

Monitoring Report

CC Docket No. 87-339

March 1989

Prepared by the Staff of the

Federal-State Joint Board

In CC Docket No. 80-286

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Introduction and Summary

This is the seventh report of a series of quarterly reports being issued over a five-year period that is intended to help telecommunications policymakers and the general public monitor the impact of two major decisions adopted by the Federal Communications Commission (Commission) during 1987. In the first of these decisions, the Commission adopted the recommendations of the Federal-State Joint Board in CC Docket No. 80-286 to increase subscriber line charges, expand the federal lifeline assistance program, retarget the formula for high cost assistance, and modify the common line pooling system. In the second decision, the Commission adopted the recommendations of the Federal-State Joint Board in CC Docket No. 86-297 to simplify jurisdictional separations rules and conform those rules to the recently revised Uniform System of Accounts.

In an Order released on August 26, 1987, the Commission acted upon the recommendations of the Joint Boards in CC Docket Nos. 80-286 and 86-297, and established a program to monitor the impact of the two decisions noted above. This report presents currently available data in each of the eight subject categories selected for monitoring, which are: (1) subscribership and penetration levels; (2) lifeline assistance plans, including both the subscriber line charge waiver and Link-Up programs; (3) costs and high cost assistance; (4) network usage and growth; (5) rates and revenues; (6) bypass; (7) pooling and rate deaveraging; and (8) jurisdictional shifts in revenue requirements.

Much of the material for the eight monitoring categories that was contained in our previous monitoring report has not been repeated here. However, since our December monitoring report, new information in several of the areas we are monitoring has become available. For example, the Consumer Price Index (CPI) and Producer Price Index (PPI) are now available through December 1988. The most recent data show that for the year 1988, the nation's overall rate of inflation was 4.4% (measured by the CPI for all items). The CPI price of telephone service increased at a rate of 1.3% during 1988. The CPI for telephone services is based on a market basket of services purchased by typical consumers and thus includes both local and long distance service. More specifically, the overall CPI for telephone service is composed of three subindexes. During 1988, the local service component (including subscriber line charges) increased at a rate of 4.5%, while the price of interstate toll calls fell at a rate of 4.2%, and the price of state toll calls also fell at a rate of 4.2%. This report also includes new subscribership information which indicates no significant change since the previous report.

We emphasize that our monitoring efforts are being conducted in the context of an open docket (CC Docket No. 87-339) which allows materials, comments, and studies to be submitted at any time. The comments that have been received since the last report are summarized in each section of this report, insofar as they relate to that section. Summaries of comments received relating to the second 90-day study and review, which were included in the report <sup>1</sup> that resulted therefrom, are not repeated in this report. We plan to continue to include in future reports a list and summary of comments that have been received in the docket in the period since the previous report.

The Joint Board has recommended that: (1) the frequency of future Monitoring Reports be reduced from four times or year to twice a year; (2) future reports be released in January and July; and (3) that the frequency of bypass reports from the regional Bell companies and GTE be reduced from twice a year to once a year, to be filed in April. Before acting on these recommendations, the FCC will provide an opportunity in the immediate future for interested parties to submit comments on the Joint Board recommendations.

The deadline for submission of information for each future monitoring report is the first day of the month preceding the one in which the report is released. Despite this deadline, the staff intends to report all filings made in the docket at the earliest possible time. In this report we have been able to incorporate all information received prior to February 18, 1989. While materials filed after the formal cutoff date will continue to be included whenever possible, filings received after the deadline will usually appear in the next report. For ease of public reference, we ask that parties submitting materials for the docket provide a duplicate copy to the Public Reference Room of the Common Carrier Bureau's Industry Analysis Division, <sup>2</sup> where copies of all materials filed in the docket are available for public reference.

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1 MTS and WATS Market Structure, Amendment of Part 36 of the Commission's Rules and Establishment of a Joint Board, Establishment of a Program to Monitor the Impact of Joint Board Decisions, CC Docket Nos. 78-72, 80-286, and 87-339, FCC 89J-3, Second Study and Report, released March 24, 1989.

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## 1. Subscribership and Penetration Levels

The number and percentage of households that have telephone service represent the most basic measures of the extent of universal service. Continuing analysis of telephone penetration statistics allows us to examine the aggregate effects of Commission actions on households' decisions to maintain, acquire or drop telephone service. This report presents comprehensive data on telephone penetration statistics collected by the Bureau of the Census under contract with the Federal Communications Commission. Along with telephone penetration statistics for the United States and each of the states from November 1983 to November 1988, data are provided on penetration based on various demographic characteristics.

Prior to 1980, precise measurements of telephone subscribership received little attention. The most widely used measure of telephone availability is the percentage of households with telephone service -- sometimes called a measure of telephone "penetration". This statistic, however, can be subject to large measurement errors. Traditionally, telephone penetration was measured by dividing the number of residential telephone lines by the number of households. With some households adding second telephone lines and with an increasing number of second homes, measures of penetration based on the number of residential lines became subject to a large margin of error.

By 1980, the traditional penetration measure (residential lines divided by the number of households) reached 96% while the number of households reporting that they had telephones in the 1980 census was slightly less than 93%. Recognizing the need for precise periodic measurements of subscribership, the FCC requested that the Bureau of the Census include questions on telephones as part of its Current Population Survey (CPS), which monitors demographic trends between the decennial censuses. This survey is a staggered panel survey in which the people residing at particular addresses are included for four consecutive months in one year and the same four months in the following year. Use of the Current Population Survey has several advantages -- it is conducted every month by an independent and expert agency, the sample is large and the questions are consistent. Thus, changes in the results can be compared over time with a great deal of confidence.

Unfortunately, the results of the CPS cannot be directly compared with the penetration figures contained in the 1980 decennial census. This is because differences in the sampling methodologies exist and because of differences in the context in which the questions were asked.

The specific questions asked in the CPS are: "Is there a telephone in this house/apartment?" and, if the answer to the first question is "no", "Is there a telephone elsewhere on which people in this household can be called?" Although the survey is conducted every month, not all questions

are asked every month. The telephone questions are asked once every four months, in the month that a household is first included in the sample and in the month that the household reenters the sample a year later. Since the sample is staggered, the information that is reported for any given month actually reflects responses over the preceding four months. Aggregated summaries of the responses are reported to the FCC, based on the surveys conducted through March, July, and November of each year. These reports are generally released approximately two months after the final month of each four month survey period.

Census Bureau figures for November 1988, the most recent data available, show that the percentage of households subscribing to telephone service has increased by 0.2% to 92.5% in the past year. This increase, however, is not statistically significant. As a result of the increasing percentage of subscribership and an increasing number of households, 1.4 million households were added to the nation's telephone system between November 1987 and November 1988. The estimated penetration rate for November is down 0.3% from the July level. This decline, however, is also not statistically significant.

This section includes figures showing subscribership percentages by state, by householder's age and race, by household size, by family income, and for individual persons by labor force status. The data for individual persons show that 93.6% of those adults in the civilian noninstitutionalized population have a telephone in their household. This figure is up 0.2% from November 1987, and down 0.3% from July 1988. These changes are not statistically significant.

The Census Bureau data are based on a nationwide sample of about 58,000 households. Because a sample is used, the estimates are subject to sampling error. For the nationwide totals, the critical value for determining a significant difference in telephone penetration over time is 0.5% (at the 95% confidence level). For individual states, the amount of sampling variability is much greater.

The data in this section are not seasonally adjusted. Seasonal analysis of the data indicates that, for the nation as a whole, there is no significant seasonal variation in the "telephone available" statistics. There is, however, a significant seasonal pattern in the "telephone in unit" statistics. This pattern, after allowing for the 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.

This section contains eleven tables and three charts presenting penetration statistics broken out for various geographic and demographic characteristics.

Table 1.1 summarizes the telephone penetration for the United States, combining information on the number of households with the penetration rates.

Table 1.2 shows the Current Population Survey responses for the United States and for each state for the period from November 1983 through November 1988. Because the Current Population Survey began collecting this data only in 1983, comparable values are not available prior to November 1983. For each of the surveys, the column headed "Unit" indicates the percentage of households for which the response to the first question was "yes". The column headed "Avail." indicates the percentage of households which responded "yes" to either the first or the second question. The annual averages are the average of the 3 surveys of the year in question.

Chart 1.1 depicts the nationwide penetration rates for households graphically, with the values taken from the top line of Table 2.

Chart 1.2 shows the states with penetration rates above and below the national average for the 1988 annual average.

Table 1.3 shows the nationwide penetration rates for households by the age and race of the householder. It shows that the penetration rate is lowest for young and non-white households.

Table 1.4 shows the nationwide penetration rates for households by the size of the household and the race of the householder. It shows that penetration is highest for households of 2 to 5 people.

Table 1.5 shows the nationwide penetration rates for households by family income and the race of the householder. It shows a strong relationship between income and penetration.

Table 1.6 shows the nationwide penetration rates for all persons at least 16 years old in the civilian noninstitutionalized population by their race and employment status. Since this table is for individuals rather than households, the total penetration rates are different from those in the previous tables. It shows that penetration is lowest among the unemployed.

Chart 1.3 depicts the nationwide penetration rates for individuals graphically, with the values taken from the totals in Table 1.6.

Tables 1.7-1.11 present the critical values for the earlier tables. These values are relevant because changes less than or equal to the values shown are likely to be due to sampling error and thus cannot be regarded as demonstrating that a change in telephone penetration has occurred. Because there is an overlap of half of the sample from year to year, but no overlap in the sample between surveys that are four months apart, annual changes are less subject to variations in sampling error. Consequently

the critical values should be multiplied by .8 when making a comparison for the same month in two consecutive years. When comparing the annual averages, the critical values should be multiplied by 0.5774, since these are based on three surveys and hence have a lower standard error. The critical values for states are shown in Table 1.7. Tables 1.8, 1.9, 1.10 and 1.11 show the corresponding critical values for testing for significant differences over time for the penetration rates shown in Tables 1.3, 1.4, 1.5, and 1.6, respectively. In some cases these critical values are very large because the sample sizes are very small for these subcategories, rendering the estimated penetration rates unreliable.

TABLE 1.1

## Telephone Penetration in the U.S.

<u>Date</u>	<u>Households</u> (millions)	<u>Households</u> with <u>Telephones</u> (millions)	<u>Percentage</u> with <u>Telephones</u>	<u>Households</u> without <u>Telephones</u> (millions)	<u>Percentage</u> without <u>Telephones</u>
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

TABLE 1.2

## PERCENTAGE OF HOUSEHOLDS WITH A TELEPHONE BY NATIONAL TOTAL AND STATES

	1983		1984		JULY		NOVEMBER		1984 ANNUAL AVERAGE		1985 MARCH	
	NOVEMBER		MARCH		Unit	Avail	Unit	Avail	Unit	Avail	Unit	Avail
	Unit	Avail	Unit	Avail								
UNITED STATES	91.4	93.7	91.8	93.6	91.6	93.8	91.4	93.6	91.6	93.7	91.8	93.7
ALABAMA	87.9	90.2	88.9	90.4	90.3	91.8	86.1	89.3	88.4	90.5	88.4	90.3
ALASKA	83.8	88.8	85.8	88.7	87.6	90.0	86.1	88.4	86.5	89.0	89.4	91.7
ARIZONA	88.8	90.7	89.6	90.6	84.2	86.8	87.0	90.7	86.9	89.4	87.0	89.4
ARKANSAS	88.2	91.4	87.1	90.1	87.8	92.6	84.8	89.2	86.6	90.6	85.7	89.8
CALIFORNIA	91.7	93.5	92.8	93.8	92.2	93.8	92.4	93.8	92.5	93.8	93.0	94.1
COLORADO	94.4	96.5	94.7	96.4	91.9	94.4	93.2	95.2	93.2	95.4	96.2	97.7
CONNECTICUT	95.5	98.4	94.5	96.2	96.0	97.6	96.0	97.2	95.5	97.0	94.9	97.2
DELAWARE	95.0	96.6	95.4	96.3	93.7	95.1	93.7	95.8	94.3	95.7	96.6	97.4
DIST OF COL	94.7	95.6	96.1	97.5	93.5	95.4	95.1	96.0	94.9	96.3	91.6	93.5
FLORIDA	85.5	89.9	89.9	92.4	89.6	91.4	86.6	90.1	88.7	91.3	88.8	90.9
GEORGIA	88.9	92.1	85.8	88.2	86.8	90.5	86.0	88.7	86.2	89.1	89.0	91.1
HAWAII	94.6	96.4	93.6	94.2	95.1	96.3	91.9	94.3	93.5	94.9	93.3	95.1
IDAHO	89.5	92.2	90.4	91.8	91.0	91.8	90.8	91.4	90.7	91.7	91.7	93.3
ILLINOIS	95.0	95.9	95.7	96.8	93.6	95.0	93.2	95.5	94.2	95.8	94.4	95.6
INDIANA	90.3	93.5	91.8	93.2	91.2	93.3	91.7	94.4	91.6	93.6	91.7	94.8
IOWA	95.4	97.2	95.7	96.2	97.5	98.7	95.4	97.2	96.2	97.4	96.0	96.9
KANSAS	94.9	96.7	94.4	95.4	95.1	96.4	93.5	95.6	94.3	95.8	94.8	97.1
KENTUCKY	86.9	90.9	87.1	90.6	88.3	91.2	89.1	91.1	88.1	91.0	89.0	92.1
LOUISIANA	88.9	93.3	89.8	92.2	88.7	93.1	90.5	92.7	89.7	92.7	90.5	93.5
MAINE	90.7	93.1	94.4	95.7	92.1	94.9	93.9	95.2	93.4	95.3	94.2	95.3
MARYLAND	96.3	96.7	96.1	96.9	94.9	95.7	96.1	96.8	95.7	96.5	95.2	96.2
MASSACHUSETTS	94.3	95.9	95.7	96.5	96.5	97.4	95.4	96.9	95.9	96.9	95.6	96.7
MICHIGAN	93.8	94.9	93.1	95.0	93.0	94.5	92.4	94.0	92.8	94.5	92.6	94.1
MINNESOTA	96.4	97.5	95.8	97.4	96.6	97.2	95.0	96.6	95.8	97.1	97.1	98.2
MISSISSIPPI	82.4	89.1	81.8	86.1	83.1	89.8	82.2	86.6	82.4	87.5	81.6	87.0
MISSOURI	92.1	94.1	92.1	94.0	91.3	93.2	91.0	93.9	91.5	93.7	92.6	94.2
MONTANA	92.8	94.5	90.2	93.9	91.6	94.5	91.1	93.8	91.0	94.0	92.2	95.2
NEBRASKA	94.0	95.3	96.4	97.2	94.8	95.8	95.9	97.3	95.7	96.8	96.4	96.9
NEVADA	89.4	91.9	93.0	95.6	88.2	89.8	89.8	93.0	90.4	92.8	91.3	93.6
NEW HAMPSHIRE	95.0	96.9	94.7	96.3	95.9	96.4	92.4	94.7	94.3	95.8	93.4	94.4
NEW JERSEY	94.1	95.1	93.5	95.0	96.0	96.9	94.8	96.3	94.8	96.1	95.1	96.5
NEW MEXICO	85.3	90.9	81.0	85.8	81.2	86.3	84.0	88.8	82.0	87.0	85.0	88.0
NEW YORK	90.8	92.2	91.2	92.5	92.3	94.5	91.8	93.6	91.8	93.6	92.0	93.1
N. CAROLINA	89.3	92.9	88.5	92.2	87.9	91.4	88.5	92.2	88.3	91.9	89.8	92.2
N. DAKOTA	95.1	97.3	94.1	96.3	95.2	97.7	94.6	96.3	94.6	96.8	95.0	96.1
OHIO	92.2	93.9	93.2	94.9	93.4	95.1	90.8	93.3	92.4	94.4	91.7	94.7
OKLAHOMA	91.5	93.7	91.1	92.5	89.4	92.3	90.3	92.6	90.3	92.5	90.3	92.7
OREGON	91.2	93.5	91.1	92.6	92.2	93.5	88.5	90.9	90.6	92.3	89.2	91.0
PENNSYLVANIA	95.1	97.1	94.4	96.0	95.1	96.4	95.1	97.2	94.9	96.5	94.2	95.5
RHODE ISLAND	93.3	94.6	94.2	95.1	92.7	93.9	93.9	95.0	93.6	94.6	93.4	94.4
S. CAROLINA	81.8	84.9	84.5	87.9	83.6	88.1	82.9	87.1	83.7	87.7	87.2	90.6
S. DAKOTA	92.7	95.0	92.8	94.3	92.8	95.2	94.0	95.2	93.2	94.9	92.4	94.5
TENNESSEE	87.6	92.6	87.0	90.3	88.3	92.0	90.1	93.8	88.5	92.0	87.7	90.0
TEXAS	89.0	92.6	88.2	91.7	87.6	91.0	89.4	92.3	88.4	91.6	87.8	91.5
UTAH	90.3	92.2	92.2	94.1	93.2	94.6	92.2	93.9	92.5	94.2	95.3	95.7
VERMONT	92.7	94.3	91.2	93.4	93.1	94.6	92.5	94.0	92.3	94.0	90.6	91.8
VIRGINIA	93.1	94.7	93.2	95.1	93.0	95.6	92.9	94.6	93.1	95.1	92.8	94.5
WASHINGTON	92.5	93.7	92.7	94.3	93.6	95.2	92.7	93.6	93.0	94.4	92.7	94.4
W. VIRGINIA	88.1	91.1	87.2	93.5	86.5	90.0	89.4	92.1	87.7	91.8	88.1	91.4
WISCONSIN	94.8	96.1	95.9	96.3	93.5	96.0	96.3	97.4	95.2	96.6	93.8	95.7
WYOMING	89.7	93.3	89.2	92.3	88.4	91.2	92.1	95.0	89.9	92.8	91.7	94.2

TABLE 1.2

	1985											
	JULY		NOVEMBER		ANNUAL AVERAGE		1986 MARCH		JULY		NOVEMBER	
	Unit	Avail	Unit	Avail	Unit	Avail	Unit	Avail	Unit	Avail	Unit	Avail
UNITED STATES	91.8	93.9	91.9	94.0	91.8	93.9	92.2	93.9	92.2	94.0	92.4	94.4
ALABAMA	89.1	90.9	89.9	91.8	89.1	91.0	89.1	90.6	89.5	91.3	87.5	89.4
ALASKA	86.4	88.0	85.7	88.7	87.1	89.5	88.4	91.0	83.5	86.1	87.3	89.6
ARIZONA	88.0	89.8	86.9	89.8	87.3	89.6	90.8	91.8	89.8	91.4	87.6	89.4
ARKANSAS	86.6	90.8	85.5	89.2	85.9	89.9	85.8	89.4	85.1	89.8	88.3	92.1
CALIFORNIA	92.7	94.1	93.0	94.1	92.9	94.1	93.3	94.1	92.3	93.2	93.4	94.8
COLORADO	93.7	95.9	93.1	95.0	94.3	96.2	95.0	97.1	93.2	94.8	94.2	96.0
CONNECTICUT	96.5	97.6	97.1	98.0	96.2	97.6	97.3	97.7	96.8	98.3	97.0	97.8
DELAWARE	94.4	96.1	93.4	95.2	94.8	96.2	95.2	97.0	93.5	95.4	95.3	96.5
DIST OF COL	93.6	94.9	95.6	97.4	93.6	95.2	91.9	93.3	93.6	94.8	91.1	93.9
FLORIDA	89.5	91.6	90.3	92.7	89.6	91.7	89.1	91.3	89.9	92.4	91.1	93.8
GEORGIA	88.4	90.2	85.4	88.0	87.6	89.7	88.2	91.4	89.1	91.4	88.0	90.2
HAWAII	92.7	95.8	93.1	94.2	93.0	95.0	94.3	96.0	92.8	94.0	89.6	93.2
IDAHO	91.1	92.7	92.6	93.5	91.8	93.1	92.1	93.6	89.8	91.8	92.7	93.7
ILLINOIS	93.4	95.3	93.3	95.2	93.7	95.3	93.4	94.7	94.4	95.5	93.2	95.5
INDIANA	92.8	95.0	92.4	94.3	92.3	94.7	92.9	94.7	91.4	93.8	92.4	94.5
IOWA	94.6	96.4	94.7	95.9	95.1	96.4	95.5	96.6	96.0	96.9	95.6	96.1
KANSAS	93.9	95.9	94.4	96.2	94.4	96.4	93.9	95.4	94.5	96.0	95.4	96.9
KENTUCKY	86.8	90.3	86.4	90.8	87.4	91.1	87.3	90.3	85.3	90.0	86.1	91.6
LOUISIANA	90.3	94.0	90.2	93.4	90.3	93.6	90.5	93.0	89.7	93.2	85.9	89.6
MAINE	93.8	95.2	94.2	96.2	94.0	95.6	92.8	95.5	93.0	94.8	94.3	95.9
MARYLAND	96.2	98.1	95.3	95.9	95.5	96.7	95.7	96.6	95.6	96.8	95.9	96.7
MASSACHUSETTS	95.0	95.9	94.8	96.5	95.2	96.3	96.3	97.2	96.5	97.1	96.4	97.1
MICHIGAN	93.5	94.7	92.6	93.7	92.9	94.2	93.7	94.5	93.3	94.7	93.4	94.4
MINNESOTA	96.8	97.4	95.3	96.7	96.4	97.4	95.6	97.0	96.4	96.9	96.7	97.9
MISSISSIPPI	80.1	88.7	81.0	87.0	80.9	87.6	81.9	87.5	76.9	86.6	81.6	87.8
MISSOURI	92.9	95.2	92.0	95.0	92.5	94.8	93.0	93.8	94.1	95.8	93.1	95.0
MONTANA	90.0	91.4	92.0	95.1	91.4	93.9	93.0	95.1	89.1	92.6	90.6	93.5
NEBRASKA	95.0	96.3	94.6	96.7	95.3	96.6	96.0	97.2	95.0	96.1	95.8	97.1
NEVADA	90.3	92.8	94.0	95.1	91.8	93.8	91.0	92.7	92.9	93.6	93.1	94.8
NEW HAMPSHIRE	93.0	94.2	93.4	95.4	93.2	94.6	93.9	95.0	93.4	94.0	94.6	96.1
NEW JERSEY	95.4	96.5	94.1	95.5	94.9	96.2	94.2	95.6	96.0	96.9	94.4	96.0
NEW MEXICO	85.1	88.8	82.1	87.8	84.1	88.2	86.0	89.4	85.2	88.9	84.2	89.1
NEW YORK	91.2	93.1	93.0	94.5	92.1	93.6	92.9	93.9	93.7	94.7	93.0	94.3
N. CAROLINA	89.2	92.7	89.2	92.2	89.4	92.4	90.0	92.1	90.6	93.0	90.1	92.5
N. DAKOTA	95.1	96.7	95.7	97.4	95.3	96.7	95.0	95.5	95.6	97.2	97.9	98.2
OHIO	93.3	95.1	91.7	93.8	92.2	94.5	93.6	95.1	92.7	94.0	92.8	94.1
OKLAHOMA	87.0	89.6	89.2	92.6	88.8	91.7	89.7	92.7	91.1	93.0	90.5	93.4
OREGON	91.0	93.2	90.6	92.0	90.3	92.1	92.6	94.6	92.6	94.5	92.9	93.6
PENNSYLVANIA	95.8	96.8	95.8	97.5	95.3	96.6	95.9	97.4	96.3	97.1	96.7	97.7
RHODE ISLAND	95.1	96.4	93.6	94.5	94.0	95.1	95.0	95.8	97.1	97.7	95.5	96.8
S. CAROLINA	85.6	90.5	87.6	90.4	86.8	90.5	88.8	91.6	83.8	88.8	86.3	91.4
S. DAKOTA	93.1	94.2	92.2	94.9	92.6	94.5	93.4	94.2	91.5	93.3	92.9	95.1
TENNESSEE	88.3	91.8	91.9	95.9	89.3	92.6	89.7	92.9	88.5	93.3	90.8	94.8
TEXAS	87.7	91.6	88.9	91.8	88.1	91.6	87.7	90.7	89.4	92.1	89.5	92.8
UTAH	93.3	95.1	93.2	94.5	93.9	95.1	93.8	94.5	91.8	93.0	93.3	94.3
VERMONT	93.0	94.4	95.1	96.2	92.9	94.1	93.7	94.9	93.4	95.2	94.4	96.5
VIRGINIA	90.4	92.3	92.0	94.5	91.7	93.8	92.0	93.7	91.3	93.7	92.9	94.9
WASHINGTON	96.1	97.5	95.3	96.6	94.7	96.2	92.2	94.6	96.6	97.7	95.2	96.4
W. VIRGINIA	88.7	92.8	86.1	90.8	87.6	91.7	90.7	93.7	87.4	91.6	86.5	90.3
WISCONSIN	94.4	95.5	94.1	95.0	94.1	95.4	94.6	95.1	95.4	95.8	95.4	96.7
WYOMING	92.7	93.8	95.7	96.7	93.4	94.9	90.5	93.7	92.4	94.8	93.3	96.8

TABLE 1.2

	1986		1987		1987		1987		1987		1988	
	ANNUAL		MARCH		JULY		NOVEMBER		ANNUAL		MARCH	
	Unit	Avail	Unit	Avail	Unit	Avail	Unit	Avail	Unit	Avail	Unit	Avail
UNITED STATES	92.3	94.1	92.5	94.3	92.3	94.2	92.3	94.3	92.4	94.2	92.9	94.6
ALABAMA	88.7	90.4	87.2	89.9	86.3	88.5	88.9	90.5	87.5	89.6	88.4	89.6
ALASKA	86.4	88.9	88.3	90.5	87.4	89.6	87.8	90.3	87.8	90.2	87.2	89.4
ARIZONA	89.4	90.9	89.1	91.8	88.6	90.4	88.2	89.8	88.6	90.7	90.5	92.5
ARKANSAS	86.4	90.4	87.0	90.4	85.8	90.4	86.0	91.3	86.3	90.7	83.6	87.7
CALIFORNIA	93.0	94.0	94.3	95.4	93.2	94.5	93.8	95.0	93.8	95.0	94.7	95.6
COLORADO	94.1	96.0	93.2	96.4	93.0	95.0	92.5	95.2	92.9	95.5	95.1	96.3
CONNECTICUT	97.0	97.9	97.9	97.9	96.7	98.2	96.4	97.9	97.0	98.0	96.5	99.0
DELAWARE	94.7	96.3	96.5	97.6	96.9	97.7	96.1	96.5	96.5	97.3	97.2	98.4
DIST OF COL	92.2	94.0	91.2	93.1	92.1	94.2	94.0	95.4	92.4	94.2	93.3	95.2
FLORIDA	90.0	92.5	91.2	93.1	92.3	94.5	91.7	93.9	91.7	93.8	93.0	94.7
GEORGIA	88.4	91.0	87.5	90.7	89.2	92.0	89.5	91.2	88.7	91.3	91.5	93.2
HAWAII	92.2	94.4	94.8	96.5	94.8	96.9	93.1	96.2	94.2	96.6	95.3	96.2
IDAHO	91.5	93.1	90.9	91.7	90.4	92.1	92.0	93.8	91.1	92.5	92.9	93.1
ILLINOIS	93.6	95.2	94.0	95.6	93.3	95.2	93.7	94.7	93.7	95.2	94.3	95.6
INDIANA	92.2	94.3	91.3	92.9	91.0	93.4	91.4	93.3	91.2	93.2	91.4	94.2
IOWA	95.7	96.5	95.5	96.7	94.9	96.4	94.8	96.0	95.1	96.3	94.5	96.2
KANSAS	94.6	96.1	95.5	96.6	95.2	96.4	94.9	96.8	95.2	96.6	95.3	95.9
KENTUCKY	86.2	90.6	87.4	90.9	85.0	89.9	87.2	91.0	86.5	90.6	89.5	92.2
LOUISIANA	88.7	91.9	86.9	90.6	89.5	91.6	86.1	90.3	87.5	90.8	86.8	90.1
MAINE	93.4	95.4	94.2	95.9	93.1	94.6	93.1	95.2	93.5	95.2	94.3	95.3
MARYLAND	95.7	96.7	96.2	96.5	94.2	96.1	96.0	97.3	95.4	96.6	96.4	97.4
MASSACHUSETTS	96.4	97.1	96.7	97.5	97.0	97.4	95.5	96.1	96.4	97.0	97.3	97.7
MICHIGAN	93.4	94.5	94.1	95.0	93.3	94.4	93.7	94.9	93.7	94.8	94.4	95.5
MINNESOTA	96.2	97.2	95.8	97.6	96.0	97.5	96.1	97.3	96.0	97.4	97.3	98.3
MISSISSIPPI	80.1	87.3	82.6	87.7	79.8	82.8	81.9	88.4	81.5	86.3	83.8	88.9
MISSOURI	93.4	94.9	91.5	94.3	93.5	95.6	94.0	95.9	93.0	95.3	93.0	95.5
MONTANA	90.9	93.7	91.4	94.2	89.3	92.1	91.9	95.2	90.9	93.9	91.4	93.2
NEBRASKA	95.6	96.8	95.0	96.4	95.1	95.7	93.8	96.0	94.6	96.1	96.4	96.9
NEVADA	92.4	93.7	92.1	92.6	92.5	94.3	92.5	94.2	92.4	93.7	91.8	92.8
NEW HAMPSHIRE	94.0	95.0	94.0	96.2	94.8	96.1	93.6	96.3	94.1	96.2	96.5	97.1
NEW JERSEY	94.9	96.1	94.3	95.5	95.6	96.6	95.2	96.9	95.0	96.3	94.3	96.0
NEW MEXICO	85.1	89.1	89.1	91.7	83.6	87.9	85.5	88.2	86.0	89.3	85.9	89.1
NEW YORK	93.2	94.3	93.3	94.2	92.5	94.1	92.5	94.1	92.7	94.2	93.0	94.4
N. CAROLINA	90.2	92.5	89.7	92.1	89.5	91.9	88.5	91.2	89.2	91.7	90.1	92.7
N. DAKOTA	96.1	97.0	97.8	98.2	96.1	96.8	96.4	97.1	96.8	97.4	96.7	97.9
OHIO	93.1	94.4	93.4	94.8	93.9	95.0	92.9	94.2	93.4	94.7	94.0	94.9
OKLAHOMA	90.4	93.0	88.5	91.9	89.1	92.5	88.6	91.1	88.7	91.8	89.6	92.0
OREGON	92.7	94.3	91.1	92.3	94.5	96.6	94.3	95.5	93.3	94.8	89.4	91.8
PENNSYLVANIA	96.3	97.4	96.0	97.0	97.0	97.8	96.1	97.2	96.4	97.3	96.1	97.2
RHODE ISLAND	95.9	96.8	95.1	96.6	95.0	95.8	95.6	96.6	95.2	96.3	95.4	96.7
S. CAROLINA	86.3	90.6	89.0	91.2	85.6	89.0	88.5	91.6	87.7	90.6	88.3	91.6
S. DAKOTA	92.6	94.2	92.2	95.1	93.3	94.9	92.8	95.1	92.8	95.0	92.2	95.0
TENNESSEE	89.6	93.6	89.3	92.3	89.1	91.6	89.2	93.9	89.2	92.6	91.7	94.7
TEXAS	88.9	91.9	90.4	92.4	89.5	92.3	88.6	91.8	89.5	92.2	87.8	90.6
UTAH	93.0	93.9	93.2	94.6	90.1	94.5	93.7	94.6	92.3	94.6	93.0	93.7
VERMONT	93.8	95.6	95.8	96.8	95.4	96.7	94.8	97.4	95.3	96.9	95.9	97.2
VIRGINIA	92.1	94.1	92.9	94.8	92.7	94.5	91.9	94.3	92.5	94.6	94.7	96.2
WASHINGTON	94.6	96.3	93.2	96.5	94.5	95.9	95.1	96.8	94.3	96.4	93.4	94.9
W. VIRGINIA	88.2	91.9	88.7	91.5	88.1	91.5	86.7	91.5	87.8	91.5	87.9	92.1
WISCONSIN	95.1	95.9	96.2	97.0	95.5	96.1	97.5	98.2	96.4	97.1	95.9	97.4
WYOMING	92.1	95.1	93.3	95.2	93.5	95.3	90.1	91.8	92.3	94.1	93.6	94.6



TABLE 1.2

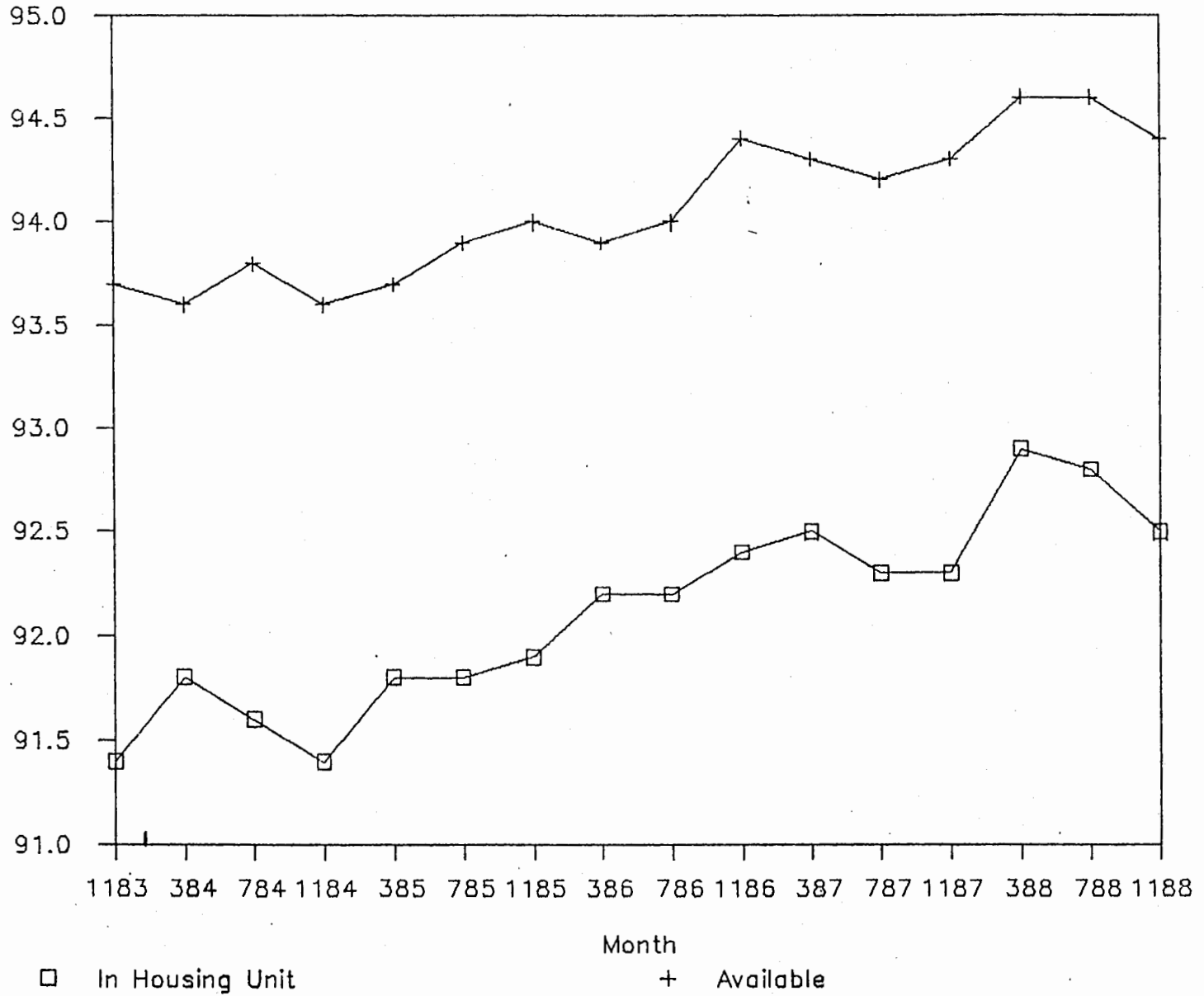
	1988 JULY		NOVEMBER		1988 ANNUAL AVERAGE	
	Unit	Avail	Unit	Avail	Unit	Avail
UNITED STATES	92.8	94.6	92.5	94.4	92.7	94.5
ALABAMA	86.5	89.2	86.9	90.2	87.3	89.6
ALASKA	88.2	90.3	87.3	90.0	87.6	89.9
ARIZONA	91.2	91.9	90.2	92.4	90.6	92.3
ARKANSAS	87.5	92.1	87.3	90.9	86.1	90.2
CALIFORNIA	94.0	95.1	94.5	95.8	94.4	95.5
COLORADO	94.1	95.7	92.2	94.1	93.8	95.4
CONNECTICUT	97.6	98.4	94.8	99.3	96.3	98.9
DELAWARE	97.4	98.2	96.3	97.2	97.0	97.9
DIST OF COL	94.4	95.3	96.1	97.3	94.6	95.9
FLORIDA	92.8	94.8	92.2	94.1	92.7	94.5
GEORGIA	90.4	92.5	88.4	91.7	90.1	92.4
HAWAII	92.2	95.0	95.9	97.8	94.5	96.3
IDAHO	91.9	93.6	91.9	93.2	92.2	93.3
ILLINOIS	94.0	95.9	94.1	95.3	94.2	95.6
INDIANA	92.8	95.3	92.8	95.3	92.3	94.9
IOWA	96.6	97.8	95.1	96.6	95.4	96.9
KANSAS	94.0	96.2	93.9	95.0	94.4	95.7
KENTUCKY	86.8	90.1	86.3	90.3	87.5	90.9
LOUISIANA	87.8	91.9	87.3	91.4	87.3	91.1
MAINE	93.5	96.0	94.7	96.3	94.2	95.9
MARYLAND	96.0	96.9	95.4	97.2	95.9	97.2
MASSACHUSETTS	97.1	97.5	96.4	96.8	96.9	97.3
MICHIGAN	93.6	94.9	93.8	94.7	93.9	95.0
MINNESOTA	97.3	98.0	97.1	98.9	97.2	98.4
MISSISSIPPI	83.7	88.7	82.5	88.1	83.3	88.6
MISSOURI	95.5	96.4	92.0	94.8	93.5	95.6
MONTANA	91.5	94.0	92.3	95.3	91.7	94.2
NEBRASKA	95.3	96.0	94.6	95.5	95.4	96.1
NEVADA	92.6	93.7	93.0	93.9	92.4	93.4
NEW HAMPSHIRE	94.8	95.4	94.5	95.9	95.2	96.1
NEW JERSEY	94.8	96.3	94.1	95.3	94.4	95.9
NEW MEXICO	85.5	87.8	85.6	90.5	85.7	89.1
NEW YORK	91.6	93.5	92.5	94.1	92.4	94.0
N. CAROLINA	91.2	92.9	89.9	92.8	90.4	92.8
N. DAKOTA	95.8	96.4	97.9	98.1	96.8	97.5
OHIO	95.1	96.1	94.0	94.8	94.4	95.2
OKLAHOMA	87.4	90.0	89.6	92.8	88.9	91.6
OREGON	94.4	95.0	92.2	93.8	92.0	93.5
PENNSYLVANIA	96.8	97.5	95.7	96.6	96.2	97.1
RHODE ISLAND	94.4	95.5	96.5	97.3	95.4	96.5
S. CAROLINA	87.4	91.1	89.7	91.6	88.5	91.4
S. DAKOTA	92.9	95.8	93.7	95.4	92.9	95.4
TENNESSEE	90.4	93.1	88.8	92.8	90.3	93.5
TEXAS	89.1	92.2	88.5	91.0	88.5	91.3
UTAH	91.4	95.4	93.1	94.3	92.5	94.5
VERMONT	95.4	96.5	95.6	96.6	95.6	96.8
VIRGINIA	91.4	95.2	92.5	95.0	92.9	95.5
WASHINGTON	95.2	96.4	94.2	95.6	94.3	95.7
W. VIRGINIA	85.8	90.1	88.4	92.0	87.3	91.4
WISCONSIN	97.2	97.9	98.0	98.7	97.0	98.0
WYOMING	94.3	95.9	91.3	92.7	93.0	94.4

