FEDERAL COMMUNICATIONS COMMISSION 1919 M STREET, N.W. WASHINGTON, D.C. 20554

40234

This is an unofficial announcement of Commission action. Release of the full text of a Commission order constitutes official action. See MCI v. FCC, 515 F 2d 385 (D.C. Circ. 1974).

October 29, 1993

#### 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 reports. For the first time, the trends report includes information on international calling as well as domestic service.

Among the findings are:

- \* International telephone calling -- propelled by technological innovation, increased economic integration with foreign countries, and stable or declining rates -- has skyrocketed. In 1992, Americans spent about \$10.3 billion dollars on international calls.
- \* In March 1993, the Current Population Survey reported that 94.2% of the nation's households have telephone service.
- \* For the 12 months ending in September 1993, the Consumer Price Index for telephone services rose 1.3%. This reflected an increase in the cost of local services of 0.9%, a decline of 0.2% in the price of intrastate toll calls, and an increase of 4.3% in the price of interstate calling. During the same 12 month period, the nation's overall rate of inflation was 2.7%.
- \* About 2.0% of all consumer expenditures are devoted to telephone service a percentage that has remained virtually unchanged over the past 20 years despite major changes in the telephone industry and in telephone usage.
- \* By all indications, the number of long distance carriers continues to increase. In December 1992, 394 carriers were reported to purchase the equal access necessary to provide direct distance dialing.

This report is available for reference in the Industry Analysis Division Reference Room, Common Carrier Bureau, 1250 23rd Street, N.W., Plaza Level. Copies may be purchased by calling International Transcription Services, Inc. (ITS) at (202) 857-3800.

FCC

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



# INDUSTRY ANALYSIS DIVISION FEDERAL COMMUNICATIONS COMMISSION WASHINGTON, D.C. 20554

OCTOBER 1993

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#### INTRODUCTION:

This publication summarizes a variety of information on telephone service. In most cases, the reports underlying this summary provide a much greater level of detail. More detailed information is available from the sources listed at the end of the document and through the automated FCC-State Link Bulletin Board. The bulletin board can be accessed via computer modem by dialing (202) 632-1361.

#### 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.

Thirteen 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 0.2% 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	
JULY	88.2	81.0	91.8		8.2
NOVEMBER	88.8	81.6	91.9	7.2 7.2	8.2 8.1
1986 MARCH	89.0	82.1	92.2		
JULY	89.5	82.5	92.2	6.9	7.8
NOVEMBER	89.9	83.1	92.2 92.4	7.0 6.8	7.8 7.6
1987 MARCH	00.0	<u> </u>			
JULY	90.2	83.4	92.5	6.8	7.5
NOVEMBER	90.7	83.7	92.3	7.0	7.7
INDAEMPEU	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	<b>87</b> ,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 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. <del>4</del> 6.7
NOVEMBER	95.7	89.4	93.4	6.3	6.6
1992 MARCH	96.6	90,7	02.0	5.0	
JULY	96.6	90.6	93.9	5.9	6.1
NOVEMBER	97.0		93.8	6.0	6.2
	97.0	91,0	93.8	6.0	6.2
1993 MARCH	97.3	91,6	94.2	5.7	5.8

TABLE 2

TELEPHONE PENETRATION BY STATE

(ANNUAL AVERAGE PERCENTAGE OF HOUSEHOLDS WITH TELEPHONE SERVICE)

STATE	1984	1992	CHANGE		
	88.4 %	90.8 %	2.3 % *		
LABAMA	86.5	91.7	5.2 *		
LASKA	86.9	93.3	6.3 *		
RIZONA	1	87.3	0.7		
RKANSAS	88.6	95.6	3.1		
CALIFORNIA	92.5	95.5	2.3		
COLORADO	93.2	96.6	1.1		
CONNECTICUT	95.5	96.5	2.2 *		
OFI AWARE	94.3	88.7	-6.2 *		
DISTRICT OF COLUMBIA	94.9	93.5	4.8		
LORIDA	88.7	90.2	4.0		
BEORGIA	86.2	95.3	1.8 *		
HAWAII	93.5		2.3		
DAHO	90.7	93.0	-0.3		
LLINOIS	94.2	93.8	0.3		
INDIANA	91.6	91,9	-0.8		
IOWA	96.2	95.4	0.9		
KANSAS	94.3	95.2	1		
KENTUCKY	68.1	89.6	1.5		
LOUISIANA	89.7	91.7	2.0		
	93.4	93,2	-0.3		
MAINE	95.7	96.0	0.4		
MARYLAND MASSACHUSETTS	95.9	96.8	0.9		
	92.8	94.4	1.6		
MICHIGAN	95.8	96.7	0.9		
MINNESOTA	82.4	86.3	3.9		
MISSISSIPPI	91.5	94.0	2.5		
MISSOURI .	91.0	93.2	2.3		
MONTANA	95.7	96.4	0.7		
NEBRASKA	90.4	93.7	3.4		
NEVADA _	94.3	95.4	1.0		
NEW HAMPSHIRE	94.8	94.4	-0.4		
NEW JERSEY	82.0	68.4	6.3		
NEW MEXICO	91.6	93.4	1.6		
NEW YORK	88.3	92.5	4.2		
NORTH CAROLINA		95.6	1.2		
NORTH DAKOTA	94.6	94.6	2.2		
OHIO	92.4	90.9	0.7		
OKLAHOMA	90.3	93.9	3.3		
OREGON	90.6	96.9	2.0		
PENNSYLVANIA	94.9	94.6	1.2		
RHODE ISLAND	93.6	89.2	5.5		
SOUTH CAROLINA	83.7		0.9		
SOUTH DAKOTA	93.2	94.1	4.6		
TENNESSEE	88.5	93.1	3.1		
TEXAS	88.4	91.5	3.3		
UTAH	92.5	95.9	2.0		
VERMONT	92.3	94.2	1.8		
VIRGINIA	93.1	94.8	3.0		
WASHINGTON	93.0	96.0	,		
WEST VIRGINIA	67.7	89.3	1.6		
WISCONSIN	95.2	97.0	1.8		
WYOMING	69.9	92.7	2.8		
TOTAL UNITED STATES	91.6	93.8	2.2		

<sup>\*</sup> CHANGE 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 on price indexes.

#### 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. 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 overall CPI (which measures the impact of inflation on consumers) and the CPI for telephone services. In addition, Table 4 shows the Gross National Product fixed weight price index prepared by the Bureau of Economic Analysis (which measures inflation throughout the economy).

#### 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 and all other expenditures. The annual rates of change for these indexes of local costs are presented in Table 5.

## Price Indexes for Long Distance Service:

Consumer price index data is available for intrastate toll and interstate toll services since December 1977. These series are also presented in Table 5. A variety of other more detailed indexes are available in the source materials indicated at the end of this publication.

Table 3
Long Term Changes for Various Price indexes \*
(Annual Rates of Change)

	1935 - 1992	1982 – 1992
CPI all items	4.2 %	3.8 %
CPI all services	4.6	4.7
CPI telephone services	2.1	2.6
CPI major categories		
<ul><li>food &amp; beverages</li></ul>	*	3.6
<ul><li>housing</li></ul>	*	3.6
<ul> <li>apparel &amp; upkeep</li> </ul>	3.3	3.0
<ul><li>transportation</li></ul>	3.9	2.7
- medical care	5.3	7.5
<ul><li>entertainment</li></ul>		4.0
- other goods & services	*	7.2
CPI public transportation	5.1	4.8
CPI piped gas	3.7	1.1
CPI electricity	2.4	2.6
CPI sewer & water maintenance	*	6.4
CPI postage	4,3	3.8

<sup>\*</sup> Series not established until after 1935.

# CPI All Items and CPI Telephone Services 1982 = 100

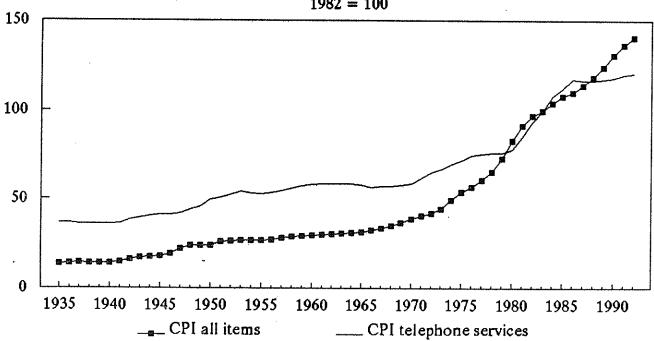


Table 4
Annual Changes in Major Price Indexes

	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	3.4	3.8	3.6
1984	3.4	3.9	9.2
1985	3.6	3.8	4.7
1986	2.5	1.1	2.7
1987	3.4	4.4	-1.3
1988	4.2	4.4	1.3
1989	4,4	4.6	-0.3
1990	4.6	6,1	-0.4
1991	3.6	3.1	3.5
1992	3.3	2.9	-0.3
1993 **		2.7	1.3

- \* In 1992 the BEA revised the methodology for calculating the GNP Fixed Weight Price Index. The BEA revised the index for 1982 through the present. The Table shows percentage changes for the unrevised series for 1978 through 1982.
- \*\* The 1993 CPI changes are measured September through September. The 1993 GNP Price Index changes are measured Second Quarter through Second Quarter.

