTH QUARTER	110.1	0.4	110.5

LONG DISTANCE CARRIERS:

Carrier Identification Codes 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.

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 24.

Table 25 shows several alternative sources of information on the development of long distance carriers.

Table 26 shows the number of long distance carriers that purchase equal access from the larger local telephone companies in each state. Equal access is the premium access used by major carriers to provide "1-plus" dialing. Within any state, a carrier purchasing access may concentrate its efforts in serving only a few exchanges or a small portion of the state. Thus, the number of carriers available to a particular customer will tend to be smaller than the number of long distance carriers that purchase access somewhere in the state. No data is available for Alaska, which is not served by any of the reporting local companies.

Most small long distance carriers purchase access in only one state, providing nationwide service from the area in which they operate by reselling services purchased from other carriers. Table 27 shows the evolution of larger carriers that purchase equal access.

TABLE 24
NUMBER OF CARRIER IDENTIFICATION CODES (CICS) ASSIGNED BY BELL COMMUNICATIONS RESEARCH

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 *	
	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	381	
	FOURTH QUARTER	413	
1987	FIRST QUARTER	444	
	SECOND QUARTER	485	
	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**	709
	SECOND QUARTER	736	748
	THIRD QUARTER	739	760
	FOURTH QUARTER	753	788
1994	FIRST QUARTER	781	815
	SECOND QUARTER	795	845
	THIRD QUARTER	805	899***
	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

* CONVERSION FROM 2-DIGIT CODES TO 3-DIGIT CODES.
** CONVERSION FROM 3-DIGIT CODES TO 4-DIGIT CODES.
*** INCLUDES BOTH 3-DIGIT CODES AND 4-DIGIT CODES.

TABLE 25

ALTERNATE SOURCES OF LONG DISTANCE CARRIER DATA

YEAR	MONTH	CARRIERS WITH PRESUBSCRIBED LINES	CARRIERS PURCHASING EQUAL ACCESS 1/	FIRMS WITH CARRIER IDENTIFICATION CODES	FIRMS PURCHASING ACCESS
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	*	*
1994	MARCH	*	433	*	*
	JUNE	454	444	*	*
	SEPTEMBER	*	458	*	*
	DECEMBER	511	465	*	*
1995	MARCH	*	*	*	*
	JUNE	549	*	*	*

* 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.

TABLE 26

LONG DISTANCE CARRIERS PURCHASING EQUAL ACCESS BY STATE
DECEMBER 31, 1994

STATE	NUMBER OF CARRIERS
ALABAMA	23
ALASKA	*
ARIZONA	41
ARKANSAS	28
CALIFORNIA	63
COLORADO	44
CONNECTICUT	49
DELAWARE	6
DIST OF COLUMBIA	50
FLORIDA	59
GEORGIA	44
HAWAII	10
IDAHO	25
ILLINOIS	80
INDIANA	44
IOWA	26
KANSAS	24
KENTUCKY	29
LOUISIANA	30
MAINE	23
MARYLAND	50
MASSACHUSETTS	41
MICHIGAN	64
MINNESOTA	37
MISSISSIPPI	16
MISSOURI	48
MONTANA	13
NEBRASKA	20
NEVADA	26
NEW HAMPSHIRE	27
NEW JERSEY	71
NEW MEXICO	34
NEW YORK	75
NORTH CAROLINA	22
NORTH DAKOTA	19
OHIO	62
OKLAHOMA	60
OREGON	38
PENNSYLVANIA	77
RHODE ISLAND	38
SOUTH CAROLINA	27
SOUTH DAKOTA	23
TENNESSEE	32
TEXAS	139
UTAH	27
VERMONT	26
VIRGINIA	43
WASHINGTON	41
WEST VIRGINIA	30
WISCONSIN	50
WYOMING	15
UNDUPLICATED TOTAL	465

* DATA NOT AVAILABLE

TABLE 27

NUMBER OF LONG DISTANCE CARRIERS PURCHASING EQUAL ACCESS
IN FOUR OR MORE STATES

YEAR	MONTH	CARRIERS SERVING 45 OR MORE STATES	CARRIERS SERVING 25 TO 44 STATES	CARRIERS SERVING 12 TO 24 STATES	CARRIERS SERVING 4 TO 11 STATES	TOTAL CARRIERS SERVING 4 OR MORE STATES
1986	MARCH	2	6	1	14	23
	JUNE	2	6	1	14	23
	SEPTEMBER	3	5	1	15	24
	DECEMBER	3	5	1	14	23
1987	MARCH	3	5	1	18	27
	JUNE	3	4	2	20	29
	SEPTEMBER	3	4	2	19	28
	DECEMBER	3	3	4	16	26
1988	MARCH	3	5	4	12	24
	JUNE	4	4	4	18	30
	SEPTEMBER	4	5	3	17	29
	DECEMBER	4	5	3	21	33
1989	MARCH	4	6	3	24	37
	JUNE	5	6	4	28	43
	SEPTEMBER	5	7	7	30	49
	DECEMBER	7	5	9	34	55
1990	MARCH	7	5	8	37	57
	JUNE	7	6	9	36	58
	SEPTEMBER	6	5	9	38	58
	DECEMBER	6	3	12	37	58
1991	MARCH	6	2	14	38	60
	JUNE	5	3	15	39	62
	SEPTEMBER	5	3	16	41	65
	DECEMBER	6	3	15	44	68
1992	MARCH	6	3	16	52	77
	JUNE	5	6	17	50	78
	SEPTEMBER	6	8	15	52	81
	DECEMBER	9	6	11	55	81
1993	MARCH	*	*	*	*	*
	JUNE	9	6	11	66	92
	SEPTEMBER	8	7	15	66	96
	DECEMBER	7	7	16	68	98
1994	MARCH	7	7	18	73	105
	JUNE	9	5	19	85	118
	SEPTEMBER	9	6	22	89	126
	DECEMBER	7	7	26	87	127

*DATA NOT AVAILABLE.

LONG DISTANCE MARKET SHARES:

1. Minutes of Interstate Calling

Measures of switched access minutes first became available in 1984 and are shown in Table 23. Such information is publicly available for the total industry and for AT&T but not for other carriers. Thus, access minutes can be used to compute a market share for AT&T but not for smaller carriers.

Since 1984, AT&T's traffic has grown at a rate slower than the industry average. The result has been a declining market share for AT&T. AT&T's market share is shown in Table 28. AT&T's share of the interstate market, measured in minutes, declined from over 80% in late 1984 to about 56% at the end of 1995. At the same time, its share of the equal access market, which was 100% prior to the implementation of equal access, has also declined to 56%.

2. "Presubscribed" Lines

Telephone lines are said to be "presubscribed" to the long distance carrier that receives the ordinary long distance calls placed on the line. Where equal access is available, each customer is asked to choose a long distance carrier. Thereafter, all of the customer's long distance calls will be routed to the chosen long distance carrier unless the customer alters normal dialing procedure -- for example, accessing an alternate long distance carrier by dialing special codes. Where equal access is not yet available, the use of long distance carriers other than AT&T usually requires alternative dialing procedures.

The National Exchange Carrier Association (NECA) provides information on the number of lines presubscribed to each long distance carrier. NECA collects the information from each local telephone company in order to comply with FCC rules that require NECA to recover certain expenses from the larger long distance carriers. This information is shown in Table 29.

NECA reports that, in December 1994, there were 148 million presubscribed lines in the United States. Special access lines, WATS lines, and other specialized lines are not included in the counts of presubscribed lines. The number of lines presubscribed to AT&T has remained roughly constant while the number of lines presubscribed to other carriers has grown. At the end of 1994, about 70% of these lines were presubscribed to AT&T, 15% to MCI, 6% to Sprint, and 1% to LDDS. About five hundred smaller carriers, serving 11 million lines, account for the remaining 8% of the industry.

3. Toll Revenues

Long distance telephone companies with over $100 million in annual revenues report their annual revenues to the FCC. The reported revenues are shown in Table 30, and include both interstate and intrastate revenues. In 1994, services provided by long distance carriers generated about $67.4 billion in revenues. During the past few years, revenues have grown at a far slower pace than the volume of long distance calling because of sharp price cuts. In 1984, AT&T's toll revenues of $35 billion accounted for 90% of the revenues received by all long distance carriers. By 1994, with its revenues virtually unchanged, its share of total revenues had fallen to 55%.

Chart 1 compares alternative measures of AT&T's market share using minutes, lines and revenues. In that chart, a second measure of revenues has been added. The alternative measure is based on financial reports to stockholders. Revenues reported to the FCC usually differ from revenues reported to stockholders. The largest differences tend to relate to the treatment of access charges and international settlements--accounting for the difference between the annual revenue share points labeled "FCC" and the revenue share line labeled "SEC" in Chart 1.