CHART 1.1

# Telephone Penetration

Households

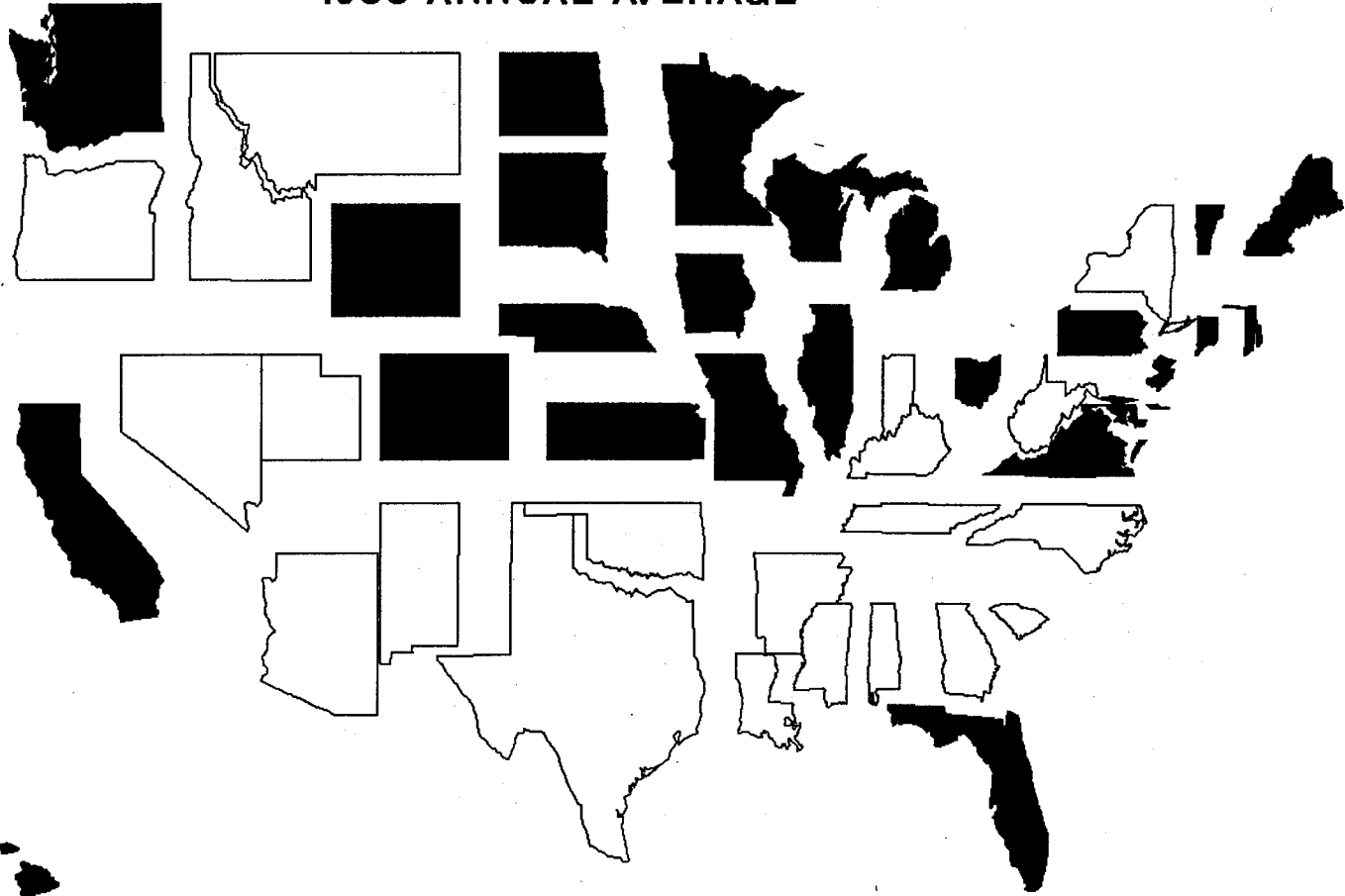
Percent with Telephone



# Households with Phones

Above or below national average.

1988 ANNUAL AVERAGE



SOLID ■ ABOVE NATIONAL AVERAGE OF 92.7%

TABLE 1.3

## PERCENTAGE OF HOUSEHOLDS WITH A TELEPHONE BY HOUSEHOLDER'S AGE

	ALL RACES		WHITE		BLACK		HISPANIC ORIGIN	
	Unit	Avail	Unit	Avail	Unit	Avail	Unit	Avail
NOVEMBER 83								
TOTAL HOUSEHOLDS	91.4	93.7	93.1	95.0	78.8	83.9	80.7	84.6
16-24 YRS OLD	76.6	84.1	80.2	86.2	49.9	68.2	64.9	71.9
25-54 YRS OLD	91.5	93.7	93.4	95.2	78.7	83.3	81.8	85.6
55-59 YRS OLD	95.0	96.1	96.1	97.0	86.3	88.5	89.3	89.3
60-64 YRS OLD	95.5	96.4	96.4	97.2	89.5	90.7	87.3	90.2
65-69 YRS OLD	95.5	96.2	96.5	97.0	87.2	89.0	90.7	90.7
70-99 YRS OLD	95.4	96.5	96.0	97.0	90.1	92.3	85.5	89.1
MARCH 84								
TOTAL HOUSEHOLDS	91.8	93.6	93.3	94.9	80.1	84.1	80.7	83.6
16-24 YRS OLD	77.8	84.0	80.3	85.5	57.9	71.5	59.0	66.2
25-54 YRS OLD	91.9	93.7	93.5	95.0	80.4	84.0	83.2	85.6
55-59 YRS OLD	94.9	95.9	95.7	96.6	87.6	89.9	88.7	90.5
60-64 YRS OLD	94.2	95.3	95.9	96.7	81.7	85.0	87.4	89.6
65-69 YRS OLD	96.1	96.6	97.0	97.4	87.8	89.3	85.8	87.8
70-99 YRS OLD	95.3	96.3	96.2	97.1	87.2	88.8	82.2	85.5
JULY 84								
TOTAL HOUSEHOLDS	91.6	93.8	93.2	95.0	80.5	85.3	81.1	84.6
16-24 YRS OLD	77.0	83.3	79.4	85.3	60.4	70.0	62.9	70.8
25-54 YRS OLD	91.7	93.8	93.4	95.1	79.8	84.9	83.1	85.8
55-59 YRS OLD	95.1	96.3	96.1	97.1	87.5	90.2	87.4	91.4
60-64 YRS OLD	95.0	96.2	95.8	96.9	87.7	89.5	88.1	90.5
65-69 YRS OLD	96.4	97.1	97.3	97.9	89.3	91.3	88.7	90.6
70-99 YRS OLD	95.2	96.5	95.9	96.9	89.6	93.1	84.0	88.5
NOVEMBER 84								
TOTAL HOUSEHOLDS	91.4	93.6	93.1	95.0	78.9	84.0	81.1	84.5
16-24 YRS OLD	76.1	83.4	79.0	85.4	56.3	70.8	60.8	70.8
25-54 YRS OLD	91.4	93.6	93.3	95.1	78.5	83.3	83.1	85.8
55-59 YRS OLD	94.9	96.2	96.3	97.5	84.7	87.4	85.3	88.3
60-64 YRS OLD	95.6	96.5	96.5	97.3	90.3	92.1	86.0	87.2
65-69 YRS OLD	96.0	96.7	97.1	97.6	86.7	89.1	96.2	96.2
70-99 YRS OLD	95.3	96.6	96.1	97.2	88.0	90.7	87.1	88.8
1984 ANNUAL AVERAGE								
TOTAL HOUSEHOLDS	91.6	93.7	93.2	94.9	79.8	84.5	80.9	84.3
16-24 YRS OLD	77.0	83.6	79.6	85.4	58.2	70.8	60.9	69.2
25-54 YRS OLD	91.7	93.7	93.4	95.1	79.6	84.1	83.1	85.7
55-59 YRS OLD	94.9	96.1	96.1	97.1	86.6	89.2	87.1	90.1
60-64 YRS OLD	94.9	96.0	96.0	97.0	86.6	88.8	87.1	89.1
65-69 YRS OLD	96.2	96.8	97.1	97.6	87.9	89.9	90.2	91.5
70-99 YRS OLD	95.3	96.5	96.0	97.1	88.2	90.9	84.4	87.6

TABLE 1.3

## PERCENTAGE OF HOUSEHOLDS WITH A TELEPHONE BY HOUSEHOLDER'S AGE

	ALL RACES		WHITE		BLACK		HISPANIC ORIGIN	
	Unit	Avail	Unit	Avail	Unit	Avail	Unit	Avail
MARCH 85								
TOTAL HOUSEHOLDS	91.8	93.7	93.3	95.0	80.1	84.4	81.2	84.1
16-24 YRS OLD	77.3	83.1	79.6	84.8	59.8	70.0	62.4	67.1
25-54 YRS OLD	91.9	93.8	93.6	95.2	79.5	83.9	83.0	85.5
55-59 YRS OLD	94.9	95.9	95.8	96.7	87.3	89.1	86.5	89.1
60-64 YRS OLD	94.3	95.4	95.5	96.2	84.4	87.6	91.3	93.2
65-69 YRS OLD	96.1	97.0	96.8	97.5	90.7	93.6	86.5	90.4
70-99 YRS OLD	95.6	96.5	96.5	97.3	87.4	89.4	87.4	91.7
JULY 85								
TOTAL HOUSEHOLDS	91.8	93.9	93.2	95.0	81.6	85.8	80.3	83.3
16-24 YRS OLD	78.3	84.4	80.7	86.3	59.6	70.2	67.8	73.7
25-54 YRS OLD	91.8	93.9	93.3	95.1	81.4	85.8	81.0	83.6
55-59 YRS OLD	94.7	95.9	95.9	96.8	86.3	89.4	87.2	88.0
60-64 YRS OLD	95.0	95.9	95.5	96.4	91.1	91.8	85.5	88.3
65-69 YRS OLD	95.5	96.5	96.7	97.4	86.1	88.5	85.9	89.7
70-99 YRS OLD	95.6	96.8	96.2	97.3	90.8	92.4	87.6	90.5
NOVEMBER 85								
TOTAL HOUSEHOLDS	91.9	94.0	93.3	95.2	81.5	85.3	82.5	85.7
16-24 YRS OLD	78.0	83.9	80.6	86.3	60.7	68.1	64.3	71.6
25-54 YRS OLD	91.9	94.0	93.5	95.3	81.1	85.2	83.4	86.5
55-59 YRS OLD	95.0	96.2	95.7	96.8	90.0	91.4	88.4	90.6
60-64 YRS OLD	95.5	96.3	96.3	97.0	89.8	91.3	92.3	92.3
65-69 YRS OLD	96.1	97.0	97.0	97.7	88.0	90.8	95.1	95.1
70-99 YRS OLD	95.3	96.6	96.0	97.2	88.9	90.5	87.8	90.4
1985 ANNUAL AVERAGE								
TOTAL HOUSEHOLDS	91.8	93.9	93.3	95.0	81.1	85.2	81.3	84.4
16-24 YRS OLD	77.9	83.8	80.3	85.8	60.0	69.4	64.8	70.8
25-54 YRS OLD	91.9	93.9	93.5	95.2	80.7	85.0	82.5	85.2
55-59 YRS OLD	94.9	96.0	95.8	96.8	87.8	90.0	87.4	89.2
60-64 YRS OLD	94.9	95.9	95.8	96.5	88.4	90.2	89.7	91.3
65-69 YRS OLD	95.9	96.8	96.8	97.5	88.2	90.9	89.1	91.7
70-99 YRS OLD	95.5	96.6	96.2	97.3	89.1	90.7	87.6	90.9
MARCH 86								
TOTAL HOUSEHOLDS	92.2	93.9	93.6	95.0	82.0	85.8	81.5	83.9
16-24 YRS OLD	78.1	82.9	80.6	84.7	58.2	69.0	60.1	63.8
25-54 YRS OLD	92.3	93.9	93.8	95.1	82.1	85.6	83.1	85.3
55-59 YRS OLD	95.2	96.3	96.1	97.0	87.8	90.6	86.8	90.3
60-64 YRS OLD	95.5	96.2	96.2	96.9	89.0	90.5	92.4	92.4
65-69 YRS OLD	95.7	96.7	96.6	97.4	87.2	89.8	94.1	95.1
70-99 YRS OLD	95.9	97.0	96.4	97.5	91.2	93.0	93.1	96.2

## PERCENTAGE OF HOUSEHOLDS WITH A TELEPHONE BY HOUSEHOLDER'S AGE

	ALL RACES		WHITE		BLACK		HISPANIC ORIGIN	
	Unit	Avail	Unit	Avail	Unit	Avail	Unit	Avail
JULY 86								
TOTAL HOUSEHOLDS	92.2	94.0	93.7	95.2	81.5	85.7	81.1	83.6
16-24 YRS OLD	79.7	85.4	82.0	86.7	63.8	76.6	64.1	69.7
25-54 YRS OLD	92.1	93.9	93.8	95.3	80.4	84.4	83.0	85.1
55-59 YRS OLD	95.0	96.0	96.0	96.9	87.9	90.0	86.0	87.1
60-64 YRS OLD	95.3	96.2	95.9	96.6	90.9	92.9	81.8	85.1
65-69 YRS OLD	95.7	96.5	96.7	97.4	87.8	89.4	91.4	92.6
70-99 YRS OLD	95.8	96.5	96.4	97.1	90.6	91.8	85.3	86.1
NOVEMBER 86								
TOTAL HOUSEHOLDS	92.4	94.4	93.8	95.5	81.3	86.1	81.6	84.7
16-24 YRS OLD	79.4	84.7	81.9	86.3	57.5	71.1	65.9	68.8
25-54 YRS OLD	92.2	94.3	93.9	95.6	80.8	85.5	82.6	86.0
55-59 YRS OLD	95.3	96.6	96.1	97.0	88.3	93.2	90.1	93.8
60-64 YRS OLD	95.4	96.2	96.6	97.4	86.7	87.8	93.2	93.6
65-69 YRS OLD	96.0	96.9	96.7	97.5	90.2	92.5	85.7	88.0
70-99 YRS OLD	96.4	97.3	96.8	97.7	92.2	93.9	84.1	86.9
1986 ANNUAL AVERAGE								
TOTAL HOUSEHOLDS	92.3	94.1	93.7	95.2	81.6	85.9	81.4	84.1
16-24 YRS OLD	79.0	84.4	81.5	85.9	59.8	72.2	63.4	67.4
25-54 YRS OLD	92.2	94.0	93.8	95.3	81.1	85.2	82.9	85.5
55-59 YRS OLD	95.2	96.3	96.1	97.0	88.0	91.3	87.6	90.4
60-64 YRS OLD	95.4	96.2	96.2	97.0	88.9	90.4	89.1	90.3
65-69 YRS OLD	95.8	96.7	96.7	97.4	88.4	90.6	90.4	91.9
70-99 YRS OLD	96.0	97.0	96.5	97.4	91.3	92.9	87.5	89.8
MARCH 87								
TOTAL HOUSEHOLDS	92.5	94.3	93.9	95.4	82.2	85.7	84.1	86.5
16-24 YRS OLD	79.7	85.5	81.9	87.0	64.3	73.8	68.1	75.1
25-54 YRS OLD	92.6	94.2	94.1	95.5	81.7	85.3	85.1	87.0
55-59 YRS OLD	95.0	96.1	96.4	97.0	85.0	88.6	87.4	90.5
60-64 YRS OLD	95.6	96.4	96.5	97.2	87.6	89.8	92.6	92.6
65-69 YRS OLD	95.6	96.2	96.5	97.0	87.9	89.2	89.4	89.4
70-99 YRS OLD	95.8	97.0	96.3	97.5	91.4	92.3	95.3	96.1
JULY 87								
TOTAL HOUSEHOLDS	92.3	94.2	93.7	95.3	82.0	86.0	83.1	85.2
16-24 YRS OLD	78.2	83.3	81.2	85.7	57.6	67.2	66.2	69.7
25-54 YRS OLD	92.1	94.2	93.6	95.3	81.9	86.2	84.2	86.1
55-59 YRS OLD	95.4	96.2	96.5	97.2	87.1	89.8	90.8	92.4
60-64 YRS OLD	95.8	96.4	96.7	97.2	88.5	90.2	91.1	93.7
65-69 YRS OLD	96.5	97.2	97.5	98.1	88.9	90.2	87.5	87.5
70-99 YRS OLD	96.0	96.9	96.4	97.3	93.4	94.1	88.8	91.6

TABLE 1.3

## PERCENTAGE OF HOUSEHOLDS WITH A TELEPHONE BY HOUSEHOLDER'S AGE

	ALL RACES		WHITE		BLACK		HISPANIC ORIGIN	
	Unit	Avail	Unit	Avail	Unit	Avail	Unit	Avail
NOVEMBER 87								
TOTAL HOUSEHOLDS	92.3	94.3	93.8	95.4	81.2	85.9	81.9	84.6
16-24 YRS OLD	78.9	84.4	81.0	85.5	63.6	76.0	61.3	67.8
25-54 YRS OLD	92.1	94.2	93.9	95.5	80.4	85.1	83.9	86.4
55-59 YRS OLD	95.3	96.4	96.3	97.3	88.9	90.3	89.1	89.3
60-64 YRS OLD	95.7	96.5	96.7	97.4	88.0	90.5	89.0	89.9
65-69 YRS OLD	95.7	96.6	97.0	97.6	84.6	88.4	89.6	89.6
70-99 YRS OLD	96.3	97.3	96.8	97.7	90.8	92.7	90.7	91.7
1987 ANNUAL AVERAGE								
TOTAL HOUSEHOLDS	92.4	94.2	93.8	95.4	81.8	85.9	83.0	85.4
16-24 YRS OLD	78.9	84.4	81.4	86.1	61.8	72.3	65.2	70.8
25-54 YRS OLD	92.3	94.2	93.9	95.4	81.4	85.5	84.4	86.5
55-59 YRS OLD	95.2	96.2	96.4	97.2	87.0	89.6	89.1	90.7
60-64 YRS OLD	95.7	96.4	96.6	97.3	88.0	90.2	90.9	92.0
65-69 YRS OLD	95.9	96.7	97.0	97.5	87.1	89.3	88.8	88.8
70-99 YRS OLD	96.0	97.0	96.5	97.5	91.9	93.0	91.6	93.1
MARCH 88								
TOTAL HOUSEHOLDS	92.9	94.6	94.2	95.7	82.7	86.3	82.6	85.7
16-24 YRS OLD	81.2	85.7	83.3	87.2	67.3	75.1	66.1	72.7
25-54 YRS OLD	92.8	94.4	94.3	95.7	81.2	84.9	83.9	86.5
55-59 YRS OLD	95.5	97.0	96.4	97.7	89.1	92.4	91.7	94.1
60-64 YRS OLD	95.4	96.4	96.4	97.2	87.7	90.8	85.3	88.4
65-69 YRS OLD	96.3	96.9	96.8	97.3	91.3	93.1	84.5	87.4
70-99 YRS OLD	95.8	97.3	96.2	97.7	92.7	94.0	91.2	93.5
JULY 88								
TOTAL HOUSEHOLDS	92.8	94.6	94.1	95.6	83.8	87.6	83.0	86.4
16-24 YRS OLD	80.6	85.5	82.6	87.1	65.6	73.8	67.0	73.4
25-54 YRS OLD	92.6	94.5	94.0	95.5	83.5	87.6	84.1	87.4
55-59 YRS OLD	94.4	95.7	95.8	97.0	85.7	87.6	88.6	89.1
60-64 YRS OLD	95.3	96.2	96.2	97.0	88.3	89.7	85.6	89.8
65-69 YRS OLD	96.7	97.4	97.5	97.9	89.6	93.2	92.9	93.9
70-99 YRS OLD	96.6	97.5	97.1	98.1	92.7	93.9	92.4	92.9
NOVEMBER 88								
TOTAL HOUSEHOLDS	92.5	94.4	93.9	95.5	82.5	86.6	80.8	83.4
16-24 YRS OLD	78.7	84.2	81.0	86.1	63.9	71.6	58.9	66.5
25-54 YRS OLD	92.4	94.4	93.9	95.5	82.0	86.4	82.5	84.4
55-59 YRS OLD	95.5	96.5	96.1	96.9	90.3	92.9	85.2	86.3
60-64 YRS OLD	95.1	96.1	96.2	97.0	86.6	89.2	91.1	91.7
65-69 YRS OLD	96.3	97.1	97.3	98.0	87.9	89.7	91.2	92.2
70-99 YRS OLD	96.3	97.6	96.8	98.1	91.5	93.7	93.0	96.4

TABLE 1.5

## PERCENTAGE OF HOUSEHOLDS WITH A TELEPHONE BY HOUSEHOLDER'S AGE

	ALL RACES		WHITE		BLACK		HISPANIC ORIGIN	
	Unit	Avail	Unit	Avail	Unit	Avail	Unit	Avail
1988 ANNUAL AVERAGE								
TOTAL HOUSEHOLDS	92.7	94.5	94.1	95.6	83.0	86.8	82.1	85.1
16-24 YRS OLD	80.2	85.1	82.3	86.8	65.6	73.5	64.0	70.9
25-54 YRS OLD	92.6	94.4	94.1	95.6	82.2	86.3	83.5	86.1
55-59 YRS OLD	95.1	96.4	96.1	97.2	88.3	91.0	88.5	89.9
60-64 YRS OLD	95.3	96.2	96.3	97.0	87.6	89.9	87.3	90.0
65-69 YRS OLD	96.4	97.1	97.2	97.7	89.6	92.0	89.6	91.2
70-99 YRS OLD	96.2	97.5	96.7	97.9	92.3	93.9	92.2	94.3



TABLE 1.4

## PERCENTAGE OF HOUSEHOLDS WITH A TELEPHONE BY HOUSEHOLD SIZE

HOUSEHOLD SIZE	ALL RACES		WHITE		BLACK		HISPANIC ORIGIN	
	Unit	Avail	Unit	Avail	Unit	Avail	Unit	Avail
NOVEMBER 83								
TOTAL	91.4	93.7	93.1	95.0	78.8	83.9	80.7	84.6
1 PERSON	87.5	91.3	90.2	93.7	71.2	77.1	73.8	82.0
2 - 3	93.3	95.0	94.5	95.9	82.5	87.8	80.7	84.3
4 - 5	92.4	94.2	93.6	95.0	83.1	87.3	83.4	86.2
6 +	86.6	88.9	90.5	92.2	74.5	78.5	81.0	84.0
MARCH 84								
TOTAL	91.8	93.6	93.3	94.9	80.1	84.1	80.7	83.6
1 PERSON	88.6	91.7	90.7	93.3	73.9	79.9	72.2	76.4
2 - 3	93.3	94.9	94.5	95.8	82.4	86.2	80.7	84.2
4 - 5	92.7	94.0	94.1	95.2	82.9	85.7	85.4	87.2
6 +	86.4	88.3	88.6	90.2	78.8	82.0	78.8	81.5
JULY 84								
TOTAL	91.6	93.8	93.2	95.0	80.5	85.3	81.1	84.6
1 PERSON	88.6	92.1	90.2	93.4	77.3	83.2	71.9	80.5
2 - 3	93.1	94.9	94.4	95.8	82.2	87.2	82.5	85.1
4 - 5	92.3	93.9	93.8	95.1	81.9	86.1	83.9	86.3
6 +	87.6	89.3	91.0	92.3	76.1	79.0	79.5	83.1
NOVEMBER 84								
TOTAL	91.4	93.6	93.1	95.0	78.9	84.0	81.1	84.5
1 PERSON	87.8	91.5	90.1	93.5	73.5	78.9	74.6	81.1
2 - 3	93.1	95.0	94.4	96.0	82.3	87.1	82.7	86.2
4 - 5	92.3	93.9	93.9	95.1	80.6	85.3	82.6	85.1
6 +	86.8	88.8	89.8	91.0	74.0	79.3	79.1	80.8
1984 ANNUAL AVERAGE								
TOTAL	91.6	93.7	93.2	94.9	79.8	84.5	80.9	84.3
1 PERSON	88.3	91.8	90.3	93.4	74.9	80.7	72.9	79.4
2 - 3	93.2	94.9	94.5	95.9	82.3	86.8	82.0	85.2
4 - 5	92.5	94.0	93.9	95.1	81.8	85.7	83.9	86.2
6 +	86.9	88.8	89.8	91.1	76.3	80.1	79.2	81.8
MARCH 85								
TOTAL	91.8	93.7	93.3	95.0	80.1	84.4	81.2	84.1
1 PERSON	88.9	92.3	91.1	94.0	73.7	80.4	75.0	82.4
2 - 3	93.4	94.8	94.5	95.7	83.8	86.8	82.4	84.8
4 - 5	92.2	93.7	93.6	94.8	81.9	86.2	81.5	83.4
6 +	87.4	89.4	90.7	92.0	75.0	79.0	84.0	85.5

TABLE 1.4

## PERCENTAGE OF HOUSEHOLDS WITH A TELEPHONE BY HOUSEHOLD SIZE

HOUSEHOLD SIZE	ALL RACES		WHITE		BLACK		HISPANIC ORIGIN	
	Unit	Avail	Unit	Avail	Unit	Avail	Unit	Avail
JULY 85								
TOTAL	91.8	93.9	93.2	95.0	81.6	85.8	80.3	83.3
1 PERSON	87.0	90.7	89.3	92.6	73.9	80.2	67.8	74.3
2 - 3	93.5	95.1	94.5	95.9	85.1	88.4	83.8	85.9
4 - 5	95.1	96.0	95.7	96.4	91.9	93.5	86.5	87.6
6 +	91.6	92.2	94.4	94.5	82.2	85.0	84.5	84.5
NOVEMBER 85								
TOTAL	91.9	94.0	93.3	95.2	81.5	85.3	82.5	85.7
1 PERSON	86.8	90.6	89.3	92.8	73.3	78.8	73.0	78.8
2 - 3	93.7	95.2	94.7	95.9	85.9	88.6	84.7	87.5
4 - 5	95.2	96.3	96.3	97.0	89.1	91.3	89.0	90.1
6 +	91.9	93.8	93.5	94.2	86.6	90.9	88.3	88.3
1985 ANNUAL AVERAGE								
TOTAL	91.8	93.9	93.3	95.0	81.1	85.2	81.3	84.4
1 PERSON	87.6	91.2	89.9	93.1	73.6	79.8	71.9	78.5
2 - 3	93.5	95.0	94.5	95.8	84.9	87.9	83.6	86.0
4 - 5	94.2	95.3	95.2	96.1	87.6	90.4	85.6	87.0
6 +	90.3	91.8	92.8	93.6	81.3	84.9	85.6	86.1
MARCH 86								
TOTAL	92.2	93.9	93.6	95.0	82.0	85.8	81.5	83.9
1 PERSON	89.1	92.3	90.6	93.5	79.2	83.9	79.1	85.0
2 - 3	93.9	95.2	95.0	96.0	84.5	88.0	81.2	83.3
4 - 5	92.7	93.8	94.1	94.9	82.8	86.4	83.8	85.5
6 +	86.7	88.0	89.7	90.7	74.2	76.9	78.8	79.8
JULY 86								
TOTAL	92.2	94.0	93.7	95.2	81.5	85.7	81.1	83.6
1 PERSON	87.6	90.8	90.1	92.9	74.3	79.5	71.8	76.6
2 - 3	94.0	95.3	94.9	96.0	85.4	89.1	83.4	85.5
4 - 5	95.1	95.8	96.0	96.4	89.6	91.2	86.8	87.5
6 +	92.5	94.2	95.4	95.5	78.0	87.4	88.2	88.2
NOVEMBER 86								
TOTAL	92.4	94.4	93.8	95.5	81.3	86.1	81.6	84.7
1 PERSON	87.7	91.2	90.4	93.3	72.6	79.5	70.9	76.5
2 - 3	94.1	95.5	95.0	96.2	86.0	89.7	84.7	87.4
4 - 5	95.5	96.3	96.3	96.8	91.3	93.5	85.9	87.1
6 +	91.1	92.3	93.5	94.1	81.2	84.1	82.8	84.3

TABLE 1.4

## PERCENTAGE OF HOUSEHOLDS WITH A TELEPHONE BY HOUSEHOLD SIZE

HOUSEHOLD SIZE	ALL RACES		WHITE		BLACK		HISPANIC ORIGIN	
	Unit	Avail	Unit	Avail	Unit	Avail	Unit	Avail
1986 ANNUAL AVERAGE								
TOTAL	92.3	94.1	93.7	95.2	81.6	85.9	81.4	84.1
1 PERSON	88.1	91.4	90.4	93.2	75.4	81.0	73.9	79.3
2 - 3	94.0	95.3	95.0	96.1	85.3	88.9	83.1	85.4
4 - 5	94.4	95.3	95.4	96.1	87.9	90.4	85.5	86.7
6 +	90.1	91.5	92.9	93.5	77.8	82.8	83.3	84.1
MARCH 87								
TOTAL	92.5	94.3	93.9	95.4	82.2	85.7	84.1	86.5
1 PERSON	89.5	92.8	91.3	94.2	77.6	82.9	80.3	84.5
2 - 3	93.9	95.2	95.1	96.2	84.0	86.6	84.4	86.8
4 - 5	93.5	94.7	94.5	95.5	85.2	88.4	86.6	88.8
6 +	88.0	89.9	90.5	91.6	78.6	82.6	80.4	80.7
JULY 87								
TOTAL	92.3	94.2	93.7	95.3	82.0	86.0	83.1	85.2
1 PERSON	89.6	92.8	91.3	94.2	78.8	83.5	79.5	83.1
2 - 3	93.9	95.2	95.1	96.2	84.0	87.5	85.6	87.3
4 - 5	92.5	94.1	93.8	95.1	82.6	86.9	81.5	83.4
6 +	88.3	90.0	90.7	91.9	78.8	82.5	83.3	84.9
NOVEMBER 87								
TOTAL	92.3	94.3	93.8	95.4	81.2	85.9	81.9	84.6
1 PERSON	89.4	92.5	91.3	94.0	77.0	83.0	78.6	82.8
2 - 3	93.8	95.5	95.1	96.4	83.6	87.9	81.5	84.8
4 - 5	93.1	94.6	94.5	95.7	83.0	86.8	85.2	87.0
6 +	85.8	87.5	88.1	89.4	74.9	79.3	78.2	79.2
1987 ANNUAL AVERAGE								
TOTAL	92.4	94.2	93.8	95.4	81.8	85.9	83.0	85.4
1 PERSON	89.5	92.7	91.3	94.1	77.8	83.1	79.5	83.5
2 - 3	93.9	95.3	95.1	96.3	83.9	87.3	83.8	86.3
4 - 5	93.0	94.5	94.3	95.4	83.6	87.4	84.4	86.4
6 +	87.4	89.1	89.8	91.0	77.4	81.5	80.6	81.6
MARCH 88								
TOTAL	92.9	94.6	94.2	95.7	82.7	86.3	82.6	85.7
1 PERSON	88.7	92.0	90.8	93.7	77.5	82.5	76.8	82.2
2 - 3	94.6	95.7	95.5	96.4	85.9	88.7	84.2	86.9
4 - 5	94.6	95.5	95.7	96.6	85.7	87.6	83.6	85.0
6 +	93.8	95.0	95.3	95.3	86.7	93.1	91.0	91.0

TABLE 1.4

## PERCENTAGE OF HOUSEHOLDS WITH A TELEPHONE BY HOUSEHOLD SIZE

HOUSEHOLD SIZE	ALL RACES		WHITE		BLACK		HISPANIC ORIGIN	
	Unit	Avail	Unit	Avail	Unit	Avail	Unit	Avail
JULY 88								
TOTAL	92.8	94.6	94.1	95.6	83.8	87.6	83.0	86.4
1 PERSON	88.5	91.7	90.8	93.5	76.9	82.5	73.9	80.3
2 - 3	94.6	95.8	95.4	96.5	87.5	90.3	85.7	88.5
4 - 5	95.2	96.0	95.8	96.4	91.7	93.5	84.8	86.2
6 +	93.4	95.8	94.0	96.4	88.8	92.7	88.0	91.0
NOVEMBER 88								
TOTAL	92.5	94.4	93.9	95.5	82.5	86.6	80.8	83.4
1 PERSON	88.0	91.3	90.4	93.2	74.9	80.8	72.4	76.1
2 - 3	94.3	95.8	95.2	96.4	86.9	90.2	82.9	85.4
4 - 5	95.1	95.8	95.9	96.5	89.5	91.1	84.8	85.7
6 +	91.3	92.2	91.7	92.9	86.0	86.0	79.2	82.1
1988 ANNUAL AVERAGE								
TOTAL	92.7	94.5	94.1	95.6	83.0	86.8	82.1	85.1
1 PERSON	88.4	91.7	90.6	93.5	76.4	82.0	74.4	79.5
2 - 3	94.5	95.7	95.4	96.4	86.8	89.7	84.2	86.9
4 - 5	94.9	95.8	95.8	96.5	89.0	90.7	84.4	85.6
6 +	92.8	94.3	93.7	94.9	87.2	90.6	86.1	88.0

