



# NEWS

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See MCI v. FCC, 515 F 2d 385 (D.C. Circ 1974).

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FOR IMMEDIATE RELEASE  
July 2, 2004

NEWS MEDIA CONTACT:  
Linda L. Haller, (202) 418-1408  
Email: [Linda.Haller@fcc.gov](mailto:Linda.Haller@fcc.gov)

## **FCC RELEASES "TRENDS IN THE INTERNATIONAL TELECOMMUNICATIONS INDUSTRY" REPORT**

Washington, D.C. – Today, the Federal Communications Commission (FCC) released a report tracing trends in the U.S. international telecommunications industry. The International Bureau Strategic Analysis and Negotiations Division and the Wireline Competition Bureau Industry Analysis and Technology Division prepared the report, which is entitled *Trends in the International Telecommunications Industry*.

The report consists of 29 statistical tables relating to international traffic, circuits, pricing, and accounting rates. Key findings are:

- The average revenue billed to end users for a minute of international telephone service declined from \$1.34 in 1980 to \$1.00 in 1990, and then by 72% to \$0.28 by 2002. The number of U.S. billed minutes increased from 1.6 billion to 8.0 billion, and then to 36.0 billion during the same period.
- In 1975, international telephone service represented less than 5% of the revenues U.S. carriers received from providing long distance services. It grew to 19% of overall toll revenues over the next 20 years. In 2002, international service accounted for 17% of overall toll revenues.
- The decrease in settlement rates has more than offset the increase in U.S. billed minutes. The result was that net settlement payments from U.S. carriers to foreign carriers decreased 45% from \$5.4 billion in 1997 to almost \$3.0 billion in 2002.
- Dramatic increases in cable capacity and decreasing costs per circuit have led to declines in international service prices and increases in traffic. While most international carrier billed revenues come from international message telephone service, the vast majority of circuits now are used for other services.

The report is available for reference in the FCC's Reference Information Center, Courtyard Level, 445 12th Street, S.W., Washington, D.C. 20554. Copies may be purchased by calling the FCC's duplicating contractor, Best Copy and Printing, Inc., 445 12<sup>th</sup> Street, S.W., Room CY-B402, Washington, DC 20554, telephone 1-800-378-3160, facsimile 202-488-5563, or via e-mail [WWW.BCPIWEB.COM](http://WWW.BCPIWEB.COM). The report, including the spreadsheets containing the report's statistical tables and the figures, can be downloaded [file name: ITRND01.ZIP or ITRND01.PDF] from [www.fcc.gov/ib](http://www.fcc.gov/ib) and the **FCC-State Link** Internet site at [www.fcc.gov/wcb/iatd/intl.html](http://www.fcc.gov/wcb/iatd/intl.html).

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For additional information, contact Linda Blake, International Bureau Strategic Analysis and Negotiations Division, (202) 418-0945, or Jim Lande, Wireline Competition Bureau Industry Analysis and Technology Division, (202) 418-0948; TTY: (202) 418-0484.



## **INTERNATIONAL BUREAU**

### **REPORT**

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# **Trends in the International Telecommunications Industry**

**July 2004**

Linda Blake  
International Bureau

Jim Lande  
Wireline Competition Bureau

Federal Communications Commission  
Washington, DC 20554

# **Trends in the International Telecommunications Industry**

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## Trends in the International Telecommunications Industry

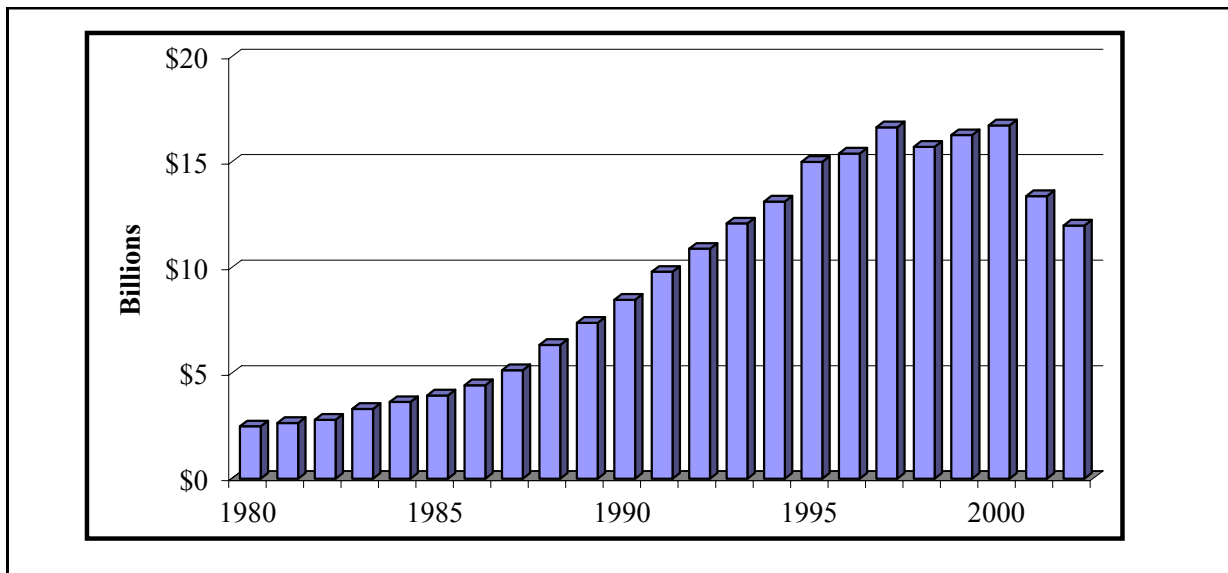
This report traces the development of the international telecommunications industry from 1950 to the present. <sup>1/</sup> <sub>2/</sub>

- Tables 1 through 5 present an overview of economic trends in the industry. Tables 6 through 14 provide detailed data for 40 countries.
- Tables 15 through 19 provide detailed traffic data by region of the world. Tables 20 through 25 provide price and accounting rate information for the same 40 countries.
- Tables 26 through 29 provide traffic information for selected carriers.

The following points highlight statistical trends gleaned from the tables and discusses trends in international telecommunications.

- End-user revenues for international services grew rapidly through 1997. Billings leveled off for the last part of the 1990s. International end-user revenues declined by about 16% per year from 2000 to 2002. See Figure 1 and Table 1.

Figure 1  
International Service End-User Revenues



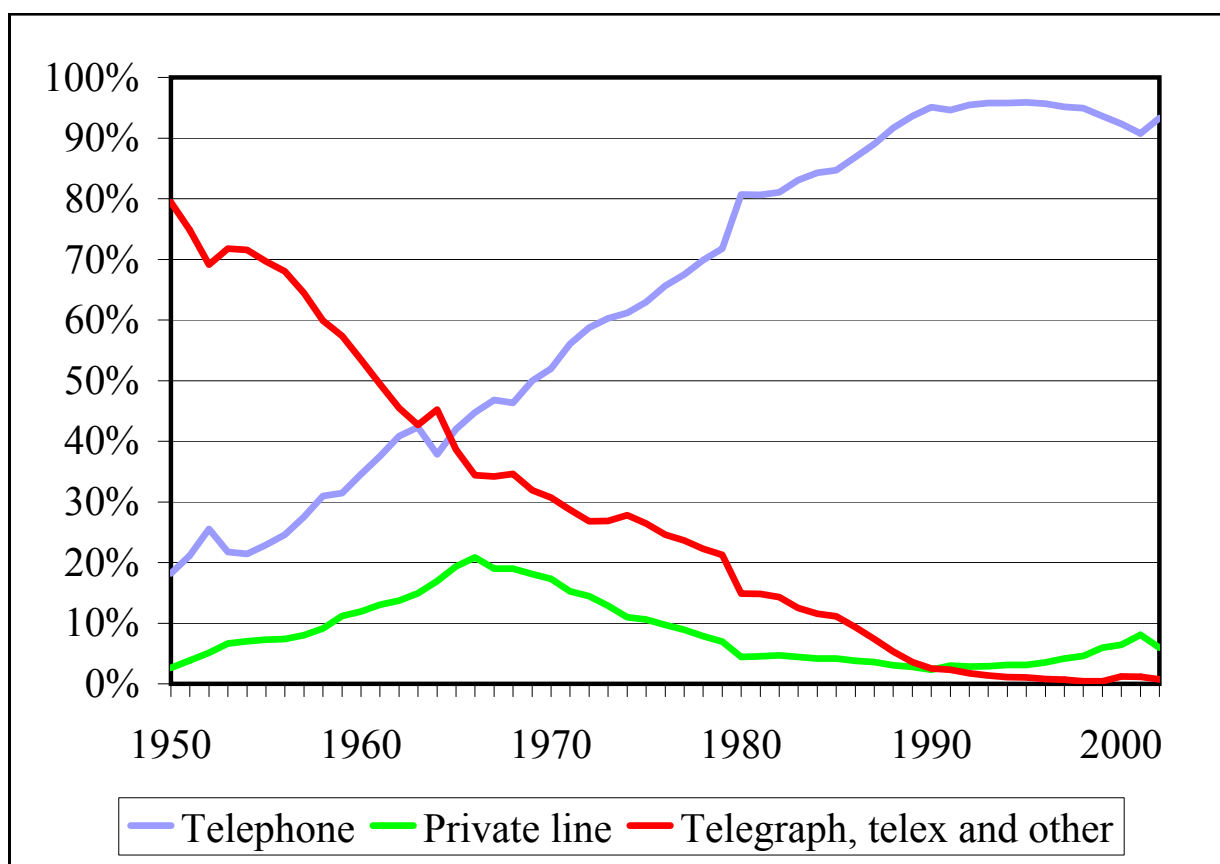
- From 1950 to 1975, international service represented between 3% and 5% of the revenues U.S. carriers received from providing all long distance services. With the installation of higher capacity and lower cost submarine cables in the 1970s, international service revenues grew in importance. International service has represented about 20% of overall toll revenues since the mid-1990s. See Table 1.

<sup>1/</sup> The previous edition of this report, with traffic data through 1999, was released in April 2001.

<sup>2/</sup> The Commission recently proposed modifications to the §43.61 and §43.82 international data collection rules. See *Reporting Requirements for U.S. Providers of International Telecommunications Services; Amendment of Part 43 of the Commission's Rules*, IB Docket 04-112, Notice of Proposed Rulemaking, 19 FCC Rcd 6460 (2004)

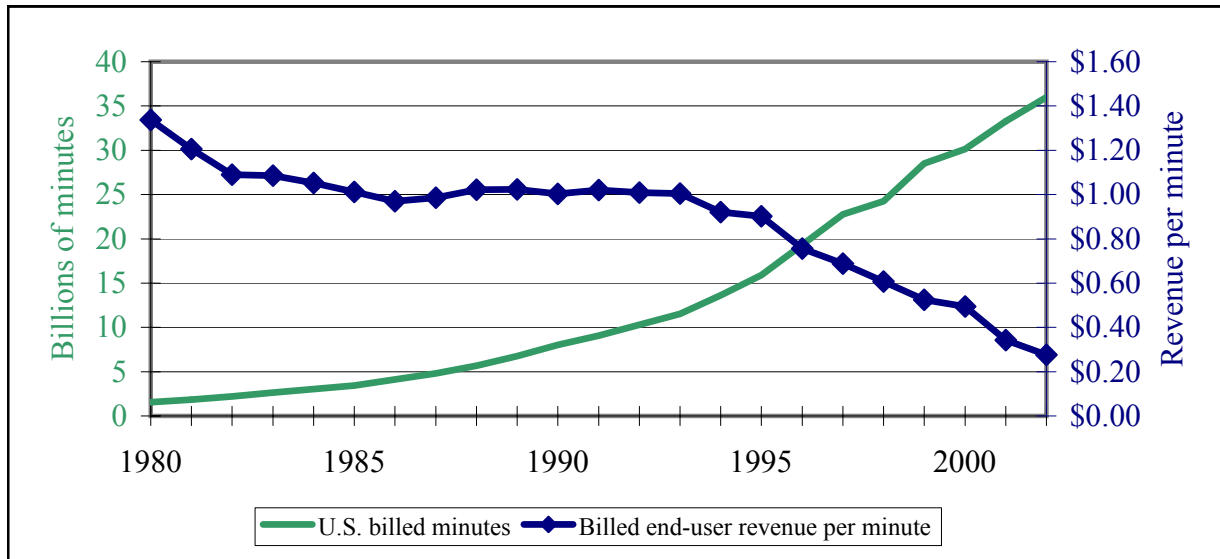
- In 1950, telegraph service accounted for 80% of international service revenues. Other services grew in importance and by 1970, international telephone, international private line and international telex services accounted for greater shares of revenues. Telegraph and telex services began declining in the 1980s and are now so small that carriers were given filing waivers in 2002. The first trans-atlantic telephone cable was installed in 1956. Prior to that, telephone service relied on radio transmissions. Cable capacity grew as new cables were introduced. Prices for international services declined as lower cost facilities cut-over. Today, telephone service accounts for 93% of billed international carrier service revenues. Note that backbone internet traffic is not provided as a carrier service and therefore, internet revenues from those providers are not included in carrier revenue data. However, if backbone internet service providers use international circuits provided by unaffiliated common carriers, the revenue for those circuits are reported as part of carrier private line revenues. See Figure 2 and Table 1.

Figure 2  
Shares of Billed Revenues by Type of International Service



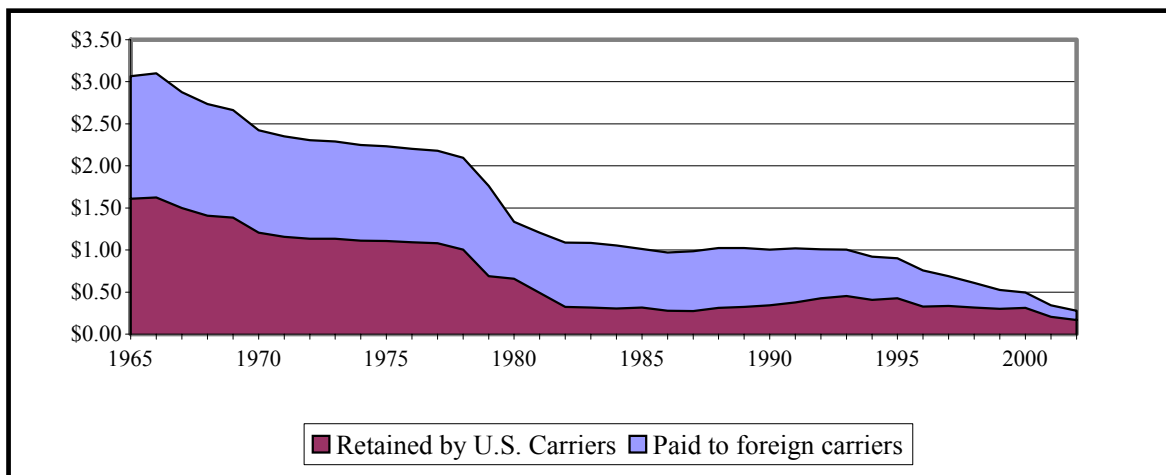
- The average revenue billed to end users for a minute of international telephone service declined from \$1.34 in 1980 to \$0.28 in 2002. The number of U.S. billed minutes increased from 1.6 billion to 36.0 billion during the same period. Note that the 36.0 billion is the number of minutes reported by facilities-based and facilities-resale carriers and represents all traffic physically handled by U.S. carriers. It includes Country Beyond and reorigination service minutes. The end-user revenue estimate incorporates markups by resellers. See Figure 3, Table 2 and Table 3.

Figure 3  
Growth in Minutes Compared with Decline in Prices



- When a call originates in the United States, typically a U.S. carrier provides for the origination of the call and a foreign carrier provides for the termination of the call. The two carriers jointly carry the call between the countries. The U.S. carrier bills the customer and owes a settlement payment to the foreign carrier. Since 1987, decreases in settlement rates explain about half of the decline in international rates. See Figure 4 and Table 2.

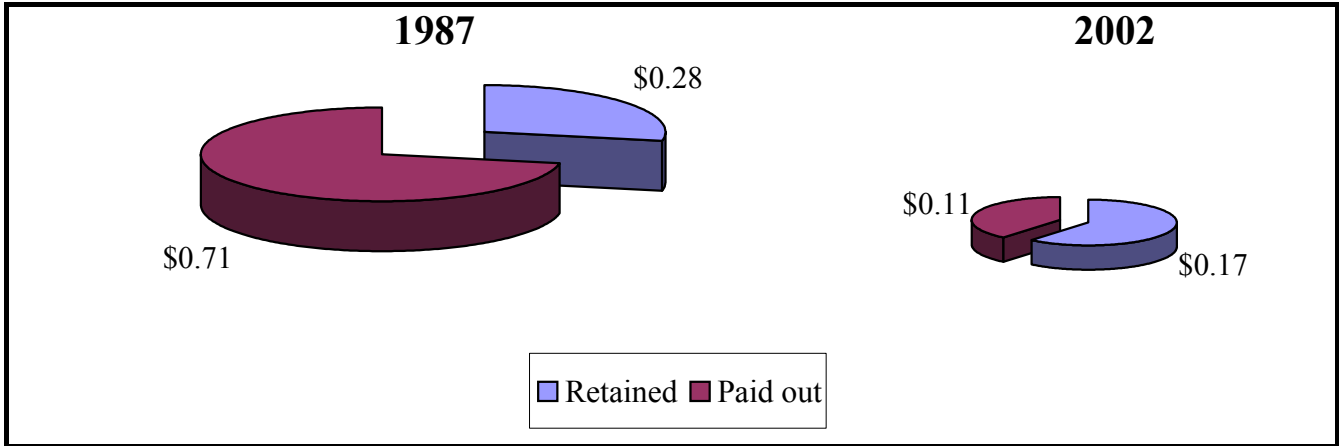
Figure 4  
U.S. and Foreign Carrier Shares of Billed Revenue per Minute



- In 1987, settlement payments represented 72% of the amounts billed to U.S. customers for international calls. In 2002, these payments represented 39% of the billed revenues for international calls. See Figure 5 and Table 2.

Figure 5

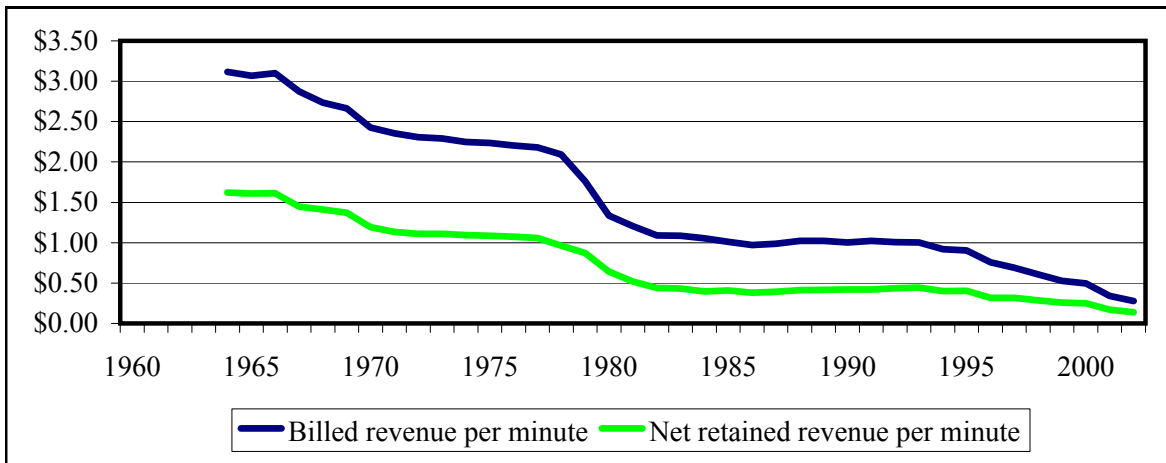
Breakdown of Billed Revenue per Minute Showing Portion Retained and Portion Paid Out



- Under the International Settlement Policy (ISP) the per-minute settlement payments are symmetrical for almost all countries. This means that the U.S. carrier receives the same per-minute payment when it completes a call for a foreign carrier as it pays when the foreign carrier completes a call for it. The average U.S. settlement payment per minute owed by U.S. carriers, however, has been significantly higher than the average settlement receipt per minute due from foreign carriers. See Table 2. One factor is that U.S. carriers terminate a significant amount of collect calls and pay foreign carriers surcharges for these calls. Far more collect calls are placed to the United States than from the United States. For routes where the ISP is no longer in effect, negotiated settlement rates are not required to be symmetrical.
- U.S. carrier net retained revenue per minute is calculated as end-user billed revenues less settlement payments plus settlement receipts, divided by all originating and terminating minutes. Net retained revenue per minute was \$1.62 in 1964, and dropped to 17 cents in 2002. During this same time period, end-user billed revenues dropped from \$3.11 per minute to 28 cents. Settlements owed per minute dropped throughout this period. See Figure 6 and Table 2.

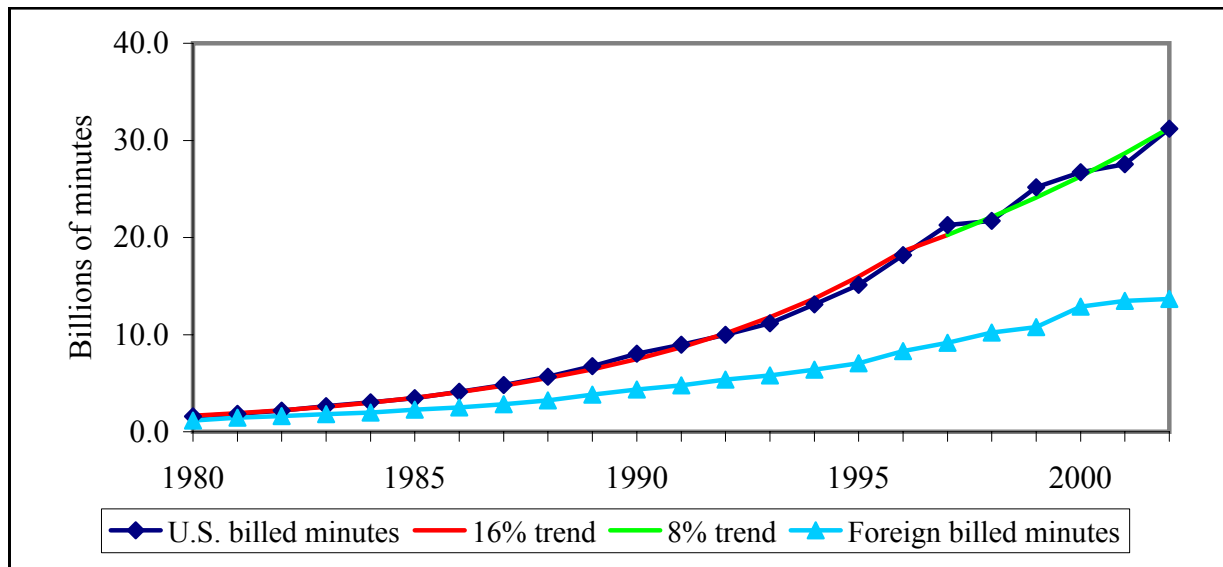
Figure 6

Billed Revenue per Minute Compared with Retained Revenue per Minute



- U.S. carriers began to provide telephone service to Europe in the 1930s. Calls were carried by radio transmission and were relatively expensive. Nonetheless, traffic grew rapidly for a number of reasons. The number of telephones in both the United States and in foreign countries grew rapidly after World War II. Undersea telephone cables were developed and succeeding cables increased capacity and lowered cost. International calling has increased as world trade increased and also as large numbers of immigrants came to the United States and became increasingly likely to call home. In the 1980s, U.S. carriers began to offer Country Direct and Country Beyond services that allow their customers to use their services while traveling to foreign points. (These services are described in Appendix C.) In the 1990s, U.S. carriers also began offering reorigination service, a type of transiting service that increased the amount of U.S. billed calls reported by U.S. carriers. These new services accounted for 13% of U.S. billed minutes in 2002. See Table 3 and Appendix C.
- U.S. billed minutes (excluding Country Direct, Country Beyond and reoriginating calls) have grown by about 8% per year since 1997. The growth rate was twice that from 1980 through 1997 -- over 16% per year. At one time facsimile calls represented a large portion of traffic to some countries, particularly points whose time zones are offset from U.S. time zones by many hours. Email and web page searches have greatly reduced the amount of facsimile traffic. In addition, many service providers now use Internet Protocol (IP) platforms and most IP traffic is not included in the § 43.61 statistics. See Figure 7 and Table 3. Data from 1980 through 1991 is available in the spreadsheet version of the table.

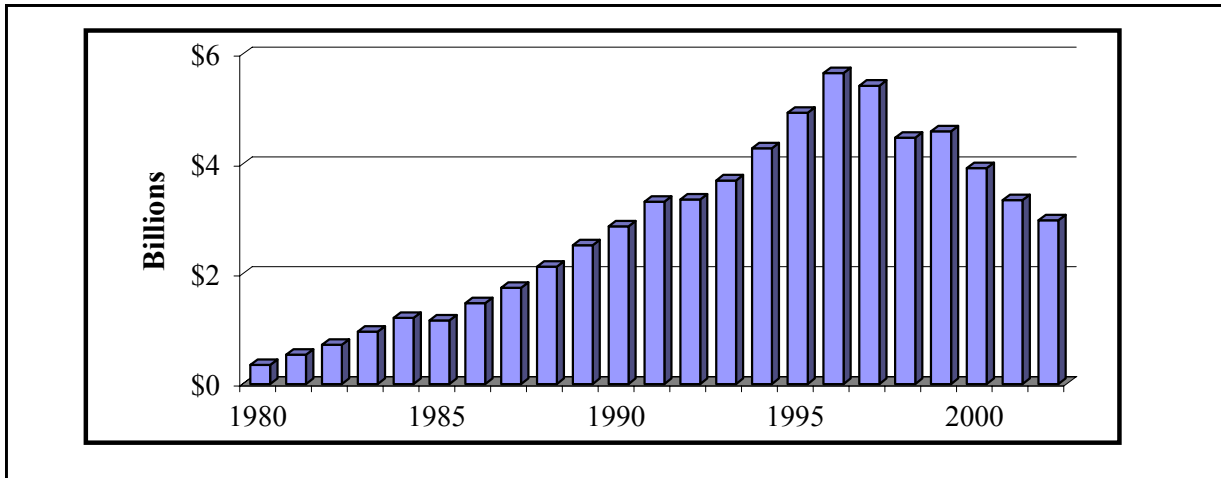
Figure 7  
Growth in U.S. Billed and Foreign Billed Minutes of Calling



- In earlier years, growth in U.S. billed calls more than offset the decline in settlement rates. The result was that net settlement payments to foreign carriers grew from \$300 million in 1980 to \$3.4 billion in 1992, to \$5.7 billion in 1996. The trend reversed in recent years. The decline in settlement rates more than offset the growth rate in U.S. billed minutes. The net settlement payment declined to \$3.0 billion in 2002. See Figure 8 and Table 3.

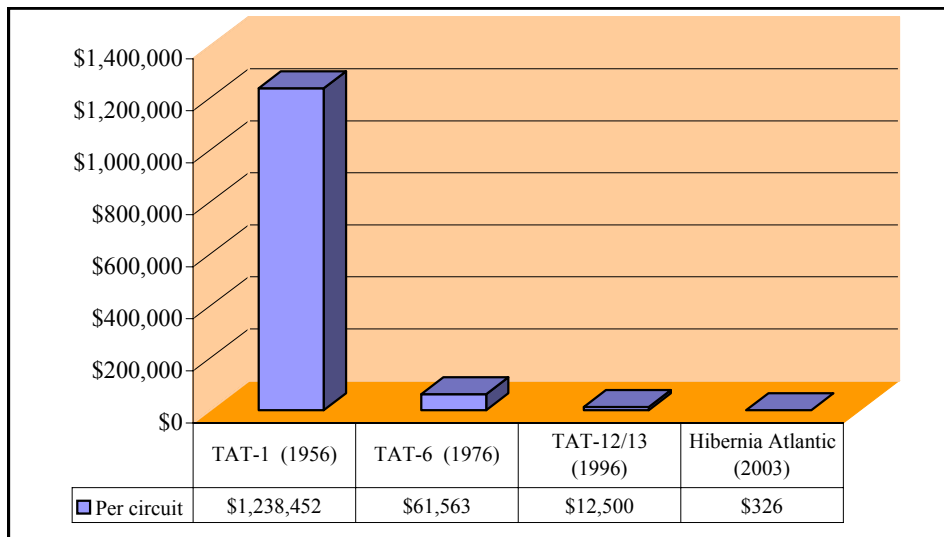


Figure 8  
Net Settlement Payouts



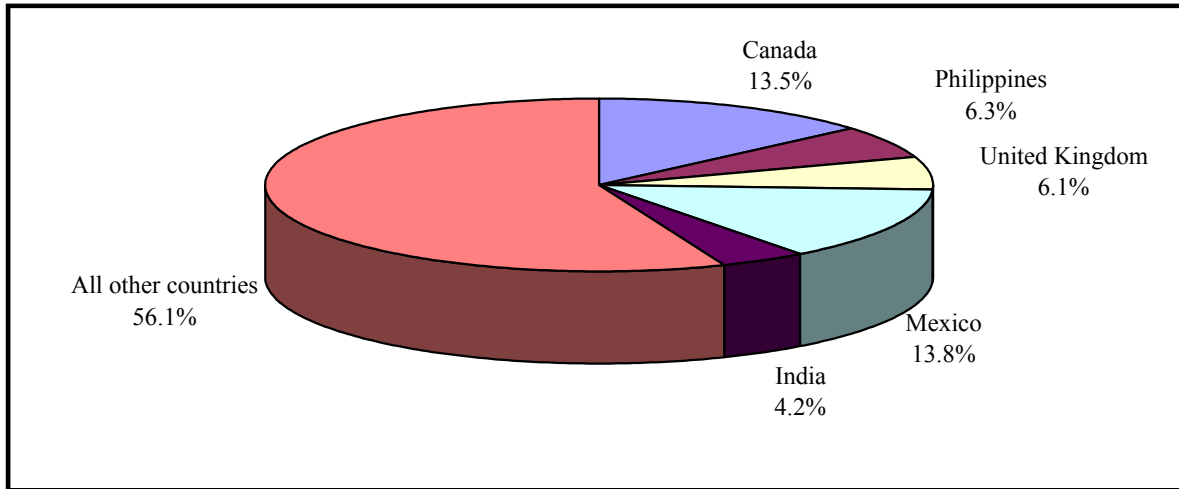
- Relatively little information is available concerning the use of international telephone service in other countries. Table 4 shows foreign carrier data taken from *TeleGeography*, a report published by PriMetrica, Inc. Over the last 5 years, traffic originating with foreign carriers has grown more rapidly than traffic reported by U.S. carriers. See Table 4 and Footnotes 11 and 12.
- Declines in settlement rates and increases in traffic are linked to dramatic increases in cable capacity at decreasing costs per circuit. The first trans-atlantic telephone cable had 40 usable circuits with an investment cost of \$1.2 million per circuit. This would represent an investment cost of around \$1.55 per minute assuming 240 minutes of traffic per day per circuit, a cable life of 25 years, and a 10% return requirement. Today, cable investment costs represent less than one cent per conversation minute and new per-circuit cable costs continue to fall. See Figure 9 and Table 5.