CPI All Items and CPI Telephone Services
(Annual Rates of Change)

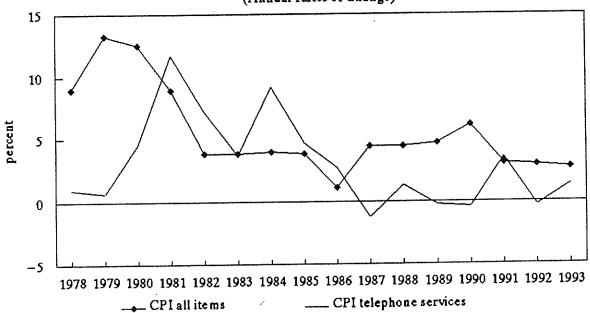
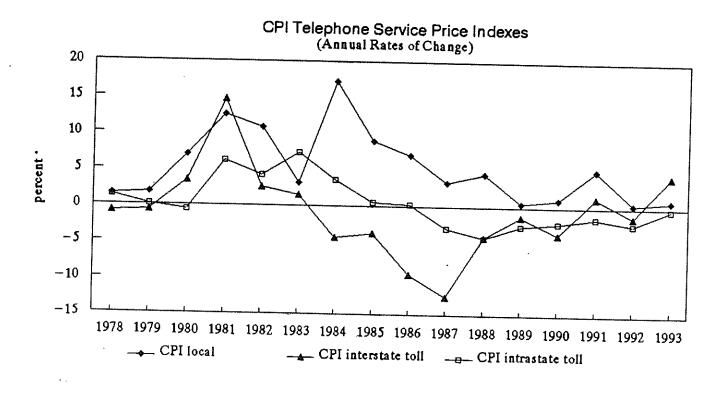


Table 5
Annual Changes in Price Indexes for Local and Long Distance Telephone Services

_	Local Residential Service		Toll Service *		
	CPI: all local charges	PPI: Monthly Service Charges	CPI: Interstate Toll Calls	CPI: Intrastate Toll Calls	
1978 1979 1980 1981 1982 1983 1984 1985 1986 987 988 989 990 991 992	1.4 % 1.7 7.0 12.6 10.8 3.1 17.2 8.9 7.1 3.3 4.5 0.6 1.0 5.1 0.5 0.9	3.1 % 1.6 7.1 15.6 9.0 0.2 10.4 12.4 8.9 2.6 4.6 1.9 1.5 2.1 -0.2	-0.8 % -0.7 3.4 14.6 2.6 1.5 -4.3 -3.7 -9.4 -12.4 -4.2 -1.3 -3.7 1.3 -1.3	1.3 % 0.1 -0.6 6.2 4.2 7.4 3.6 0.6 0.3 -3.0 -4.2 -2.6 -2.2 -1.5 -2.4	

<sup>\*</sup> CPI toll indexes represent rates for households. PPI toll indexes represent rate changes for both business and residential consumers.

<sup>\*\*</sup> The 1993 index changes are measured September through September.



#### PRICE LEVELS:

#### 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 1992 the national average for flat rate residential service was \$18.66 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 1992, the national average for the lowest generally available recurring charge was \$6.24. The average minimum monthly bill, including subscriber line charges and taxes, was \$11.12.

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.

#### Long Distance Rates:

In Table 7, AT&T's prices for directly dialed long distance calls are shown for January 1984 and September 1992. 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 charges for directly dialed interstate calls have been reduced about 40%.

Table 6
National Averages for Local Telephone Rates

				Octob	er Data					
	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992
Residential rates*		- "	2 7.	:						
Unlimited service	\$10.50	\$12.10	\$12.17	\$12.58	\$12,44	\$12.32	#10 00	640.00	010.10	
Subscriber line charges	0.00	0.00	1.01	2.04	2.66	2.67	\$12.30	\$12.39	\$13.10	\$13.08
Taxes including 911 charges	1.08	1.25	1.36	1.51	1.56		3.53	3.55	3.56	3.55
Total	11.58	13.35	14.54	16.13	1 <u>6.66</u>	<u>1.58</u> 16.57	<u>1.70</u> 17.53	<u>1.85</u> 17.79	<u>2.00</u> 18.66	<u>2.03</u> 18.66
Lowest generally										
available rate	5.37	5.62	5.75	5.96	5.81	5.67	E 67	E CO	0.40	
Subscriber line charges	0.00	0.00	1.01	2.04	2.66	2.67	5.67 3.53	5.68	6.18	6,24
Taxes including 911 charges	0.56	0.58	0.70	0.84				3.55	3.56	3.55
Total	5.93	6.20	7.46	8.84	0.94 9.41	0.91	1.03	1.15	1.28	1.33
	0.55	0.20	7.40	0.04	9.41	9.25	10.23	10.38	11.02	11.12
Basic Connection***	35.01	43.71	44.32	45.63	44.04	42.94	42.71	42.00	40.00	
_Taxes	1.75	2.19	2.22	2,28	2.20			43.06	42.00	41.51
Total	36.76	4 <u>5.90</u>	46.54	47.91	46.24	<u>2.11</u> 45.05	<u>2.24</u> 44.95	<u>2.32</u> 45.38	<u>2.19</u> 44.19	<u>2.23</u> 43.74
Business rates ** Representative rate Touch - Tone service Subscriber line charges Taxes including 911 charges Total	29.16 ** 0.00 3.35	32.74 0.00 3.77	33,42 ** 1.01 3.96	34.26 ** 2.04 4.17	33.71 ** 2.68 4.18	31.03 2.45 2.69 3.95	31.06 2.43 3.55 4.21	30.97 2.35 3.57 4.32	32.29 1.84 3.57 4.42	32.38 1.71 3.56 4.46
	32.51	36.51	38.39	40.47	40.57	40.12	41.25	41.21	42.12	42.11
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	0.092
Basic Connection***	56.04	68.84	70.82	7294	72.15	70.48	71.05	71.36	72.75	72.61
Touch—Tone service	**	**	**	**	**	2.03	1.70	1.89	1.13	1.13
Taxes	3.08	3.79	3.90	4.01	3.97	3.92	4.06	4.15	. 4.32	
Total	59.12	72.63	74.72	76.95	76.12	76.43	76.81	77.40	78.20	4.33 78.07
5 minute payphone call	0.168	0.212	0.222	0.223	0.226	0.228	0.228	0.228	0.228	0.228

<sup>\*</sup> The residential rates shown in this table do not include additional charges for touch tone service.

<sup>\*\*</sup> 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.

<sup>\*\*\*</sup> 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 Rate Schedule)

			Residenti	ial		Busines	}
Calling Distar	ice	January	September	Percentage	January	September	Percentage
in airline mile:	S,	1984	1993	change	1984	1993	change
rate center to rate center							
1 10	Dav ·	\$0.96	\$1.10	14.6 %	\$0.96	\$1.10	14.6 %
	Evening	\$0.57	•	5.3	\$0.57	\$0.70	22.8
	Night & Weekend	\$0.38	\$0.55	44.7	\$0.38	\$0.70	84.2
11 – 22	Day	\$1.28	\$1.15	-10.2	\$1.28	\$1.10	-14.1
	Evening	\$0.76	\$0.65	-14.5	\$0.76	\$0.70	-7.9
	Night & Weekend	\$0.51	\$0.60	17.6	\$0.51	\$0.70	37.3
23 - 55	Day	\$1.60	\$1.15	-28.1	\$1.60		-31.3
	Evening	\$0.96	\$0.65	-32.3	\$0.96	\$0.70	<b>– 27.1</b>
	Night & Weekend	\$0.64	\$0.60	-6.2	\$0.64	\$0.70	9.4
56 - 124	Dav	\$2.05	\$1.15	-43.9	\$2.05	\$1.15	-43.9
	Evening	\$1.22		-42.6	\$1.22	\$0.70	<b>-42</b> .6
	Night & Weekend	\$0.82		-26.8	\$0.82	\$0.70	-14.6
125 – 292	Day	\$2.14	\$1.20	-43.9	\$2.14	\$1.15	-46.3
	Evening	\$1.28	\$0.75	-41.4	\$1.28	\$0.70	-45.3
	Night & Weekend	\$0.85	\$0.65	-23.5	\$0.85	\$0.70	<b>– 17.6</b>
293 – 430	Day	\$2.27	\$1.20	-47.1	\$2.27		-49.3
	Evening	\$1.36	\$0.75	-44.9	\$1.36		
	Night & Weekend	\$0.90	\$0.65	-27.8	\$0.90	\$0.70	-22.2
431 925	Day	\$2.34	\$1.20	48.7	\$2.34	\$1.15	-50.9
	Evening	\$1.40		-46.4	\$1.40	\$0.70	-50.0
	Night & Weekend	\$0.93	\$0.65	-30.1	\$0.93	\$0.70	-24.7
926 – 1910	Dav	\$2.40	\$1.25	-47.9	\$2.40	\$1.25	-47.9
	Evening	\$1.44		-47.9	\$1.44	\$0.75	<b>-47.9</b>
	Night & Weekend	\$0.96		-32.3	\$0.96	\$0.75	-21.9
1911 - 3000	Day	\$2.70	\$1.25	-53.7	\$2.70	\$1.25	-53.7
	Evening	\$1.62	\$0.75	-53.7	\$1.62	\$0.75	-53.7
	Night & Weekend	\$1.08		-39.8	\$1.08	\$0.75	30.6
3001 - 4250	Day	\$2.80	\$1.50	-46.4	\$2.80		46.4
	Evening	\$1.68	\$1.05	-37.5	\$1.68		-37.5
	Night & Weekend	\$1.12	\$0.80	-28.6	\$1.12	\$1.05	-6.3
4251 - 5750		\$2.91		-43.3	\$2.91		-43.3
	Evening	\$1.74		-36.8	\$1.74		-36.8
	Night & Weekend	\$1.16	\$0.85	-26.7	\$1.16	\$1.10	-5.2

<sup>\*</sup> 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.

