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FCC RELEASES SEMIANNUAL STUDY ON TELEPHONE TRENDS

The FCC has released a semiannual report on Trends in Telephone Service. The report is a summary of information collected by the Commission in much more detailed and technical reports. It includes information on telephone subscribership levels, prices, consumer expenditures, calling volumes, long-distance carriers, market shares, and lifeline programs.

Among the findings are:

-- In March 1991, the Current Population Survey conducted by the Bureau of the Census reported that 93.6% of the nation's households have telephone service, compared with 93.3% a year ago.

-- During the year ended June 1991, the Consumer Price Index for local service rose 2.9%, while the cost of interstate calling declined 2.2% and the cost of state toll calls fell 2.3%. As a result, the composite Consumer Price Index for telephone services increased 1.3%. The nation's overall rate of inflation during the past 12 months was 4.7%. Thus, after adjusting for inflation, the real cost of telephone service fell about 3.4%.

-- About 2.0% of all consumer expenditures are devoted to telephone service. The percentage has remained fairly constant since 1980. Since 1984, expenditures for toll service have increased by about 5% per year while reductions in long distance rates also averaged about 5% per year. This suggests that residential use of toll service has grown by about 10% annually.

-- The volume of interstate calling has doubled since 1983. As a result, by 1989, 14% of calling minutes were interstate compared with fewer than 8% at the beginning of the decade.

This report is available for reference in Room 537, Industry Analysis Division, Common Carrier Bureau, 1919 M St., NW. Copies may be purchased from the Commission's duplicating contractor, Downtown Copy Center at (202) 452-1422.

- FCC -

For further information, contact the Industry Analysis Division, Common Carrier Bureau, at (202) 632-0745

Trends in Telephone Service

Industry Analysis Division

Common Carrier Bureau

Federal Communications Commission

August 7, 1991

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INTRODUCTION:

The Federal Communications Commission, like most regulatory agencies, accumulates a great deal of information from the companies it regulates. Such information is essential to economic regulation, and is provided to the Commission both in the tariff process and in periodic reports. Most of this information deals with investments, revenues, expenses, and earnings. Only in recent years has the Commission begun to systematically collect a wider variety of information. This paper summarizes the range of information now available on a routine basis that extends beyond the bare essentials needed for economic regulation.

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 independent and 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.

Ten 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 0.3% from November to March, followed by a decrease of 0.1% from March to July, followed by a decrease of 0.2% 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

Telephone Penetration in the U.S.

(Percentage of Households with Telephone Service)

Date	Households (millions)	Households with Telephones (millions)	Percentage with Telephones	Households without Telephones (millions)	Percentage without Telephones
November 1983	85.8	78.4	91.4%	7.4	8.6%
March 1984	86.0	78.9	91.8	7.1	8.2
July 1984	86.6	79.3	91.6	7.3	8.4
November 1984	87.4	79.9	91.4	7.5	8.6
March 1985	87.4	80.2	91.8	7.2	8.2
July 1985	88.2	81.0	91.8	7.2	8.2
November 1985	88.8	81.6	91.9	7.2	8.1
March 1986	89.0	82.1	92.2	6.9	7.8
July 1986	89.5	82.5	92.2	7.0	7.8
November 1986	89.9	83.1	92.4	6.8	7.6
March 1987	90.2	83.4	92.5	6.8	7.5
July 1987	90.7	83.7	92.3	7.0	7.7
November 1987	91.3	84.3	92.3	7.0	7.7
March 1988	91.8	85.3	92.9	6.5	7.1
July 1988	92.4	85.7	92.8	6.7	7.2
November 1988	92.6	85.7	92.5	6.9	7.5
March 1989	93.6	87.0	93.0	6.6	7.0
July 1989	93.8	87.5	93.3	6.3	6.7
November 1989	93.9	87.3	93.0	6.6	7.0
March 1990	94.2	87.9	93.3	6.3	6.7
July 1990	94.8	88.4	93.3	6.4	6.7
November 1990	94.7	88.4	93.3	6.3	6.7
March 1991	95.3	89.2	93.6	6.1	6.4

Table 2

Telephone Penetration by State

(Percentage of Households with Telephone Service)

	1984	1990	Change		1984	1990	Change
Alabama	88.4%	89.5%	1.1%	Montana	91.0%	92.0%	1.1%
Alaska	86.5	89.3	2.8	Nebraska	95.7	96.2	0.5
Arizona	86.9	93.0	6.0*	Nevada	90.4	92.6	2.3
Arkansas	86.6	88.7	2.2	New Hampshire	94.3	95.0	0.7
California	92.5	94.6	2.1*	New Jersey	94.8	94.7	-0.1
Colorado	93.2	94.7	1.4	New Mexico	82.0	85.8	3.7*
Connecticut	95.5	97.1	1.6	New York	91.8	91.1	-0.7
Delaware	94.3	96.0	1.7	North Carolina	88.3	91.9	3.7*
District of Columbia	94.9	91.4	-3.4*	North Dakota	94.6	97.0	2.3*
Florida	88.7	93.0	4.3*	Ohio	92.4	95.2	2.7*
Georgia	86.2	90.9	4.7*	Oklahoma	90.3	89.5	-0.8
Hawaii	93.5	95.3	1.8*	Oregon	90.6	94.5	3.9*
Idaho	90.7	92.8	2.1	Pennsylvania	94.9	96.9	2.0*
Illinois	94.2	94.3	0.1	Rhode Island	93.6	95.6	2.0*
Indiana	91.6	92.8	1.3	South Carolina	83.7	90.2	6.5*
Iowa	96.2	96.1	-0.1	South Dakota	93.2	93.4	0.2
Kansas	94.3	95.4	1.1	Tennessee	88.5	91.6	3.1*
Kentucky	88.1	89.1	1.0	Texas	88.4	89.4	1.0
Louisiana	89.7	89.4	-0.3	Utah	92.5	95.6	3.1*
Maine	93.4	95.7	2.3*	Vermont	92.3	94.9	2.7
Maryland	95.7	95.4	-0.3	Virginia	93.1	93.0	-0.0
Massachusetts	95.9	96.6	0.8	Washington	93.0	97.1	4.0*
Michigan	92.8	94.1	1.3	West Virginia	87.7	87.6	-0.1
Minnesota	95.8	96.9	1.1	Wisconsin	95.2	96.9	1.6
Mississippi	82.4	87.0	4.6*	Wyoming	89.9	94.1	4.3*
Missouri	91.5	92.0	0.6				
Total United States	91.6	93.3	1.7*				

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

CHANGES IN THE PRICE OF 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 average American household now spends about as much on long distance service as on local service and the Consumer Expenditure Survey, which is used to provide weights for consumer price indexes, indicates that telephone service accounts for about 2% of total consumer expenditures. This percentage has remained virtually unchanged over the past 15 years, during which there have been major changes in the telephone industry and in telephone usage. The following sections illustrate the range of information available on price indexes and rate levels.