TABLE 1.5

## PERCENTAGE OF FAMILIES WITH A TELEPHONE BY FAMILY INCOME

	ALL RACES		WHITE		BLACK		HISPANIC ORIGIN	
	Unit	Avail	Unit	Avail	Unit	Avail	Unit	Avail
NOVEMBER 83								
TOTAL	91.4	93.7	93.1	95.0	78.8	83.9	80.7	84.6
UNDER \$5,000	71.7	78.4	75.7	81.9	62.7	70.4	58.3	64.6
\$5,000 - \$7,499	82.7	87.2	84.5	88.5	74.7	82.0	71.1	76.5
\$7,500 - \$9,999	88.2	90.9	89.6	92.2	80.5	83.9	72.6	77.9
\$10,000 - \$12,499	89.7	92.7	91.2	93.9	82.0	86.2	76.8	82.1
\$12,500 - \$14,999	92.1	94.6	93.4	95.2	82.5	90.7	89.8	91.7
\$15,000 - \$17,499	94.6	96.2	94.9	96.4	91.7	95.1	86.9	90.8
\$17,500 - \$19,999	95.7	97.4	96.1	97.7	91.4	95.0	88.4	91.5
\$20,000 - \$24,999	96.9	97.8	97.4	98.2	91.2	93.2	93.1	94.3
\$25,000 - \$29,999	98.0	98.9	98.2	99.0	96.1	97.2	98.3	99.0
\$30,000 - \$34,999	98.8	99.1	99.0	99.2	95.1	97.7	97.7	98.9
\$35,000 - \$39,999	99.0	99.5	99.1	99.5	98.4	98.4	92.1	98.2
\$40,000 - \$49,999	99.2	99.5	99.4	99.7	97.3	97.3	100.0	100.0
\$50,000 - \$74,999	99.4	99.7	99.5	99.7	98.5	100.0	99.6	100.0
\$75,000 +	99.4	99.6	99.4	99.6	100.0	100.0	100.0	100.0
MARCH 84								
TOTAL	91.8	93.6	93.3	94.9	80.1	84.1	80.7	83.6
UNDER \$5,000	71.4	77.0	74.7	79.8	62.8	69.7	53.6	60.2
\$5,000 - \$7,499	83.6	86.8	85.8	88.7	74.6	79.1	70.0	73.9
\$7,500 - \$9,999	85.8	89.3	87.7	90.8	75.9	81.1	72.2	76.3
\$10,000 - \$12,499	90.0	92.4	91.3	93.5	82.5	86.3	81.8	86.2
\$12,500 - \$14,999	92.7	94.3	93.6	95.2	84.6	86.7	88.5	89.7
\$15,000 - \$17,499	93.6	95.6	94.3	95.9	87.6	92.7	89.4	91.2
\$17,500 - \$19,999	95.3	96.3	95.4	96.3	94.8	96.4	87.1	88.0
\$20,000 - \$24,999	97.1	98.0	97.3	98.1	94.6	97.4	90.0	92.8
\$25,000 - \$29,999	98.1	98.6	98.5	98.9	93.5	94.8	96.2	97.6
\$30,000 - \$34,999	98.8	99.2	98.8	99.3	97.5	97.5	99.2	99.2
\$35,000 - \$39,999	99.4	99.6	99.5	99.7	96.3	97.2	100.0	100.0
\$40,000 - \$49,999	99.4	99.6	99.5	99.7	98.0	98.3	100.0	100.0
\$50,000 - \$74,999	99.2	99.6	99.3	99.7	97.0	97.0	100.0	100.0
\$75,000 +	98.9	99.6	99.0	99.6	94.0	100.0	95.1	100.0
JULY 84								
TOTAL	91.6	93.8	93.2	95.0	80.5	85.3	81.1	84.6
UNDER \$5,000	71.8	77.9	74.5	80.1	65.4	72.4	53.2	60.6
\$5,000 - \$7,499	82.6	86.9	84.8	88.8	74.4	80.3	71.7	76.1
\$7,500 - \$9,999	86.5	89.8	88.6	91.3	75.6	82.4	76.4	83.3
\$10,000 - \$12,499	89.7	92.7	90.7	93.3	83.4	88.9	80.7	84.1
\$12,500 - \$14,999	91.7	94.6	92.8	95.3	85.0	90.0	87.0	93.0
\$15,000 - \$17,499	94.1	95.9	94.5	96.3	89.4	91.1	87.6	88.0
\$17,500 - \$19,999	95.6	97.0	96.1	97.2	92.4	95.7	94.4	95.3
\$20,000 - \$24,999	96.8	97.8	97.2	98.0	92.9	95.7	96.7	97.3
\$25,000 - \$29,999	97.9	98.6	98.1	98.6	95.8	98.4	96.3	97.4
\$30,000 - \$34,999	98.8	99.1	98.8	99.2	97.7	97.7	100.0	100.0
\$35,000 - \$39,999	99.2	99.6	99.3	99.6	98.1	99.1	98.0	98.0
\$40,000 - \$49,999	99.3	99.5	99.5	99.7	96.1	96.1	100.0	100.0
\$50,000 - \$74,999	99.7	99.8	99.7	99.8	98.8	100.0	100.0	100.0
\$75,000 +	99.1	99.6	99.1	99.6	100.0	100.0	100.0	100.0

TABLE 1.5

## PERCENTAGE OF FAMILIES WITH A TELEPHONE BY FAMILY INCOME

	ALL RACES		WHITE		BLACK		HISPANIC ORIGIN	
	Unit	Avail	Unit	Avail	Unit	Avail	Unit	Avail
NOVEMBER 84								
TOTAL	91.4	93.6	93.1	95.0	78.9	84.0	81.1	84.5
UNDER \$5,000	70.3	77.5	74.4	81.3	61.4	69.4	58.5	66.1
\$5,000 - \$7,499	83.7	87.1	85.8	88.8	75.3	81.2	67.7	70.8
\$7,500 - \$9,999	87.0	89.8	88.7	90.9	80.2	84.7	76.3	79.5
\$10,000 - \$12,499	89.4	92.6	91.4	94.1	77.4	83.6	76.8	83.5
\$12,500 - \$14,999	92.0	94.2	92.5	94.5	86.6	91.6	86.5	88.9
\$15,000 - \$17,499	93.3	95.6	93.8	95.8	88.6	93.0	88.3	91.0
\$17,500 - \$19,999	94.3	95.9	95.2	96.5	88.0	91.0	91.5	95.2
\$20,000 - \$24,999	96.5	97.6	96.8	97.9	92.3	94.3	90.7	93.3
\$25,000 - \$29,999	98.4	99.1	98.6	99.2	96.0	98.3	96.7	96.7
\$30,000 - \$34,999	98.6	99.1	98.9	99.3	95.3	96.6	97.1	98.0
\$35,000 - \$39,999	99.1	99.4	99.1	99.4	98.7	98.7	96.5	97.6
\$40,000 - \$49,999	99.2	99.6	99.3	99.7	95.7	96.4	96.8	97.8
\$50,000 - \$74,999	99.5	99.9	99.6	99.9	98.3	98.3	100.0	100.0
\$75,000 +	98.7	99.5	98.8	99.5	95.6	100.0	99.0	100.0
1984 ANNUAL AVERAGE								
TOTAL	91.6	93.7	93.2	94.9	79.8	84.5	80.9	84.3
UNDER \$5,000	71.2	77.5	74.5	80.4	63.2	70.5	55.1	62.3
\$5,000 - \$7,499	83.3	86.9	85.5	88.7	74.8	80.2	69.8	73.6
\$7,500 - \$9,999	86.5	89.6	88.3	91.0	77.2	82.7	75.0	79.7
\$10,000 - \$12,499	89.7	92.6	91.1	93.6	81.1	86.3	79.7	84.6
\$12,500 - \$14,999	92.1	94.4	93.0	95.0	85.4	89.5	87.3	90.5
\$15,000 - \$17,499	93.7	95.7	94.2	96.0	88.5	92.2	88.4	90.0
\$17,500 - \$19,999	95.1	96.4	95.6	96.7	91.7	94.4	91.0	92.8
\$20,000 - \$24,999	96.8	97.8	97.1	98.0	93.3	95.8	92.5	94.5
\$25,000 - \$29,999	98.1	98.8	98.4	98.9	95.1	97.2	96.4	97.2
\$30,000 - \$34,999	98.7	99.1	98.8	99.3	96.8	97.2	98.8	99.1
\$35,000 - \$39,999	99.2	99.5	99.3	99.6	97.7	98.3	98.2	98.5
\$40,000 - \$49,999	99.3	99.6	99.4	99.7	96.6	96.9	98.9	99.3
\$50,000 - \$74,999	99.4	99.8	99.5	99.8	98.0	98.4	100.0	100.0
\$75,000 +	98.9	99.6	98.9	99.6	96.5	100.0	98.0	100.0
MARCH 85								
TOTAL	91.8	93.7	93.3	95.0	80.1	84.4	81.2	84.1
UNDER \$5,000	71.1	77.5	75.1	81.0	62.1	69.7	57.9	64.1
\$5,000 - \$7,499	82.5	86.1	85.0	88.1	72.0	77.6	65.9	70.8
\$7,500 - \$9,999	86.3	89.2	87.6	90.3	79.9	83.9	72.2	77.1
\$10,000 - \$12,499	89.5	92.2	90.7	93.1	81.5	86.0	85.1	86.6
\$12,500 - \$14,999	91.4	93.9	92.6	94.7	83.3	87.8	86.9	90.0
\$15,000 - \$17,499	93.7	95.8	94.6	96.3	88.1	92.0	85.8	88.5
\$17,500 - \$19,999	94.1	95.5	94.7	96.0	89.1	92.0	93.6	94.2
\$20,000 - \$24,999	96.2	97.2	96.4	97.3	93.3	95.5	88.8	91.0
\$25,000 - \$29,999	97.8	98.5	98.0	98.7	95.3	96.6	93.1	96.2
\$30,000 - \$34,999	98.6	99.0	98.8	99.0	97.3	98.3	97.8	97.8
\$35,000 - \$39,999	99.0	99.4	99.1	99.4	96.7	98.2	99.5	99.5
\$40,000 - \$49,999	98.9	99.2	99.0	99.3	97.0	98.0	97.4	97.4
\$50,000 - \$74,999	99.5	99.6	99.5	99.7	98.4	98.7	98.4	98.4
\$75,000 +	99.5	99.6	99.5	99.6	100.0	100.0	100.0	100.0

TABLE 1.5

## PERCENTAGE OF FAMILIES WITH A TELEPHONE BY FAMILY INCOME

	ALL RACES		WHITE		BLACK		HISPANIC ORIGIN	
	Unit	Avail	Unit	Avail	Unit	Avail	Unit	Avail
JULY 85								
TOTAL	91.8	93.9	93.2	95.0	81.6	85.8	80.3	83.3
UNDER \$5,000	72.0	77.9	74.9	80.7	64.5	71.1	60.7	65.8
\$5,000 - \$7,499	83.2	87.0	84.6	87.9	76.7	83.2	67.9	71.2
\$7,500 - \$9,999	86.9	90.8	87.7	91.1	82.3	88.1	76.0	78.1
\$10,000 - \$12,499	89.7	92.5	91.1	93.6	82.1	86.8	76.7	79.5
\$12,500 - \$14,999	91.0	93.6	92.6	94.9	80.2	84.6	79.2	83.2
\$15,000 - \$17,499	93.4	95.5	94.2	96.2	88.6	91.2	86.1	88.4
\$17,500 - \$19,999	94.5	96.1	94.8	96.5	91.9	93.0	87.1	89.8
\$20,000 - \$24,999	96.7	97.8	96.8	98.0	94.7	96.5	92.9	95.7
\$25,000 - \$29,999	97.1	98.1	97.4	98.2	94.4	97.0	91.5	95.2
\$30,000 - \$34,999	98.4	98.9	98.5	99.0	96.5	97.9	96.9	96.9
\$35,000 - \$39,999	98.7	99.2	98.8	99.4	98.4	98.4	95.8	98.6
\$40,000 - \$49,999	99.3	99.6	99.3	99.6	99.3	99.3	98.8	98.8
\$50,000 - \$74,999	99.3	99.7	99.4	99.7	97.7	98.8	100.0	100.0
\$75,000 +	99.0	99.4	99.0	99.4	100.0	100.0	95.6	95.6
NOVEMBER 85								
TOTAL	91.9	94.0	93.3	95.2	81.5	85.3	82.5	85.7
UNDER \$5,000	72.7	79.0	75.9	82.2	65.2	71.1	66.4	71.0
\$5,000 - \$7,499	82.5	86.3	84.7	88.2	73.3	78.6	65.9	71.9
\$7,500 - \$9,999	87.1	89.9	88.9	91.4	78.7	82.9	76.8	82.8
\$10,000 - \$12,499	89.6	92.0	90.5	93.1	83.3	85.2	79.3	82.4
\$12,500 - \$14,999	90.6	93.6	91.6	93.9	84.7	90.9	82.4	84.2
\$15,000 - \$17,499	93.1	95.5	93.8	96.1	88.0	92.1	85.3	89.0
\$17,500 - \$19,999	95.4	96.9	95.8	97.3	93.5	95.3	90.7	94.4
\$20,000 - \$24,999	96.0	97.4	96.1	97.5	95.1	96.8	92.3	94.4
\$25,000 - \$29,999	98.0	98.8	98.1	98.8	97.5	98.3	94.3	96.3
\$30,000 - \$34,999	98.7	99.1	98.8	99.2	98.2	98.9	97.3	97.3
\$35,000 - \$39,999	98.6	99.1	98.8	99.3	95.5	96.7	99.2	100.0
\$40,000 - \$49,999	99.0	99.3	99.1	99.4	97.0	97.3	96.3	98.3
\$50,000 - \$74,999	99.2	99.7	99.3	99.7	97.5	98.8	100.0	100.0
\$75,000 +	99.2	99.3	99.3	99.4	92.7	92.7	100.0	100.0
1985 ANNUAL AVERAGE								
TOTAL	91.8	93.9	93.3	95.0	81.1	85.2	81.3	84.4
UNDER \$5,000	71.9	78.1	75.3	81.3	63.9	70.6	61.6	67.0
\$5,000 - \$7,499	82.7	86.5	84.8	88.1	74.0	79.8	66.6	71.3
\$7,500 - \$9,999	86.8	90.0	88.1	90.9	80.3	85.0	75.0	79.4
\$10,000 - \$12,499	89.6	92.2	90.8	93.2	82.3	86.0	80.4	82.8
\$12,500 - \$14,999	91.0	93.7	92.2	94.5	82.7	87.8	82.8	85.8
\$15,000 - \$17,499	93.4	95.6	94.2	96.2	88.2	91.8	85.7	88.6
\$17,500 - \$19,999	94.7	96.2	95.1	96.6	91.5	93.4	90.4	92.8
\$20,000 - \$24,999	96.3	97.5	96.5	97.6	94.4	96.3	91.3	93.7
\$25,000 - \$29,999	97.6	98.5	97.8	98.6	95.8	97.3	93.0	95.9
\$30,000 - \$34,999	98.6	99.0	98.7	99.1	97.3	98.4	97.3	97.3
\$35,000 - \$39,999	98.8	99.2	98.9	99.4	96.9	97.8	98.2	99.4
\$40,000 - \$49,999	99.1	99.4	99.1	99.4	97.8	98.2	97.5	98.2
\$50,000 - \$74,999	99.3	99.7	99.4	99.7	97.9	98.8	99.5	99.5
\$75,000 +	99.2	99.5	99.2	99.5	97.6	97.6	98.5	98.5

TABLE 1.5

## PERCENTAGE OF FAMILIES WITH A TELEPHONE BY FAMILY INCOME

	ALL RACES		WHITE		BLACK		HISPANIC ORIGIN	
	Unit	Avail	Unit	Avail	Unit	Avail	Unit	Avail
MARCH 86								
TOTAL	92.2	93.9	93.6	95.0	82.0	85.8	81.5	83.9
UNDER \$5,000	71.1	76.9	74.0	79.3	63.8	71.1	56.7	61.3
\$5,000 - \$7,499	82.7	85.8	85.1	87.8	72.0	76.9	68.7	72.7
\$7,500 - \$9,999	87.6	90.0	88.8	90.8	82.1	86.4	72.1	73.9
\$10,000 - \$12,499	89.5	91.8	90.6	92.7	82.1	86.0	78.5	81.0
\$12,500 - \$14,999	91.3	94.1	92.0	94.7	87.6	90.9	84.6	90.0
\$15,000 - \$17,499	92.9	94.5	93.6	95.2	88.0	91.0	84.9	89.1
\$17,500 - \$19,999	94.6	96.0	95.2	96.4	90.1	92.8	86.1	88.8
\$20,000 - \$24,999	96.3	97.1	96.7	97.4	93.6	95.0	92.3	93.5
\$25,000 - \$29,999	97.2	98.0	97.7	98.3	91.6	94.0	92.5	92.5
\$30,000 - \$34,999	98.3	98.6	98.4	98.7	97.5	97.8	96.9	97.7
\$35,000 - \$39,999	98.9	99.2	99.1	99.3	98.1	98.1	100.0	100.0
\$40,000 - \$49,999	98.9	99.3	99.0	99.3	98.3	98.3	97.5	97.5
\$50,000 - \$74,999	99.5	99.7	99.5	99.7	99.3	99.3	100.0	100.0
\$75,000 +	99.3	99.4	99.3	99.4	100.0	100.0	98.5	100.0
JULY 86								
TOTAL	92.2	94.0	93.7	95.2	81.5	85.7	81.1	83.6
UNDER \$5,000	71.5	77.0	74.4	79.7	65.4	71.2	57.1	63.8
\$5,000 - \$7,499	82.6	86.1	85.0	87.9	73.8	79.2	64.9	68.6
\$7,500 - \$9,999	86.3	90.1	87.8	90.8	77.4	83.9	72.9	75.9
\$10,000 - \$12,499	89.6	92.4	90.8	93.2	82.9	87.3	80.9	81.9
\$12,500 - \$14,999	91.5	93.9	92.4	94.5	83.4	88.8	87.1	87.7
\$15,000 - \$17,499	93.1	95.2	94.3	95.8	84.2	90.6	86.9	88.9
\$17,500 - \$19,999	95.5	96.6	95.8	97.0	93.2	94.3	89.4	91.9
\$20,000 - \$24,999	96.6	97.6	97.0	98.0	92.1	94.0	94.5	95.0
\$25,000 - \$29,999	97.7	98.4	98.0	98.7	95.7	96.6	92.2	95.0
\$30,000 - \$34,999	98.3	98.8	98.5	99.0	96.6	97.8	98.0	98.7
\$35,000 - \$39,999	99.2	99.3	99.2	99.4	98.4	98.4	98.6	98.6
\$40,000 - \$49,999	99.1	99.4	99.1	99.4	99.0	99.0	98.1	98.9
\$50,000 - \$74,999	99.6	99.8	99.6	99.8	100.0	100.0	98.2	99.2
\$75,000 +	99.6	99.8	99.7	99.8	95.5	100.0	100.0	100.0
NOVEMBER 86								
TOTAL	92.4	94.4	93.8	95.5	81.3	86.1	81.6	84.7
UNDER \$5,000	72.3	78.3	76.3	81.3	62.6	70.9	58.9	63.7
\$5,000 - \$7,499	83.9	87.7	85.6	89.0	77.0	82.7	70.8	75.0
\$7,500 - \$9,999	86.8	90.4	88.7	91.6	76.3	83.2	73.8	77.7
\$10,000 - \$12,499	89.6	92.1	90.6	93.0	82.9	85.9	81.4	84.9
\$12,500 - \$14,999	90.8	93.6	91.3	94.0	88.1	91.3	80.0	85.7
\$15,000 - \$17,499	93.4	95.6	94.9	96.1	83.7	93.3	87.2	88.8
\$17,500 - \$19,999	94.6	96.4	94.9	96.6	93.4	95.6	86.0	89.7
\$20,000 - \$24,999	96.5	97.9	96.9	98.1	92.5	95.0	92.1	93.8
\$25,000 - \$29,999	98.2	98.9	98.4	99.0	96.2	97.1	97.0	98.1
\$30,000 - \$34,999	98.7	99.1	99.0	99.3	96.2	97.1	97.7	98.9
\$35,000 - \$39,999	98.6	99.3	98.8	99.4	96.5	97.2	95.8	99.2
\$40,000 - \$49,999	99.2	99.5	99.3	99.6	97.4	97.4	100.0	100.0
\$50,000 - \$74,999	99.5	99.7	99.6	99.8	99.0	99.0	100.0	100.0
\$75,000 +	99.3	99.7	99.3	99.7	98.6	98.6	93.9	100.0



TABLE 1.5

## PERCENTAGE OF FAMILIES WITH A TELEPHONE BY FAMILY INCOME

	ALL RACES		WHITE		BLACK		HISPANIC ORIGIN	
	Unit	Avail	Unit	Avail	Unit	Avail	Unit	Avail
1986 ANNUAL AVERAGE								
TOTAL	92.3	94.1	93.7	95.2	81.6	85.9	81.4	84.1
UNDER \$5,000	71.6	77.4	74.9	80.1	63.9	71.0	57.5	62.9
\$5,000 - \$7,499	83.1	86.5	85.2	88.2	74.3	79.6	68.1	72.1
\$7,500 - \$9,999	86.9	90.2	88.4	91.1	78.6	85.2	72.9	75.8
\$10,000 - \$12,499	89.6	92.1	90.7	93.0	82.6	86.4	80.3	82.6
\$12,500 - \$14,999	91.2	93.8	91.9	94.4	86.4	90.3	83.9	87.8
\$15,000 - \$17,499	93.1	95.1	94.3	95.7	85.3	91.6	86.3	88.9
\$17,500 - \$19,999	94.9	96.3	95.3	96.7	92.2	94.2	87.2	90.1
\$20,000 - \$24,999	96.5	97.5	96.9	97.9	92.8	94.6	93.0	94.1
\$25,000 - \$29,999	97.7	98.4	98.0	98.7	94.5	95.9	93.9	95.2
\$30,000 - \$34,999	98.4	98.9	98.6	99.0	96.7	97.5	97.5	98.4
\$35,000 - \$39,999	98.9	99.3	99.0	99.4	97.6	97.9	98.1	99.3
\$40,000 - \$49,999	99.1	99.4	99.1	99.4	98.2	98.2	98.5	98.8
\$50,000 - \$74,999	99.5	99.8	99.6	99.8	99.4	99.4	99.4	99.7
\$75,000 +	99.4	99.6	99.4	99.6	98.0	99.5	97.5	100.0
MARCH 87								
TOTAL	92.5	94.3	93.9	95.4	82.2	85.7	84.1	86.5
UNDER \$5,000	71.9	78.0	75.1	80.9	63.8	70.5	63.8	67.6
\$5,000 - \$7,499	83.6	86.7	85.3	87.9	76.8	81.9	69.5	73.0
\$7,500 - \$9,999	87.7	89.9	88.5	90.6	83.6	86.2	78.1	81.0
\$10,000 - \$12,499	89.4	92.0	90.5	93.1	81.4	85.2	78.9	82.1
\$12,500 - \$14,999	90.5	92.9	91.7	93.9	84.2	86.3	83.6	85.0
\$15,000 - \$17,499	92.4	94.7	93.3	95.6	85.8	88.6	83.7	88.9
\$17,500 - \$19,999	94.2	95.9	95.0	96.3	88.1	92.4	91.0	93.0
\$20,000 - \$24,999	96.6	97.4	97.1	97.9	93.5	94.6	94.1	95.1
\$25,000 - \$29,999	97.3	98.4	97.8	98.7	92.8	95.0	96.6	97.8
\$30,000 - \$34,999	98.1	98.7	98.3	98.9	96.0	96.4	96.5	97.5
\$35,000 - \$39,999	98.6	99.0	98.9	99.1	94.7	97.1	96.9	96.9
\$40,000 - \$49,999	99.4	99.7	99.4	99.7	99.6	99.6	99.6	99.9
\$50,000 - \$74,999	99.4	99.6	99.5	99.7	98.1	98.8	98.6	99.5
\$75,000 +	99.7	99.8	99.7	99.8	97.2	100.0	100.0	100.0
JULY 87								
TOTAL	92.3	94.2	93.7	95.3	82.0	86.0	83.1	85.2
UNDER \$5,000	70.7	75.9	74.1	78.7	63.8	70.5	58.0	62.7
\$5,000 - \$7,499	83.6	87.0	85.8	88.8	75.5	80.7	71.6	73.1
\$7,500 - \$9,999	86.5	89.6	88.1	90.8	78.8	83.7	76.6	79.0
\$10,000 - \$12,499	89.6	92.6	90.6	93.4	82.9	87.8	84.2	86.6
\$12,500 - \$14,999	91.2	93.7	92.3	94.4	83.6	88.8	86.3	88.4
\$15,000 - \$17,499	92.2	94.4	92.7	94.6	89.0	93.2	87.0	88.9
\$17,500 - \$19,999	94.8	96.2	95.8	97.0	88.1	91.0	87.7	87.7
\$20,000 - \$24,999	96.0	97.4	96.4	97.8	92.0	93.9	93.4	95.6
\$25,000 - \$29,999	97.6	98.4	98.1	98.8	93.7	95.2	96.7	98.7
\$30,000 - \$34,999	98.0	98.9	98.1	98.8	97.5	98.9	96.9	98.2
\$35,000 - \$39,999	98.8	99.2	98.8	99.2	97.8	98.9	96.8	96.8
\$40,000 - \$49,999	99.3	99.6	99.4	99.7	98.3	98.6	100.0	100.0
\$50,000 - \$74,999	99.4	99.8	99.4	99.9	99.4	99.4	97.6	99.1
\$75,000 +	99.4	99.8	99.4	99.7	100.0	100.0	97.2	100.0

TABLE 1.5

## PERCENTAGE OF FAMILIES WITH A TELEPHONE BY FAMILY INCOME

	ALL RACES		WHITE		BLACK		HISPANIC ORIGIN	
	Unit	Avail	Unit	Avail	Unit	Avail	Unit	Avail
NOVEMBER 87								
TOTAL	92.3	94.3	93.8	95.4	81.2	85.9	81.9	84.6
UNDER \$5,000	71.8	78.2	75.7	81.3	63.5	72.0	60.3	66.9
\$5,000 - \$7,499	82.9	86.5	85.6	88.7	72.2	78.0	68.5	71.0
\$7,500 - \$9,999	85.8	89.2	87.6	90.4	75.7	82.2	72.9	76.7
\$10,000 - \$12,499	89.4	92.3	90.1	92.9	85.5	89.4	80.0	83.7
\$12,500 - \$14,999	90.5	93.1	91.6	93.9	83.7	88.1	85.6	87.5
\$15,000 - \$17,499	93.3	95.5	94.5	96.2	85.8	90.6	86.1	88.4
\$17,500 - \$19,999	94.1	95.8	94.5	96.0	90.9	94.8	89.2	91.2
\$20,000 - \$24,999	96.8	98.0	97.0	98.1	95.1	96.7	92.0	94.0
\$25,000 - \$29,999	97.6	98.4	98.1	98.6	93.8	95.7	93.8	94.7
\$30,000 - \$34,999	98.1	99.0	98.5	99.2	94.8	96.4	97.4	97.4
\$35,000 - \$39,999	98.9	99.4	99.1	99.4	96.9	99.7	98.4	99.3
\$40,000 - \$49,999	99.5	99.6	99.6	99.7	98.0	98.0	99.4	99.4
\$50,000 - \$74,999	99.7	99.8	99.7	99.9	99.7	100.0	99.8	100.0
\$75,000 +	99.4	99.8	99.4	99.8	98.2	98.7	98.4	100.0
1987 ANNUAL AVERAGE								
TOTAL	92.4	94.2	93.8	95.4	81.8	85.9	83.0	85.4
UNDER \$5,000	71.5	77.4	75.0	80.3	63.7	71.0	60.7	65.7
\$5,000 - \$7,499	83.4	86.7	85.5	88.4	74.8	80.2	69.9	72.4
\$7,500 - \$9,999	86.7	89.6	88.1	90.6	79.3	84.0	75.8	78.9
\$10,000 - \$12,499	89.5	92.3	90.4	93.1	83.2	87.5	81.0	84.1
\$12,500 - \$14,999	90.8	93.2	91.9	94.1	83.8	87.7	85.2	86.9
\$15,000 - \$17,499	92.6	94.9	93.5	95.5	86.9	90.8	85.6	88.7
\$17,500 - \$19,999	94.4	96.0	95.1	96.4	89.0	92.7	89.3	90.6
\$20,000 - \$24,999	96.4	97.6	96.8	97.9	93.5	95.1	93.1	94.9
\$25,000 - \$29,999	97.5	98.4	98.0	98.7	93.4	95.3	96.4	97.1
\$30,000 - \$34,999	98.1	98.9	98.3	99.0	96.1	97.2	96.9	97.7
\$35,000 - \$39,999	98.8	99.2	98.9	99.3	96.5	98.6	97.4	97.7
\$40,000 - \$49,999	99.4	99.7	99.5	99.7	98.7	98.7	99.7	99.8
\$50,000 - \$74,999	99.5	99.8	99.5	99.8	99.1	99.4	98.7	99.6
\$75,000 +	99.5	99.8	99.5	99.8	98.5	99.6	98.6	100.0
MARCH 88								
TOTAL	92.9	94.6	94.2	95.7	82.7	86.3	82.6	85.7
UNDER \$5,000	72.3	78.1	75.2	81.1	65.5	71.6	59.4	67.0
\$5,000 - \$7,499	84.0	87.4	86.1	89.1	75.6	80.5	71.6	76.9
\$7,500 - \$9,999	85.8	89.0	86.8	90.1	79.9	83.1	63.0	69.0
\$10,000 - \$12,499	89.4	92.2	90.7	92.9	82.3	88.4	78.7	82.2
\$12,500 - \$14,999	91.2	93.1	92.2	94.0	83.7	86.5	82.7	83.6
\$15,000 - \$19,999	93.4	94.8	94.2	95.4	87.3	89.7	87.3	89.0
\$20,000 - \$24,999	96.4	97.7	96.6	97.9	94.3	95.9	91.6	95.1
\$25,000 - \$29,999	97.7	98.3	97.8	98.4	95.5	97.1	94.1	95.3
\$30,000 - \$34,999	98.1	98.7	98.6	99.1	92.6	94.9	97.5	97.5
\$35,000 - \$39,999	98.9	99.3	99.0	99.3	97.5	98.0	98.7	98.7
\$40,000 - \$49,999	99.2	99.7	99.2	99.6	97.6	100.0	99.1	99.1
\$50,000 - \$74,999	99.5	99.8	99.6	99.9	99.1	99.1	99.3	99.4
\$75,000 +	99.6	99.9	99.5	99.9	100.0	100.0	96.7	100.0

TABLE 1.5

## PERCENTAGE OF FAMILIES WITH A TELEPHONE BY FAMILY INCOME

	ALL RACES		WHITE		BLACK		HISPANIC ORIGIN	
	Unit	Avail	Unit	Avail	Unit	Avail	Unit	Avail
JULY 88								
TOTAL	92.8	94.6	94.1	95.6	83.8	87.6	83.0	86.4
UNDER \$5,000	72.3	78.6	75.2	80.9	65.9	73.8	59.2	64.3
\$5,000 - \$7,499	84.4	87.8	85.7	89.0	80.0	84.5	68.2	74.9
\$7,500 - \$9,999	86.0	89.2	87.7	90.8	80.2	83.3	71.8	78.8
\$10,000 - \$12,499	88.4	91.2	89.6	92.1	81.9	86.2	79.2	81.4
\$12,500 - \$14,999	91.2	94.1	91.6	94.3	88.1	92.1	80.4	86.8
\$15,000 - \$19,999	93.8	95.6	94.4	96.1	89.1	92.2	91.1	93.2
\$20,000 - \$24,999	95.8	97.0	96.2	97.2	91.8	95.1	88.7	90.1
\$25,000 - \$29,999	97.3	98.0	97.8	98.4	92.7	94.7	95.6	97.8
\$30,000 - \$34,999	98.5	99.0	98.8	99.2	95.6	97.2	98.7	99.4
\$35,000 - \$39,999	98.5	98.9	98.6	99.0	97.7	98.3	93.9	95.3
\$40,000 - \$49,999	99.4	99.7	99.5	99.8	97.3	98.1	98.0	100.0
\$50,000 - \$59,999	99.5	99.8	99.6	99.8	98.0	98.5	100.0	100.0
\$60,000 - \$74,999	99.6	99.9	99.6	99.8	100.0	100.0	97.9	99.8
\$75,000 +	99.4	99.9	99.4	99.9	100.0	100.0	97.2	100.0
NOVEMBER 88								
TOTAL	92.5	94.4	93.9	95.5	82.5	86.6	80.8	83.4
UNDER \$5,000	71.5	78.3	74.2	80.4	66.0	74.1	56.8	62.2
\$5,000 - \$7,499	81.6	86.0	83.4	87.2	75.2	81.9	59.6	63.1
\$7,500 - \$9,999	84.9	88.1	87.2	90.1	73.1	77.9	67.0	70.6
\$10,000 - \$12,499	88.7	91.2	90.0	92.2	81.0	84.9	74.5	79.3
\$12,500 - \$14,999	91.5	93.9	92.8	94.8	83.4	87.9	81.5	83.1
\$15,000 - \$19,999	93.6	95.5	94.3	96.1	89.1	91.2	87.3	89.7
\$20,000 - \$24,999	96.5	97.6	96.7	97.8	94.4	96.2	93.1	94.1
\$25,000 - \$29,999	97.8	98.7	98.1	98.7	95.0	98.3	95.4	96.1
\$30,000 - \$34,999	98.6	99.2	98.7	99.3	98.0	98.2	99.5	100.0
\$35,000 - \$39,999	99.0	99.5	99.1	99.5	98.1	99.0	99.1	99.1
\$40,000 - \$49,999	99.3	99.5	99.4	99.6	97.0	97.5	99.0	100.0
\$50,000 - \$59,999	99.5	99.8	99.5	99.8	99.3	99.3	100.0	100.0
\$60,000 - \$74,999	99.5	99.9	99.5	99.9	100.0	100.0	100.0	100.0
\$75,000 +	99.4	100.0	99.4	100.0	100.0	100.0	99.6	100.0
1988 ANNUAL AVERAGE								
TOTAL	92.7	94.5	94.1	95.6	83.0	86.8	82.1	85.1
UNDER \$5,000	72.0	78.4	74.9	80.8	65.8	73.2	58.5	64.5
\$5,000 - \$7,499	83.3	87.1	85.1	88.4	76.9	82.3	66.4	71.7
\$7,500 - \$9,999	85.6	88.7	87.2	90.3	77.7	81.4	67.3	72.8
\$10,000 - \$12,499	88.8	91.5	90.1	92.4	81.7	86.5	77.5	80.9
\$12,500 - \$14,999	91.3	93.7	92.2	94.4	85.1	88.8	81.5	84.5
\$15,000 - \$19,999	93.6	95.3	94.3	95.9	88.5	91.1	88.6	90.6
\$20,000 - \$24,999	96.2	97.4	96.5	97.6	93.5	95.7	91.1	93.1
\$25,000 - \$29,999	97.6	98.4	97.9	98.5	94.4	96.7	95.0	96.4
\$30,000 - \$34,999	98.4	99.0	98.7	99.2	95.4	96.7	98.6	99.0
\$35,000 - \$39,999	98.8	99.2	98.9	99.3	97.8	98.4	97.2	97.7
\$40,000 - \$49,999	99.3	99.6	99.4	99.7	97.3	98.5	98.7	99.7
\$50,000 - \$74,999	99.5	99.8	99.6	99.8	99.2	99.3	99.4	99.8
\$75,000 +	99.5	99.9	99.4	99.9	100.0	100.0	97.8	100.0

TABLE 1.6

## PERCENTAGE OF PERSONS WITH A TELEPHONE BY LABOR FORCE STATUS

	TOTAL		WHITE		BLACK		HISPANIC ORIGIN	
	Unit	Avail	Unit	Avail	Unit	Avail	Unit	Avail
NOVEMBER 83								
TOTAL CNP	92.8	94.5	94.1	95.6	82.7	86.6	83.4	86.5
EMPLOYED	94.1	95.9	95.0	96.6	85.7	89.8	86.3	89.6
UNEMPLOYED	82.5	86.5	84.8	88.1	74.6	81.2	76.6	79.9
NOT IN LABOR FORCE	92.1	93.4	93.8	94.9	80.8	83.7	80.4	83.0
MARCH 84								
TOTAL CNP	93.0	94.5	94.2	95.5	83.5	86.7	83.3	85.7
EMPLOYED	94.5	95.9	95.3	96.5	87.6	90.8	87.1	89.3
UNEMPLOYED	82.0	85.7	83.8	87.1	75.5	80.3	73.3	76.1
NOT IN LABOR FORCE	92.0	93.3	93.8	94.9	80.2	82.7	79.6	82.1
JULY 84								
TOTAL CNP	92.8	94.5	94.1	95.5	83.1	87.1	82.7	85.7
EMPLOYED	93.9	95.6	94.9	96.3	85.6	89.6	84.8	87.8
UNEMPLOYED	81.2	84.8	83.7	86.6	73.9	79.7	74.0	78.2
NOT IN LABOR FORCE	92.4	93.8	93.9	95.1	82.1	85.7	80.8	83.5
NOVEMBER 84								
TOTAL CNP	92.6	94.4	94.1	95.5	82.0	86.2	82.9	85.5
EMPLOYED	93.8	95.6	94.8	96.4	84.7	89.1	85.1	87.8
UNEMPLOYED	81.8	85.6	84.3	87.3	74.7	80.8	74.7	77.8
NOT IN LABOR FORCE	92.0	93.4	93.8	95.0	79.8	83.2	80.6	82.9
1984 ANNUAL AVERAGE								
TOTAL CNP	92.8	94.5	94.1	95.5	82.9	86.7	83.0	85.6
EMPLOYED	94.0	95.7	95.0	96.4	85.9	89.8	85.7	88.3
UNEMPLOYED	81.7	85.3	84.0	87.0	74.7	80.2	74.0	77.4
NOT IN LABOR FORCE	92.1	93.5	93.8	95.0	80.7	83.9	80.3	82.8
MARCH 85								
TOTAL CNP	93.0	94.5	94.2	95.5	83.5	86.8	83.3	85.4
EMPLOYED	94.3	95.8	95.1	96.4	87.1	90.2	85.1	87.4
UNEMPLOYED	82.9	86.0	84.6	87.1	76.1	81.3	72.6	75.1
NOT IN LABOR FORCE	92.1	93.5	93.8	94.9	80.2	83.4	82.5	84.3