#### CONSUMER EXPENDITURES:

The Bureau of Labor Statistics conducts surveys of consumer expenditures, in part, to develop weights for CPI indexes. Table 8 shows expenditures for telephone service for all consumer units. Average annual expenditures on telephone service increased from \$325 per household in 1980 to \$618 in 1991.

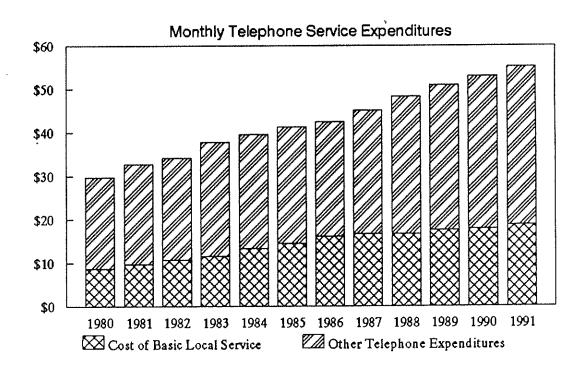
About 2% of all consumer expenditures are devoted to telephone service. This percentage has remained virtually unchanged over the past 20 years, despite major changes in the telephone industry and in telephone usage.

The information on average telephone expenditures can be used to estimate the average monthly bills for households with telephone service. This average was about \$55 per month for 1991. 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. Additionally, residential toll calling has grown by about 6% a year in the 1990s. 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 8
Telephone Service Expenditures

		Expenditures r All Households)		es ne Service)	
Year	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

- \* 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.



#### 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 1984, the level of activity in state cases diminished substantially. Beginning in 1987, the dollar amount of rate reductions and refunds ordered by state commissions has usually exceeded the dollar amount of rate increases authorized.

The total amount of rate increases pending before public utility commissions is about \$120 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 recent reductions ordered by state commissions -- should indicate a low level of rate changes for local and intrastate toll rates during the next year.

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	\$528	\$1,176	\$4,852
SECOND QUARTER	94	2,054	1,676
THIRD QUARTER	2,243	265	3,388
FOURTH QUARTER	1,059	361	3,672
1985 FIRST QUARTER	977	248	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	318
FOURTH QUARTER	9	1	323
1987 FIRST QUARTER	. 7	(33)	67
SECOND QUARTER	19	(112)	46
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	1 26	(108)	149
THIRD QUARTER	363	(49)	490
FOURTH QUARTER	6	(478)	420
1990 FIRST QUARTER	896	(135)	904
SECOND QUARTER	58	(1 10)	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	(246)	158
FOURTH QUARTER	10	(29)	160
1992 FIRST QUARTER SECOND QUARTER	40 61	(57) 5	127 123
ANNUAL TOTALS:	4,024	3,876	
1984	1 '	1,155	
1985	1,627	290	1
1986	644	(519)	1
1987	148	(1,366)	
1988	358	(839)	
1989	447 1,109	(451)	
1990	1	(87)	
1991	381 205	(492)	

#### CHANGES IN TECHNOLOGY AND EQUAL ACCESS:

#### 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. 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 is shown in Table 10.

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 widely deployed. The number of offices and lines equipped for these features are shown in Table 11.

#### 2. 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 Operating 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. Overall, more than 90% of the nation's telephone lines have been converted to equal access.

#### 3. Data for Individual Companies and States:

The information shown in Tables 10 through 12 is based on special studies completed around 1989 and present a lengthy time series for data not usually available. Much more detailed data is available for individual companies on a state-by-state basis but only for the years 1990, 1991, and 1992. The detailed data can be obtained through the FCC-State Link Bulletin Board. Viewed in the aggregate, the two sets of data give virtually identical results at the national level and, because the differences are so minor, we have not attempted to update the projections shown in Tables 10-12.

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

YEAR END	TOTAL OFFICES	ELECTRO MECHANICAL OFFICES		ANALOG STORED PROGRAM CONTROL OFFICES		DIGITAL S PROGRAM O OFFIC	CONTROL
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 *	9,352	1,804	19.3	2,209	23.6	5,339	57.1
1991 *	9,338	1,199	12.8	2,166	23.2	5,973	64.0
1992 *	9,314	825	8.9	2,043	21.9	6,446	69.2
1993 *	9,320	659	7.1	1,919	20.6	6,742	72.3
1994 *	9,311	510	5.5	1,789	19.2	7,012	75.3

## ACCESS LINES SERVED BY TYPE OF OFFICE (THOUSANDS)

YEAR END	TOTAL MECHANICAL OFFICES		NICAL	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
1 1	88.630	30,074	33.9	56,404	63.6	2,151	2.4
1984	91,455	24,778	27.1	58,532	64.0	8,145	8.9
1985	93,630	19,491	20.8	59,252	63.3	14,886	15.9
1986	96,593	14,205	14.7	59,442	61.5	22,946	23.8
1987	99,564	8,707	8.7	60,364	60.6	30,493	30.6
1988	102,684	5,646	5.5	58,846	57.3	38,192	37.2
1989	106,016	2,987	2.8	56,991	53.8	46,038	43.4
1330	109,403	1,722	1.6	55,631	50.8	52,050	47.6
1991 *	· •	954	0.8	53,843	47.8	57,858	51.4
1332	112,655	741	0.6	51,963	44.8	63,180	54.5
1993 * 1994 *	115,885 121,706	803	0.7	52,258	42.9	68,646	56.4

<sup>\*</sup> Projected in CC Docket 89-624.

**FEATURES AVAILABLE IN CENTRAL OFFICES** (BELL OPERATING COMPANIES)

YEAR END	TOTAL OFFICES	EQUAL ACCESS OFFICES		SIGNALING SYSTEM 7 OFFICES		ISDN OF	FICES
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	j o	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 *	9,352	7,534	80.6	2,028	21.7	4 <b>26</b>	4.6
1991 *	9,338	7,951	85.1	2,834	30.3	1,591	17.0
1992 *	9,314	8,267	88.8	3,845	41.3	1,746	18.7
1993 *	9,320	8,449	90.7	4,566	49.0	1,952	20.9
1994 *	9,311	8,602	92.4	4,988	53.6	2,197	23.6
	EC	QUIPPED ACC	CESS LINE	S BY TYPE OF	OFFICE		
YEAR END	TOTAL OFFICES	EQUAL A		SIGNALING		ISDN OF	FICES

#### 0 0.0 % 0 0.0 % 0.0 % 1980 81,032 0 0 0.0 0 0,0 82,581 0 0.0 1981 0.0 0.0 0 0.0 0 1982 83,819 0 86,186 146 0.2 0 0.0 0 0.0 1983 9,350 10.5 0 0.0 0 0,0 88,630 1984 0.0 49,241 53.8 0 0.0 0 1985 91,455 0.0 0 0,0 70,543 75.3 0 1986 93,630 12 0.0 81,743 84.6 1,035 1.1 1987 96,593 47 0.0 91,809 92.2 10,325 10.4 1988 99,564 111 0.1 21,917 21.3 1989 102,684 97,410 94.9 103,079 504 0.5 1990 \* 106,016 97.2 38,597 36.4 1,053 1.0 1991 \* 53,066 48.5 109,403 107,205 98.0 1.2 1992 \* 111,033 98.6 68,438 60.8 1,358 112,655 69.0 1.874 1.6 1993 \* 115,885 114,669 99.0 79,926 1.7

99.1

82,765

68.0

2,122

121,706

120,664

1994 \*

<sup>\*</sup> Projected in CC Docket 89-624.

EQUAL ACCESS CONVERSION SCHEDULE (PERCENTAGE OF LINES CONVERTED)

	BELL COMPANIES	OTHER LARGE COMPANIES*	SMALL COMPANIES	TOTAL INDUSTRY
1984 THIRD QUARTER	1.1%	0.0%	0.0%	0.9%
FOURTH QUARTER	3.8	1.5	0.0	3.2
1985 FIRST QUARTER	12.1	2.4	0.0	9.8
SECOND QUARTER	26.9	3.7	0.0	21.4
THIRD QUARTER	43.0	4.0	0.0	34.0
FOURTH QUARTER	50.9	4.9	0.5	40.2
1986 FIRST QUARTER	56.8	11.9	2.7	46.0
SECOND QUARTER	61.9	18.4	4.0	51.0
THIRD QUARTER	71.5	27.4	5.9	59.9
FOURTH QUARTER	74.3	38.3	7.1	63.8
1987 FIRST QUARTER SECOND QUARTER THIRD QUARTER FOURTH QUARTER	76.4	45.3	9.1	66.6
	77.7	50.9	10.9	68.7
	80.4	57.9	12.7	72.0
	84.7	64.0	14.9	76.3
1988 FIRST QUARTER	86.5	66.2	15.8	78.1
SECOND QUARTER	87.4	68.5	17.3	79.3
THIRD QUARTER	88.5	71.3	18.6	80.6
FOURTH QUARTER	91.3	74.1	20.3	83.4
1989 FIRST QUARTER	92.6	76.5	22.0	84.8
SECOND QUARTER	93.4	77.6	23.1	85.7
THIRD QUARTER	94.1	79.1	24.3	86.5
FOURTH QUARTER	95.2	80.9	25.5	87.7
1990 FIRST QUARTER	95.7	81.9	26.5	88.4
SECOND QUARTER	96.0	83.3	29.0	89.0
THIRD QUARTER	96.4	83.8	30.3	89.5
FOURTH QUARTER	96.9	85.6	33.1	90.4
1991 FIRST QUARTER	97.1	85.9	33.8	90.6
SECOND QUARTER	97.2	86.5	35.3	90.9

<sup>\*</sup> COMPANIES WITH \$100 MILLION IN ANNUAL OPERATING REVENUES.