1. Long Term Trends in Prices:

A price index for telephone services 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. The price of telephone service has increased less rapidly than almost any other category when viewed over a long period of time.

Table 3

Long Term Trends in Prices
(Annual Rate of Change For Various Price Indexes)

	1935 to 1990	1980 to 1990
CPI all goods and services	4.2%	4.7%
CPI all services	4.6	6.0
CPI telephone services	2.1	4.2
CPI major categories		
- food & beverages	*	4.3
- housing	*	4.7
- apparel & upkeep	3.3	3.2
- transportation	4.0	3.8
- medical care	5.2	8.1
- entertainment	*	4.7
- other goods & services	*	7.8
CPI public transportation	5.1	7.5
CPI piped gas	3.8	4.0
CPI electricity	2.4	4.5
CPI sewer & water maintenance	*	7.3

* Series not established until after 1935.

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. Changes in telephone prices tend to lag behind other price changes. Overall inflation in the American economy peaked in 1979 and 1980. In contrast, the price of telephone services rose most rapidly during the years 1981 through 1984. The annual rate of change is shown in Table 4 for the Gross National Product fixed weight price index (which reflects inflation throughout the economy), the overall CPI (which measures the impact of inflation on consumers), and the CPI for telephone services.

Table 4

Annual Rate of Change in Major Price Indexes

	GNP 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	3.9	3.8	3.6
1984	3.7	3.9	9.2
1985	3.6	3.8	4.7
1986	2.3	1.1	2.7
1987	3.8	4.4	-1.3
1988	4.6	4.4	1.3
1989	4.0	4.6	-0.3
1990	4.8	6.1	-0.4
1991	4.2*	4.7**	1.3**

* Measured second quarter through second quarter.

** Measured June through June.

3. Price Indexes for Local Service:

The Bureau of Labor Statistics publishes a number of price indexes related to local telephone service. The price indexes indicate percentage changes in the price of telephone services. The BLS does not publish the actual level of rates. 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, enhanced services (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 and all other expenditures. The annual rates of change for these two indexes of local costs are presented in Table 5.

Table 5

Annual Rate of Change in Price Indexes
For Local Telephone Service

	CPI: All Local Charges	PPI: Monthly Service Charges For Residential Service
1978	1.4%	3.1%
1979	1.7	1.6
1980	7.0	7.1
1981	12.6	15.6
1982	10.8	9.0
1983	3.1	0.2
1984	17.2	10.4
1985	8.9	12.4
1986	7.1	8.9
1987	3.3	2.6
1988	4.5	4.6
1989	0.6	1.9
1990	1.0	1.5
1991*	2.9	2.5

* Measured June through June.

4. Price Indexes for Long Distance Service:

CPI data is available for intrastate toll and interstate toll services since December 1977. Table 6 presents the annual changes in these series.

Table 6

Annual Rate of Change in Price Indexes
For Long Distance Service

	CPI: Interstate Toll calls	CPI: Intrastate Toll calls
1978	-0.8%	1.3%
1979	-0.7	0.1
1980	3.4	- 0.6
1981	14.6	6.2
1982	2.6	4.2
1983	1.5	7.4
1984	-4.3	3.6
1985	-3.7	0.6
1986	-9.4	0.3
1987	-12.4	-3.0
1988	-4.2	-4.2
1989	-1.3	-2.6
1990	-3.7	-2.2
1991	-2.2	-2.3

* Measured June through June.

5. Local Rate Levels:

Local rates are regulated by state public utility commissions and vary so much from area to area that it is hard to characterize any rate as "typical". In most states, the Bell Operating Companies and larger independents charge higher rates in metropolitan areas than in rural areas -- a pricing practice that dates back to the turn of the century and is traditionally justified in the belief that the value of the service provided is higher for subscribers with larger local calling areas. California differs from most states in that rates for residential customers are averaged throughout the state. There, the basic local rate is $8.35 for areas served by Pacific Bell and $9.75 for areas served by General of California.

Table 7 presents average local rates for residential customers. They are based on surveys using the same sampling areas and weights used by the BLS in constructing the Consumer Price Index. In October 1990, the national average for flat rate residential service was $17.78 monthly, including taxes and subscriber line charges (SLCs). 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 1990, the national average for the lowest generally available recurring charge was $5.66. The average minimum monthly bill, including subscriber line charges and taxes, was $10.35.

Table 7

Average Monthly Residential Rates
(in October of each year)

	1983	1984	1985	1986	1987	1988	1989	1990
Unlimited Local Calling	$10.50	$12.10	$12.17	$12.58	$12.44	$12.32	$12.30	$12.40
SLCs	.00	.00	1.01	2.04	2.66	2.67	3.53	3.55
Taxes	1.08	1.25	1.36	1.51	1.56	1.58	1.70	1.83
Total	11.58	13.35	14.54	16.13	16.66	16.57	17.53	17.78
Lowest Rate *	$ 5.37	$ 5.62	$ 5.75	$ 5.96	$ 5.81	$ 5.67	$ 5.67	5.66
SLCs	.00	1.01	2.04	2.66	2.67	2.67	3.53	3.55
Taxes	.56	.58	.70	.84	.94	.91	1.03	1.14
Total	5.93	6.20	7.46	8.84	9.41	9.25	10.23	10.35
Connection Charge	$35.01	$43.71	$44.32	$45.63	$44.04	$42.94	$42.71	43.02
Taxes	1.75	2.19	2.22	2.28	2.20	2.11	2.24	2.37
Total	36.76	45.90	46.54	47.91	46.24	45.05	44.95	45.39

* Reflects only service offerings available to the general public. Does not include "lifeline" prices restricted to low income subscribers.

Table 8 shows rates for a single-line business customer. These rates are representative of local access costs for small businesses.

Table 8

Average Monthly Single-line Business Rates
(in October of each year)

	1983	1984	1985	1986	1987	1988	1989	1990
Rate *	$29.16	$32.74	$33.42	$34.26	$33.71	$34.48	$33.49	$33.28
SLCs	.00	.00	1.01	2.04	2.68	2.69	3.55	3.57
Taxes	3.35	3.77	3.96	4.17	4.18	3.95	4.21	4.24
Total	33.51	36.51	38.39	40.47	40.57	40.12	41.25	41.09
Connection Charge**	$56.04	$68.84	$70.82	$79.94	$72.15	$72.51	$72.75	$73.33
Taxes	3.08	3.79	3.90	4.01	3.97	3.92	4.06	4.16
Total	59.12	72.63	74.72	76.95	76.12	76.43	76.81	77.49

* The "representative" rate is the monthly single-line rate for touch tone service with unlimited service where offered, and the measured service rate with 200 messages in other cities.