TABLE 1.6

## PERCENTAGE OF PERSONS WITH A TELEPHONE BY LABOR FORCE STATUS

	TOTAL		WHITE		BLACK		HISPANIC ORIGIN	
	Unit	Avail	Unit	Avail	Unit	Avail	Unit	Avail
JULY 85								
TOTAL CNP	92.9	94.6	94.0	95.5	84.5	87.9	82.9	85.0
EMPLOYED	94.0	95.8	94.8	96.4	87.4	90.6	84.5	86.5
UNEMPLOYED	83.6	87.3	85.5	88.7	78.0	83.0	77.9	80.7
NOT IN LABOR FORCE	92.2	93.6	93.6	94.8	82.0	85.1	81.1	83.5
NOVEMBER 85								
TOTAL CNP	93.1	94.7	94.3	95.7	84.4	87.4	84.2	86.9
EMPLOYED	94.4	96.0	95.2	96.6	87.5	90.5	85.8	88.7
UNEMPLOYED	80.5	84.3	82.4	86.0	74.9	79.0	70.9	74.9
NOT IN LABOR FORCE	92.3	93.7	93.9	95.1	82.2	85.1	84.2	86.0
1985 ANNUAL AVERAGE								
TOTAL CNP	93.0	94.6	94.2	95.6	84.1	87.4	83.5	85.8
EMPLOYED	94.2	95.8	95.0	96.5	87.3	90.4	85.1	87.5
UNEMPLOYED	82.3	85.8	84.2	87.3	76.3	81.1	73.8	76.9
NOT IN LABOR FORCE	92.2	93.6	93.8	94.9	81.5	84.5	82.6	84.6
MARCH 86								
TOTAL CNP	93.4	94.7	94.5	95.6	84.9	87.8	83.4	85.1
EMPLOYED	94.6	95.8	95.4	96.4	88.3	91.0	85.1	86.9
UNEMPLOYED	82.7	86.1	85.1	88.0	74.6	80.2	73.6	75.3
NOT IN LABOR FORCE	92.7	93.8	94.2	95.1	82.4	85.0	82.5	84.1
JULY 86								
TOTAL CNP	93.4	94.8	94.6	95.7	84.4	87.9	83.2	85.1
EMPLOYED	94.8	96.1	95.6	96.8	87.3	90.9	85.4	87.3
UNEMPLOYED	82.2	85.9	84.1	87.4	75.7	80.8	79.0	80.1
NOT IN LABOR FORCE	92.3	93.6	93.8	94.8	82.3	85.2	79.9	82.2
NOVEMBER 86								
TOTAL CNP	93.4	95.1	94.6	95.9	84.5	88.5	83.4	86.1
EMPLOYED	94.6	96.2	95.4	96.7	87.7	91.4	85.4	87.9
UNEMPLOYED	81.9	86.0	84.2	87.6	74.1	81.0	73.3	79.2
NOT IN LABOR FORCE	92.8	94.2	94.3	95.4	82.3	85.9	81.7	84.0

TABLE 1.6

## PERCENTAGE OF PERSONS WITH A TELEPHONE BY LABOR FORCE STATUS

	TOTAL		WHITE		BLACK		HISPANIC ORIGIN	
	Unit	Avail	Unit	Avail	Unit	Avail	Unit	Avail
1986 ANNUAL AVERAGE								
TOTAL CNP	93.4	94.8	94.6	95.8	84.6	88.1	83.3	85.4
EMPLOYED	94.7	96.1	95.5	96.6	87.7	91.1	85.3	87.4
UNEMPLOYED	82.3	86.0	84.5	87.6	74.8	80.7	75.3	78.2
NOT IN LABOR FORCE	92.6	93.9	94.1	95.1	82.3	85.4	81.4	83.4
MARCH 87								
TOTAL CNP	93.6	95.0	94.8	95.9	85.0	87.9	85.5	87.3
EMPLOYED	94.8	96.1	95.6	96.7	88.6	91.1	86.7	88.6
UNEMPLOYED	84.1	87.1	86.7	89.3	75.5	80.1	82.8	84.9
NOT IN LABOR FORCE	92.8	94.0	94.3	95.2	82.0	85.2	83.9	85.5
JULY 87								
TOTAL CNP	93.4	94.9	94.6	95.8	85.2	88.4	84.5	86.3
EMPLOYED	94.4	96.0	95.3	96.6	87.4	90.7	86.4	88.2
UNEMPLOYED	83.9	87.3	85.9	89.1	77.5	82.1	77.1	80.5
NOT IN LABOR FORCE	92.7	93.7	94.1	94.9	83.3	86.1	82.1	83.6
NOVEMBER 87								
TOTAL CNP	93.4	94.9	94.6	95.9	84.1	87.9	83.5	85.7
EMPLOYED	94.6	96.1	95.4	96.7	87.8	91.2	85.8	88.1
UNEMPLOYED	80.0	83.8	83.3	86.3	69.2	75.6	71.2	73.5
NOT IN LABOR FORCE	92.6	94.0	94.3	95.3	81.2	85.1	81.6	83.3
1987 ANNUAL AVERAGE								
TOTAL CNP	93.5	94.9	94.7	95.9	84.7	88.1	84.5	86.4
EMPLOYED	94.6	96.1	95.4	96.7	87.9	91.0	86.3	88.3
UNEMPLOYED	82.7	86.1	85.3	88.2	74.0	79.3	77.0	79.6
NOT IN LABOR FORCE	92.7	93.9	94.2	95.2	82.2	85.5	82.5	84.1
MARCH 88								
TOTAL CNP	93.8	95.2	95.0	96.2	84.8	87.7	83.8	86.4
EMPLOYED	95.2	96.4	95.9	97.0	88.5	91.3	86.5	88.8
UNEMPLOYED	83.2	86.2	86.0	88.6	74.2	78.8	74.6	77.8
NOT IN LABOR FORCE	92.6	94.0	94.2	95.4	81.5	84.3	80.4	83.5

TABLE 1.6

## PERCENTAGE OF PERSONS WITH A TELEPHONE BY LABOR FORCE STATUS

	TOTAL		WHITE		BLACK		HISPANIC ORIGIN	
	Unit	Avail	Unit	Avail	Unit	Avail	Unit	Avail
JULY 88								
TOTAL CNP	93.9	95.3	94.9	96.1	86.5	89.6	84.9	87.5
EMPLOYED	94.8	96.2	95.6	96.8	88.8	91.8	86.3	89.0
UNEMPLOYED	84.5	88.1	87.3	90.0	76.7	82.9	78.1	81.3
NOT IN LABOR FORCE	93.0	94.4	94.3	95.5	84.7	87.3	83.3	85.7
NOVEMBER 88								
TOTAL CNP	93.6	95.1	94.7	96.0	85.5	88.8	82.2	84.4
EMPLOYED	94.6	96.1	95.4	96.6	88.2	91.4	83.4	85.4
UNEMPLOYED	82.1	86.0	84.4	88.1	75.4	79.7	77.5	81.7
NOT IN LABOR FORCE	92.9	94.3	94.3	95.5	83.0	86.4	80.7	82.8
1988 ANNUAL AVERAGE								
TOTAL CNP	93.8	95.2	94.9	96.1	85.6	88.7	83.6	86.1
EMPLOYED	94.9	96.2	95.6	96.8	88.5	91.5	85.4	87.7
UNEMPLOYED	83.3	86.8	85.9	88.9	75.4	80.5	76.7	80.3
NOT IN LABOR FORCE	92.8	94.2	94.3	95.5	83.1	86.0	81.5	84.0

CHART 1.3

# Telephone Penetration

Individuals

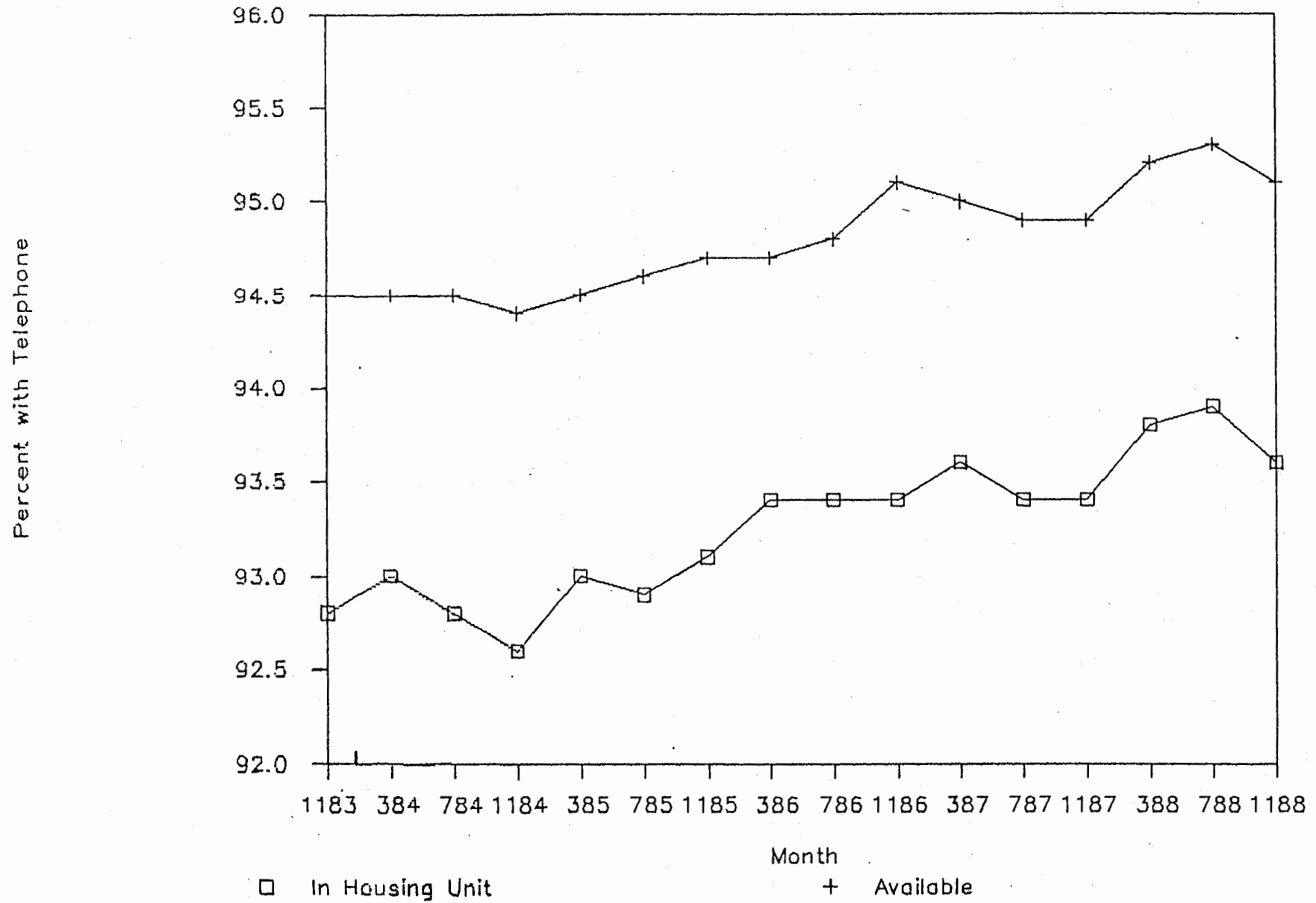




TABLE 1.7

## Critical Values for Determining Significant Differences for States

<u>State</u>	<u>In Unit</u>	<u>Available</u>
Total US	0.5%	0.5%
Alabama	3.6	3.4
Alaska	5.2	4.5
Arizona	4.5	4.4
Arkansas	5.8	4.8
California	1.6	1.4
Colorado	3.3	3.0
Connecticut	2.8	1.8
Delaware	3.2	2.7
Dist. of Columbia	3.9	2.9
Florida	2.9	2.8
Georgia	5.0	4.6
Hawaii	2.7	2.1
Idaho	4.2	3.4
Illinois	2.1	1.8
Indiana	3.4	2.7
Iowa	3.0	2.3
Kansas	2.5	2.3
Kentucky	5.3	4.8
Louisiana	4.2	3.7
Maine	3.8	3.3
Maryland	3.2	2.7
Massachusetts	2.6	2.3
Michigan	2.6	2.2
Minnesota	2.7	2.4
Mississippi	5.1	4.6
Missouri	3.6	2.9
Montana	5.3	4.3
Nebraska	3.3	3.0
Nevada	5.0	4.3
New Hampshire	4.0	3.4
New Jersey	2.4	2.1
New Mexico	5.8	4.5
New York	2.1	1.8
North Carolina	3.9	3.4
North Dakota	3.9	3.5
Ohio	2.3	1.9
Oklahoma	3.8	3.6
Oregon	3.5	3.0
Pennsylvania	1.6	1.3
Rhode Island	3.0	2.5

TABLE 1.7 (cont.)

<u>State</u>	<u>In Unit</u>	<u>Available</u>
South Carolina	6.2	5.3
South Dakota	3.7	3.5
Tennessee	4.9	4.3
Texas	2.6	2.3
Utah	4.5	4.5
Vermont	5.4	4.6
Virginia	4.0	3.5
Washington	4.0	3.9
West Virginia	4.4	3.9
Wisconsin	3.2	3.0
Wyoming	4.7	3.9

TABLE 1.8

## Critical Values for Determining Significant Differences for Age and Race

	ALL RACES		WHITE		BLACK		HISPANIC	
	<u>In Unit</u>	<u>Avail-able</u>	<u>In Unit</u>	<u>Avail-able</u>	<u>In Unit</u>	<u>Avail-able</u>	<u>In Unit</u>	<u>Avail-able</u>
Total Households	0.5%	0.5%	0.5%	0.5%	2.2%	1.9%	4.8%	4.4%
16 - 24 Yrs old	1.6%	1.4%	1.6%	1.5%	5.9%	5.5%	10.4%	10.2%
25 - 54 Yrs old	0.7%	0.6%	0.7%	0.6%	2.8%	2.4%	5.9%	5.4%
55 - 59 Yrs old	2.1%	1.8%	2.1%	1.8%	8.9%	7.7%	20.9%	18.8%
60 - 64 Yrs old	2.1%	1.8%	2.1%	1.8%	9.3%	8.1%	24.0%	21.9%
65 - 69 Yrs old	2.3%	2.0%	2.3%	1.9%	10.4%	9.0%	30.3%	27.4%
70 - 99 Yrs old	1.6%	1.4%	1.6%	1.4%	7.9%	6.8%	23.7%	21.5%

TABLE 1.9

## Critical Values for Determining Significant Differences for Household Size

	ALL RACES		WHITE		BLACK		HISPANIC	
	<u>In Unit</u>	<u>Avail-able</u>	<u>In Unit</u>	<u>Avail-able</u>	<u>In Unit</u>	<u>Avail-able</u>	<u>In Unit</u>	<u>Avail-able</u>
Total	0.5%	0.5%	0.5%	0.5%	2.2%	1.9%	4.8%	4.4%
1 Person	1.1%	0.9%	1.1%	1.0%	4.0%	3.6%	11.1%	10.6%
2 - 3	0.8%	0.7%	0.8%	0.7%	3.5%	3.1%	7.6%	6.9%
4 - 5	1.2%	1.0%	1.2%	1.0%	4.9%	4.2%	8.8%	7.9%
6 +	2.6%	2.3%	2.9%	2.5%	8.7%	7.6%	14.8%	13.4%

TABLE 1.10

## Critical Values for Determining Significant Differences for Income

		ALL RACES		WHITE		BLACK		HISPANIC	
		<u>In</u>	<u>Avail-</u>	<u>In</u>	<u>Avail-</u>	<u>In</u>	<u>Avail-</u>	<u>In</u>	<u>Avail-</u>
		<u>Unit</u>	<u>able</u>	<u>Unit</u>	<u>able</u>	<u>Unit</u>	<u>able</u>	<u>Unit</u>	<u>able</u>
	Total	0.5%	0.5%	0.5%	0.5%	2.2%	1.9%	4.8%	4.4%
	Under \$5,000	1.3%	1.2%	1.5%	1.4%	3.5%	3.3%	8.7%	8.5%
	\$5,000 - \$7,499	1.7%	1.5%	1.8%	1.6%	5.6%	5.1%	11.0%	10.6%
	\$7,500 - \$9,999	1.9%	1.7%	2.0%	1.8%	7.1%	6.3%	12.9%	12.3%
	\$10,000 - \$12,499	1.8%	1.6%	1.9%	1.7%	7.2%	6.4%	15.7%	14.5%
	\$12,500 - \$14,999	2.1%	1.8%	2.1%	1.8%	8.7%	7.6%	17.9%	16.4%
	\$15,000 - \$17,499	2.2%	1.9%	2.2%	2.0%	9.4%	8.1%	20.3%	18.4%
	\$17,500 - \$19,999	2.3%	2.0%	2.3%	2.0%	10.4%	9.0%	20.3%	18.4%
	\$20,000 - \$24,999	1.7%	1.5%	1.7%	1.5%	9.1%	7.8%	16.5%	15.0%
	\$25,000 - \$29,999	1.9%	1.7%	1.9%	1.6%	10.9%	9.5%	22.0%	19.8%
	\$30,000 - \$34,999	2.0%	1.8%	2.0%	1.7%	12.5%	10.6%	25.1%	22.4%
	\$35,000 - \$39,999	2.4%	2.1%	2.4%	2.0%	15.6%	13.2%	28.6%	25.5%
	\$40,000 - \$49,999	2.2%	1.9%	2.1%	1.8%	15.1%	12.9%	29.0%	26.0%
	\$50,000 - \$74,999	2.3%	1.9%	2.2%	1.9%	16.4%	13.9%	32.3%	28.7%
	\$75,000 +	3.5%	3.0%	3.3%	2.9%	45.2%	38.2%	54.0%	49.0%

TABLE 1.11

Critical Values for Determining Significant Differences for Employment Status

	ALL RACES		WHITE		BLACK		HISPANIC	
	<u>In</u> <u>Unit</u>	<u>Avail-</u> <u>able</u>	<u>In</u> <u>Unit</u>	<u>Avail-</u> <u>able</u>	<u>In</u> <u>Unit</u>	<u>Avail-</u> <u>able</u>	<u>In</u> <u>Unit</u>	<u>Avail-</u> <u>able</u>
Total CNP	0.8%	0.7%	0.8%	0.7%	3.3%	2.9%	7.3%	6.7%
Employed	1.0%	0.9%	1.0%	0.9%	4.0%	3.5%	9.8%	8.9%
Unemployed	3.1%	2.8%	3.5%	3.1%	9.3%	8.4%	25.3%	23.5%
Not in Labor Force	1.3%	1.1%	1.3%	1.1%	5.1%	4.5%	11.9%	10.9%

## 2. Lifeline Assistance Plans

To further the universal service objectives of the Communications Act, the Joint Board and the FCC established lifeline assistance programs to ensure that low-income subscribers do not drop off the telephone network, and additionally to encourage low-income households without service to connect to the network. Attachment I is a report from NECA on projected costs on a state-by-state basis for implementing lifeline assistance in 1989. Attachment II provides a summary of lifeline households as a percentage of total residential customers. The FCC is monitoring subscriber participation and telephone usage to determine program benefits and costs.

Because participating states and telephone companies have wide latitude in selecting means tests and eligibility criteria and in shaping the benefits of the programs, and because uniform reporting is required for the first time in May of 1989, existing reports do not fully describe the impact of these programs. Attachment III is a copy of the annual cost report that will be filed by state commissions with FCC certified programs, and local telephone companies participating in the Federal programs where a statewide program has not been certified.<sup>1</sup>

The FCC, in conjunction with the states and local telephone companies, has established lifeline programs which are designed to promote universal service by helping low income individuals afford telephone service. The programs are funded through charges ultimately paid by interstate ratepayers, are managed by the states, and may take the form of a reduction in monthly charges or a reduction in service connection and installation charges. After state programs are certified by the FCC, local exchange carriers are reimbursed through the National Exchange Carrier Association (NECA) revenue pool for program expenses. These revenues are not funded by federal tax dollars. Under these programs, lifeline benefits are only available to persons who pass a "means" test such as eligibility for food stamps or Medicaid. A second requirement for FCC certification is that each applicant's eligibility for benefits be verified. The state has considerable latitude in selecting means tests, shaping the benefits, and determining the geographic availability of the programs.

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1 MTS and WATS Market Structure and Amendment of Part 67 of the Commission's Rules and Establishment of a Joint Board, Decision and Order, CC Docket Nos. 78-72 and 80-286, FCC 85-643, 51 Fed. Reg. 1371 (January 13, 1986) at para. 5; and Establishment of a Program to Monitor the Impact of Joint Board Decision, Order, CC Docket No. 87-339, 2 FCC Rcd 5266 (1987).

Based on the recommendation of the Federal-State Joint Board, the FCC has made available the following three federal lifeline assistance plans:

Plan 1- On December 19, 1984, the FCC adopted an optional plan which allows a total reduction in fixed charges for telephone service equal to the federal subscriber line charge (SLC) for low income households satisfying a state determined means test subject to verification. This is accomplished by a 50% reduction in the SLC funded through the interstate carrier common line charge (CCLC). States wishing to take advantage of this assistance mechanism are required to implement an equal monetary reduction in the local exchange rate for those low income households to be funded from state sources. The assistance is available for a single telephone line for the principal residence of eligible households.

Plan 2- On December 10, 1985, the FCC adopted broader lifeline assistance measures for low income households providing for a total reduction in fixed charges for telephone service of twice the amount of the SLC. This reduction would be achieved through a waiver of the full federal SLC up to the amount matched by state assistance, provided that the state plan meets the following federal requirements:

a) means test -- highly targeted assistance plan which focuses on those individuals with limited incomes;

b) subject to verification -- procedures must be established which routinely check to ensure that those individuals eligible under the plans are the individuals benefitting under the plan;

c) availability -- for a single telephone line for the principal residence of eligible households.

The state matching contribution can be in the form of reduced local telephone service rates, reduced connection charges or reduced deposit requirements. No restrictions are imposed on the source of funding for the state assistance. The federal assistance is to be funded by the carriers through the interstate Common Carrier Line Charge (CCLC).

Plan 3- On April 16, 1987, the FCC adopted a two part plan, Link Up America, to connect low income households to the telephone network. Under the first part, federal assistance will be provided to pay one-half of the connection charges, up to a maximum of \$30.00 in benefits, assessed for commencing telephone service. Under the second part, when a local

exchange company (LEC) offers a deferred payment plan not to exceed 12 months for service commencement charges and it does not assess the subscribers any interest charges, federal assistance will be available to that LEC to cover the interest on costs of up to \$200.

On June 23, 1988, the FCC adopted a Notice of Proposed Rule Making in CC Docket No. 88-341 which proposed eliminating the requirement that consumers requesting to be included in the Link Up America program have lived at an address where there has not been telephone service for the last three months and have not received Link Up benefits in the last two years. This Notice was adopted in response to waiver requests from the States of Maine and New York. Some telephone companies had declined to participate in the program due to the existence of non-means-based eligibility criteria. The Commission was concerned that the three-month and two-year eligibility rules were discouraging participation in Link Up America. Data from a pilot program indicated that approximately 15 percent of Link Up applicants had been rejected for failure to meet the three-month rule. Therefore, the Commission proposed eliminating these rules for states and telephone companies that verify income eligibility but retaining these rules and requiring prior service verification in cases in which income eligibility is not verified.

On February 27, 1989, the FCC adopted and released a revision of the Link-Up America rules which eliminated two non-income criteria. Connection assistance will be available for one telephone line per household, at a subscriber's principal place of residence. In order to be eligible for assistance when income is verified a residential subscriber must (1) meet the requirements of a state established income test, and (2) not be a dependent, unless the subscriber is more than 60 years ago. Alternatively, when income is not verified, a residential subscriber may self-certify #1 and #2, and the entity receiving certification (state or company) must verify that the customer (3) has lived at an address where there has been no telephone service for at least three months, and (4) has not received assistance within the last two years.

States are encouraged, but not required, to match the federal benefits and cover the remaining half of the connection charges. The states and LECs are encouraged to develop deferred payment plans for service commencement charges as well as to provide reductions in, or waivers of, security deposit requirements for low income customers who do not have poor credit histories.



Federal assistance is being funded through the interstate CCLC until April 1989, at which time all three lifeline assistance plans will be funded through direct billing of the interexchange carriers (IXCs) by NECA. Under existing rules, IXCs will be responsible for paying lifeline assistance if they have at least (1) 1% of the "1+" or "presubscribed" common lines presubscribed to interexchange carriers in all study areas, or (2) 5% of the presubscribed lines in any study area and a minimum of 1,000 presubscribed lines in that study area. However, the Commission has initiated a Notice of Proposed Rulemaking which proposes to replace this cut-off point with a nationwide 0.5% of presubscribed lines criterion.

Two states, California and New York, began offering a lifeline assistance program pursuant to Plan 1 in 1985. New York switched to Plan 2 in November 1987. Twenty-six states and the District of Columbia have been certified to offer lifeline assistance pursuant to Plan 2. At this time, thirty-eight states, the District of Columbia and Puerto Rico have been certified by the FCC to provide lifeline connection assistance under the Link Up America Program, Plan 3. A total of 43 states, the District of Columbia, and Puerto Rico are participating in some type of federal assistance program for low income Americans. Link-Up is targeted to those qualified individuals who comprise a portion of the approximately 2.9 million low income households who currently are not connected to the public switched network. Table 2.1 provides a complete listing of all approved state and local exchange company programs offering assistance, and the dates of FCC certification. Descriptions of the Plan 2 programs for each state with such a program available were included in the December 1988 Monitoring Report. They are not repeated here.

Table 2.1

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	7/25/86	11/13/87
Connecticut		11/13/87
Distict of Columbia	3/18/86	8/19/87
Florida		8/01/88
Hawaii	10/27/86	
Idaho	7/24/87	
Indiana		4/25/88
Iowa		3/10/88
Kansas		1/27/88
Kentucky		12/24/87
Maine	8/11/87	8/11/87
Maryland	5/22/86	10/01/87
Michigan	1/24/89	1/24/89
Minnesota	1/27/88	1/27/88
Mississippi		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	9/07/88
New Hampshire		11/03/88
New Jersey		11/13/87
New Mexico	4/01/87	1/15/88
New York	11/02/87	8/11/87
North Carolina	5/22/86	10/19/87
North Dakota		12/24/87
Ohio	7/01/87	10/01/87
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	3/25/88	3/25/88

Tennessee		11/03/88
Texas	7/12/88	10/01/87
Utah	12/31/86	3/17/88
Vermont	10/01/86	
Washington	7/24/87	
West Virginia	7/25/86	9/11/87
Wyoming		1/24/89

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

ATTACHMENT I

LIFELINE ASSISTANCE PLANS  
NECA BUDGET PROJECTIONS FOR STATE PLANS

The monitoring of Lifeline Assistance plans requires NECA to submit reports at the state and study area level of detail. In lieu of actuals NECA has submitted the projection of Lifeline Assistance and Link-Up America lines estimated for January to June 1989 that were included in the Annual Tariff filing made on June 20, 1988 for calendar year 1989. These projections are based on the June 30, 1988 data submission.

NECA is collecting actual data from the exchange carriers on a semiannual basis and will include this data in this docket.

Key:

LCA = Lifeline Connection Assistance (Link-Up America)  
SLC = Subscriber Line Charge (lifeline)

PROJECTED SLC WAIVER & LCA LEVELS: JAN THRU JUN 1989  
 BASED ON JUN 30, 1988 DATA SUBMISSION

9 MAR 89

ST- ATE	PERCENT LINES CERTIFIED	TOTAL LCA LINES	TOTAL LCA AMOUNT	TOTAL SLC WAIVER LINES	TOTAL SLC WAIVER AMOUNT
AK	0.00%	20	\$500	2	\$20
AL	100.00%	3,061	\$57,270	0	\$0
AR	100.00%	1,510	\$23,037	5,300	\$106,530
AZ	100.00%	410	\$8,133	5,676	\$78,499
CA	100.00%	0	\$0	1,267,795	\$12,759,228
CO	100.00%	270	\$7,155	20,002	\$402,040
CT	100.00%	1,950	\$36,816	0	\$0
DC	100.00%	498	\$7,659	498	\$10,010
DE	0.00%	60	\$1,275	0	\$0
FL	100.00%	3,652	\$72,331	0	\$0
GA	0.00%	1,230	\$15,490	0	\$0
HI	100.00%	107	\$2,524	6,313	\$102,270
IA	100.00%	1,198	\$13,331	0	\$0
ID	100.00%	955	\$15,350	8,781	\$176,496
IL	0.00%	3,218	\$25,504	11	\$144
IN	100.00%	3,498	\$78,994	0	\$0
KS	100.00%	529	\$6,314	5	\$100
KY	91.19%	2,367	\$35,289	4,695	\$94,370
LA	100.00%	4,800	\$144,000	0	\$0
MA	0.00%	0	\$0	0	\$0
MD	99.85%	157	\$3,768	157	\$3,156
ME	100.00%	238	\$4,105	34,466	\$692,653
MI	86.25%	0	\$0	0	\$0
MN	100.00%	1,716	\$29,781	21,117	\$424,437
MO	100.00%	2,760	\$51,623	16,675	\$335,235
MS	100.00%	1,058	\$20,119	0	\$0
MT	100.00%	240	\$4,662	5,650	\$113,565
NC	100.00%	1,996	\$32,559	18,702	\$375,943
ND	100.00%	128	\$1,685	0	\$0
NE	100.00%	506	\$5,552	0	\$0
NH	100.00%	40	\$700	0	\$0
NJ	100.00%	181	\$3,730	258,550	\$2,598,428
NM	96.67%	490	\$9,807	10,214	\$205,301
NV	0.05%	150	\$1,219	13,618	\$137,836
NY	100.00%	549	\$7,237	417,001	\$6,928,365
OH	100.00%	43,406	\$799,484	21,803	\$438,233
OK	0.00%	307	\$6,794	2	\$31
OR	100.00%	6,499	\$41,864	40,215	\$802,035
PA	100.00%	1,066	\$19,981	0	\$0
PR	88.51%	0	\$0	0	\$0
RI	100.00%	80	\$610	22,562	\$453,496
SC	100.00%	1,401	\$23,487	0	\$0
SD	77.19%	428	\$4,898	5,961	\$119,841
TN	100.00%	2,389	\$48,084	0	\$0
TX	100.00%	3,888	\$92,444	40,901	\$823,498
UT	100.00%	223	\$3,229	17,505	\$351,851
VA	100.00%	2,717	\$49,953	8,123	\$160,127
VI	0.00%	0	\$0	0	\$0

PROJECTED SLC WAIVER & LCA LEVELS: JAN THRU JUN 1989  
 BASED ON JUN 30, 1988 DATA SUBMISSION

9 MAR 89

ST- ATE	PERCENT LINES CERTIFIED	TOTAL LCA LINES	TOTAL LCA AMOUNT	TOTAL SLC WAIVER LINES	TOTAL SLC WAIVER AMOUNT
VT	100.00%	30	\$450	17,955	\$358,127
WA	98.03%	375	\$5,474	41,346	\$598,504
WI	0.00%	0	\$0	9	\$187
WV	100.00%	3,064	\$66,610	5,131	\$97,786
WY	92.68%	0	\$0	0	\$0
	===== 85.18% =====	===== 105,415 =====	===== \$1,890,881 =====	===== 2,336,741 =====	===== \$29,748,342 =====

NOTE: PERCENT OF LINES CERTIFIED IS BASED ON THE STUDY AREA  
 BEING CERTIFIED FOR EITHER LINK-UP AMERICA (LCA) OR  
 THE SLC WAIVER PROGRAM.

ATTACHMENT II

PERCENT OF RESIDENCE C.P.T.'s WHICH ARE LIFELINE

	AL	AR	AZ	CA	CO	CT
1Q86	0.00%	0.22%	0.00%	5.37%	0.00%	0.00%
2Q86	0.00%	0.27%	0.00%	5.74%	0.00%	0.00%
3Q86	0.00%	0.28%	0.00%	6.27%	1.15%	0.00%
4Q86	0.00%	0.80%	0.00%	7.10%	1.51%	0.00%
1Q87	0.00%	0.78%	0.00%	10.05%	1.57%	0.00%
2Q87	0.00%	0.72%	0.00%	10.75%	1.54%	0.00%
3Q87	0.00%	0.68%	0.16%	11.14%	1.53%	0.00%
4Q87	0.00%	0.75%	0.17%	11.29%	1.44%	0.00%
1Q88	0.00%	0.87%	0.35%	10.99%	1.48%	0.00%
2Q88	0.00%	0.94%	0.40%	12.15%	1.43%	0.00%
3Q88	0.00%	0.97%	0.43%	12.11%	1.44%	0.00%
FORECAST, 4/89-12/89	0.00%	0.91%	0.40%	12.73%	1.48%	0.00%

	DC	DE	FL	GA	HI	IA
1Q86	0.35%	0.00%	0.00%	0.00%	0.00%	0.00%
2Q86	0.71%	0.00%	0.00%	0.00%	0.00%	0.00%
3Q86	0.81%	0.00%	0.00%	0.00%	0.00%	0.00%
4Q86	0.87%	0.00%	0.00%	0.00%	1.29%	0.00%
1Q87	0.90%	0.00%	0.00%	0.00%	1.38%	0.00%
2Q87	0.95%	0.00%	0.00%	0.00%	1.45%	0.00%
3Q87	0.94%	0.00%	0.00%	0.00%	1.49%	0.00%
4Q87	0.97%	0.00%	0.00%	0.00%	1.54%	0.00%
1Q88	1.01%	0.00%	0.00%	0.00%	1.61%	0.00%
2Q88	1.07%	0.00%	0.00%	0.00%	1.46%	0.00%
3Q88	1.06%	0.00%	0.00%	0.00%	1.56%	0.00%
FORECAST, 4/89-12/89	1.11%	0.00%	0.00%	0.00%	1.62%	0.00%

	ID	IL	IN	KS	KY	LA
1Q86	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
2Q86	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
3Q86	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
4Q86	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
1Q87	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
2Q87	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
3Q87	1.24%	0.00%	0.00%	0.00%	0.00%	0.00%
4Q87	1.86%	0.00%	0.00%	0.00%	0.00%	0.00%
1Q88	2.30%	0.00%	0.00%	0.00%	0.00%	0.00%
2Q88	2.38%	0.00%	0.00%	0.00%	0.00%	0.00%
3Q88	2.21%	0.00%	0.00%	0.00%	0.00%	0.00%
FORECAST, 4/89-12/89	2.62%	0.00%	0.00%	0.00%	0.00%	0.00%

PERCENT OF RESIDENCE C.P.T.'s WHICH ARE LIFELINE

	MA	MD	ME	MI	MN	MO
1Q86	0.00%	0.06%	0.00%	0.00%	0.00%	0.00%
2Q86	0.00%	0.12%	0.00%	0.00%	0.00%	0.00%
3Q86	0.00%	0.14%	0.00%	0.00%	0.00%	0.00%
4Q86	0.00%	0.18%	0.00%	0.00%	0.00%	0.00%
1Q87	0.00%	0.17%	0.00%	0.00%	0.00%	0.00%
2Q87	0.00%	0.17%	0.00%	0.00%	0.00%	0.00%
3Q87	0.00%	0.17%	0.00%	0.00%	0.00%	0.00%
4Q87	0.00%	0.16%	6.48%	0.00%	0.00%	0.00%
1Q88	0.00%	0.17%	6.50%	0.00%	0.05%	1.07%
2Q88	0.00%	0.06%	6.73%	0.00%	0.87%	1.10%
3Q88	0.00%	0.16%	6.68%	0.00%	1.22%	1.09%
FORECAST, 4/89-12/89	0.00%	0.17%	6.67%	5.65%	1.24%	1.12%

	MS	MT	NC	ND	NE	NH
1Q86	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
2Q86	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
3Q86	0.00%	0.00%	0.03%	0.00%	0.00%	0.00%
4Q86	0.00%	0.00%	0.03%	0.00%	0.00%	0.00%
1Q87	0.00%	0.00%	0.02%	0.00%	0.00%	0.00%
2Q87	0.00%	0.00%	0.02%	0.00%	0.00%	0.00%
3Q87	0.00%	0.00%	0.36%	0.00%	0.00%	0.00%
4Q87	0.00%	1.80%	0.40%	0.00%	0.00%	0.00%
1Q88	0.00%	1.96%	0.76%	0.00%	0.00%	0.00%
2Q88	0.00%	2.06%	0.86%	0.00%	0.00%	0.00%
3Q88	0.00%	2.01%	0.79%	0.00%	0.00%	0.00%
FORECAST, 4/89-12/89	0.00%	2.26%	1.02%	0.00%	0.00%	0.00%

	NJ	NM	NV	NY	OH	OK
1Q86	0.00%	0.00%	0.00%	0.75%	0.00%	0.00%
2Q86	0.00%	0.00%	0.00%	0.78%	0.00%	0.00%
3Q86	0.00%	0.00%	0.00%	0.80%	0.00%	0.00%
4Q86	0.00%	0.00%	0.00%	0.83%	0.00%	0.00%
1Q87	0.00%	0.00%	0.00%	0.89%	0.00%	0.00%
2Q87	0.00%	1.53%	0.00%	1.10%	0.00%	0.00%
3Q87	0.00%	1.75%	0.11%	1.26%	0.00%	0.00%
4Q87	0.00%	1.89%	0.12%	1.55%	0.04%	0.00%
1Q88	0.00%	1.87%	0.12%	1.93%	0.18%	0.00%
2Q88	0.00%	2.39%	0.12%	2.34%	0.28%	0.00%
3Q88	0.00%	2.40%	0.29%	2.73%	0.29%	0.00%
FORECAST, 4/89-12/89	7.62%	2.54%	1.85%	6.46%	0.46%	0.00%



PERCENT OF RESIDENCE C.P.T.'s WHICH ARE LIFELINE

	OR	PA	RI	SC	SD	TN
1Q86	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
2Q86	0.12%	0.00%	0.00%	0.00%	0.00%	0.00%
3Q86	0.86%	0.00%	0.00%	0.00%	0.00%	0.00%
4Q86	0.87%	0.00%	0.00%	0.00%	0.00%	0.00%
1Q87	0.92%	0.00%	0.00%	0.00%	0.00%	0.00%
2Q87	1.00%	0.00%	0.00%	0.00%	0.00%	0.00%
3Q87	0.89%	0.00%	0.00%	0.00%	0.00%	0.00%
4Q87	0.87%	0.00%	3.21%	0.00%	0.00%	0.00%
1Q88	0.85%	0.00%	3.32%	0.00%	0.00%	0.00%
2Q88	1.28%	0.00%	3.31%	0.00%	0.12%	0.00%
3Q88	2.42%	0.00%	3.28%	0.00%	2.21%	0.00%

FORECAST,  
4/89-12/89

	2.52%	6.47%	3.27%	0.00%	3.01%	0.00%
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	TX	UT	VA	VT	WA	WI
1Q86	0.00%	0.00%	0.00%	1.87%	0.00%	0.00%
2Q86	0.00%	0.00%	0.00%	1.92%	0.00%	0.00%
3Q86	0.00%	0.00%	0.00%	1.99%	0.00%	0.00%
4Q86	0.00%	0.00%	0.00%	2.99%	0.00%	0.00%
1Q87	0.00%	2.85%	0.00%	5.37%	0.00%	0.00%
2Q87	0.00%	3.09%	0.00%	6.62%	0.00%	0.00%
3Q87	0.00%	2.89%	0.00%	7.02%	1.24%	0.00%
4Q87	0.00%	3.16%	0.00%	6.95%	1.77%	0.00%
1Q88	0.00%	3.27%	0.40%	7.15%	2.07%	0.00%
2Q88	0.00%	3.33%	0.42%	7.49%	2.15%	0.00%
3Q88	0.03%	3.25%	0.46%	7.29%	2.09%	0.00%

FORECAST,  
4/89-12/89

	0.48%	3.34%	0.46%	8.23%	2.18%	0.00%
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	WV	WY	TBOC	TICO	TOTL
1Q86	0.00%	0.00%	0.70%	0.94%	0.74%
2Q86	0.00%	0.00%	0.75%	1.00%	0.80%
3Q86	0.00%	0.00%	0.80%	1.33%	0.89%
4Q86	1.01%	0.00%	0.94%	1.43%	1.03%
1Q87	0.98%	0.00%	1.40%	1.58%	1.43%
2Q87	0.98%	0.00%	1.52%	1.72%	1.55%
3Q87	0.95%	0.00%	1.60%	1.87%	1.64%
4Q87	1.01%	0.00%	1.72%	1.95%	1.76%
1Q88	0.98%	0.00%	1.75%	2.08%	1.81%
2Q88	0.97%	0.00%	1.92%	2.19%	1.96%
3Q88	0.95%	0.00%	2.11%	1.96%	2.09%

FORECAST,  
4/89-12/89

	1.09%	0.00%	3.59%	2.36%	3.37%
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NOTES: A. C.P.T. are customer premises termination, a measure of the number of telephone customers. These data show the percentage of total residence customers enrolled in the Lifeline program.