#### TELEPHONE LINES AND LOCAL TELEPHONE COMPANIES:

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 13 shows the nation's total number of local loops during each year. 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 1300 local telephone companies in the United States. Table 14 shows the number of companies and the number of switched access lines in each state.

Total U.S. Telephone Lines (Local Loops)

Table 13

	Loops	Annual Growth
1980	102,216,367	N.A.
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	122,773,173	3.8%
1988	127,087,323	3.5%
1989	131,623,290	3.6%
1990	136,184,917	3.5%
1991	139,551,781	2.5%
1992	143,491,824	2.8%

Table 14

Local Telephone Companies and Access Lines by State as of December 31, 1992

State	Companies	Bell Company	Other Company	Total Lines
	N.	Lines	Lines	
Alabama	30	1,571,594	378,166	1,949,760
Alaska	25	0	307,637	307,637
Arizona	12	1,847,772	115,479	1,963,251
Arkansas	29	756,649	356,961	1,113,610
California	22	13,725,211	3,949,649	17,674,860
Colorado	27	1,935,861	37,111	1,972,972
Connecticut	2	0	1,861,979	1,861,979
Delaware	1	414,319	0	414,319
District of Col.	1	793,866	ŏ	793,866
Florida	13	4,717,257	3,103,784	7,821,041
Georgia	36	2,937,827	564,882	3,502,709
Hawaii	1 ,	0	573,717	573,717
Idaho	20	387,056	122,125	509,181
Ilinois	56	5,355,295	1,137,062	6,492,357
Indiana	42	1,715,268	1,079,889	2,795,157
lowa	153	913.695	482,873	1,396,568
Kansas	40	1,084,136	220,145	1,304,281
Kentucky	19	985,028	697,909	1,682,937
Louisiana	20	1,861,564	141,310	2,002,874
Maine	19	559,772	107,382	667,154
Maryland	2	2,796,718	4,898	2,801,616
Massachusetts	3	3,852,950	3,369	3,656,319
Michigan	38	4,276,614	778,489	5,055,103
Minnesota	91	1,801,361	586,375	2,387,736
Mississippi	19	1,010,900	65,518	1,076,418
Missouri	44	2,051,458	671,946	2,723,404
Montana	.17	325,293	93,734	419,027
Nebraska	42	463,976	388,854	852,830
Nevada	13	234,675	567,975	802,650
New Hampshire	12	612,891	39,678	652,569
New Jersey	3	4,917,830	157,804	5,075,634
New Mexico	14	613,651	104,179	717,830
New York	- 44	9,483,372	1,022,758	10,506,130
North Carolina	28	1,763,788	1,756,800	3,520,588
North Dakota	24	245,793	94,176	339,969
Ohio	42	3,241,570	2,255,260	5,496,830
Oklahoma	39	1,317,449	261,204	1,598,653
Oregon	34	1,062,807	479,153	1,541,960
Pennsylvania	3 <b>9</b>	5,137,755	1,499,317	6,637,072
Rhode Island	1	548,854	0	548,854
South Carolina	28	1,137,074	541,819	1,678,893
South Dakota	31	267,705	78,581	346,286
Tennessee	25	2,065,298	501,507	2,586,805
Texas	56	6,889,807	1,992,373	8,882,180
Utah	13	770,869	32,329	803,198
Vermont	9	271,419	47,197	318,616
Virginia	21	2,595,420	797,809	3,393,229
Washington Wash Vissinia	22	1,957,773	805,999	2,763,772
West Virginia	10	671,458	132,918	804,376
Wisconsin	95 10	1,753,545	894,892	2,648,437
Wyoming	10	222,171	19,296	241,467
United States	1437 *	105,744,414	31,934,267	137,678,681
Puerto Rico	2	0	995,337	995,337
Virgin Islands	1	0	51,022	51,022
Grand Total	1440 *	105,744,414	32,980,626	138,725,040

This figure overstates the actual number of operating companies because many operating companies serve more than one state. There are about 1300 separate operating companies.

#### MINUTES OF CALLING:

#### 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 15. 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 12% in 1991. During that same period, interstate calling minutes increased from 8% of the total to 14%.

As shown in Table 16, the average telephone line is used primarily for local calling and is used somewhat less than an hour per day. This level has remained relatively constant for a long period of time despite increases in long distance calling and the introduction of facsimile machines and other devices that affect usage.

TABLE 15

DIAL EQUIPMENT MINUTES

		and the second s		
	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	252	<b>295</b> .	2,260
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
·		NCREASE OVER PR	RIOR 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	6	9	2
1988	5	7	9	5
1989	2 .	6	7	3
1990	1	5	3	-2
1991	1 .	1	4	, <b>1</b>
	1	PERCENT DISTRI	BUTION	
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

TABLE 16

#### LINE USAGE PER DAY

	(DIAL EQUIPMENT MINUTES PER LOCAL LOOP)						
-	LOCAL	INTRASTATE TOLL	INTERSTATE TOLL	TOTAL			
1980	39	4	4	46			
1981	39	4	4	46			
1982	39	4	4	47			
1983	39	4	4	48			
1984	40	5	5	50			
1985	. 40	5	6	51			
1986	39	5	6	51			
1987	38	6	7	50			
1988	39	6	7	51			
1989	38	6	7	51			
1990	37	6	7	50			
1991	<b>37</b>	6	7	50			
	INCF	REASE OVER PRIC	PR 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	5 2	5	<u>-1</u>			
1988	1	. 3	5	2			
1989	<del>-</del> 1	3	4	<del>-</del> -0			
1990	-2	1	-0	-1			
1991	-2	-1	1	-1			

#### 2. 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.

Table 17 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 dial equipment minutes.

INTERSTATE SWITCHED ACCESS MINUTES (FIGURES SHOWN IN BILLIONS)

	PREMIUM MINUTES	NON-PREMIUM MINUTES	TOTAL MINUTES
1984 THIRD QUARTER	32.0		
FOURTH QUARTER	33.6	5.5 6.0	37.5 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	36.8	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	24	59.0
. SECOND QUARTER	57.3	23	59.8
THIRD QUARTER	59.8	23	62.1
FOURTH QUARTER	61.8	2.2	64.0
1989 FIRST QUARTER	64.1	21	66.2
SECOND QUARTER	66.5	20	68,5
THIRD QUARTER	67.7	20	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	79.2 81.9
THIRD QUARTER	81.2	1.4	62.6
FOURTH QUARTER	83.0	1.4	84.4
1992 FIRST QUARTER	84.5	1.2	85.7
SECOND QUARTER	85.5	1.1	86.6
THIRD QUARTER	67.0	1.0	88.1
FOURTH QUARTER	89.0	1.0	89.9
1993 FIRST QUARTER	90.3	0.9	91.2
SECOND QUARTER	90.9	0.8	91.7
INCREASE OVER PRIOR YEAR:			
1986	18.3%	41.0%	9.5%
1987	21.0%	-18.8%	9.5% 17.8%
1988	15.5%	-22.5%	17.6%
1989	14.3%	- 13.0%	13.3%
1990	11.6%	-11.3%	11.0%
1991	7.3%	-18.2%	6.7%
1992	7.4%	-26.5%	6.8%

#### 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.

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 firms holding these codes is shown in Table 18.

Table 19 shows several alternative sources of information on the development of long distance carriers. A large share of the firms purchasing access—about 400 companies—purchase the premium access needed to provide direct dial long distance service.

Table 20 shows the number of long distance carriers that purchase different forms of access from the larger local telephone companies in each state. "Feature Group A" access requires a customer to dial a local telephone number to reach a long distance carrier. "Feature Group B" access involves dialing a seven digit number that begins with "950". "Feature Group D" 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 21 shows the evolution of larger carriers that purchase equal access.

In January 1991, about 300 providers of operator services filed tariffs 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 appear to provide operator services.