** Includes charges for touch tone service.

6. Long Distance Rates:

In Table 9, the prices of several long distance calls are shown based on AT&T's tariffed rates during January 1984 and July 1991. During this period, AT&T's charges for directly dialed interstate calls have been reduced about 45% for the average residential customer.

Table 9

Changes in the Price of Directly Dialed Long Distance Calls
(AT&T Prices from Washington, D.C.)

For calls to:		Five minute calls			Ten minute calls		
		January 1984	July 1991	Percentage change	January 1984	July 1991	Percentage change
New York City*	Day	$2.14	$1.04	-51.4%	$4.09	$2.09	-48.9%
	Evening	1.28	.72	-43.7	2.45	1.45	-40.8
	Night	.85	.61	-28.2	1.63	1.22	-25.2
Atlanta & Chicago**	Day	2.34	1.15	-50.9	4.49	2.30	-48.8
	Evening	1.40	.74	-47.1	2.69	1.49	-44.6
	Night	.93	.65	-30.1	1.79	1.30	-27.4
Los Angeles***	Day	2.70	1.22	-54.8	5.15	2.45	-52.4
	Evening	1.62	.74	-54.3	3.09	1.49	-51.8
	Night	1.08	.67	-38.0	2.06	1.35	-34.5

* The prices shown for calls between New York City and Washington, D.C. apply to all calls with distances between 125 and 292 miles.

** The prices shown apply to all calls with distances between 431 and 925 miles.

*** The prices shown apply to all calls with distances between 1911 and 3000 miles.

CONSUMER EXPENDITURES:

The Bureau of Labor Statistics conducts surveys of consumer expenditures, in part, to develop weights for CPI indexes. Table 10 shows expenditures for telephone service for all consumer units. Average expenditures per household increased from $325 in 1980 to $567 in 1989. About 2.0% of all consumer expenditures are devoted to telephone service. The percentage has remained fairly constant since 1980, and is slightly below the 2.2% found in earlier BLS studies of the 1972-1973 period.

The information on average telephone expenditures can be used to estimate average monthly residential bills. This average was about $50 per month in 1989. Since 1980, expenditures for toll service have increased by about 5% per year while long distance rates were falling. This suggests that residential use of toll service has grown by about 10% per year.

Table 10

Annual Expenditures on Telephone Service
(Average for all Households)

Year	Telephone Expenditures	Percentage of Total Expenditures
1980	$325	1.9%
1981	360	2.1
1982	375	2.1
1983	415	2.1
1984	435	2.0
1985	455	1.9
1986	471	2.0
1987	499	2.0
1988	537	2.1
1989	567	2.0

Table 11

Monthly Expenditures for Telephone Service
(for Households with Telephone Service)

Year	Basic Local Service *	Toll and Other **	Total
1980	$8.70	$20.90	$29.60
1981	9.70	23.10	32.80
1982	10.80	23.40	34.20
1983	11.60	26.20	37.80
1984	13.40	26.20	39.60
1985	14.50	26.80	41.30
1986	16.10	26.40	42.50
1987	16.70	28.40	45.10
1988	16.60	31.70	48.30
1989	17.50	33.30	50.80
Growth Rate ***	8.4%	4.6%	5.8%

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

** Primarily toll services. Also includes charges for equipment, additional access lines, connection, touch tone, call waiting, "900 service", directory listings, etc.

*** Calculated using exponential regression.

STATE TELEPHONE RATE CASES:

The actions of state regulatory commissions provide important indicators of future rate changes. Rate cases completed by the state commissions tend 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, provides an indicator of future rate changes.

At the beginning of 1984, rate cases pending before state public utility commissions totaled nearly $7 billion dollars. During the first half of that year, state commissions completed action on a number of extraordinarily large rate cases. After the first half of 1984, the level of activity in state cases diminished substantially. Since 1987, the dollar amount of rate reductions and refunds ordered by state commissions has exceeded the dollar amount of rate increases authorized. The total amount of rate increases pending before public utility commissions is only about $220 million. Since it typically takes more than a year for a rate case to be completed, the low level of pending cases -- viewed in conjunction with the recent reductions ordered by state commissions -- should indicate a low level of state and local rate changes during at least the next year.

TABLE 12
State Telephone Rate Cases
(Millions of Dollars)

	Revenue Increases Requested During Quarter	Revenue Changes Ordered During Quarter	Requested Increases Pending at End of Quarter
1984 First quarter	$ 627.7	$ 1,175.6	$ 4,851.9
Second quarter	93.7	2,054.2	1,675.6
Third quarter	2,242.9	284.5	3,387.5
Fourth quarter	1,059.4	361.2	3,672.3
Total	4,023.7	3,875.5	
1985 First quarter	976.6	246.3	3,779.0
Second quarter	172.4	314.8	3,316.3
Third quarter	108.3	286.5	2,664.2
Fourth quarter	369.9	307.3	1,437.3
Total	1,627.2	1,154.9	
1986 First quarter	155.1	58.0	766.2
Second quarter	249.9	57.9	362.0
Third quarter	230.0	173.3	315.7
Fourth quarter	8.7	.8	322.6
Total	643.7	290.0	
1987 First quarter	7.0	-33.1	67.1
Second quarter	19.4	-112.0	47.7
Third quarter	62.0	-94.0	94.0
Fourth quarter	57.9	-279.9	124.7
Total	146.3	-519.0	
1988 First quarter	46.4	-215.3	148.5
Second quarter	155.2	-232.4	301.6
Third quarter	140.9	-387.8	377.0
Fourth quarter	15.4	-530.9	198.5
Total	357.9	-1,366.4	
1989 First quarter	52.1	-203.7	140.6
Second quarter	25.8	-107.6	148.7
Third quarter	362.9	-48.9	490.4
Fourth quarter	6.2	-478.3	419.5
Total	447.0	-838.5	
1990 First quarter	897.8	-134.6	903.6
Second quarter	58.3	-109.9	955.1
Third quarter	129.3	-316.9	1,066.8
Fourth quarter	23.8	110.3	258.6
Total	1,109.2	-451.1	
1991 First quarter	184.3	2.8	372.4
Second quarter	2.1	7.9	219.2

CHANGES IN TECHNOLOGY AND EQUAL ACCESS:

1. Central Office Technology:

During the 1980's, the Bell Operating Companies replaced most of their older "electromechanical" switches with newer equipment. The newer offices use computers to switch calls. 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. About half of the Bell company 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 is shown in Table 13.