B. TBOC are total Bell Operating Company figures; TICO are total non-Bell Operating Company figures.

C. Data are provided only for those states which had Lifeline programs in effect by the second quarter of 1987.

Source: Schedule DMD-5, 1989 Tariff Review Plan, Tier I Rollup

FCC 496

FEDERAL COMMUNICATIONS COMMISSION  
WASHINGTON, D.C. 20554

APPROVED BY OMB  
3060-0391  
EXPIRES 09/30/90

**STATE TELEPHONE ASSISTANCE REPORT**

Estimated Average Burden  
Hours Per Response: 4 Hours

READ ALL INSTRUCTIONS ON BACK BEFORE COMPLETING

1. NAME AND ADDRESS OF REPORTING ENTITY	2. FOR STATE OF:
	3. YEAR REPORT ENDING: <b>DECEMBER 31, 19_____</b>

4. REPORT REFLECTS THE FOLLOWING TELEPHONE COMPANY(IES)

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5(a) PARTICULARS PERTAINING TO PROGRAM PARTICIPANTS AND COST	AT END OF YEAR	
	(b) Lifeline Program	(c) Link Up Program
1. Number of Households/Customers enrolled in program		
2. Number of enrolled households that are new customers (incl. in 1. above)		
3. Number of Households eligible		
4. Annual Administrative Costs - <b>Recurring</b> (See Instruction C)		
5. Administrative Costs - <b>Start-up</b> (See Instruction C)		

6. PARTICULARS PERTAINING TO SERVICE AREA AND CHARGES	AT END OF YEAR
1. Number of households in service area	
2. Number of households with telephone service	
3. Subscriber line charges waived (Per Subscriber Per Month (Average) \$ _____)	
4. Additional Reduction in Local Charges or Benefits Provided (Per Subscriber Per Month \$ _____)	

7. DESCRIPTION OF PROGRAM (See Instruction D)

a. Name of Program	b. Type of Program (Mark "X" One)  1. <input type="checkbox"/> Lifeline Program  2. <input type="checkbox"/> Link Up Program	c. Date of Most Recent FCC Certification
		d. Effective Date of Program

e. Eligibility Requirements. Describe eligibility requirements. Response should include income criteria and/or participation in other assistance programs such as Medicaid, Food Stamps, fuel assistance, etc. Also, include non-income criteria such as age and disability. Describe how the number of eligible households is developed.

f. Verification of Eligibility Requirements. Describe how the eligibility requirements, defined above, are verified.

g. Determination of Costs. Describe how the costs of the plan are determined.

h. Publicity Methodologies. Describe methodologies used to inform the public about the availability of the program.

8. CONTACT REPRESENTATIVE. Give name, address and telephone number of person preparing this report.

Name	Mailing Street Address or P.O. Box, City, State and ZIP Code	Area Code - Telephone No.
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9. CERTIFICATION: I certify that to the best of my knowledge and belief that this is a true and correct report.

Date	Typed Name of Person Signing	Title of Person Signing	Signature
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PERSONS MAKING WILLFUL FALSE STATEMENTS IN THIS REPORT CAN BE PUNISHED BY FINE OR IMPRISONMENT, U.S. CODE, TITLE 18, SECTION 1001.

**INSTRUCTIONS**

A. This report is prescribed under authority of Sections 4(i) and 4(j) of the Communications Act of 1934, as amended. FCC 496 shall be filed in duplicate with the **Federal Communications Commission, Washington, D.C. 20554, not later than May 1, of the year following that for which the report is made.**

B. The following entities that participate in Federal telephone assistance under Parts 69 and/or 36 of the FCC Rules are required to file this report:

1. All states that have obtained FCC certification to provide such assistance programs;
2. All telephone companies that have obtained FCC certification; and
3. All other telephone companies that participate in waivers or reductions of the end user subscriber line charge.

C. The cost of the program should include all costs specifically identifiable as related solely to the lifeline and Link Up America programs; no allocation of common or joint costs should be included. For states filing this report, the figures reported should include both state and local exchange carrier costs.

D. Item 7. Description of Program. Complete item 7 only once for each different program even if this report is being submitted by a state commission for more than one company.

If the state or company reporting has both a lifeline program and a Link Up program, please provide a separate descriptive sheet for each program.

If a description is already on file at the FCC, please indicate "No change since my submission of (include date)."

E. Any data that requires clarification should be footnoted and fully explained in the Remarks section below. If the space provided is insufficient for the required data or it is otherwise necessary or desirable to insert additional statements or schedules, the insert pages should include the name of the respondent and the time period covered, in a style conforming nearly as practicable to that appearing on the regular page.

F. All instructions shall be followed. All questions and statements must be completed. If proper answer is "none" or "not applicable," insert that answer. If exact data are not available, please estimate and label your response "estimate".

G. Notice. The FCC 496 Report is needed to provide the Commission with the data necessary to fulfill its regulatory responsibilities with respect to interstate telephone service under Title II of the Communications Act of 1934, as amended. Information from FCC 496 Report is used in analyzing requests for continuing certification of state telephone assistance programs and selected data are tabulated and released by the Commission. Your response is mandatory.

Public reporting burden for this collection of information is estimated to average 4 hours per response including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing the burden, to the Federal Communications Commission, Office of Managing Director, Washington, DC 20554, and to the Office of Management and Budget, Office of Information and Regulatory Affairs, Washington, DC 20503.

This Notice is required by the Privacy Act of 1974, P.L. 93-579, December 31, 1974, 5 U.S.C. 552a(e)(3) and the Paperwork Reduction Act of 1980, P.L. 96-511, December 11, 1980, 44 U.S.C. 3504.

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**REMARKS**

### 3. Costs and High Cost Assistance

On a nationwide average basis, approximately 28 percent of local exchange carrier (LEC) local loop costs are allocated to the interstate (federal) jurisdiction, and 72 percent are allocated to the state jurisdiction. The average cost per loop, however, varies significantly among LECs. The Commission's high cost assistance program enables LECs with very high per loop costs to allocate more of their loop costs to the interstate jurisdiction, thus recovering these costs from interexchange carriers and leaving less costs to be recovered through state rates. In this manner, the high cost assistance program operates to hold down local rates and thereby furthers one of the most important goals of federal and state regulation -- the preservation of universal telephone service. Acting on the recommendation of the Federal-State Joint Board in CC Docket No. 80-286, the Commission adopted rule changes that, effective January 1988, retargeted federal assistance provided to high cost LECs. This section of the report outlines the high cost assistance program and the changes adopted by the Commission, and discusses the high cost data included in the report.

The Commission regulates the recovery by LECs of that portion of their total costs associated with the provision of interstate services. The states regulate the recovery of costs associated with intrastate services (local service and state long distance services). The Commission's high cost assistance program relates to the allocation between the state and interstate jurisdictions of non-traffic sensitive (NTS) "local loop costs" -- a term that refers to the costs of outside telephone wires, poles, and other facilities that link each telephone customer's premises to the public switched telephone network. These costs are allocated between the state and interstate jurisdictions because all local loops can be used for making and receiving state and interstate telephone calls.

Pursuant to the changes recommended by the Joint Board and adopted by the Commission, high cost assistance has been retargeted to increase benefits to small and medium sized LECs beginning in January 1988. This retargeting takes the form of changes in the additional interstate cost allocation for such LECs. The old and new high cost formulas are compared in Table 3.1.<sup>1</sup>

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1 Of course, the percentages shown in the table are in addition to the basic allocation of NTS costs to the interstate jurisdiction under our rules.

The Commission's high cost assistance program is being implemented during a period in which the basic interstate allocation of loop costs is being shifted from a level based on the Subscriber Plant Factor (SPF) to a gross allocation factor of 25%. Both of these changes are being phased in over the same eight-year period.

The Commission's high cost assistance program is administered by the National Exchange Carrier Association (NECA). As part of the administration of the program, NECA collects certain cost data from LECs that provide service to approximately 98% of the nation's subscribers. Each year NECA collects NTS cost and loop data from the previous year, and uses it to distribute high cost assistance in the following year. State totals from NECA's 1988 report, covering high cost data for 1987, and using a 12% rate of return which was in effect in 1987 (rather than the 12.75% rate previously in effect) are presented in Table 3.2. The column headed "USF Cost/Loop" is the "Unseparated Revenue Requirement" divided by the "Loops". In Table 3.2, the column headed "Annual USF at 100%" is the universal service fund (USF) calculation for 1987 data based on the new high cost formula which took effect in 1988. The introduction of the USF and the movement of the basic interstate allocation from frozen SPF to 25% is being accomplished over an eight-year transition period which began in 1986. Since 1989 is the fourth year of this transition, the annual USF payment for 1989 will be  $\frac{4}{8}$  (or  $\frac{1}{2}$ ) of the amount shown in the column "Annual USF at 100%" and the monthly payment will be 4 times the amount shown in the column "Monthly USF at  $\frac{1}{8}$  Transition." Comparable data for individual study areas were included in the December 1988 Monitoring Report. They are not repeated here.

NECA has also provided information on comparisons of aggregate unseparated NTS costs and USF high cost assistance reported in 1988 versus the corresponding amounts reported in 1987. Table 3.3 compares unseparated NTS costs. It shows that total cost declined nationwide, and that this decline can be attributed to the reduction in the rate of return from 12.75% to 12% and to the impact of the Tax Reform Act. It also shows a breakdown by three groups of companies: Subset 1 consists of the Bell Operating Companies, Subset 2 consists of larger independent companies, and Subset 3 consists of smaller independent companies. Table 3.4 compares post-transition USF high cost assistance. It shows that the size of the fund increased nationwide, and that this increase can be attributed to the introduction of the new USF formula. The table shows that the increase is concentrated in Subset 2, which includes most of the study areas with between 50,000 and 200,000 lines; these study areas shifted from the large company category to the small company category with the introduction of the new formula. The last two lines show the breakdown of the assistance of study areas with above or below 200,000 lines.

TABLE 3.1

HIGH COST FORMULAS

Cost Range As % of National Average      % Expense Adjustment Within Range

Old Formula, Study Areas with Over 50,000 Loops

0% - 115%	0%
115% - 150%	25%
150% and above	75%

Old Formula, Study Areas with 50,000 Loops or Less

0% - 115%	0%
115% - 150%	50%
150% and above	75%

New Formula, Study Areas with Over 200,000 Loops

0% - 115%	0%
115% - 160%	10%
160% - 200%	30%
200% - 250%	60%
250% and above	75%

New Formula, Study Areas with 200,000 Loops or Less

0% - 115%	0%
115% - 150%	65%
150% and above	75%

TABLE 3.2

DATE: 08/19/88  
 TIME: 10:19  
 PRO: 801  
 TYPE: ALL

NATIONAL EXCHANGE CARRIERS ASSOCIATION  
 UNIVERSAL SERVICE FUND  
 EXPENSE ADJUSTMENT  
 STATE SUMMARY

USF3010  
 PAGE 1

STATE	UNSEPARATED REVENUE REQUIREMENT	LOOPS	USF COST/LOOP	ANNUAL USF AT 100%	MONTHLY USF AT 1/8 TRANSITION	PERCENT OF TOTAL
ALABAMA	436,366,145.04	1,663,583	262.30	15,581,274	162,306	03.11
ALASKA	98,988,844.90	250,920	394.50	28,447,993	296,337	05.69
ARIZONA	446,716,176.17	1,692,428	263.94	13,480,272	140,420	02.69
ARKANSAS	296,942,540.61	942,016	315.22	17,435,839	181,624	03.49
CALIFORNIA	3,356,116,840.83	15,370,310	218.35	30,127,955	397,168	07.63
COLORADO	355,192,061.16	1,714,805	207.12	2,629,196	27,309	00.52
CONNECTICUT	362,082,954.94	1,749,489	206.96	0	0	00.00
DELAHARE	66,573,680.20	360,747	180.54	0	0	00.00
DISTRICT OF COLUMBIA	81,760,698.32	776,011	105.36	0	0	00.00
FLORIDA	1,951,032,232.40	6,651,854	293.30	27,393,443	285,348	05.48
GEORGIA	837,318,081.00	2,965,465	282.35	23,660,314	246,463	04.73
HAWAII	86,178,522.62	503,271	171.23	0	0	00.00
IDAHO	120,809,121.63	428,590	281.87	7,874,810	82,031	01.57
ILLINOIS	965,754,359.83	5,904,874	163.55	2,442,180	25,439	00.48
INDIANA	523,299,147.68	2,400,280	218.01	1,670,949	17,406	00.33
IOWA	263,182,377.17	1,290,550	203.93	1,206,989	12,576	00.24
KANSAS	307,439,967.68	1,191,394	258.05	13,563,321	141,286	02.71
KENTUCKY	406,870,155.92	1,460,288	278.62	7,961,803	82,935	01.59
LOUISIANA	574,467,832.34	1,837,702	312.60	18,620,051	193,958	03.72
MAINE	150,050,416.99	582,183	257.73	2,553,830	26,603	00.51
MARYLAND	470,874,600.51	2,525,912	186.41	0	0	00.00
MASSACHUSETTS	500,249,853.00	3,302,933	151.45	0	0	00.00
MICHIGAN	824,733,309.59	4,454,281	185.15	1,835,620	19,121	00.36
MINNESOTA	454,792,141.22	2,133,524	213.16	3,410,527	35,525	00.68
MISSISSIPPI	309,762,462.91	935,867	330.98	9,587,399	99,870	01.91
MISSOURI	569,472,470.92	2,413,768	235.92	33,184,973	345,679	06.64
MONTANA	117,952,479.89	363,951	324.08	8,124,537	84,631	01.62
NEBRASKA	151,562,850.10	783,036	193.55	4,353,747	45,353	00.87
NEVADA	128,496,724.84	576,852	222.75	5,567,292	57,993	01.11
NEW HAMPSHIRE	151,006,017.89	565,838	266.87	750,042	7,814	00.15
NEW JERSEY	777,592,744.05	4,537,814	171.35	0	0	00.00
NEW MEXICO	170,794,527.94	621,997	274.59	17,741,492	184,809	03.55
NEW YORK	2,342,472,473.67	9,956,220	235.27	9,972,522	103,880	01.99
NORTH CAROLINA	762,887,344.41	3,007,936	253.62	12,398,838	129,154	02.48
NORTH DAKOTA	89,407,767.97	336,164	265.96	2,392,837	24,926	00.47
OHIO	1,025,604,471.94	4,976,116	206.10	761,914	7,937	00.15
OKLAHOMA	418,979,550.63	1,476,752	283.71	23,645,529	246,311	04.73
OREGON	320,234,311.40	1,331,865	240.44	11,200,940	116,678	02.24
PENNSYLVANIA	1,058,972,181.82	5,999,716	176.50	1,785,373	18,598	00.35
PUERTO RICO	196,931,816.01	764,979	257.43	0	0	00.00
RHODE ISLAND	92,687,333.56	492,045	188.37	0	0	00.00
SOUTH CAROLINA	432,968,380.30	1,438,707	300.94	8,722,720	90,862	01.74
SOUTH DAKOTA	81,071,893.15	312,694	259.26	2,129,806	22,186	00.42
TENNESSEE	520,790,991.38	2,231,795	233.35	2,689,330	28,014	00.53
TEXAS	2,132,515,053.17	7,874,717	270.80	71,492,421	744,712	14.31
UTAH	133,251,795.40	686,194	194.18	1,795,268	18,701	00.35
VERMONT	83,174,391.97	280,290	296.74	3,108,802	32,384	00.62

TABLE 3.2

DATE: 08/19/88  
 TIME: 10:19  
 PRD: 881  
 TYPE:- ALL

NATIONAL EXCHANGE CARRIERS ASSOCIATION  
 UNIVERSAL SERVICE FUND  
 EXPENSE ADJUSTMENT  
 STATE SUMMARY

USF3010  
 PAGE 2

STATE	UNSEPARATED REVENUE REQUIREMENT	LOOPS	USF COST/LOOP	ANNUAL USF AT 100%	MONTHLY USF AT 1/8 TRANSITION	PERCENT OF TOTAL
VIRGIN ISLANDS	18,987,892.28	41,030	462.69	5,015,674	60,580	01.16
VIRGINIA	708,905,924.25	2,966,686	238.95	3,620,710	37,715	00.72
WASHINGTON	503,758,931.95	2,353,104	214.00	10,943,292	113,994	02.19
WEST VIRGINIA	266,110,356.28	753,516	353.15	12,866,259	134,024	02.57
WISCONSIN	492,402,014.73	2,306,640	213.47	2,244,654	23,383	00.44
WYOMING	87,868,141.43	225,386	389.85	4,791,503	49,911	00.95
INDUSTRY TOTAL	28,084,415,358.24	122,773,173	228.75	499,584,240	5,204,034	100.00

TOTAL NUMBER OF STUDY AREA CODES: 1467



TABLE 3.3

USF LOOP COST ANALYSIS\*  
1987 VS. 1988

	<u>TAX/INVESTMENT COMPONENTS</u>			<u>NON-TAX/INVESTMENT COMPONENTS</u>			<u>TOTAL LOOP COST</u>		
	<u>1987</u>	<u>1988</u>	<u>% CHANGE</u>	<u>1987</u>	<u>1988</u>	<u>% CHANGE</u>	<u>1987</u>	<u>1988</u>	<u>% CHANGE</u>
NATIONWIDE AVERAGE LOOP COST	\$99.20	\$91.93	(7.33)%	\$132.57	\$136.79	3.18%	231.77	228.72	(1.32)%
SUBSET (ALL COST COMPANIES)									
1	93.69	86.59	(7.58)	126.47	129.87	2.69	220.16	216.46	(1.68)
2	118.04	110.27	(6.58)	152.97	160.05	4.63	271.01	270.32	(.25)
3	138.47	132.93	(4.00)	179.50	196.22	9.31	317.97	329.15	3.52

\* THESE DATA REPRESENT COST COMPANIES ONLY. DIFFERENCES (I.E. 1988 LOOP COST OF \$228.72 VERSUS \$228.75) ARE THE RESULT OF INCLUSION OF AVERAGE SCHEDULE COMPANIES INTO THE FINAL USF LOOP COST CALCULATION

TABLE 3.4  
 USF EXPENSE ADJUSTMENT ANALYSIS  
 1987 VS. 1988

	POST TRANSITION USF REQUIREMENT <u>1987</u>	POST TRANSITION USF REQUIREMENT <u>1988</u>	PERCENT CHANGE <u></u>
TOTAL INDUSTRY	\$476,747,692	\$499,778,692	4.8
SUBSET			
1	69,106,449	60,805,799	(12.0)
2	283,003,015	312,982,934	10.6
3	124,638,228	125,990,229	1.1
▷200K LINES % OF FUND	95,802,687 (20.1%)	89,947,444 (18.0%)	(6.1)
◁200K LINES % OF FUND	380,945,005 (79.9%)	409,831,518 (82.0%)	7.6

#### 4. Network Usage and Growth

The amount of traffic carried on the public switched network is a vital concern to the Joint Board and the Commission, since the interstate toll rate decreases that have accompanied the subscriber line charge increase were designed to make usage of the network more efficient and to stimulate traffic growth. To monitor use of this network, the National Exchange Carrier Association (NECA) provides monthly reports to the Commission on the volumes of switched interstate usage. To supplement this information, the Joint Board recommended that the larger local telephone companies also provide, on an annual basis, their total switched minutes of use, their interstate switched minutes of use, and their Subscriber Plant Factor (SPF), Subscriber Line Usage (SLU), and Dial Equipment Minutes (DEM) factors. The Joint Board recognized that much of this information was not previously collected by any single entity and that reports could be received and consolidated by some other entity (such as NECA).

This report includes data on switched telephone traffic as reflected in the NECA calculations of carrier common line (CCL) minutes of use from January 1986 through December 1988. Our December 1988 report included this cumulative data through August 1988. Table 4.1 shows the latest available figures on minutes of use for interstate traffic as reported by NECA, derived from the Common Line Pool earned revenues. Tables 4.2 and 4.3 show the figures for large (Tier 1) and small (non-Tier 1) companies, respectively. Since June 1986, these figures do not include the minutes from the closed end of WATS.

TABLE 4.1

## NATIONAL EXCHANGE CARRIER ASSOCIATION, INC.

SUPPLEMENTAL REPORT OF COMMON LINE POOL RESULTS  
 REPORTED AS OF FEBRUARY, 1989

PAGE 1 OF 1

## MINUTES OF USE DERIVED FROM N E C A CCL EARNED REVENUES

## TOTAL COMMON LINE POOL

(MOU REPORTED IN MILLIONS)

MONTH/YR	PREMIUM CCL MOUS			NONPREMIUM CCL MOUS		
	ORIGINATING	TERMINATING	TOTAL	ORIGINATING	TERMINATING	TOTAL
JAN 86	N/A	N/A	15,291.015	N/A	N/A	1,522.729
FEB 86	N/A	N/A	14,691.467	N/A	N/A	1,397.703
MAR 86	N/A	N/A	15,861.035	N/A	N/A	1,348.922
APR 86	N/A	N/A	15,905.442	N/A	N/A	1,300.394
MAY 86	N/A	N/A	16,039.848	N/A	N/A	1,208.236
JUN 86	5,706.256	8,104.051	13,810.308	485.227	817.323	1,302.550
JUL 86	6,309.790	8,133.097	14,442.888	513.799	777.371	1,291.171
AUG 86	6,140.566	8,193.667	14,334.234	437.119	714.419	1,151.539
SEP 86	6,263.505	8,161.822	14,425.328	367.912	701.346	1,069.260
OCT 86	6,630.015	8,541.799	15,171.815	317.616	684.723	1,002.341
NOV 86	6,370.152	8,170.618	14,540.771	337.348	700.566	1,037.915
DEC 86	6,990.485	8,841.610	15,832.097	294.923	668.989	963.913
JAN 87	7,039.465	8,607.077	15,646.543	350.038	646.490	996.529
FEB 87	6,757.539	8,637.511	15,395.050	377.624	715.916	1,093.541
MAR 87	7,440.362	9,518.151	16,958.513	380.310	778.097	1,158.408
APR 87	7,166.084	9,222.868	16,388.952	367.257	721.592	1,088.850
MAY 87	7,080.463	8,981.788	16,062.252	325.900	691.203	1,017.104
JUN 87	7,483.998	9,390.198	16,874.198	290.649	719.433	1,010.083
JUL 87	8,236.317	9,484.987	17,721.305	352.888	695.232	1,048.121
AUG 87	7,548.840	9,547.361	17,096.202	258.929	703.707	962.637
SEP 87	7,491.054	9,726.212	17,217.267	252.682	686.486	939.169
OCT 87	7,748.115	10,211.924	17,960.040	237.964	653.783	891.747
NOV 87	7,660.052	9,701.031	17,361.084	219.608	616.658	836.267
DEC 87	8,549.409	10,544.052	19,093.461	262.507	599.660	862.168
JAN 88	7,998.639	10,133.515	18,132.156	185.671	579.431	765.103
FEB 88	8,094.111	10,242.769	18,336.881	196.106	599.864	795.972
MAR 88	8,631.830	11,187.791	19,819.622	188.854	598.218	787.073
APR 88	8,220.950	10,347.068	18,568.019	165.705	528.700	694.406
MAY 88	8,472.292	10,633.936	19,106.229	201.095	641.633	842.729
JUN 88	8,659.170	10,912.852	19,572.023	186.393	609.068	795.462
JUL 88	8,401.972	10,454.722	18,856.696	172.694	558.302	730.997
AUG 88	9,266.136	11,706.021	20,972.158	187.587	617.348	804.936
SEP 88	8,782.944	11,095.146	19,878.091	182.179	583.458	765.638
OCT 88	8,942.880	11,260.619	20,203.500	190.265	580.825	771.090
NOV 88	9,230.921	11,333.488	20,564.410	173.543	592.878	766.422
DEC 88	9,392.214	11,761.879	21,154.093	170.074	565.010	735.085

TABLE 4.2

## NATIONAL EXCHANGE CARRIER ASSOCIATION, INC.

SUPPLEMENTAL REPORT OF COMMON LINE POOL RESULTS  
 REPORTED AS OF FEBRUARY, 1989

PAGE 1 OF 1

## MINUTES OF USE DERIVED FROM N E C A CCL EARNED REVENUES

## TIER 1

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(MOU REPORTED IN MILLIONS)

MONTH/YR	PREMIUM CCL MOUS			NONPREMIUM CCL MOUS		
	ORIGINATING	TERMINATING	TOTAL	ORIGINATING	TERMINATING	TOTAL
JAN 86	N/A	N/A	14,389.693	N/A	N/A	1,500.785
FEB 86	N/A	N/A	13,824.567	N/A	N/A	1,370.954
MAR 86	N/A	N/A	14,935.645	N/A	N/A	1,322.737
APR 86	N/A	N/A	14,978.971	N/A	N/A	1,273.609
MAY 86	N/A	N/A	15,088.685	N/A	N/A	1,179.820
JUN 86	5,330.518	7,570.611	12,901.130	475.630	801.154	1,276.785
JUL 86	5,918.206	7,628.361	13,546.568	503.527	761.831	1,265.359
AUG 86	5,740.942	7,660.433	13,401.376	425.377	695.228	1,120.606
SEP 86	5,872.893	7,652.836	13,525.730	355.024	676.769	1,031.794
OCT 86	6,229.295	8,025.517	14,254.814	305.567	658.740	964.308
NOV 86	5,977.214	7,666.633	13,643.848	325.098	675.118	1,000.218
DEC 86	6,578.415	8,320.443	14,898.859	283.246	642.489	925.736
JAN 87	6,595.686	8,064.471	14,660.158	336.211	620.953	957.165
FEB 87	6,360.433	8,129.909	14,490.342	364.670	691.355	1,056.026
MAR 87	7,021.074	8,981.758	16,002.833	368.484	753.903	1,122.388
APR 87	6,748.702	8,685.682	15,434.385	355.001	697.511	1,052.513
MAY 87	6,651.589	8,437.717	15,089.307	313.073	663.997	977.070
JUN 87	7,045.388	8,839.861	15,885.250	280.063	693.236	973.299
JUL 87	7,736.714	8,909.616	16,646.330	340.392	670.613	1,011.006
AUG 87	7,080.577	8,955.113	16,035.691	248.546	675.491	924.038
SEP 87	7,049.439	9,152.781	16,202.221	242.308	658.302	900.611
OCT 87	7,301.604	9,623.410	16,925.015	228.240	627.077	855.319
NOV 87	7,200.034	9,118.431	16,318.466	208.597	585.741	794.338
DEC 87	8,075.206	9,959.169	18,034.375	249.840	570.721	820.561
JAN 88	7,507.327	9,511.082	17,018.409	176.126	549.637	725.763
FEB 88	7,635.582	9,662.517	17,298.100	185.123	566.269	751.393
MAR 88	8,172.430	10,592.351	18,764.782	176.942	560.487	737.430
APR 88	7,747.665	9,751.352	17,499.018	155.580	496.391	651.972
MAY 88	7,987.018	10,024.851	18,011.870	188.091	600.141	788.234
JUN 88	8,177.904	10,306.329	18,484.234	174.218	569.290	743.509
JUL 88	7,895.871	9,824.974	17,720.846	159.994	517.253	677.248
AUG 88	8,749.118	11,052.864	19,801.983	174.645	574.778	749.424
SEP 88	8,272.322	10,450.165	18,722.488	168.420	539.430	707.851
OCT 88	8,427.166	10,611.274	19,038.441	175.745	536.522	712.269
NOV 88	8,700.231	10,679.824	19,380.056	160.577	548.888	709.466
DEC 88	8,831.821	11,058.623	19,890.446	156.245	518.948	675.194

TABLE 4.3

## NATIONAL EXCHANGE CARRIER ASSOCIATION, INC.

SUPPLEMENTAL REPORT OF COMMON LINE POOL RESULTS  
 REPORTED AS OF FEBRUARY, 1989

PAGE 1 OF 1

## MINUTES OF USE DERIVED FROM N E C A CCL EARNED REVENUES

## NON-TIER 1

(MOU REPORTED IN MILLIONS)

MONTH/YR	PREMIUM CCL MOUS			NONPREMIUM CCL MOUS		
	ORIGINATING	TERMINATING	TOTAL	ORIGINATING	TERMINATING	TOTAL
JAN 86	N/A	N/A	901.322	N/A	N/A	21.944
FEB 86	N/A	N/A	866.900	N/A	N/A	26.749
MAR 86	N/A	N/A	925.390	N/A	N/A	26.186
APR 86	N/A	N/A	926.472	N/A	N/A	26.785
MAY 86	N/A	N/A	951.164	N/A	N/A	28.416
JUN 86	375.738	533.439	909.178	9.596	16.168	25.765
JUL 86	391.583	504.736	896.321	10.271	15.540	25.812
AUG 86	399.623	533.234	932.858	11.741	19.191	30.933
SEP 86	390.611	508.985	899.597	12.888	24.577	37.466
OCT 86	400.719	516.281	917.002	12.049	25.983	38.033
NOV 86	392.938	503.985	896.924	12.249	25.447	37.697
DEC 86	412.070	521.167	933.238	11.676	26.500	38.177
JAN 87	443.779	542.605	986.385	13.827	25.537	39.365
FEB 87	397.105	507.602	904.708	12.954	24.560	37.515
MAR 87	419.287	536.392	955.681	11.825	24.193	36.019
APR 87	417.381	537.185	954.567	12.256	24.081	36.337
MAY 87	428.873	544.070	972.945	12.827	27.205	40.034
JUN 87	438.609	550.337	988.947	10.586	26.196	36.783
JUL 87	499.603	575.371	1,074.975	12.496	24.618	37.115
AUG 87	468.262	592.248	1,060.511	10.383	28.215	38.599
SEP 87	441.615	573.430	1,015.046	10.373	28.183	38.558
OCT 87	446.510	588.514	1,035.025	9.723	26.705	36.428
NOV 87	460.017	582.600	1,042.617	11.011	30.917	41.928
DEC 87	474.203	584.882	1,059.086	12.667	28.939	41.607
JAN 88	491.312	622.433	1,113.746	9.544	29.794	39.339
FEB 88	458.529	580.251	1,038.781	10.982	33.595	44.578
MAR 88	459.399	595.440	1,054.840	11.911	37.731	49.643
APR 88	473.285	595.715	1,069.001	10.125	32.308	42.434
MAY 88	485.274	609.085	1,094.360	13.003	41.491	54.495
JUN 88	481.266	606.523	1,087.789	12.175	39.777	51.952
JUL 88	506.101	629.747	1,135.849	12.699	41.048	53.749
AUG 88	517.018	653.156	1,170.176	12.941	42.569	55.512
SEP 88	510.621	644.981	1,155.603	13.758	44.028	57.787
OCT 88	515.714	649.344	1,165.058	14.519	44.302	58.822
NOV 88	530.689	653.663	1,184.354	12.965	43.989	56.956
DEC 88	560.392	703.255	1,263.648	13.828	46.062	59.891

## 5. Rates and Revenues

This section contains a variety of information on telephone price indexes and rate levels. First, it describes and presents a series of price indexes maintained by the Bureau of Labor Statistics. Second, it discusses rate levels and changes in average rate levels. Third, it summarizes rate cases pending before state regulatory commissions. These cases are an important indicator of future local rate changes.

### 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 monthly price indexes represent prices sampled in the middle of the month.

#### A. Long-Term Trends in the Overall Price of Telephone Service:

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 5.1 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 public utilities. The price of telephone service has increased less rapidly than almost any other category when viewed over a long period of time. <sup>1</sup>

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1 For a description of the methodologies used by the BLS in calculating price indexes, see Primer and Sourcebook on Telephone Price Indexes and Rate Levels, published by the FCC in April 1987.

Table 5.1  
Annual Rate of Change For Various Price Indexes\*

	1935 to 1988	1978 to 1988
CPI all goods and services	4.2%	6.1%
CPI all services	4.6	7.5
CPI telephone services	2.2	4.3
CPI major categories		
- food & beverages	**	5.1
- housing	**	6.6
- apparel & upkeep	3.3	3.6
- transportation	3.9	5.8
- medical care	5.1	8.4
- entertainment	**	5.3
- other goods & services	**	7.9
CPI public transportation	5.0	9.1
CPI piped gas	3.8	7.1
CPI electricity	2.4	6.2
CPI sewer & water maintenance	**	7.2

\* Exponential rates calculated using "year average" index values for the first and last years of each comparison period.

\*\* Series not established until after 1935.