TABLE 28

AT&T'S SHARE OF INTERSTATE MINUTES

	PREMIUM MINUTES	ALL MINUTES
1984 THIRD QUARTER	98.7 %	84.2 %
FOURTH QUARTER	94.6	80.2
1985 FIRST QUARTER	99.8	83.0
SECOND QUARTER	95.5	80.3
THIRD QUARTER	92.2	78.9
FOURTH QUARTER	87.9	77.1
1986 FIRST QUARTER	88.2	79.5
SECOND QUARTER	84.7	77.5
THIRD QUARTER	82.8	76.6
FOURTH QUARTER	78.9	74.0
1987 FIRST QUARTER	77.8	72.9
SECOND QUARTER	78.3	73.7
THIRD QUARTER	75.2	71.2
FOURTH QUARTER	73.7	70.4
1988 FIRST QUARTER	72.8	69.8
SECOND QUARTER	71.8	69.0
THIRD QUARTER	70.8	68.2
FOURTH QUARTER	69.6	67.2
1989 FIRST QUARTER	68.9	66.8
SECOND QUARTER	66.8	64.8
THIRD QUARTER	66.3	64.4
FOURTH QUARTER	65.6	63.9
1990 FIRST QUARTER	64.6	63.0
SECOND QUARTER	63.6	62.1
THIRD QUARTER	64.0	62.5
FOURTH QUARTER	64.3	63.0
1991 FIRST QUARTER	64.3	63.0
SECOND QUARTER	62.8	61.7
THIRD QUARTER	63.0	61.9
FOURTH QUARTER	63.2	62.1
1992 FIRST QUARTER	63.1	62.2
SECOND QUARTER	60.8	60.0
THIRD QUARTER	61.0	60.3
FOURTH QUARTER	60.3	59.7
1993 FIRST QUARTER	61.8	61.3
SECOND QUARTER	60.8	60.3
THIRD QUARTER	60.6	60.2
FOURTH QUARTER	59.7	59.3
1994 FIRST QUARTER	60.1	59.8
SECOND QUARTER	59.3	58.9
THIRD QUARTER	57.8	57.5
FOURTH QUARTER	58.5	58.3
1995 FIRST QUARTER	57.8	57.6
SECOND QUARTER	56.7	56.5
THIRD QUARTER	56.0	55.8
FOURTH QUARTER	56.2	56.0

TABLE 29
PRESUBSCRIBED TELEPHONE LINES BY CARRIER

	DEC 87	DEC 88	DEC 89	DEC 90	DEC 91	DEC 92	DEC 93	DEC 94
TOTAL NUMBER OF CARRIERS WITH PRESUBSCRIBED LINES	223	253	302	325	388	414	436	511
QUALIFYING COMPANIES 1/								
AT&T	101,652,678	100,205,677	99,396,609	100,061,611	101,498,260	101,203,888	101,711,178	103,957,425
MCI	9,990,561	12,149,921	15,055,643	17,434,898	18,329,870	20,167,298	21,818,212	22,040,062
SOUTHERNET	183,769	215,384						
TELECOM*USA			646,084					
TELECONNECT	156,614	247,042						
SPRINT	5,836,179	7,197,136	8,167,638	8,743,988	8,353,583	8,856,004	9,212,993	9,467,999
LA CONEXION FAMILIAR, INC.						71,327		
LONG DISTANCE/USA	85,680							
LDDS 2/			66,576	116,864	332,244	482,043	1,752,616	1,954,198
ADVANCED TELECOM CORP. (ATC)			396,319	355,518	333,152	440,961		
AMERICAN NETWORK	95,926							
CLAYDESTA DIGITAL	71,794	96,914						
COM SYSTEMS DBA SUN DIAL		62,773	89,081	118,963	116,326	126,190		
ITT	279,549	420,793	412,197					
METROMEDIA	215,485	215,181	207,599	515,711	476,128	494,864		
MICROTEL		70,273						
MID-AMERICAN	96,384	97,526						
NTS (NATIONAL TELEPHONE SYS.)			77,667					
TELUS/TELTEC SAVING	105,243	125,339						
ALLNET	726,974	763,680	677,531	744,452	813,748	859,499	891,577	1,334,360
WILTEL 2/					87,758	191,076	432,844	960,004
LCI INTERNATIONAL 3/		92,014	123,748	144,926	186,884	338,496	405,644	638,464
UNITED TELEPHONE	82,602	285,385	513,033	548,303	596,114	639,341	648,131	572,010
CABLE & WIRELESS	236,000	304,976	394,020	422,534	466,935	513,419	529,398	524,153
TELEFONICA LARGA DISTANCIA				375,694	419,293	432,701	442,922	441,467
TOUCH-1 LONG DISTANCE						110,929	98,044	320,571
FRONTIER COMMUNICATIONS 4/		83,383	113,329	171,198	190,382	252,495	279,304	283,372
ALASCOM	152,040	161,572	168,095	182,341	203,105	209,850	216,964	226,974
COMMUNIQUE TELECOM					106,892	148,865	189,781	188,295
ONCOR COMMUNICATIONS, INC.						87,593	144,511	161,085
INTERNATIONAL TELECHARGE			95,252	83,725	72,813			
COMMUNICATIONS TELESYSTEMS INT'L (CTI)								156,055
COMMONWEALTH LONG DISTANCE						103,684	113,072	147,045
LONG DISTANCE SAVERS					77,568	87,687	112,905	141,697
WEST COAST TELECOM							96,539	137,489
AMERICAN SHARECOM								132,946
VARTEC TELECOM INC.							117,692	122,991
BUSINESS TELECOM							79,396	121,822
U.S. LONG DISTANCE, INC.								116,602
SONIC COMMUNICATIONS								114,041
U.S. SIGNAL CORP (TELEDIAL AMERICA) 5/								114,026
ATX TELECOMMUNICATIONS						77,096	109,071	104,971
SOUTHERN NEW ENGLAND TEL (SNET)						82,303	104,971	107,979
TEL-AMERICA								105,855
GENERAL COMMUNICATIONS	94,292	90,570	100,213	101,968	85,801	92,860	94,114	105,053
CINCINNATI BELL	89,338	83,468	86,089	88,360	93,233	97,798	99,911	102,528
INTER CONTINENTAL TELEPHONE				67,689	79,182	90,841	93,659	102,163
LINTEL (LINCOLN)								99,033
SCHNEIDER COMMUNICATIONS	93,352	94,031	96,966	99,594	94,183	93,427	90,146	85,496
EXCEL TELECOMMUNCIATIONS, INC.						71,059	77,699	84,141
ACC LONG DISTANCE								75,543
TELESPHERE NETWORK								74,482
PUERTO RICO TEL-COM				111,386				
				99,821				
TOTAL QUALIFYING CARRIERS	120,244,460	123,063,038	126,883,689	130,589,544	133,013,454	136,423,594	139,963,294	145,317,426
NON-QUALIFYING CARRIERS	1,222,040	1,297,791	1,598,790	1,819,064	2,273,128	2,301,446	2,845,986	3,161,902
TOTAL INDUSTRY PRESUBSCRIBED LINES	121,466,500	124,360,829	128,482,479	132,408,608	135,286,582	138,725,040	142,809,280	148,479,328
PRESUBSCRIBED LINES MARKET SHARE								
AT&T	83.7%	80.6%	77.4%	75.6%	75.0%	73.0%	71.2%	70.0%
MCI	8.2%	9.8%	11.7%	13.2%	13.5%	14.5%	15.3%	14.8%
SPRINT	4.8%	5.8%	6.4%	6.6%	6.2%	6.4%	6.5%	6.4%
LDDS			0.1%	0.1%	0.2%	0.3%	1.2%	1.3%
OTHER QUALIFYING CARRIERS	2.3%	2.8%	3.3%	3.2%	3.3%	4.1%	3.8%	5.3%
NON-QUALIFYING CARRIERS	1.0%	1.0%	1.2%	1.4%	1.7%	1.7%	2.0%	2.1%
ANNUAL RATES OF GROWTH:								
AT&T		-1.4%	-0.8%	0.7%	1.4%	-0.3%	0.5%	2.2%
MCI		21.6%	23.9%	15.8%	5.1%	10.0%	8.2%	1.0%
SPRINT		23.3%	13.5%	7.1%	-4.5%	6.0%	4.0%	2.8%
LDDS				75.5%	184.3%	45.1%	263.6%	11.5%
OTHER QUALIFYING CARRIERS		27.0%	19.8%	0.8%	6.3%	27.0%	-4.3%	44.4%
NON-QUALIFYING CARRIERS		6.2%	23.2%	13.8%	25.0%	1.2%	23.7%	11.1%
TOTAL INDUSTRY LINES		2.4%	3.3%	3.1%	2.2%	2.5%	2.9%	4.0%

1/ QUALIFYING COMPANIES -- DATA IS ONLY SHOWN FOR YEARS IN WHICH THE CARRIER HAD .05% OF OVERALL PRESUBSCRIBED LINES.
2/ LDDS AND WILTEL MERGED ON JANUARY 5, 1995.
3/ NAME CHANGED FROM LITEL, DECEMBER 1994.
4/ NAME CHANGED FROM RCI, DECEMBER 1994.
5/ NAME CHANGED FROM TELEDIAL AMERICA, DECEMBER 1994.