The use of digital technology has allowed local telephone companies to equip most 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 to develop standards for 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. ISDN, however, has not yet been deployed except on an experimental basis. The number of offices and lines equipped for these features are shown in Table 14.

Table 13

Central Offices and Access Lines by Technology:

All Bell Operating Companies

Year	Total Offices	Electromechanical 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	9,229	6,668	72.3	2,536	27.5	25	0.3
1982	9,207	6,381	69.3	2,741	29.8	85	0.9
1983	9,196	6,102	66.4	2,916	31.7	178	1.9
1984	9,145	5,743	62.8	3,048	33.3	354	3.9
1985	9,169	5,275	57.5	3,022	33.0	872	9.5
1986	9,181	4,605	50.2	2,920	31.8	1,656	18.0
1987	9,237	3,853	41.7	2,820	30.5	2,564	27.8
1988	9,348	3,068	32.8	2,674	28.6	3,606	38.6
1989*	9,389	2,457	26.2	2,493	26.6	4,439	47.3
1990*	9,406	1,746	18.6	2,278	24.2	5,382	57.2
1991*	9,393	1,243	13.2	2,124	22.6	6,026	64.2
1992*	9,373	870	9.3	1,989	21.2	6,514	69.5
1993*	9,375	705	7.5	1,866	19.9	6,804	72.6
1994*	9,366	556	5.9	1,736	18.5	7,074	75.5

Thousands of Access Lines Served

Year	Total Lines	Electromechanical Lines	%	Analog Stored Program Control Lines	%	Digital Stored Program Control Lines	%
1980	80,234	45,039	56.1%	35,191	43.9%	4	0.0%
1981	82,709	40,809	49.3	41,847	50.6	53	0.1
1982	83,716	36,954	44.1	46,566	55.6	196	0.2
1983	85,924	32,763	38.1	52,674	61.3	488	0.6
1984	88,546	30,180	34.1	56,333	63.6	2,033	2.3
1985	91,442	25,651	28.1	58,759	64.3	7,033	7.7
1986	93,863	20,053	21.4	59,421	63.3	14,390	15.3
1987	96,654	14,496	15.0	59,506	61.6	22,653	23.4
1988	99,524	8,972	9.0	59,716	60.0	30,835	31.0
1989*	102,648	5,933	5.8	58,845	57.3	37,870	36.9
1990*	105,844	3,345	3.2	56,954	53.8	45,454	43.0
1991*	109,228	2,121	1.9	55,459	50.8	51,647	47.3
1992*	112,476	1,301	1.2	53,558	47.6	57,617	51.2
1993*	115,700	1,076	0.9	51,970	44.9	62,654	54.2
1994*	118,961	853	0.7	50,081	42.1	68,028	57.2

* Projected in CC Docket 89-624.

Table 14

Features Available in Central Offices:

All Bell Operating Companies

Year	Total Offices	Equal Access Offices	%	Signaling System 7 Offices	%	ISDN Offices	%
1980	9,195	0	0.0%	0	0.0%	0	0.0%
1981	9,229	0	0.0	0	0.0	0	0.0
1982	9,207	0	0.0	0	0.0	0	0.0
1983	9,196	0	0.0	0	0.0	0	0.0
1984	9,145	124	1.4	0	0.0	0	0.0
1985	9,169	1,934	21.1	0	0.0	0	0.0
1986	9,181	3,637	39.6	0	0.0	0	0.0
1987	9,237	4,839	52.4	29	0.3	4	0.0
1988	9,348	6,089	65.1	435	4.7	82	0.9
1989*	9,389	6,810	72.5	950	10.1	179	1.9
1990*	9,406	7,559	80.4	2,083	22.1	426	4.5
1991*	9,393	7,987	85.0	3,087	32.9	1,595	17.0
1992*	9,373	8,295	88.5	4,101	43.8	1,764	18.8
1993*	9,375	8,472	90.4	4,895	52.2	1,962	20.9
1994*	9,366	8,625	92.1	5,362	57.2	2,269	24.2

Thousands of Equipped Access Lines

Year	Total Lines	Equal Access Lines	%	Signaling System 7 Lines	%	ISDN Lines	%
1980	80,234	0	0.0%	0	0.0%	0	0.0%
1981	82,709	0	0.0	0	0.0	0	0.0
1982	83,716	0	0.0	0	0.0	0	0.0
1983	85,924	0	0.0	0	0.0	0	0.0
1984	88,546	3,528	4.0	0	0.0	0	0.0
1985	91,442	46,688	51.1	0	0.0	0	0.0
1986	93,863	69,957	74.5	0	0.0	0	0.0
1987	96,654	81,381	84.2	1,035	1.1	1	0.0
1988	99,524	91,565	92.0	10,325	10.4	43	0.0
1989*	102,648	97,181	94.7	21,555	21.0	99	0.1
1990*	105,844	102,639	97.0	36,706	34.7	496	0.5
1991*	109,228	106,728	97.7	52,250	47.8	1,059	1.0
1992*	112,476	110,548	98.3	66,394	59.0	1,370	1.2
1993*	115,700	114,246	98.7	78,645	68.0	1,888	1.6
1994*	118,961	117,778	99.0	86,964	73.1	2,218	1.9

* Projected in CC Docket 89-624.

2. Equal Access:

The Bell Operating Companies serve about 80% 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 process began in 1984 and the Bell Operating Companies have converted well over 95% of their lines to equal access. The remaining lines are at smaller, older offices where equal access is being provided when the offices are converted to more modern equipment. Independent telephone companies, which serve 20% of the nation's lines, are converting offices to equal access at a less rapid pace. Overall, about 90% of the nation's telephone lines have been converted to equal access.

TABLE 15

Equal Access Conversion Schedule
(Percentage of Lines Converted)

Date	Bell Companies	Other Large Companies*	Small Companies	Total Industry
3Q84	1.1%	0.0%	0.0%	0.9%
4Q84	3.8	1.5	0.0	3.2
1Q85	12.1	2.4	0.0	9.8
2Q85	26.9	3.7	0.0	21.4
3Q85	43.0	4.0	0.0	34.0
4Q85	50.9	4.9	0.5	40.2
1Q86	56.8	11.9	2.7	46.0
2Q86	61.9	18.4	4.0	51.0
3Q86	71.5	27.4	5.9	59.9
4Q86	74.3	38.3	7.1	63.8
1Q87	76.4	45.3	9.1	66.6
2Q87	77.7	50.9	10.9	68.7
3Q87	80.4	57.9	12.7	72.0
4Q87	84.7	64.0	14.9	76.3
1Q88	86.5	66.2	15.8	78.1
2Q88	87.4	68.5	17.3	79.3
3Q88	88.5	71.3	18.6	80.6
4Q88	91.3	74.1	20.3	83.4
1Q89	92.6	76.5	22.0	84.8
2Q89	93.4	77.6	23.1	85.7
3Q89	94.1	79.1	24.3	86.5
4Q89	95.2	80.9	25.5	87.7
1Q90	95.7	81.9	26.5	88.4
2Q90	96.0	83.3	29.0	89.0
3Q90	96.4	83.8	30.3	89.5
4Q90	96.9	85.6	33.1	90.4
1Q91	97.1	85.9	33.8	90.6
2Q91	97.2	86.5	35.3	90.9

* Companies with $100 million in annual operating revenues.