Figure 9  
Investment Cost per Circuit for Trans-Atlantic Submarine Cable



- Calls from the United States are concentrated to a handful of countries. In 2002, the five most heavily used routes accounted for 44% of U.S. billed minutes. See Figure 10 and Table 6.

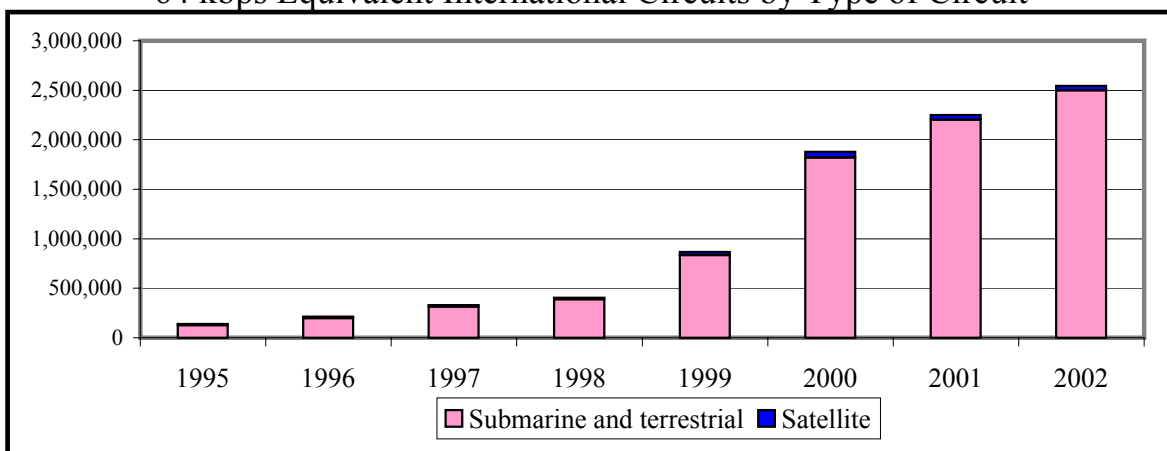
Figure 10  
U.S. Billed Minutes by Destination: 2002



- Return traffic is more concentrated than U.S. billed traffic. The countries with the most return traffic, Canada, Germany, Japan, Mexico, and the United Kingdom, accounted for 62% of foreign billed minutes in 2002. See Table 7.
- More than half of U.S. billed traffic goes to North and Central America and to Western Europe. Traffic to other regions of the world, however, has grown slightly faster. More than 70 % of return traffic came from these regions in 2002. See Tables 15 and 16.
- Over the past five years, prices for calls to each of the 40 countries tracked in the tables have declined. From 1997 to 2002, U.S. billed revenue per minute declined by more than 50% for 33 of the 40 countries tracked in the tables. See Table 9.
- Average revenue per minute has declined significantly for calls to all regions of the world. From 1992 to 2002, average revenue per minute declined by 74%. The smallest percentage decline was 62% for calls to international points in North and Central America. The greatest percentage decline was 84% for calls to Eastern Europe. See Table 18.
- Net settlement payments to an individual country change because of changes in traffic patterns and changes in settlement rates. Country-to-country and period-to-period differences for net settlement payments are much greater than for other traffic statistics. For example, the net settlement payments from U.S. carriers to carriers in Canada were \$74 million in 1997. In 2002, carriers reported net settlement receipts of \$2.5 million from Canada. See Table 10.

- The amount of capacity on international circuits, measured as 64 kbps (voice) equivalent circuits, has increased dramatically in recent years. In 1997, carriers reported 341 thousand 64 kbps equivalent submarine and terrestrial circuits and 37 thousand voice equivalent satellite circuits. In 2002, these figures were 2,765 thousand and 80 thousand, respectively. See Figure 11 and Tables 11 and 12.

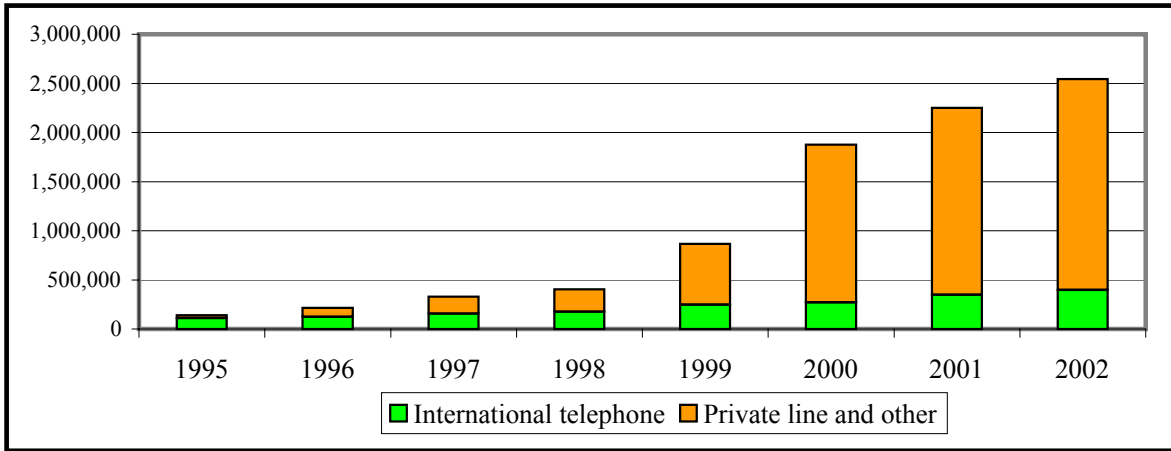
Figure 11  
64 kbps Equivalent International Circuits by Type of Circuit



- Most international capacity was used to provide international telephone service in 1995, when the FCC began collecting detailed capacity statistics on § 43.82 reports. The number of circuits used for international telephone service has more than tripled since then. See Table 13. Nonetheless, most of the growth in capacity has been used for other services, particularly private line and data services. Much of this additional capacity may be carrying Internet traffic. While internet traffic and revenues are not reported, those common carrier circuits that are provided to backbone internet providers are reported. However, backbone internet providers also take circuits on a private carrier or non-carrier basis and those circuits are not included in § 43.61 traffic reports or § 43.82 circuit reports. If these circuits were included, Figure 12 would show even greater growth in private line circuits. See Figure 12. Total circuits are based on data in Table 11 and Table 12; telephone circuits are based on data in Table 13. Additional breakouts of cable capacity by type of circuit and type of service are available in § 43.82 *Circuit Status Data* report, December 2003.
- While most international carrier billed revenues come from international message telephone service, the vast majority of circuits are used for other services. See Figure 12. While the cost of international circuits represents only a small portion of the cost of providing international telephone service, it represents a large portion of the cost of providing international private line and data services. Thus, international telephone service must generate significantly more revenue per circuit used.

Figure 12

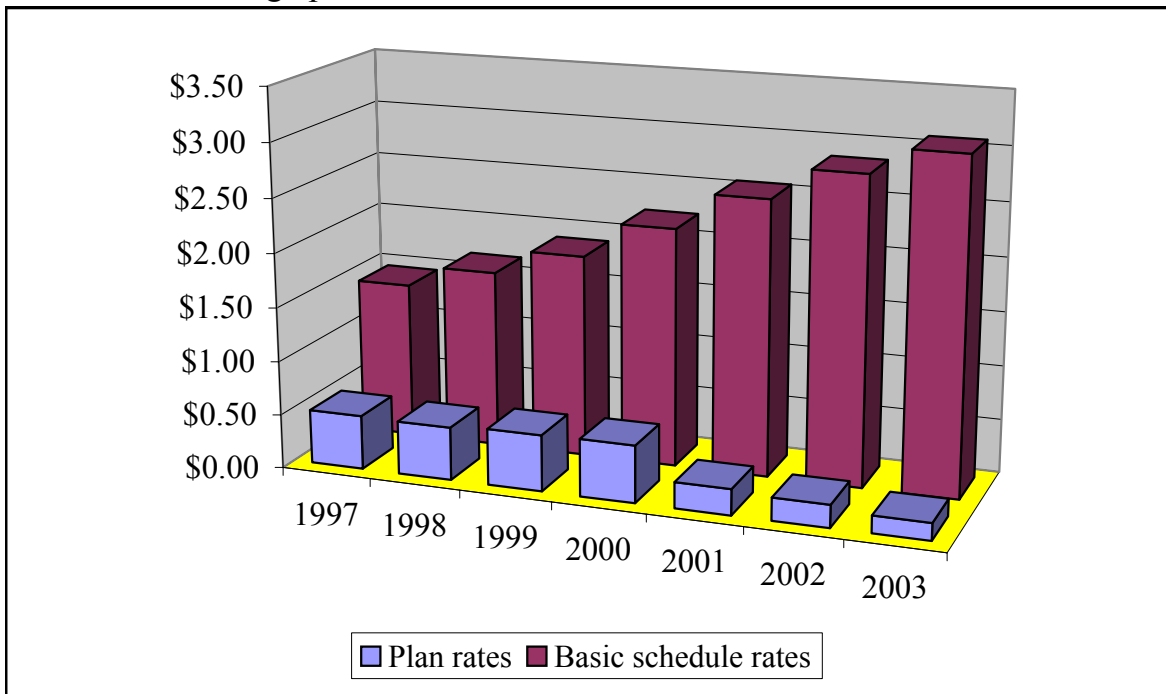
Voice Equivalent International Circuits by Use of Circuit



- Tables 20 through 23 show AT&T published rates. AT&T rates are shown because a long time series exists and because these rates are representative of charges by large IXC's. In the past 10 years, there have been dramatic increases in the basic schedule rates. Customers who never shop around or who rarely place international calls pay these rates. Customers who make frequent international calls get dramatic savings by using special calling plans, prepaid calling cards and other means of avoiding the basic schedule rates. In 2003, the weighted average of residential peak-period call rates for the 40 countries tracked in the table was \$3.08 per minute. Callers with the AnyHour plan would have paid \$0.16 per minute for the same calls. See Figure 13, and Tables 20 through 23.

Figure 13

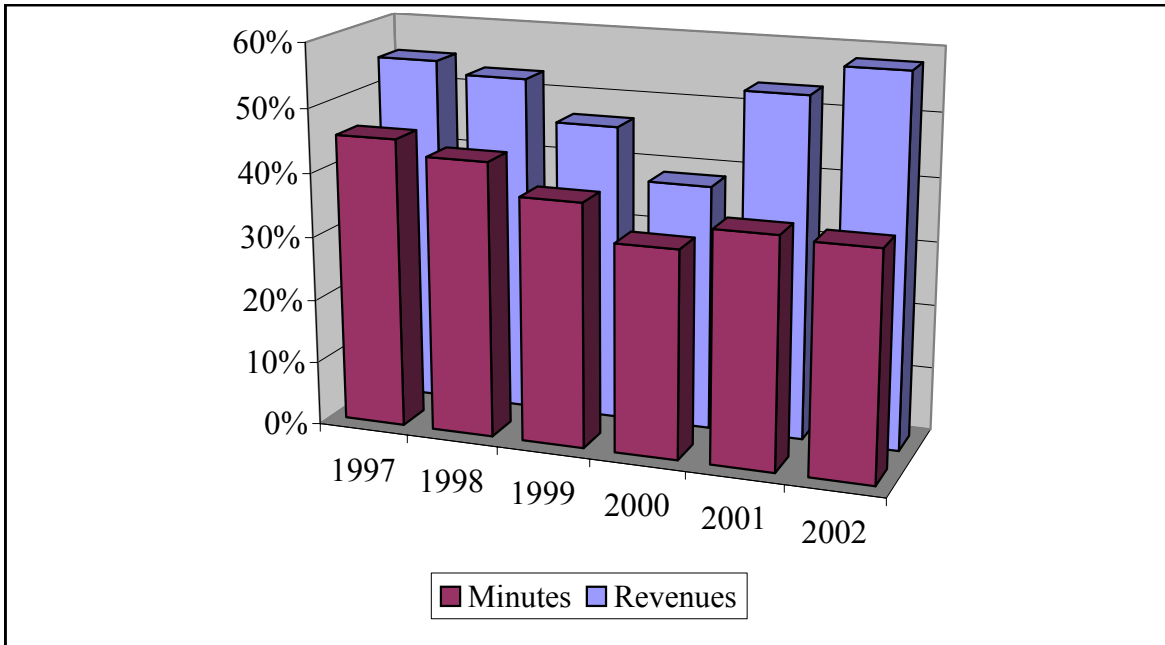
Charge per Minute for Basic Schedule and Plan Rates



- As noted above, the average end-user billed revenue per minute has continued to decline. The average in 2002 was \$0.28 compared with the average plan rate for selected cities of \$0.16. This suggests that most minutes are carried at discounted rates. See Table 2, and Tables 20 - 23.
- In 1980, AT&T billed more than 90% of total U.S. international telephone service revenues and had a virtual monopoly on service from the mainland. GTE/Hawaiian Telephone, which had a virtual monopoly on service from Hawaii, billed almost 8% of revenues. Competition developed slowly and a decade later, AT&T still had 80% of billed revenues. During the 1990s, AT&T's market share dropped by an additional 20 percentage points. While AT&T's share of minutes has continued to drop, AT&T has been able to retain some of the more expensive minutes and as a result, their overall share of revenues has increased somewhat in recent years. See Figure 14 and Tables 26 through 29.

Figure 14

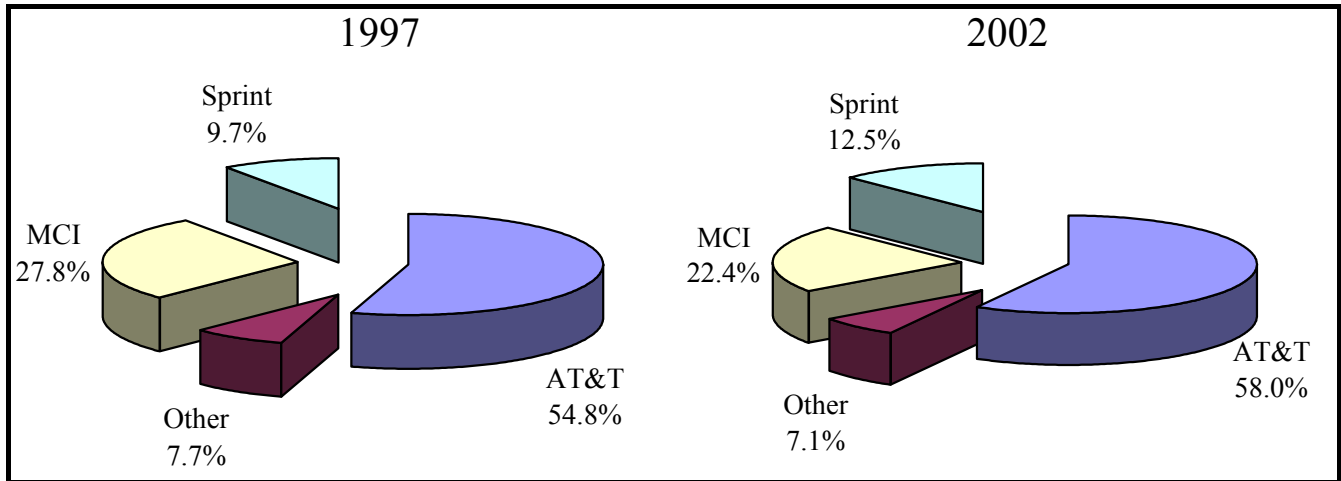
AT&T's Share of Facilities-Based and Facilities-Resale International Message Telephone Service



- The three largest international carriers -- AT&T, MCI and Sprint -- continue to provide most reported international telephone service. Note that IP services are not subject to filing requirements and thus are not included in these figures. See Figure 15 and Tables 28 and 29.

Figure 15

Facilities-Based and Facilities-Resale International Message Telephone Service Revenues



**Table 1**  
**International and Domestic Toll Service Revenues**  
**(Revenue Amounts Shown in Millions)**

	International Service Revenues 1/								Total Toll Revenues 2/		International as % of Total Toll		
	Telephone		Private Line		Miscellaneous			Total International		End User 4/	Carrier's Carrier & End User	End User 4/	Carrier's Carrier & End User
	Facilities-Based, Facilities-Resale, and ISR 3/	Pure Resale 3/	Telephone	Record	Telex	Telegraph	Other	End User 4/	Carrier's Carrier & End User 4/				
1950	\$9.0		\$0.2	\$1.1		\$39.3		\$49.5	\$49.5		\$1,245		4.0 %
1951	12.1		0.3	1.9	\$0.2	42.6		54.9	57.2		1,403		4.1
1952	15.4		0.3	2.8	0.4	41.3		57.2	60.3		1,535		3.9
1953	13.1		0.3	3.7	0.7	42.5		56.2	60.2		1,642		3.7
1954	13.7		0.2	4.3	0.8	45.0		59.5	64.0		1,796		3.6
1955	15.7		0.2	4.8	1.2	46.6		63.6	68.6		2,049		3.3
1956	18.7		0.3	5.3	1.9	49.8		70.4	76.0		2,277		3.3
1957	22.7		0.6	6.0	2.8	50.3		75.8	82.4		2,525		3.3
1958	27.8		1.4	6.8	3.6	50.2		81.6	89.8		2,680		3.4
1959	33.1		3.4	8.4	5.4	55.0		93.5	105.3		3,008		3.5
1960	42.3		7.1	7.5	7.5	57.9		107.8	122.3		3,243		3.8
1961	50.9		9.1	8.6	10.0	57.1		118.1	135.7		3,495		3.9
1962	61.4		11.1	9.5	12.2	56.2		129.7	150.3		3,786		4.0
1963	69.4		12.4	12.1	13.7	56.3		139.4	163.9		4,095		4.0
1964	62.9		13.6	14.6	17.2	58.0		138.1	166.3		4,615		3.6
1965	78.2		15.9	20.2	21.3	50.6		150.1	186.2		5,092		3.7
1966	100.1		17.6	29.0	27.3	49.7		177.2	223.7		5,843		3.8
1967	114.2		15.1	31.3	33.7	49.8		197.7	244.0		6,375		3.8
1968	126.9		15.4	36.6	44.3	50.5		221.8	273.8		7,126		3.8
1969	172.0		16.8	45.4	56.0	53.8		281.8	344.0		8,232		4.2
1970	196.6		15.5	49.9	63.1	53.1		312.8	378.2		8,956		4.2
1971	237.4		12.7	52.0	72.5	49.2		359.1	423.8		9,962		4.3
1972	291.8		14.2	57.7	88.3	44.8		424.9	496.9		11,323		4.4
1973	364.9		15.1	62.8	115.0	47.7		527.6	605.5		13,126		4.6
1974	428.7		12.9	64.1	142.7	52.3		623.7	700.8		14,582		4.8
1975	490.2		13.2	69.2	163.4	42.5		696.1	778.5		16,098		4.8
1976	601.1		14.1	74.8	188.0	37.3		826.4	915.4		18,680		4.9
1977	744.3		13.8	84.4	225.2	35.5		1,005.0	1,103.2		21,159		5.2
1978	954.4		14.0	93.3	267.3	37.1		1,258.9	1,366.2		24,426		5.6
1979	1,138.2		14.7	96.0	299.4	37.7		1,475.3	1,585.9		27,599		5.7
1980	2,097.2		14.8	100.0	324.9	62.6		2,484.7	2,599.5		31,001		8.4
1981	2,239.4		14.1	111.9	349.6	61.8		2,650.8	2,776.7		39,180		7.1
1982	2,382.1		14.3	123.7	363.3	56.4		2,801.8	2,939.8		43,919		6.7
1983	2,876.1		15.1	138.9	378.6	53.8		3,308.5	3,462.6		46,970		7.4
1984	3,197.0		7.2	150.4	393.8	45.6		3,636.4	3,794.0		51,156		7.4
1985	3,487.4		8.5	163.4	414.7	44.9		3,946.9	4,118.8		54,815		7.5
1986	4,004.4		10.7	164.2	389.6	41.6		4,435.6	4,610.5		57,468		8.0
1987	4,749.6	\$14.1	26.8	164.1	360.1	35.1		5,146.3	5,349.9		58,519		9.1
1988	5,799.8	65.3		194.2	310.1	29.7		6,340.3	6,399.0		62,600		10.2
1989	6,901.1	112.9		208.0	243.1	27.0		7,390.5	7,492.0		66,024		11.3
1990	8,042.3	166.9		201.4	196.1	23.9		8,480.5	8,630.7		66,792		12.9
1991	9,219.1	440.7		309.0	200.0	15.2	\$22.7	9,810.1	10,206.7		68,558		14.9
1992	10,331.3	514.0		323.4	155.4	15.6	24.1	10,901.1	11,363.7		71,983		15.8
1993	11,504.5	594.0		366.1	135.1	11.8	23.4	12,100.2	12,634.8		75,290		16.8
1994	12,430.9	1,122.7		440.9	122.7	12.4	25.3	13,144.3	14,154.8		80,726		17.5
1995	14,159.8	1,759.4		514.2	119.3	6.3	47.9	15,023.4	16,606.8		85,475		19.4
1996	14,234.1	3,642.7		660.7	118.9	5.0	26.1	15,409.1	18,687.5		93,361		20.0
1997	15,250.4	4,113.1		850.9	109.8	3.5	28.3	16,654.2	20,356.0	\$89,193	100,793	18.7 %	20.2
1998	14,246.4	4,798.3		921.5	50.5	2.7	36.3	15,737.2	20,055.7	91,607	105,055	17.2	19.1
1999	14,527.6	4,528.0		1,215.9	56.8	1.6	30.8	16,285.5	20,360.8	93,311	108,246	17.5	18.8
2000	14,172.2	7,366.7		1,501.9	32.7	1.3	250.6	16,751.4	23,381.4	87,767	109,615	19.1	21.3
2001	10,844.4	5,341.8		1,467.0	10.3	0.3	199.2	13,392.3	18,200.0	79,302	99,301	16.9	18.3
2002	9,446.4	5,100.7		988.1	5/	5/	112.8	12,005.9	16,596.6	67,222	83,697	17.9	19.8

See notes at the end of the tables.

**Table 2**  
**International Telephone Service Per-Minute Data 1/**  
**(Revenues, Payouts, Receipts and Minutes Amounts Shown in Millions)**

	U.S. Billed Amounts				Foreign Billed Amounts		Per-Minute Data 6/				
	Number of Minutes	End-User Billed Revenues 4/	Payouts to Foreign Carriers	Retained Revenues	Number of Minutes	Receipts from Foreign Carriers	End-User Billed Revenues 6/	Payout to Foreign Carriers	Retained Revenues	Receipts from Foreign Carriers	Net Retained Revenues for all U.S. and Foreign Minutes
1964	20.2	\$62.9	\$30.3	\$32.6	12.0	\$19.6	\$3.11	\$1.50	\$1.62	\$1.63	\$1.62
1965	25.5	78.2	37.2	41.1	15.4	24.7	3.07	1.46	1.61	1.60	1.61
1966	32.3	100.1	47.6	52.5	18.9	30.1	3.10	1.47	1.63	1.59	1.61
1967	39.7	114.2	54.6	59.6	23.4	31.8	2.88	1.38	1.50	1.36	1.45
1968	46.4	126.9	61.5	65.4	28.2	40.0	2.73	1.33	1.41	1.42	1.41
1969	64.6	172.0	82.7	89.4	38.3	51.6	2.66	1.28	1.38	1.35	1.37
1970	81.1	196.6	98.9	97.7	51.0	59.8	2.43	1.22	1.21	1.17	1.19
1971	100.9	237.4	120.7	116.6	68.4	75.1	2.35	1.20	1.16	1.10	1.13
1972	126.5	291.8	148.2	143.6	91.7	98.6	2.31	1.17	1.14	1.08	1.11
1973	159.3	364.9	184.4	180.5	111.5	120.2	2.29	1.16	1.13	1.08	1.11
1974	190.7	428.7	216.6	212.1	142.0	152.2	2.25	1.14	1.11	1.07	1.09
1975	219.4	490.2	247.4	242.9	167.0	176.9	2.23	1.13	1.11	1.06	1.09
1976	272.7	601.1	303.0	298.1	197.2	207.2	2.20	1.11	1.09	1.05	1.08
1977	341.3	744.3	374.9	369.3	253.0	259.6	2.18	1.10	1.08	1.03	1.06
1978	455.6	954.4	496.2	458.2	346.0	314.8	2.09	1.09	1.01	0.91	0.96
1979	646.4	1,138.2	692.7	445.4	409.8	475.1	1.76	1.07	0.69	1.16	0.87
1980	1,569.2	2,097.2	1,063.1	1,034.1	1,162.4	715.9	1.34	0.68	0.66	0.62	0.64
1981	1,857.2	2,239.4	1,329.6	909.8	1,436.6	798.6	1.21	0.72	0.49	0.56	0.52
1982	2,186.6	2,382.1	1,673.6	708.5	1,612.7	961.4	1.09	0.77	0.32	0.60	0.44
1983	2,649.7	2,876.1	2,035.5	840.5	1,808.3	1,085.9	1.09	0.77	0.32	0.60	0.43
1984	3,037.0	3,197.0	2,268.8	928.2	1,970.6	1,065.7	1.05	0.75	0.31	0.54	0.40
1985	3,446.3	3,487.4	2,398.2	1,089.2	2,262.6	1,243.1	1.01	0.70	0.32	0.55	0.41
1986	4,126.1	4,004.4	2,864.6	1,139.9	2,511.0	1,395.9	0.97	0.69	0.28	0.56	0.38
1987	4,819.2	4,751.1	3,422.9	1,328.2	2,822.7	1,670.6	0.99	0.71	0.28	0.59	0.39
1988	5,679.4	5,806.3	4,039.1	1,767.2	3,228.2	1,906.3	1.02	0.71	0.31	0.59	0.41
1989	6,750.7	6,912.3	4,735.4	2,176.9	3,810.3	2,212.7	1.02	0.70	0.32	0.58	0.42
1990	8,029.7	8,059.0	5,297.4	2,761.6	4,340.9	2,426.3	1.00	0.66	0.34	0.56	0.42
1991	9,071.7	9,263.2	5,852.4	3,410.8	4,768.6	2,410.4	1.02	0.65	0.38	0.51	0.42
1992	10,293.8	10,382.5	6,007.7	4,374.8	5,369.7	2,481.2	1.01	0.58	0.42	0.46	0.44
1993	11,513.3	11,563.7	6,372.0	5,191.7	5,786.0	2,476.7	1.00	0.55	0.45	0.43	0.44
1994	13,615.6	12,542.9	7,009.7	5,533.2	6,384.9	2,501.8	0.92	0.51	0.41	0.39	0.40
1995	15,888.8	14,335.4	7,569.0	6,766.4	7,050.6	2,464.1	0.90	0.48	0.43	0.35	0.40
1996	19,325.1	14,597.8	8,252.3	6,345.5	8,293.2	2,450.9	0.76	0.43	0.33	0.30	0.32
1997	22,753.1	15,661.6	8,031.0	7,630.5	9,170.0	2,458.9	0.69	0.35	0.34	0.27	0.32
1998	24,249.9	14,726.3	7,021.7	7,704.5	10,198.5	2,158.2	0.61	0.29	0.32	0.21	0.29
1999	28,515.4	14,980.3	6,383.1	8,597.3	10,765.0	1,576.0	0.53	0.22	0.30	0.15	0.26
2000	30,134.8	14,908.8	5,536.0	9,372.8	12,888.2	1,447.6	0.49	0.18	0.31	0.11	0.25
2001	33,286.8	11,379.6	4,526.2	6,853.5	13,478.0	1,118.4	0.34	0.14	0.21	0.08	0.17
2002	35,988.3	9,956	3,872.9	6,083.6	13,676.8	738.0	0.28	0.11	0.17	0.05	0.14

See notes at the end of the tables.