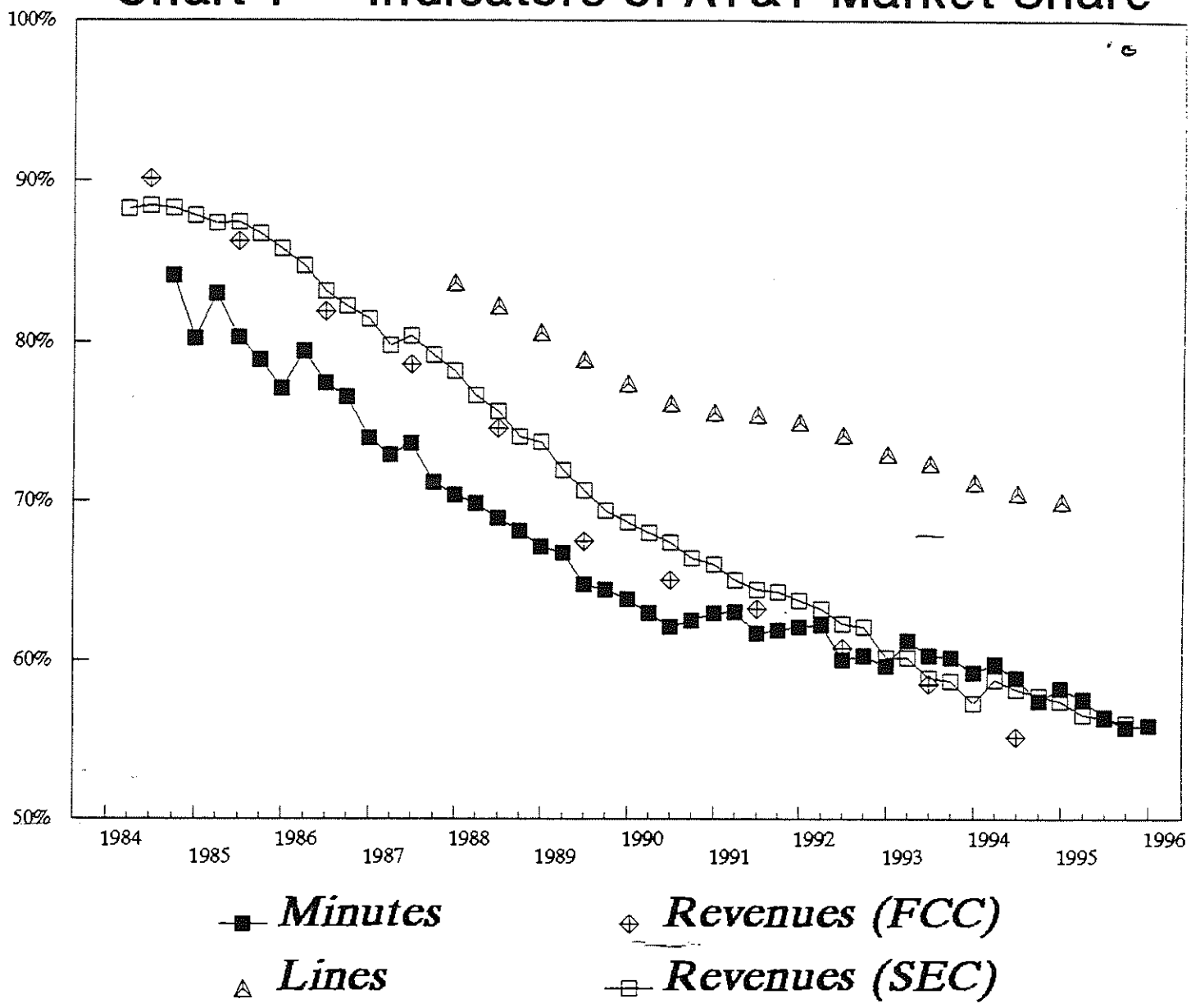
TABLE 30 TOTAL TOLL SERVICE REVENUES
(DOLLAR AMOUNTS SHOWN IN MILLIONS)

COMPANY	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994
AT&T COMMUNICATIONS, INC.	$34,935	$36,770	$36,514	$35,219	$35,407	$34,549	$33,880	$34,384	$35,495	$35,731	$37,166
MCI TELECOMMUNICATIONS CORP. 1/	1,761	2,331	3,372	3,938	4,886	6,171	7,392	8,266	9,719	10,947	11,715
(TELECOM*USA)	105	201	291	396	524	713					
SPRINT COMMUNICATIONS CO. 2/			1,141	2,592	3,405	4,320	5,041	5,378	5,658	6,139	6,805
(GTE SPRINT)	1,052	1,122	779								
(US TELECOM)		387	212								
LDDS COMMUNICATIONS, INC. 3/ 4/						110	154	263	801	1,145	2,221
(ADVANCED TELECOMMUNICATIONS CORP.)	72	86	124	162	178	326	342	356			
(METROMEDIA COMMUNICATIONS CORP.) 5/						127	381	369	369	297	
(ITT COMMUNICATION SERVICES, INC.)	161	241	282	287	379	404					
(COMSYSTEMS NETWORK SERVICES)							130	131	135	116	
WILTEL, INC. 4/						300	376	405	494	664	917
CABLE & WIRELESS COMMUNICATIONS, INC.		146	171	180	218	275	359	406	495	557	654
ALLNET 6/ 7/		309	450	395	394	334	326	347	376	436	568
(LEXITEL)		127									
LCI INTERNATIONAL TELECOM CORP.						197	215	208	243	317	453
ALASCOM, INC.	255	271	267	262	272	278	259	338	333	320	329
FRONTIER COMMUNICATIONS INT'L, INC. 7/ 8/ 9/ 10/						104	142	155	168	213	306
ONCOR COMMUNICATIONS, INC.						275	230	181	159	140	172
EXCEL TELECOMMUNICATIONS, INC.											156
WEST COAST TELECOMMUNICATIONS, INC. 9/											144
U.S. LONG DISTANCE, INC.										100	136
AMERICAN SHARECOM, INC. 10/											123
AMERICAN NETWORK EXCHANGE, INC.											109
MIDCOM COMMUNICATIONS, INC.											109
VARTEC TELECOM, INC.											107
GENERAL COMMUNICATION, INC. 11/										92	106
TELESPHERE NETWORK, INC. 12/						192	293	308			
(NATIONAL TELEPHONE SERVICES, INC.)						150					
OTHERS 13/	414	639	992	1,352	1,823	2,359	2,582	2,948	3,923	4,319	5,055
TOTAL LONG DISTANCE CARRIERS	38,755	42,630	44,595	44,783	47,487	51,184	52,102	54,443	58,368	61,533	67,351
AT&T COMMUNICATIONS SHARE:	90.1%	86.3%	81.9%	78.6%	74.6%	67.5%	65.0%	63.2%	60.8%	58.1%	55.2%
MCI TELECOMMUNICATIONS SHARE:	4.5%	5.5%	7.6%	8.6%	10.3%	12.1%	14.2%	15.2%	16.7%	17.8%	17.4%
SPRINT COMMUNICATIONS CO. SHARE:	2.7%	2.6%	4.3%	5.8%	7.2%	8.4%	9.7%	9.9%	9.7%	10.0%	10.1%
LDDS COMMUNICATIONS, INC. SHARE:						0.2%	0.3%	0.5%	1.4%	1.9%	3.3%
ALL OTHER CARRIERS:	2.6%	5.6%	6.3%	6.8%	8.0%	11.8%	10.8%	11.3%	11.5%	12.3%	14.0%
BELL OPERATING COMPANIES	9,037	9,026	9,599	10,268	10,668	10,549	10,578	10,066	9,718	9,849	9,527
OTHER LOCAL TELEPHONE COMPANIES 13/	3,364	3,159	3,274	3,468	4,445	4,291	4,112	4,049	3,897	3,908	3,848
TOTAL LOCAL EXCHANGE COMPANIES	12,401	12,185	12,873	13,736	15,113	14,840	14,690	14,115	13,615	13,757	13,375
TOTAL TOLL SERVICE REVENUES	51,156	54,815	57,468	58,519	62,600	66,024	66,792	68,558	71,983	75,290	80,726
AT&T COMMUNICATIONS SHARE:	68.3%	67.1%	63.5%	60.2%	56.6%	52.3%	50.7%	50.2%	49.3%	47.5%	46.0%
MCI TELECOMMUNICATIONS SHARE:	3.4%	4.3%	5.9%	6.7%	7.8%	9.3%	11.1%	12.1%	13.5%	14.5%	14.5%
SPRINT COMMUNICATIONS CO. SHARE:	2.1%	2.0%	3.3%	4.4%	5.4%	6.5%	7.5%	7.8%	7.9%	8.2%	8.4%
LDDS COMMUNICATIONS, INC. SHARE:						0.2%	0.2%	0.4%	1.1%	1.5%	2.8%
ALL OTHER CARRIERS:	2.0%	4.4%	4.9%	5.2%	6.1%	9.1%	8.4%	9.0%	9.3%	9.5%	11.7%
LOCAL EXCHANGE COMPANIES SHARE.	24.2%	22.2%	22.4%	23.5%	24.1%	22.5%	22.0%	20.6%	18.9%	18.3%	16.6%