TELEPHONE LINES AND CALLING VOLUMES:

1. 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 local loops during each of the most recent 10 years for which data is available. 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.

There are about 1400 local telephone companies in the United States. Table 17 shows the number of companies and the number of switched access lines in each state.

Table 16

Total U.S. Telephone Lines
(Local Loops)

	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	116,042,281	3.1
1986	118,345,686	2.0
1987	123,010,150	3.9
1988	127,217,947	3.4
1989	131,570,300	3.4

* Not Available

Table 17

Local Telephone Companies and Access Lines
(June 30, 1990)

State	Study Areas	Bell Company Lines	Other Company Lines	Total Lines
Alabama	30	1,439,723	360,666	1,800,389
Alaska	25	0	261,561	261,561
Arizona	10	1,705,927	99,002	1,804,929
Arkansas	28	706,635	333,960	1,040,595
California	22	13,442,343	3,646,756	17,089,099
Colorado	27	1,799,056	35,896	1,834,952
Connecticut	2	0	1,842,996	1,842,996
Delaware	1	383,025	0	383,025
District of Col.	1	770,284	0	770,284
Florida	13	4,343,021	3,027,972	7,370,993
Georgia	36	2,670,280	522,658	3,192,938
Hawaii	1	0	516,676	516,676
Idaho	20	348,769	108,717	457,486
Illinois	56	5,084,339	1,084,935	6,169,274
Indiana	42	1,623,593	1.015,917	2,639,510
Iowa	153	876,157	468,220	1,344,377
Kansas	40	1,024,701	214,577	1,239,278
Kentucky	19	917,994	664,148	1,582,142
Louisiana	20	1,721,281	134,084	1,855,365
Maine	19	549,009	99,839	648,848
Maryland	2	2,625,344	4,543	2,629,887
Massachusetts	3	3,496,412	3,356	3,499,768
Michigan	38	4,056,995	728,335	4,785,330
Minnesota	91	1,728,521	545,751	2,274,272
Mississippi	20	938,782	61,234	1,000,016
Missouri	44	1,934,279	614,877	2,549,156
Montana	17	302,876	84,853	387,729
Nebraska	42	391,260	369,776	761,036
Nevada	13	208,517	477,475	685,992
New Hampshire	12	578,902	38,037	616,939
New Jersey	3	4,716,736	148,471	4,865,207
New Mexico	14	571,114	93,576	664,690
New York	45	9,077,060	1,005,252	10,082,312
North Carolina	28	1,631,916	1,642,900	3,274,816
North Dakota	24	229,652	91,613	321,265
Ohio	44	3,092,951	2,123,471	5,216,422
Oklahoma	39	1,251,816	268,517	1,520,333
Oregon	34	974,065	451,619	1,425,684
Pennsylvania	39	4,889,279	1,405,844	6,295,123
Puerto Rico	2	0	919,428	919,428
Rhode Island	1	527,504	0	527,504

Table 17
Continued

Local Telephone Companies and Access Lines
(June 30, 1990)

State	Study Areas	Bell Company Lines	Other Company Lines	Total Lines
South Carolina	28	1,057,623	515,074	1,572,697
South Dakota	31	239,462	71,515	310,977
Tennessee	25	1,893,846	456,723	2,350,569
Texas	60	6,359,854	1,804,601	8,164,455
Utah	13	688,762	29,221	717,983
Vermont	9	0	43,067	43,067
Virgin Islands	1	261,430	49,110	310,540
Virginia	20	2,397,369	767,260	3,164,629
Washington	23	1,818,709	745,264	2,563,973
West Virginia	10	604,389	124,245	728,634
Wisconsin	95	1,641,001	833,191	2,474,192
Wyoming	11	209,984	17,689	227,673
National Totals	1,446*	99,802,547	30,974,468	130,777,015

* A "study area" is a telephone company's service area in a particular state. Companies that serve more than one state have a study area in each state. The number of study areas therefore overstates the total number of operating companies. There are about 1400 operating companies.

2. Minutes of Calling:

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 18. 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 has surged as prices have fallen. As a result, an ever greater portion of calls are long distance. By 1989, 14% of all minutes were interstate compared with fewer than 8% at the beginning of the decade.

Table 18

Dial Equipment Minutes

(Billions of Minutes)

	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	1,717	254	296	2,267
1988	1,796	268	321	2,385
1989	1,829	287	344	2,460

(Increase over Prior Year)

1981	2.3%	6.9%	7.8%	3.1%
1982	3.2	5.0	7.3	3.7
1983	3.1	5.1	9.6	3.8
1984	3.2	19.2	22.9	6.3
1985	2.1	12.2	20.2	4.9
1986	1.6	6.5	8.0	2.9
1987	1.0	7.2	9.3	2.7
1988	4.6	5.5	8.6	5.2
1989	1.8	7.0	7.3	3.1

(Percentage Distribution)

1980	84.2%	8.1%	7.7%	100.0%
1981	83.5	8.4	8.1	100.0
1982	83.1	8.5	8.3	100.0
1983	82.5	8.6	8.8	100.0
1984	80.1	9.7	10.2	100.0
1985	78.0	10.4	11.7	100.0
1986	77.0	10.7	12.3	100.0
1987	75.8	11.2	13.0	100.0
1988	75.3	11.2	13.5	100.0
1989	74.3	11.7	14.0	100.0

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.

Table 19 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 (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 continues. Telephone industry traffic experts usually 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 DEM minutes.

Table 19

Interstate Switched Access Minutes
(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 Qurter	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	72.8	1.8	74.6
Second Quarter	73.9	1.8	75.7
Third Quarter	76.0	1.8	77.8
Fourth Quarter	77.5	1.6	79.1
1991 First Quarter	77.7	1.4	79.1
Increase over Prior Year:			
1986	18.3%	-41.0%	9.5%
1987	21.0	-19.2	17.8
1988	15.5	-22.0	13.4
1989	14.3	-13.0	13.2
1990	11.6	-12.5	10.9

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 three digit Carrier Identification Code so that traffic can be efficiently routed.