**Table 3**  
**Selected Traffic Statistics for International Telephone Service 1/**  
**(Revenues, Payouts, Receipts and Minutes Amounts Shown in Millions)**

<b>International Telephone Service</b>	<b>1992</b>	<b>1993</b>	<b>1994</b>	<b>1995</b>	<b>1996</b>	<b>1997</b>	<b>1998</b>	<b>1999</b>	<b>2000</b>	<b>2001</b>	<b>2002</b>	<b>Annual Growth Rates 1997 to 2002 7/</b>
U.S. Minutes												
US Originated and Received Collect or Toll Free	9,999	11,163	13,110	15,135	18,174	21,288	21,712	25,169	26,737	27,543	31,197	8.0 %
US Billed Country Direct and Country Beyond 8/	294	350	500	728	1,053	933	1,736	1,935	1,236	1,330	1,127	-0.9
Calls Reoriginated by U.S. Carriers 8/	n.a.	n.a.	5	26	98	532	802	1,412	2,161	4,414	3,664	n.m.
Total U.S. Billed Minutes	10,294	11,513	13,616	15,889	19,325	22,753	24,250	28,515	30,135	33,287	35,988	9.9
Foreign Minutes 9/	5,370	5,786	6,385	7,051	8,293	9,170	10,198	10,765	12,888	13,478	13,677	9.0
Transiting Minutes	399	505	582	520	562	823	1,599	1,384	1,023	742	1,998	n.m.
Total Minutes	16,063	17,804	20,583	23,460	28,180	32,746	36,048	40,664	44,046	47,507	51,663	9.5
U.S. Messages	1,663	1,945	2,347	2,830	3,520	4,259	4,477	5,305	5,742	6,265	6,107	8.6
Foreign Messages	1,088	1,220	1,408	1,525	1,976	2,103	2,134	2,682	2,904	2,942	3,030	8.5
Total Messages	2,750	3,165	3,755	4,354	5,496	6,361	6,611	7,987	8,646	9,207	9,136	8.6
Average Minutes per Message												
U.S. Calls	6.2	5.9	5.8	5.6	5.5	5.3	5.4	5.4	5.2	5.3	5.9	1.2
Foreign Calls	4.9	4.7	4.5	4.6	4.2	4.4	4.8	4.0	4.4	4.6	4.5	0.4
All Telephone Calls	5.8	5.6	5.5	5.4	5.1	5.1	5.5	5.1	5.1	5.2	5.7	0.9
Billed Revenues	\$10,331	\$11,505	\$12,431	\$14,160	\$14,234	\$15,250	\$14,246	\$14,528	\$14,172	\$10,844	\$9,446	-8.8
Settlement Payments	\$6,008	\$6,372	\$7,010	\$7,569	\$8,252	\$8,031	\$7,022	\$6,383	\$5,536	\$4,526	\$3,873	-13.6
Retained Billed Revenues	\$4,324	\$5,133	\$5,421	\$6,591	\$5,982	\$7,219	\$7,225	\$8,145	\$8,636	\$6,318	\$5,574	-4.6
Settlement Receipts	\$2,481	\$2,477	\$2,502	\$2,464	\$2,451	\$2,459	\$2,158	\$1,576	\$1,448	\$1,118	\$738	-20.6
Transiting Traffic Receipts	\$370	\$452	\$496	\$565	\$369	\$408	\$1,094	\$369	\$349	\$125	\$290	-21.1
Transiting Traffic Payments	\$200	\$261	\$279	\$398	\$226	\$265	\$715	\$163	\$187	\$63	\$136	-25.9
Net Settlement Payments	(\$3,357)	(\$3,705)	(\$4,291)	(\$4,938)	(\$5,658)	(\$5,429)	(\$4,484)	(\$4,601)	(\$3,927)	(\$3,346)	(\$2,981)	-10.9
Net Revenues 10/	\$6,974	\$7,800	\$8,140	\$9,222	\$8,576	\$9,821	\$9,762	\$9,926	\$10,245	\$7,499	\$6,465	-7.8
Per Minute of U.S. Traffic:												
U.S. Billings	\$1.00	\$1.00	\$0.91	\$0.89	\$0.74	\$0.67	\$0.59	\$0.51	\$0.47	\$0.33	\$0.26	-17.0
Settlement Payments	\$0.58	\$0.55	\$0.51	\$0.48	\$0.43	\$0.35	\$0.29	\$0.22	\$0.18	\$0.14	\$0.11	-21.3
Retained Revenues	\$0.42	\$0.45	\$0.40	\$0.41	\$0.31	\$0.32	\$0.30	\$0.29	\$0.29	\$0.19	\$0.15	-13.2
Per Minute of Foreign Traffic:												
Settlement Receipts	\$0.46	\$0.43	\$0.39	\$0.35	\$0.30	\$0.27	\$0.21	\$0.15	\$0.11	\$0.08	\$0.05	-27.2
Per Transiting Minute Revenues	\$0.42	\$0.38	\$0.37	\$0.32	\$0.25	\$0.17	\$0.24	\$0.15	\$0.16	\$0.08	\$0.08	-18.5
Net Revenue per Minute	\$0.43	\$0.44	\$0.40	\$0.39	\$0.30	\$0.30	\$0.27	\$0.24	\$0.23	\$0.16	\$0.13	-15.8
Percent Billings for Settlements	58.2%	55.4%	56.4%	53.5%	58.0%	52.7%	49.3%	43.9%	39.1%	41.7%	41.0%	-5.2
Average Price for a U.S. Call	\$6.21	\$5.92	\$5.30	\$5.00	\$4.04	\$3.58	\$3.18	\$2.74	\$2.47	\$1.73	\$1.55	-16.1

See notes at the end of the tables.

**Table 4**  
**International Telephone Service Minutes of Traffic Originating**  
**In the United States Compared with Traffic**  
**Originating in Other Countries 1/ 11/**  
**(Amounts Shown in Millions)**

	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	Annual Growth Rates 1997 to 2002 7/
Total United States	10,294	11,513	13,616	15,889	19,325	22,753	24,250	28,515	29,216	33,287	35,988	9.8 %
Total Other Countries	32,706	36,687	40,284	44,411	50,675	59,047	68,750	80,385	103,484	110,713	119,212	16.0
Total World	43,000	48,200	53,900	60,300	70,000	81,800	93,000	108,900	132,700	144,000	155,200	14.4
U.S. as a Percent of World	23.9%	23.9%	25.3%	26.3%	27.6%	27.8%	26.1%	26.2%	22.0%	23.1%	23.2%	
AT&T	7,039	7,201	8,040	8,831	9,546	10,331	10,452	10,900	9,787	11,975	12,787	4.0
MCI WorldCom, Inc.	2,101	2,857	3,529	4,486	5,372	5,913	7,195	8,306	12,412	11,455	12,260	16.8
Sprint	946	1,181	1,490	1,772	2,745	2,794	2,916	3,640	3,945	5,447	4,774	14.2
BT	2,188	2,310	2,489	2,909	3,158	3,735	4,249	4,029	4,559	4,234	4,059	1.5
Cable & Wireless	661	820	1,018	1,107	1,411	2,065	2,646	2,528	3,488	3,114	3,459	10.2
China Telecom 12/	635	900	1,170	1,390	1,433	1,632	1,712	1,950	2,240	1,783	1,325	-2.2
Deutsche Telekom 12/	4,087	4,680	5,147	5,244	5,100	4,813	4,711	4,385	4,525	4,900	5,275	1.8
France Telecom	2,449	2,576	2,603	2,805	3,116	3,545	3,911	4,390	4,393	4,592	4,603	5.2
PCCW Hong Kong Telecom	1,137	1,377	1,578	1,692	1,739	1,718	1,682	1,668	1,200	1,270	1,169	-8.5
Stentor	1,520	1,552	1,525	1,467	1,650	1,778	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Swisscom	1,551	1,572	1,649	1,778	1,936	2,164	2,258	2,259	1,633	1,757	1,937	-4.6
Telecom Italia	1,473	1,610	1,708	1,908	2,184	2,352	2,339	2,391	2,706	3,042	3,405	8.2

See notes at the end of the tables.

**Table 5**  
**Cost of Selected Submarine Cable Systems**  
(Including Some Systems Removed from Service and Some Planned Systems)

System 13/	Year	Techology	Estimated Cost When New (\$ Million)	Total 64 kbps Circuits as Planned 14/	Usable 64 kbps Circuits as Planned 14/	Investment Cost per Usable Planned Circuit 15/
<b>Trans-Atlantic</b>						
Operational						
TAT-1	1956	Coax Cable	\$50	45	40	\$1,238,452
TAT-2	1959	Coax Cable	43	49	44	968,254
TAT-3	1963	Coax Cable	51	88	79	642,540
TAT-4	1965	Coax Cable	50	69	62	811,594
TAT-5	1970	Coax Cable	70	720	648	108,642
TAT-6	1976	Coax Cable	197	4,000	3,200	61,563
TAT-7	1983	Coax Cable	180	4,246	3,821	47,103
TAT-8	1988	Fiber Optic	360	7,560	6,048	59,524
PTAT-1	1989	Fiber Optic	400	17,010	17,010	23,516
TAT-9	1992	Fiber Optic	406	15,120	15,120	26,852
TAT-10	1992	Fiber Optic	300	22,680	15,120	19,841
TAT-11	1993	Fiber Optic	280	22,680	15,120	18,519
TAT-12/13	1996	Fiber Optic	756	60,480	60,480	12,500
Gemini	1997	Fiber Optic	520	120,960	120,960	4,299
AC-1	1998	Fiber Optic	750	241,920	241,920	3,100
Colombus III	1999	Fiber Optic	236	120,960	120,960	1,951
Level 3	2000	Fiber Optic	300	1,935,360	1,935,360	155
AC-2	2000	Fiber Optic	300	1,935,360	1,935,360	155
TAT-14	2001	Fiber Optic	1,500	1,935,360	1,935,360	775
FLAG-Atlantic-1	2001	Fiber Optic	1,200	1,935,360	1,935,360	620
Hibernia Atlantic (formerly 360Atlantic)	2003	Fiber Optic	630	1,935,360	1,935,360	326
Apollo Cable	2003	Fiber Optic	1,200	3,870,720	3,870,720	310
<b>Americas</b>						
Operational						
TCS-1	1990	Fiber Optic	133	1,890	1,890	70,370
Taino-Carb	1992	Fiber Optic	17	45,360	45,360	375
Americas I	1994	Fiber Optic	268	22,680	22,680	11,817
Pan American						
Cable System	1998	Fiber Optic	214	120,960	120,960	1,769
Americas II	2000	Fiber Optic	310	604,800	604,800	513
MAC	2000	Fiber Optic	200	241,920	241,920	827
PAC	2000	Fiber Optic	365	241,920	241,920	1,509
MAYA-1	2000	Fiber Optic	150	90,720	90,720	1,653
SAC	2000	Fiber Optic	700	483,840	483,840	1,447
ARCOS-1	2001	Fiber Optic	285	181,440	181,440	1,571
SAm-1	2001	Fiber Optic	900	483,840	483,840	1,860
<b>Trans-Pacific</b>						
Operational						
HAW-4/TPC-3	1989	Fiber Optic	601	7,560	7,560	79,497
TPC-4	1992	Fiber Optic	408	15,120	15,120	26,984
HAW-5	1993	Fiber Optic	152	15,120	15,120	10,053
PacRimEast	1993	Fiber Optic	280	7,560	7,560	37,037
PacRimWest	1995	Fiber Optic	282	7,560	7,560	37,302
TPC-5	1996	Fiber Optic	1,348	120,960	120,960	11,144
PC-1	1999	Fiber Optic	1,200	967,680	967,680	1,240
China-U.S. CN	2000	Fiber Optic	1,100	967,680	967,680	1,137
Southern Cross	2000	Fiber Optic	800	483,840	483,840	1,653
Australia-Japan						
Cable (Guam)	2001	Fiber Optic	350	967,680	967,680	362
Japan-U.S. CN	2001	Fiber Optic	1,000	967,680	967,680	1,033
Tyco Pacific	2003	Fiber Optic	1,700	5,564,160	5,564,160	306

See notes at the end of the tables.

**Table 6**  
**U.S. Billed Minutes of International Telephone Service 1/**  
**For Selected International Points**  
**(In Millions)**

U.S. Billed Minutes	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	Annual Growth Rate 1997 to 2002 7/
Australia	113.6	126.5	157.0	201.3	282.6	389.2	439.9	397.0	492.9	504.3	499.7	5.5 %
Brazil	144.7	171.4	221.9	283.0	374.7	495.3	568.1	586.4	677.8	773.9	797.5	10.4
Canada	2,227.1	2,493.8	2,787.3	3,049.3	3,464.9	3,922.1	3,860.6	4,292.2	4,623.1	4,915.1	4,850.3	5.5
China	68.6	110.3	169.5	231.0	299.3	380.2	418.3	397.1	501.0	398.9	395.7	n.m.
Colombia	172.5	200.2	231.1	256.5	288.0	263.0	217.8	320.9	382.5	435.7	357.7	11.4
Dominican Republic	251.1	255.2	314.2	410.5	416.4	379.1	438.4	749.9	665.5	716.4	1,005.7	19.5
Egypt	43.9	49.0	56.9	68.6	90.0	109.9	111.3	169.1	94.4	170.7	291.8	17.3
El Salvador	99.9	107.0	120.8	135.7	141.8	154.9	197.9	237.4	298.1	331.6	669.3	29.7
France	239.9	263.7	304.9	362.8	442.6	511.0	560.3	577.1	539.4	725.5	653.5	5.7
Germany	563.1	572.6	604.1	662.3	782.4	1,008.3	1,153.4	1,466.4	1,251.4	886.9	1,057.4	n.m.
Greece	70.0	75.6	82.1	86.5	91.3	97.5	115.3	183.8	213.8	259.9	172.9	16.9
Guatemala	88.0	93.8	105.4	115.1	128.0	127.3	144.7	189.8	233.1	368.9	909.1	44.3
Haiti	48.6	52.9	62.8	73.6	79.2	93.6	99.6	135.9	94.4	67.3	107.8	-2.4
Hong Kong	114.3	143.2	213.9	315.8	539.7	677.3	565.3	193.0	163.3	278.1	171.2	-23.1
India	97.9	134.2	191.6	285.7	428.0	583.3	749.7	960.1	1,243.5	1,332.7	1,512.2	21.3
Israel	137.7	162.7	195.7	214.3	239.8	214.2	220.4	363.8	307.3	267.8	309.5	6.7
Italy	207.3	229.7	250.9	279.4	336.3	476.6	515.1	701.3	499.8	685.9	722.7	7.7
Jamaica	124.4	145.0	167.5	186.7	220.9	252.9	289.1	364.4	289.3	373.2	524.0	12.7
Japan	366.6	400.5	469.2	576.3	703.4	857.4	799.4	819.9	859.2	884.2	831.6	0.6
Korea, Republic of	207.8	238.8	283.4	319.3	382.5	428.4	381.3	322.9	335.8	430.5	394.8	-0.0
Mexico	1,277.3	1,398.9	1,656.2	2,012.2	2,390.4	2,766.5	3,013.6	4,053.6	5,509.4	5,123.9	4,973.5	14.8
Morocco	8.2	9.2	11.7	13.6	14.1	14.4	16.3	64.8	34.0	51.0	88.8	40.4
Netherlands	92.7	107.3	130.4	163.6	207.2	225.3	273.0	308.2	236.6	283.4	404.5	8.2
Nigeria	34.3	38.5	39.5	52.1	75.1	105.3	160.7	133.5	104.9	92.2	98.3	-6.2
Pakistan	64.3	68.7	84.1	107.2	133.9	164.7	204.4	304.9	454.2	517.3	612.6	32.1
Peru	80.1	89.7	105.8	121.8	145.0	165.2	180.9	241.4	163.4	171.3	161.6	-1.9
Philippines	200.3	224.7	267.3	295.7	356.3	452.3	557.1	757.6	1,042.3	1,664.7	2,275.5	39.6
Poland	73.9	81.6	110.3	133.4	161.4	170.8	189.4	273.1	276.1	372.8	270.5	13.2
Russia	31.0	45.6	63.7	78.4	100.9	122.5	156.3	193.8	183.6	171.8	148.8	3.5
Saudi Arabia	61.5	67.6	77.5	88.2	101.3	110.1	108.1	111.1	109.5	180.5	179.5	3.5
Sierra Leone	4.4	4.5	4.8	5.8	8.9	12.1	39.7	10.0	4.8	9.3	19.3	-7.6
Singapore	47.3	56.8	73.0	100.1	148.7	202.7	168.4	120.3	115.7	124.5	109.0	-10.9
South Africa	29.2	36.3	53.7	73.8	97.5	111.6	128.0	163.9	114.7	127.4	75.6	-6.4
Spain	105.6	109.5	119.4	130.3	147.9	191.0	245.3	329.1	341.1	322.7	367.4	12.5
Switzerland	93.5	104.4	115.4	135.6	181.1	246.3	197.6	240.3	179.3	216.7	270.0	1.3
Taiwan	162.9	184.7	226.0	271.6	321.7	379.4	325.3	335.6	351.0	349.5	261.5	-4.5
Thailand	53.2	62.9	78.4	92.3	114.6	117.2	121.2	117.9	131.8	170.6	146.4	6.6
Turkey	37.6	40.1	45.6	51.3	59.3	62.5	106.9	241.2	162.0	205.6	258.1	28.0
United Kingdom	733.8	800.2	906.4	1,025.1	1,226.4	1,553.8	1,561.2	1,673.6	1,621.1	1,922.1	2,179.7	6.7
Viet Nam	7.1	20.6	45.2	74.3	114.2	165.2	192.0	252.0	312.8	282.6	252.2	10.5
Total for Countries Shown Above	8,585.1	9,577.8	11,204.9	13,139.9	15,837.6	18,760.7	19,791.3	23,354.4	25,213.9	27,167.6	29,386.8	9.8 %
Total for Other Countries	1,708.7	1,935.5	2,410.8	2,748.9	3,487.6	3,992.4	4,458.6	5,161.0	4,920.9	6,119.2	6,601.5	10.3
Total for All Countries	10,293.8	11,513.3	13,615.6	15,888.8	19,325.1	22,753.1	24,249.9	28,515.4	30,134.8	33,286.8	35,988.3	9.9
Total for 5 Largest Routes	50.2%	49.2%	47.2%	46.1%	44.3%	44.4%	42.6%	43.6%	46.0%	44.9%	43.9%	
Canada, India Mexico, Philippines and UK as Percent of Total	44.1%	43.9%	42.7%	42.0%	40.7%	40.8%	40.2%	41.2%	46.6%	44.9%	43.9%	
Other Countries Shown Above as Percent of Total	39.3%	39.3%	39.8%	40.8%	41.4%	41.6%	41.6%	40.9%	38.9%	39.6%	42.1%	
Countries not Shown Above as Percent of Total	16.7%	16.9%	17.6%	17.2%	17.9%	17.7%	18.2%	17.9%	14.5%	15.4%	14.0%	

See notes at the end of the tables.

**Table 7**  
**Foreign Billed Minutes of International Telephone Service 1/**  
**For Selected International Points**  
**(In Millions)**

Foreign Minutes	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	Annual Growth Rate 1997 to 2002 7/
Australia	104.1	118.6	140.1	150.1	155.8	131.6	236.6	446.0	314.3	271.3	296.2	12.5 %
Brazil	49.3	46.9	62.1	101.7	123.5	159.2	180.2	185.9	203.2	232.8	317.6	13.1
Canada	1,512.2	1,605.6	1,800.8	2,067.3	2,845.9	3,141.9	3,359.0	3,922.1	5,139.3	5,066.4	4,432.0	9.6
China	25.4	41.1	48.5	52.4	58.3	61.8	79.4	46.9	65.7	57.7	70.7	n.m.
Colombia	50.5	51.8	58.9	59.7	61.4	67.6	51.2	57.2	89.1	94.2	94.6	11.9
Dominican Republic	50.5	62.3	69.2	97.4	125.1	107.8	113.2	122.0	219.2	192.1	272.9	21.5
Egypt	6.8	8.0	8.6	9.2	9.6	10.7	11.7	11.2	11.3	11.8	13.2	3.1
El Salvador	8.5	7.8	8.0	8.6	9.9	12.7	16.0	24.8	71.6	61.9	70.2	47.6
France	156.6	161.7	170.3	181.2	203.6	216.7	270.8	226.2	253.9	231.6	338.5	5.5
Germany	235.9	262.6	277.1	290.6	313.0	325.2	365.9	333.0	384.6	477.2	863.1	18.1
Greece	25.7	25.4	34.2	30.6	33.0	35.1	42.8	38.6	46.1	47.5	47.6	5.9
Guatemala	18.5	14.0	12.8	14.3	11.8	15.4	17.9	18.7	27.0	48.0	43.3	27.5
Haiti	6.4	5.5	6.9	10.4	7.1	5.0	7.1	6.8	4.7	8.0	8.2	7.3
Hong Kong	82.8	89.9	101.0	102.4	96.3	78.4	50.5	103.7	83.9	81.6	139.1	12.4
India	60.1	57.3	52.0	51.8	50.1	49.7	58.5	44.2	77.4	77.8	83.5	12.1
Israel	48.1	53.2	59.3	70.4	78.9	121.6	171.4	237.4	261.7	260.3	288.1	17.6
Italy	118.0	99.1	101.4	104.0	114.4	117.8	134.0	201.1	133.8	125.5	176.2	4.1
Jamaica	42.4	38.4	36.1	44.3	50.1	49.9	51.9	54.2	59.2	68.0	98.2	13.0
Japan	281.8	291.5	308.8	322.5	346.5	342.9	336.4	309.2	310.2	343.3	357.9	0.8
Korea, Republic of	96.3	102.2	125.2	140.7	159.1	199.9	219.7	203.8	279.6	266.2	253.0	6.1
Mexico	608.7	676.3	748.8	835.7	948.1	942.2	1,086.3	1,124.1	1,574.5	1,700.1	1,449.6	11.6
Morocco	3.1	4.2	4.5	4.8	4.8	5.8	6.4	6.0	7.2	10.8	4.5	1.5
Netherlands	66.7	77.0	82.5	82.7	85.6	98.7	122.2	136.8	143.4	187.4	222.9	16.7
Nigeria	11.3	11.3	18.5	18.9	9.2	8.7	17.4	9.2	11.0	17.7	13.4	7.0
Pakistan	7.2	7.6	8.4	9.2	10.0	10.5	15.6	8.8	14.7	9.3	11.2	-2.0
Peru	12.5	14.7	20.2	24.0	25.5	24.5	31.4	27.5	33.4	33.2	35.5	6.5
Philippines	23.2	37.0	42.9	42.3	50.2	33.4	50.8	38.9	57.3	73.3	104.3	22.8
Poland	25.0	28.7	34.0	31.5	27.1	27.3	27.8	24.9	24.2	13.3	20.0	-10.3
Russia	8.0	31.6	30.2	26.6	31.0	29.8	22.0	17.4	27.6	54.9	24.1	6.3
Saudi Arabia	30.0	29.8	28.2	24.1	27.2	31.8	36.9	32.0	24.0	35.7	30.3	n.m.
Sierra Leone	0.1	0.4	0.5	0.5	1.0	1.2	1.2	0.6	1.2	1.1	1.9	8.0
Singapore	34.2	37.7	43.5	51.1	53.5	61.4	65.8	26.4	72.7	73.5	65.0	4.8
South Africa	18.8	20.8	24.3	26.7	29.3	31.1	36.5	38.9	39.0	28.1	36.7	0.1
Spain	53.1	45.4	51.8	46.1	61.5	85.3	76.0	85.1	112.0	108.3	144.4	12.0
Switzerland	66.1	66.1	73.0	77.3	91.9	98.0	102.1	81.7	118.1	98.0	125.6	4.3
Taiwan	82.4	88.7	93.9	108.5	112.2	139.1	152.9	121.8	167.0	170.5	162.6	4.2
Thailand	15.8	18.9	22.6	26.3	29.7	26.3	32.2	23.5	25.6	30.2	32.4	2.7
Turkey	16.0	16.8	17.8	21.1	25.9	25.0	28.4	27.0	25.9	24.6	30.3	1.4
United Kingdom	501.6	546.7	590.0	690.7	737.7	945.5	1,175.2	1,119.1	1,001.9	1,351.7	1,370.0	6.4
Viet Nam	0.4	1.0	2.1	3.1	5.2	4.1	4.5	7.4	4.5	5.0	4.7	1.5
Total for Countries Shown Above	4,564.3	4,903.4	5,418.6	6,060.8	7,219.9	7,880.8	8,865.7	9,550.2	11,520.6	12,049.8	12,153.4	9.8 %
Total for Other Countries	805.5	882.7	966.3	989.7	1,073.2	1,289.3	1,332.8	1,214.8	1,367.6	1,428.2	1,523.4	3.4
Total for All Countries	5,369.7	5,786.0	6,384.9	7,050.6	8,293.2	9,170.0	10,198.5	10,765.0	12,888.2	13,478.0	13,676.8	9.0
Total for 5 Largest Routes	58.5%	58.5%	58.3%	59.7%	62.6%	62.1%	62.0%	63.2%	65.3%	66.3%	61.9%	
Canada, India Mexico, Philippines and UK as Percent of Total	50.4%	50.5%	50.7%	52.3%	55.9%	55.8%	56.2%	58.0%	60.9%	61.4%	54.4%	
Other Countries Shown Above as Percent of Total	34.6%	34.2%	34.2%	33.7%	31.2%	30.2%	30.7%	30.7%	28.5%	28.0%	34.5%	
Countries not Shown Above as Percent of Total	15.0%	15.3%	15.1%	14.0%	12.9%	14.1%	13.1%	11.3%	10.6%	10.6%	11.1%	

See notes at the end of the tables.