SOURCES: LOCAL EXCHANGE CARRIER INFORMATION DERIVED FROM USTA ANNUAL REPORTS.
AT&T COMMUNICATIONS AND ALASCOM FROM STATISTICS OF COMMUNICATIONS COMMON CARRIERS.
OTHER COMPANIES: 1984 – 1994 AS REPORTED PURSUANT TO FCC REPORT AND ORDER IN CC DOCKET 83-1291.

1/ MCI TELECOMMUNICATIONS AND TELECOM*USA MERGED DURING 1989.
2/ 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 US SPRINT FOR 1986 IS FOR JULY 1 – DECEMBER 31. EFFECTIVE FEBRUARY 26, 1992, THE COMPANY'S NAME BECAME SPRINT COMMUNICATIONS CO.
3/ LDDS COMMUNICATIONS, INC. AND ADVANCED TELECOMMUNICATIONS CORP. MERGED DURING 1992. IN 1993, LDDS COMMUNICATIONS, INC. MERGED WITH METROMEDIA COMMUNICATIONS CORP. AND COMSYSTEMS NETWORK SERVICES. FOR 1993, ONLY THE REVENUES THAT OCCURRED AFTER THE MERGER ARE INCLUDED IN LDDS COMMUNICATIONS' REVENUES. THOSE REVENUES UP TO THE MERGER ARE LISTED INDIVIDUALLY FOR 1993.
4/ LDDS AND WILTEL MERGED ON JANUARY 6, 1995.
5/ METROMEDIA COMMUNICATIONS CORP. AND ITT COMMUNICATIONS CORP. MERGED DURING 1988. INFORMATION FOR 1989 WAS REPORTED SEPARATELY.
6/ ALLNET AND LEXITEL MERGED AT THE END OF 1985.
7/ FRONTIER CORPORATION, THE PARENT COMPANY OF FRONTIER COMMUNICATIONS, INT'L. INC., ACQUIRED ALC COMMUNICATIONS, THE PARENT COMPANY OF ALLNET ON AUGUST 16, 1995.
8/ NAME CHANGE FROM RCI LONG DISTANCE, INC., IN 1994.
9/ FRONTIER CORPORATION, THE PARENT COMPANY OF FRONTIER COMMUNICATIONS, INT'L. INC., ACQUIRED WCT COMMUNICATIONS, THE PARENT COMPANY OF WEST COAST TELECOMMUNICAITONS ON MAY 18, 1995.
10/ FRONTIER CORPORATION, THE PARENT COMPANY OF FRONTIER COMMUNICATIONS, INT'L. INC., ACQUIRED AMERICAN SHARECOM ON MARCH 17, 1995.
11/ DOES NOT INCLUDE $10 MILLION FROM NON-COMMUNICATIONS OPERATIONS IN 1993 AND $11 MILLION IN 1994.
12/ TELESPHERE NETWORK, INC., AND NATIONAL TELEPHONE SERVICES, INC., MERGED DURING 1989. IN 1991, TELESPHERE NETWORK, INC., WENT INTO BANKRUPTCY.
13/ ESTIMATED BY FCC STAFF.

Chart 1 – Indicators of AT&T Market Share



TOTAL TELECOMMUNICATIONS INDUSTRY REVENUES:

Since 1993, all carriers with interstate revenues have been required to file annual Telecommunications Relay Service (TRS) Fund Worksheets. Because revenues derived from providing access to the interstate network are considered to be interstate, virtually all carriers are required to file information. Over 2800 carriers filed these worksheets in 1995 and reported $184 billion of revenue for 1994. Table 31 shows these revenues for the ten revenue categories provided in the TRS worksheets. The revenues are shown by type of carrier in Table 32. Carriers billed $66 million for local services, $35 million for access services, and $83 million for toll services in 1994. A large share of access revenues represents payments from toll carriers to traditional local exchange carriers for access.

The publication Carrier Locator: Interstate Service Providers lists each of the 2,847 carriers that filed a worksheet along with the categories of revenues reported. It also contains an address and contact telephone number for each carrier.

Table 31

Telecommunications Revenue by Type of Service

(Dollar amounts shown in Millions)

	1992	1993	1994	Percent Change From 1992
Local Exchange Service	$39,235	$40,176	$42,281	7.8 %
Local Private Line Service	1,049	1,088	1,133	8.0
Mobile Radio, Cellular, Paging & PCS	7,285	10,237	14,258	95.7
Alternative Access and Other	7,687	8,002	8,321	8.2
Total Local Revenues	55,256	59,503	65,992	19.4
Interstate Access	21,740	23,587	25,535	17.5
Intrastate Access	8,174	8,528	9,148	11.9
Total Access Revenues	29,914	32,114	34,683	15.9
Operator Service	9,465	10,772	10,655	12.6
Non–operator Switched Toll Service	53,756	57,498	59,511	10.7
Long Distance Private Line Service	7,783	8,067	9,062	16.4
All Other Long Distance	4,195	5,392	4,013	–4.3
Total Toll Revenues	75,198	81,729	83,241	10.7
Total Carrier Revenue	160,325	173,347	183,915	14.7

Source: TRS Fund worksheets

Table 32

Telecommunications Revenue by Type of Carrier

(Dollar amounts shown in Millions)

	1992	1993	1994
Regional Bell Operating Companies (RBOCs)	$66,887	$70,428	$70,856
Independent Local Exchange Carriers	24,697	25,362	27,577
Local Exchange Carriers (LECs)	91,584	95,789	98,433
Competitive Access Providers (CAPs)	69	282	287
Cellular Carriers	6,718	9,388	13,259
Mobile Service Carriers	670	1,085	1,111
Personal Communications Service Providers	0	0	*
Wireless Carriers	7,388	10,472	14,370
Access Carriers	99,039	106,544	113,091
Big Four: AT&T, LDDS, MCI, and Sprint	55,104	60,694	63,357
Interexchange Carriers Other Than the Big Four	2,237	2,595	3,028
Resellers	1,293	2,044	2,840
Operator Service Providers (OSPs)	558	695	543
Satellite and Other Common Carriers	2,369	775	1,057
Toll Carriers	61,561	66,803	70,824
All Carriers	160,325	173,347	183,915

Source: TRS Fund worksheets

* Included with cellular

LOCAL COMPETITION:

The potential for competition in the local-calling market will be greatly increased by the recent passage of the Telecommunications Act of 1996. The new law provides for competition in local telephone service. Even before passage of this historic new law, competitors had begun offering switched local service in seven states: California, Illinois, Maryland, Massachusetts, Michigan, New York, and Washington. Competitive activity is not evenly spread within these states: the first seeds of competition have sprouted in urban areas where many potential customers are concentrated. Generally, new competitors are small and are still experimenting in the market.

The Federal Communications Commission and state regulators are working together to encourage local competition and to develop a better understanding of its evolving nature. Table 33 shows the current state of local competition. Rapid progress is expected once the ground rules for competition -- including interconnection, number portability, unbundling, universal service and resale -- are established.