We believe 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. In 1986, however, a number of corporations, government agencies and other organizations began to buy access for their own use, rather than for the purpose of providing telecommunications services to others.

Table 20

Number of Firms with Carrier Identification Codes

June 30, 1982:	13	June 30, 1987:	397
December 31, 1982:	11	December 31, 1987:	451
June 30, 1983:	25	June 30, 1988:	489
December 31, 1983:	42	December 31, 1988:	493
June 30, 1984:	65	June 30, 1989:	544
December 31, 1984:	123	December 31, 1989:	577
June 30, 1985:	179	June 30, 1990:	611
December 31, 1985:	217	December 31, 1990:	601
June 30, 1986:	276	June 30, 1991:	597
December 31, 1986:	334		

The exact number of long distance carriers is difficult to determine for several reasons: Many carriers have similar names. Some carriers use different names in different regions. Smaller telecommunications firms seem to experience the high turnover rates experienced by other small businesses. The billing records from which the data is compiled are not always corrected to reflect changed corporate names and mergers. Some billing systems do not distinguish between carriers and other access purchasers. Using several sources, we have tried to make the best judgement in putting together the following tables. Prior to 1990, we did not attempt to identify and eliminate the small number of non-carriers from the data. However, we have attempted to do so beginning with the data for March 1990.

Table 21 shows the number of long distance carriers that purchase access from Bell Operating Companies. Information is provided for 47 states and the District of Columbia. Three states -- Alaska, Connecticut, and Hawaii -- are not served by the Bell Operating Companies. Long distance carriers that serve only those states are not included in the table.

Table 21

Long Distance Telephone Carriers and other Companies Purchasing Access From Bell Operating Companies

	Total Purchasers of Equal Access	Carriers Purchasing Equal Access	Total Purchasers of Switched Access	Carriers Purchasing Switched Access
1986				
March	169	*	*	*
June	183	*	*	*
September	190	*	506	*
December	210	*	533	*
1987				
March	211	*	561	*
June	213	*	*	*
September	224	*	*	*
December	239	**	540	*
1988				*
March	238	*	511	*
June	248	**	519	*
September	256	*	506	*
December	266	**	510	*
1989				
March	274	*	519	*
June	287	**	*	*
September	304	*	*	*
December	318	**	514	*
1990				
March	295	289	512	466
June	294	288	506	460
September	311	304	511	462
December	311	304	499	448
1991				
March	314	306	505	446

* Data not available.

** Data is not available from the lists of carriers purchasing access that are used in the preparation of this table. Data on the number of carriers with "presubscribed lines" is available for these dates and should be nearly identical to the number of carriers purchasing equal access. See Table 27.

Most small 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 22 shows the evolution of larger carriers that purchase equal access.

Table 22

Number of Carriers Purchasing Equal Access in Four or more States*

	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

* The data in this table is calculated based on the number of carriers purchasing equal access from Bell Operating Companies. Including carriers buying all forms of switched access yields the following results: 7 carriers serve 45 or more states and another 16 serve at least 25 states; 28 carriers serve 12 to 24 states and another 58 serve at least 4 states. Thus, the total number of carriers serving 4 or more states in March 1991 was 109.

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 far smaller than the number of long distance carriers that purchase access somewhere in the state. Since the larger long distance carriers serve many states, they are recorded as purchasing access in each state. Because of this, the state figures can not be added to estimate a national total of long distance carriers.

Table 23

Carriers Purchasing Access
From Bell Operating Companies: March 1991

State	Switched Access	Equal Access	State	Switched Access	Equal Access
Alabama	28	15	Nebraska	31	20
Arizona	50	32	Nevada	24	20
Arkansas	24	16	New Hampshire	15	13
California	87	41	New Jersey	75	36
Colorado	76	39	New Mexico	37	25
Delaware	17	5	New York	106	42
District of Columbia	71	32	North Carolina	35	16
Florida	63	32	North Dakota	23	13
Georgia	65	25	Ohio	66	33
Idaho	22	15	Oklahoma	44	25
Illinois	88	37	Oregon	40	22
Indiana	51	25	Pennsylvania	81	36
Iowa	32	19	Rhode Island	23	14
Kansas	29	16	South Carolina	30	14
Kentucky	30	18	South Dakota	27	16
Louisiana	40	22	Tennessee	49	27
Maine	13	11	Texas	129	80
Maryland	50	25	Utah	35	18
Massachusetts	52	24	Vermont	12	11
Michigan	63	27	Virginia	40	25
Minnesota	63	28	Washington	46	25
Mississippi	26	13	West Virginia	14	11
Missouri	56	22	Wisconsin	53	31
Montana	22	14	Wyoming	23	12
			Unduplicated Total	446	306

In January 1991, tariffs were filed by about 300 providers of operator services as required by the Telephone Operator Consumer Services Improvement Act of 1990. About 50 of these tariffs were filed by long distance carriers that have been identified as purchasing access or having presubscribed lines. The remaining tariffs were filed by firms we had not previously identified. Thus, it appears that most firms providing operator services are operating as resellers without purchasing access. At the same time,

most of the carriers purchasing access in order to provide long distance service do not provide operator services.

LONG DISTANCE MARKET SHARES:

1. Minutes of Interstate Calling

Table 24 shows interstate access minutes handled by AT&T, by other carriers, and industry totals. For the period since mid-1984, industry traffic volume has grown at an annual rate of 12%. AT&T's traffic has grown at a rate slower than the industry average and the remaining traffic, handled by all other carriers, grew at a rapid rate -- averaging over 25% per year.

The result of an AT&T growth rate slower than the industry average has been a declining market share for AT&T. AT&T's market share is shown in Table 25. AT&T's share of the overall market for interstate switched minutes declined from over 80% in late 1984 to 63% in the first quarter of 1991. At the same time, its share of the premium market has declined from virtually 100% in late 1984 (the first scattered offices began to be converted to equal access in the summer of 1984) to about 64%.