**Table 8**  
**U.S. Billed Revenues for International Telephone Service 1/**  
**For Selected International Points**  
**(In Millions)**

U.S. Billed Revenues	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	Percent Change 1997 to 2002
Australia	\$150.1	\$158.0	\$170.6	\$202.5	\$192.2	\$118.4	\$186.3	\$220.2	\$250.3	\$191.4	136.2	15.1 %
Brazil	163.1	181.5	215.0	271.3	290.7	362.2	382.0	336.1	304.9	194.0	179.4	-50.5
Canada	872.5	1,027.2	991.9	1,039.8	1,020.1	1,203.4	1,195.0	1,204.1	1,221.0	920.8	928.6	-22.8
China	138.5	198.5	261.2	338.7	383.9	434.7	375.8	289.7	238.2	116.1	95.2	-78.1
Colombia	198.6	215.1	232.3	257.5	242.6	234.8	168.2	208.6	163.6	114.1	73.6	-68.7
Dominican Republic	242.8	249.5	262.3	342.9	292.8	216.5	197.8	202.4	168.1	143.6	149.8	-30.8
Egypt	58.4	66.2	72.2	85.9	93.9	113.5	108.0	137.0	66.2	75.0	80.6	-29.0
El Salvador	119.2	132.4	144.7	166.9	165.7	167.6	161.0	163.3	180.2	105.3	186.6	11.3
France	250.4	261.9	277.9	294.6	274.4	323.2	280.8	204.7	222.1	239.2	143.0	-55.7
Germany	610.7	600.9	575.5	581.6	510.1	505.8	458.4	544.0	410.4	340.3	301.4	-40.4
Greece	82.0	86.1	87.9	95.0	90.4	94.3	91.9	112.9	132.2	64.7	47.4	-49.8
Guatemala	104.0	111.7	121.7	134.8	137.3	127.4	120.8	126.0	146.1	138.4	300.1	135.6
Haiti	58.7	64.5	77.1	86.5	78.5	75.4	71.3	77.9	48.6	31.3	35.9	-52.4
Hong Kong	166.6	195.7	230.4	283.2	319.8	318.1	199.7	104.8	72.7	52.6	58.4	-81.6
India	208.0	252.8	298.5	395.3	433.9	561.2	610.5	634.5	799.4	685.4	600.2	6.9
Israel	184.2	203.3	215.6	248.6	235.5	215.3	174.8	171.8	106.5	87.4	79.0	-63.3
Italy	223.3	241.2	255.8	278.4	265.8	352.0	358.5	410.4	273.2	231.1	183.0	-48.0
Jamaica	132.4	152.6	176.4	192.9	201.3	202.1	213.2	233.0	166.8	138.7	165.3	-18.2
Japan	484.3	494.2	490.9	573.8	537.8	529.6	371.8	368.3	320.3	259.2	265.7	-49.8
Korea, Republic of	304.2	325.6	325.6	347.3	355.2	379.2	307.9	226.1	200.3	157.0	125.4	-66.9
Mexico	1,217.1	1,400.0	1,547.8	1,700.8	1,775.7	1,850.0	1,794.2	2,027.8	2,858.7	1,471.1	1,346.3	-27.2
Morocco	11.2	12.2	14.4	18.2	16.8	18.3	13.7	47.1	21.0	22.1	20.9	14.3
Netherlands	95.2	109.8	112.3	128.0	118.3	112.6	108.5	134.9	111.3	107.7	84.1	-25.3
Nigeria	39.1	44.9	42.9	56.5	65.0	83.6	109.7	88.8	44.6	38.2	30.0	-64.1
Pakistan	113.8	116.8	130.9	164.1	166.2	184.4	202.9	225.8	305.5	235.9	176.8	-4.1
Peru	91.3	95.5	109.4	125.7	126.1	144.2	144.4	161.9	79.7	53.3	31.7	-78.0
Philippines	304.6	315.8	345.8	382.3	383.9	435.5	424.0	470.3	488.0	514.9	583.1	33.9
Poland	81.1	86.1	98.9	113.8	117.8	129.2	107.8	110.9	108.6	137.9	71.1	-44.9
Russia	61.7	88.6	115.9	123.3	129.0	142.9	107.8	120.0	79.6	46.1	35.4	-75.2
Saudi Arabia	82.2	95.3	96.9	106.1	106.4	118.8	108.3	97.5	82.3	96.3	53.1	-55.3
Sierra Leone	8.4	8.7	8.6	10.4	10.8	13.0	18.8	7.5	2.9	7.7	8.3	-36.6
Singapore	69.9	78.4	87.0	107.6	126.3	112.8	93.9	69.7	59.6	54.9	60.2	-46.6
South Africa	38.4	38.8	50.6	69.8	66.8	87.6	87.1	92.8	73.9	43.7	34.9	-60.1
Spain	117.4	120.9	127.9	140.4	138.5	150.6	176.6	207.2	188.6	117.2	87.2	-42.1
Switzerland	100.8	107.9	116.1	119.6	111.9	112.5	96.2	102.7	78.7	63.6	48.1	-57.3
Taiwan	230.7	239.3	237.5	263.6	238.2	260.4	205.8	181.2	166.3	110.8	70.3	-73.0
Thailand	85.9	96.0	99.8	117.1	117.4	127.2	113.9	101.3	85.2	57.2	32.5	-74.4
Turkey	46.4	53.0	56.9	61.5	61.6	66.3	97.8	132.4	80.3	53.2	55.0	-17.0
United Kingdom	666.9	699.5	719.4	750.7	699.2	761.4	659.4	693.5	693.9	700.3	423.9	-44.3
Viet Nam	16.2	46.7	82.8	127.1	153.8	209.7	216.8	213.7	282.6	246.8	128.7	-38.6
Total for Countries Shown Above	8,230.4	9,073.3	9,685.2	10,904.3	10,851.9	11,655.6	10,921.1	11,262.5	11,382.7	8,464.4	7,516.5	-35.5 %
Total for Other Countries	2,100.9	2,431.2	2,745.6	3,144.2	3,406.0	3,594.8	3,325.3	3,265.0	2,789.5	2,380.0	1,930.0	-46.3
Total for All Countries	10,331.3	11,504.5	12,430.9	14,159.8	14,234.1	15,250.4	14,246.4	14,527.6	14,172.2	10,844.4	9,446.4	-38.1
Canada, India Mexico, Philippines and UK as Percent of Total	31.6%	32.1%	31.4%	30.1%	30.3%	31.5%	32.9%	34.6%	42.8%	39.6%	41.1%	
Other Countries Shown Above as Percent of Total	48.0%	46.7%	46.5%	46.9%	45.9%	44.9%	43.8%	42.9%	37.6%	38.5%	38.5%	
Countries not Shown Above as Percent of Total	20.3%	21.1%	22.1%	23.0%	23.8%	23.6%	23.3%	22.5%	19.7%	21.9%	20.4%	

See notes at the end of the tables.

**Table 9**  
**U.S. Billed Revenues per Minute for International Telephone Service**  
**For Selected International Points**

Billed Revenues per Minute	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	Percent Change 1997 to 2002
Australia	\$1.32	\$1.25	\$1.09	\$1.01	\$0.68	\$0.30	\$0.42	\$0.55	\$0.51	\$0.38	\$0.27	-10.3 %
Brazil	1.13	1.06	0.97	0.96	0.78	0.73	0.67	0.57	0.45	0.25	0.22	-69.2
Canada	0.39	0.41	0.36	0.34	0.29	0.31	0.31	0.28	0.26	0.19	0.19	-37.6
China	2.02	1.80	1.54	1.47	1.28	1.14	0.90	0.73	0.48	0.29	0.24	-79.0
Colombia	1.15	1.07	1.01	1.00	0.84	0.89	0.77	0.65	0.43	0.26	0.21	-77.0
Dominican Republic	0.97	0.98	0.83	0.84	0.70	0.57	0.45	0.27	0.25	0.20	0.15	-73.9
Egypt	1.33	1.35	1.27	1.25	1.04	1.03	0.97	0.81	0.70	0.44	0.28	-73.3
El Salvador	1.19	1.24	1.20	1.23	1.17	1.08	0.81	0.69	0.60	0.32	0.28	-74.2
France	1.04	0.99	0.91	0.81	0.62	0.63	0.50	0.35	0.41	0.33	0.22	-65.4
Germany	1.08	1.05	0.95	0.88	0.65	0.50	0.40	0.37	0.33	0.38	0.29	-43.2
Greece	1.17	1.14	1.07	1.10	0.99	0.97	0.80	0.61	0.62	0.25	0.27	-71.7
Guatemala	1.18	1.19	1.15	1.17	1.07	1.00	0.83	0.66	0.63	0.38	0.33	-67.0
Haiti	1.21	1.22	1.23	1.18	0.99	0.81	0.72	0.57	0.51	0.47	0.33	-58.7
Hong Kong	1.46	1.37	1.08	0.90	0.59	0.47	0.35	0.54	0.45	0.19	0.34	-27.4
India	2.13	1.88	1.56	1.38	1.01	0.96	0.81	0.66	0.64	0.51	0.40	-58.7
Israel	1.34	1.25	1.10	1.16	0.98	1.01	0.79	0.47	0.35	0.33	0.26	-74.6
Italy	1.08	1.05	1.02	1.00	0.79	0.74	0.70	0.59	0.55	0.34	0.25	-65.7
Jamaica	1.06	1.05	1.05	1.03	0.91	0.80	0.74	0.64	0.58	0.37	0.32	-60.5
Japan	1.32	1.23	1.05	1.00	0.76	0.62	0.47	0.45	0.37	0.29	0.32	-48.3
Korea, Republic of	1.46	1.36	1.15	1.09	0.93	0.89	0.81	0.70	0.60	0.36	0.32	-64.1
Mexico	0.95	1.00	0.93	0.85	0.74	0.67	0.60	0.50	0.52	0.29	0.27	-59.5
Morocco	1.36	1.33	1.23	1.35	1.19	1.27	0.84	0.73	0.62	0.43	0.24	-81.5
Netherlands	1.03	1.02	0.86	0.78	0.57	0.50	0.40	0.44	0.47	0.38	0.21	-58.4
Nigeria	1.14	1.17	1.09	1.08	0.86	0.79	0.68	0.67	0.42	0.41	0.31	-61.5
Pakistan	1.77	1.70	1.56	1.53	1.24	1.12	0.99	0.74	0.67	0.46	0.29	-74.2
Peru	1.14	1.07	1.03	1.03	0.87	0.87	0.80	0.67	0.49	0.31	0.20	-77.5
Philippines	1.52	1.41	1.29	1.29	1.08	0.96	0.76	0.62	0.47	0.31	0.26	-73.4
Poland	1.10	1.06	0.90	0.85	0.73	0.76	0.57	0.41	0.39	0.37	0.26	-65.2
Russia	1.99	1.94	1.82	1.57	1.28	1.17	0.69	0.62	0.43	0.27	0.24	-79.6
Saudi Arabia	1.34	1.41	1.25	1.20	1.05	1.08	1.00	0.88	0.75	0.53	0.30	-72.6
Sierra Leone	1.93	1.94	1.78	1.80	1.22	1.07	0.47	0.75	0.61	0.83	0.43	-60.0
Singapore	1.48	1.38	1.19	1.08	0.85	0.56	0.56	0.58	0.52	0.44	0.55	-0.7
South Africa	1.32	1.07	0.94	0.95	0.69	0.78	0.68	0.57	0.64	0.34	0.46	-41.1
Spain	1.11	1.10	1.07	1.08	0.94	0.79	0.72	0.63	0.55	0.36	0.24	-69.9
Switzerland	1.08	1.03	1.01	0.88	0.62	0.46	0.49	0.43	0.44	0.29	0.18	-61.0
Taiwan	1.42	1.30	1.05	0.97	0.74	0.69	0.63	0.54	0.47	0.32	0.27	-60.8
Thailand	1.61	1.53	1.27	1.27	1.02	1.09	0.94	0.86	0.65	0.34	0.22	-79.5
Turkey	1.23	1.32	1.25	1.20	1.04	1.06	0.91	0.55	0.50	0.26	0.21	-79.9
United Kingdom	0.91	0.87	0.79	0.73	0.57	0.49	0.42	0.41	0.43	0.36	0.19	-60.3
Viet Nam	2.29	2.27	1.83	1.71	1.35	1.27	1.13	0.85	0.90	0.87	0.51	-59.8
Average for Countries Shown Above	0.96	0.95	0.86	0.83	0.69	0.62	0.55	0.48	0.45	0.31	0.26	-58.8 %
Average for Other Countries	1.23	1.26	1.14	1.14	0.98	0.90	0.75	0.63	0.57	0.39	0.29	-67.5
Average for All Countries	1.00	1.00	0.91	0.89	0.74	0.67	0.59	0.51	0.47	0.33	0.26	-60.8
Canada, India Mexico, Philippines and UK as Percent of Total	0.72	0.73	0.67	0.64	0.55	0.52	0.48	0.43	0.43	0.29	0.25	
Average for Other Countries Shown Above	1.23	1.19	1.07	1.03	0.82	0.72	0.62	0.54	0.48	0.34	0.27	

See notes at the end of the tables.

**Table 10**  
**Net Settlement Payouts for International Telephone Service 1/**  
**For Selected International Points**  
**(In Millions)**

Net Settlement Payouts	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	Percent Change 1997 to 2002
Australia	(\$0.8)	(\$6.1)	(\$19.0)	\$8.7	\$21.9	\$37.2	\$26.5	\$55.6	\$71.1	\$20.2	15.7	-57.7 %
Brazil	71.0	90.7	104.2	102.7	132.9	153.7	129.8	87.1	77.5	61.9	40.0	-74.0
Canada	121.1	130.2	136.7	125.4	99.7	73.9	77.4	47.8	6.0	11.6	(2.5)	n.m.
China	62.9	77.7	152.1	231.0	263.2	233.9	140.6	122.7	97.3	43.0	15.7	-93.3
Colombia	96.2	111.7	122.9	131.9	139.2	110.5	56.2	68.9	75.1	47.9	25.9	-76.6
Dominican Republic	130.0	120.2	126.5	125.4	111.4	84.7	93.5	107.8	43.3	18.3	34.5	-59.3
Egypt	33.4	33.3	37.0	41.7	55.8	64.7	55.1	78.3	35.9	32.2	40.3	-37.7
El Salvador	64.0	65.0	69.6	77.1	75.0	67.6	70.9	60.4	52.9	51.8	56.4	-16.5
France	38.9	40.7	41.5	44.2	45.3	39.3	22.7	18.2	18.7	57.3	45.0	14.5
Germany	188.1	129.4	79.4	64.2	53.0	66.4	51.9	33.2	64.3	36.1	54.8	-17.4
Greece	39.6	38.7	36.0	33.9	26.6	25.4	20.6	25.1	18.2	15.1	9.0	-64.6
Guatemala	47.7	52.1	56.7	58.7	64.0	53.2	41.0	46.7	57.5	57.8	71.6	34.6
Haiti	28.1	30.9	34.6	37.1	42.7	52.5	54.1	61.8	34.8	26.9	19.8	-62.3
Hong Kong	24.9	33.9	56.7	106.3	207.8	237.6	158.0	13.4	5.4	9.0	1.9	-99.2
India	32.0	58.2	109.4	202.9	298.1	409.7	417.6	523.1	542.0	493.8	372.8	-9.0
Israel	93.5	105.0	128.5	119.1	103.4	41.5	12.6	16.7	11.9	2.1	8.2	-80.2
Italy	60.2	85.2	72.3	65.9	51.8	63.1	54.3	66.4	37.9	46.2	70.2	11.3
Jamaica	64.7	78.4	93.1	99.4	115.5	132.3	154.9	154.5	89.7	61.6	67.2	-49.2
Japan	39.0	52.6	76.7	119.3	169.0	210.7	65.9	61.1	43.8	39.2	42.1	-80.0
Korea, Republic of	92.8	103.2	111.0	118.7	122.1	101.5	18.4	32.3	6.8	12.7	8.9	-91.2
Mexico	677.7	720.0	818.9	871.7	875.0	703.3	648.9	652.3	755.7	471.2	421.9	-40.0
Morocco	7.9	7.5	9.8	11.0	5.5	3.4	1.4	17.1	6.4	7.8	17.8	n.m.
Netherlands	10.2	8.0	10.8	22.3	22.8	16.5	11.3	(0.1)	7.8	11.8	12.6	-23.7
Nigeria	17.0	18.8	9.5	8.5	41.7	68.5	100.3	70.9	31.3	18.1	18.1	-73.6
Pakistan	63.8	69.8	88.1	107.3	127.6	120.3	114.6	152.3	185.4	144.4	139.1	15.6
Peru	54.3	53.4	58.7	62.1	72.3	74.6	64.0	62.2	23.1	20.7	18.0	-75.9
Philippines	155.7	144.0	150.7	154.2	162.1	164.7	150.5	187.1	144.8	190.3	211.3	28.3
Poland	32.4	31.8	42.1	52.3	57.9	43.6	36.9	48.1	31.5	27.7	27.5	-36.8
Russia	29.7	20.8	39.0	60.6	67.1	44.4	35.8	55.9	27.9	14.7	8.6	-80.7
Saudi Arabia	30.6	37.7	50.2	66.9	77.6	71.2	53.5	46.6	18.7	26.6	36.4	-49.0
Sierra Leone	3.3	3.7	3.6	3.6	4.8	6.5	10.0	3.3	1.5	2.8	4.1	-37.1
Singapore	4.8	7.8	13.1	22.4	42.6	56.6	26.3	11.6	6.6	3.3	(0.2)	n.m.
South Africa	9.2	13.0	18.1	27.0	35.6	37.0	34.7	37.7	21.3	22.0	6.4	-82.8
Spain	49.0	54.9	55.7	53.0	36.2	21.2	26.1	25.6	20.7	15.1	28.0	32.2
Switzerland	13.4	15.6	17.9	19.3	22.7	23.5	14.0	18.0	8.4	13.2	16.8	-28.6
Taiwan	43.7	48.9	79.1	95.0	118.4	133.9	42.3	27.8	21.9	18.6	4.4	-96.7
Thailand	32.8	36.2	44.8	50.7	64.1	57.3	34.4	27.5	20.2	43.7	16.0	-72.1
Turkey	20.4	21.3	26.0	24.0	18.9	16.6	28.4	69.4	32.4	31.1	32.7	96.9
United Kingdom	72.6	67.3	77.1	55.3	41.1	23.4	(15.9)	25.9	12.7	14.8	1.3	-94.6
Viet Nam	8.0	21.5	40.4	62.3	94.1	139.8	151.0	179.4	209.2	171.5	116.1	-16.9
Total for Countries Shown Above	2,663.9	2,832.9	3,279.5	3,743.2	4,186.2	4,085.2	3,290.7	3,399.6	2,977.3	2,414.2	2,134.1	-47.8 %
Total for Other Countries	693.4	872.0	1,011.3	1,194.7	1,472.3	1,343.9	1,193.4	1,201.9	949.9	931.4	847.0	-37.0
Total for All Countries	3,357.2	3,705.0	4,290.9	4,937.8	5,658.4	5,429.2	4,484.1	4,601.5	3,927.2	3,345.6	2,981.1	-45.1
Canada, India Mexico, Philippines and UK as Percent of Total	31.5%	30.2%	30.1%	28.5%	26.1%	25.3%	28.5%	31.2%	37.2%	35.3%	33.7%	
Other Countries Shown Above as Percent of Total	47.8%	46.2%	46.3%	47.3%	47.9%	49.9%	44.9%	42.7%	38.6%	36.8%	37.9%	
Countries not Shown Above as Percent of Total	20.7%	23.5%	23.6%	24.2%	26.0%	24.8%	26.6%	26.1%	24.2%	27.8%	28.4%	

See notes at the end of the tables.



**Table 11**  
**Submarine and Terrestrial Circuits in Service 16/**  
**For Selected International Points**

Cable & Terrestrial Circuits	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	Percent Change 1997 to 2002
Australia	n.a.	n.a.	n.a.	2,874	4,416	8,201	8,819	21,740	40,241	94,186	103,601	1163.3 %
Brazil	n.a.	n.a.	n.a.	1,264	2,119	3,229	4,423	5,986	27,233	31,382	31,106	863.3
Canada	n.a.	n.a.	n.a.	51,223	65,440	124,489	108,235	185,171	393,519	465,547	391,446	214.4
China	n.a.	n.a.	n.a.	409	744	1,013	1,469	4,463	16,475	54,601	47,955	4634.0
Colombia	n.a.	n.a.	n.a.	914	1,166	1,190	1,371	1,671	4,059	6,908	6,908	480.5
Dominican Republic	n.a.	n.a.	n.a.	1,477	1,464	1,512	2,128	2,009	2,696	3,559	8,472	460.3
Egypt	n.a.	n.a.	n.a.	30	63	115	257	296	281	181	245	113.0
El Salvador	n.a.	n.a.	n.a.	120	0	114	185	279	234	354	5,972	5138.6
France	n.a.	n.a.	n.a.	2,622	5,351	6,312	6,703	15,714	26,172	31,352	27,015	328.0
Germany	n.a.	n.a.	n.a.	3,532	8,449	12,909	12,735	33,710	101,669	83,327	124,648	865.6
Greece	n.a.	n.a.	n.a.	142	278	349	174	474	575	2,577	425	21.8
Guatemala	n.a.	n.a.	n.a.	0	0	34	145	134	219	326	1,063	3026.5
Haiti	n.a.	n.a.	n.a.	90	60	60	61	88	88	152	148	146.7
Hong Kong	n.a.	n.a.	n.a.	1,406	2,581	4,041	5,748	10,537	15,516	20,489	72,739	1700.0
India	n.a.	n.a.	n.a.	608	1,041	1,453	1,008	3,793	5,619	11,982	25,172	1632.4
Israel	n.a.	n.a.	n.a.	528	863	1,291	1,923	3,557	3,575	4,330	3,699	186.5
Italy	n.a.	n.a.	n.a.	1,534	2,254	2,334	2,840	3,140	12,847	32,240	34,409	1374.3
Jamaica	n.a.	n.a.	n.a.	273	263	228	445	470	586	995	1,139	399.6
Japan	n.a.	n.a.	n.a.	6,435	12,786	16,303	20,047	62,391	125,321	173,099	219,871	1248.7
Korea, Republic of	n.a.	n.a.	n.a.	1,105	2,379	5,548	5,919	11,488	38,940	63,904	40,707	633.7
Mexico	n.a.	n.a.	n.a.	24,860	41,059	60,083	69,250	104,348	169,052	228,618	232,473	286.9
Morocco	n.a.	n.a.	n.a.	61	62	62	64	59	60	63	59	-4.8
Netherlands	n.a.	n.a.	n.a.	1,808	2,985	3,230	8,182	23,103	68,439	66,064	223,794	6828.6
Nigeria	n.a.	n.a.	n.a.	0	30	0	0	0	66	2	2	n.m.
Pakistan	n.a.	n.a.	n.a.	0	32	0	1	5	316	559	797	n.m.
Peru	n.a.	n.a.	n.a.	0	0	0	0	313	900	1,915	3,122	n.m.
Philippines	n.a.	n.a.	n.a.	1,804	2,265	3,616	4,546	5,109	6,435	11,885	19,696	444.7
Poland	n.a.	n.a.	n.a.	347	580	659	928	961	957	884	886	34.4
Russia	n.a.	n.a.	n.a.	677	659	1,267	1,681	2,610	3,271	1,285	1,188	-6.2
Saudi Arabia	n.a.	n.a.	n.a.	90	150	179	149	210	210	2,669	277	54.7
Sierra Leone	n.a.	n.a.	n.a.	0	0	0	0	0	0	0	0	n.m.
Singapore	n.a.	n.a.	n.a.	597	1,449	2,048	2,584	9,241	25,045	39,525	63,717	3011.2
South Africa	n.a.	n.a.	n.a.	174	357	523	577	575	581	1,930	501	-4.2
Spain	n.a.	n.a.	n.a.	1,136	1,353	2,685	2,978	2,540	2,893	35,750	4,686	n.m.
Switzerland	n.a.	n.a.	n.a.	1,156	1,553	2,347	3,825	8,561	8,999	20,684	71,521	2947.3
Taiwan	n.a.	n.a.	n.a.	1,058	1,825	2,501	3,204	7,167	12,784	30,095	28,842	1053.2
Thailand	n.a.	n.a.	n.a.	140	256	599	879	1,149	1,418	6,498	7,095	1084.5
Turkey	n.a.	n.a.	n.a.	149	238	343	194	414	356	2,922	304	-11.4
United Kingdom	n.a.	n.a.	n.a.	14,952	32,034	41,537	104,039	300,402	701,941	667,809	691,695	1565.3
Viet Nam	n.a.	n.a.	n.a.	1	210	508	534	582	547	589	829	63.2
Total for Countries Shown Above	n.a.	n.a.	n.a.	125,596	198,814	312,912	388,250	834,460	1,820,135	2,201,237	2,498,224	698.4 %
Total for Other Countries	n.a.	n.a.	n.a.	12,917	18,465	27,800	39,206	46,262	70,819	121,389	266,329	858.0
Total for All Countries	n.a.	n.a.	n.a.	138,513	217,279	340,712	427,456	880,722	1,890,954	2,322,626	2,764,553	711.4
Canada, India Mexico, Philippines and UK as Percent of Total	n.a.	n.a.	n.a.	67.5%	65.3%	67.9%	67.2%	68.0%	67.5%	59.7%	49.2%	
Other Countries Shown Above as Percent of Total	n.a.	n.a.	n.a.	23.2%	26.2%	24.0%	23.7%	26.8%	28.7%	35.1%	41.2%	
Countries not Shown Above as Percent of Total	n.a.	n.a.	n.a.	9.3%	8.5%	8.2%	9.2%	5.3%	3.7%	5.2%	9.6%	

See notes at the end of the tables.

**Table 12**  
**Satellite Circuits in Service 16/**  
**For Selected International Points**

Activated Satellite Circuits	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	Percent Change 1997 to 2002
Australia	n.a.	n.a.	n.a.	293	291	271	232	4,040	2,508	3,609	4,277	1478.2 %
Brazil	n.a.	n.a.	n.a.	633	645	852	1,252	3,914	4,096	1,260	735	-13.7
Canada	n.a.	n.a.	n.a.	1,272	647	1,992	634	1,284	1,763	504	3	-99.8
China	n.a.	n.a.	n.a.	705	852	914	996	969	10,094	6,771	6,854	649.9
Colombia	n.a.	n.a.	n.a.	346	400	695	724	2,062	3,180	3,678	3,208	361.6
Dominican Republic	n.a.	n.a.	n.a.	683	971	1,339	629	636	612	440	469	-65.0
Egypt	n.a.	n.a.	n.a.	210	199	226	289	2,347	423	360	366	61.9
El Salvador	n.a.	n.a.	n.a.	237	408	407	469	1,068	1,950	1,387	1,233	202.9
France	n.a.	n.a.	n.a.	300	345	343	343	22	22	56	62	-81.9
Germany	n.a.	n.a.	n.a.	455	75	347	257	612	449	392	274	-21.0
Greece	n.a.	n.a.	n.a.	198	201	224	163	317	770	1,079	914	308.0
Guatemala	n.a.	n.a.	n.a.	338	415	423	502	578	894	809	697	64.8
Haiti	n.a.	n.a.	n.a.	311	201	194	195	290	432	816	854	340.2
Hong Kong	n.a.	n.a.	n.a.	275	356	333	208	2,215	1,416	653	31	-90.7
India	n.a.	n.a.	n.a.	690	862	768	955	840	772	867	1,386	80.5
Israel	n.a.	n.a.	n.a.	300	483	635	458	2,915	7,128	1,361	1	-99.8
Italy	n.a.	n.a.	n.a.	177	318	223	346	296	187	41	38	-83.0
Jamaica	n.a.	n.a.	n.a.	374	431	489	460	841	899	1,858	1,540	214.9
Japan	n.a.	n.a.	n.a.	1,393	1,171	1,033	933	1,057	3,100	276	727	-29.6
Korea, Republic of	n.a.	n.a.	n.a.	534	640	493	481	460	745	580	291	-41.0
Mexico	n.a.	n.a.	n.a.	78	74	472	286	56	107	891	788	66.9
Morocco	n.a.	n.a.	n.a.	33	34	58	60	72	83	75	85	46.6
Netherlands	n.a.	n.a.	n.a.	91	43	43	43	21	21	32	30	-30.2
Nigeria	n.a.	n.a.	n.a.	242	185	235	328	591	743	1,035	1,170	397.9
Pakistan	n.a.	n.a.	n.a.	269	339	339	368	442	578	565	539	59.0
Peru	n.a.	n.a.	n.a.	344	528	687	799	1,418	1,287	593	1,416	106.1
Philippines	n.a.	n.a.	n.a.	206	137	48	19	11	897	380	394	720.8
Poland	n.a.	n.a.	n.a.	224	259	258	258	257	249	258	289	12.0
Russia	n.a.	n.a.	n.a.	613	694	554	461	455	737	231	120	-78.3
Saudi Arabia	n.a.	n.a.	n.a.	317	365	396	380	533	545	805	823	107.8
Sierra Leone	n.a.	n.a.	n.a.	17	31	31	31	31	32	66	73	135.5
Singapore	n.a.	n.a.	n.a.	306	291	213	214	394	210	244	193	-9.4
South Africa	n.a.	n.a.	n.a.	169	278	322	514	398	1,684	5,793	5,819	1707.1
Spain	n.a.	n.a.	n.a.	61	102	124	166	67	164	145	62	-50.0
Switzerland	n.a.	n.a.	n.a.	176	116	2	0	0	4	4,744	4,744	n.m.
Taiwan	n.a.	n.a.	n.a.	171	148	132	127	130	2,224	761	773	485.6
Thailand	n.a.	n.a.	n.a.	286	400	320	193	205	158	112	84	-73.8
Turkey	n.a.	n.a.	n.a.	80	189	136	138	389	2,992	3,925	1,449	965.4
United Kingdom	n.a.	n.a.	n.a.	1,229	441	202	211	460	2,219	1,433	2,324	1050.5
Viet Nam	n.a.	n.a.	n.a.	194	308	188	188	157	235	155	163	-13.3
Total for Countries Shown Above	n.a.	n.a.	n.a.	14,830	14,873	16,961	15,310	32,850	56,609	49,040	45,298	167.1 %
Total for Other Countries	n.a.	n.a.	n.a.	11,075	14,399	20,410	21,346	27,975	36,107	33,040	35,011	71.5
Total for All Countries	n.a.	n.a.	n.a.	25,905	29,272	37,371	36,656	60,825	92,716	82,080	80,309	114.9
Canada, India Mexico, Philippines and UK as Percent of Total	n.a.	n.a.	n.a.	13.4%	7.4%	9.3%	5.7%	4.4%	6.2%	5.0%	6.1%	
Other Countries Shown Above as Percent of Total	n.a.	n.a.	n.a.	43.8%	43.4%	36.1%	36.0%	49.6%	54.8%	54.8%	50.3%	
Countries not Shown Above as Percent of Total	n.a.	n.a.	n.a.	42.8%	49.2%	54.6%	58.2%	46.0%	38.9%	40.3%	43.6%	

See notes at the end of the tables.