Table 33
Status of Local Switched Competition
as of March 21, 1996

State	Competitors have applied	Competitive operations have begun	Notes on the status of local switched access competition
Alabama	yes		Workshops in progress. Public Utility Commission to prepare price regulation and local-competition plan.
Alaska	yes		Rules not yet in place.
Arizona	yes (approved)		Rules established.
Arkansas	yes (approved)		Rules not yet in place.
California	yes	yes	Interim rules through 1996 may become permanent 1/97. Interim number portability. Permanent implementation details and universal service in separate dockets at Public Utilities Commission. Interconnection agreement approved. Of 66 companies that have applied to compete, 31 have been approved.
Colorado	yes		Rules in committee at Public Utilities Commission. Competition set to begin 7/96. Some rules adopted.
Connecticut	yes (approved)		Interim rules set rates for unbundled service and interconnection. Guidelines established. Three companies have contracts with Southern New England Telephone. None are yet operating. Interim resale rates filed.
Delaware	yes		Rulemakings in progress.
District of Columbia	yes		Legislation pending.
Florida	yes (approved)		Rulemaking in process at Public Service Commission. Companies must negotiate. Three agreements reached setting rules for universal service, interconnection, temporary number portability, unbundling and resale.
Georgia	yes (approved)		Temporary rules in place. Workshops and hearings in progress. Number portability ordered to be in place by 9/97.
Hawaii	yes		Companies must negotiate. Open docket on rules to be completed 12/96. Legislation addresses rules and requires incumbent local exchange carrier to comply.
Idaho	yes		Rules not yet in place.
Illinois	yes	yes	Rules in place. Competition began 9/1/95. Number portability solution adopted, resale tariffs filed. Two competitors have reciprocal compensation co-carrier agreement with Ameritech in Chicago.
Indiana	yes		Hearings on local competition issues. Workshops in progress.
Iowa	yes (approved)		Rulemaking in progress. Local service offered through resale of Centrex services. US West tariffs disputed.

Status of Local Switched Competition, continued

State	Competitors have applied	Competitive operations have begun	Notes on the status of local switched access competition
Kansas	yes (approved)		Rulemakings and workshops in progress. One new entrant in operation, bought facilities from United but faces no competition. One other carrier certified for area, but is not yet operational.
Kentucky	yes		Docket in progress. Generic proceeding underway at public utilities commission. Hearing scheduled 3/96.
Louisiana	yes		Public service commission has adopted rules.
Maine	yes		Rules not yet in place.
Maryland	yes	yes	911 and interconnection rules in place. Interim rules on number portability. Competition in test period.
Massachusetts	yes	yes	Docket regarding rules suspended pending federal action. Contracts between firms. MFS actively marketing services and serving a handful of customers.
Michigan	yes	yes	Interconnection contracts in place between firms.
Minnesota	yes		Rules docket to be complete 8/97 for companies serving >50,000 lines. Rules for smaller companies by 1/98. Task forces considering interconnection, number portability, etc.
Mississippi	yes		Rules not yet in place. Docket established, no dates set.
Missouri	yes		Rules not yet in place.
Montana	yes (approved)		Rules not yet in place.
Nebraska	yes		Rules not yet in place. To be certified, potential competitor must prove incumbent is inadequate.
Nevada	yes		Contracts must be developed between firms.
New Hampshire	yes		Public Utilities Commission has rules docket in progress. Rules must be completed by end of 1996.
New Jersey	yes		Rulemaking in progress -- comment/reply stage.
New Mexico	yes		Rulemakings in progress. Companies serving < 100,000 lines exempt.
New York	yes	yes	Rules in place. 23 competitive companies are certified. Competition limited to NYC and Rochester.
North Carolina	yes (approved)		Interim rules in place. Parties to negotiate in "good faith", after 90 days can petition Public Utility Commission for determination. Companies serving < 200,000 lines exempt. Competition to begin 7/96.
North Dakota	yes		Rules not yet in place.

Status of Local Switched Competition, continued

State	Competitors have applied	Competitive operations have begun	Notes on the status of local switched access competition
Ohio	yes (approved)		Interim interconnection agreement in place for two companies. Public Utility Commission has proposed generic local competition rules.
Oklahoma	yes		Rules not yet in place. Rulemaking in progress. Bill introduced.
Oregon	yes (approved)		Public Utilities Commission adopted temporary number portability, bill-and-keep rules for two years. Working on permanent number portability solution.
Pennsylvania	yes (approved)		Rules not yet in place. Rulemakings in progress.
Rhode Island	yes		Rules not yet in place. Public Utilities Commission has open docket and is following the progress of Massachusetts and Connecticut.
South Carolina	yes		Rules not yet in place.
South Dakota	yes		Rules not yet in place. Public Utilities Commission has legal authority. No other actions have been taken.
Tennessee	yes (approved)		Rules approved by Public Service Commission and need to be approved by Attorney General.
Texas	yes (approved)		Proposed rules in hearing stage. Universal service provisions in state law. Competitors began filing 9/95.
Utah	yes (approved)		Contracts must be developed between firms. Interconnection hearings delayed pending federal action. Interim number portability agreement. Compensation on bill-and-keep basis.
Vermont	yes		Rules not yet in place. Public Utilities Commission has an open docket.
Virginia	yes		Generic rules in place, details to be worked out between firms.
Washington	yes	yes	Interconnection rules in place. Six companies authorized to compete with incumbents, serving a handful of customers.
West Virginia	yes		Rules not yet in place. Public Utilities Commission continuing general investigation, which began 11/94.
Wisconsin	yes (approved)		Rules are in a pending docket at the Public Utilities Commission. Discussions concerned with interconnection, number portability, reciprocal compensation.
Wyoming	yes (approved)		Rules not yet in place.

ACCESS CHARGES:

In the 1980's the FCC, in cooperation with a "Federal-State Joint Board" composed of both federal and state regulators, introduced sweeping changes to the way that telephone services were priced.

As recently as the early 1980's, almost all long distance service continued to be provided by AT&T. AT&T, in turn, charged prices far above cost for long distance calls and shared the revenues with local telephone companies. From AT&T's perspective, this revenue sharing was largely internal because it owned the Bell operating companies, which provided about three-quarters of the nation's local telephone service. The transfer of revenues from long distance service was an important--and rapidly growing--source of revenues to local telephone companies and reduced pressures to raise local monthly rates.

The method of sharing revenues that had developed historically had several major deficiencies. First, the amounts of revenue shared had grown far beyond expectations--by the early 1980's, two-thirds of the price of a long distance call was passed back to local telephone companies. Doing so was inefficient--suppressing the demand for long distance calls and inducing large corporations to arrange private systems that "bypassed" the public switched network. Finally, while such revenue sharing arrangements were perhaps sustainable in an industry where one firm monopolized both long distance and local service, they were not compatible with a competitive long distance industry. MCI and other new competitors had not been party to developing the revenue sharing arrangements and did not want to share their revenues with local telephone companies--especially those owned by AT&T (then the dominant competitor in the long distance market).

The "access charges" introduced in mid-1984 had several major elements. Monthly "subscriber line charges" (SLCs) were introduced for business lines in 1984 and subsequently for residential customers. Currently, the SLC is $6.00 monthly for most business lines and $3.50 for most residential lines. Local telephone companies were required to reduce their charges to long distance carriers--dollar for dollar--as SLCs were introduced.

The "rebalancing" of local and long distance prices had fundamental impacts on the telephone industry and upon consumers as the price of long distance service fell and the volume of long distance calling surged. Average monthly SLCs are shown in Table 34, and average per-minute rates charged to long distance carriers are shown in Table 35. The per-minute access rates charged by local telephone companies are generally higher for smaller companies. The range of access rates proposed for mid-1996 are shown in Table 36.

Table 34

Interstate Subscriber Line Charges by Local Telephone Companies
(Dollars per Month per Line, Charged to End Users) *

Rates in Effect		Residential and Single–Line Business **	Multiline Business ***	Embedded Centrex Rate Cap ****
From	To			
05/26/84	05/31/85	$0.00	$4.99	$2.00
06/01/85	09/30/85	1.00	4.99	2.00
10/01/85	05/31/86	1.00	4.97	2.00
06/01/86	12/31/86	2.00	4.97	3.00
01/01/87	06/30/87	2.00	5.12	3.00
07/01/87	12/31/87	2.60	5.12	4.00
01/01/88	11/30/88	2.60	5.01	4.00
12/01/88	03/31/89	3.20	5.01	5.00
04/01/89	12/31/89	3.50	4.94	6.00
01/01/90	06/30/90	3.48	4.84	6.00
07/01/90	12/31/90	3.48	4.83	6.00
01/01/91	06/30/91	3.48	4.77	6.00
07/01/91	11/27/91	3.49	4.74	6.00
11/28/91	06/30/92	3.49	4.76	6.00
07/01/92	06/30/93	3.49	4.68	6.00
07/01/93	06/30/94	3.50	5.37	6.00
07/01/94	06/30/95	3.50	5.45	6.00
07/01/95	06/30/96	3.50	5.50	6.00
07/01/96	06/30/97	3.50	5.53	6.00

* These rates are the average of price cap and NECA pool companies. Interstate revenues of these companies comprise approximately 95% of the industry total. The industry rates in this table are the weighted averages of the carriers. The weights are the common line minutes. Rates for the current period are those filed to be effective July 1, 1996.