B. Recent Annual Changes in the Overall Price of Telephone Service:

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, with the rate of increase declining since then. The annual rate of change during each of the last ten years is shown in Table 5.2 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 5.2  
Annual Rate of Change in 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	4.0	4.4	-1.3
1988	4.5	4.4	1.3

C. Price Indexes for Local Service:

The Bureau of Labor Statistics publishes a number of price indexes related to local telephone service, two of which are important to the monitoring program. The CPI index of local telephone charges is based on a broadly defined "market basket" of local services that includes monthly service charges, message unit charges, equipment, installation, additional services (such as Touch-Tone and Call Waiting), taxes, subscriber line charges, and all other consumer expenditures associated with local 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 telephone service charges. The annual rates of change for these two indexes are presented in Table 5.3. In the CPI index, about half of the 1984 increase occurred during January, reflecting adjustments made at the time of AT&T's divestiture of its operating companies.

Table 5.3  
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	4.5

D. Price Indexes for Long Distance Service:

CPI data are available for intrastate toll and interstate toll services since December 1977. Table 5.4 presents the annual changes in these series for recent years. The high inflation of the late 1970's is reflected in the long distance price increases beginning in 1980. Interstate toll rates have steadily fallen since 1983, and intrastate toll rates have fallen in the last two years.

Table 5.4  
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	-9.5	0.3
1987	-12.4	-3.0
1988	-4.2	-4.2

E. Monthly Price Index Data:

Monthly data for the CPI telephone indexes are shown in Table 5.5.  
Monthly data for PPI indexes are shown in Table 5.6.

TABLE 5.5

1/19/89

U.S. Department of Labor  
Bureau of Labor Statistics  
Washington, D.C. 20212

## Consumer Price Index

## All Urban Consumers - (CPI-U)

## U.S. city average

## All items

1982-84=100

YEAR	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.	NOV.	DEC.	SEMIANNUAL		PERCENT CHANGE		
													1ST HALF	2ND HALF	AVG.	DEC-DEC	AVG-AVG
1970	37.8	38.0	38.2	38.5	38.6	38.8	39.0	39.0	39.2	39.4	39.6	39.8			38.8	5.6	5.7
1971	39.8	39.9	40.0	40.1	40.3	40.6	40.7	40.8	40.8	40.9	40.9	41.1			40.5	3.3	4.4
1972	41.1	41.3	41.4	41.5	41.6	41.7	41.9	42.0	42.1	42.3	42.4	42.5			41.8	3.4	3.2
1973	42.6	42.9	43.3	43.6	43.9	44.2	44.3	45.1	45.2	45.6	45.9	46.2			44.4	8.7	6.2
1974	46.6	47.2	47.8	48.0	48.6	49.0	49.4	50.0	50.6	51.1	51.5	51.9			49.3	12.3	11.0
1975	52.1	52.5	52.7	52.9	53.2	53.6	54.2	54.3	54.6	54.9	55.3	55.5			53.8	6.9	9.1
1976	55.6	55.8	55.9	56.1	56.5	56.8	57.1	57.4	57.6	57.9	58.0	58.2			56.9	4.9	5.8
1977	58.5	59.1	59.5	60.0	60.3	60.7	61.0	61.2	61.4	61.6	61.9	62.1			60.6	6.7	6.5
1978	62.5	62.9	63.4	63.9	64.5	65.2	65.7	66.0	66.5	67.1	67.4	67.7			65.2	9.0	7.6
1979	68.3	69.1	69.8	70.6	71.5	72.3	73.1	73.8	74.6	75.2	75.9	76.7			72.6	13.3	11.3
1980	77.8	78.9	80.1	81.0	81.8	82.7	82.7	83.3	84.0	84.8	85.5	86.3			82.4	12.5	13.5
1981	87.0	87.9	88.5	89.1	89.8	90.6	91.6	92.3	93.2	93.4	93.7	94.0			90.9	8.9	10.3
1982	94.3	94.6	94.5	94.9	95.8	97.0	97.5	97.7	97.9	98.2	98.0	97.6			96.5	3.8	6.2
1983	97.8	97.9	97.9	98.6	99.2	99.5	99.9	100.2	100.7	101.0	101.2	101.3			99.6	3.8	3.2
1984	101.9	102.4	102.6	103.1	103.4	103.7	104.1	104.5	105.0	105.3	105.3	105.3	102.9	104.9	103.9	3.9	4.3
1985	105.5	106.0	106.4	106.9	107.3	107.6	107.8	108.0	108.3	108.7	109.0	109.3	106.6	108.5	107.6	3.8	3.6
1986	109.6	109.3	108.8	108.6	108.9	109.5	109.5	109.7	110.2	110.3	110.4	110.5	109.1	110.1	109.6	1.1	1.9
1987	111.2	111.6	112.1	112.7	113.1	113.5	113.8	114.4	115.0	115.3	115.4	115.4	112.4	114.9	113.6	4.4	3.6
1988	115.7	116.0	116.5	117.1	117.5	118.0	118.5	119.0	119.8	120.2	120.3	120.5	116.8		118.3	4.4	4.1

01/21/89

TABLE 5.5

U.S. Department of Labor  
Bureau of Labor Statistics  
Washington, D.C. 20212

## Consumer Price Index

## All Urban Consumers - (CPI-U)

## U.S. city average

## Telephone services

1982-84=100

YEAR	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.	NOV.	DEC.	AVG.	PERCENT CHANGE	
														DEC-DEC	AVG-AVG
1966			53.8			57.4			57.4			57.4	56.5	-0.2	-2.1
1967			57.3			57.3			57.4			56.7	57.3	-1.2	1.4
1968			56.9			57.3			57.4			57.7	57.3	1.8	0.0
1969	57.7	57.8	57.8	57.9	57.9	58.1	58.1	58.1	58.1	58.1	58.1	58.2	58.0	0.9	1.2
1970	57.7	57.5	58.2	58.6	58.7	58.7	58.9	58.9	59.0	59.1	59.6	59.6	58.7	2.4	1.2
1971	60.0	60.6	60.6	60.8	60.8	60.9	62.4	62.5	62.5	62.5	62.5	62.7	61.6	5.2	4.9
1972	63.3	64.4	64.4	64.5	64.6	65.1	65.2	65.3	65.6	65.8	65.8	65.9	65.0	5.1	5.5
1973	65.6	65.9	66.0	66.1	66.2	66.4	66.4	67.0	67.1	67.3	67.3	69.0	66.7	4.7	2.6
1974	69.2	69.3	69.3	69.3	69.3	69.3	69.4	69.4	69.9	69.9	69.9	69.9	69.5	1.3	4.2
1975	69.7	70.1	70.7	70.9	71.2	71.7	71.9	72.2	72.4	72.6	73.6	73.8	71.7	5.6	3.2
1976	73.3	73.4	73.8	73.8	73.9	74.0	74.0	75.0	74.9	75.0	75.3	75.3	74.3	2.0	3.6
1977	74.7	74.7	74.8	75.0	75.0	75.1	75.1	75.2	75.4	75.5	75.6	75.7	75.2	0.5	1.2
1978	75.6	75.8	75.8	76.0	76.0	76.0	76.1	76.3	76.3	76.2	76.2	76.3	76.0	0.8	1.1
1979	75.9	75.7	75.6	75.6	75.7	75.6	75.6	75.9	75.8	75.1	76.3	76.9	75.8	0.8	-0.3
1980	76.4	76.0	76.3	76.4	76.7	77.6	78.0	78.2	78.4	78.7	79.4	80.3	77.7	4.4	2.5
1981	80.8	81.5	81.6	82.1	82.5	82.2	84.3	85.4	87.3	88.4	89.1	89.8	84.6	11.8	8.9
1982	90.0	90.4	90.8	92.1	92.5	93.5	93.8	94.0	94.8	95.2	95.4	96.3	93.2	7.2	10.2
1983	98.1	98.3	98.5	98.4	98.9	99.3	99.5	99.6	99.9	99.7	100.4	99.8	99.2	3.6	6.4
1984	105.0	107.0	106.4	106.7	106.9	107.1	107.7	107.9	108.7	108.8	109.4	109.0	107.5	9.2	8.4
1985	109.3	108.3	109.5	109.4	109.6	112.1	112.9	113.6	113.7	113.8	114.2	114.1	111.7	4.7	3.9
1986	114.6	114.8	115.3	116.5	116.5	118.7	118.7	118.8	118.3	118.9	117.6	117.2	117.2	2.7	4.9
1987	116.6	116.4	116.4	116.7	116.4	115.6	116.7	117.1	116.6	117.0	116.9	115.7	116.5	-1.3	-0.6
1988	115.8	116.6	116.2	116.6	116.6	115.8	115.8	114.8	115.6	115.8	115.7	117.2	116.0	1.3	-0.4

01/21/89

TABLE 5.5

U.S. Department of Labor  
Bureau of Labor Statistics  
Washington, D.C. 20212

Consumer Price Index

All Urban Consumers - (CPI-U)

U.S. city average

Telephone, local charges

1982-84=100

YEAR	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.	NOV.	DEC.	AVG.	PERCENT CHANGE		
														DEC-DEC	AVG-AVG	
1977																
1978	69.2	69.8	69.7	70.0	69.9	69.9	70.1	70.4	70.5	70.1	70.2	70.2	70.0	1.4		
1979	69.6	69.5	69.4	69.4	69.6	69.2	69.2	69.5	69.4	68.3	70.4	71.4	69.6	1.7	-0.6	
1980	71.0	71.0	71.4	71.6	72.1	72.8	72.9	72.9	73.3	73.7	74.9	76.4	72.8	7.0	4.6	
1981	77.2	78.5	78.6	79.4	79.9	79.5	80.7	81.1	83.3	84.0	85.4	86.0	81.1	12.6	11.4	
1982	85.8	86.7	86.9	88.5	89.2	90.7	91.2	91.6	92.9	93.5	93.6	95.3	90.5	10.8	11.6	
1983	97.2	96.8	97.0	96.8	97.5	98.1	98.1	98.3	98.6	98.3	99.5	98.3	97.9	3.1	8.2	
1984	106.7	110.0	109.1	109.1	109.5	110.7	112.3	112.9	114.3	114.5	115.4	115.2	111.6	17.2	14.0	
1985	115.6	113.8	116.0	115.8	116.0	121.3	123.0	123.9	124.2	124.3	125.2	125.5	120.4	8.9	7.9	
1986	126.2	126.4	127.2	129.5	129.5	135.6	137.0	137.2	136.5	137.5	135.1	134.4	132.7	7.1	10.2	
1987	137.6	137.5	137.4	138.2	138.1	137.5	141.0	141.9	140.9	141.3	141.4	138.9	139.3	3.3	5.0	
1988	139.9	141.6	141.1	142.0	142.0	140.8	141.4	139.4	140.6	141.1	140.9	145.2	141.3	4.5	1.4	

TABLE 5.5

01/21/89

U.S. Department of Labor  
Bureau of Labor Statistics  
Washington, D.C. 20212

## Consumer Price Index

## All Urban Consumers - (CPI-U)

## U.S. city average

## Telephone, interstate toll calls

1982-84=100

YEAR	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.	NOV.	DEC.	AVG.	PERCENT CHANGE	
														DEC-DEC	AVG-AVG
1977													83.4		
1978	82.9	82.7	82.8	82.6	82.6	82.7	82.7	82.7	82.7	82.7	82.8	82.8	82.7	-0.7	
1979	82.3	82.1	82.0	82.0	82.0	82.1	82.1	82.2	82.1	82.1	82.1	82.1	82.1	-0.8	-0.7
1980	81.5	81.2	81.2	81.2	81.2	83.0	84.8	85.0	85.2	85.2	84.8	84.9	83.3	3.4	1.5
1981	84.9	84.9	84.9	84.9	84.9	84.9	91.0	94.6	95.8	97.3	97.3	97.3	90.3	14.6	8.4
1982	97.4	97.3	98.2	100.0	100.1	99.8	99.9	99.9	99.9	99.9	99.9	99.9	99.4	2.7	10.1
1983	100.9	101.6	101.6	101.6	101.6	101.6	101.7	101.7	101.7	101.4	101.4	101.3	101.5	1.4	2.1
1984	101.3	102.1	102.1	102.0	102.3	98.9	96.9	96.8	96.8	97.0	96.9	96.9	99.2	-4.3	-2.3
1985	96.9	96.9	96.9	96.9	97.4	94.7	93.1	93.3	93.3	93.3	93.3	93.3	94.9	-3.7	-4.3
1986	93.3	93.3	93.3	93.3	93.3	88.0	84.7	84.4	84.4	84.4	84.4	84.5	88.4	-9.4	-6.8
1987	77.1	77.1	77.1	77.0	76.7	76.7	73.4	73.4	73.7	73.7	73.7	74.0	75.3	-12.4	-14.8
1988	72.2	72.2	72.0	72.1	72.1	72.1	72.1	72.1	73.1	73.1	73.1	70.9	72.3	-4.2	-4.0

01/21/89

TABLE 5.5

U.S. Department of Labor  
Bureau of Labor Statistics  
Washington, D.C. 20212

## Consumer Price Index

## All Urban Consumers - (CPI-U)

## U.S. city average

## Telephone, intrastate toll calls

1982-84=100

YEAR	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.	NOV.	DEC.	AVG.	PERCENT CHANGE	
														DEC-DEC	AVG-AVG
1977												85.4			
1978	85.5	84.9	85.1	85.6	85.5	85.5	85.5	85.6	85.7	85.6	85.6	86.5	85.5	1.3	
1979	86.1	86.0	86.0	86.0	86.0	86.4	86.5	86.6	86.6	86.8	86.6	86.6	86.4	0.1	1.1
1980	86.1	84.3	84.3	84.5	84.9	85.0	84.9	85.3	85.5	85.5	85.9	86.1	85.2	-0.6	-1.4
1981	86.2	86.4	86.4	86.6	86.8	86.6	86.6	86.9	88.7	90.1	89.9	91.4	87.8	6.2	3.1
1982	93.2	93.1	93.1	93.0	93.3	93.7	93.9	93.9	94.0	94.2	94.8	95.2	93.8	4.2	6.8
1983	97.3	98.9	99.3	99.5	100.0	100.2	100.9	101.0	101.2	101.6	102.3	102.2	100.4	7.4	7.0
1984	104.2	104.2	104.1	105.6	105.1	106.5	107.5	106.6	106.5	106.5	107.1	105.9	105.9	3.6	5.5
1985	105.9	105.8	106.1	106.0	105.8	106.2	107.5	107.8	107.8	108.0	107.9	106.5	106.8	0.6	0.8
1986	106.7	107.0	107.1	106.8	106.9	106.7	106.7	107.0	106.5	106.8	106.5	106.8	106.8	0.3	0.0
1987	107.0	106.4	106.4	106.3	105.2	102.7	104.0	103.8	103.5	104.1	103.6	103.6	104.7	-3.0	-2.0
1988	104.1	103.6	103.2	102.9	102.8	102.3	100.3	100.3	100.0	99.4	99.4	99.2	101.5	-4.2	-3.1



TABLE 5.6

Price indexes for selected telephone services, January 1972-December 1988  
(1972 = 100)

## 4811-1 Local service

	Avg.	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1972	100.0	98.1	99.1	99.1	99.7	100.6	100.8	100.8	99.6	100.5	100.5	100.5	100.5
1973	102.7	100.8	101.3	101.5	101.9	101.9	101.9	101.9	102.9	102.9	104.8	104.8	105.9
1974	108.4	107.4	107.7	107.7	107.7	107.7	107.7	107.7	109.2	109.2	109.6	109.6	109.6
1975	112.8	109.8	111.4	111.6	111.6	111.9	112.0	112.8	113.1	114.1	114.1	115.4	115.4
1976	118.4	117.0	117.7	117.7	117.9	118.3	118.9	118.8	118.9	118.9	118.9	119.1	119.1
1977	118.5	119.1	117.6	118.2	118.4	118.4	118.5	118.4	118.4	118.4	118.4	119.1	119.5
1978	121.9	120.2	120.9	120.9	120.9	120.9	120.9	120.9	122.0	123.7	123.7	123.7	124.3
1979	123.8	124.3	123.9	123.0	123.0	123.0	123.0	123.0	123.3	123.9	124.4	124.4	126.1
1980	127.5	125.3	125.4	125.4	126.0	126.2	126.2	126.2	126.2	127.2	130.4	132.5	133.0
1981	141.2	133.4	135.3	135.6	136.3	138.0	138.0	141.5	142.6	144.3	146.9	151.0	151.0
1982	154.6	149.5	149.5	149.5	151.2	152.3	153.3	153.3	153.7	158.8	160.4	160.9	162.3
1983	163.7	162.6	162.9	163.4	163.1	162.6	163.3	163.8	163.9	164.3	164.7	164.8	164.8
1984	179.5	171.2	171.2	171.2	171.9	172.1	177.9	182.2	185.7	187.6	187.7	187.5	187.6
1985	197.4	188.9	190.7	190.6	190.6	191.0	200.6	200.8	201.6	202.2	202.3	204.8	204.8
1986	212.7	206.5	206.7	206.7	206.7	206.7	216.6	216.6	216.9	217.5	217.5	216.8	216.8
1987	218.0	216.7	216.6	216.8	216.1	216.1	216.1	220.1	219.9	219.3	219.3	219.3	219.3
1988	219.2	218.7	218.2	218.4	218.4	218.4	218.4	217.9	218.1	218.2	219.4	219.7	226.6

## 4811-111 Local service, residential

	Avg.	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1972	100.0	97.7	98.9	98.9	99.5	100.7	100.9	100.9	99.7	100.7	100.7	100.7	100.7
1973	102.9	101.0	101.5	101.6	102.0	102.0	102.0	102.0	103.0	103.0	105.2	105.2	106.7
1974	108.8	108.1	108.3	108.3	108.3	108.3	108.3	108.3	109.4	109.3	109.7	109.7	109.7
1975	113.3	109.9	112.0	112.2	112.2	112.4	112.5	113.4	113.6	114.8	114.8	116.2	116.2
1976	118.9	118.0	118.0	118.0	118.2	118.6	119.2	119.2	119.3	119.3	119.3	119.6	119.6
1977	119.3	119.6	118.3	119.0	119.3	119.3	119.3	119.1	119.1	119.1	119.1	120.1	120.5
1978	122.1	120.2	121.0	121.0	121.0	121.0	121.0	121.0	122.2	124.2	124.2	124.2	124.2
1979	123.4	124.0	123.6	122.5	122.5	122.5	122.5	122.5	122.8	123.5	124.0	124.0	126.2
1980	128.0	125.3	125.3	125.4	125.9	126.3	126.3	126.3	126.3	127.4	131.6	134.5	135.1
1981	144.1	135.6	137.0	137.3	138.2	140.0	140.0	144.5	145.1	147.4	151.2	156.2	156.2
1982	160.6	154.9	154.9	154.9	156.7	157.3	158.4	158.4	159.0	165.8	167.8	168.4	170.2
1983	169.6	168.7	169.0	169.5	169.2	168.4	169.1	169.6	169.7	170.2	170.5	170.6	170.6
1984	182.4	177.8	177.8	177.7	177.7	178.1	178.6	181.4	186.0	188.7	188.7	188.3	188.4
1985	202.6	189.8	191.9	191.9	191.9	192.3	208.8	209.2	210.4	211.0	211.0	211.7	211.7
1986	223.6	213.4	213.6	213.6	213.6	213.6	230.3	230.3	230.8	231.3	231.3	230.5	230.5
1987	233.1	230.1	230.0	230.3	229.2	229.2	229.2	236.6	236.6	236.6	236.6	236.6	236.6
1988	236.6	236.1	235.5	235.7	235.7	235.7	235.7	235.1	235.4	235.3	235.6	235.7	247.2

TABLE 5.6

4811-112		Local service, business											
	Avg.	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1972	100.0	97.8	98.7	98.7	99.8	100.7	100.8	100.8	99.3	100.8	100.9	100.9	100.9
1973	104.0	101.2	102.0	102.6	103.4	103.4	103.4	103.4	104.2	104.3	106.5	106.5	107.3
1974	111.1	109.2	109.8	109.8	109.8	109.8	109.8	109.9	112.2	112.4	113.4	113.4	113.4
1975	117.1	113.6	115.2	115.3	115.3	115.6	115.9	117.3	117.8	119.1	119.1	120.4	120.5
1976	123.9	122.9	122.9	122.9	123.4	123.8	124.3	124.3	124.4	124.4	124.4	124.5	124.5
1977	122.4	124.5	121.0	121.9	122.1	122.1	122.2	122.1	122.1	122.1	122.1	122.9	123.4
1978	126.0	123.4	124.5	124.5	124.5	124.5	124.5	124.5	126.2	128.8	128.8	128.8	128.8
1979	128.5	128.8	128.2	127.5	127.5	127.5	127.5	127.5	127.8	128.8	129.5	129.5	131.6
1980	132.9	130.4	130.4	130.5	130.9	131.3	131.3	131.3	131.4	133.0	136.7	138.2	139.2
1981	148.8	139.6	141.4	141.6	142.8	144.1	144.1	148.6	152.2	153.8	155.4	161.0	161.0
1982	162.7	157.7	157.7	157.7	159.7	160.1	161.4	161.4	162.0	167.2	168.4	169.0	170.3
1983	172.7	170.8	171.2	172.2	172.0	171.5	172.3	173.1	173.2	173.6	174.0	174.1	174.1
1984	200.4	180.3	180.3	180.5	183.7	183.7	208.1	211.0	213.7	215.8	215.9	216.0	216.0
1985	222.7	218.2	220.7	220.7	220.7	220.9	222.2	222.2	222.9	223.9	224.6	228.0	228.0
1986	232.9	230.8	231.3	231.3	231.3	231.3	234.0	234.0	234.1	234.6	234.6	233.6	233.6
1987	232.9	234.0	234.0	234.1	233.5	233.5	233.5	232.7	232.0	231.9	231.8	231.8	231.8
1988	231.1	230.7	230.5	230.7	230.7	230.9	230.9	230.1	230.3	230.6	231.0	232.3	234.5

4811-113		Local service, optional additional usage											
	Avg.	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1972	100.0	99.5	100.4	100.4	100.4	100.4	100.9	100.9	99.4	99.4	99.4	99.4	99.4
1973	100.3	99.7	99.8	99.8	99.9	99.9	99.9	99.9	101.0	101.0	101.1	101.1	101.1
1974	104.6	103.3	103.6	103.6	103.6	103.6	103.6	103.6	106.0	106.0	106.0	106.0	106.0
1975	107.5	106.1	106.1	107.4	107.4	107.4	107.4	107.5	107.5	107.9	107.9	109.0	109.0
1976	110.3	109.0	109.4	109.4	109.4	110.2	110.8	110.8	110.8	110.8	110.8	110.8	110.9
1977	111.0	110.9	110.9	110.9	110.9	110.9	111.1	111.1	111.1	111.1	111.1	111.1	111.2
1978	117.6	117.6	117.6	117.6	117.6	117.6	117.6	117.6	117.6	117.7	117.7	117.7	117.7
1979	117.7	117.7	117.7	117.7	117.7	117.7	117.7	117.7	117.7	117.7	117.7	117.7	117.7
1980	118.2	117.7	117.7	117.7	119.4	118.3	118.3	118.3	118.3	118.3	118.3	118.3	118.3
1981	123.2	118.5	123.1	123.1	123.1	123.8	123.8	123.8	123.8	123.8	123.8	124.1	124.1
1982	124.6	124.1	124.1	124.1	124.1	124.2	124.2	124.2	124.2	124.2	125.6	125.9	125.9
1983	126.2	125.9	125.9	125.9	125.9	125.7	126.2	126.2	126.2	126.2	127.0	127.0	127.0
1984	123.4	124.3	124.3	124.3	124.3	124.3	124.3	122.5	122.5	122.5	122.5	122.5	122.5
1985	123.8	122.5	122.5	122.5	122.5	122.5	122.5	122.5	122.5	122.5	122.5	130.2	130.2
1986	130.7	130.3	130.3	130.3	130.3	130.3	130.3	130.3	130.3	131.5	131.5	131.5	131.5
1987	130.3	131.5	131.5	131.5	131.5	131.5	131.5	131.5	131.5	127.8	127.8	127.8	127.7
1988	127.7	127.7	127.7	127.7	127.7	127.7	127.7	127.7	127.7	127.7	127.7	127.7	127.7

TABLE 5.6

4811-114	Local service, coin												
	Avg.	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1972	100.0	99.8	100.0	100.0	100.0	100.0	100.0	100.0	99.9	100.1	100.1	100.1	100.1
1973	101.2	100.1	100.1	100.1	100.1	100.1	100.1	100.1	101.5	101.5	103.4	103.4	103.7
1974	103.8	103.8	103.8	103.8	103.8	103.8	103.8	103.8	103.9	103.9	103.9	103.9	103.9
1975	104.3	103.9	103.9	103.9	103.9	103.9	103.9	103.9	103.9	104.6	104.9	105.2	105.2
1976	113.9	105.7	114.6	114.6	114.6	114.6	114.6	114.6	114.7	114.7	114.7	114.7	114.7
1977	114.7	114.7	114.7	114.7	114.7	114.7	114.7	114.7	114.7	114.7	114.7	114.8	114.9
1978	116.2	115.0	115.0	115.4	115.4	115.4	115.4	115.4	115.5	115.6	115.6	115.6	124.7
1979	124.3	124.7	124.5	124.2	124.2	124.2	124.2	124.2	124.2	124.2	124.3	124.3	124.5
1980	124.6	124.5	124.5	124.5	124.5	124.5	124.5	124.5	124.5	124.8	124.8	124.8	125.1
1981	128.2	125.1	125.3	125.9	126.0	129.1	129.1	129.1	129.3	129.5	130.0	130.0	130.0
1982	139.4	130.0	130.0	130.0	132.8	143.2	143.6	143.6	143.1	144.0	144.0	144.0	144.0
1983	162.6	161.0	161.0	161.0	160.9	161.8	162.9	163.2	163.2	163.4	164.3	164.5	164.5
1984	205.8	184.2	184.2	184.4	184.6	184.6	189.0	222.3	227.2	227.2	227.2	227.5	227.5
1985	230.6	228.2	228.9	228.9	228.9	230.5	230.7	230.7	230.8	231.2	231.3	233.8	233.8
1986	234.6	234.3	234.3	234.3	234.3	234.3	234.6	234.6	234.7	234.9	234.9	234.9	234.9
1987	234.7	235.0	234.9	234.9	234.9	234.9	234.9	234.9	234.6	234.5	234.5	234.5	234.5
1988	236.4	234.2	233.1	233.1	233.1	233.1	233.1	233.1	233.1	233.1	245.7	246.1	246.3

4811-2	Toll service												
	Avg.	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1972	100.0	98.7	99.3	99.3	99.3	99.8	100.2	100.2	100.5	100.7	100.7	100.7	100.7
1973	102.9	100.7	102.4	102.5	102.5	102.5	102.5	102.5	103.4	103.4	103.8	103.8	104.3
1974	104.7	104.6	104.6	104.6	104.6	104.6	104.5	104.4	104.4	104.4	105.1	105.1	105.1
1975	111.6	105.4	105.4	111.6	111.6	111.6	111.6	112.3	113.1	113.1	113.5	114.7	114.8
1976	120.2	115.4	115.6	119.6	119.6	120.4	120.8	120.8	122.0	122.0	122.0	122.0	122.0
1977	123.5	123.3	123.1	123.1	123.2	123.2	123.3	123.1	123.1	124.2	124.3	124.3	124.3
1978	124.2	124.3	124.2	124.3	124.3	124.3	124.3	124.3	124.3	124.3	124.3	123.8	123.9
1979	123.2	123.3	123.2	123.2	123.3	123.2	123.1	123.1	123.1	123.1	123.4	123.3	123.3
1980	125.9	123.4	123.2	123.2	123.4	123.6	127.5	127.5	127.5	127.5	127.9	128.3	128.3
1981	134.8	129.1	129.0	129.0	129.0	128.7	128.7	139.2	139.2	141.0	141.3	141.3	142.1
1982	145.9	143.1	143.1	143.1	146.4	146.4	146.7	146.7	146.8	146.8	147.1	147.1	147.5
1983	149.3	148.8	148.8	149.0	148.9	149.0	149.3	149.4	149.4	149.4	149.8	149.8	149.8
1984	148.5	150.7	150.6	150.7	150.8	150.5	146.2	146.6	147.1	147.3	147.3	146.8	147.4
1985	147.2	147.6	147.7	147.7	148.1	149.9	146.3	146.3	146.6	146.5	146.5	146.7	146.2
1986	139.8	146.2	146.2	146.2	144.1	144.1	135.9	135.9	135.8	135.8	136.0	136.0	136.0
1987	126.8	128.8	128.5	128.5	128.4	128.1	128.0	125.4	125.4	124.9	124.9	125.2	125.2
1988	122.1	123.5	123.1	123.1	123.1	123.1	123.0	120.9	121.7	121.5	121.5	120.6	120.1

TABLE 5.6

4811-211 Toll service, intrastate MTS		Avg.	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1972		100.0	96.6	98.1	98.1	98.1	99.6	100.4	100.4	101.3	101.8	101.8	101.8	101.8
1973		103.3	101.9	102.1	102.1	102.1	102.1	102.1	102.1	104.2	104.2	105.4	105.4	106.3
1974		107.7	107.2	107.2	107.2	107.2	107.2	107.2	107.2	107.2	107.2	109.1	109.1	109.1
1975		113.8	109.8	109.8	111.6	111.6	111.6	111.6	113.5	115.4	115.4	116.4	119.3	119.3
1976		125.6	121.0	121.4	122.6	122.6	124.7	125.7	125.7	128.6	128.6	128.6	128.6	128.6
1977		131.9	132.2	131.5	131.5	131.8	131.8	132.0	132.0	132.0	132.0	132.0	132.0	132.0
1978		132.0	132.1	132.0	132.0	132.0	132.0	132.0	132.0	132.0	132.0	132.0	132.0	132.1
1979		131.6	132.1	131.9	131.9	131.9	131.9	131.5	131.5	131.5	131.5	131.5	131.2	131.2
1980		132.3	131.5	131.1	131.1	131.3	132.1	132.2	132.2	132.2	132.2	133.2	134.1	134.2
1981		137.3	136.0	136.0	136.0	136.0	135.1	135.1	135.1	135.1	139.5	140.4	140.4	142.4
1982		145.6	144.9	144.9	144.9	145.2	145.3	145.5	145.5	145.5	145.6	146.4	146.4	147.4
1983		152.1	151.1	151.1	151.7	151.5	151.5	152.2	152.2	152.3	152.3	153.2	153.2	153.2
1984		157.0	155.9	155.9	155.9	156.1	155.3	155.9	157.0	158.3	158.9	158.9	157.5	159.0
1985		162.0	159.8	159.8	159.8	161.0	162.6	162.8	162.8	163.4	163.2	163.2	163.7	162.4
1986		158.0	162.4	162.5	162.6	156.9	156.9	156.1	156.1	156.1	156.2	156.8	156.7	156.7
1987		153.5	156.1	155.4	155.4	155.2	154.4	154.2	152.4	152.4	151.3	151.3	152.0	152.0
1988		149.3	152.4	151.4	151.4	151.4	151.4	151.2	146.8	147.9	147.8	147.8	146.2	146.2

4811-212 Toll service, interstate MTS		Avg.	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1972		100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1973		102.9	100.0	103.2	103.2	103.2	103.2	103.2	103.1	103.1	103.1	103.1	103.1	103.1
1974		103.0	103.1	103.1	103.1	103.1	103.1	102.9	102.9	102.9	102.9	102.9	102.9	102.9
1975		111.7	102.9	102.9	113.5	113.5	113.5	113.5	113.5	113.5	113.5	113.5	113.5	113.5
1976		118.9	113.5	113.5	120.2	120.0	120.0	120.0	120.0	120.0	120.0	120.0	120.0	120.0
1977		120.6	120.0	120.0	120.0	120.0	120.0	120.0	119.7	119.7	121.9	121.9	121.9	121.9
1978		121.9	121.9	121.9	121.9	121.9	121.9	121.9	121.9	121.9	121.9	121.9	121.9	121.9
1979		120.8	120.9	120.8	120.8	120.8	120.8	120.8	120.8	120.8	120.8	120.8	120.8	120.8
1980		124.6	120.8	120.8	120.8	120.8	120.8	127.4	127.4	127.4	127.4	127.4	127.4	127.4
1981		137.5	127.4	127.4	127.4	127.4	127.4	127.4	147.7	147.7	147.7	147.7	147.7	147.7
1982		152.0	147.7	147.7	147.7	153.4	153.4	153.4	153.4	153.4	153.4	153.4	153.4	153.4
1983		153.4	153.4	153.4	153.4	153.4	153.4	153.4	153.4	153.4	153.4	153.4	153.4	153.4
1984		148.8	153.4	153.4	153.4	153.4	153.4	145.6	145.6	145.6	145.6	145.6	145.6	145.6
1985		143.3	145.6	145.6	145.6	145.6	147.9	141.3	141.3	141.3	141.3	141.3	141.3	141.3
1986		133.0	141.3	141.3	141.3	141.3	141.3	127.2	127.1	127.1	127.1	127.1	127.1	127.1
1987		111.9	113.8	113.8	113.8	113.8	113.8	113.8	110.0	110.0	110.0	110.0	110.0	110.0
1988		106.9	107.0	107.0	107.0	107.0	107.0	107.0	107.0	107.0	107.0	107.0	107.0	106.1

TABLE 5.6

## 4811-213 Toll service, international MTS

	Avg.	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1972	100.0	100.1	100.1	100.1	100.1	100.1	100.1	100.1	100.1	100.1	100.1	100.1	99.4
1973	99.4	99.4	99.4	99.4	99.4	99.4	99.4	99.4	99.4	99.4	99.4	99.4	99.4
1974	99.4	99.4	99.4	99.4	99.4	99.4	99.4	99.4	99.4	99.4	99.4	99.4	99.4
1975	98.7	99.4	99.4	99.4	99.4	98.3	98.3	98.3	98.3	98.3	98.3	98.3	98.3
1976	100.0	98.3	98.3	99.0	100.5	100.5	100.5	100.5	100.5	100.5	100.5	100.5	100.5
1977	99.6	100.5	100.5	100.5	100.5	100.5	100.5	98.7	98.7	98.7	98.7	98.7	98.7
1978	94.9	97.1	97.1	97.1	97.1	97.1	97.1	97.1	97.1	97.1	97.1	84.0	84.0
1979	85.5	84.0	84.0	84.0	84.0	83.3	83.3	83.3	82.7	82.7	91.4	91.4	91.4
1980	94.0	90.9	90.9	90.9	90.9	90.9	96.6	96.2	96.2	96.2	96.2	96.2	96.2
1981	89.4	96.2	95.2	95.2	95.2	95.2	95.2	83.5	83.5	83.5	83.5	83.5	83.5
1982	88.5	83.5	83.5	83.5	83.5	83.5	91.4	91.4	92.3	92.3	92.3	92.3	92.3
1983	92.4	92.3	92.3	92.3	92.3	92.3	92.3	92.3	92.3	92.3	92.3	92.7	92.7
1984	89.2	92.7	92.5	92.5	92.5	92.5	87.3	86.8	86.8	86.8	86.8	86.8	86.8
1985	86.6	86.8	86.8	86.8	86.8	86.8	86.5	86.5	86.5	86.5	86.5	86.5	86.5
1986	84.2	84.2	84.2	84.2	84.3	84.3	84.1	84.1	84.1	84.1	84.1	84.1	84.1
1987	84.0	84.1	84.1	84.1	84.1	84.1	84.1	84.0	84.0	84.0	84.0	83.8	83.8
1988	83.8	83.8	83.8	83.8	83.8	83.8	83.8	83.8	83.8	83.8	83.8	83.8	83.8

## 4811-214 Toll service, WATS

	Avg.	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1972	100.0	99.8	99.8	99.8	99.8	99.8	99.8	99.8	100.3	100.3	100.3	100.3	100.0
1973	101.8	100.1	100.1	101.5	101.5	101.5	101.5	101.5	102.6	102.6	102.6	102.8	103.5
1974	103.1	103.7	103.7	103.7	103.7	103.7	103.7	102.5	102.5	102.7	102.6	102.6	102.6
1975	105.3	102.7	102.7	104.5	105.2	105.2	105.2	105.2	105.5	106.4	106.4	106.8	108.0
1976	109.8	108.0	108.0	109.6	109.6	109.6	109.6	109.6	110.8	110.8	110.8	110.8	110.8
1977	111.6	111.1	111.3	111.3	111.4	111.4	111.4	111.4	111.6	111.6	112.3	112.3	112.4
1978	112.9	112.4	112.4	113.0	112.7	112.7	112.7	113.2	113.2	113.2	113.2	113.2	113.2
1979	113.8	113.2	113.2	113.2	113.6	113.6	113.6	113.6	114.3	114.3	114.3	114.3	114.4
1980	116.9	114.4	114.4	114.4	114.6	114.6	118.4	118.4	118.4	118.4	118.8	118.8	118.8
1981	124.9	120.2	120.2	120.2	120.2	120.5	120.5	128.9	128.9	129.8	129.8	129.8	129.9
1982	132.5	129.9	129.9	129.9	133.5	133.4	133.4	133.4	133.5	133.5	133.1	133.1	133.1
1983	132.9	131.8	131.8	131.8	131.8	132.4	132.7	133.7	133.7	133.7	133.7	133.7	133.7
1984	129.6	132.2	132.2	132.7	132.6	132.8	127.2	127.6	127.5	127.5	127.6	127.6	127.8
1985	125.3	127.6	127.6	127.8	127.8	128.2	123.5	123.5	123.5	123.7	123.6	123.5	123.3
1986	118.4	124.2	124.2	124.2	124.4	124.9	115.4	115.3	114.2	113.8	113.8	113.7	113.3
1987	110.5	111.0	110.9	110.9	110.9	110.9	110.3	110.3	110.1	110.1	110.1	110.1	110.1
1988	102.8	106.3	105.8	105.8	104.8	104.9	104.7	99.5	98.8	103.3	103.3	98.5	98.0