**Table 13**  
**Circuits Used for International Telephone Service 16/**  
**For Selected International Points**

IMTS Circuits	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	Percent Change 1997 to 2002
Australia	n.a.	n.a.	n.a.	2,310	2,247	4,173	3,494	2,521	3,366	5,845	9,292	122.7 %
Brazil	n.a.	n.a.	n.a.	1,430	1,530	1,595	2,030	1,919	2,639	3,318	5,724	258.9
Canada	n.a.	n.a.	n.a.	44,384	41,869	50,501	54,909	77,798	80,874	140,285	125,435	148.4
China	n.a.	n.a.	n.a.	1,058	1,290	1,501	1,606	1,673	1,557	1,761	1,585	5.6
Colombia	n.a.	n.a.	n.a.	1,026	1,178	1,137	1,168	1,373	1,699	2,566	4,008	252.5
Dominican Republic	n.a.	n.a.	n.a.	1,555	1,661	2,156	2,310	1,973	2,258	2,725	3,266	51.5
Egypt	n.a.	n.a.	n.a.	235	203	215	278	270	300	332	407	89.3
El Salvador	n.a.	n.a.	n.a.	338	359	390	474	637	690	721	988	153.3
France	n.a.	n.a.	n.a.	2,143	2,810	3,142	4,389	5,336	5,896	8,595	13,738	337.2
Germany	n.a.	n.a.	n.a.	2,706	3,835	5,120	5,595	9,244	11,315	12,472	20,880	307.8
Greece	n.a.	n.a.	n.a.	314	330	404	285	373	524	477	507	25.5
Guatemala	n.a.	n.a.	n.a.	308	365	368	465	503	702	633	1,247	238.9
Haiti	n.a.	n.a.	n.a.	392	246	244	240	236	298	328	358	46.7
Hong Kong	n.a.	n.a.	n.a.	779	1,007	1,273	1,227	1,313	1,657	2,783	2,553	100.5
India	n.a.	n.a.	n.a.	1,004	1,358	1,418	1,144	1,453	1,839	1,993	3,529	148.9
Israel	n.a.	n.a.	n.a.	676	860	1,082	1,018	1,141	1,357	1,306	1,307	20.8
Italy	n.a.	n.a.	n.a.	1,545	1,772	1,700	2,234	2,635	2,740	4,965	15,613	818.4
Jamaica	n.a.	n.a.	n.a.	587	620	639	771	668	802	1,041	969	51.6
Japan	n.a.	n.a.	n.a.	4,888	5,629	6,582	7,041	8,681	11,133	10,764	15,125	129.8
Korea, Republic of	n.a.	n.a.	n.a.	1,143	1,492	2,246	2,299	2,678	2,858	2,807	3,037	35.2
Mexico	n.a.	n.a.	n.a.	23,270	27,812	37,030	40,350	52,280	64,529	71,216	83,465	125.4
Morocco	n.a.	n.a.	n.a.	91	89	113	115	112	114	114	113	0.0
Netherlands	n.a.	n.a.	n.a.	1,224	1,073	1,179	2,087	1,831	3,401	3,497	3,012	155.5
Nigeria	n.a.	n.a.	n.a.	232	208	232	294	364	365	303	333	43.5
Pakistan	n.a.	n.a.	n.a.	268	329	269	300	305	443	813	1,115	314.5
Peru	n.a.	n.a.	n.a.	277	343	383	404	540	758	593	1,089	184.3
Philippines	n.a.	n.a.	n.a.	1,856	2,003	2,835	3,125	3,143	3,862	6,588	10,642	275.4
Poland	n.a.	n.a.	n.a.	554	744	760	1,089	1,085	1,105	1,057	1,129	48.6
Russia	n.a.	n.a.	n.a.	1,108	1,052	1,266	1,269	1,541	1,455	1,160	1,158	-8.5
Saudi Arabia	n.a.	n.a.	n.a.	319	378	461	297	328	358	478	518	12.4
Sierra Leone	n.a.	n.a.	n.a.	16	27	27	27	27	24	38	38	40.7
Singapore	n.a.	n.a.	n.a.	378	623	641	835	867	975	1,181	1,990	210.5
South Africa	n.a.	n.a.	n.a.	259	382	423	432	432	524	579	656	55.1
Spain	n.a.	n.a.	n.a.	1,120	1,209	1,722	1,990	1,463	2,726	3,982	3,939	128.7
Switzerland	n.a.	n.a.	n.a.	927	952	1,237	2,251	1,991	2,799	4,586	3,912	216.2
Taiwan	n.a.	n.a.	n.a.	1,070	1,377	1,635	1,368	1,647	1,586	1,768	2,201	34.6
Thailand	n.a.	n.a.	n.a.	342	357	439	490	487	460	489	580	32.1
Turkey	n.a.	n.a.	n.a.	180	233	287	209	321	355	385	351	22.3
United Kingdom	n.a.	n.a.	n.a.	8,530	13,149	18,197	25,444	54,789	48,762	42,226	50,163	175.7
Viet Nam	n.a.	n.a.	n.a.	191	508	661	662	643	601	571	571	-13.6
Total for Countries Shown Above	n.a.	n.a.	n.a.	111,033	123,509	155,683	176,015	246,621	269,706	347,341	396,543	154.7 %
Total for Other Countries	n.a.	n.a.	n.a.	20,689	22,599	26,674	28,790	30,805	32,901	36,299	52,127	95.4
Total for All Countries	n.a.	n.a.	n.a.	131,722	146,108	182,357	204,805	277,426	302,607	383,640	448,670	146.0
Canada, India Mexico, Philippines and UK as Percent of Total	n.a.	n.a.	n.a.	60.0%	59.0%	60.3%	61.0%	68.3%	66.0%	68.4%	60.9%	
Other Countries Shown above as Percent of Total	n.a.	n.a.	n.a.	24.3%	24.3%	23.8%	23.7%	18.4%	20.6%	20.6%	25.2%	
Countries not Shown Above as Percent of Total	n.a.	n.a.	n.a.	15.7%	16.7%	15.9%	15.3%	13.3%	13.3%	11.0%	13.9%	

See notes at the end of the tables.

**Table 14**  
**U.S. Billed Revenues for International Private Line Service 1/**  
**For Selected International Points**  
**(In Millions)**

Private Line Revenues	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	Percent Change 1997 to 2002
Australia	\$11.0	\$15.9	\$19.9	\$21.8	\$25.5	\$40.1	\$47.4	\$81.6	\$100.5	\$74.4	\$36.5	-9.2 %
Brazil	5.6	6.4	7.7	10.6	14.8	17.9	26.6	26.1	26.1	32.6	22.1	23.5
Canada	39.5	42.0	55.4	59.8	60.6	67.1	60.2	88.0	98.0	86.4	70.8	5.5
China	0.3	0.6	1.1	1.7	2.9	5.8	12.7	32.6	61.2	84.1	56.9	887.3
Colombia	1.4	2.1	2.8	3.7	6.0	7.0	15.3	18.2	23.7	12.9	15.8	127.1
Dominican Republic	1.9	1.7	2.5	4.1	5.2	6.4	4.8	6.5	6.6	6.5	6.1	-4.6
Egypt	0.2	0.2	0.1	1.0	0.1	1.1	1.4	4.8	2.3	2.2	2.1	94.5
El Salvador	1.8	0.3	0.8	0.9	1.1	1.4	2.2	3.8	7.3	4.4	2.3	67.4
France	12.1	13.6	13.2	14.1	18.3	20.4	14.2	12.4	8.4	5.5	2.9	-85.9
Germany	13.0	12.1	18.3	26.8	31.3	48.5	37.9	44.6	36.7	31.6	46.9	-3.4
Greece	0.4	0.4	0.3	0.2	0.3	0.5	0.4	1.2	1.8	1.5	1.6	251.9
Guatemala	0.4	0.5	0.7	0.8	0.9	1.3	1.4	2.3	6.8	3.5	2.4	80.9
Haiti	0.1	0.1	0.2	0.3	0.2	0.4	0.4	1.3	2.1	1.1	1.2	188.9
Hong Kong	11.1	15.0	18.6	24.2	32.3	33.4	42.6	60.1	62.5	29.7	9.5	-71.6
India	1.0	1.7	3.6	6.0	10.3	14.6	24.7	29.3	50.7	64.9	82.4	463.6
Israel	2.0	1.8	1.8	3.9	6.5	7.5	8.1	15.1	12.1	13.1	6.9	-8.0
Italy	2.5	2.6	2.9	3.7	6.2	8.5	5.5	7.5	5.8	5.5	4.2	-51.2
Jamaica	0.6	0.8	0.8	1.0	1.5	2.0	2.2	4.4	10.9	6.1	4.5	122.6
Japan	40.0	48.5	49.2	46.6	64.0	92.3	109.5	160.7	189.4	207.3	81.4	-11.7
Korea, Republic of	5.8	7.7	7.8	9.1	13.4	17.6	29.2	52.7	31.8	33.4	13.8	-21.6
Mexico	16.4	16.7	21.5	29.6	29.9	33.9	41.6	69.1	98.7	90.5	53.9	58.7
Morocco	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.3	0.3	0.6	n.m.
Netherlands	4.0	5.9	6.2	9.7	13.6	14.9	15.7	14.7	9.9	9.0	8.4	-43.7
Nigeria	0.2	0.2	0.1	0.1	0.3	0.4	0.7	1.0	5.8	4.7	4.6	1009.2
Pakistan	0.0	0.1	0.1	0.1	0.4	0.6	1.9	2.0	3.6	4.0	3.0	371.8
Peru	1.0	1.0	1.3	1.9	2.9	4.1	5.2	7.0	10.3	5.1	5.0	20.2
Philippines	3.8	3.5	3.9	4.9	6.0	8.9	13.7	17.6	14.3	14.2	9.8	9.8
Poland	0.0	0.0	0.1	0.2	0.2	0.3	0.4	0.8	0.6	0.4	0.4	53.4
Russia	4.2	1.2	5.7	6.8	12.4	11.0	13.3	7.9	4.6	2.5	2.3	-79.5
Saudi Arabia	3.0	1.9	2.0	2.2	2.9	1.7	2.1	2.8	2.3	3.5	3.9	123.0
Sierra Leone	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.2	0.1	0.1	0.0	ERR
Singapore	6.9	9.9	15.0	18.7	20.4	26.3	33.8	48.9	56.1	50.2	19.2	-27.0
South Africa	0.4	0.2	0.5	1.1	3.9	6.3	8.1	11.2	18.1	15.5	11.0	73.5
Spain	1.8	1.9	1.4	1.7	2.4	3.3	1.2	2.8	2.3	1.5	0.8	-74.1
Switzerland	5.5	6.0	6.3	6.8	7.1	8.4	8.2	6.0	2.8	4.6	5.1	-38.8
Taiwan	2.2	3.2	4.0	5.9	7.2	11.1	19.8	30.7	38.4	25.1	9.8	-11.5
Thailand	0.5	0.9	1.3	2.0	2.8	3.9	4.4	5.7	6.6	11.0	2.4	-39.2
Turkey	1.0	0.8	0.9	0.9	1.4	1.5	1.9	2.6	8.3	1.7	1.0	-33.5
United Kingdom	74.3	82.7	96.4	107.4	132.6	183.0	120.8	92.9	144.9	140.0	81.1	-55.7
Viet Nam	0.0	0.0	0.0	0.0	0.1	0.1	1.0	1.0	0.3	0.7	0.7	395.2
Total for Countries Shown Above	276.1	310.1	374.4	440.4	548.0	713.7	740.1	978.1	1,172.8	1,091.3	693.3	-2.9 %
Total for Other Countries	47.2	56.0	66.4	73.8	112.7	137.2	181.4	237.8	307.1	326.1	294.7	114.9
Total for All Countries	323.4	366.1	440.9	514.2	660.7	850.9	921.5	1,215.9	1,479.9	1,417.4	988.1	16.1
Canada, India Mexico, Philippines and UK as Percent of Total	41.7%	40.0%	41.0%	40.4%	36.2%	36.1%	28.3%	24.4%	27.5%	27.9%	30.2%	
Other Countries Shown Above as Percent of Total	43.6%	44.7%	43.9%	45.3%	46.7%	47.7%	52.0%	56.0%	51.8%	49.1%	40.0%	
Countries not Shown Above as Percent of Total	14.6%	15.3%	15.1%	14.4%	17.1%	16.1%	19.7%	19.6%	20.7%	23.0%	29.8%	

**Table 15**  
**U.S. Billed Minutes of International Telephone Service 1/**  
**By Region of the World**  
**(In Millions)**

U.S. Billed Minutes	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	Annual Growth Rates 1998 to 2002 7/
Africa	204.9	235.3	303.4	408.0	525.1	602.2	772.7	907.7	731.2	1,041.5	1,206.6	10.8 %
Antarctica and Maritime	3.7	11.9	10.3	8.9	4.4	10.3	16.6	3.5	1.3	2.2	2.5	n.m.
Asia	1,485.5	1,756.7	2,241.9	2,851.2	3,781.7	4,704.7	4,783.6	4,879.7	5,870.0	6,872.4	7,510.4	13.3
Caribbean	723.6	735.4	912.4	1,088.8	1,264.3	1,372.2	1,645.0	2,062.9	1,798.8	1,882.7	2,363.1	6.5
Eastern Europe	192.5	246.8	337.5	408.9	538.6	586.8	712.2	1,074.5	995.1	1,331.2	1,388.5	16.8
Middle East	348.0	400.5	474.3	555.7	656.9	636.8	680.7	933.5	817.1	933.9	951.8	6.9
North and Central America	3,908.6	4,337.4	5,019.2	5,577.1	6,440.2	7,346.4	7,633.1	9,284.7	11,196.8	11,339.7	12,128.6	11.9
Oceania	186.5	209.3	251.9	299.8	418.8	595.0	643.2	598.1	669.3	737.0	848.2	7.9
South America	715.9	849.6	1,028.9	1,282.3	1,593.3	1,782.8	1,802.0	2,051.8	2,163.0	2,622.7	2,353.5	8.1
Western Europe	2,507.5	2,714.1	3,018.5	3,408.1	4,082.0	5,092.2	5,542.1	6,695.7	5,858.4	6,488.2	7,204.8	5.1
<b>Total for All Countries 17/</b>	<b>10,293.8</b>	<b>11,513.3</b>	<b>13,615.6</b>	<b>15,888.8</b>	<b>19,325.1</b>	<b>22,753.1</b>	<b>24,249.9</b>	<b>28,515.4</b>	<b>30,134.8</b>	<b>33,286.8</b>	<b>35,988.3</b>	<b>9.9 %</b>
North and Central America as Percent of Total	38.0%	37.7%	36.9%	35.1%	33.3%	32.3%	31.5%	32.6%	37.2%	34.1%	33.7%	
Western Europe as Percent of Total	24.4%	23.6%	22.2%	21.4%	21.1%	22.4%	22.9%	23.5%	19.4%	19.5%	20.0%	
Other Regions of the World as Percent of Total	37.7%	38.8%	41.0%	43.4%	45.6%	45.3%	45.7%	44.0%	43.4%	46.4%	46.3%	

See notes at the end of the tables.

**Table 16**  
**Foreign Billed Minutes of International Telephone Service 1/**  
**By Region of the World**  
**(In Millions)**

Foreign Billed Minutes	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	Annual Growth Rates 1998 to 2002 7/
Africa	62.2	70.2	82.4	89.7	88.2	99.7	121.3	110.0	134.6	149.2	113.9	1.8 %
Antarctica and Maritime	4.8	2.9	2.1	1.5	5.3	0.9	0.0	6.4	0.1	0.1	0.5	n.m.
Asia	737.7	810.7	890.4	961.2	1,025.8	1,070.5	1,134.1	989.8	1,210.6	1,244.8	1,341.5	5.8
Caribbean	254.9	276.7	297.4	351.3	368.8	353.5	364.5	357.3	481.8	461.2	569.8	12.2
Eastern Europe	69.5	115.0	121.3	119.5	125.2	127.1	148.6	107.8	124.0	158.7	110.1	-2.1
Middle East	135.1	149.5	152.3	168.0	177.6	231.0	302.3	353.7	373.0	377.2	404.4	6.7
North and Central America	2,236.1	2,383.1	2,660.6	2,982.3	3,900.5	4,201.3	4,570.3	5,224.4	6,979.1	7,078.6	6,192.9	9.5
Oceania	158.2	179.2	204.8	211.2	222.3	214.7	340.0	539.5	387.8	346.9	372.7	-2.5
South America	234.7	240.7	291.2	354.4	388.5	457.6	491.3	455.6	550.7	570.2	653.0	8.3
Western Europe	1,463.8	1,536.5	1,655.4	1,811.6	1,971.5	2,389.2	2,712.4	2,611.2	2,635.0	3,078.4	3,903.3	9.3
<b>Total for All Countries 17/</b>	<b>5,369.7</b>	<b>5,786.0</b>	<b>6,384.9</b>	<b>7,050.6</b>	<b>8,293.2</b>	<b>9,170.0</b>	<b>10,198.5</b>	<b>10,765.0</b>	<b>12,888.2</b>	<b>13,478.0</b>	<b>13,676.8</b>	<b>8.5 %</b>
North and Central America as Percent of Total	41.6%	41.2%	41.7%	42.3%	47.0%	45.8%	44.8%	48.5%	54.2%	52.5%	45.3%	
Western Europe as Percent of Total	27.3%	26.6%	25.9%	25.7%	23.8%	26.1%	26.6%	24.3%	20.4%	22.8%	28.5%	
Other Regions of the World as Percent of Total	31.1%	32.3%	32.4%	32.0%	29.2%	28.1%	28.6%	27.2%	25.4%	24.6%	26.2%	

See notes at the end of the tables.

**Table 17**  
**U.S. Billed Revenues for International Telephone Service 1/**  
**By Region of the World**  
**(In Millions)**

U.S. Billed Revenues	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
Africa	\$304.3	\$323.7	\$405.9	\$524.5	\$566.0	\$607.5	\$626.7	\$645.4	\$417.9	\$413.1	\$352.1
Antarctica and Maritime	37.7	122.1	86.5	38.8	30.6	39.2	27.7	12.7	5.1	8.3	4.7
Asia	2,282.9	2,540.9	2,791.9	3,346.5	3,478.4	3,863.0	3,387.5	3,102.7	3,203.1	2,643.0	2,347.0
Caribbean	707.1	753.6	873.3	1,058.4	1,063.9	1,024.9	1,081.8	984.3	796.6	604.2	600.2
Eastern Europe	263.8	345.7	439.3	496.8	551.0	600.6	497.1	592.7	503.9	424.3	299.6
Middle East	476.8	544.2	578.6	685.9	693.4	686.8	617.6	664.0	519.5	437.4	316.8
North and Central America	2,555.4	2,940.9	3,110.5	3,333.9	3,410.3	3,680.5	3,602.1	3,853.8	4,749.9	2,868.6	3,022.6
Oceania	263.2	284.0	304.1	340.9	361.4	315.2	321.5	359.5	369.6	307.1	252.7
South America	823.0	927.8	1,055.5	1,306.5	1,351.7	1,468.4	1,300.4	1,271.8	1,033.4	797.4	588.1
Western Europe	2,593.2	2,699.7	2,764.1	2,916.4	2,723.1	2,939.8	2,770.7	3,029.7	2,562.4	2,332.2	1,655.5
<b>Total for All Countries 17/</b>	<b>10,331.3</b>	<b>11,504.5</b>	<b>12,430.9</b>	<b>14,159.8</b>	<b>14,234.1</b>	<b>15,250.4</b>	<b>14,246.4</b>	<b>14,527.6</b>	<b>14,172.2</b>	<b>10,844.4</b>	<b>9,446.4</b>
North and Central America as Percent of Total	24.7%	25.6%	25.0%	23.5%	24.0%	24.1%	25.3%	26.5%	33.5%	26.5%	32.0%
Western Europe as Percent of Total	25.1%	23.5%	22.2%	20.6%	19.1%	19.3%	19.4%	20.9%	18.1%	21.5%	17.5%
Other Regions of the World as Percent of Total	50.2%	51.0%	52.7%	55.9%	56.9%	56.6%	55.3%	52.6%	48.4%	52.0%	50.5%

See notes at the end of the tables.

**Table 18**  
**Average U.S. Billed Revenue per Minute for International Telephone Service**  
**By Region of the World**

Average Revenue per Minute	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	10 Year Decline
Africa	\$1.48	\$1.38	\$1.34	\$1.29	\$1.08	\$1.01	\$0.81	\$0.71	\$0.57	\$0.40	\$0.29	-80 %
Antarctica and Maritime	10.15	10.25	8.37	4.37	6.97	3.80	1.67	3.61	3.83	3.73	1.92	-81
Asia	1.54	1.45	1.25	1.17	0.92	0.82	0.71	0.64	0.55	0.38	0.31	-80
Caribbean	0.98	1.02	0.96	0.97	0.84	0.75	0.66	0.48	0.44	0.32	0.25	-74
Eastern Europe	1.37	1.40	1.30	1.21	1.02	1.02	0.70	0.55	0.51	0.32	0.22	-84
Middle East	1.37	1.36	1.22	1.23	1.06	1.08	0.91	0.71	0.64	0.47	0.33	-76
North and Central America	0.65	0.68	0.62	0.60	0.53	0.50	0.47	0.42	0.42	0.25	0.25	-62
Oceania	1.41	1.36	1.21	1.14	0.86	0.53	0.50	0.60	0.55	0.42	0.30	-79
South America	1.15	1.09	1.03	1.02	0.85	0.82	0.72	0.62	0.48	0.30	0.25	-78
Western Europe	1.03	0.99	0.92	0.86	0.67	0.58	0.50	0.45	0.44	0.36	0.23	-78
<b>Total for All Countries 17/</b>	<b>1.00</b>	<b>1.00</b>	<b>0.91</b>	<b>0.89</b>	<b>0.74</b>	<b>0.67</b>	<b>0.59</b>	<b>0.51</b>	<b>0.47</b>	<b>0.33</b>	<b>0.26</b>	<b>-74 %</b>

See notes at the end of the tables.

**Table 19**  
**U.S. Billed Revenues for International Private Line Service 1/**  
**By Region of the World**  
**(In Millions)**

Private Line Revenues	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
Africa	\$2.9	\$8.3	\$4.4	\$4.7	\$6.9	\$10.4	\$14.6	\$23.3	\$41.3	\$40.3	\$35.3
Antarctica and Maritime	0.3	0.2	0.9	0.2	6.6	6.0	8.7	11.7	12.6	17.9	19.8
Asia	73.3	93.7	109.5	125.4	169.1	229.5	308.6	462.9	557.5	565.9	336.0
Caribbean	11.7	10.6	9.8	14.4	24.6	27.7	26.5	35.0	48.4	48.2	40.5
Eastern Europe	4.6	1.9	8.8	9.6	16.6	16.2	22.9	34.5	21.8	16.7	12.1
Middle East	7.3	7.2	7.5	9.1	13.6	14.2	19.6	31.6	32.4	35.9	28.6
North and Central America	61.0	62.7	83.1	96.9	101.9	114.3	117.3	178.8	238.4	208.6	144.0
Oceania	18.6	23.3	29.9	33.2	38.3	53.4	61.2	104.7	123.9	102.0	66.8
South America	21.2	22.3	28.7	34.1	50.0	63.4	96.9	120.6	177.6	162.6	137.2
Western Europe	122.5	136.0	158.3	186.4	232.3	314.9	244.8	212.4	247.7	219.1	167.0
<b>Total for All Countries 16/</b>	<b>323.4</b>	<b>366.1</b>	<b>440.9</b>	<b>514.2</b>	<b>660.7</b>	<b>850.9</b>	<b>921.5</b>	<b>1,215.9</b>	<b>1,501.9</b>	<b>1,417.4</b>	<b>988.1</b>

See notes at the end of the tables.

**Table 20**  
**AT&T Basic Schedule Rates for 7-Minute, Peak-Period,**  
**Residential Customer Calls 18/**

													Rates as of Feb. 20
	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004
Australia	\$10.60	\$10.96	\$10.96	\$12.19	\$13.03	\$10.57	\$11.90	\$13.51	\$15.54	\$18.13	\$19.95	\$21.98	\$21.98
Brazil	\$8.74	\$9.34	\$10.42	\$12.68	\$13.52	\$12.88	\$14.49	\$16.38	\$18.83	\$21.98	\$24.15	\$26.60	\$26.60
Canada 19/	\$4.07	\$4.28	\$4.35	\$4.83	\$4.83	\$3.78	\$4.27	\$4.90	\$5.67	\$6.65	\$7.35	\$8.12	\$8.12
China	\$15.06	\$15.36	\$17.27	\$17.27	\$18.41	\$18.20	\$20.44	\$23.24	\$26.74	\$31.22	\$34.37	\$35.00	\$35.00
Colombia	\$9.05	\$9.53	\$10.85	\$13.11	\$14.01	\$13.02	\$14.63	\$16.66	\$19.18	\$22.33	\$24.57	\$27.02	\$27.02
Dominican Republic	\$7.81	\$7.81	\$9.47	\$9.98	\$10.64	\$11.06	\$12.46	\$14.14	\$16.24	\$18.97	\$20.86	\$22.96	\$22.96
Egypt	\$11.05	\$11.47	\$12.67	\$14.85	\$15.87	\$15.19	\$17.08	\$19.39	\$22.33	\$26.04	\$28.63	\$31.50	\$31.50
El Salvador	\$8.61	\$8.91	\$10.55	\$11.10	\$11.82	\$12.18	\$13.72	\$15.61	\$17.92	\$20.86	\$22.96	\$25.27	\$25.27
France	\$8.07	\$8.07	\$8.19	\$9.90	\$10.56	\$9.31	\$10.50	\$11.90	\$13.72	\$16.03	\$17.64	\$19.39	\$19.39
Germany	\$8.31	\$8.31	\$8.31	\$9.55	\$9.73	\$8.75	\$9.80	\$11.06	\$12.74	\$14.84	\$16.31	\$17.92	\$17.92
Greece	\$9.49	\$10.69	\$11.77	\$14.47	\$15.43	\$13.65	\$15.33	\$17.36	\$19.95	\$23.24	\$25.55	\$28.14	\$28.14
Guatemala	\$8.61	\$8.91	\$10.30	\$12.08	\$12.92	\$12.32	\$13.86	\$15.75	\$18.13	\$21.21	\$23.31	\$25.62	\$25.62
Haiti	\$7.94	\$8.42	\$9.42	\$11.88	n.a.	\$12.25	\$13.79	\$15.68	\$18.06	\$21.00	\$23.10	\$25.41	\$25.41
Hong Kong	\$11.72	\$11.72	\$11.72	\$12.75	\$13.59	\$12.88	\$14.49	\$16.38	\$18.83	\$21.98	\$24.15	\$26.60	\$26.60
India	\$16.44	\$15.53	\$13.41	\$17.00	\$18.14	\$18.48	\$20.72	\$23.52	\$27.02	\$31.50	\$34.65	\$35.00	\$35.00
Israel	\$10.18	\$10.42	\$13.44	\$13.96	\$14.92	\$13.79	\$15.47	\$17.50	\$20.16	\$23.52	\$25.90	\$28.49	\$28.49
Italy	\$8.12	\$8.72	\$9.38	\$10.79	\$11.51	\$10.50	\$11.83	\$13.44	\$15.47	\$17.99	\$19.81	\$21.77	\$21.77
Jamaica	\$7.42	\$7.72	\$9.25	\$11.00	\$11.90	\$11.13	\$12.53	\$14.21	\$16.31	\$19.04	\$20.93	\$23.03	\$23.03
Japan	\$10.49	\$10.49	\$11.43	\$12.11	\$12.95	\$10.15	\$11.41	\$12.95	\$14.91	\$17.43	\$19.18	\$21.07	\$21.07
Korea, Republic of	\$11.90	\$11.90	\$13.22	\$13.61	\$14.51	\$12.74	\$14.28	\$16.17	\$18.62	\$21.70	\$23.87	\$26.25	\$26.25
Mexico 19/	\$9.88	\$10.35	\$10.64	\$11.69	\$11.69	\$10.57	\$11.41	\$12.11	\$14.56	\$15.19	\$16.73	\$18.41	\$18.41
Morocco	\$10.57	\$12.07	\$12.61	\$16.85	\$19.25	\$17.43	\$19.53	\$22.19	\$25.55	\$29.82	\$32.83	\$35.00	\$35.00
Netherlands	\$8.00	\$8.12	\$8.12	\$9.61	\$10.27	\$9.17	\$10.36	\$11.76	\$13.51	\$15.82	\$17.43	\$19.18	\$19.18
Nigeria	\$9.69	\$10.23	\$10.47	\$13.21	\$14.11	\$13.72	\$15.40	\$17.43	\$20.02	\$23.31	\$25.62	\$28.21	\$28.21
Pakistan	\$16.69	\$17.89	\$20.96	\$27.12	\$28.92	\$28.91	\$32.48	\$36.82	\$42.35	\$44.87	\$44.87	\$44.87	\$44.87
Peru	\$9.05	\$9.53	\$11.30	\$13.82	\$14.78	\$13.93	\$15.68	\$17.78	\$20.44	\$23.87	\$26.25	\$28.91	\$28.91
Philippines	\$11.65	\$12.07	\$14.55	\$14.97	\$15.99	\$15.19	\$17.08	\$19.39	\$22.33	\$26.04	\$28.63	\$31.50	\$31.50
Poland	\$9.73	\$9.73	\$9.97	\$11.18	\$11.96	\$10.99	\$12.39	\$14.07	\$16.17	\$18.90	\$20.79	\$22.89	\$22.89
Russia 20/	\$14.31	\$14.31	\$14.97	\$16.09	\$17.17	\$17.15	\$19.25	\$21.84	\$25.13	\$29.33	\$32.27	\$35.00	\$35.00
Saudi Arabia	\$10.09	\$10.93	\$13.32	\$14.25	\$15.21	\$14.70	\$16.52	\$18.76	\$21.56	\$25.13	\$27.65	\$30.45	\$30.45
Sierra Leone	\$15.42	\$15.42	\$16.38	\$20.16	\$21.54	\$20.51	\$23.10	\$26.25	\$30.17	\$35.21	\$35.21	\$35.21	\$35.21
Singapore	\$11.42	\$11.42	\$11.42	\$11.09	\$11.81	\$11.55	\$12.95	\$14.70	\$16.94	\$19.81	\$21.77	\$23.94	\$23.94
South Africa	\$8.66	\$9.38	\$10.34	\$11.52	\$12.30	\$12.25	\$13.79	\$15.68	\$18.06	\$21.00	\$23.10	\$25.41	\$25.41
Spain	\$8.48	\$9.14	\$11.34	\$12.11	\$12.95	\$11.34	\$12.74	\$14.49	\$16.66	\$19.39	\$21.35	\$23.52	\$23.52
Switzerland	\$8.48	\$8.90	\$8.90	\$10.68	\$11.40	\$9.87	\$11.06	\$12.53	\$14.42	\$16.80	\$18.48	\$20.30	\$20.30
Taiwan	\$12.19	\$12.19	\$12.19	\$13.81	\$14.77	\$13.93	\$15.68	\$17.78	\$20.44	\$23.87	\$26.25	\$28.91	\$28.91
Thailand	\$12.84	\$12.84	\$14.74	\$14.68	\$15.64	\$14.07	\$15.82	\$17.99	\$20.72	\$24.15	\$26.60	\$29.26	\$29.26
Turkey	\$9.73	\$11.53	\$11.83	\$13.70	\$14.60	\$12.88	\$14.49	\$16.38	\$18.83	\$21.98	\$24.15	\$26.60	\$26.60
United Kingdom	\$7.08	\$7.20	\$7.20	\$8.03	\$8.57	\$7.63	\$8.54	\$9.66	\$11.13	\$13.02	\$14.35	\$15.82	\$15.82
Vietnam	n.a.	\$15.93	\$15.93	\$18.47	\$19.73	\$20.02	\$22.47	\$25.48	\$29.33	\$34.16	\$37.59	\$37.59	\$37.59
Fisher Ideal Rate Index 21/	84.4	87.5	92.5	103.7	108.1	96.7	108.6	122.7	143.5	164.4	181.4	199.1	199.9
% Changes from Prior Rate	-0.2%	3.6%	5.7%	12.2%	4.2%	-10.6%	12.3%	13.0%	16.9%	14.5%	10.4%	9.7%	0.4%
Index without Mexico	83.8	86.6	91.7	102.9	107.5	95.5	107.4	122.1	140.7	164.0	180.2	196.5	196.5
% Changes from Prior Rate	0.0%	3.3%	6.0%	12.1%	4.5%	-11.2%	12.5%	13.7%	15.2%	16.6%	9.9%	9.1%	0.0%
Weighted Average Charge per Minute	\$1.15	\$1.20	\$1.30	\$1.48	\$1.57	\$1.45	\$1.65	\$1.88	\$2.21	\$2.55	\$2.84	\$3.08	\$3.08

See notes at the end of the tables.