** The rate charged to residential and single–line business customers is capped at a level of $3.50. Carriers are not permitted to charge the full amount unless justified by the underlying costs.

*** The rate charged to multiline business customers is capped at a level of $6.00. Carriers are not permitted to charge the full amount unless justified by the underlying costs. As a result, some companies charge less than the full $6.00.

**** This is the maximum rate applied to centrex lines that were in place or on order as of July 27, 1983. Prior to April 1, 1989, these embedded centrex lines had a lower rate cap than new centrex lines. Customers with new centrex lines paid the multiline business subscriber line charge. Since April 1, 1989, however, the caps on centrex and multiline business charges have been at the same level.

Table 35

Interstate Charges by Local Telephone Companies to Long Distance Carriers
(National Average for "Premium" Service in Cents per Minute) *

Rates in Effect		Interstate Charges for Switched Access Service				
From	To	Carrier Common Line Per Originating Minute*	Carrier Common Line Per Terminating Minute*	Traffic Sensitive Per Switched Minute	Non-Traffic Sensitive Per Switched Minute	Total Charge Per Conversation Minute
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

* These rates are the average of price cap and NECA pool companies. Revenues of these companies comprise approximately 95% of the industry total. The rates are weighted averages of the carriers. Carrier common line (CCL) charges are weighted by CCL minutes. The other access charges are weighted by local switching minutes. Rates for the current period are those filed to be effective on July 1, 1996.

** Included with other traffic sensitive charges.

Table 36
Average Rate per Minute by Carrier
(Price–Cap Companies and NECA)

Company *	Rates Effective 7/01/96				Total Charge Per Conversation Minute **	1995 Minutes of Use (Millions)		
	Originating Carrier Common Line	Terminating Carrier Common Line	Switched Traffic Sensitive	Switched Non–Traffic Sensitive		CCL Originating	CCL Terminating	Local Switching
Ameritech	$0.0043	$0.0043	$0.0174	$0.0020	$0.0490	17,222	27,293	44,754
Bell Atlantic	0.0055	0.0055	0.0144	0.0016	0.0445	32,801	28,818	61,611
BellSouth	0.0100	0.0120	0.0139	0.0021	0.0558	24,983	36,469	61,879
NYNEX	0.0072	0.0072	0.0272	0.0019	0.0751	22,212	28,903	51,489
Pacific Telesis	0.0055	0.0055	0.0150	0.0020	0.0466	12,036	20,611	32,743
SBC	0.0075	0.0075	0.0164	0.0015	0.0525	13,605	21,616	35,576
U S West	0.0056	0.0056	0.0198	0.0017	0.0561	16,565	31,597	48,398
GTE	0.0100	0.0219	0.0203	0.0010	0.0767	16,540	24,385	41,687
Citizens	0.0100	0.0384	0.0330	0.0008	0.1191	1,099	962	2,113
Lincoln	0.0016	0.0016	0.0256	0.0013	0.0591	231	383	616
Frontier	0.0087	0.0091	0.0240	0.0012	0.0706	780	1,353	2,164
Southern New England	0.0057	0.0057	0.0203	0.0019	0.0578	2,941	4,337	7,296
Sprint LTCs	0.0087	0.0158	0.0180	0.0012	0.0649	7,440	10,650	18,245
NECA Pool Companies	0.0082	0.0082	0.0579	0.0007	0.1383	9,823	11,586	21,409
Total Minutes						178,278	248,963	429,980
Average CCL Rates Weighted by Minutes	$0.0071	$0.0090	$0.0195	$0.0017	$0.0605			

* Rates are the composites of all regions and subsidiaries of each company.

** This column was calculated as follows: 107% of the originating CCL rate + 100% of the terminating CCL rate
+ 107% of the the traffic sensitive and non–traffic sensitive rates (for originating access)
+ 100% of the the traffic sensitive and non–traffic sensitive rates (for terminating access).

LIFELINE AND UNIVERSAL SERVICE PROGRAMS:

The FCC has established two types of assistance programs for low income subscribers. Programs of the first type are designed to assist poor subscribers in affording the monthly costs of service, and are called "lifeline" plans. Other programs -- connection assistance or "Link-Up" programs -- are designed to help low income subscribers defray installation charges in order to begin receiving telephone service. Participating states have wide latitude in selecting means tests and shaping the benefits of the programs. In 1996, programs have been established in all 50 states, the District of Columbia, the Virgin Islands, and the Commonwealth of Puerto Rico. The states with each type of program are indicated in Table 37, along with the year during which a program was first certified.

In addition to the programs for low income subscribers, a "Universal Service Fund" provides support to local telephone companies that have high costs. All of these assistance programs are financed currently by monthly charges imposed on larger long distance carriers. Under current FCC rules, each long distance carrier serving more than .05% of the nation's telephone lines is billed monthly on a per-line basis to support these programs. These charges are shown in Table 38.

TABLE 37

LIFELINE AND LINK–UP TELEPHONE PROGRAMS (YEAR FIRST CERTIFIED)

STATE	LIFELINE	LINK–UP
ALABAMA	95	87
ALASKA	93	93
ARIZONA	86	88
ARKANSAS	86	87
CALIFORNIA	85	*
COLORADO	90	90
CONNECTICUT	94	87
DELAWARE		95
DISTRICT OF COLUMBIA	86	87
FLORIDA	94	88
GEORGIA	91	90
HAWAII	86	89
IDAHO	87	88
ILLINOIS	**	93
INDIANA		88
IOWA		88
KANSAS		88
KENTUCKY		87
LOUISIANA		88
MAINE	87	87
MARYLAND	86	87
MASSACHUSETTS	90	90
MICHIGAN	89	89
MINNESOTA	88	88
MISSISSIPPI	91	88
MISSOURI	87	87
MONTANA	87	87
NEBRASKA		88
NEVADA	87	88
NEW HAMPSHIRE		88
NEW JERSEY		87
NEW MEXICO	87	87
NEW YORK	87	87
NORTH CAROLINA	86	87
NORTH DAKOTA	87	89
OHIO	87	87
OKLAHOMA	95	90
OREGON	86	88
PENNSYLVANIA	95	88
PUERTO RICO		88
RHODE ISLAND	87	87
SOUTH CAROLINA	95	87
SOUTH DAKOTA	88	88
TENNESSEE	92	88
TEXAS	88	87
UTAH	86	88
VERMONT	86	90
VIRGIN ISLANDS U.S.	91	91
VIRGINIA	87	87
WASHINGTON	87	90
WEST VIRGINIA	86	87
WISCONSIN	88	90
WYOMING	91	89

* CALIFORNIA PROVIDES AN INDEPENDENT CONNECTION ASSISTANCE PROGRAM.
** ILLINOIS COMMERCE COMMISSION IS INVESTIGATING A VOLUNTARY CONTRIBUTION PROGRAM.