Table 24

Interstate Switched Access Minutes
(in Billions)

		AT&T	Other Carriers	Total Industry
1984:	Third Quarter	31.6	5.9	37.5
	Fourth Quarter	31.8	7.8	39.6
1985:	First Quarter	32.8	6.7	39.6
	Second Quarter	33.3	8.2	41.5
	Third Quarter	33.8	9.0	42.8
	Fourth Quarter	33.4	9.9	43.3
1986:	First Quarter	34.2	8.8	43.0
	Second Quarter	34.7	10.1	44.8
	Third Quarter	35.8	10.9	46.7
	Fourth Quarter	35.9	12.6	48.5
1987:	First Quarter	37.4	13.9	51.2
	Second Quarter	38.6	13.8	52.5
	Third Quarter	39.2	15.9	55.0
	Fourth Quarter	40.1	16.9	57.0
1988:	First Quarter	41.2	17.8	59.0
	Second Quarter	41.1	18.5	59.6
	Third Quarter	42.3	19.8	62.1
	Fourth Quarter	43.0	21.0	64.0
1989:	First Quarter	44.2	22.0	66.2
	Second Quarter	44.4	24.1	68.5
	Third Quarter	44.9	24.8	69.7
	Fourth Quarter	46.4	26.2	72.6
1990:	First Quarter	47.1	27.5	74.6
	Second Quarter	47.1	28.6	75.7
	Third Quarter	48.7	29.1	77.8
	Fourth Quarter	49.8	29.4	79.1
1991	First Quarter	49.9	29.2	79.1
Increase over Prior Year:				
	1986	5.5%	25.6%	9.5%
	1987	10.5	42.2	17.8
	1988	7.9	27.5	13.4
	1989	7.3	25.9	13.2
	1990	7.1	18.0	10.9

Table 25

AT&T 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	64.7	63.1
	Second Quarter	63.7	62.2
	Third Quarter	64.0	62.6
	Fourth Quarter	64.2	62.9
1991:	First Quarter	64.3	63.1

2. Total Toll Revenues

Long distance telephone companies with over $100 million in annual revenues report their annual revenues to the FCC. The revenues reported include both interstate and intrastate revenues. For most carriers, no information is available that separates interstate from intrastate service. In 1990, services provided by long distance carriers generated more than $50 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. Indeed, AT&T's total toll revenues have declined slightly since 1985 because the growth in calling volume was not sufficient to offset the effect of lower prices.

Long distance revenues are shown in Table 26. During 1984, AT&T's toll revenues of $35 billion accounted for about 90% of the revenues received by all long distance carriers. By 1990, with its revenues virtually unchanged, its share of total revenues had fallen to 65%. AT&T's share of revenue exceeds its share of minutes due primarily to the provision of a larger proportion of operator handled and international calls (both of which bear higher prices than ordinary direct dial calls).

The largest local telephone companies, which provide a substantial amount of intrastate toll service, also file annual reports with the Commission. The total toll market, including the short haul toll traffic handled entirely by local telephone companies, exceeded $65 billion in 1990, with AT&T accounting for 50% of the total.

TABLE 26–TOTAL TOLL SERVICE REVENUES
(DOLLAR AMOUNTS SHOWN IN MILLIONS)

COMPANY	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990
AT&T COMMUNICATIONS				$34,935	$36,770	$36,514	$35,219	$35,407	$34,549	$33,880
MCI TELECOMMUNICATIONS 1/	$413	$802	$1,326	1,761	2,331	3,372	3,938	4,886	6,171	7,392
(TELECOM*USA)				105	201	291	396	524	713	
US SPRINT 2/						1,141	2,592	3,405	4,320	5,041
(GTE SPRINT)	231	393	740	1,052	1,122	779				
(US TELECOM)					387	212				
METROMEDIA COMMUNICATIONS CORP. 3/									127	381
(ITT COMMUNICATION SERVICES, INC.)	83	128	163	161	241	282	287	379	404	
WILLIAMS TELECOMMUNICATIONS GROUP									300	376
CABLE & WIRELESS					146	171	180	218	275	359
ADVANCED TELECOMMUNICATIONS CORP.				72	86	124	162	178	326	342
ALLNET 4/					309	450	395	394	334	326
(LEXITEL)					127					
TELESPHERE NETWORK, INC. 5/									192	293
(NATIONAL TELEPHONE SERVICES, INC.)									150	
ALASCOM	191	238	257	255	271	267	262	272	278	259
INTERNATIONAL TELECHARGE, INC.									275	230
LITEL TELECOMMUNICATIONS, INC.									197	215
LDDS COMMUNICATIONS, INC.									110	154
RCI CORPORATION/RCI NETWORK SERVICES								–	104	142
COMSYSTEMS NETWORK SERVICES										130
OTHERS 6/	144	263	443	414	639	992	1,352	1,823	2,359	2,582
TOTAL LONG DISTANCE CARRIERS				38,755	42,630	44,595	44,783	47,487	51,184	52,102
AT&T COMMUNICATIONS SHARE:				90.1%	86.3%	81.9%	78.6%	74.6%	67.5%	65.0%
MCI TELECOMMUNICATIONS SHARE:				4.5%	5.5%	7.6%	8.8%	10.3%	12.1%	14.2%
US SPRINT SHARE:				2.7%	2.6%	4.3%	5.8%	7.2%	8.4%	9.7%
BELL OPERATING COMPANIES				9,037	9,026	9,599	10,268	10,668	10,549	10,578
OTHER LOCAL TELEPHONE COMPANIES				3,364	3,159	3,304	3,468	4,445	4,402	4,305
TOTAL LOCAL EXCHANGE COMPANIES				12,401	12,185	12,903	13,736	15,113	14,951	14,883
TOTAL TOLL SERVICE REVENUES 7/	39,180	43,919	46,970	51,156	54,815	57,498	58,519	62,600	66,135	66,985
AT&T COMMUNICATIONS SHARE:				68.3%	67.1%	63.5%	60.2%	56.6%	52.2%	50.6%
MCI TELECOMMUNICATIONS SHARE:				3.4%	4.3%	5.9%	6.7%	7.8%	9.3%	11.0%
US SPRINT SHARE:				2.1%	2.0%	3.3%	4.4%	5.4%	6.5%	7.5%

SOURCES: LOCAL EXCHANGE CARRIER INFORMATION DERIVED FROM USTA ANNUAL REPORTS.
AT&T COMMUNICATIONS AND ALASCOM – STATISTICS OF COMMUNICATIONS COMMON CARRIERS.
OTHER COMPANIES:
1981–1982: ANNUAL REPORT FORM P.
1983–1990: AS REPORTED PURSUANT TO FCC REPORT AND ORDER IN CC DOCKET 83–1291.

1/ MCI TELECOMMUNICATIONS AND TELECOM*USA MERGED DURING 1989. INFORMATION FOR 1990 IS COMBINED.
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.
3/ METROMEDIA COMMUNICATIONS CORP. AND ITT COMMUNICATIONS CORP. MERGED DURING 1988. INFORMATION FOR 1989 WAS REPORTED SEPARATELY; INFORMATION FOR 1990 IS COMBINED.
4/ ALLNET AND LEXITEL MERGED AT THE END OF 1985. INFORMATION FOR 1986 IS COMBINED.
5/ TELESPHERE NETWORK, INC., AND NATIONAL TELEPHONE SERVICES, INC., MERGED DURING 1989. INFORMATION FOR 1990 IS COMBINED.
6/ ESTIMATED BY FCC STAFF.
7/ WHILE TOTAL TOLL REVENUES ARE AVAILABLE PRIOR TO 1984, THE MANNER IN WHICH THEY WERE DIVIDED BETWEEN THE BELL SYSTEM AND OTHER TELEPHONE COMPANIES MAKES IT IMPOSSIBLE TO ACCURATELY DETERMINE THE AMOUNTS BILLED BY WHAT IS NOW AT&T COMMUNICATIONS, THE BELL COMPANIES, AND OTHER TELEPHONE COMPANIES.