**Table 21**  
**AT&T Basic Schedule Rates for 7-Minute, Peak-Period,**  
**Commercial Customer Calls 18/**

													Rates as of Feb. 20
	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004
Australia	\$10.60	\$10.96	\$12.71	\$13.62	\$14.98	\$18.41	\$18.41	\$20.51	\$20.51	\$30.31	\$35.98	\$44.24	\$63.70
Brazil	\$8.74	\$9.34	\$10.43	\$11.19	\$12.35	\$15.05	\$15.05	\$16.73	\$16.73	\$23.38	\$27.72	\$34.09	\$49.07
Canada 19/	\$4.07	\$4.28	\$4.84	\$4.98	\$5.54	\$6.09	\$6.09	\$6.79	\$6.79	\$9.94	\$11.83	\$14.56	\$20.93
China	\$15.06	\$15.36	\$18.38	\$19.34	\$21.24	\$25.55	\$25.55	\$28.42	\$28.42	\$37.38	\$44.38	\$54.53	\$78.40
Colombia	\$9.05	\$9.53	\$10.78	\$11.58	\$12.72	\$14.63	\$14.63	\$16.24	\$16.24	\$23.38	\$27.72	\$34.09	\$49.07
Dominican Republic	\$7.81	\$7.81	\$9.36	\$9.86	\$10.88	\$12.25	\$12.25	\$13.58	\$13.58	\$21.00	\$24.92	\$30.66	\$44.17
Egypt	\$11.05	\$11.47	\$13.75	\$14.53	\$15.95	\$17.36	\$17.36	\$19.32	\$19.32	\$28.00	\$33.25	\$40.88	\$58.80
El Salvador	\$8.61	\$8.91	\$10.62	\$11.23	\$12.35	\$14.14	\$14.14	\$15.68	\$15.68	\$23.38	\$27.72	\$34.09	\$49.07
France	\$8.07	\$8.07	\$9.67	\$10.31	\$11.37	\$13.09	\$13.09	\$14.56	\$14.56	\$21.00	\$24.92	\$30.66	\$44.17
Germany	\$8.31	\$8.31	\$9.92	\$10.44	\$11.50	\$13.30	\$13.30	\$14.77	\$14.77	\$21.00	\$24.92	\$30.66	\$44.17
Greece	\$9.49	\$10.69	\$11.35	\$12.20	\$13.44	\$14.84	\$14.84	\$16.52	\$16.52	\$23.38	\$27.72	\$34.09	\$49.07
Guatemala	\$8.61	\$8.91	\$10.62	\$11.23	\$12.35	\$13.09	\$13.09	\$14.56	\$14.56	\$21.00	\$24.92	\$30.66	\$44.17
Haiti	\$7.94	\$8.42	\$9.81	\$10.54	\$11.60	\$12.60	\$12.60	\$14.00	\$17.01	\$21.00	\$24.92	\$30.66	\$44.17
Hong Kong	\$11.72	\$11.72	\$13.99	\$14.76	\$16.30	\$22.33	\$22.33	\$24.85	\$24.85	\$37.38	\$44.38	\$54.53	\$78.40
India	\$16.44	\$15.53	\$18.63	\$19.60	\$21.54	\$23.94	\$23.94	\$26.60	\$26.60	\$37.38	\$44.38	\$54.53	\$78.40
Israel	\$10.18	\$10.42	\$12.21	\$13.11	\$14.45	\$16.73	\$16.73	\$18.55	\$18.55	\$28.00	\$33.25	\$40.88	\$58.80
Italy	\$8.12	\$8.72	\$9.69	\$9.99	\$10.95	\$19.39	\$19.39	\$21.49	\$21.49	\$30.31	\$35.98	\$44.24	\$63.70
Jamaica	\$7.42	\$7.72	\$9.21	\$9.72	\$10.74	\$11.83	\$11.83	\$13.16	\$13.16	\$21.00	\$24.92	\$40.88	\$44.17
Japan	\$10.49	\$10.49	\$12.59	\$12.94	\$14.28	\$17.50	\$17.50	\$19.46	\$19.46	\$28.00	\$33.25	\$30.66	\$58.80
Korea, Republic of	\$11.90	\$11.90	\$14.24	\$15.01	\$16.55	\$22.68	\$22.68	\$25.20	\$25.20	\$37.38	\$44.38	\$54.53	\$78.40
Mexico 19/	\$9.88	\$10.35	\$13.23	\$13.86	\$15.26	\$13.37	\$13.37	\$14.84	\$14.84	\$19.25	\$22.82	\$28.07	\$40.32
Morocco	\$10.57	\$12.53	\$14.44	\$15.21	\$16.73	\$18.48	\$18.48	\$20.58	\$24.57	\$30.31	\$35.98	\$44.24	\$63.70
Netherlands	\$8.00	\$8.12	\$9.60	\$9.65	\$11.12	\$12.88	\$12.88	\$14.35	\$14.35	\$21.00	\$24.92	\$30.66	\$44.17
Nigeria	\$9.69	\$10.23	\$11.58	\$12.26	\$13.52	\$14.70	\$14.70	\$16.31	\$16.31	\$23.38	\$27.72	\$34.09	\$49.07
Pakistan	\$16.69	\$17.89	\$19.96	\$21.44	\$23.56	\$24.92	\$24.92	\$27.65	\$27.65	\$37.38	\$44.38	\$54.53	\$78.40
Peru	\$9.05	\$9.53	\$10.78	\$11.58	\$12.72	\$13.86	\$13.86	\$15.40	\$15.40	\$23.38	\$27.72	\$34.09	\$49.07
Philippines	\$11.65	\$12.07	\$13.91	\$14.89	\$16.38	\$18.34	\$18.34	\$20.37	\$20.37	\$30.31	\$35.98	\$44.24	\$63.70
Poland	\$9.73	\$9.73	\$11.67	\$12.29	\$13.53	\$14.56	\$14.56	\$16.17	\$16.17	\$23.38	\$27.72	\$34.09	\$49.07
Russia 20/	\$14.31	\$14.31	\$17.16	\$18.07	\$19.91	\$21.84	\$21.84	\$24.22	\$24.22	\$37.38	\$44.38	\$54.53	\$78.40
Saudi Arabia	\$10.09	\$10.93	\$12.63	\$13.55	\$14.91	\$17.43	\$17.43	\$19.39	\$19.39	\$28.00	\$33.25	\$40.88	\$58.80
Sierra Leone	\$15.42	\$16.02	\$18.43	\$18.82	\$21.78	\$23.59	\$23.59	\$26.18	\$30.24	\$37.38	\$44.38	\$54.53	\$78.40
Singapore	\$11.42	\$11.42	\$13.63	\$14.38	\$15.88	\$19.53	\$19.53	\$21.63	\$24.57	\$30.31	\$35.98	\$44.24	\$63.70
South Africa	\$8.66	\$9.38	\$10.69	\$11.48	\$12.58	\$14.77	\$14.77	\$16.38	\$16.38	\$23.38	\$27.72	\$34.09	\$49.07
Spain	\$8.48	\$9.14	\$10.13	\$10.84	\$11.92	\$13.93	\$13.93	\$15.47	\$15.47	\$23.38	\$27.72	\$34.09	\$49.07
Switzerland	\$8.48	\$8.90	\$10.13	\$10.84	\$11.92	\$13.93	\$13.93	\$15.47	\$15.47	\$23.38	\$27.72	\$34.09	\$49.07
Taiwan	\$12.19	\$12.19	\$14.63	\$15.39	\$16.92	\$20.79	\$20.79	\$23.10	\$23.10	\$30.31	\$35.98	\$44.24	\$63.70
Thailand	\$12.84	\$12.84	\$15.35	\$16.20	\$17.78	\$22.19	\$22.19	\$24.64	\$24.64	\$37.38	\$44.38	\$54.53	\$78.40
Turkey	\$9.73	\$11.53	\$12.57	\$13.49	\$14.85	\$16.66	\$16.66	\$18.48	\$22.68	\$28.00	\$33.25	\$40.88	\$58.80
United Kingdom	\$7.08	\$7.20	\$8.51	\$8.73	\$9.63	\$11.06	\$11.06	\$12.25	\$12.25	\$17.78	\$21.14	\$25.97	\$37.38
Vietnam	n.a.	\$16.52	\$19.02	\$20.04	\$22.08	\$23.80	\$23.80	\$26.46	\$30.24	\$37.38	\$44.38	\$54.53	\$78.40
Fisher Ideal Rate Index 21/	84.4	87.4	103.3	108.0	119.0	132.2	132.2	146.9	147.7	209.0	248.1	306.1	439.0
% Changes from Prior Rate	-0.3%	3.5%	18.3%	4.5%	10.2%	11.1%	0.0%	11.1%	0.5%	41.5%	18.7%	23.4%	43.4%
Index without Mexico	83.2	86.3	102.4	107.4	119.1	136.1	136.1	152.4	153.5	227.7	274.8	345.1	508.8
% Changes from Prior Rate	-0.1%	3.7%	18.8%	4.8%	11.0%	14.3%	0.0%	12.0%	0.7%	48.4%	20.7%	25.6%	47.4%
Weighted Average Charge per Minute	\$1.15	\$1.20	\$1.46	\$1.56	\$1.75	\$1.98	\$2.00	\$2.20	\$2.24	\$3.19	\$3.81	\$4.70	\$6.73

See notes at the end of the tables.



**Table 22**  
**AT&T Discount Rates for 7-Minute, Peak-Period,**  
**Residential Customer Calls 18/ 22/**

	Reach Out World 1992	TrueWorld Savings				One Rate				AnyHour			Rates as of Feb. 20 2004
		1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	
Australia	\$5.46	\$8.21	\$9.46	\$9.46	\$10.08	\$3.09	\$3.29	\$3.29	\$3.29	\$0.98	\$0.98	\$0.84	\$0.84
Brazil	\$4.62	\$7.68	\$8.01	\$9.30	\$9.91	\$4.30	\$4.34	\$4.34	\$4.34	\$1.75	\$1.75	\$0.98	\$0.98
Canada 19/	\$2.80	\$3.33	\$3.14	\$3.30	\$3.53	\$0.84	\$0.84	\$0.84	\$0.84	\$0.49	\$0.49	\$0.42	\$0.42
China	n.o.	\$10.12	\$9.52	\$13.55	\$14.45	\$8.33	\$9.17	\$9.17	\$9.17	\$2.03	\$1.33	\$0.70	\$0.70
Colombia	\$4.62	\$7.68	\$8.40	\$9.74	\$10.42	\$5.27	\$5.32	\$5.32	\$5.32	\$2.31	\$2.17	\$1.05	\$1.05
Dominican Republic	n.o.	\$6.49	\$6.38	\$8.23	\$8.79	\$3.78	\$3.85	\$3.85	\$4.27	\$2.31	\$2.17	\$1.33	\$1.33
Egypt	n.o.	\$8.81	\$9.46	\$10.98	\$11.70	\$6.20	\$6.37	\$6.37	\$7.00	\$3.36	\$2.87	\$2.73	\$2.73
El Salvador	n.o.	\$7.20	\$7.00	\$8.46	\$9.02	\$5.55	\$5.60	\$5.60	\$5.60	\$2.45	\$2.17	\$2.03	\$2.03
France	\$4.34	\$6.37	\$5.99	\$7.34	\$7.84	\$2.45	\$2.03	\$2.03	\$2.03	\$0.98	\$0.98	\$0.84	\$0.84
Germany	\$4.34	\$6.49	\$6.10	\$7.17	\$7.67	\$2.45	\$2.03	\$2.03	\$2.03	\$0.98	\$0.98	\$0.84	\$0.84
Greece	\$4.34	\$8.45	\$9.24	\$10.75	\$11.48	\$2.45	\$2.03	\$2.03	\$2.03	\$0.98	\$0.98	\$0.84	\$0.84
Guatemala	n.o.	\$7.20	\$7.00	\$9.02	\$9.63	\$5.10	\$5.11	\$5.11	\$5.11	\$2.45	\$2.17	\$1.96	\$1.96
Haiti	n.o.	n.a.	n.a.	n.a.	n.a.	\$5.39	\$5.60	\$5.60	\$6.16	\$3.99	\$3.57	\$3.43	\$3.43
Hong Kong	\$5.46	\$8.81	\$8.29	\$9.52	\$10.14	\$4.20	\$4.62	\$4.62	\$5.11	\$0.91	\$0.84	\$0.70	\$0.70
India	\$10.92	\$12.67	\$10.47	\$11.98	\$12.77	\$7.79	\$8.54	\$8.54	\$8.54	\$3.71	\$2.94	\$1.96	\$1.96
Israel	\$5.18	\$8.45	\$9.02	\$10.58	\$11.31	\$4.31	\$4.48	\$4.48	\$4.48	\$0.98	\$0.98	\$0.84	\$0.84
Italy	\$4.48	\$6.78	\$7.00	\$7.84	\$8.34	\$2.45	\$2.03	\$2.03	\$2.03	\$0.98	\$0.98	\$0.84	\$0.84
Jamaica	\$5.46	\$8.45	\$8.29	\$9.24	\$9.86	\$3.30	\$3.36	\$3.36	\$3.36	\$0.98	\$0.98	\$0.70	\$0.70
Japan	\$4.13	\$6.72	\$7.34	\$8.34	\$8.90	\$5.12	\$5.32	\$5.32	\$5.32	\$3.92	\$3.29	\$2.66	\$2.66
Korea, Republic of	\$5.60	\$9.52	\$9.80	\$10.42	\$11.09	\$4.13	\$4.55	\$4.55	\$4.55	\$0.98	\$0.98	\$0.56	\$0.56
Mexico 19/	\$9.88	\$8.39	\$8.12	\$8.90	\$9.52	\$4.55	\$3.43	\$3.43	\$3.43	\$1.75	\$1.47	\$0.70	\$0.70
Morocco		n.a.	n.a.	n.a.	n.a.	\$5.94	\$6.16	\$6.16	\$6.79	\$4.13	\$4.13	\$3.99	\$3.99
Netherlands	\$4.34	\$6.25	\$5.88	\$7.11	\$7.56	\$2.45	\$2.03	\$2.03	\$2.24	\$0.98	\$0.98	\$0.84	\$0.84
Nigeria		\$7.08	\$6.66	\$8.57	\$9.13	\$5.14	\$5.32	\$5.32	\$5.88	\$4.13	\$4.13	\$3.99	\$3.99
Pakistan	\$8.82	\$14.70	\$16.41	\$19.94	\$21.28	\$9.10	\$9.24	\$9.24	\$10.15	\$3.71	\$2.94	\$2.31	\$2.31
Peru	\$4.62	\$7.91	\$8.46	\$9.91	\$10.58	\$5.21	\$5.25	\$5.25	\$5.81	\$2.73	\$2.59	\$1.40	\$1.40
Philippines	\$5.60	\$9.04	\$9.58	\$11.31	\$12.04	\$4.90	\$5.39	\$5.39	\$5.39	\$1.82	\$1.47	\$1.26	\$1.26
Poland	n.o.	\$7.62	\$7.56	\$8.23	\$8.79	\$4.10	\$3.50	\$3.50	\$3.50	\$1.96	\$1.75	\$1.05	\$1.05
Russia 20/	n.o.	\$11.60	\$10.92	\$11.48	\$12.26	\$7.96	\$8.75	\$8.75	\$8.75	\$1.61	\$1.61	\$1.05	\$1.05
Saudi Arabia	n.o.	\$8.81	\$8.96	\$10.47	\$11.14	\$7.59	\$7.77	\$7.77	\$8.54	\$4.69	\$3.57	\$3.43	\$3.43
Sierra Leone	n.o.	n.a.	n.a.	n.a.	n.a.	\$6.40	\$6.72	\$6.72	\$7.42	\$6.65	\$4.55	\$4.27	\$4.27
Singapore		n.a.	n.a.	n.a.	n.a.	\$2.70	\$2.94	\$2.94	\$3.22	\$1.40	\$1.12	\$0.98	\$0.98
South Africa	n.o.	\$7.38	\$7.22	\$8.23	\$8.79	\$3.49	\$3.71	\$3.71	\$4.06	\$2.73	\$2.73	\$2.59	\$2.59
Spain	\$4.34	\$7.20	\$7.34	\$9.07	\$9.69	\$2.45	\$2.03	\$2.03	\$2.03	\$0.98	\$0.98	\$0.84	\$0.84
Switzerland	\$4.34	\$6.90	\$6.89	\$8.06	\$8.62	\$2.45	\$2.03	\$2.03	\$2.24	\$0.98	\$0.98	\$0.84	\$0.84
Taiwan	\$5.46	\$9.52	\$8.96	\$10.36	\$11.03	\$4.14	\$4.55	\$4.55	\$4.55	\$1.05	\$0.84	\$0.49	\$0.49
Thailand	\$5.60	\$9.58	\$9.02	\$11.14	\$11.87	\$5.21	\$5.74	\$5.74	\$6.30	\$3.22	\$1.89	\$1.75	\$1.75
Turkey		n.a.	n.a.	n.a.	n.a.	\$4.19	\$4.34	\$4.34	\$4.76	\$3.15	\$3.15	\$3.01	\$3.01
United Kingdom	\$4.13	\$5.65	\$5.32	\$5.82	\$6.22	\$0.84	\$0.84	\$0.84	\$0.84	\$0.63	\$0.63	\$0.56	\$0.56
Vietnam	n.o.	n.a.	n.a.	n.a.	n.a.	\$8.13	\$8.96	\$8.96	\$8.96	\$5.18	\$5.18	\$3.85	\$3.85
Weighted Average Price per Minute for Rates Shown	\$0.73	\$0.95	\$0.95	\$1.10	\$1.18	\$0.50	\$0.49	\$0.52	\$0.53	\$0.24	\$0.21	\$0.16	\$0.16

See notes at the end of the tables.

**Table 23**  
**AT&T Discount Rates for 7-Minute, Off Peak-Period,**  
**Residential Customer Calls 18/ 22/**

	Reach Out World	TrueWorld Savings					One Rate				AnyHour			Rates as of Feb. 20 2004
		1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	
Australia	\$5.46	\$4.64	\$4.87	\$4.87	\$5.21	\$3.09	\$3.29	\$3.29	\$3.29	\$0.98	\$0.98	\$0.84	\$0.84	
Brazil	\$4.62	\$4.28	\$4.70	\$5.60	\$5.99	\$4.30	\$4.34	\$4.34	\$4.34	\$1.75	\$1.75	\$0.98	\$0.98	
Canada 19/	\$2.80	\$1.13	\$1.18	\$1.34	\$1.23	\$0.84	\$0.84	\$0.84	\$0.84	\$0.49	\$0.49	\$0.42	\$0.42	
China	n.o.	\$6.96	\$6.89	\$9.13	\$9.74	\$8.33	\$9.17	\$9.17	\$9.17	\$2.03	\$1.33	\$0.70	\$0.70	
Colombia	\$4.62	\$4.34	\$4.82	\$5.66	\$6.05	\$5.27	\$5.32	\$5.32	\$5.32	\$2.31	\$2.17	\$1.05	\$1.05	
Dominican Republic	n.o.	\$4.76	\$4.70	\$5.60	\$5.99	\$3.78	\$3.85	\$3.85	\$4.27	\$2.31	\$2.17	\$1.33	\$1.33	
Egypt	n.o.	\$6.13	\$6.05	\$7.22	\$7.73	\$6.20	\$6.37	\$6.37	\$7.00	\$3.36	\$2.87	\$2.73	\$2.73	
El Salvador	n.o.	\$5.12	\$5.04	\$5.94	\$6.33	\$5.55	\$5.60	\$5.60	\$5.60	\$2.45	\$2.17	\$2.03	\$2.03	
France	\$4.34	\$3.69	\$3.47	\$3.86	\$4.03	\$2.45	\$2.03	\$2.03	\$2.03	\$0.98	\$0.98	\$0.84	\$0.84	
Germany	\$4.34	\$3.69	\$3.47	\$3.75	\$4.03	\$2.45	\$2.03	\$2.03	\$2.03	\$0.98	\$0.98	\$0.84	\$0.84	
Greece	\$4.34	\$3.87	\$4.54	\$5.43	\$5.77	\$2.45	\$2.03	\$2.03	\$2.03	\$0.98	\$0.98	\$0.84	\$0.84	
Guatemala	n.o.	\$5.12	\$5.04	\$5.94	\$6.33	\$5.10	\$5.11	\$5.11	\$5.11	\$2.45	\$2.17	\$1.96	\$1.96	
Haiti	n.o.	n.a.	n.a.	n.a.	n.a.	\$5.39	\$5.60	\$5.60	\$6.16	\$3.99	\$3.57	\$3.43	\$3.43	
Hong Kong	\$5.46	\$4.64	\$4.54	\$5.21	\$5.54	\$4.20	\$4.62	\$4.62	\$5.11	\$0.91	\$0.84	\$0.70	\$0.70	
India	\$10.92	\$9.28	\$7.84	\$8.12	\$9.24	\$7.79	\$8.54	\$8.54	\$8.54	\$3.71	\$2.94	\$1.96	\$1.96	
Israel	\$5.18	\$4.40	\$4.70	\$5.66	\$6.05	\$4.31	\$4.48	\$4.48	\$4.48	\$0.98	\$0.98	\$0.84	\$0.84	
Italy	\$4.48	\$4.05	\$4.31	\$4.93	\$5.26	\$2.45	\$2.03	\$2.03	\$2.03	\$0.98	\$0.98	\$0.84	\$0.84	
Jamaica	\$5.46	\$4.64	\$4.54	\$5.21	\$5.54	\$3.30	\$3.36	\$3.36	\$3.36	\$0.98	\$0.98	\$0.70	\$0.70	
Japan	\$4.13	\$4.11	\$4.65	\$5.49	\$5.88	\$5.12	\$5.32	\$5.32	\$5.32	\$3.92	\$3.29	\$2.66	\$2.66	
Korea, Republic of	\$5.60	\$4.76	\$4.48	\$4.93	\$5.26	\$4.13	\$4.55	\$4.55	\$4.55	\$0.98	\$0.98	\$0.56	\$0.56	
Mexico 19/	\$6.30	\$5.36	\$4.98	\$5.60	\$5.99	\$4.55	\$3.43	\$3.43	\$3.43	\$1.75	\$1.47	\$0.70	\$0.70	
Morocco		n.a.	n.a.	n.a.	n.a.	\$5.94	\$6.16	\$6.16	\$6.79	\$4.13	\$4.13	\$3.99	\$3.99	
Netherlands	\$4.34	\$3.69	\$3.47	\$4.14	\$4.42	\$2.45	\$2.03	\$2.03	\$2.24	\$0.98	\$0.98	\$0.84	\$0.84	
Nigeria		\$5.89	\$5.54	\$6.61	\$7.06	\$5.14	\$5.32	\$5.32	\$5.88	\$4.13	\$4.13	\$3.99	\$3.99	
Pakistan	\$8.82	\$7.79	\$8.40	\$10.47	\$11.14	\$9.10	\$9.24	\$9.24	\$10.15	\$3.71	\$2.94	\$2.31	\$2.31	
Peru	\$4.62	\$4.22	\$4.82	\$5.66	\$6.05	\$5.21	\$5.25	\$5.25	\$5.81	\$2.73	\$2.59	\$1.40	\$1.40	
Philippines	\$5.60	\$4.82	\$5.43	\$6.05	\$6.44	\$4.90	\$5.39	\$5.39	\$5.39	\$1.82	\$1.47	\$1.26	\$1.26	
Poland	n.o.	\$4.40	\$4.59	\$5.43	\$5.77	\$4.10	\$3.50	\$3.50	\$3.50	\$1.96	\$1.75	\$1.05	\$1.05	
Russia 20/	n.o.	\$7.91	\$7.73	\$8.01	\$8.57	\$7.96	\$8.75	\$8.75	\$8.75	\$1.61	\$1.61	\$1.05	\$1.05	
Saudi Arabia	n.o.	\$5.53	\$5.43	\$6.89	\$7.34	\$7.59	\$7.77	\$7.77	\$8.54	\$4.69	\$3.57	\$3.43	\$3.43	
Sierra Leone	n.o.	n.a.	n.a.	n.a.	n.a.	\$6.40	\$6.72	\$6.72	\$7.42	\$6.65	\$4.55	\$4.27	\$4.27	
Singapore		n.a.	n.a.	n.a.	n.a.	\$2.70	\$2.94	\$2.94	\$3.22	\$1.40	\$1.12	\$0.98	\$0.98	
South Africa	n.o.	\$4.52	\$4.54	\$5.43	\$5.77	\$3.49	\$3.71	\$3.71	\$4.06	\$2.73	\$2.73	\$2.59	\$2.59	
Spain	\$4.34	\$4.22	\$4.59	\$5.43	\$5.77	\$2.45	\$2.03	\$2.03	\$2.03	\$0.98	\$0.98	\$0.84	\$0.84	
Switzerland	\$4.34	\$3.69	\$3.64	\$4.31	\$4.59	\$2.45	\$2.03	\$2.03	\$2.24	\$0.98	\$0.98	\$0.84	\$0.84	
Taiwan	\$5.46	\$4.64	\$4.37	\$4.87	\$5.21	\$4.14	\$4.55	\$4.55	\$4.55	\$1.05	\$0.84	\$0.49	\$0.49	
Thailand	\$5.60	\$4.76	\$4.48	\$5.43	\$5.77	\$5.21	\$5.74	\$5.74	\$6.30	\$3.22	\$1.89	\$1.75	\$1.75	
Turkey		n.a.	n.a.	n.a.	n.a.	\$4.19	\$4.34	\$4.34	\$4.76	\$3.15	\$3.15	\$3.01	\$3.01	
United Kingdom	\$4.13	\$3.51	\$3.30	\$3.81	\$4.03	\$0.84	\$0.84	\$0.84	\$0.84	\$0.63	\$0.63	\$0.56	\$0.56	
Vietnam	n.o.	n.a.	n.a.	n.a.	n.a.	\$8.13	\$8.96	\$8.96	\$8.96	\$5.18	\$5.18	\$3.85	\$3.85	
Weighted Average Price per Minute for Rates Shown	\$0.64	\$0.54	\$0.55	\$0.64	\$0.68	\$0.50	\$0.49	\$0.52	\$0.53	\$0.24	\$0.21	\$0.16	\$0.16	

See notes at the end of the tables.