Table 38

Monthly Charges to Long Distance Carriers For Lifeline and Universal Service Programs

Rates in Effect		Universal Service Fund	Lifeline Link–Up Programs	Total Charge Per Access Line	Access Lines * (millions)	Approximate Monthly Billing ($ millions)
From	To					
04/01/89	06/30/89	$0.1753	$0.0467	$0.2220	121.1	$26.35
07/01/89	12/31/89	0.1752	0.0556	0.2308	121.3	27.44
01/01/90	06/30/90	0.2476	0.0366	0.2842	123.1	34.29
07/01/90	12/30/90	0.2367	0.0412	0.2779	125.4	34.15
01/01/91	01/31/91	0.2696	0.0593	0.3289	126.9	40.90
02/01/91	06/30/91	0.3090	0.0593	0.3683	126.9	45.80
07/01/91	12/31/91	0.3185	0.0534	0.3719	129.0	47.02
01/01/92	06/30/92	0.3823	0.0789	0.4612	130.6	59.03
07/01/92	12/31/92	0.3901	0.0733	0.4634	132.0	59.95
01/01/93	01/31/93	0.4404	0.0777	0.5181	133.0	67.53
02/01/93	06/31/93	0.4624	0.0777	0.5401	133.0	70.40
07/01/93	12/31/93	0.4561	0.0809	0.5370	136.4	71.78
01/01/94	01/31/94	0.4520	0.0841	0.5361	138.2	72.61
02/01/94	06/30/94	0.4408	0.0841	0.5249	138.2	71.09
07/01/94	12/31/94	0.4295	0.0901	0.5196	140.0	71.29
01/01/95	06/30/95	0.4335	0.0848	0.5183	142.2	72.23
07/01/95	12/31/95	0.4214	0.0936	0.5150	145.3	73.33
01/01/96	06/30/96	0.4182	0.0928	0.5110	147.0	73.61

* Billings are made by The National Exchange Carrier Association to interchange carriers who have more than .05% of the nationwide total presubscribed lines. These carriers serve approximately 98% of total presubscribed lines. The 147.0 million access lines shown for January 1, 1996 are the number of access lines reported as of June 30, 1995 by the billed carriers contributing to the Universal Service Fund.

CELLULAR TELEPHONE SERVICE:

The Federal Communications Commission licenses cellular telephone companies but does not impose reporting requirements on the cellular industry. The Cellular Telecommunications Industry Association periodically publishes summary information on their industry, a selection of which is shown in Tables 39 and 40.

TABLE 39

CELLULAR TELEPHONE SUBSCRIBERS

		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

SOURCE: CELLULAR TELECOMMUNICATIONS INDUSTRY ASSOCIATION

TABLE 40

CELLULAR TELEPHONE SERVICE: SURVEY RESULTS

		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

SOURCE: CELLULAR TELECOMMUNICATIONS INDUSTRY ASSOCIATION.

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 has increased more than 600% since 1980. In 1994, Americans spent about $12.4 billion dollars on 2.3 billion international calls. 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 41.

U.S. and foreign carriers compensate each other when one carries traffic that the other bills. 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 reached $4.3 billion in 1994. On average, carriers billed $.92 per minute for international calls in 1994 and paid $.52 per billed minute in settlements. Trends in settlement payments are shown in Table 42. On average, for all traffic, carriers retained $.39 for each international minute that they handled in 1994, compared with $.44 per minute in 1993. Some of this decline results from the fact that some carriers did not reflect discounts to customers in their 1993 data, but did in their 1994 data.

International traffic data is available on a country-by-country basis. Table 43 summarizes traffic by region of the world. Five markets -- Canada, Mexico, the United Kingdom, Germany, and Japan -- currently account for about half of the international calls billed in the United States.

Since 1985, when MCI first entered the market in competition with AT&T, numerous carriers have begun to provide international service. Thirty-four U.S. carriers provided international telecommunications service in 1994 by using their own facilities or lines leased from other carriers. These carriers billed $13.0 billion for international services, of which $12.4 billion was for telephone service. Table 44 shows the U.S.-billed revenues for each of the 34 carriers. Together, AT&T, MCI, and Sprint account for 97% of the facilities-based service billed in the United States.

In addition to the 34 carriers that owned or leased facilities, some 180 carriers reported the resale of international message telephone service. These carriers reported $1.1 billion of resale revenue in 1994. The revenues for the larger resellers are shown in Table 45.

Table 41
International Service from U.S. to Foreign Points
(Minute, message, and revenue amounts shown in millions)

	Telephone Service					Other Services			
			Billed Revenue			Billed Revenue			
	Minutes	Messages		Per minute	Per call	Telex	Telegraph	Private Line	Misc.
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

Table 42
International Telephone Service Settlements
(Revenue amounts shown in millions)

							Average Per Minute		
	Billed Revenue	Owed to Foreign Carriers	Retained Revenue	Due from Foreign Carriers	Net Settlements	Net Revenue	Settlement Owed for U.S. Billed Calls	Settlement Due for Foreign Billed Calls	Net Revenue 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 *	(3,298)	5,798	0.64	0.47	0.42
1992	10,179	5,945	4,234	2,601 *	(3,344)	6,835	0.59	0.43	0.43
1993	11,353	6,327	5,027	2,678 *	(3,649)	7,704	0.56	0.39	0.44
1994	12,255	6,947	5,308	2,658 *	(4,289)	7,966	0.52	0.35	0.39

* Includes transiting traffic.

Table 43
International Message Telephone Service for 1994

(Figures rounded to the nearest million)

International Point	Traffic Billed in the United States					Traffic Billed in Foreign Countries				Total U.S. Carrier
						Originating or Terminating in the United States			TRANSITING	
	Number of Messages	Number of Minutes	U.S. Carrier Revenue	Owed to Foreign Carriers	Retained Revenue	Number of Messages	Number of Minutes	Due from Foreign Carriers	Retained Revenue	Retained Revenue
North and Central America	956	4,918	3,076	1,706	1,371	553	2,624	487	4	1,861
Asia	342	2,227	2,767	1,650	1,117	210	883	586	73	1,776
South America	167	1,029	1,055	739	316	69	291	207	11	535
Caribbean	133	895	862	503	359	66	287	143	8	511
Oceania	43	245	297	104	193	40	199	92	13	298
Middle East	68	474	578	476	102	27	152	153	24	279
Eastern Europe	47	337	439	281	158	23	121	101	15	274
Africa	45	303	406	258	148	21	82	66	13	227
Other Regions	3	10	86	65	21	1	2	4	1	26
Total for Foreign Points	2,313	13,393	12,255	6,947	5,307	1,380	6,247	2,443	215	7,966
Total for U.S. Points	10	64	74	21	53	9	50	13	1	67
Total for all International points	2,323	13,457	12,329	6,968	5,361	1,389	6,297	2,456	216	8,033

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 off-shore U.S. points such as Guam and the U.S. Virgin Islands. The total for all international points also includes the traffic of carriers serving off-shore U.S. points.

Chart 2

U.S. Billed Minutes by Country

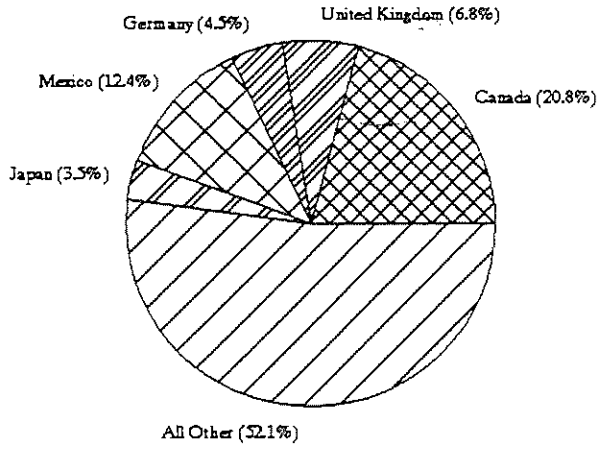


Table 44

U.S. Billed Service to all International Points in 1994 *

(Revenue amounts shown in millions)

	Telephone	Telex	Telegraph	Private Line	Miscellaneous	Total
Alascom, Inc.	$16					$16
American Samoa Office of Communications	4					4
AmericaTel Corporation				**		**
AT&T Corp.	7,984	61	6	172	5	8,228
BT North America	**					**
Corporate Satellite Communications, Inc.				**		**
EMI Communications Corporation					**	**
fONOROLA Corp.	19					19
GTE	25			2	**	27
Harris Corporation	**					**
Hughes Communications Carrier Services, Inc.				**		**
IT&E Overseas, Inc.	37			1		38
LDDS Communications, Inc.	124	10	4	90	**	229
MCI / Western Union International	2,952	52	3	125	2	3,135
Melbourn International Communications LTD.				1		1
MFS International				**		**
Micronet, Inc.					1	1
Micronesian Telecommunications Corp.	15	**	**			15
Mobile Satellite Communications, Inc.				1	**	1
Northern Communications, Inc.				**		**
Overseas Telecommunications, Inc.				5		5
Pacific Gateway Exchange, Inc.	3			**		3
PSO, Inc. d/b/a Canal Uno					**	**
Southern Satellite Systems, Inc. /LMC SatCom				2		2
Sprint	1,229	**		39	16	1,284
Startec, Inc.	3					3
St. Thomas & San Juan Telephone Co. Inc.	2			**		2
Telecomunicaciones Ultramarinas–Puerto Rico				1		1
Telefonica Larga Distancia de Puerto Rico	18					18
The Associated Group, Inc.				**		**
TLC Productions, Inc.				**		**
UPS Telecommunications, Inc.				**		**
Westinghouse Communications Services, Inc.					**	**
WilTel, Inc.				1	**	1
Total	$12,431	$123	$12	$441	$25	$13,033

* Totals exclude pure resale services.