TABLE 18

NUMBER OF FIRMS WITH CARRIER IDENTIFICATION CODES

YEAR	MONTH	FIRMS WITH CARRIER IDENTIFICATION CODES
1982	JUNE DECEMBER	13 11
1983	JUNE DECEMBER	25 42
1984	JUNE DECEMBER	65 123
1985	JUNE DECEMBER	179 217
1986	JUNE DECEMBER	276 334
1987	JUNE DECEMBER	397 451
1988	JUNE DECEMBER	489 493
1989	JUNE DECEMBER	544 577
1990	JUNE DECEMBER	611 601
1991	JUNE DECEMBER	597 631
1992	JUNE DECEMBER	659 692

TABLE 19

ALTERNATE SOURCES OF LONG DISTANCE CARRIER DATA

· · · · · · · · · · · · · · · · · · ·		CIDMO MITTE	CIDMO	CARRIERO	CARRIERO
	1101771	FIRMS WITH	FIRMS	CARRIERS	CARRIERS
YEAR	MONTH	CARRIER	PURCHASING	PURCHASING	WITH
		IDENTIFICATION	ACCESS	EQUAL ACCESS	PRESUBSCRIBED
		CODES		1/	LINES
1986	MARCH	231	ń	169	•
	JUNE	276	•	183	*
	SEPTEMBER	302	506	190	*
:	DECEMBER	334	533	210	•
1987	MARCH	360	561	211	•
1.507	JUNE	397	*	213	*
	SEPTEMBER	421	*	224	•
	DECEMBER	451	540	239	223
		171	VTV	200	
1988	MARCH	471	511	238	#
	JUNE	489	519	248	242
	SEPTEMBER	464	506	256	*
	DECEMBER	493	510	266	253
1989	MARCH	5 <b>2</b> 0 .	519	274	•
1000	JUNE	544	*	287	276
	SEPTEMBER	560	•	304	*
	DECEMBER	577	514	318	302
	J672J61.	<b>J.</b>		-10	<b>702</b>
1990	MARCH	594	512	289	•
	JUNE	611	506	288	314
	SEPTEMBER	636	511	304	•
	DECEMBER	601	499	304	325
1991	MARCH	571	505	306	•
1001	JUNE	597	542	327	355
	SEPTEMBER	605	538	337	*
	DECEMBER	631	576	351	388
1992	MARCH	616	595	361	•
1992	JUNE	659	595 577	370	425
	SEPTEMBER	654	587	370 379	₩ <i>ω</i>
	DECEMBER	692	599	379 394	414
	DESCRIBEN	092	J33	354	7   7
1993	MARCH	*	*	•	*
	JUNE	*	*	401	*
					<u> </u>

<sup>\*</sup> DATA NOT AVAILABLE

<sup>1/</sup> DATA FOR THE PERIODS PRIOR TO MARCH 1990 INCLUDE A SMALL NUMBER OF FIRMS PURCHASING EQUAL ACCESS THAT WERE NOT CARRIERS.

TABLE 20

LONG DISTANCE CARRIERS PURCHASING ACCESS: DECEMBER 1992

STATE	FEATURE GROUP A	FEATURE GROUP B	FEATURE GROUP D	ANY
ALABAMA	17	20	24	38
ALASKA	NÄ.	N.A.	N.A.	N.A.
ARIZONA	22	44	44	70
ARKANSAS	17	26	23	37
CALIFORNIA	51	82	66	115
COLORADO	24	50	40	74
CONNECTICUT	1	34	33	49
DELAWARE	7	6	6	12
DIST OF COLUMBIA	41	34	35	68
FLORIDA	23	28	41	59
GEORGIA	45	37	31	72
HAWAII	2	6	8	12
IDAHO	6	23	24	28
ILLINOIS	41	52	51	87
INDIANA	31	33	31	54
IOWA	12	30	25	37
KANSAS	15	28	24	40
KENTUCKY	18	24	27	38
LOUISIANA	25	. 27	31	47
MAINE	1	17	15	21
MARYLAND	31	32	32	57
MASSACHUSETTS	28	31	30	56
MICHIGAN	40	40	31	66
MINNESOTA	22	34	30	48
MISSISSIPPI	16	16	18	30
MISSOURI	41	39	40	72
MONTANA	11	21	20	27
NEBRASKA	9	27 34	23	34 45
NEVADA	7 7	21	18	24
NEW HAMPSHIRE	44	42	43	77
NEW JERSEY NEW MEXICO	16	31	33	46
NEW YORK	50	53	46	86
NORTH CAROLINA	25	22	20	39
NORTH DAKOTA	8	23	12	28
OHIO	35	43	41	68
OKLAHOMA	28	42	41	65
OREGON	15	39	35	45
PENNSYLVANIA	53	47	52	84
RHODE ISLAND	11	20	26	36
SOUTH CAROLINA	17	21	23	34
SOUTH DAKOTA	10	12	14	18
TENNESSEE	22	32	33	52
TEXAS	73	99	102	151
UTAH	9	28	26	40
VERMONT	5	17	19	22
VIRGINIA	27	26	29	43
WASHINGTON	25	47	40	65
WEST VIRGINIA	14	15	15	20 57
WISCONSIN	32	34	37	22
WYOMING	4	14	16	
UNDUPLICATED				544
TOTAL	251	348	394	514

N.A. -- Not Available.

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 JUNE SEPTEMBER DECEMBER	2 2 3 3	8 8 5 5	1 1 1	14 14 15 14	23 23 24 23
1987	MARCH	3	5	1	18	27
	JUNE	3	4	2	20	29
	SEPTEMBER	3	4	2	19	28
	DECEMBER	3	9	4	16	26
1956	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	56
	DECEMBER	6	3	12	37	56
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 JUNE SEPTEMBER DECEMBER	6 5 6 9	3 6 8	16 17 15 11	52 50 52 55	77 78 81 81
1993	MARCH JUNE	9	6	11	* 66	• 92

<sup>\*</sup> NOT AVAILABLE

#### LONG DISTANCE MARKET SHARES:

#### Minutes of Interstate Calling

Measures of switched access minutes first became available in 1984 and were shown in Table 17. 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, interstate calling has grown at an annual rate of more than 10%. 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.

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 22. AT&T's share of the interstate market, measured in minutes, declined from over 80% in late 1984 to 60% by the end of 1992. 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 about 60%.

#### "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.

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 23.

NECA reports that, in December 1992, there were 138 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 1992, about 73% of these lines were presubscribed to AT&T, 14% to MCI, and 6% to US Sprint. About four hundred smaller carriers, serving 8 million lines, account for the remaining 6% 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 lower for AT&T than for other carriers.

#### 3. 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 1992, services provided by long distance carriers generated more than \$59 million 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 24. During 1984, AT&T's toll revenues of \$35 billion accounted for about 90% of the revenues received by all long distance carriers. By 1992, with its revenues virtually unchanged, its share of total revenues had fallen to about 60%.

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, was \$73 billion in 1992, with AT&T accounting for about half of the total.

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.

AT&T'S SHARE OF INTERSTATE MINUTES

TABLE 22

and the second of the second	was a second sec			
: !		PREMIUM MINUTES	ALL MINUTES	
	1004 THIRD OLLARTED	00.7	0,00	
	1984 THIRD QUARTER FOURTH QUARTER	98.7 94.6	84.2 %	
2 (4) (4) (4) (4) (4) (4) (4) (4) (4) (4)				
1000 grat	1985 FIRST QUARTER	99.8	83.0	
1 .	SECOND QUARTER THIRD QUARTER	95.5	80,3 78,9	
to a second second	FOURTH QUARTER	92.2 87.9	76.9 77.1	
	2 FOORIN QUARTER	67.9	// <sub>1</sub>   ,	A 740 W
i. Parto parto	, 1986 FIRST QUARTER	88,2	79.5	
free free i	SECOND QUARTER	84.7	77.5	,
Parameter Commence	THIRD QUARTER	82.8	76.6	1.4.5
養養をようで、「Pluming」 最	**** <b>FOURTH QUARTER</b>	78.9	; <b>74.0</b>	
er af Meson i de filosofie en	1987 FIRST QUARTER	77.8	729	
:	SECOND QUARTER	78.3	73.7	
	THIRD QUARTER	75.2	71.2	į.
English Server	FOURTH QUARTER	73.7	70.4	
garage and the second	1988 FIRST QUARTER	72.8	69.8	
15,30 35,00	SECOND QUARTER	71.8	69.0	
ten mig Is and the control of the second	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	63.1	62.1	
	1992 FIRST QUARTER	63.1	62.2	
	SECOND QUARTER	60.7	60.0	
	THIRD QUARTER	60.9	60.2	
	FOURTH QUARTER	60.2	59.5	
	1993 FIRST QUARTER	61.4	60.8	
	TOO THIS WOULD	60.5		1

TABLE 23
\*PRESUBSCRIBED\* TELEPHONE LINES BY CAPRIER
(Thousands of Lines)