**Table 24**  
**Accounting Rates for Peak-Period**  
**International Telephone Service Calls**  
**For Selected International Points 22/ 23/**

	December 31											
	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
Australia	0.6 SDR	0.55 SDR	0.4 SDR	0.4 SDR	0.308 SDR							
Brazil	\$1.50	\$1.40	\$1.27	\$1.14	\$1.03	\$0.85	\$0.65	\$0.60	\$0.38			
Canada	\$0.28	\$0.28										
China	7.5 GF	6.5 GF	6.0 GF	5.5 GF	4.5 GF	3.8 GF	3.1 GF	0.74 SDR	0.56 SDR	\$0.40	\$0.36	\$0.36
Colombia	\$1.55	\$1.50	\$1.40	\$1.30	\$1.25	\$1.00	\$0.80	\$0.65	\$0.55	\$0.38		
Dominican Republic	\$1.36	\$1.29	\$1.30	\$1.10	\$0.90	\$0.70	\$0.60	\$0.38	\$0.38			
Egypt	\$1.70	\$1.60	\$1.50	\$1.40	\$1.40	\$1.30	\$1.30	\$1.10	\$0.70			
El Salvador	\$1.30	\$1.25	\$1.20	\$1.20	\$1.10	\$0.88	\$0.77	\$0.60	\$0.48	\$0.38		
France	0.7 SDR	0.7 SDR	0.42 SDR	0.36 SDR	0.24 SDR	0.19 SDR						
Germany	0.8 SDR	0.6 SDR	0.34 SDR	0.26 SDR	0.16 SDR	0.15 SDR						
Greece	1.21 SDR	1.12 SDR	.95 SDR	.85 SDR	0.7 SDR	0.63 SDR	0.4 SDR	0.22 SDR				
Guatemala	\$1.40	\$1.30	\$1.20	\$1.18	\$1.00	\$0.90	\$0.77	\$0.64	\$0.51			
Haiti	\$1.35	\$1.30	\$1.25	\$1.20	\$1.20	\$1.20	\$1.20	\$1.00	\$0.92	\$0.70	\$0.60	\$0.46
Hong Kong	\$1.60	\$1.20	\$1.00	\$1.00	.65 SDR	.58 SDR	.52 SDR					
India	\$2.00	\$1.90	\$1.80	\$1.80	\$1.60	\$1.42	\$1.28	\$1.08	\$0.85	\$0.68	\$0.46	\$0.46
Israel	\$2.28	\$2.16	\$2.16	\$1.90	\$1.18	\$0.70	\$0.59					
Italy	1.2 SDR	1.1 SDR	0.82 SDR	0.48 SDR	0.36 SDR	0.24 SDR						
Jamaica	\$1.55	\$1.50	\$1.40	\$1.40	\$1.30	\$1.25	\$1.25	\$1.05	\$0.60			
Japan	0.95 SDR	0.75 SDR	0.63 SDR	0.63 SDR	0.63 SDR	0.63 SDR						
Korea, Rep.	\$1.60	\$1.44	0.95 SDR	0.85 SDR	0.85 SDR	0.72 SDR	\$0.85	\$0.71	\$0.51			
Mexico 19/	\$0.72	\$0.68	\$0.58	\$0.53	\$0.485	\$0.395	\$0.37	\$0.19	\$0.19	\$0.19	\$0.19	\$0.19
Morocco	2.2 SDR	2.2 SDR	2.2 SDR	1.2 SDR	1.0 SDR	0.8 SDR	0.6 SDR	0.6 SDR	0.6 SDR	0.3 SDR		
Netherlands	0.5 SDR	0.5 SDR	0.4 SDR	0.25 SDR	0.25 SDR	0.2 SDR						
Nigeria	\$1.50	\$1.50	\$1.50	\$1.50	\$1.50	\$1.50	\$1.40	\$1.15	0.6 SDR	0.4 SDR		
Pakistan	\$2.30	\$2.30	\$2.30	\$2.30	\$2.20	\$2.00	\$1.20	\$1.20	\$0.84	\$0.54	\$0.42	\$0.42
Peru	\$1.50	\$1.40	\$1.30	\$1.30	\$1.23	\$1.00	\$0.85	\$0.66	\$0.50	\$0.38		
Philippines	\$1.68	\$1.68	\$1.34	\$1.23	\$1.00	\$1.00	\$0.72	\$0.57				
Poland	\$1.30	\$1.25	\$1.20	\$1.15	\$0.95	\$0.70	\$0.55	\$0.38				
Russia	\$2.60	\$2.60	\$2.60	\$2.60	\$2.60	\$2.60	\$2.60	\$2.60	\$2.60	\$2.60	\$2.60	\$2.60
Saudia Arabia	\$2.20	\$2.20	\$2.20	\$2.20	\$2.20	1.5 SDR	1.25 SDR	1.0 SDR	\$0.28	\$0.28	\$0.28	\$0.28
Sierra Leone	\$1.50	\$1.50	\$1.50	\$1.50	\$1.50	\$1.50	\$1.50	\$1.50	0.6 SDR	0.6 SDR	\$0.56	\$0.56
Singapore	0.62 SDR	0.62 SDR	0.62 SDR	0.62 SDR	0.62 SDR	0.62 SDR	0.38 SDR					
South Africa	\$1.80	\$1.50	\$1.20	\$1.20	\$1.00	\$1.00	\$0.80	\$0.70	\$0.60			
Spain	1.5 SDR	1.3 SDR	1.2 SDR	1.0 SDR	.44 SDR	.35 SDR	0.2 SDR					
Switzerland	.808 SDR	.61 SDR	0.61 SDR	0.35 SDR	0.35 SDR	0.25 SDR						
Taiwan	\$1.40	\$1.20	\$1.20	\$1.20	\$1.20	\$1.14	\$0.45	\$0.30	\$0.30	\$0.30		
Thailand	\$1.75	\$1.60	\$1.60	\$1.55	\$1.50	\$1.20	\$0.90	\$0.60	\$0.48			
Turkey	1.4 SDR	1.2 SDR	1.2 SDR	1.1 SDR	0.8 SDR	0.6 SDR	.55 SDR	.48 SDR	0.32 SDR	\$0.38		
United Kingdom	0.54 SDR	0.44 SDR										
Viet Nam	\$2.30	\$2.30	\$2.30	\$2.30	\$2.30	\$2.30	\$2.30	1.15 SDR	1.0 SDR	0.9 SDR		

See notes at the end of the tables.

**Table 25**  
**Dollar Equivalent Accounting Rates for Peak-Period**  
**International Telephone Service Calls**  
**For Selected International Points 23/ 24/**

	December 31											
	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
Australia	\$0.83	\$0.76	\$0.59	\$0.59	\$0.45							
Brazil	1.50	1.40	1.27	1.14	1.03	\$0.85	\$0.65	\$0.60	\$0.38			
Canada	0.28	0.28										
China	3.37	2.93	2.91	2.67	2.13	1.69	1.40	1.01	0.72	\$0.40	\$0.36	\$0.36
Colombia	1.55	1.50	1.40	1.30	1.25	1.00	0.80	0.65	0.55	0.38		
Dominican Republic	1.36	1.29	1.30	1.10	0.90	0.70	0.60	0.38	0.38			
Egypt	1.70	1.60	1.50	1.40	1.40	1.30	1.30	1.10	0.70			
El Salvador	1.30	1.25	1.20	1.20	1.10	0.88	0.77	0.60	0.48	0.38		
France	0.96	0.97	0.62	0.54	0.35	0.26						
Germany	1.10	0.83	0.51	0.39	0.23	0.20						
Greece	1.66	1.55	1.41	1.26	1.01	0.86	0.55	0.30				
Guatemala	1.40	1.30	1.20	1.18	1.00	0.90	0.77	0.64	0.51			
Haiti	1.35	1.30	1.25	1.20	1.20	1.20	1.20	1.00	0.92	0.70	0.60	0.46
Hong Kong	1.60	1.20	1.00	1.00	0.94	0.79	0.72					
India	2.00	1.90	1.80	1.80	1.60	1.42	1.28	1.08	0.85	0.68	0.46	0.46
Israel	2.28	2.16	2.16	1.90	1.18	0.70	0.59					
Italy	1.65	1.51	1.22	0.71	0.52	0.33						
Jamaica	1.55	1.50	1.40	1.40	1.30	1.25	1.25	1.05	0.60			
Japan	1.31	1.04	0.94	0.94	0.91	0.86						
Korea, Rep.	1.60	1.44	1.41	1.26	1.23	0.98	0.85	0.71	0.51			
Mexico 19/	0.72	0.68	0.58	0.53	0.485	0.395	0.37	0.19	0.19	0.19	0.19	0.19
Morocco	3.03	3.04	3.27	1.78	1.45	1.09	0.83	0.82	0.77	0.38		
Netherlands	0.69	0.69	0.59	0.37	0.36	0.27						
Nigeria	1.50	1.50	1.50	1.50	1.50	1.50	1.40	1.15	0.77	0.51		
Pakistan	2.30	2.30	2.30	2.30	2.20	2.00	1.20	1.20	0.84	0.54	0.42	0.42
Peru	1.50	1.40	1.30	1.30	1.23	1.00	0.85	0.66	0.50	0.38		
Philippines	1.68	1.68	1.34	1.23	1.00	1.00	0.72	0.57				
Poland	1.30	1.25	1.20	1.15	0.95	0.70	0.55	0.38				
Russia	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60
Saudia Arabia	2.20	2.20	2.20	2.20	2.20	2.03	1.73	1.37	0.28	0.28	0.28	0.28
Sierra Leone	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	0.77	0.76	0.56	0.56
Singapore	0.85	0.86	0.92	0.92	0.90	0.85	0.52					
South Africa	1.80	1.50	1.20	1.20	1.00	1.00	0.80	0.70	0.60			
Spain	2.06	1.80	1.78	1.44	0.64	0.48	0.26					
Switzerland	1.11	0.84	0.91	0.52	0.51	0.34						
Taiwan	1.40	1.20	1.20	1.20	1.20	1.14	0.45	0.30	0.30	0.30		
Thailand	1.75	1.60	1.60	1.55	1.50	1.20	0.90	0.60	0.48			
Turkey	1.93	1.66	1.78	1.63	1.16	0.82	0.76	0.66	0.41	0.38		
United Kingdom	0.74	0.61										
Viet Nam	2.30	2.30	2.30	2.30	2.30	2.30	2.30	1.58	1.27	1.28		
Fisher Ideal Rate Index 22/ % changes from Prior Rate	65.5 -10.3%	60.5 -7.6%	52.0 -14.1%	48.3 -7.2%	43.2 -10.5%	38.2 -11.7%	34.1 -10.6%	27.9 -18.2%	n.m.	n.m.	n.m.	n.m.
Index without Mexico % changes from Prior Rate	63.4 -11.2%	58.2 -8.2%	50.0 -14.1%	46.4 -7.3%	41.2 -11.2%	36.7 -10.8%	32.3 -12.0%	29.0 -10.3%	n.m.	n.m.	n.m.	n.m.

See notes at the end of the tables.

**Table 26**  
**Revenues for Facilities-Based and Facilities-Resale**  
**International Message Telephone Service**  
**For Selected Carriers 1/**  
**(In Millions)**

	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
ABS-CBN Telecom North America, Inc.							*	\$6	\$9	\$5	*
ACC Global Corp.				\$1	\$2	\$1					
Alascom, Inc.	\$15	\$15	\$16	10							
American Samoa Telecomm. Authority	4	3	4	3	3	3	2	2	2	2	\$2
Andrew Telecom, Inc.							1	1			
AT&T Corp.	7,314	7,482	7,984	8,425	8,559	8,351	7,533	6,755	5,444	5,790	5,477
BellSouth Corporation								8	18		
Cable & Wireless, Inc.	4			7	12	14	10		66	70	1
Communication TeleSys. Int'l./WorldxChange				6	17	123	159	25			
DirectNet Telecommunications					1	3	7	10			
Esprit Telecom (U.K.), Ltd.				1	7						
fONOROLA Corporation		10	19	20	20	31					
Golden Pages (Jersey) Ltd.					21						
GTE Corporation	29	26	25	28	27	26	55	51			
Harris Corporation		64	*	*	2	2	1	*	*	*	*
IDT Corporation							3	23	21	119	129
International Telecommunications Corp.				11							
IT&E Overseas, Inc.	35	38	37	39	40	32	26	19	15	10	8
Japan Telecom America, Inc.							1	3	2		
KDD America, Inc.							1	2	11	10	10
KPN-INS, Inc.								16	12	30	15
LC Communications - Int'l. Telecom Inc.								3	4		
Masatepe Communications, U.S.A., L.L.C.							1	1			
MCC Communications, Inc.											
MCI WorldCom, Inc. 25/	2,065	2,779	2,952	3,968	3,550	4,243	4,298	5,056	6,818	2,876	2,116
MFS International				1							
Micronesian Telecommunications Corp.	18	16	15	16	17	15					
New Global Telecom, Inc.							34				
Pacific Gateway Exchange, Inc.			3	12	34	173	148	60			
PCI Communications, Inc.						6					
Primus Telecommunications, Inc.						10	27	241	204	134	129
RSL Communications, Ltd.					21	26	54	107	80		
SBC Telecommunications, Inc.								2	7		
Sprint	786	1,048	1,229	1,289	1,493	1,478	1,421	1,379	1,188	1,386	1,185
Star Telecommunications, Inc.						59	132	140			
Startec Global Communications Corp.		2	3	4	7	6	8	75	91	60	14
St. Thomas & San Juan Telephone Co. Inc.	8	9	2								
Telecom New Zealand Limited						2	43				
Telefonica Larga Distancia, Inc.	8	11	18	26	19	16	20	19	13	8	6
Teleglobe USA Inc.						3					
Telstra Incorporated								*	20		
TerraLink Communications, Ltd.					2						
TresCom International, Inc.				1	4	10	14				
TRICOM USA, Inc.						7	13	31	53	65	76
TRT/FTC Communications, Inc.	35										
U.S. Long Distance, Inc.				1							
Verizon Communications, Inc.									55	71	141
Viatel, Inc.				1	6	32	63	212			
Western Union International											
World Access (Facicom Int'l.)					4	75	167	276	33		
World Communications, Inc.	10										
WorldCom, Inc. d/b/a LDDS WorldCom	1	1	124	291	364	500					
Total for Carriers Not Shown Above			*	1	2	3	2	3	6	210	137
Total for All Carriers	\$10,331	\$11,505	\$12,431	\$14,160	\$14,234	\$15,250	\$14,246	\$14,528	\$14,172	\$10,844	\$9,446
HHI Index 26/	5,469	4,897	4,789	4,413	4,354	3,880	3,811	3,474	3,864	3,723	4,028

See notes at the end of the tables.

**Table 27**  
**Shares of Facilities-Based and Facilities-Resale**  
**International Message Telephone Service Revenues**  
**For Selected Carriers 1/**

	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
ABS-CBN Telecom North America, Inc.				0.0%	0.0%	0.0%	0.0%	0.0%	0.1%	0.0%	0.0%
ACC Global Corp.				0.1%	0.1%						
Alascom, Inc.	0.1%	0.1%	0.1%	0.1%							
American Samoa Telecomm. Authority	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Andrew Telecom, Inc.							0.0%	0.0%			
AT&T Corp.	70.8%	65.0%	64.2%	59.5%	60.1%	54.8%	52.9%	46.5%	38.4%	53.4%	58.0%
Cable & Wireless, Inc.	0.0%			0.0%	0.1%	0.1%	0.1%		0.5%	0.6%	0.0%
Communication TeleSys. Int'l./WorldxChange				0.0%	0.1%	0.8%	1.1%	0.2%			
DirectNet Telecommunications					0.0%	0.0%	0.1%	0.1%			
Esprit Telecom (U.K.), Ltd.				0.0%	0.1%						
fONOROLA Corporation		0.1%	0.2%	0.1%	0.1%	0.2%					
Golden Pages (Jersey) Ltd.					0.1%						
GTE Corporation	0.3%	0.2%	0.2%	0.2%	0.2%	0.2%	0.4%	0.4%			
Harris Corporation		0.6%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
IDT Corporation						0.0%	0.0%	0.2%	0.1%	1.1%	1.4%
IT&E Overseas, Inc.	0.3%	0.3%	0.3%	0.3%	0.3%	0.2%	0.2%	0.1%	0.1%	0.1%	0.1%
Japan Telecom America, Inc.							0.0%	0.0%	0.0%		
KDD America, Inc.							0.0%	0.0%	0.1%	0.1%	0.1%
Masatepe Communications, U.S.A., L.L.C.							0.0%	0.0%			
MCC Communications, Inc.											
MCI WorldCom, Inc. 25/	20.0%	24.2%	23.8%	28.0%	24.9%	27.8%	30.2%	34.8%	48.1%	26.5%	22.4%
MFS International				0.0%							
Micronesia Telecommunications Corp.	0.2%	0.1%	0.1%	0.1%	0.1%	0.1%					
New Global Telecom, Inc.							0.2%				
Pacific Gateway Exchange, Inc.			0.0%	0.1%	0.2%	1.1%	1.0%	0.4%			
PCI Communications, Inc.						0.0%					
Primus Telecommunications, Inc.						0.1%	0.2%	1.7%	1.4%	1.2%	1.4%
RSL Communications, Ltd.					0.1%	0.2%	0.4%	0.7%	0.6%		
SBC Telecommunications, Inc.								0.0%	0.1%		
Sprint	7.6%	9.1%	9.9%	9.1%	10.5%	9.7%	10.0%	9.5%	8.4%	12.8%	12.5%
Star Telecommunications, Inc.						0.4%	0.9%	1.0%			
Startec Global Communications Corp.		0.0%	0.0%	0.0%	0.0%	0.0%	0.1%	0.5%	0.6%	0.5%	0.1%
St. Thomas & San Juan Telephone Co. Inc.	0.1%	0.1%	0.0%								
Telecom New Zealand Limited						0.0%	0.3%				
Telefonica Larga Distancia, Inc.	0.1%	0.1%	0.1%	0.2%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%
Teleglobe USA Inc.						0.0%					
Telstra Incorporated								0.0%	0.1%		
TerraLink Communications, Ltd.					0.0%						
TresCom International, Inc.				0.0%	0.0%	0.1%	0.1%				
TRICOM USA, Inc.						0.0%	0.1%	0.2%	0.4%	0.6%	0.8%
TRT/FTC Communications, Inc.	0.3%										
U.S. Long Distance, Inc.				0.0%							
Verizon Communications, Inc.									0.4%	0.7%	1.5%
Viatel, Inc.				0.0%	0.0%	0.2%	0.4%	1.5%			
Western Union International											
World Access (Facicom Int'l.)					0.0%	0.5%	1.2%	1.9%	0.2%		
World Communications, Inc.	0.1%										
WorldCom, Inc. d/b/a LDDS WorldCom	0.0%	0.0%	1.0%	2.1%	2.6%	3.3%					

See notes at the end of the tables.

**Table 28**  
**Shares of International Message Telephone Service**  
**Including Pure Resale and End-User Revenues**  
**For Selected Carriers 1/**  
**(In Millions)**

	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
<b>Facilities-Based and Facilities-Resale Service</b>											
<b>Billed Revenues</b>											
AT&T	\$7,314	\$7,482	\$7,985	\$8,425	\$8,559	\$8,351	\$7,533	\$6,755	\$5,444	\$5,790	\$5,477
MCI Worldcom (MCI prior to 1998) 25/	2,065	2,779	2,952	3,968	3,550	4,243	4,298	5,056	6,818	2,876	2,116
Sprint	786	1,048	1,229	1,289	1,493	1,478	1,421	1,379	1,188	1,386	1,185
WorldCom	10	64	124	291	364	500	--	--	--	--	--
All Other	156	132	141	187	268	678	994	1,337	721	793	668
Total All Carriers	10,331	11,505	12,431	14,160	14,234	15,250	14,246	14,528	14,172	10,844	9,446
<b>Shares of Billed Revenues</b>											
AT&T	70.8%	65.0%	64.2%	59.5%	60.1%	54.8%	52.9%	46.5%	38.4%	53.4%	58.0%
MCI Worldcom (MCI prior to 1998) 25/	20.0%	24.2%	23.7%	28.0%	24.9%	27.8%	30.2%	34.8%	48.1%	26.5%	22.4%
Sprint	7.6%	9.1%	9.9%	9.1%	10.5%	9.7%	10.0%	9.5%	8.4%	12.8%	12.5%
WorldCom	0.1%	0.6%	1.0%	2.1%	2.6%	3.3%	--	--	--	--	--
All Other	1.5%	1.1%	1.1%	1.3%	1.9%	4.4%	7.0%	9.2%	5.1%	7.3%	7.1%
HHI Index 26/	5,469	4,897	4,789	4,413	4,354	3,880	3,811	3,474	3,864	3,723	4028
<b>Pure Resale Service</b>											
<b>Billed Revenues</b>											
AT&T	\$0	\$0	\$0	\$0	\$0	\$43	\$206	\$254	\$2,484	\$1,283	\$764
MCI Worldcom (MCI prior to 1998) 25/	48	34	56	52	42	39	683	618	429	225	282
Sprint	63	28	57	68	87	95	89	244	187	175	184
WorldCom	12	50	214	188	411	301	--	--	--	--	--
All Other	388	479	793	1,446	3,096	3,633	3,820	3,412	4,266	3,658	3,871
Total All Carriers	511	591	1,120	1,754	3,636	4,111	4,798	4,528	7,366	5,341	5,100
<b>Shares of Billed Revenues</b>											
AT&T	0.0%	0.0%	0.0%	0.0%	0.0%	1.0%	4.3%	5.6%	33.7%	24.0%	15.0%
MCI Worldcom (MCI prior to 1998) 25/	9.4%	5.8%	5.0%	3.0%	1.2%	0.9%	14.2%	13.7%	5.8%	4.2%	5.5%
Sprint	12.3%	4.8%	5.1%	3.9%	2.4%	2.3%	1.9%	5.4%	2.5%	3.3%	3.6%
WorldCom	2.3%	8.5%	19.1%	10.7%	11.3%	7.3%	--	--	--	--	--
All Other	75.9%	81.0%	70.8%	82.4%	85.1%	88.4%	79.6%	75.4%	57.9%	68.5%	75.9%
<b>All International Telephone Service</b>											
<b>Billed Revenues</b>											
AT&T	\$7,314	\$7,482	\$7,985	\$8,425	\$8,559	\$8,394	\$7,739	\$7,009	\$7,929	\$7,073	\$6,241
MCI Worldcom (MCI prior to 1998) 25/	2,113	2,813	3,008	4,020	3,592	4,282	4,981	5,675	7,247	3,101	2,397
Sprint	849	1,076	1,285	1,357	1,580	1,573	1,510	1,623	1,376	1,561	1,369
WorldCom	22	114	338	479	775	801	--	--	--	--	--
All Other	544	610	934	1,633	3,364	4,311	4,814	4,749	4,987	4,451	4,540
Total All Carriers	10,842	12,096	13,551	15,914	17,870	19,361	19,044	19,055	21,538	16,186	14,547
<b>Shares of Billed Revenues</b>											
AT&T	67.5%	61.9%	58.9%	52.9%	47.9%	43.4%	40.6%	36.8%	36.8%	43.7%	42.9%
MCI Worldcom (MCI prior to 1998)	19.5%	23.3%	22.2%	25.3%	20.1%	22.1%	26.2%	29.8%	33.6%	19.2%	16.5%
Sprint	7.8%	8.9%	9.5%	8.5%	8.8%	8.1%	7.9%	8.5%	6.4%	9.6%	9.4%
WorldCom	0.2%	0.9%	2.5%	3.0%	4.3%	4.1%	--	--	--	--	--
All Other	5.0%	5.0%	6.9%	10.3%	18.8%	22.3%	25.3%	24.9%	23.2%	27.5%	31.2%
Lower Bound HHI Index 26/ 27/	4,992	4,447	4,061	3,523	2,795	2,452	2,398	2,312	2,528	2,370	2,201
Upper Bound HHI Index 26/ 27/	5,000	4,456	4,077	3,558	2,913	2,617	2,611	2,519	2,707	2,622	2,525
<b>End-User International Telephone Service 4/</b>											
<b>Largest Carriers Shown Above</b>											
Other Carriers	\$10,110	\$11,259	\$12,076	\$13,519	\$12,916	\$13,506	\$12,319	\$12,606	\$12,415	\$9,153	\$7,687
Total All Carriers	272	305	467	816	1,682	2,156	2,407	2,374	2,494	2,225	2,270
Total All Carriers	10,382	11,564	12,543	14,335	14,598	15,661	14,726	14,980	14,909	11,379	9,956
<b>Revenue per Minute</b>											
U.S. Billed Minutes	10,294	11,513	13,616	15,889	19,325	22,753	24,250	28,515	30,135	33,287	35,988
Underlying Carrier Revenue per Minute	\$1.00	\$1.00	\$0.91	\$0.89	\$0.74	\$0.67	\$0.59	\$0.51	\$0.47	\$0.33	\$0.26
End-User Revenue per Minute	\$1.01	\$1.00	\$0.92	\$0.90	\$0.76	\$0.69	\$0.61	\$0.53	\$0.49	\$0.34	\$0.28

See notes at the end of the tables.

**Table 29**  
**Revenue per Minute Data for Selected Carriers 1/**  
**(Revenues and Minutes in Millions)**

U.S. Billed Revenues and Minutes	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	Annual Growth Rates 1997 to 2002 7/
<b>AT&amp;T</b>												
U.S. Billed Minutes	7,039	7,201	8,040	8,831	9,546	10,331	10,452	10,900	9,787	11,975	12,787	4.0%
U.S. Billed Revenues	\$7,314	\$7,482	\$7,984	\$8,425	\$8,559	\$8,351	\$7,533	\$6,755	\$5,444	\$5,790	\$5,477	
Revenue per Billed Minute	\$1.04	\$1.04	\$0.99	\$0.95	\$0.90	\$0.81	\$0.72	\$0.62	\$0.56	\$0.48	\$0.43	
Originating + Terminating Minutes	10,741	10,938	11,807	12,778	13,563	14,529	15,113	15,944	14,548	16,200	17,888	3.4%
Retained Revenues 10/	\$4,814	\$4,979	\$5,229	\$5,634	\$5,705	\$5,786	\$5,332	\$4,921	\$4,127	\$4,597	\$4,517	
Retained Revenue per Minute	\$0.45	\$0.46	\$0.44	\$0.44	\$0.42	\$0.40	\$0.35	\$0.31	\$0.28	\$0.28	\$0.25	
<b>WorldCom, Inc.</b>												
U.S. Billed Minutes	2,101	2,857	3,529	4,486	5,372	5,913	7,195	8,306	12,412	11,455	12,260	16.8%
U.S. Billed Revenues 25/	\$2,065	\$2,779	\$2,952	\$3,968	\$3,550	\$4,243	\$4,298	\$5,056	\$6,818	\$2,876	\$2,116	
Revenue per Billed Minute	\$0.98	\$0.97	\$0.84	\$0.88	\$0.66	\$0.72	\$0.60	\$0.61	\$0.55	\$0.25	\$0.17	
Originating + Terminating Minutes	3,163	4,175	5,206	6,350	7,496	8,216	10,257	11,396	17,904	17,172	17,647	18.1%
Retained Revenues 10/	\$1,360	\$1,789	\$1,790	\$2,402	\$1,772	\$2,634	\$2,745	\$3,489	\$4,900	\$1,655	\$1,103	
Retained Revenue per Minute	\$0.43	\$0.43	\$0.34	\$0.38	\$0.24	\$0.32	\$0.27	\$0.31	\$0.27	\$0.10	\$0.06	
<b>Sprint</b>												
U.S. Billed Minutes	946	1,181	1,490	1,772	2,745	2,794	2,916	3,640	3,945	5,447	4,774	14.2%
U.S. Billed Revenues	\$786	\$1,048	\$1,229	\$1,289	\$1,493	\$1,478	\$1,421	\$1,379	\$1,188	\$1,386	\$1,185	
Revenue per Billed Minute	\$0.83	\$0.89	\$0.82	\$0.73	\$0.54	\$0.53	\$0.49	\$0.38	\$0.30	\$0.25	\$0.25	
Originating + Terminating Minutes	1,424	1,730	2,140	2,480	4,060	4,505	4,795	5,507	5,957	7,977	7,389	12.4%
Retained Revenues 10/	\$520	\$706	\$742	\$741	\$672	\$822	\$922	\$825	\$781	\$773	\$500	
Retained Revenue per Minute	\$0.37	\$0.41	\$0.35	\$0.30	\$0.17	\$0.18	\$0.19	\$0.15	\$0.13	\$0.10	\$0.07	
<b>All Other Carriers</b>												
U.S. Billed Minutes	113	274	556	800	1,662	3,715	3,687	5,670	3,990	4,410	6,167	8.1%
U.S. Billed Revenues	\$166	\$195	\$265	\$478	\$632	\$1,177	\$994	\$1,337	\$721	\$793	\$668	
Revenue per Billed Minute	\$1.48	\$0.71	\$0.48	\$0.60	\$0.38	\$0.32	\$0.27	\$0.24	\$0.18	\$0.18	\$0.11	
Originating + Terminating Minutes	242	457	847	1,333	2,500	4,673	4,283	6,434	4,615	5,416	6,741	6.5%
Retained Revenues 10/	\$111	\$136	\$161	\$166	\$284	\$430	\$383	\$486	\$276	\$413	\$191	
Retained Revenue per Minute	\$0.46	\$0.30	\$0.19	\$0.12	\$0.11	\$0.09	\$0.09	\$0.08	\$0.06	\$0.08	\$0.03	
<b>Total All Carriers</b>												
U.S. Billed Minutes	10,199	11,513	13,615	15,889	19,325	22,753	24,250	28,515	30,135	33,287	35,988	9.9%
U.S. Billed Revenues	\$10,331	\$11,505	\$12,431	\$14,160	\$14,234	\$15,250	\$14,246	\$14,528	\$14,172	\$10,844	\$9,446	
Revenue per Billed Minute	\$1.01	\$1.00	\$0.91	\$0.89	\$0.74	\$0.67	\$0.59	\$0.51	\$0.47	\$0.33	\$0.26	
Originating + Terminating Minutes	15,569	17,299	20,000	22,939	27,618	31,923	34,448	39,280	43,023	46,765	49,665	9.6%
Retained Revenues 10/	\$6,805	\$7,609	\$7,923	\$8,944	\$8,433	\$9,672	\$9,383	\$9,721	\$10,084	\$7,437	\$6,312	
Retained Revenue per Minute	\$0.44	\$0.44	\$0.40	\$0.39	\$0.31	\$0.30	\$0.27	\$0.25	\$0.23	\$0.16	\$0.13	
												<b>Change in Share 1997 to 2002</b>
<b>Shares of U.S. Billed Minutes</b>												
AT&T	69.0%	62.5%	59.1%	55.6%	49.4%	45.4%	43.1%	38.2%	32.5%	36.0%	35.5%	-9.9%
MCI WorldCom	20.6%	24.8%	25.9%	28.2%	27.8%	26.0%	29.7%	29.1%	41.2%	34.4%	34.1%	8.1%
Sprint	9.3%	10.3%	10.9%	11.2%	14.2%	12.3%	12.0%	12.8%	13.1%	16.4%	13.3%	1.0%
All Other Carriers	1.1%	2.4%	4.1%	5.0%	8.6%	16.3%	15.2%	19.9%	13.2%	13.2%	17.1%	0.8%
<b>Lower Bound HHI Index 26/ 27/</b>	5,273	4,633	4,279	4,011	3,415	2,888	2,883	2,473	2,923	2,746	2,599	
<b>Upper Bound HHI Index 26/ 27/</b>	5,274	4,635	4,284	4,019	3,439	2,977	2,960	2,604	2,981	2,805	2,697	
<b>Shares of Foreign Billed Minutes</b>												
AT&T	68.9%	64.6%	59.0%	56.0%	48.4%	45.8%	45.7%	46.8%	36.9%	31.3%	37.3%	-8.5%
MCI WorldCom	19.8%	22.8%	26.3%	26.4%	25.6%	25.1%	30.0%	28.7%	42.6%	42.4%	39.4%	14.3%
Sprint	8.9%	9.5%	10.2%	10.0%	15.9%	18.7%	18.4%	17.3%	15.6%	18.8%	19.1%	0.5%
All Other Carriers	2.4%	3.1%	4.6%	7.6%	10.1%	10.4%	5.8%	7.1%	4.8%	7.5%	4.2%	-6.3%



## Appendix A: Notes to Tables

Note: Some previously published data have been revised. Detail may not add to totals shown due to rounding. "n.a." signifies data not available. "n.o." signifies service not offered. "\*" signifies an amount greater than 0 but less than a half million. "n.m." signifies not meaningful.