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

Table 45
Top 50 Providers of Pure Resale International MTS in 1994

	Number of Messages	Number of Minutes	U.S. Carrier Revenue	Percent of total IMTS Resale
LDDS Communications, Inc.	64,909,384	297,028,852	214,286,592	19.129%
Cable & Wireless, Inc.	45,260,529	167,463,960	122,750,385	10.958%
Allnet Communication Services, Inc.	17,630,533	72,203,948	68,078,985	6.077%
WilTel, Inc.	25,763,413	97,469,133	60,979,885	5.444%
Sprint	5,733,623	32,879,778	56,684,899	5.060%
MCI Telecommunications Corporation	3,930,916	28,637,260	55,756,745	4.977%
Telegroup, Inc.	8,822,586	43,384,665	46,243,308	4.128%
Operator Communications, Inc. d/b/a Oncor Communicati	1,703,703	11,277,639	29,804,048	2.661%
LCI International Telecom Corp.	14,392,941	48,936,000	29,704,730	2.652%
VIATEL, Inc.	3,596,044	13,596,190	24,453,100	2.183%
MTC International, Inc.	8,050,010	40,467,025	21,134,237	1.887%
Communication TeleSystems International (CTS)	4,852,955	31,027,481	20,303,486	1.813%
St. Thomas & San Juan Tel. Co. (TRESCOM)	7,216,889	30,856,203	17,310,335	1.545%
Capital Network System, Inc.	439,807	3,102,774	14,937,188	1.333%
Home Owner's Long Distance Inc. (HOLD)	6,931,790	47,136,172	14,071,534	1.256%
Excel Telecommunications, Inc.	1,260,748	9,939,926	12,682,080	1.132%
Pacific Gateway Exchange, Inc.	3,907,365	19,299,330	11,942,290	1.066%
L.D. Services, Inc.	952,361	5,986,578	11,358,736	1.014%
MIDCOM Communications, Inc.	3,151,673	10,686,955	11,301,021	1.009%
Frontier Communications International Inc.	3,699,816	12,756,948	11,076,614	0.989%
E-Tel Incorporated	440,182	2,787,072	11,064,676	0.988%
Adir International Communications Services	1,843,774	8,067,404	10,516,000	0.939%
Matrix Telecom, Inc.	1,812,043	8,010,083	10,414,078	0.930%
The Furst Group	3,210,091	9,630,273	10,270,109	0.917%
Continental Intercell, Inc.	3,497,713	15,789,284	9,453,800	0.844%
ACC Long Distance Corporation	7,679,369	30,234,619	8,484,621	0.757%
Phoenix Network, Inc.	2,879,840	9,291,247	8,396,165	0.750%
Transtel Communications, Inc.	2,651,124	11,302,994	8,051,947	0.719%
GTE Airfone Incorporated	328,780	1,226,905	6,687,954	0.597%
Telefonica Larga Distancia de Puerto Rico, Inc.	439,878	2,214,266	6,565,043	0.586%
NTS Communications, Inc.	1,225,664	4,338,810	6,549,800	0.585%
VarTec Telecom, Inc.	867,232	7,903,201	6,082,930	0.543%
Dial & Save	330,160	4,331,463	5,966,789	0.533%
Working Assets Funding Services, Inc.	830,004	6,024,832	5,875,624	0.525%
General Communication Incorporated (GCI)	746,333	5,221,077	5,844,841	0.522%
Hertz Technologies Inc.	2,092,979	6,427,949	5,607,321	0.501%
Caribbean Telephone and Telegraph, Inc.	2,021,413	8,732,503	5,501,477	0.491%
TeleData International, Inc.	441,716	2,155,468	5,417,559	0.484%
TransNational Communications, Inc.	855,681	4,999,552	5,201,299	0.464%
Fairchild Communications Services Company	1,035,647	3,875,628	4,876,039	0.435%
Enterprise Telcom Services, Inc.	1,758,556	5,552,471	4,722,405	0.422%
National Communications Association, Inc.	1,322,526	4,153,371	4,594,435	0.410%
Business Telecom, Inc. (BTI)	1,430,496	4,901,870	4,381,434	0.391%
American Operator Services, Inc.	215,578	1,082,892	4,320,738	0.386%
Nationwide Long Distance, Inc.	500,427	4,666,907	4,307,320	0.385%
Executive TeleCard, Ltd.	219,008	1,875,810	3,667,209	0.327%
Long Distance Savers, Inc.	1,293,107	4,533,942	3,210,200	0.287%
Teledial America Inc., D/B/A US Signal Corporation	1,737,167	5,407,700	3,093,430	0.276%
Executone Information Systems, Inc.	997,958	3,363,800	2,931,418	0.262%
Cyberlink, Inc.	2,105,598	9,052,281	2,888,869	0.258%
All Other Carriers	23,806,545	99,540,123	$79,589,908	7.1%
Total All Carriers	302,823,675	1,320,832,613	$1,119,395,635	

* * *

The information in this report and, in many cases more detailed information, can be obtained from the **FCC-State Link** Electronic Bulletin Board by calling (202) 418-0241. The **FCC-State Link** can also be reached by using a gateway feature available through the National Technical Information Service's **FedWorld** system. **FedWorld** can be reached via direct dial access at (703) 321-3339, via internet telnet access (fedworld.gov), or via the World Wide Web (http://www.fedworld.gov).

Printed copies of statistical reports are available for reference in the Common Carrier Bureau's Public Reference Room (Room 509 at 1919 M Street, N.W.) and from the Commission's duplicating contractor (International Transcription Services, Inc. (ITS), 202-857-3800). Copies can also be downloaded from the **FCC-State Link.**

Additional information on regulated carriers, including investments, revenues, expenses, and earnings, is contained in the annual Statistics of Communications Common Carriers, available from the U.S. Government Printing Office (202-512-1800).

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. Detailed international data is available from International Telecommunications Data, and Trends in the International Telecommunications Industry, both of which are published by the Industry Analysis Division.

The information on cellular telephone service shown in Tables 39 and 40 was prepared by the Cellular Telecommunications Industry Association (1133 21st Street N.W., Washington, D.C. 20036, (202) 785-0081).

The United States Telephone Association represents virtually all local telephone companies (1401 H Street N.W., Washington D.C. 20005, (202) 326-7300). 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.

Two widely used sources of names, addresses and other information for companies in the telephone industry are Telephony's Directory & Buyers' Guide for the Telecommunications Industry and the Industry Analysis Division's Carrier Locator.

For more information on the following subjects, the following individuals may be contacted at (202) 418-0940:

Access Charges	Jim Lande
Consumer Expenditures	Jim Lande
International Statistics	Linda Blake or Jim Lande
Lifeline Assistance Programs	Mary Green or Larry Povich
Lines and Calling Volumes	Alexander Belinfante
Local Competition	Emily Hoffnar
Long Distance Companies	Katie Rangos
Market Shares	Katie Rangos, Jim Lande
Prices and Rates	Jim Lande
State Rate Cases	Mike Lehner
Subscribership and Penetration	Alexander Belinfante
Technology and Equal Access	Jonathan Kraushaar
Telecomm. Relay Fund Worksheets	Jim Lande

Customer Response

Publication: Trends In Telephone Service: May 1996

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

1. Please check the category that best describes you:

_____ press
_____ current telecommunications carrier
_____ potential telecommunications carrier
_____ business customer evaluating vendors/service options
_____ consultant, law firm, lobbyist
_____ other business customer
_____ academic/student
_____ residential customer
_____ FCC employee
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_____ state or local government employee
_____ Other (please specify) _____

2. Please rate the report:

	Excellent	Good	Satisfactory	Poor	No opinion
Data accuracy	(_)	(_)	(_)	(_)	(_)
Data presentation	(_)	(_)	(_)	(_)	(_)
Timeliness of data	(_)	(_)	(_)	(_)	(_)
Completeness of data	(_)	(_)	(_)	(_)	(_)
Text clarity	(_)	(_)	(_)	(_)	(_)
Completeness of text	(_)	(_)	(_)	(_)	(_)

3.

	Excellent	Good	Satisfactory	Poor	No opinion
Overall, how do you rate this report?	(_)	(_)	(_)	(_)	(_)

4. How can this report be improved?

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To discuss the information in this report, contact: Katie Rangos, or Jim Lande at 202-418-0940		
Fax this response to	or	Mail this response to
202-418-0520		FCC/IAD Mail Stop 1600 F Washington, DC 20554