3. "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 dialing a 7 digit local telephone number and entering a personal identification number. In areas where equal access is not yet available, all lines are considered to be presubscribed to AT&T.

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 27. -

NECA reports that, in June 1990, there were 130 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 fallen while the number of lines presubscribed to other carriers has grown rapidly. During 1990, about 76% of these lines were presubscribed to AT&T, 13% to MCI, and 6% to US Sprint. About three hundred smaller carriers, serving a total of 6 million lines, account for the remainder of the industry.

AT&T's percentage of lines is higher than its share of revenues or minutes because all lines in areas that do not yet have equal access are counted as AT&T lines. Also, many customers who make few long distance calls have not chosen an alternative carrier and, as a result, the number of calls per customer line is far lower for AT&T than for other carriers.

TABLE 27

"PRESUBSCRIBED" TELEPHONE LINES BY CARRIER

	DEC 1987	JUNE 1988	DEC 1988	JUNE 1989	DEC 1989	JUNE 1990
TOTAL NUMBER OF CARRIERS WITH PRESUBSCRIBED LINES	223	242	253	276	302	314
NUMBER OF PRESUBSCRIBED LINES:						
AT&T	101,652,678	100,832,869	100,205,677	100,006,827	99,396,609	99,612,725
MCI	9,990,561	10,941,207	12,149,921	13,671,625	15,055,643	16,864,001
US SPRINT	5,836,179	6,382,372	7,197,136	7,874,605	8,167,638	8,148,013
OTHER CARRIERS	3,987,082	4,508,967	4,808,095	5,393,478	5,862,589	6,152,276
TOTAL INDUSTRY LINES	121,466,500	122,665,415	124,360,829	126,746,535	128,482,479	130,777,015
ANNUAL CHANGE:						
AT&T	–	–	-1.42%	-0.82%	-0.81%	-0.39%
MCI	–	–	21.61%	24.96%	23.92%	23.35%
US SPRINT	–	–	23.32%	20.25%	13.48%	6.17%
OTHER CARRIERS	–	–	20.59%	19.62%	21.93%	14.07%
TOTAL INDUSTRY LINES	–	–	2.38%	3.33%	3.31%	3.18%
PERCENTAGE SHARE OF TOTAL LINES:						
AT&T	83.69%	82.20%	80.58%	78.90%	77.36%	76.17%
MCI	8.22%	8.92%	9.77%	10.79%	11.72%	12.90%
US SPRINT	4.80%	5.20%	5.79%	6.06%	6.36%	6.23%
OTHER CARRIERS	3.28%	3.68%	3.87%	4.26%	4.56%	4.70%
TOTAL INDUSTRY LINES	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%

LIFELINE ASSISTANCE 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. By early 1991, programs had been established in 48 states, the District of Columbia and the Commonwealth of Puerto Rico. The states, and the date of FCC certification for each program, are indicated in Table 28.

Table 28

Lifeline and Connection Assistance Programs:
Date of Approval*

State	Lifeline	Link Up
Alabama		10/01/87
Arizona	11/14/86	1/15/88
Arkansas	5/22/86	10/01/87
California	1/01/85**	
Colorado	5/15/90***	1/16/90***
Connecticut		11/13/87
Distict of Columbia	3/18/86	8/19/87
Florida		8/01/88
Georgia	2/25/91	5/25/90
Hawaii	10/27/86	8/07/89
Idaho	7/24/87	9/07/88
Illinois	11/08/90****	9/18/89****
Indiana		4/25/88
Iowa		3/10/88
Kansas		1/27/88
Kentucky		1/24/87
Louisiana		10/25/88
Maine	8/11/87	8/11/87
Maryland	5/22/86	10/01/87
Massachusetts	2/09/90	2/09/90
Michigan	1/24/89	1/24/89
Minnesota	1/27/88	1/27/88
Mississippi	1/14/91	4/27/88
Missouri	10/01/87	12/28/87
Montana	8/11/87	8/11/87
Nebraska		3/17/88
Nevada	4/28/87	8/16/88
New Hampshire		11/03/88
New Jersey		11/03/87
New Mexico	7/13/87	4/01/87
New York	3/14/87	3/14/87
North Carolina	5/22/86	10/19/87

Table 28
Continued

Lifeline and Connection Assistance Programs:
Date of Approval*

State	Lifeline	Link Up
North Dakota	12/24/87	12/18/89
Ohio	7/01/87	10/01/87
Oklahoma		4/09/90
Oregon	5/22/86	5/05/88
Pennsylvania		6/02/88
Puerto Rico		11/17/88
Rhode Island	9/21/87	9/21/87
South Carolina		12/24/87
South Dakota	2/25/88	2/25/88
Tennessee		11/03/88 -
Texas	4/08/88	10/01/87
Utah	12/31/86	3/17/88
Vermont	9/30/86	2/09/90
Virginia	12/24/87	12/24/87
Washington	7/24/87	8/17/90
West Virginia	7/25/86	9/11/87
Wisconsin	7/14/88	11/08/90
Wyoming	5/21/91	1/24/89

* The approval date reflects the first plan approved in each state. In some instances, several companies have received approval at different times.

** California is the only state still offering a lifeline program under Plan 1 (a 50% waiver of the Subscriber Line Charge).

*** These programs replace earlier programs terminated as a result of legislative sunset provisions.

**** Programs terminated by Illinois Commerce Commission in February 1991.

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The statistical data presented above provides a brief summary of several types of information collected by the FCC's Industry Analysis Division. In most cases, the reports underlying this summary provide a greater level of detail and are available in the Division's Public Reference Room, Room 537 at 1919 M Street, N.W. For more information, the following individuals may be contacted at (202) 632-0745:

Telephone Penetration Levels:	Alexander Belinfante
Prices and Rates:	Jim Lande
State Rate Cases:	Linda Blake or Adrianne Brent
Consumer Expenditures:	Jim Lande
Technology and Equal Access:	Ramses Mina
Lines and Calling Volumes:	Alexander Belinfante
Long Distance Companies and CIC Codes:	Katie Rangos
Access Minutes and Market Shares:	Linda Blake
Lifeline Assistance Programs:	Mary Green or Larry Povich