- 1) Data for 1990 are as reported in the Wireline Competition Division, Industry Analysis and Technology Division *Statistics of Communications Common Carriers (SOCC)*, with the following adjustment: telephone traffic for Canada and Mexico have been added. The telephone data for 1990 originated in FCC Form M filings and represent traffic between domestic United States and offshore points. Starting in 1990, the *SOCC* includes calls between international points and Alaska and Hawaii. The record data for those years (telegraph, telex, and record private line) are based on FCC Form O/R filings. Starting in 1991, data have been taken from the latest version of *International Telecommunications Data* reports and represent traffic between all U.S. points and all international points, and include a small amount of traffic between domestic U.S. points and offshore U.S. points. Data exclude pure resale traffic unless otherwise noted. Appendix A summarizes changes in data reported over time.
- 2) The data for total toll revenues for 1950 through 1980 have been taken from Table 4.3 of the *SOCC*, and represent message telephone, WATS, subscriber-toll free, private line, and other toll service revenues (accounts 510 through 516) reported in the discontinued annual FCC Form M filings. Starting with 1981, the total toll figures are from Wireline Competition Bureau, Industry Analysis and Technology Division *Trends in Telephone Service*, and include toll revenues of all local and interexchange carriers. Note that total toll revenues include revenues from end users as well as revenues from other carriers. Total end-user toll revenues also are taken from *Trends in Telephone Service*.
- 3) International Simple Resale (ISR) traffic differs from facilities-based traffic in that the former is carried over **leased private lines** and the latter is carried over **owned circuits**. Pure resale traffic is handled by reselling the **switched services** of another carrier. Pure resale data through 1990 appear to include revenues for a few very small facilities-based carriers. Starting with 1991, the amounts shown are primarily for pure resale international telephone service, but include very small amounts of other pure resale switched international services. Breakouts are available in the annual *International Telecommunications Data* reports. **ISR/Hubbed** traffic is switched traffic that is routed and settled by the U.S. carrier outside the traditional settlement process and that may be carried over private lines that are interconnected to the public switched network on one or both ends of the private line. The Commission allows carriers to use ISR as a means to route U.S.-outbound and U.S.-inbound traffic between the United States and a rapidly growing number of approved countries. In many cases, U.S. carriers exchange traffic with a carrier in an approved country and that carrier "hubs" the call, i.e. terminates the call

in or from a third country under a traditional settlement agreement. See 47 C.F.R. § 63.17.

- 4) Total international revenues include revenues from filers that requested confidential treatment. These revenues are not included in revenues for individual services. For 2002, twelve carriers requested confidential treatment for a total of \$949 million of international revenues. **End-user** revenues are estimated as the total revenues for facilities-based and facilities-resale traditional and International Simple Resale (ISR)/Hubbed service plus 10% of pure resale revenues. In Table 28, the amount of end-user revenues attributed to carriers other than the three largest are estimated as half of their total billed revenues. The amounts for the largest carriers are estimated as the balance of total end-user revenues. For 2001, these assumptions produce data that are roughly consistent with data filed on FCC Form 499-A. Private line revenues, which are treated as end-user revenues for estimating total end-user international revenues, contain a small amount of resale revenues.
- 5) Only one facilities-based carrier reported providing international telex and telegraph services in 2002. That carrier, MCI WorldCom, represented that it billed relatively little revenues for those services and was granted a waiver not to file data.
- 6) See footnote 4 for information on end-user revenues. Per-minute estimates published herein are different from estimates published in *Trends in Telephone Service* because the latter does not include billed minutes and revenues associated with calls that both originate and terminate at foreign points.
- 7) The annual rates of growth were estimated by fitting a log linear regression to data for the years indicated.
- 8) Country Direct, Country Beyond, and reoriginated traffic were first reported separately in 1995. Amounts shown for prior years are based on staff estimates.
- 9) Many countries charge for service on the basis of metered pulses, rather than by call minutes as is done in the United States. The pulses are converted to minutes to facilitate settlements. U.S. carriers report these amounts as foreign billed minutes.
- 10) U.S. traffic generally exceeds foreign traffic. Since settlement payments are based on traffic, there is usually a net settlement payment by U.S. carriers, shown as a negative amount in the table. Net revenues are the retained revenues from U.S. billed calls plus the settlement amounts from foreign billed calls. Cases in which U.S. carriers report both settlement receipts and settlement payments for transiting calls are where the operating agreements have cascade billing arrangements. In a cascade billing arrangement, the U.S. carrier collects from the originating foreign carrier both the transit fee and the settlement amount that the

- originating foreign carrier will owe to the terminating foreign carrier. The U.S. carrier then makes the settlement payment to the terminating foreign carrier.
- 11) Estimated minutes of traffic for selected foreign carriers and for the total world were obtained from the TeleGeography research division of PriMetrica, Inc. ([www.telegeography.com](http://www.telegeography.com)). Several companies have changed over time due to name changes and mergers. Through 1997, MCI data are shown for MCI WorldCom. Cable & Wireless, prior to 1997, is Mercury, and then C&W Communications until 2000. PCCW Hong Kong Telecom, prior to 1998, was HongKong Telecom, and then C&W Hong Kong until 2000. China Telecom is China MPT prior to 1997. Through 1991, Deutsche Telecom is DBP Telecom. Stentor became part of Bell Canada in 1998. Some previous data have been revised.
  - 12) The *TeleGeography* report does not provide estimates for China Telecom and Deutsche Telekom for 2001. The amounts shown are the average of the 2000 and 2002 estimates.
  - 13) Source: *2002 Year-End Circuit Status Report*, International Bureau, December 24, 2003. See Table 7 therein for conversion ratios used to calculate the number of 64 kbps circuits for high-speed digital systems. Data include revisions for previous years.
  - 14) Data are shown for circuits as planned and represent the capacity planned for the day the cable goes into service. On some older systems, some capacity was not available for technical reasons and some was held in reserve for backup purposes. On some newer systems, capacity can be increased greatly with relatively small incremental investments. For example, the AC-1 system has been upgraded to increase its capacity from 241,920 circuits to 1,693,440 circuits.
  - 15) Data for previous years have been revised to incorporate revisions received from carriers. Latest data are from the International Bureau *2002 Year-End Circuit Status Data Report*. Data reflect 4 khz or 64 kbps equivalent circuits. Data shown in Tables 11 through 13 are for activated circuits and do not include idle circuits. The *Circuit Status* reports contain data for both activated and idle circuits.
  - 16) Totals and averages for all countries include traffic billed in off-shore U.S. points. The region totals do not.
  - 17) Tariff rates do not include taxes or surcharges. In March 1994, AT&T introduced separate rate schedules for residential and commercial customers. Until then, the same rate schedule applied to residential and commercial calls.
  - 18) Tariff rates for traffic to Canada and Mexico are distance sensitive. The rates shown for Canada are for 1000-mile calls. Accounting rates do not exist for

service between Mexico and the United States. The settlement rate varies by service classification and the originating or terminating locations. The average settlement rate per minute shown in the table is an average of all the per-minute settlement rates in effect for service.

- 19) Rates shown are for service to Moscow.
- 20) A Fisher ideal price index is a geometric mean of a Laspeyres price index and a Paasche price index for a good or service. A Laspeyres price index is the ratio of the cost of a market basket of goods and services from period 0 at the prices in period 1 to the cost of the identical market basket at the prices in period 0. A Paasche price index is the ratio of the cost of a market basket of goods and services from period 1 at the prices in period 1 to the cost of the identical market basket at the prices in period 0.
- 21) The AT&T "Reach Out World" rates did not offer discounts to all countries for the years shown. AT&T's "TrueWorld Savings" rates, including "Reach Out World" discounts, are shown for 1993 to 1996. Customers of the "Reach Out-Overseas One Rate" plan must pay a fixed charge of \$3 per month. On December 3, 2001, AT&T introduced its "AnyHour International Savings" plan with a fixed monthly charge of \$2.95 per month. Until 1997, different rates applied for peak and off-peak rate schedules.
- 22) The accounting rates shown are for rates available to all carriers for traffic carried during the peak period. The peak period is defined in the accounting rate agreement, and varies by country. In addition to varying by time of day, some accounting rate agreements vary by volume of traffic. See annual *International Telecommunications Data* reports for detailed descriptions of different traffic arrangements. Accounting rates typically are denominated in dollars, gold francs (G.F.), or Standard Drawing Rights (S.D.R.). Once the FCC determines that U.S. carriers can terminate at least 50% of U.S.-billed traffic to a country at least 25% below the benchmark settlement rate for the country, the FCC grants relief from the international settlements policy. This permits each U.S. carrier to negotiate its own settlement rates. These negotiated settlement rates are not public and therefore are not available for publication.
- 23) Where more than one foreign carrier connects with U.S. carriers, the table shows rates for the first carrier providing service. These include Korea Telecom in Korea, Kokusai Denshin Denwa in Japan, PLDT in the Philippines, CODETEL in the Dominican Republic, and British Telecom in the United Kingdom.

- 24) Accounting rates do not exist for service between Mexico and the United States. Instead, settlements are based on the distance between the border and the destination point in Mexico. The table shows an average settlement rate per minute which is calculated as an average of all the per minute settlement rates for service between the United States and Mexico. The settlement rate varies by service classification and the originating or terminating locations.
- 25) MCI WorldCom facilities-based telephone service revenues for 2000 appear to be seriously overstated. The company has not been able to file corrected data.
- 26) The Herschfeld-Herfendahl Index (HHI) value for the market is based on the market shares for each entrant.
- 27) A lower bound HHI estimate is calculated using the share for the largest entrants only. An upper bound HHI estimate is calculated by imputing the shares of all other carriers to three equal-sized firms.

## Appendix B: Sources of International Traffic Data

Most of the data presented herein came from carrier rate information, accounting rate agreements, and annual statistical reports, such as the international traffic data and circuit status reports filed pursuant to sections 43.61 and 43.82 of the Commission's rules. Much of the data presented in this report were previously published in the *Statistics of Communications Common Carriers (SOCC)* and in annual *Section 43.61 International Telecommunications Data* reports released by the Wireline Competition Bureau and *Section 43.82 Circuit Status Data* reports released by the International Bureau. Annual volumes of the *SOCC* and recent editions of the traffic data and circuit status reports are available in the Federal Communications Commission's Reference Information Center, Courtyard Level, 445 12th Street S.W., Washington, D.C. 20554, (202) 418-0270. Recent data from these sources also are available from the FCC at [www.fcc.gov/ib](http://www.fcc.gov/ib) or <http://www.fcc.gov/wcb/iatd/intl.html>. Copies may also be obtained from the Commission's duplicating contractor, Best Copy and Printing, Inc. (BCPI). Customers may contact BCPI through its web site: [WWW.BCPIWEB.COM](http://WWW.BCPIWEB.COM), by e-mail at [FCC@BCPIWEB.COM](mailto:FCC@BCPIWEB.COM), by phone at 202-488-5300 or by FAX at 202-488-5563.

Additional information on accounting rates, settlement payments, international circuit capacity, and international policies can be obtained from the FCC's International Bureau (202) 418-1460 and on the Internet site at [www.fcc.gov/ib](http://www.fcc.gov/ib).

Previous editions of *International Trends* can be downloaded from the **FCC-State Link** Internet site at <http://www.fcc.gov/wcb/iatd/intl.html>. The **FCC-State Link** also contains information on the domestic telecommunications industry

Information from the Bureau of Economic Analysis, (202) 606-9900, can be found on the Internet at [www.bea.doc.gov](http://www.bea.doc.gov).

Information from the United States Census Bureau, (301) 457-4100, can be found on the Internet at [www.census.gov](http://www.census.gov).

Information from the United States International Trade Commission, (202) 205-2000, can be found on the Internet at [www.usitc.gov](http://www.usitc.gov).

Additional information on consumer price indexes can be obtained from the U.S. Department of Labor, Bureau of Labor Statistics, (202) 691-5200, and at <http://stats.bls.gov>.

Some information on telecommunications in foreign countries is available from the International Telecommunications Union, 41-22-730-5111 or at [www.itu.int/](http://www.itu.int/), and also from the Organization for Economic Co-operation and Development, 33-145-24-8200 or at [www.oecd.org](http://www.oecd.org). Additional information on international telephone traffic originating in foreign countries can be obtained from TeleGeography, (202) 741-0020, and at [www.telegeography.com](http://www.telegeography.com).

## Appendix C: Data Collection Definitions and History

Much of the data presented in this report are based on the figures reported in the annual volumes of the *Statistics of Communications Common Carriers (SOCC)*. The *Manual for Filing Section 43.61 Data in accordance with the FCC's Rules and Regulations*, June 1995, and four Public Notices<sup>1</sup> provide directions for filing international traffic data<sup>2</sup>. Many significant reporting changes have occurred over the years, and several adjustments have been made to make the time series more consistent. The most significant changes stem from the changing focus of the reporting requirements. Prior to 1990, the FCC collected data for overseas telecommunications. At one time, traffic to Alaska, Hawaii and Puerto Rico was classified as reportable overseas traffic, while traffic to foreign points such as Canada and Mexico was not reported. This classification arose from the fact that carriers used radio facilities for overseas traffic while they used terrestrial cable facilities to serve Canada and Mexico.

Since 1985, Hawaii, Alaska, the conterminous U.S., and Puerto Rico have been considered U.S. domestic points for reporting purposes. Carriers need not report data for traffic between any two domestic U.S. points. Starting in 1991, carriers must report all traffic for offshore U.S. points, such as Guam and Midway, and must include traffic between offshore U.S. points and all other U.S. points. Also in 1991, the FCC started systematically collecting traffic data for service to Canada, Mexico, and Saint Pierre and Miquelon. The current data requirements facilitate better tracking of the effects of settlement payments on the national balance of payments.

Several adjustments were made to published data so that the data presented in the report for recent years approximate totals for all international traffic. Traffic reported to Alaska, Hawaii, and Puerto Rico has been removed from the data presented in this publication for the years 1980 through 1984. AT&T voluntarily provided telephone traffic data for Canada and Mexico for 1978 through 1990. All carriers filed data beginning in 1991. Appendix B and Appendix C of the *Trends in the U.S. International*

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<sup>1</sup> DA 00-1526, Annual Section 43.61(a) International Telecommunications Traffic Reports Due by July 31, 2000 (rel. July 7, 2000), DA 99-1332, Further Clarification of Section 43.61 International Traffic Data Reporting Requirements (rel. July 7, 1999), DA 98-1369, Clarification of Section 43.61 International Traffic Data Reporting Requirements (rel. July 9, 1998), and Clarification of Section 43.61 International Traffic Data Reporting Requirements (rel. July 15, 1997), may be obtained at the following FCC web sites: <http://www.fcc.gov/ib> (click on "Industry Information" and then on "Section 43.61 International Traffic Data Report"); or <http://www.fcc.gov/wcb/iatd/stats.html> (click on "Section 43.61 International Traffic Data Report").

<sup>2</sup> The Commission recently proposed modifications to the §43.61 and §43.82 international data collection rules. See *Reporting Requirements for U.S. Providers of International Telecommunications Services; Amendment of Part 43 of the Commission's Rules*, IB Docket 04-112, Notice of Proposed Rulemaking, 19 FCC Rcd 6460 (2004)

*Telecommunications Industry*, September 1999, show the available telephone service traffic data for Canada and Mexico, respectively. Log-linear regression analysis with a dummy trend was used to estimate Canada and Mexico traffic carried by AT&T's competitors for 1985 through 1990. While very approximate, these estimates were used to construct industry total data shown in the report.

In addition to reclassifying international points, the FCC instituted other reporting changes in 1991. Service categories changed. Pure-resale traffic was separated from facilities-based traffic to avoid double counting. The Commission changed the definition of minutes for reporting purposes. For facilities-based service, carriers now report the number of minutes upon which settlements are calculated. They formerly reported billing minutes. The settlement process is used by U.S. and foreign carriers to provide compensation for handling traffic for each other. The number of minutes used for settlement purposes is generally based on the number of conversation minutes. In many cases, accumulated seconds are used to determine the minutes used in settlements. In the case of Mexico, billed minutes are used to determine settlements. Settlement minutes averaged 5% to 6% less than billed minutes for traffic billed in the United States for 1988 through 1990. Because carriers do not make settlement payments for their pure resale traffic, they continue to report resale data based on billing information.

In 1991, the FCC also changed the traffic categories for reporting purposes. Prior to 1991, carriers reported traffic originating in the United States, terminating in the United States, and transiting the United States. Since 1991, the reporting categories are U.S. billed, foreign billed, and transiting traffic. **U.S. billed** traffic includes all traffic billed by U.S. carriers, and includes most calls that originate in the United States, calls that are placed collect or "caller toll-free" to the United States, U.S. carrier "Country Beyond" and "Country Direct" calls, and U.S. reorigination traffic (definitions below). Prior to 1991, a collect call placed from a U.S. point could have been classified as originating traffic. Because these calls are billed by a carrier serving an international point, such traffic, however, now must be reported as foreign billed calls. **Foreign billed** traffic is all traffic billed by a foreign or correspondent carrier and includes most calls that originate in foreign points as well as collect and "caller toll-free" calls placed by U.S. customers to foreign points. Foreign billed calls do not necessarily originate in the country for which the traffic is reported. In some cases, foreign carriers reoriginate traffic for other foreign carriers. U.S. carriers may not know which calls originated in a country and which calls had originated in some third country and then been reoriginated by the foreign carrier that sent the calls to the United States. **Transiting** traffic is traffic that originates from an international point, is billed by a foreign or correspondent carrier, is routed through the U.S., and terminates at an international point. Transiting traffic is reported for the country in which the service is billed. Unlike reorigination traffic, transiting traffic is settled based on the settlement rate between the actual countries of origination and destination. To avoid confusion, this report uses the term "**U.S. traffic**" to refer to traffic originating in the United States through 1990, and traffic billed in the United States thereafter. Similarly, the term "**foreign traffic**" refers to traffic originating in foreign points through 1990, and traffic billed by foreign carriers



thereafter. Prior to 1991, many carriers classified traffic based on billing. Thus, the change in definitions may not have caused any significant changes in the data being reported.

**Reorigination traffic** is billed by a foreign carrier, transits an U.S. carrier's facilities, and terminates in a foreign point. Unlike traditional transiting arrangements, reorigination traffic is not settled pursuant to an accounting rate agreement between the originating and terminating carriers. Reorigination allows the foreign carrier to take advantage of the U.S. carrier's accounting rate agreement with the carrier in the terminating country. The U.S. carrier treats reorigination traffic like U.S. billed traffic when it settles with the carrier in the country of termination and reports this traffic as U.S. billed traffic for filing purposes.

During 1995, the Commission adopted a revised § 43.61 international traffic data reporting manual. Beginning with the 1995 data filings, carriers were required to provide separate switched service and private line data for facilities-based and facilities-resale services. Carriers also separately identified U.S. billed traffic originated in a foreign point via Country Direct and Country Beyond type services. **Country Direct and Country Beyond services** are U.S. carrier offerings that allow customers in foreign locations to route calls through U.S. carriers' facilities to reach the United States (Country Direct) or any world point (Country Beyond). Country Direct and Country Beyond services rely on alternative billing arrangements, such as credit cards, and enable the customer in a foreign point to be served by a U.S. carrier rather than by a foreign carrier. Note that U.S. carriers or their affiliates may operate in foreign countries as foreign carriers. They do not report § 43.61 traffic on calls that they carry from one foreign country to another unless they carry this traffic through a United States point. Finally, the revised manual clarified the treatment of discounts for reporting purposes.

Beginning with the 1997 data filings, carriers were required to separate switched services data by the financial arrangements made with carriers in foreign countries for terminating that traffic. Carriers now classify traffic as traditional settlement with proportionate return, and international simple resale including traffic hubbed through an intermediate foreign country. These arrangements are discussed below. Carriers continue to separately report facilities-based and facilities-resale private line services.

As explained above, carriers separately report international switched telephone, and miscellaneous services based on the financial termination arrangements. **Traditional settlement** traffic is settled according to the Commission's International Settlements Policy (ISP). See 47 C.F.R. § 43.51(e) and § 64.1001. The settlement is based on the accounting rate, which is part of a compensation agreement negotiated between an U.S. carrier and its foreign correspondent on a particular international route. The ISP requires nondiscriminatory accounting rates among U.S. carriers on a given route and that the U.S. carrier and its foreign correspondent share the accounting rate on a 50/50 basis. The ISP also requires that the U.S. carrier agree to accept no more than its proportionate share of return traffic from the foreign carrier.

**ISR/Hubbed** traffic is switched traffic that is routed and settled by the U.S. carrier outside the traditional settlement process and that may be carried over private lines that are interconnected to the public switched network on one or both ends of the private line. The Commission allows carriers to use ISR as a means to route U.S.-outbound and U.S.-inbound traffic between the United States and a rapidly growing number of approved countries. In many cases, U.S. carriers exchange traffic with a carrier in an approved country and that carrier "hubs" the call, i.e. terminates the call in or from a third country under a traditional settlement agreement. See 47 C.F.R. §63.17.

Figure A-1 summarizes changes in reporting definitions over time. These changes may account for some of the year-to-year changes in the reported data. In addition, the data may contain reporting errors. For example, the 1987 *SOCC* contains inaccurate data for traffic to the United Kingdom because AT&T's § 43.61 filing omitted foreign traffic for November and December. Corrected figures have been used herein. The FCC's reporting requirements incorporate a threshold below which corrections need not be made. In addition, the complexity of the settlement process guarantees that some errors are only discovered or correctable after the carriers file their final § 43.61 report for the year. While the data cannot be used to calculate precise year-to-year changes, the data provide a good indicator of industry trends.

Complete technical information on current reporting requirements are contained in the *Manual for Filing Section 43.61 Data*, June 1995. Additional information on year 2002 data is contained in the *2002 International Telecommunications Data* report available from the FCC's Internet sites at [www.fcc.gov/ib](http://www.fcc.gov/ib) and <http://www.fcc.gov/wcb/iatd/intl.html>.

**Figure A-1**

Reporting and Definition Changes Affecting <i>SOCC</i> International Traffic Statistics	
1.	The treatment of Hawaii and Puerto Rico traffic changed over time. Prior to 1985, Hawaii and Puerto Rico were classified as overseas points. Generally, traffic between the continental U.S. and Hawaii and Puerto Rico were included in <i>SOCC</i> tables through 1984. Where possible, these amounts have been removed from tables.
2.	The treatment of Alaska traffic changed over time. Alaska traffic was included for some years before 1968, and for 1981 through 1984. Where possible, Alaska data for 1981 through 1984 have been removed from the tables.
3.	Starting in 1991, the international tables include traffic for all domestic U.S. points, including Alaska, Hawaii, and Puerto Rico. (International traffic for offshore U.S. points is contained in the <i>International Telecommunications Data</i> report.)

4.	Carriers did not report data for Saint Pierre and Miquelon, Canada or Mexico for 1968 through 1990. The 1980 through 1990 <i>SOCC</i> data presented in Table 1 and Table 2 have been adjusted to include estimates for telephone traffic with Canada and Mexico.
5.	U.S. traffic with the U.S. Virgin Islands was included in the international tables for 1980 through 1984, and then excluded for 1985 through 1990. U.S. traffic to other offshore U.S. points, such as Guam and Wake Island, was included for 1980 through 1985, and then excluded from the country-by-country table for 1986 through 1990. Beginning with 1991, the traffic with non-domestic offshore U.S. points has been included in the statistical tables. Such traffic currently represents less than 1% of all international traffic for the United States.
6.	Maritime traffic was not explicitly included in some years through 1990. Starting in 1991, the <i>SOCC</i> tables include maritime traffic.
7.	Before divestiture, interexchange carriers such as MCI and Sprint did not provide international telephone services. Through 1984, the tables containing country-by-country international telephone traffic represented AT&T only.
8.	Prior to 1991, some switched service revenues, such as telephone service from offshore U.S. points, were classified as miscellaneous. In addition, some minor services, such as packet switching, were reported as miscellaneous. Carriers, however, were not required to report any data for some minor services.
9.	From 1985 through 1990, switched services data included both facilities-based and pure-resale service. Starting in 1991, carriers must separate international facilities-based traffic from international pure resale traffic. Starting in 1995, carriers must also separate private line circuits offered over resold circuits (facilities-resale) from those offered over the carriers own circuits (facilities-based).
10.	Through 1984, carriers reported transiting traffic both by points of origin and destination. Thus, each transiting call would be counted twice.
11.	Through 1990, carriers were instructed to categorize traffic data by point of origin. Starting in 1991, carriers are instructed to categorize traffic based on where each call is billed. This may not represent a significant change, because many carriers reported traffic based on billing prior to 1991. In this report, the term "U.S. traffic" refers to traffic reported as originating in the U.S. through 1990, and traffic reported as billed in the U.S. thereafter. Similarly, the term "foreign traffic" refers to traffic reported as originating in foreign points through 1990, and traffic reported as billed to foreign points thereafter.
12.	Through 1990, carriers were instructed to report the number of billing minutes or billing words. Starting in 1991, facilities-based carriers report the number of minutes or words used for settlement purposes. Pure resale carriers continue to report the number of minutes used for billing purposes.

13.	Starting with 1995 filings, carriers were required to separate facilities-based data from facilities-resale data for switched services. This distinction was intended to separate International Simple Resale (ISR) traffic from settled traffic. In 1996, the Commission allowed carriers to offer ISR traffic using their own facilities. As a result, the Commission dropped the facilities-based/facilities-resale distinction for switched services in 1997, and instead required that carriers separate traffic by settlement arrangement: traffic settled under traditional settlement with proportionate return arrangement; under international simple resale (ISR) including traffic hubbed through an intermediate foreign country arrangement; and, under an alternative settlement arrangement (see Point 18 below).
14.	Starting with 1995 filings, carriers were required to separate Country Direct, Country Beyond, hubbing and reorigination traffic from other types of traffic in non-public filings.
15.	The Commission started granting waivers for 1998 traffic filings allowing carriers to report switched international telex and telegraph services as miscellaneous or other international switched services, and to use two private line service categories instead of the six private line service categories described in the <i>Manual for Filing Section 43.61 Data</i> , June 1995. See Public Notice DA 99-1332, June 7, 1999, available from <a href="http://www.fcc.gov/ib">www.fcc.gov/ib</a> and <a href="http://www.fcc.gov/wcb/iatd/intl.html">http://www.fcc.gov/wcb/iatd/intl.html</a> .
16.	Starting with 1998 filings, carriers that are granted waivers to report reoriginated traffic using billing codes other than 3 (traditional transiting), are required to separately identify traffic terminated via pure resale of another carrier's switched service. Carriers need file this breakout only in non-public filings.
17.	The Commission eliminated alternative settlement arrangements in the 1998 Biennial Regulatory Review Report and Order, adopted in 1999 (11 FCC Rcd 7963, see paragraphs 75-81).
18.	For 2002 traffic filings, the Commission waived the requirement that MCI file telex and telegraph data. No other carriers reported telex or telegraph data for that year.

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Publication: *Trends in the International Telecommunications Industry*, July 2004

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