	DEC 1987	JUNE 1868	DEC 1964	JUNE 1900	DEC 1989	JUNE 1990	DEC 1990	JUNE 1991	DEC 1981	JUNE 1992	DEC 1992
TOTAL NUMBER OF CARRIERS				•							
WITH PRESUSSCRIBED LINES	223	242	253	276	302	314	325	355	358	425	414
NUMBER OF PRESUBSCRIBED LINES:			·								
ATRT	101,653	100,833	100,206	100,007	99,397	90 613	100,082	101,014	101,496	101,384	101,204
MCI '	9,991	10,941	12,150	13,872	15,056	10,564	17,435	17.603	18,330	19,190	20,167
US SPRINT	5,836	8,382	7,197	7,875	8,166	8,148	8,744	8,702	8,354	8,424	8,858
ALL OTHER CARRERS	3,967	4,509	4,808	5,363	5,863	6,152	8,168	6,577	7,105	7,705	8,496
TOTAL INDUSTRY LINES	121,467	122,665	124,351	126,747	128,482	130,777	132,409	133,896	135,267	136,704	138,725
AHNUAL CHANGE:						-			i		
ATAT	-	-	-1.4%	-0.6%	-0.9%	-0.4%	0.7%	1.4%	1.4%	0.4%	0.3%
MCI		_	21.6%	25.0%	23.8%	23.4%	15.8%	4,4%	5.1%	9.0%	10.0%
UG SPRINT	-	-	23.3%	20.2%	135%	8.2%	7.1%	0.0%	~4.5%	-0.2%	8.0%
ALL CITHER CARRIERS	-	-	20.6%	19.8%	21.8%	14,1%	5.2%	8.9%	.15.2%	17.1%	19.5%
TOTAL INDUSTRY LINES		· -	2.4%	3.3%	3.3%	3.2%	3.1%	2,4%	2.2%	2,1%	2.5%
PERCENTAGE SHARE OF TOTAL UNIES:						***			,		
ATET	63.7%	82.2%	80.5%	78.0%	77 A%	78.2%	75.8%	75.4%	75.0%	742%	73.0%
MCI .	6.2%	6.8%	9.8%	10.8%	117%	12.9%	132%	13.1%	135%	140%	145%
US SPRINT:	.4.8%	5.2%	-5.8%	6.1%	0.4%	8.2%	0.5%	6.5%	0.2%	0.2%	8.4%
ALL OTHER CARRIERS	3,3%	3.7%	3.8%	4.3%	4.6%	4.7%	4.7%	4.0%	5.3%	5.8%	8.1%
TOTAL INDUSTRY LINES	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

## TABLE 24 - TOTAL TOLL SERVICE REVENUES (DOLLAR AMOUNTS SHOWN IN MILLIONS)

COMPANY	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992
OOM! CIT!												
AT&T COMMUNICATIONS				\$34,935	\$36,770	\$36,514	\$35,219	\$35,407	\$34,549	\$33,880	\$34,384	\$35,495
MCI TELECOMMUNICATIONS 1/	\$413	\$802	\$1,326	1,761	2,331	3,372	3,938	4,886	6,171	7,392	8,266	9,719
(TELECOM*USA)				105	201	291	396	524	713			
SPRINT COMMUNICATIONS CO. 2/						1,141	2,592	3,405	4,320	5,041	5,378	5,658
(GTE SPRINT)	231	383	740	1,052	1,122	· 779		,	}			
(US TELECOM)				•	387	212				'		
LDDS COMMUNICATIONS, INC. 3/									110	154	263	801
(ADVANCED TELECOMMUNICATIONS CORP.)		1		72	86	124	162	178	326	342	356	
CABLE & WIRELESS COMMUNICATIONS, INC.					146	171	180	218	275	359	408	495
WILTEL, INC.							_		300	376	405	494
ALLNET 4/					309	450	395	394	334	326	347	376
(LEXITEL)					127					204	369	
METROMEDIA COMMUNICATIONS CORP. 5/									127	381	369	389
(ITT COMMUNICATION SERVICES, INC.)	83	128	163	161	241	282	287	379	404	259	338	333
ALASCOM	191	238	257	255	271	267	262	272	278 197	215	208	243
LITEL TELECOMMUNICATIONS, CORP. CEDA								,	197	213	200	243
LCHINTERNATIONAL					İ		,		104	142	155	158
RCI LONG DISTANCE, INC.									275	230	181	159
INTERNATIONAL TELECHARGE, INC. CEDA						]			2/3	230	101	139
ONCOR COMMUNICATIONS, INC.	1									130	131	135
COMSYSTEMS NETWORK SERVICES						1			192	293	308	,
TELESPHERE NETWORK, INC. 6/						ł		,	150	2.30	000	
(NATIONAL TELEPHONE SERVICES, INC.)									155	1 :		
OTHERS 7/	144	263	443	414	639	992	1,352	1,823	2,359	2,582	3,765	4,927
TOTAL LONG DISTANCE CARRIERS				38,755	42,630	44,595	44,763	47,487	51,184	52,102	55,260	59,372
				90.1%	86.3%	81.9%	78.8%	74.6%	67.5%	65.0%	62.2%	59.8%
AT&T COMMUNICATIONS SHARE:	1		,	4.5%	5.5%	7.5%	8.8%	10.3%	12.1%	14.2%	15.0%	18.4%
MCI TELECOMMUNICATIONS SHARE:				2.7%	2.5%	4.3%	5.8%	7.2%	8.4%	9.7%	9.7%	9.5%
US SPRINT SHARE:		١,	l	2.6%	5.6%	6.3%	6.8%	8.0%	12.0%	11.1%	13,1%	14.3%
ALL OTHER CARRIERS:	<del> </del>		-	2.078	3.0 %	0.5/6	- <del> </del>	0.074	12.070	1	1	1.000
DEL A DECRATINA ACMADANIES			1	9,037	9,026	9,599	10,268	10,668	10,549	10,578	10,066	9,718
BELL OPERATING COMPANIES OTHER LOCAL TELEPHONE COMPANIES 7/				3,364	3,159	3,274	3,468	4,445	4,291	4,112	4,049	3,897
OTHER LOCAL TELEFFICIE COMPARED IT	<del> </del>	<del>                                     </del>	<del> </del>		1							
TOTAL LOCAL EXCHANGE COMPANIES				12,401	12,185	12,873	13,736	15,113	14,840	14,690	14,115	13,615
TOTAL TOLL SERVICE REVENUES 8/	39,180	43.919	46,970	51,156	54,815	57,468	58,519	62,600	66,024	66,792	69,375	72,987
TOTAL TOLE BETTTOE HEVELOUE W		1,						1	1	1		
AT&T COMMUNICATIONS SHARE:				68.3%	67.1%	63.5%	60.2%	56.6%	E.	E .		48.6%
MCI TELECOMMUNICATIONS SHARE:				3.4%	4.3%	5.9%	6.7%	7.9%	9.3%	11.1%	11.9%	1
US SPRINT SHARE:			l	2.1%	2.0%	3.3%	4.4%	5.4%	6.5%	7.5%	7.8%	
ALL OTHER CARRIERS:				2.0%	4.4%	4.9%	52%	6.1%	1	1	1	
LOCAL EXCHANGE COMPANIES SHARE:			<u>L</u>	24.2%	22.2%	22.4%	23.5%	24.1%	22.5%	22.0%	20.3%	18.7%

SOURCES: LOCAL EXCHANGE CARRIER INFORMATION DERIVED FROM USTA ANNUAL REPORTS.

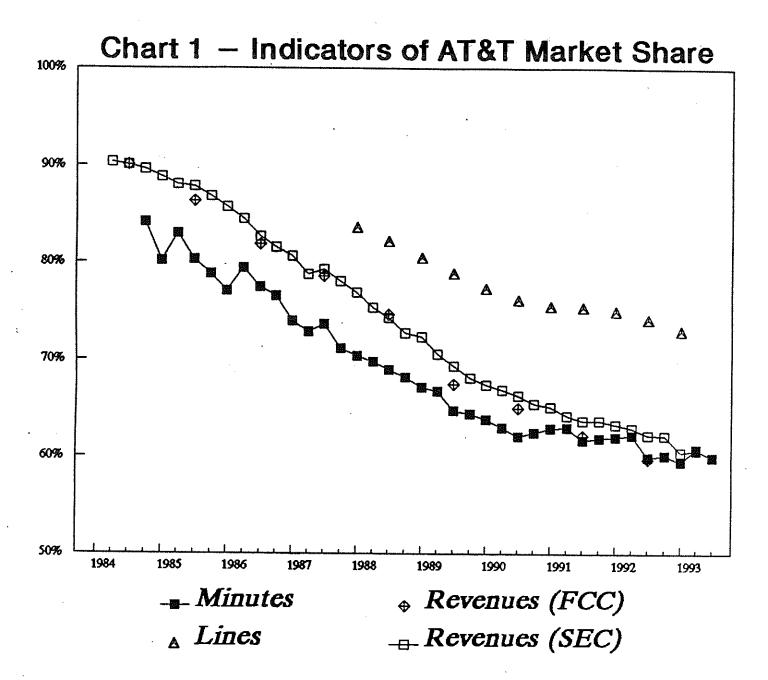
AT&T COMMUNICATIONS AND ALASCOM - STATISTICS OF COMMUNICATIONS COMMON CARRIERS.

OTHER COMPANIES:

1961-1962: ANNUAL REPORT FORM P.

1983 - 1992; AS REPORTED PURSUANT TO FCC REPORT AND ORDER IN CC DOCKET 83 - 1291.

- 1/ MCI TELECO MMUNICATIONS 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.
- 4/ ALLNET AND LEXITEL MERGED AT THE END OF 1985.
- 5/ METROMEDIA COMMUNICATIONS CORP. AND ITT COMMUNICATIONS CORP. MERGED DURING 1986. INFORMATION FOR 1989 WAS REPORTED SEPARATELY.
- 6/ TELESPHERE NETWORK, INC., AND NATIONAL TELEPHONE SERVICES, INC., MERGED DURING 1989. IN 1991, TELESPHERE NETWORK, INC., WENT INTO BANKRUPTCY.
- 7/ ESTIMATED BY FCC STAFF.
- S/WHILE TOTAL TOLL REVENUES ARE AVAILABLE PRIOR TO 1984, THE MANNER IN WHICH THEY WERE DIVIDED BETWEEN THE SELL 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.