TABLE 5.6

## 4811-214-11 Toll service, interstate WATS

	Avg.	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1972	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1973	101.7	100.0	100.0	102.0	102.0	102.0	102.0	102.0	102.0	102.0	102.0	102.0	102.0
1974	101.1	102.0	102.0	102.0	102.0	102.0	102.0	100.3	100.3	100.3	100.3	100.3	100.3
1975	102.5	100.3	100.3	102.9	102.9	102.9	102.9	102.9	102.9	102.9	102.9	102.9	102.9
1976	104.7	102.9	102.9	105.1	105.1	105.1	105.1	105.1	105.1	105.1	105.1	105.1	105.1
1977	105.1	105.1	105.1	105.1	105.1	105.1	105.1	105.1	105.1	105.1	105.1	105.1	105.1
1978	105.1	105.1	105.1	105.1	105.1	105.1	105.1	105.1	105.1	105.1	105.1	105.1	105.1
1979	105.1	105.1	105.1	105.1	105.1	105.1	105.1	105.1	105.1	105.1	105.1	105.1	105.1
1980	108.2	105.1	105.1	105.1	105.1	105.1	110.5	110.5	110.5	110.5	110.5	110.5	110.5
1981	116.3	110.5	110.5	110.5	110.5	110.5	110.5	122.1	122.1	122.1	122.1	122.1	122.1
1982	125.8	122.1	122.1	122.1	127.1	127.1	127.1	127.1	127.1	127.1	127.1	127.1	127.1
1983	127.1	127.1	127.1	127.1	127.1	127.1	127.1	127.1	127.1	127.1	127.1	127.1	127.1
1984	122.7	127.1	127.1	127.1	127.1	127.1	119.6	119.6	119.6	119.6	119.6	119.6	119.6
1985	115.8	119.6	119.6	119.6	119.6	119.6	113.1	113.1	113.1	113.1	113.1	113.1	113.1
1986	105.9	113.1	113.1	113.1	113.1	113.9	100.8	100.6	100.6	100.6	100.6	100.6	100.6
1987	97.5	97.5	97.5	97.5	97.5	97.5	97.5	97.5	97.5	97.5	97.5	97.5	97.5
1988	90.6	93.1	93.1	93.1	93.1	93.1	93.1	85.9	85.9	93.1	93.1	85.9	85.3

## 4811-214-12 Toll service, intrastate WATS

	Avg.	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1972	100.0	99.1	99.3	99.3	99.3	99.3	99.3	99.3	101.3	101.3	101.3	101.3	100.1
1973	102.2	100.2	100.2	100.2	100.2	100.2	100.2	100.2	104.0	104.0	104.0	104.9	107.6
1974	108.4	108.1	108.1	108.1	108.1	108.1	108.1	108.1	108.1	109.1	108.8	108.8	108.8
1975	112.8	108.8	108.8	108.5	111.2	111.2	111.2	111.2	112.4	115.7	115.7	117.0	121.6
1976	123.4	121.6	121.6	121.6	121.6	121.6	121.6	121.6	126.0	126.0	126.0	126.0	126.0
1977	128.8	126.7	127.5	127.5	127.9	127.9	127.9	127.9	128.8	128.8	131.4	131.4	131.7
1978	133.6	131.7	131.5	133.8	132.7	132.7	132.7	134.4	134.7	134.7	134.7	134.7	134.7
1979	136.8	134.7	134.7	134.7	136.0	136.0	136.0	136.0	138.5	138.5	138.5	138.5	139.0
1980	139.6	139.0	138.8	138.8	139.7	139.7	139.3	139.3	139.3	139.3	140.7	140.7	140.7
1981	147.6	145.9	145.8	145.8	145.8	146.9	146.9	146.9	146.9	150.1	150.1	150.1	150.5
1982	149.9	150.5	150.5	150.5	150.5	149.9	149.9	149.9	150.4	150.4	148.9	148.9	148.9
1983	148.2	144.1	144.3	144.3	144.3	146.3	147.6	151.2	151.2	151.2	151.2	151.2	151.1
1984	147.8	145.6	145.9	147.3	147.1	147.8	147.4	148.8	148.5	148.5	148.7	148.7	149.6
1985	150.4	148.8	148.8	149.7	149.5	150.9	151.0	151.0	151.0	151.6	151.3	150.9	150.3
1986	151.7	153.6	153.6	153.6	154.2	154.1	154.3	154.3	150.2	148.9	148.7	148.6	146.9
1987	144.9	146.9	146.4	146.4	146.4	146.4	144.2	144.1	143.7	143.6	143.4	143.4	143.4
1988	135.0	141.1	139.5	139.5	135.9	136.2	135.3	135.6	132.9	130.1	130.1	131.9	131.8

TABLE 5.6

4811-311		Private lines, interstate												
	Avg.	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.	
1972	100.0	98.5	100.1	100.1	100.1	100.1	100.1	100.1	100.1	100.1	100.1	100.1	100.1	
1973	100.1	100.1	100.1	100.1	100.1	100.1	100.1	100.1	100.1	100.1	100.1	100.1	99.6	
1974	99.5	99.6	99.6	99.6	99.6	99.5	99.5	99.5	99.5	99.5	99.5	99.5	99.5	
1975	103.4	99.5	99.5	99.5	102.2	103.6	103.8	103.8	103.8	103.8	107.0	107.0	107.0	
1976	108.2	107.0	107.0	108.7	109.0	109.0	108.3	108.3	108.3	108.3	108.3	108.3	108.3	
1977	108.4	108.3	108.3	108.3	108.3	108.3	108.4	108.4	108.4	108.4	108.4	108.7	108.6	
1978	108.6	108.6	108.6	108.6	108.6	108.6	108.6	108.6	108.6	108.6	108.6	108.6	108.6	
1979	108.5	108.6	108.6	108.6	108.7	108.7	108.7	108.7	108.7	108.3	108.3	108.3	108.3	
1980	109.7	108.3	108.3	108.3	108.3	108.3	110.7	110.7	110.7	110.8	110.8	110.8	110.8	
1981	133.5	110.8	110.8	110.8	110.8	117.2	117.2	153.3	153.3	154.5	154.5	154.5	154.5	
1982	156.3	154.5	154.5	154.5	156.9	156.9	156.9	156.9	156.9	156.9	156.9	156.9	156.9	
1983	157.0	156.9	156.9	156.9	156.9	156.9	156.9	156.9	156.9	156.9	156.9	156.9	158.4	
1984	159.2	158.4	158.4	158.4	158.4	158.4	158.4	158.4	158.4	158.4	158.4	163.1	163.1	
1985	165.9	163.1	163.1	159.2	159.2	168.3	168.3	168.3	168.3	168.3	168.3	168.3	168.3	
1986	168.3	168.3	168.3	168.3	168.3	168.3	168.3	168.3	168.3	168.3	168.3	168.3	168.3	
1987	168.3	168.3	168.3	168.3	168.3	168.3	168.3	168.3	168.3	168.3	168.3	168.3	168.3	
1988	168.3	168.3	168.3	168.3	168.3	168.3	168.3	168.3	168.3	168.3	168.3	168.3	168.3	
4811-911		Directory advertising												
	Avg.	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.	
1973	98.4	99.9	99.4	98.4	98.8	98.2	98.3	98.2	98.3	98.0	98.0	97.8	97.8	
1974	104.3	97.5	97.8	99.1	101.0	103.0	105.0	105.4	105.9	107.3	109.1	109.9	110.6	
1975	117.2	112.1	113.3	115.3	115.7	115.8	116.6	117.0	118.3	119.3	120.5	121.1	121.6	
1976	125.1	122.6	122.3	122.9	123.5	125.1	125.6	125.7	125.9	126.4	126.8	127.1	127.4	
1977	131.5	128.6	128.9	129.8	130.5	130.0	131.1	131.4	131.6	132.9	134.0	134.3	134.7	
1978	139.3	134.9	135.6	136.1	137.0	139.2	140.7	141.1	140.7	140.2	141.3	142.2	143.2	
1979	148.0	144.0	143.9	145.4	145.9	146.4	147.4	148.2	149.9	152.0	151.2	151.4	150.7	
1980	155.4	151.6	152.8	153.0	153.3	153.8	154.6	155.3	156.2	157.0	158.5	159.2	159.5	
1981	159.4	159.9	158.2	159.1	160.0	160.7	160.6	160.1	157.0	157.3	159.2	159.5	160.7	
1982	172.0	164.7	166.4	166.4	168.5	170.4	170.2	171.2	173.4	175.6	177.5	179.3	180.2	
1983	193.5	182.6	184.5	185.2	188.1	190.6	192.4	194.0	196.3	198.8	201.0	203.7	204.9	
1984	216.9	207.9	208.9	209.9	212.4	214.8	219.0	220.0	222.0	219.5	221.5	222.8	224.4	
1985	240.5	228.2	230.9	233.2	236.1	238.7	243.3	243.8	244.0	244.9	246.5	248.0	248.2	
1986	258.5	249.6	251.6	253.0	254.6	257.8	260.2	260.7	261.7	262.3	262.9	263.8	264.3	
1987	270.7	265.8	266.9	267.7	269.6	268.1	270.7	270.1	270.4	271.6	274.5	276.4	276.2	
1988	285.5	280.1	282.4	283.4	284.1	284.0	284.5	283.7	285.8	288.3	289.4	290.0	290.0	

## INFORMATION ON RATE LEVELS:

This section describes the level of local and long distance rates and access charges in dollar terms.

### Local Rates

Local rates are regulated by state regulatory agencies and vary greatly from area to area. Characterization of any rate as "typical" is therefore difficult. In most states, the Bell Operating Companies and larger independent telephone companies 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 by the belief that the value of the service provided is higher for subscribers with more populous local calling areas. This also reflects the fact that the operating companies forego toll revenue when exchange calling areas increase in size. California differs from most states in that rates 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 5.7 presents average local residential rates. The price indexes published by the BLS indicate percentage changes in the price of the telephone services. The BLS does not publish the actual level of rates. The averages shown in Table 5.7 are based on a FCC survey using the same sampling areas and weights used by the Bureau of Labor Statistics (BLS) in constructing the Consumer Price Index. In October 1988, the national average for flat rate residential service was \$12.33 monthly. In October 1987 this average rate was \$12.44. Lower-priced service alternatives are frequently available, at an average monthly charge of \$5.62. <sup>2</sup>

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2 The methodology used in conducting the survey is contained in the Primer and Sourcebook on Telephone Price Indexes and Rate Levels. The most recent city specific data is contained in Telephone Rates Update, Mimeo No. 1509, released February 8, 1989.



Table 5.7  
Average Monthly Residential Telephone Rates\*  
(In October Of Each Year)

	1983	1984	1985	1986	1987	1988
Unlimited Local Calling	\$10.50	\$12.10	\$12.17	\$12.58	\$12.44	\$12.33
Subscriber Line Charges **	.00	.00	1.01	2.04	2.66	2.67
Taxes	1.08	1.25	1.36	1.51	1.56	1.59
<u>Total</u>	<u>11.58</u>	<u>13.35</u>	<u>14.54</u>	<u>16.13</u>	<u>16.66</u>	<u>16.59</u>
Lowest Generally						
Available Monthly Rate	\$ 5.37	\$ 5.62	\$ 5.75	\$ 5.96	\$ 5.81	\$ 5.62
Subscriber Line Charges **	.00	.00	1.01	2.04	2.66	2.67
Taxes	.56	.58	.70	.84	.94	.91
<u>Total</u>	<u>5.93</u>	<u>6.20</u>	<u>7.46</u>	<u>8.84</u>	<u>9.41</u>	<u>9.20</u>
Minimum Connection Charge	\$35.01	\$43.71	\$44.32	\$45.63	\$44.04	\$42.98
Taxes	1.75	2.19	2.22	2.28	2.20	2.11
<u>Total</u>	<u>36.76</u>	<u>45.90</u>	<u>46.54</u>	<u>47.91</u>	<u>46.24</u>	<u>45.09</u>

\* Monthly rates and connection charges do not include lifeline rates.  
\*\* Includes both interstate and intrastate charges.

The local rate averages shown in Table 5.7 are based on rates that are available to all customers. Many states have programs that subsidize monthly service charges or connection fees paid by needy households. These programs are further described in Section 2 above. Most of these programs are part of the FCC sponsored Lifeline and Link Up programs. The most recent local rate survey, reflecting data as of October 15, 1988, indicated that assistance for monthly service charges was offered in 55 of the 95 sample cities, representing 58% of urban consumers. Connection assistance was offered in 67 of the 95 sample cities representing 71% of urban consumers.

In the 55 cities where lifeline-type services were available, data were collected for the subsidized monthly rate for the service most similar to a private rotary line with unlimited local calling. In cities where the only subsidized service was a measured or message rate service, the charge includes 100 five minute day time calls. The average cost was \$10.32 for subsidized monthly service, including \$.27 for subscriber line charges and \$1.05 for tax. The average cost for comparable non-subsidized service was \$16.87 (including taxes and subscriber line charges) in those 55 cities. Thus, Lifeline and similar assistance programs provide an average benefit of \$6.55 per month.

Data also were collected for subsidized connection charges. The average subsidized connection cost was \$20.91, including \$.97 tax, in the 67 cities where subsidized connection was available. The average charge for non-subsidized connection was \$44.23 in these cities. Thus, Link Up and similar connection assistance programs reduce connection costs by an average of \$23.32.

#### Long Distance Rates

Table 5.8 compares the prices of interstate long distance calls in all mileage bands and rate periods based on AT&T's tariffed rates in effect during January 1984 and January 1989. These rates are the basic message toll service rates and do not reflect discounts available in special calling plans. They also do not reflect any taxes or surcharges imposed by some states. During this period, AT&T's per minute charges for directly dialed interstate calls have been reduced about 38% for the average customer. This presentation of interstate toll levels was requested by the D.C. Public Service Commission.

Table 5.8  
Changes in the Price of Directly Dialed Long Distance Calls  
(AT&T Interstate Rates)

Calling Distance (in miles)		Five minute calls			Ten minute calls		
		Jan. 1984	Jan. 1989	Percentage change	Jan. 1984	Jan. 1989	Percentage change
1 - 10	Day	\$0.96	\$0.77	-19.8%	\$1.76	\$1.47	-16.5%
	Evening	0.57	0.50	-12.3	1.05	0.95	- 9.5
	Night	0.38	0.38	0.0	0.70	0.73	4.3
11 - 22	Day	1.28	0.93	-27.3	2.38	1.78	-25.2
	Evening	0.76	0.60	-21.1	1.42	1.15	-19.0
	Night	0.51	0.46	- 9.8	0.95	0.89	- 6.3
23 - 55	Day	1.60	1.03	-35.6	3.00	1.98	-34.0
	Evening	0.96	0.66	-31.2	1.80	1.28	-28.9
	Night	0.64	0.51	-20.3	1.20	0.99	-17.5
56 - 124	Day	2.05	1.11	-45.9	3.90	2.16	-44.6
	Evening	1.22	0.72	-41.0	2.34	1.40	-40.2
	Night	0.82	0.55	-32.9	1.56	1.08	-30.8
125 - 292	Day	2.14	1.19	-44.4	4.09	2.34	-42.8
	Evening	1.28	0.77	-39.8	2.45	1.52	-38.0
	Night	0.85	0.59	-30.6	1.63	1.17	-28.2
293 - 430	Day	2.27	1.23	-45.8	4.37	2.43	-44.4
	Evening	1.36	0.79	-41.9	2.62	1.57	-40.1
	Night	0.90	0.61	-32.2	1.74	1.21	-30.5
431 - 925	Day	2.34	1.34	-42.7	4.49	2.64	-41.2
	Evening	1.40	0.87	-37.9	2.69	1.71	-36.4
	Night	0.93	0.67	-28.0	1.79	1.32	-26.3
926 - 1910	Day	2.40	1.34	-44.2	4.60	2.64	-42.6
	Evening	1.44	0.87	-39.6	2.75	1.71	-37.8
	Night	0.96	0.67	-30.2	1.84	1.32	-28.3
1911 - 3000	Day	2.70	1.40	-48.1	5.15	2.75	-46.6
	Evening	1.62	0.91	-43.8	3.09	1.78	-42.4
	Night	1.08	0.70	-35.2	2.06	1.37	-33.5
3001 - 4250	Day	2.80	1.63	-41.8	5.35	3.18	-40.6
	Evening	1.68	1.05	-37.5	3.21	2.06	-35.8
	Night	1.12	0.81	-27.7	2.14	1.59	-25.7

4251 - 5750	Day	2.91	1.73	-40.5	5.56	3.38	-39.2
	Evening	1.74	1.12	-35.6	3.33	2.19	-34.2
	Night	1.16	0.86	-25.9	2.22	1.69	-23.9

Subscriber Line and Access Charges

Monthly interstate subscriber line charges (or "end user" charges) were first imposed on multiline business customers in 1984 and were charged to residential customers beginning in 1985. Table 5.9 presents the level of these charges over time.

Table 5.9

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

		Residential and Single Line Business *	Multiline Business **	Centrex***
5/26/84	to 5/31/85	\$0.00	\$4.99	\$2.00
6/1/85	to 9/30/85	1.00	4.99	2.00
10/1/85	to 5/31/86	1.00	4.97	2.00
6/1/86	to 12/31/86	2.00	4.97	3.00
1/1/87	to 6/30/87	2.00	5.12	3.00
7/1/87	to 11/30/88	2.60	5.12	4.00
12/1/88	to Present	3.20	5.12	5.00

\* The monthly subscriber line charge for residential and single line business customers is capped at a maximum rate of \$3.20 monthly. Local companies are not permitted to charge the full amount unless justified by their underlying costs. As a result, some companies may not charge the full \$3.20

\*\* The monthly subscriber line charge for multiline business customers is capped at a maximum rate of \$6.00 monthly. Local companies are not permitted to charge the full amount unless justified by their underlying costs. As a result, some companies do not charge the full \$6.00. This column represents a national average calculated by NECA.

\*\*\* These rates represent the maximum charge applied to "embedded" centrex lines - that is, centrex lines in place or on order as of July 27, 1983. Customers with new centrex lines pay the multiline business subscriber line charge. Again, not all companies charge the maximum rate.

Access charges by local telephone companies to long distance carriers are an important component of the overall cost of providing long distance service. Changes in the average level of these charges are shown in Table 5.10.

Table 5.10

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

	Carrier Common Line Charge Per Originating Access Minute <u>1/</u>	Carrier Common Line Charge Per Terminating Access Minute <u>1/</u>	Total Traffic Sensitive Charge Per Access Minute <u>2/</u>	Total Charges Per Conversation Minute <u>3/</u>
5/26/84 to 12/31/84	5.24	5.24	3.1	17.3
1/1/85 to 5/31/85	5.43	5.43	3.1	17.7
6/1/85 to 9/30/85	4.71	4.71	3.1	16.2
10/1/85 to 5/31/86	4.33	4.33	3.1	15.4
6/1/86 to 12/31/86	3.04	4.33	3.1	14.0
1/1/87 to 6/30/87	1.55	4.33	3.1	12.4
7/1/87 to 12/31/87	0.69	4.33	3.1	11.5
1/1/88 to 11/30/88	0.00	4.14	3.1	10.6
12/1/88 to Present	0.00	3.39	3.1	9.8

1/ These are nationally uniform "premium" rates specified in tariffs filed by the National Exchange Carrier Association (NECA). Where equal access is not available, carriers other than AT&T pay discounted "non-premium" rates.

2/ Traffic sensitive switched access rates are not subject to mandatory pooling and are thus not nationally uniform. The rate shown in this column has been estimated by the FCC staff as a weighted average that includes both switching and transport charges.

3/ Long distance carriers are billed originating access charges for the time that the local network is tied up with calls that are not completed and for the time involved in setting up calls. As a result, the number of originating access minutes exceeds the number of conversation minutes. Using the ratio of access minutes to conversation minutes presented by AT&T for its domestic interstate service, the charges in this column have been calculated as follows: 107% of the originating carrier common line rate + 100% of the terminating carrier common line rate + 107% of the traffic sensitive rate (for originating access) + 100% of the traffic sensitive access rate (for terminating access).

### STATE TELEPHONE RATE CASES:

The actions of state regulatory commissions provide important indicators of future local and state toll rate levels. 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 indication of future rate changes.

At the time of divestiture, rate cases pending before state public utility commissions totaled nearly \$7 billion. During the first half of 1984, state commissions completed action on a number of extraordinarily large rate cases. After the first half of 1984, however, the level of activity in state cases diminished substantially. At the end of 1988, the amount of rate increases requested and pending before state commissions totaled only about \$220 million. During 1987 and 1988, the dollar amount of rate reductions and refunds ordered by state commissions exceeded the dollar amount of rate increases authorized. 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 increases during at least the next year. The data on state rate cases are shown in Table 5.11.

The information in Table 5.11 reflects data we have received from the Bell Operating Companies, Contel, GTE, and United Telephone on pending state rate cases. In addition to this, we also include information from smaller companies which is submitted by state utility commissions, information published by the National Regulatory Research Institute, and any additional information brought to our attention or appearing in a telecommunications publication.

TABLE 5.11

State Telephone Rate Cases  
(Millions of Dollars)

	<u>Revenue</u> <u>Increases</u> <u>Requested</u> <u>During Quarter</u>	<u>Revenue</u> <u>Changes</u> <u>Ordered</u> <u>During Quarter</u>	<u>Requests</u> <u>Pending</u> <u>at End</u> <u>of Quarter</u>
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	<u>1,059.4</u>	<u>361.2</u>	<u>3,672.3</u>
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	<u>369.9</u>	<u>307.3</u>	<u>1,437.3</u>
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	<u>8.7</u>	<u>.8</u>	<u>322.6</u>
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	<u>57.9</u>	<u>-279.9</u>	<u>124.7</u>
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	<u>36.4</u>	<u>-530.9</u>	<u>219.5</u>
Total	378.9	-1,366.4	

ADDITIONAL DATA RECEIVED

Twenty-five state utility commissions have filed data. We have not included the data in this report because the data are voluminous. However, the data are available for research and reference in the Public Reference Room maintained by the FCC's Industry Analysis Division. A summary of the rate information that has been filed is in Table 5.12.

Table 5.12  
Rate Information Provided by States

	No. of carriers for which R-1 and B-1 rates are provided*	No. of carriers for which intrastate toll rates are provided	Status for state rate cases **
Alaska	16	1	x
Arkansas	28	17	x
California	22	3	x
Colorado	31	3	x
District of Col.	1	N/A	x
Florida	14	1	x
Idaho	21	1	x
Indiana	42	4	x
Iowa	152	10	x
Maine	20	1	x
Massachusetts	1	1	
Michigan	45	3	
Minnesota	4	24	x
Missouri	46	0	x
Nebraska	42	1	
New Jersey	3	3	x
New York	41	7	x
North Carolina	19	16	x
North Dakota	10	1	
Ohio	44	33	x
Rhode Island	1	1	x
Texas	66	2	x
Virginia	20	9	x
Washington	3	0	x
Wisconsin	100	4	x

\* Most states provided tariff pages.

\*\* x indicates information has been filed.



## 6. Bypass

The Regional Bell Operating Companies (RBOCs) and GTE have issued their second bypass reports. A number of these carriers have changed their methodology for estimating bypass and these changes are described in the various bypass report summaries that follow. We have attached a copy of the generic methodology of bypass analysis used by the RBOCs and GTE, as submitted by USTA. (See Appendix.) The reporting carriers claim that bypass is still a threat and increasing. The total estimated revenue lost, based on annualized 1988 rates, is \$3.7 billion. The estimated loss of minutes of use (MOU) is 99.7 billion minutes. In the April reports, total estimated revenues lost due to bypass were \$3.8 billion and the total MOU were estimated to be 108 billion minutes. Because the April estimates were based on a different methodology than the October estimates, the decline in the estimated total bypass is the result of the changes in the estimation method, and not an actual decline in the quantity of bypass. Two of the changes in analysis that make the second bypass report different from the first bypass report include the use of access rates specific to each operating company instead of using regional switched access rates, and using rates in effect in June 1988, instead of the higher rates in effect in December 1987. A summary of the estimated bypass loss by company is in Table 6.1. Analysis of the methods used by the companies indicates a considerable improvement in the report quality. However, there is still room for further improvement. In particular, some commenters have suggested that information be obtained from interexchange carriers, alternate access providers, and major bypassing customers. We seek comment on the kinds of information that could be sought from these parties that would be useful and that we can reasonably expect to be provided voluntarily.

The carriers have also reported many new bypass examples. These are summarized in Table 6.2. We note that since these are just examples, the totals cannot be regarded as totals for all new bypass. The quantities shown in the table are an indication that bypass remains significant in certain locations. As several companies have noted, some types of bypass are difficult to detect until long after they occur. There may always be a reporting lag which must be accounted for in future reports. The number of reported bypass abandonments is small. These reports indicate that most of the examples of new bypass cited economic considerations as the primary reason for bypassing.

Table 6.1  
 Estimated Revenue Losses Due to Bypass - Annualized on 1988 Rates  
 (Millions of Dollars)

Company	Facility Switched Voice (a)	Facility Private Line (b)	Total Facility (c) (a+b)	Switched Service (d)	Total Bypass Facility and Service (e) (c+d)	Percent of Total Facility (f) (c/e)	Percent of Total Service (g) (d/e)	Minutes of Use Loss Estimates (Billions)
Ameritech	370.0	142.7	512.7	351.3	864.0	59%	41%	22.1
Bell Atlantic	283.4	145.1	428.5	403.7	832.2	51%	49%	23.2
BellSouth	28.6	14.5	43.1	213.5	256.6	17%	83%	5.8
GTE	NA	NA	112.6	178.2	290.8	39%	61%	4.8
NYNEX	104.5	35.2	139.7	233.7	373.4	37%	63%	10.9
Pacific Telesis	45.4	13.9	59.3	298.2	357.5	17%	83%	8.1
Southwestern Bell	67.8	137.1	204.9	135.6	340.5	60%	40%	12.8
US West	41.3	19.8	61.1	378.6	439.7	14%	86%	12.0
Totals	NA	NA	1561.9	2192.8	3754.7	42%	58%	99.7

Table 6.2

Totals for Examples of New Bypass Since Last Report  
Revenue Lost (Millions of Dollars)

Company	Facility	Service	Total
Ameritech	30.7	2.1	32.9
Bell Atlantic	33.8	2.8	36.5
BellSouth	0.7	1.3	2.0
GTE	5.7	9.4	15.1
NYNEX	0.4	0.6	1.0
Pacific Telesis	35.1	2.2	37.3
Southwestern Bell	0.3	2.2	2.5
US West	17.2	38.5	55.6
Total	123.9	59.0	182.9

Summary of Previous Reports

The first monitoring report, September 1987, emphasized the need for a uniform and periodic bypass reporting system. That monitoring report requested proposals for a bypass reporting system, and included substantial excerpts from the Common Carrier Bureau's Third Report on Bypass of the Public Switched Network (May 26, 1987).

The second monitoring report, December 1987, contained an analysis by the Joint Board staff of the comments and proposals received in response to the request made in the first report. As a result of the analysis of the proposals, the staff suggested three part bypass monitoring data forms, which were published in the December report. The periodic bypass reports would be supplied by the major carriers, the RBOCs and GTE. In order to establish a historical baseline for bypass data, the initial reports were to include all bypass experienced to date. Successive reports would only include new bypass related activity.

On December 24, 1987, the Chief of the Common Carrier Bureau sent the three-part bypass data forms to the seven RBOCs and GTE. The Bureau Chief requested that the first set of completed forms be filed by April 29, 1988, in time to be incorporated in the June 1988 monitoring report. Thereafter, reports would be filed on a semi-annual basis. The Joint Board staff also encouraged other local exchange companies to file bypass data and reports.

On April 29, 1988 the RBOCs and GTE submitted their first bypass reports based on the Joint Board forms. The June 1988 monitoring report summarized the data submitted to the Joint Board. The initial data

submissions were not as consistent as we might have hoped. Since this initial data collection can be viewed as a pilot effort, and since the data gathering and calculations are complex processes, we are not surprised that some inconsistencies arose.

The reported total estimated revenue loss amounted to \$3.8 billion. The total estimated minutes lost were 108 billion. However, given the problems surfacing in the first set of reports, these numbers must be viewed as subject to potentially large corrections.

To eliminate future inconsistencies the Joint Board staff requested that the following dates be used in compiling future reports. For bypass reports due in October, rates in effect on June 30 should be used to quantify "Revenue Lost." Estimates of minutes lost should be developed using data from the month of June (or the second quarter) as the basis for annualized estimates. For bypass reports due in April, rates in effect on December 31 should be used to quantify "Revenue Lost." Estimates of minutes lost should be developed using data from the month of December (or the fourth quarter) as the basis for annualized estimates.

The September 1988 monitoring report attempted to compile a time series of new bypass by year of first occurrence. However, several companies have brought to our attention that this attempt had serious flaws, and therefore it will not be repeated. The flaws included: (1) The data was drawn from the examples of bypass submitted by some of the companies. Not all of the companies that submitted bypass reports were included, and, furthermore, the examples were not an exhaustive compilation of bypass for the companies that were included. (2) The years used were vintage years of the first occurrence of bypass for each bypasser, but generally the amount of bypass has changed (usually grown) over time. The quantities measured were the amounts of current bypass, not the amount in the vintage year. Thus, what was actually shown on that chart was current bypass by vintage year of bypasser, not "new bypass in year of first occurrence" as the chart was titled.

The December 1988 monitoring report contained excerpts from the reports filed by carriers in October 1988: Ameritech, Bell Atlantic, BellSouth, GTE, NYNEX, Pacific Telesis, Southwestern Bell, U.S. West.

Excerpts from bypass comments filed between the September 1988 and December 1988 report were also included in the December 1988 monitoring report. Those filing comments included: The State of Colorado Public Utilities Commission, Metropolitan Fiber Systems of Chicago, Public Utility Commission of Texas, and Wilton Telephone.

#### Current Reports

We have received two new submissions on bypass. One report was submitted by Shooshan & Jackson Inc., Bypass and Growth of Demand for Switched

Access, dated February 17, 1989. MCI also submitted comments dated February 15, 1989, entitled MCI Comments on the Semi-Annual Bypass Reports submitted by the Regional Bell Operating Companies in Compliance with CC Docket 87-339. Excerpts from the above submissions follow.

Shooshan and Jackson <sup>1</sup>

"In this paper, we estimate the impact of service and facilities bypass. We do so by comparing the growth of switched interstate services (MTS and WATS) before divestiture with growth after divestiture. We control for other factors (e.g., population, income, and price) that affect demand for interstate services."

"We found that, before divestiture, switched interstate services were subject to a growth rate of 4% per year after taking into account the control factors. This is what we refer to as the 'external growth rate.' After divestiture, the external growth rate fell to 0% per year. This massive decline in external growth has been masked by a combination of the Federal Communications Commission's access charge plan (which substantially lowered interstate rates and thereby stimulated demand) and a prosperous economy (which has also stimulated usage). Our statistical analysis controls for this stimulation and unmask the decline in external growth. If the reduced rate of external growth persists, it will have a considerable detrimental effect on local exchange carriers in the long run."

"The only reasonable explanation for the large decline in external growth of switched interstate services is bypass. Some of the decline resulted from large customers' installing bypass facilities. The bulk, however, is much more subtle. Customers have been migrating from switched access to special access slightly more rapidly than they would have, absent divestiture. Individually, none of these subtle changes constitutes a 'smoking gun' of bypass. In aggregate, however, these subtle changes are having an enormous effect on the local exchange industry -- an effect that shows up clearly in statistical analysis. Our analysis demonstrates that bypass is not just a 'myth.' It is dramatically affecting the growth and future of the local exchange industry."

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1 This study was commissioned jointly by Bell Atlantic, BellSouth, and Southwestern Bell. Nevertheless, the views expressed are those of the authors and not necessarily those of Bell Atlantic, BellSouth, or Southwestern Bell.

MCI

"In their bypass reports dated April 29, 1988, and October 31, 1988, the RBOCs have made exaggerated claims concerning both the amount of minutes lost to service and facility bypass and the associated revenues. The Commission should request that the RBOCs submit realistic estimates, so that an informed opinion can be made as to its impact on the telecommunications industry."

"The Regional Bell Operating Companies (RBOCs) have been asserting for years that many of its large potential customers have avoided local access to their network through the use of technology designed to connect themselves with long distance carriers. The RBOCs maintain that most local facilities represent usage-insensitive fixed costs. Therefore, they must pass the burden of any lost revenues due to bypass along to the remaining subscribers in the form of a rate hike. These rate hikes could eventually threaten the existence of universal service. While MCI does not deny that bypass does exist, it does not believe the phenomenon is as widespread or pervasive as the RBOCs maintain...."

"MCI will demonstrate that the estimates of the RBOCs are exaggerated and are not consistent with the raw data supporting them."

"The amount of service and facility bypass as a percentage of interstate CCL MOU appears excessive and, therefore, questionable. On an individual state basis the RBOCs claim it ranges from a minimum of 29.88% in the state of Vermont to a maximum of 301.84% in the state of Ohio, with a national average of 125.52% of their interstate CCL demand. Given that service and facility bypass could involve interstate traffic, the RBOCs are suggesting that it is over one-half of their potential interstate demand."

"The comparison of bypass estimates to interstate traffic sensitive minutes of use is equally striking. On an individual state basis, the RBOCs claim it ranges from a minimum of 9.42% in the state of Mississippi to a maximum of 103.42% in the state of Indiana, with a national average of 48.45% of their interstate traffic. Once again given that interstate traffic could involve service and facility bypass, the RBOCs are suggesting that bypass comprises approximately one-third of the potential traffic sensitive demand."

"MCI has accumulated the estimated minutes lost to bypass contained in the Bypass Report filed by each of the RBOCs for each state."

"Although the data from the Bypass Report are for intrastate and interstate bypass and the data from the Annual Access Filing are for interstate circuits, it is still possible to draw conclusion from the information provided. For instance, in the state of Nevada the estimated number of circuits lost to service bypass is nearly seven times larger than the number of interstate special access voice grade circuits. It is unclear how Nevada Bell accounts for all the reported bypass. The same observation

can be made to a lesser extent in the states of California, New Jersey, Pennsylvania, Arizona, Colorado, and Idaho."

"MCI has also analyzed the RBOCs documented cases of estimated service bypass in relation to the actual bypass reported."

"There are some instances where the documented bypass exceeds the bypass reported in a particular state."

"MCI has stratified the documented cases by industry based upon the descriptions provided by the RBOCs in their April and October bypass reports.... The comparisons between the RBOCs uncovers dubious information. For instance, US West claims to have documented evidence of communications service bypass valued at \$67,013,061 or nearly 50% of the national amount. It is questionable that so much communications industry bypass would be concentrated in one region of the country. It is more reasonable that the communications industry bypass would also be prevalent in the Pacific Telesis, Bell Atlantic and NYNEX RBOCs."

"... MCI has classified as Pre-1984 any bypass for which the RBOCs did not specifically identify the date of origination. NYNEX, for example, documented all communications as having originated in 1984. Southwestern Bell, US West, and Ameritech have documented a decline in communications industry bypass post-1986. Pacific Telesis, on other hand, has documented a steady increase since 1985. Nationally, communications industry bypass peaked in 1987 and has since leveled off, according to the RBOCs documented evidence. One possible cause of this trend is the completion of construction of several national communications networks that previously used some local exchange carrier facilities to provide service. Another possible cause is the zero originating, interstate carrier common line charge."

"In addition, to the specific criticisms outlined above, MCI also notes that each RBOC has different criteria for determining the aggregate value of bypass. MCI believes that the joint board should establish one set of principles for all the RBOCs to follow. The joint board should establish a consistent minutes of use factor. The joint board should also require that the RBOCs explain adequately all assumptions used in determining their fill factors. At the present time, the RBOCs are not providing any of this relevant and necessary information. Their apparent current policy is to state their assumptions and leave the rationalization for those assumptions to the readers of the information. MCI would like to see the joint board require the RBOCs to fully explain all assumptions used in compiling the bypass reports in the future. Given these obvious discrepancies and inadequacies in the data associated with the bypass reports, it is difficult, if not impossible, to lend much credibility to the information provided by the RBOCs."

## 7. Pooling and Rate Deaveraging

As has been noted in previous monitoring reports, the transition to jurisdictionally-specific Carrier Common Line (CCL) charges will occur on April 1, 1989. The implementation of the final subscriber line charge increase at that time is expected to minimize pressures to deaverage interstate toll rates due to the access rate structure.