## 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 late-1993, programs had been established in 49 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 25, along with the year during which a program was first certified.

#### 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 are shown in Tables 26 and 27.

TABLE 25

# LIFELINE AND LINK--UP TELEPHONE PROGRAMS (YEAR FIRST CERTIFIED)

STATE	LIFELINE	LINK-UP
ALABAMA		. 87
ALASKA	93	93
ARIZONA	86	86
ARKANSAS	86	87
CALIFORNIA	85	••
COLORADO	90	90
CONNECTICUT	1	87
DELAWARE	1	<b>"</b>
DISTRICT OF COLUMBIA	86	87
FLORIDA	•	88
GEORGIA	* * * * * * * * * * * * * * * * * * * *	<del></del>
HAWAII	91 86	90 89
IDAHO		
ILLINOIS	87	88
		93 *
INDIANA		88
IOWA	•	88
KANSAS		88
KENTUCKY	. 4	87
LOUISIANA		88
MAINE	87	87
MARYLAND	86	87
MASSACHUSETTS	90	90
MICHIGAN	89	89
MINNESOTA	88	88
MISSISSIPPI	91	88
MISSOURI	97	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		90
OREGON	86	86
PENNSYLVANIA		88
PUERTO RICO	1	88
RHODE ISLAND	87	87
SOUTH CAROLINA	97	87
- · - · · · · · · - · - · - · · · · · ·	60	1
SOUTH DAKOTA TENNESSEE	88 92	88
		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

<sup>\*</sup> THE ILLINOIS GENERAL ASSEMBLY MANDATED A UNIVERSAL TELEPHONE SERVICE ASSISTANCE PROGRAM FOR LIFELINE FUNDED VOLUNTARY CONTRIBUTIONS.

<sup>\*\*</sup> CALIFORNIA PROVIDES AN INDEPENDENT CONNECTION ASSISTANCE PROGRAM.

TABLE 26
CELLULAR TELEPHONE SERVICE

	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	6,380,053
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

TABLE 27

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 DECEMBER	65 101	100.0% 100.0%	1,697 2,727	176,231 306,197	
1986	JUNE DECEMBER	122 160	96.0% 95.3%	3,556 4,334	360,585 462,467	
1987	JUNE DECEMBER	192 297	88.0% 97.2%	5,656 7,147	479,514 672,005	<b>\$</b> 96.83
1988	JUNE DECEMBER	409 496	99.9 <del>%</del> 99.1%	9,154 11,400	886,075 1,073,473	95.00 96.02
1989	JUNE DECEMBER	513 546	99.1% 98.8%	13,719 15,927	1,406,463 1,934,132	85.52 89.30
1990	JUNE DECEMBER	554 663	98.8% 98.2%	18,973 21,382	2,126,362 2,422,458	83.94 80.90
1991	JUNE DECEMBER	905 1,005	98.4% 96.5%	25,545 26,327	2,653,505 3,055,017	74.56 72.74
1992	JUNE DECEMBER	1,129 1,189	96.3% 93.4%	30,595 34,348	3,633,285 4,189,441	68.51 68.68
1993	JUNE	1,110	92.2%	36,501	4,819,259	67.31

#### INTERNATIONAL TELEPHONE SERVICE:

International telecommunications has become an increasingly important segment of the telecommunications market. International telephone calling — propelled by technological innovation, increased economic integration with foreign countries, and stable or declining rates — has skyrocketed. The number of calls has increased more than 600% since 1980. In 1992, Americans spent about \$10.3 billion dollars on 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 28.

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 \$3.3 billion in 1992. Several factors, most notably lowered settlement rates, kept the net payments from growing significantly in 1992. Nonetheless, settlement payments represented 58.4% of the price of international telephone calls in 1992. The trends in settlement payments are shown in Table 29.

International carriers are required to file detailed traffic reports on a country-by-country basis. Final data for 1992 is due on October 31, 1993. Preliminary results for telephone service are summarized by region of the world in Table 30. 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 Table 31 lists the carriers that provided international service. service in 1992. Most of these carriers resold switched services of other carriers. Carriers reported \$489 million of resale revenue in 1992. Twenty five U.S. carriers provided facilities based telecommunications service in 1992. The 1992 data show that these carriers billed about \$10.8 billion for all international services, of which \$10.3 billion was for telephone Table 32 shows the U.S. billed revenues by service for each facilities based carrier. Together, AT&T, MCI, and Sprint account for 96% of the facilities based service billed in the United States.

Table 28
International Service to Foreign Points 1980 – 1992
(Minute, Message, and Revenue amounts shown in Millions)

			elephone Se	rvice		Other Services					
t	····		٠.	Billed Revenue			Billed R				
·	Minutes	Messages		Per minute	Per call	Telex	Telegraph	Private Line	Misc.		
4000	1.560	199	<b>\$</b> 2,097	\$1.34	<b>\$</b> 10.53	<b>\$</b> 325	\$63	\$115			
1980	1,569	233	2,239	1.21	9.61	350	62	126			
1981	1,857	i	2,382	1.09	8.70	363	56	138			
1982	2,187	274	2,302	1.09	8.92	379	54	154			
1983	2,650	322	3,197	1.05	8.71	394	46	158			
1984	3,037	367	3,435	1.03	8.37	415	45	172			
1985	3,350	411	3,891	0.99	8.07	390	42	175			
1986	3,917	482	4,559	1.02	8.00	360	35	191			
1987	4,480	570	5,507	1.06	8.02	310	30	194			
1988	5,190	687	6,517	1.07	7.80	243	27	208			
1989	6,109	835	7,626	1.06	7.75	196	24	201			
1990	7,215	984	9,096	1.01	6.63	200	15	303	\$2		
1991 1992	8,986 10,136	1,371 1,640	10,166	1.00	6.20	155	15	319	2		

Table 29
International Telephone Service Settlements
(Revenue amounts shown in Millions)

							Average Settlement Per Minute		
	Billed Revenue	Owed to Foreign Carriers	Retained Revenue		Net Settlements	Net Revenue	Owed For U.S. Billed	Due For Foreign Billed	
1980 1981 1982 1983 1984 1985 1986 1987 1988 1989 1990 1991	\$2,097 2,239 2,382 2,876 3,197 3,435 3,891 4,559 5,507 6,517 7,626 9,096 10,166	\$1,063 1,330 1,674 2,036 2,269 2,369 2,802 3,309 3,868 4,513 5,079 5,792 5,935	\$1,034 910 708 841 928 1,066 1,089 1,250 1,640 2,004 2,547 3,304 4,231	\$716 799 961 1,086 1,066 1,239 1,387 1,634 1,840 2,115 2,317 2,493 * 2,626 *	(\$347) (531) (712) (950) (1,203) (1,130) (1,414) (1,675) (2,028) (2,398) (2,762) (3,298) (3,310)	\$1,750 1,708 1,670 1,926 1,994 2,305 2,476 2,884 3,480 4,119 4,863 5,798 6,856	\$0.68 0.72 0.77 0.77 0.75 0.71 0.72 0.74 0.75 0.74 0.70 0.64 0.59	\$0.62 0.56 0.60 0.54 0.55 0.56 0.61 0.62 0.61 0.60 0.50	

<sup>\*</sup> Includes Transiting Traffic.

Table 30
International Message Telephone Service For 1992

(Figures Rounded to the Nearest Million)

International Point	T	raffic Bilk	d in the U	Inited Stat	es	Trat	lic Billed	in Foreign (	Countries	Total
				•			ating or Te the United !		TRANSITING	U.S. Carrier
	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 Carrien	Retained Revenue	Retained Revenue
Western Europe	397	2,504	\$2,588	\$1,403	\$1,185	305	1,460	\$786	\$43	\$2,014
Asia	221	1,474	2,256	1,271	985	164	731	588	61	1,634
North and Central America	714	3,882	2,531	1,431	1,100	422	2,197	418	5	1,523
South America	101	715	822	558	264	53	234	178	3	445
Cari bbean	87	663	681	426	255	44	226	131	11	397
Middle East	45	348	476	368	109	22	133	140	25	273
Oceania	30	180	254	100	155	32	152	78	7	240
Africa	26	205	304	192	112	14	62	61	2	175
Eastern Europe	24	194	266	170	95	12	70	57	1	154
Other Regions	1	4	38	33	4	1	5	4	41	50
Total for all International points	1,645	10,169	10,216	5,952	4,264	1,070	5,269	2,440	200	6,904

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.