The following local exchange carriers have elected to withdraw from the NECA CCL pool on April 1, 1989: Ameritech, Bell Atlantic, BellSouth, Centel, Cincinnati Bell, Continental Telecom, GTE, NYNEX, Pacific Telesis, Rochester Telephone, Seneca-Gorham Telephone, Southern New England Telephone, Southwestern Bell, US West, United Telephone Systems, and Warwick Valley.

In the future, our monitoring effort should include information on the dimensions of long term support and transitional support payments among the LECs, and the common line revenue requirements for the LECs remaining in the NECA pool. To further this effort, we have asked NECA to file data regarding the revenues and expenses of pool members by study area on an annual basis, and nationwide totals on a monthly basis.

The latest nationwide pool earned revenue figures through December 1988, provided by NECA, follow in Tables 7.1 through 7.3. Table 7.1 shows the total CCL pool revenues. Table 7.2 shows the pool revenues for Tier I companies. Table 7.3 shows the revenues for non-Tier I companies. Table 7.4 summarizes the CCL pool revenues and expenses for the first eleven months of 1988. Table 7.5 has corresponding figures for NECA's voluntary traffic sensitive pool.



TABLE 7.1

## NATIONAL EXCHANGE CARRIER ASSOCIATION, INC.

SUPPLEMENTAL REPORT OF COMMON LINE POOL RESULTS  
 REPORTED AS OF FEBRUARY, 1989

PAGE 1 OF 1

## N E C A CCL EARNED REVENUES

## TOTAL COMMON LINE POOL

(REVENUE REPORTED IN MILLIONS)

MONTH/YR	PREMIUM CCL EARNED REVENUE			NONPREMIUM CCL EARNED REVENUE		
	ORIGINATING	TERMINATING	TOTAL	ORIGINATING	TERMINATING	TOTAL
JAN 86	N/A	N/A	662.101	N/A	N/A	29.693
FEB 86	N/A	N/A	636.141	N/A	N/A	27.255
MAR 86	N/A	N/A	686.783	N/A	N/A	26.304
APR 86	N/A	N/A	688.706	N/A	N/A	25.358
MAY 86	N/A	N/A	694.525	N/A	N/A	23.561
JUN 86	173.470	350.905	524.376	6.647	15.937	22.585
JUL 86	191.817	352.163	543.981	7.039	15.158	22.198
AUG 86	186.673	354.785	541.459	5.988	13.931	19.920
SEP 86	190.410	353.406	543.817	5.040	13.676	18.717
OCT 86	201.552	369.859	571.412	4.351	13.352	17.703
NOV 86	193.652	353.787	547.440	4.621	13.661	18.283
DEC 86	212.510	382.841	595.353	4.040	13.045	17.086
JAN 87	109.111	372.686	481.798	2.450	12.606	15.057
FEB 87	104.741	374.004	478.746	2.643	13.960	16.604
MAR 87	115.325	412.135	527.462	2.662	15.172	17.835
APR 87	111.074	399.350	510.424	2.570	14.071	16.642
MAY 87	109.747	388.911	498.659	2.281	13.478	15.760
JUN 87	116.001	406.595	522.598	2.034	14.028	16.063
JUL 87	56.830	410.699	467.531	1.093	13.557	14.651
AUG 87	52.086	413.400	465.488	0.802	13.722	14.525
SEP 87	51.688	421.144	472.833	0.783	13.386	14.170
OCT 87	53.461	442.176	495.638	0.737	12.748	13.486
NOV 87	52.854	420.054	472.909	0.680	12.024	12.706
DEC 87	58.990	456.557	515.548	0.813	11.693	12.507
JAN 88	N/A	419.527	419.528	N/A	10.777	10.777
FEB 88	N/A	424.050	424.051	N/A	11.157	11.157
MAR 88	N/A	463.174	463.175	N/A	11.126	11.127
APR 88	N/A	428.368	428.369	N/A	9.833	9.834
MAY 88	N/A	440.244	440.245	N/A	11.934	11.934
JUN 88	N/A	451.792	451.792	N/A	11.328	11.329
JUL 88	N/A	432.825	432.826	N/A	10.384	10.384
AUG 88	N/A	484.629	484.629	N/A	11.482	11.483
SEP 88	N/A	459.339	459.339	N/A	10.852	10.852
OCT 88	N/A	466.189	466.190	N/A	10.803	10.803
NOV 88	N/A	469.206	469.206	N/A	11.027	11.028
DEC 88	N/A	398.727	398.728	N/A	8.644	8.645

TABLE 7.2

## NATIONAL EXCHANGE CARRIER ASSOCIATION, INC.

SUPPLEMENTAL REPORT OF COMMON LINE POOL RESULTS  
 REPORTED AS OF FEBRUARY, 1989

PAGE 1 OF 1

## N E C A CCL EARNED REVENUES

## TIER 1

(REVENUE REPORTED IN MILLIONS)

MONTH/YR	PREMIUM CCL EARNED REVENUE			NONPREMIUM CCL EARNED REVENUE		
	ORIGINATING	TERMINATING	TOTAL	ORIGINATING	TERMINATING	TOTAL
JAN 86	N/A	N/A	623.074	N/A	N/A	29.265
FEB 86	N/A	N/A	598.604	N/A	N/A	26.734
MAR 86	N/A	N/A	646.713	N/A	N/A	25.793
APR 86	N/A	N/A	648.589	N/A	N/A	24.835
MAY 86	N/A	N/A	653.340	N/A	N/A	23.006
JUN 86	162.047	327.807	489.855	6.516	15.622	22.139
JUL 86	179.913	330.308	510.222	6.898	14.855	21.754
AUG 86	174.524	331.696	506.221	5.827	13.556	19.385
SEP 86	178.535	331.367	509.904	4.863	13.197	18.061
OCT 86	189.370	347.504	536.876	4.186	12.845	17.032
NOV 86	181.707	331.965	513.673	4.453	13.164	17.619
DEC 86	199.983	360.275	560.259	3.880	12.528	16.409
JAN 87	102.233	349.191	451.425	2.353	12.108	14.462
FEB 87	98.586	352.025	450.612	2.552	13.481	16.034
MAR 87	108.826	388.910	497.737	2.579	14.701	17.281
APR 87	104.604	376.090	480.695	2.485	13.601	16.086
MAY 87	103.099	365.353	468.453	2.191	12.947	15.139
JUN 87	109.203	382.765	491.970	1.960	13.518	15.479
JUL 87	53.383	385.786	439.170	1.055	13.076	14.132
AUG 87	48.855	387.756	436.612	0.770	13.172	13.943
SEP 87	48.641	396.315	444.957	0.751	12.836	13.588
OCT 87	50.381	416.693	467.075	0.707	12.228	12.936
NOV 87	49.680	394.828	444.508	0.646	11.421	12.069
DEC 87	55.718	431.232	486.951	0.774	11.129	11.904
JAN 88	N/A	393.758	393.759	N/A	10.223	10.223
FEB 88	N/A	400.028	400.028	N/A	10.532	10.533
MAR 88	N/A	438.523	438.523	N/A	10.425	10.425
APR 88	N/A	403.705	403.706	N/A	9.232	9.233
MAY 88	N/A	415.028	415.029	N/A	11.162	11.163
JUN 88	N/A	426.682	426.682	N/A	10.588	10.589
JUL 88	N/A	406.753	406.754	N/A	9.620	9.621
AUG 88	N/A	457.588	457.589	N/A	10.690	10.691
SEP 88	N/A	432.636	432.637	N/A	10.033	10.033
OCT 88	N/A	439.306	439.307	N/A	9.979	9.979
NOV 88	N/A	442.144	442.145	N/A	10.209	10.209
DEC 88	N/A	374.887	374.887	N/A	7.939	7.940

TABLE 7.3

## NATIONAL EXCHANGE CARRIER ASSOCIATION, INC.

SUPPLEMENTAL REPORT OF COMMON LINE POOL RESULTS  
 REPORTED AS OF FEBRUARY, 1989

PAGE 1 OF 1

## N E C A CCL EARNED REVENUES

## NON-TIER 1

(REVENUE REPORTED IN MILLIONS)

MONTH/YR	PREMIUM CCL EARNED REVENUE			NONPREMIUM CCL EARNED REVENUE		
	ORIGINATING	TERMINATING	TOTAL	ORIGINATING	TERMINATING	TOTAL
JAN 86	N/A	N/A	39.027	N/A	N/A	0.428
FEB 86	N/A	N/A	37.537	N/A	N/A	0.522
MAR 86	N/A	N/A	40.069	N/A	N/A	0.511
APR 86	N/A	N/A	40.116	N/A	N/A	0.522
MAY 86	N/A	N/A	41.185	N/A	N/A	0.554
JUN 86	11.422	23.097	34.520	0.131	0.315	0.447
JUL 86	11.904	21.855	33.759	0.140	0.303	0.444
AUG 86	12.148	23.089	35.238	0.160	0.374	0.535
SEP 86	11.874	22.039	33.914	0.176	0.479	0.656
OCT 86	12.181	22.355	34.537	0.165	0.506	0.672
NOV 86	11.945	21.822	33.768	0.167	0.496	0.664
DEC 86	12.526	22.566	35.093	0.159	0.516	0.677
JAN 87	6.878	23.494	30.373	0.096	0.497	0.595
FEB 87	6.155	21.979	28.134	0.090	0.478	0.570
MAR 87	6.498	23.225	29.725	0.082	0.471	0.555
APR 87	6.469	23.260	29.730	0.085	0.469	0.555
MAY 87	6.647	23.558	30.206	0.089	0.530	0.620
JUN 87	6.798	23.829	30.628	0.074	0.510	0.585
JUL 87	3.447	24.913	28.361	0.038	0.480	0.519
AUG 87	3.231	25.644	28.875	0.032	0.550	0.582
SEP 87	3.047	24.829	27.877	0.032	0.549	0.582
OCT 87	3.080	25.482	28.564	0.030	0.520	0.551
NOV 87	3.174	25.226	28.401	0.034	0.602	0.637
DEC 87	3.272	25.325	28.597	0.039	0.564	0.604
JAN 88	N/A	25.768	25.769	N/A	0.554	0.554
FEB 88	N/A	24.022	24.022	N/A	0.624	0.625
MAR 88	N/A	24.651	24.651	N/A	0.701	0.702
APR 88	N/A	24.662	24.663	N/A	0.600	0.601
MAY 88	N/A	25.216	25.216	N/A	0.771	0.772
JUN 88	N/A	25.110	25.110	N/A	0.739	0.740
JUL 88	N/A	26.071	26.072	N/A	0.763	0.764
AUG 88	N/A	27.040	27.041	N/A	0.791	0.792
SEP 88	N/A	26.702	26.702	N/A	0.818	0.819
OCT 88	N/A	26.882	26.883	N/A	0.824	0.824
NOV 88	N/A	27.061	27.062	N/A	0.818	0.818
DEC 88	N/A	23.840	23.840	N/A	0.704	0.705

TABLE 7.4

NATIONAL EXCHANGE CARRIER ASSOCIATION, INC.  
SUMMARY OF POOL RESULTS FOR THE MONTH ENDING DECEMBER 31, 1988  
REPORTED AS OF FEBRUARY 28, 1989

COMMON LINE (CL) (Note 1)	CURRENT MONTH	1988 POOL YEAR (Note 2)
Carrier Common Line (CCL) Earned Revenue		
Premium	\$398,792,757	\$5,338,229,722
Non-premium	\$8,669,604	\$129,200,112
Special Access Surcharge	\$4,740,230	\$65,996,266
CCL Net Realized Uncollectibles	\$487,678	\$6,399,092
CCL Net Earned Revenue	\$411,624,913	\$5,526,937,008
End User Earned Revenues	\$435,203,545	\$4,523,170,314
End User Net Realized Uncollectibles	\$2,041,659	\$24,301,189
End User Net Earned Revenues	\$433,161,886	\$4,498,869,125
Total Common Line Net Earned Revenues	\$844,786,799	\$10,025,866,133
CL Income from Interest Charged Construction	\$28,963	\$249,852
Total Common Line Revenues	\$844,815,762	\$10,026,055,985
NECA Administrative Cost	\$3,753,321	\$41,365,245
Average Schedule Company Settlements	\$24,352,080	\$293,783,050
Common Line Expenses and other Taxes	\$577,155,497	\$6,928,638,265
Common Line Adjusted Federal Income Tax	\$45,127,887	\$524,912,588
Universal Service Fund (effective 1/1/86)	\$15,775,156	\$179,417,524
Total Common Line Costs	\$666,163,941	\$7,968,116,672
Common Line Residue for Distribution (Note 3)	\$178,651,821	\$2,057,939,313
Common Line Net Investment	\$16,454,314,829	\$16,467,734,595
Annualized Common Line Residue Ratio (Note 4)	13.03%	12.50%

Note 1: All of the individual line items include some estimates and are subject to further adjustments under current NECA procedures.

Note 2: The 1988 pool year is for the period beginning January 1, 1988 through the CURRENT MONTH. The Net Investment is an average of the cumulative months reported.

Note 3: Residue for Distribution is Total Revenues less Total Expenses.

Note 4: Annualized Residue Ratio in the CURRENT MONTH is calculated by dividing the amount of Residue for Distribution by the amount of average Net Investment and multiplying by 12 months X 100. The annualized Pool Year Residue Ratios are similarly computed except that the sum of the calculation is then divided by the number of POOL YEAR reporting periods.

TABLE 7.5

NATIONAL EXCHANGE CARRIER ASSOCIATION, INC.  
SUMMARY OF POOL RESULTS FOR THE MONTH ENDING DECEMBER 31, 1988  
REPORTED AS OF FEBRUARY 28, 1989

TRAFFIC SENSITIVE (TS) (Note 1)	CURRENT MONTH	1988 POOL YEAR (Note 2)
TS Earned Revenue	\$45,150,070	\$524,115,148
TS Net Realized Uncollectibles	\$4,862	\$75,777
TS Net Earned Revenue	\$45,145,208	\$524,039,371
TS Income From Interest Charged Construction	\$16,431	\$143,533
Total Traffic Sensitive Revenues	\$45,161,639	\$524,182,904
Average Schedule Company Settlements	\$17,388,037	\$205,076,121
TS Expenses and other Taxes	\$17,759,352	\$212,273,224
TS Adjusted Federal Income Tax	\$2,017,810	\$20,803,847
Total Traffic Sensitive Expenses	\$37,165,199	\$438,153,192
TS Residue For Distribution (Note 3)	\$7,996,440	\$86,029,712
TS Net Investment	\$681,372,139	\$676,624,647
Annualized Traffic Sensitive Residue Ratio (Note 4)	14.08%	12.71%

Note 1: All of the individual line items include some estimates and are subject to further adjustments under current NECA procedures.

Note 2: The 1988 pool year is for the period beginning January 1, 1988 through the CURRENT MONTH. The Net Investment is an average of the cumulative months reported.

Note 3: Residue for Distribution is Total Revenues less Total Expenses.

Note 4: Annualized Residue Ratio in the CURRENT MONTH is calculated by dividing the amount of Residue for Distribution by the amount of average Net Investment and multiplying by 12 months X 100. The annualized Pool Year Residue Ratios are similarly computed except that the sum of the calculation is then divided by the number of POOL YEAR reporting periods.

## 8. Jurisdictional Shifts in Revenue Requirements

To address concerns that changes in separations procedures might dramatically shift costs between jurisdictions and thereby lead to unanticipated or significant rate increases, the monitoring program includes the examination of jurisdictional shifts in revenue requirements that occur starting in 1988. This section discusses the monitoring efforts that will be undertaken in this area as the information becomes available.

In 1987, the Commission adopted the recommendations of the Joint Board in Docket No. 86-297 which conformed separations procedures to the revised Uniform System of Accounts and simplified those procedures. The Commission also adopted the Joint Board's recommendation that review of the jurisdictional revenue requirement shifts resulting from these changes be included in the monitoring plan. Pursuant to the Commission's decision, no formal reports from carriers on jurisdictional shifts in revenue requirements are due until May 1989. At that time, shifts occurring during calendar year 1988 will be reported by carriers.

Specifically, the Commission requested information on jurisdictional shifts in total revenue requirements that exceed 5% or more of the company's annual total revenue requirements for the study area. The shifts in revenue requirements to be reported by carriers are those resulting from conformance of the separations rules to the new accounting rules and from simplification of the separations rules. Other separations procedures changes (including those relating to Central Office Equipment and other changes recommended by the Joint Board in Docket No. 80-286) will be excluded.

Subsequent to the Commission's adoption of the Joint Board's recommended monitoring plan, further separations issues developed. The Commission reconsidered its decision regarding the separations procedures for marketing expenses, and decided that, on an interim basis, billings for access charges should be included in the allocation factor for these expenses.<sup>1</sup> The Commission was concerned, as were the state members of the Joint Board, that the revenue requirement impact of the exclusion of access revenues from the allocation factor had not been fully tested in the conformance proceeding. The Commission referred this issue to the Joint Board in CC Docket No. 80-286 and requested that the Joint Board recommend

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1 MTS and WATS Market Structure, Amendment of Part 67 (New Part 36) of the Commission's Rules and Establishment of a Joint Board, CC Docket Nos. 78-72, 80-286, and 86-297, 2 FCC Rcd 5349 (1987) (Supplemental NPRM).

a permanent solution. The Joint Board adopted an Order Inviting Comments and Request for Data regarding this issue on May 4, 1988.<sup>2</sup> In addition, the Commission recently acted on petitions for reconsideration regarding other aspects of the revised separations procedures.<sup>3</sup>

#### Reconsideration Order

In the Monitoring Reconsideration Order,<sup>4</sup> the Commission acted on a Petition for Clarification and Reconsideration filed by Pacific Bell and Nevada Bell (Pacific Companies) on October 28, 1987, which raised the issue of the appropriate reporting procedures for jurisdictional revenue requirement shifts. Specifically, the Pacific Companies requested that the Commission clarify or modify its request to permit LECs to report simulated, rather than actual, impacts on revenue requirements of the new separations rules. The Pacific Companies proposed to use modeling techniques to simulate actual revenue requirement impacts.

Several parties filed responsive pleadings. USTA supported the Pacific Companies' petition. The Ameritech Operating Companies (Ameritech) and Southwestern Bell Telephone Company (Southwestern) contended that no reconsideration was necessary because the decisions of the two Joint Boards and the Commission do not require the use of dual accounting and separation procedures and do not prohibit the use of modeling techniques to calculate revenue requirement shifts. These parties agreed, however, with the Pacific Companies' concern that the Commission clarify this issue. In addition, the New York Department of Public Service (New York) requested that the Commission expand the monitoring program to include an assessment of the cumulative nationwide effect of all the revisions that have resulted from the recent separations decisions. New York also requested that the Commission assess the impact resulting from changes in the allocation of depreciation reserve deficiencies.

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2 Amendment of Part 36 of the Commission's Rules and Establishment of a Joint Board, CC Docket No. 80-286, 3 FCC Rcd 2774 (1988).

3 MTS and WATS Market Structure, Amendment of Part 67 (New Part 36) of the Commission's Rules and Establishment of a Federal-State Joint Board, CC Docket Nos. 78-72, 80-286 and 86-297, 3 FCC Rcd 5518 (1988).

4 Establishment of a Program to Monitor the Impact of Joint Board Decisions, CC Docket No. 87-339, FCC 88-244, released July 19, 1988.

In the Monitoring Reconsideration Order, at paras. 26-30, the Commission clarified its preferred method for reporting jurisdictional shifts in revenue requirements. The Commission endorsed the interpretation of Ameritech and Southwestern. The Commission stated that the Joint Board and the Commission did not intend to request that LECs report actual, rather than modeled, data in reporting jurisdictional shifts in revenue requirements but, rather, intended to allow carriers to use modeling as a technique to calculate the revenue requirement impact of the new Separations Manual. The Commission noted that to report actual data, carriers would be required to maintain dual accounting systems and perform complex and costly studies, which would contravene the goal of simplifying the separations process. The Commission accordingly clarified that in complying with its request for reports on jurisdictional shifts in revenue requirements, LECs may report data using a modeling approach rather than report actual data.

The Commission stated that although several modeling approaches had been proposed by the industry to determine jurisdictional shifts in revenue requirements, the use of one approach by the entire industry is necessary for a meaningful and accurate analysis of the results. The Commission therefore stated that it would establish a modeling technique that will be used by all carriers in reporting jurisdictional shifts in revenue requirements. The Commission solicited suggestions, to be filed in the open docket in this proceeding, of approaches to the modeling of revenue requirement impacts and requested that such proposals be as specific as possible, with appropriate illustrative examples. The Commission specifically requested that USTA, the Pacific Companies, Ameritech and Southwestern submit their suggested techniques. Comments suggesting modeling approaches were filed August 30, 1988.<sup>5</sup> Reply comments were filed September 20, 1988.<sup>6</sup> These comments will be summarized in the Order that selects the model to be used.

In addition, the Commission declined to expand the monitoring program as suggested by New York, stating that neither the Joint Board, nor the

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5 Comments were filed by American Telephone and Telegraph, Ameritech, BellSouth, MCI, Pacific Telesis, Southwestern Bell, and the United States Telephone Association.

6 Reply comments were filed by American Telephone and Telegraph, Ameritech, Bell Atlantic, BellSouth, District of Columbia Public Service Commission, GTE, MCI, NYNEX, Southwestern Bell, United States Telephone Association, and US West.



Commission, intended the monitoring program to be a comprehensive, all-encompassing review of the impact of every recent separations decision. The Commission stated that both Joint Board and the Commission instead intended the program to be a review of certain specific changes in the Commission's rules that the Joint Board estimated would have certain expected impacts. The Commission added that the request for reports of jurisdictional shifts in revenue requirements was intended to confirm that the impact of separations conformance to accounting changes and of separations simplification would be as the Joint Board and the Commission expected. The remainder of the program, the Commission continued, was intended to monitor the effect of certain changes in subscriber line charges, the federal lifeline assistance programs, the high cost assistance formula, and the common line pooling system. The Commission stated that expansion of the monitoring program as suggested by New York would not further the goals of this proceeding and would exceed the purposes of both Joint Boards and of the Commission in establishing the program. Moreover, the Commission noted that the impact of the separations revisions not included in the monitoring program, such as changes in Central Office Equipment procedures, had been fully considered and adequately addressed in Docket No. 80-286 and need not be revisited. In addition, the Commission declined to expand the monitoring program to include an evaluation of the impact of changes in depreciation reserve deficiencies because it would exceed the purposes of the monitoring program and because that issue had never been referred to any Joint Board and had never been considered by any Joint Board.

On January 30, 1989, in response to a request by USTA, the Common Carrier Bureau extended the date for filing the first report on jurisdictional revenue requirement shifts from March 1, 1989, to May 1, 1989, to ensure that the report will contain complete 1988 data and to avoid undue reporting burdens. Establishment of a Program to Monitor the Impact of Joint Board Decisions, CC Docket No. 87-339, DA 89-102, released February 8, 1989.

#### Comments on the District of Columbia and Jurisdictional Shifts

In the December 1988 report, we stated that the Public Service Commission of the District of Columbia (DC) implied in comments on the Class B Manual in Docket 86-297 that the provision of telecommunications services in its jurisdiction involves unique circumstances and therefore warrants special treatment. To the extent DC claims it has unique circumstances in this regard, we requested that it file comments in this docket quantifying the facts surrounding the provision of service in that jurisdiction. We also invited interested parties to respond.<sup>7</sup> Specifically,

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<sup>7</sup> We extended the date for filing comments in response to DC's request. DC filed comments on February 14, 1989, and USTA's response was filed March 1, 1989. See Establishment of a Program to Monitor the Impact

we asked DC to comment on the impact of the use of Centrex, the use of telecommunications services by the federal government, and the lack of state toll usage. We wanted to determine if the jurisdictional revenue requirement shifts that resulted from the implementation of the new Separations Manual adopted in Docket No. 86-297 may have had any adverse impacts on DC's jurisdiction.

In response to our request for comments, DC claims that: (1) unique circumstances exist in DC; (2) the impact of various FCC activities since divestiture was especially burdensome for ratepayers in DC; (3) much of the impact was caused by the unique circumstances; and (4) the unique circumstances require that the increased burdens be imposed directly on the local exchange ratepayer. DC argues that several unique circumstances in its jurisdiction exist which have increased the costs that have been allocated to its jurisdiction and decreased its ability to recover revenue from sources other than the local exchange subscribers. First, DC argues that over 41 percentage of the switched access lines in its jurisdiction are Centrex lines. In addition, DC argues that another 22 percent of the switched access are other business lines. DC contends that such a heavy concentration of business lines results in a higher percentage of directory expense and, therefore, a higher percent of state costs that are allocated on the basis of directory expense. DC also contends that the recovery of the increased state costs from Centrex users is highly unlikely because an increase in Centrex rates leads to an increased diversion to private branch exchanges (PBXs) and stranded Centrex investment. Second, DC argues that, because the Class B Separations Manual does not fully consider the wage costs associated with private lines when allocating general support facilities and general and administrative expenses, excessive costs will be allocated to its jurisdiction. DC states that a significant amount of the wage costs in Account 6530, Network Operations Expenses, are required for private lines. DC explains that there are 108,171 private lines in DC (12 percent of its total access lines), of which 47 percent are interstate lines. DC argues that the high percentage of private lines in its jurisdiction, coupled with an expected large amount of wage expense associated with private lines, will result in the allocation of a significant amount of costs to the state jurisdiction.

Third, DC argues that, because no state toll exists in DC and because the federal government and private industry represent such a large amount of its business, interstate toll usage is high when compared to other jurisdictions. DC argues that the changes in which the FCC eliminated or

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of Joint Board Decisions, CC Docket No. 87-339, DA 89-97, released January 31, 1989.

reduced the use of interstate business office contacts to allocate costs will have a more severe impact on DC than the other jurisdictions. DC also argues that before the most recent separations procedures were adopted, the Subscriber Plant Factor (SPF) was used in the assignment of nontraffic sensitive (NTS) costs to the state jurisdiction. DC states that, because SPF was determined by applying a factor to the relative subscriber line usage, the separations procedures took into account the high interstate toll usage in DC. DC states that, as a result of that method, 56 percent of its NTS costs were allocated to the state jurisdiction. Under the current procedures, DC argues, the assignment of NTS costs to the state jurisdiction is based on transitional SPF and will eventually increase to 75 percent, which is not related to usage in its jurisdiction. DC states that the Chesapeake and Potomac Telephone Company (C&P) estimates that DC will experience a \$27.5 million increase in state revenue requirements as a result of the change from the SPF factor to the 25 percent allocation factor. C&P estimates that \$1.4 million of this shift <sup>8</sup> will result from the changes in the B Manual's indirect allocation of dependent investment and expense in the Class B Manual. <sup>9</sup> DC contends that this increase is drastic and that the local exchange ratepayers will shoulder the burden of paying for increased state costs, rather than sharing this burden with state toll users as in other jurisdictions.

DC submits that C&P estimates that, as a result of the Class B Manual changes, DC has experienced a \$5.2 million increase in its state revenue requirements, compared to C&P's other jurisdictions that have cumulatively experienced a \$1.3 million decrease in state revenue requirements. <sup>10</sup> DC states that C&P also estimates DC's state revenue requirements will increase by \$7.4 million as a result of the reallocation of Central Office Equipment (COE) in CC Docket 80-286. <sup>11</sup> DC states that when the new allocation factor

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8 DC explains that \$530,000 of the impact of the SPF change will be in effect in 1988 and that, based on the phase-in schedule for the 25 percent allocation factor, the full \$1.4 million will be in effect annually as of 1993. See DC Comments at n. 5.

9 DC Comments, at 5.

10 Specifically, DC states that Maryland will experience an increase of \$1.3 million in state revenue requirements, Virginia will experience a \$2.5 million decrease, and West Virginia will experience a \$0.1 million decrease.

11 DC Comments, at 5.

for Category 3 COE is fully phased-in, approximately \$484,000 of this shift will result from changes in the allocation of dependent investment and expense. <sup>12</sup> DC estimates that as a result of all of the separations changes since the divestiture of the American Telephone and Telegraph Company (AT&T), its state revenue requirement has increased by \$21.4 million as of 1988, which is 9.0 percent of C&P's 1988 state revenues, while C&P's other jurisdictions have cumulatively experienced an increase of \$27.4 million, or 1.2 percent of their 1988 state revenues. <sup>13</sup> DC states that as of 1993, its state revenue requirement will increase by \$45.3 million, which is 19.5 percent of its 1988 state revenues, or \$57.00 per access line. DC also states that the increases related to the Class B Manual will be \$6.5 million by 1993 or \$8.00 per access line. <sup>14</sup> Furthermore, DC states that, if Centrex access lines are excluded, the increase in rates per access line as a result of the Class B Manual will be \$14.00 per line. <sup>15</sup> DC asserts that the other C&P jurisdictions would experience a total shift of \$45.9 million. DC further asserts that this shift represents 2 percent of those jurisdictions' 1988 state revenues, which equals \$8.00 per access line. DC notes that the increase will be 0.9 percent for Maryland, 3.5 percent for Virginia and 1.2 percent for West Virginia. <sup>16</sup> In addition, DC asserts that the \$1.3 million decrease related to the Class B Manual for the Maryland, Virginia, and West Virginia jurisdictions combined would be \$0.23 per access line.

DC provides specific examples of instances in which increases in its state revenue requirements caused by the Class B Manual are the direct result of the unique circumstances in its jurisdiction. DC cites the

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12 Id.

13 DC notes that the shift was 0.2 percent for Maryland, 2.0 percent for Virginia, and 5 percent for West Virginia. DC Comments at 5, n. 6.

14 DC Comments, at 6.

15 DC Comments, at 6

16 DC notes that the increase will be 0.9 percent for Maryland, 3.5 percent for Virginia and 1.2 percent for West Virginia. DC Comments, at n. 7.

allocation of General Support Facilities (GSF) and network support expenses on the basis of the Big Three Expenses, including Cable and Wire Facilities (C&WF) expense, which is influenced by the transitional SPF allocation factor. DC contends that under the former Manual, only a portion of vehicle investment was allocated based on SPF, but under the Class B Manual, the transitional SPF allocation factor has a much more significant effect on the allocation of GSF investment and network support expenses. DC therefore argues that the allocation of these expenses on the basis of C&WF expenses will significantly increase the allocation of those expenses to its jurisdiction. DC submits that C&P estimates that approximately \$631,000 of these expenses will shift to the state jurisdiction as a result of this change in allocation procedures. 17

DC also claims that the GSF increase is heavily influenced by the increase in COE expense. DC states that before the implementation of the Class B Manual, a portion of Category 3 COE was allocated based on the the SPF allocation factor, which was 56 percent for DC, resulting in a relatively low state allocation for DC. DC further states that the use of dial equipment minutes (DEM) under the current Manual to allocate Category 3 COE has increased the allocation to DC's jurisdiction to 84 percent. DC therefore maintains that the substantial use of COE expenses, which follow the allocation of COE investment, to allocate GSF under the Class B Manual will in turn substantially increase the allocation of GSF investment and network support expense to the state jurisdiction. DC submits that C&P estimates that the use of DEM will increase DC's state revenue requirement by \$484,000, after DEM is fully phased-in. 18

DC asserts that Information Origination/Termination (IOT) expense and investment are allocated on the basis of Category 1.3 C&WF (subscriber line), except for customer premise equipment (CPE) which has been detariffed. DC asserts that the transitional SPF allocation factor is applied to the IOT investment and expense category, and that the effect of transitional SPF on the allocation of that investment and expense and, ultimately, on the allocation of GSF and network support expense, results in an increase in its state revenue requirement of approximately \$723,000 after the 25 percent allocation factor is fully phased-in. 19

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17 DC Comments, at 8.

18 DC Comments, at 9.

19 DC Comments, at 9

DC asserts that another part of the allocation factor for GSF, i.e., services expenses, (a sub-account of customer operations expense which includes local business office expense and directory expense), has increased its state revenue requirement by \$1.7 million. <sup>20</sup> DC submits two reasons for this increase: the effect of the large amount of interstate usage in DC on business office expenses and the large amount of directory expenses assigned to DC. C&P estimates that DC will experience a \$6.5 million increase in its state revenue requirement as the result of the change in business office expenses. DC claims that AT&T's take-back of its toll billing inquiry service from C&P since 1986 was a primary reason for this increase, coupled with the 1986 changes in the allocation procedures for business office expense that did not mitigate the negative impacts for DC to the same extent those procedures mitigated the impact for other jurisdictions. <sup>21</sup> DC states that its heavy business orientation leads to unusually high directory expenses which are all assigned to the state jurisdiction and, therefore, the use of directory expenses as part of the basis of allocation for GSF and network support expense also contributed to the increase in its state revenue requirement.

DC contends that, under the Class B Manual, general and administrative expenses and executive and planning expenses are allocated on the basis of an expense factor, whereas, under the old manual, they were allocated on the basis of a wage factor. DC contends that the use of the expense factor instead of the wage factor gives less weight to network operations expenses, which has a high interstate allocation. DC further asserts that network operations expenses include a large amount of labor costs for private line services, which is not reflected in the expense factor because 26 percent of the expense base is network operations expense, whereas 32 percent of the wage base is network operations expense. <sup>22</sup> Therefore, DC contends that the use of the expense factor instead of the wage factor gives less weight to DC's private line costs than is appropriate. DC notes that use of the expense factor instead of the wage factor added \$1.6 million in general and administrative expense and \$331,000 in GSF and network support expenses to its state revenue requirement. <sup>23</sup>

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20 DC Comments, at 9

21 DC Comments, at 10.

22 DC Comments, at 11.

23 DC Comments, at 12.

DC submits that the substantial increases in state allocations outlined above must be sought solely from the local exchange ratepayers. DC concludes that if it allowed C&P to increase the rates for Centrex lines, customers will be diverted to PBXs and a large amount of C&WF investment will become stranded because it is not reusable. DC states that, to protect its ratepayers from stranded investment due to the Centrex subscriber line charge, it made a formal commitment from early 1985 through 1990 not to raise the rates for some Centrex customers beyond increases in the CPI.<sup>24</sup> DC explains that in light of the large number of Centrex lines in DC, if it allowed raises in the rates for Centrex lines, a large part of C&P's investment would be abandoned. DC further explains that the costs associated with that stranded investment would have to be passed on to the local exchange ratepayers because DC has no state toll and because CPE, enhanced services, and inside wiring have been deregulated.

DC also states that the local exchange ratepayers will be burdened with the changes resulting from the Class B Manual and the other separations changes, such as the change from SPF to the 25 percent allocation factor and the changes in COE procedures. DC also argues that local ratepayers will bear the burden of increased subscriber line charges. DC states that, although the Joint Board has considered the impact of these changes on a nationwide basis, the impact of the cumulative revisions on DC's local exchange ratepayers is disproportionately unfair. DC notes that subscribership in DC has decreased among the low income families since the divestiture despite the existence of the Lifeline and Link-Up programs. DC asserts that subscribership will be further reduced by increases in cost resulting from the separations changes.

DC recommends the amendment of the Class B Manual to prevent unfairly burdening its ratepayers with increased rates. DC submits that mitigation of the burden on DC local ratepayers would not have a significant impact on other regions. DC proposes that the FCC create a special task force to propose rules, applicable only to DC, designed to ameliorate the negative impacts DC has discussed. DC proposes that the task force be comprised of staff from DC and C&P. DC proposes, in the alternative, that the FCC establish a Joint Board to find a solution to the adverse impacts that DC claims it will encounter as a result of the adoption of the Class B Manual. DC proposes the following objectives for the task force or the Joint Board: (1) to propose to the Joint Board special rules to govern the separations process for DC; (2) to minimize any adverse consequences associated with those rules for other jurisdictions; and (3) to assure that such rules are consistent with the new Uniform System of Accounts. DC proposes the

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24 DC Comments, at 13, n. 11.

following changes for consideration by the Joint Board or task force : (1) the elimination of directory expense from the basis of allocation for GSF, network support expenses, and general and administrative expenses; and (2) the use of a wage base instead of an expense base to allocate GSF, network support expenses, and general and administrative expenses.

USTA, the only party that responded to DC's comments, reviews the process of decision-making by the Joint Board and states that the Class B Manual represents a balance of revenue impacts that does not penalize or favor specific jurisdictions. USTA further states that the Joint Board considered the impact on DC in the data compilations and analysis. Moreover, USTA asserts that, although DC may have been adversely affected by the separations procedures in the Class B Manual, DC's loop costs are still less than one-half the national average for loop costs. Specifically, USTA notes that the unseparated Universal Service Fund (USF) cost per loop for DC was \$112.57 in 1987, whereas the nationwide average was \$231.57. USTA also notes that the average loop cost for some other study areas is significantly higher, as high as \$2000 to \$3000. In addition, USTA states that DC does not have long, rural loops which have inherently high costs. USTA states that, although DC has no state toll, the contribution such associated revenues make would not be a factor, since DC's average loop costs are already low. Furthermore, USTA contends that DC's high business line use is favorable to DC's residents in view of the low number of residential access lines. Finally, USTA contends that DC's request to modify the Class B Manual is based on the possibility that DC may experience only a \$6.5 million shift in revenues to its jurisdiction. USTA states that it would be premature to change the Class B Manual or institute additional studies before the Joint Board staff has had an opportunity to analyze the monitoring reports which are due May 1, 1989.