## U.S. Billed Minutes by Country

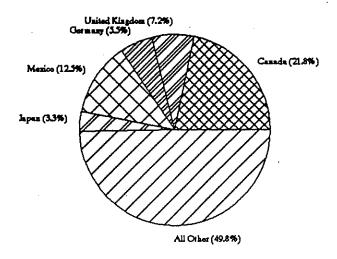


Table 31

### CARRIERS FILING INTERNATIONAL TRAFFIC DATA FOR 1992

	FACILITIES	RESALE		FACILMES	RESALE
	BASED			BASED	
	DAGLO		IT&E OVERSEAS, INC.	*	
ADIR INT'L COMM. SVCS. CORP. LTD.			LDGC, INC.		ŧ
AFFORD-A-CALL CORP.	+		LDDS COMMUNICATIONS, INC.	*	*
ALASCOM			LDS TELECOMMUNICATIONS CORP.		*
ALLNET COMMUNICATION SERVICES, INC.			LITEL TELECOMM. CORP. D/B/A		
AMERICAN NETWORK EXCHANGE, INC.			LOINTL		*
AMERICAN PIONEER TELEPHONE			LONG DISTANCE SAVERS, INC.		*
AMERICAN SAMOA GOVERNMENT	*		MATRIX TELECOM		*
AMERICAN SHARECOM, INC.				•	•
AMERICAN TELEGRAM CORPORATION			MCIAMUI METROMEDIA COMMUNICATIONS CORP.		*
AMER-I-NET SERVICES CORP.				•	
AT&T	*		MICRONET, INC. MIDCO COMMUNICATIONS, INC.		4
RUSINESS TELECOM, INC. (BTI)			MOBILE SATELLITE COMMUNICATIONS, INC. D/B/A		
CABLE & WIRELESS COMMUNICATIONS, INC.	*		PITTSBURGH INTERNATIONAL TELEPORT		
CALL AMERICA BUSINESS COMMUNICATIONS		•	PITISBURGH INTERNATIONAL TELEFORM	•	
CALL TECHNOLOGY		*	MTC (MICRONESIANTELECOMM, CORP.)		*
CAPITAL NETWORK SYSTEM INC.		*	NATIONAL TECHNICAL ASSOCIATES		*
CELLULAR LONG DISTANCE SERVICE CORP.	-		NORTHWEST NETWORK COMMUNICATIONS, INC.	ļ	•
CHARTER NETWORK		*	NTS COMMUNICATIONS		*
COMMONWEALTH LONG DISTANCE CO.		*	OCOM CORPORATION		
COMMUNIGROUP (KANSAS)		*	ONE CALL COMMUNICATIONS, INC.		1
COMMUNIGROUP (MISSISSIPPI)		*	ONE CALL COMMUNICATIONS, INC. D/B/A		
COM SYSTEMS		•	ОРПСОМ		<del> </del>
CONQUEST OPERATOR SERVICES CORP.		*	OVERSEAS TELECOMMUNICATIONS INC. (OTI)		<del>  .</del>
CONTINENTAL INTERCELL, INC.		*	PENNSYLVANIA ALTERNATIVE COM MUNICATIONS		
CORPORATE SATELLITE COMMUNICATIONS, INC.	*		POLAR COMMUNICATIONS, CORP.		
CUSTOM TELECOMMUNICATIONS NETWORK (CTN)			RCI LONG DISTANCE NEW ENGLAND D/8/A/		1 .
OF ARIZONA, INC.	]	•	LONG DISTANCE NORTH		
DATACOMM INT'L. CO., LTD.		*	RCI LONG DISTANCE, INC.		١.
DICKEYVILLE TELEPHONE CORP.			RESURGENS COMMUNICATIONS GROUP, INC.		
		•	RGT UTILITIES, INC.		
DIGITRAN CORPORATION		-	SAN MARCOS LONG DISTANCE, INC.		-
EASTERN TELELOGIC		*	SOUTHERN SATELLITE SYSTEMS/LMC SATCOM	-	
EATELNET, INC.		1	SOUTHNET SERVICES CORPORATION		<del>                                     </del>
EMI COMMUNICATIONS CORPORATION		•	SPRINT		
ENTERPRISE TELECOM SERVICES, INC.	<del></del>	*	TACONIC LONG DISTANCE SERVICE CORP.		<del>                                     </del>
EXECULINE OF SACRAMENTO, INC.	<b></b>		TELEDIAL AMERICA, INC.		1
EXECULINES OF THE NORTHWEST			TELEFONICA LARGA DISTANCIA DE PUERTO RICO	*	*
EXECUTIVE TELECARD LTD.			TELEPHONE EXPRESS		*
EXECUTONE INFORMATION SYSTEMS, INC.			TRT COMMUNICATIONS, INC.	*	ŧ
FAIRCHILD COMMUNICATIONS SERVICES	1		TTI TELECOMMUNICATIONS, INC.		*
FARMERS LONG DISTANCE, INC.			UNITED TELEPHONE LONG DISTANCE		*
FEEK'S TELECOMMUNICATIONS, INC.		_	UPS	*	
FONOROLA	<u> </u>	-	US FIBERCOM NETWORK, INC. (USF)		*
GOLDEN VALLEY TECHNOLOGIES	<u> </u>		U.S. LINK, INC.		
GTE	<u> </u>		U.S. LONG DISTANCE		•
HORRY TELEPHONE LONG DISTANCE			U.S.V.I. CELLULAR TELEPHONE CORP.		•
HUGHES COMMUNICATIONS CARRIER SERVICES, INC.	*		VARTEC TELECOM, INC.		*
IDB/CICI			WASHINGTON INT'L TELEPORT (WIT)		*
IN-FLIGHT PHONE CORPORATION		•	WASHINGTON INT'L TELEPORT (1917) WESTINGHOUSE COMMUNICATION SERVICES, INC.	*	
INTERLINK TELECOMMUNICATIONS, INC.		•		*	-
INTERNATIONAL TELECHARGE D/B/A		1	WILTEL INC.	*	•
ONCOR COMMUNICATIONS	L	•	WORLD COMMUNICATIONS, INC.	ŀ	1
IOWA NETWORK SERVICES, INC.		*			

Table 32
U.S. Billed Service to all International Points in 1992
By Facilities Based Carriers
(Revenue amounts shown in Millions)

, A. 4.5	Telephone	Telex	Telegraph	Private Line	Miscell	ancou
Conterminous U.S. Alaska	\$10,119	\$155	\$15	\$314		\$24
Hawaii	15 44			_		
Puerto Rico	38		•	3		•
Total for Domestic U.S. points	10,216	156	15	319		24
Guam	46		÷	•		
U.S. Virgin Islands	14	•		•		
All other U.S. points	24	•	•			
Total for All U.S. Points	10,300	156	15	320		24
Alascom, Inc.	15					
American Samoa Office of Communications	4		n glang	y The wat grade	,	1-1
			8	122	·	*
Cable and Wireless Communications, Inc. Corporate Satellite Communications, Inc.	.4					
EMI Communications Corporation		nia. I ma sumano		•		
Fanaraia Cara	1				4.	*
OTE STATE OF THE S	29		Zamana kanan		2.27	
Hughes Communications Carrier Services, I	nc.				,	
IDB Communications Group			i jarringi 🙀	**** 4 <b>2</b> *	Q - 118 .	. :
IT&F Oversage Inc	0.0		•	_		5.5
LDDS Communications, Inc.		(93 <b>)</b>		right (1884)		•
	2,039					
Micronesian Telecommunications Corp. Mobile Satellite Communications, Inc.	18	naky.	*	_		
Overseas Telecommunications, Inc.		£*	a .	**		
Southern Satellite Systems, Inc. /LMC SatCo	ım	± 797		12		
Sprinting of the second second second second	786	er je je 🏚				19
Telefonica Larga Distancia de Puerto Rico	*	• • •		•		13
TRT/FTC Communications, Inc.	35	34	3	*.	1 : .	3
JPS Telecommunications, Inc.			,	•		·
Western Union International	13	74	3	82		1
Westinghouse Communications, Inc.				*		×
WillTel, Inc.	All Maria Maria	and a		*		
Norld Communications, Inc.	10			34		

<sup>\*</sup> Represents revenues greater than \$0 but less than \$500,000.

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 202-632-1361.

Printed copies of statistical reports are available in the Industry Analysis Division's Public Reference Room (Room 10 at 1250 23rd Street, N.W.) and from the Commission's duplicating contractor (International Transcription Services, Inc. (ITS) 202-857-3800).

Additional information on regulated carriers, including investments, revenues, expenses, and earnings, is contained in the annual <u>Statistics of Communications Common Carriers</u>, available from the U.S. Government Printing Office.

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.

The information on cellular telephone service shown in Table 26 was prepared by the Cellular Telecommunications Industry Association (1133 21st Street N.W., Washington, D.C. 20554, (202) 785-0081).

The United States Telephone Association represents virtually all local telephone companies (900 19th Street N.W., Washington D.C. 20006 -- (202) 835-3100). Like many trade associations, it collects information from each of its members. Annually, it publishes and sells statistical publications such as <a href="https://pubmission.org/phone-facts">Phone Facts</a> and <a href="https://pubmission.org/phone-facts">Statistics of the Local Exchange Carriers</a>.

Two widely used sources of names, addresses and other information for companies in the telephone industry are Telephony's <u>Directory & Buyers' Guide for the Telecommunications</u>
<u>Industry</u> and the <u>Telephone Engineer and Management Directory</u>.

For more information, the following individuals may be contacted at (202) 632-0745:

Consumer ExpendituresJim Lande
International StatisticsLinda Blake
Lifeline Assistance Program
Lifeline Assistance ProgramsMary Green or Larry Povich
Dong Distance Companies Vatio Danger
Market Shares Vatio Dances
Prices and RatesJim Lande
Quality of Service
Quality of ServiceJonathan Kraushaar
beate Rate cases
Subscribership and Penetration Alexander Poline
reconnectedly and Edual Access Damene wine
International Telephone ServiceLinda Blake or Jim Lande
Lande