

4 Telecommunications Services

1. Overall Trends

The number of subscriptions to the two NTT regional companies' fixed-line telephones and the number of public telephones have decreased over the past several years thanks to the surging popularity of cell phones. In the mobile telecommunications category, the number of cell phone (portable and automobile) subscriptions has risen explosively; in contrast, the number of pager subscriptions in fiscal 1999 dropped by almost half year over year.

2. Telecommunications Media Usage

2.1 Telephone Calls between Different Media

During fiscal 1998, calls between fixed-line telephones accounted for 67.4% of all telephone calls nationwide, down 7.8 percentage points year over year. Calls between fixed-line telephones and mobile telecommunications handsets (portable cell phones, automobile cell phones, and PHS) accounted for 18.9% of calls, up 1.8 points, while calls between cell phones accounted for 13.7% of calls, up 6.0 points.

2.2 Calling Time Volume by Originating Equipment

Some 123.79 billion telephone calls were made in fiscal 1998, up 1.0%. Total calling time amounted to 5.08 billion hours, an increase of 5.0%. Calls originating from fixed-line telephones totaled 4.24 billion hours, down 0.6%,

while calls made from cell phones (portable and automobile) and PHS totaled 720 million hours, up a huge 56.1%, and calls made from PHS amounted to 110 million hours, up 7.1%.

2.3 Telephone Call Volume by Time of Day

Calls made from fixed-line telephones at business offices are concentrated between the hours of 9 A.M. and 6 P.M. (except from noon to 1 P.M.). In contrast, calls made from fixed-line telephones in homes are made primarily in the evening, after 6 P.M., and peak between 8 and 9 P.M. The frequency of calls made from cell phones (portable and automobile) peaks between 5 and 7 P.M., while, interestingly, PHS usage peaks between 10 and 11 P.M.

2.4 Telephone Call Volume by Distance Called

During fiscal 1998, 60.2% of calls originating from fixed-line telephones were made within the caller's local service area, while 14.5% of calls were made to the adjacent service area. Although the total of these two figures, 74.7%, is relatively large, the proportion of other, long-distance, calls is rising.

3. Fixed-Line Telephones

As of the end of September 1999, the two regional NTT companies had a combined fixed-line telephone subscribership of 57.29 million, down 3.9% year over year, a larger decline rate than the year-earlier figure. The

business-use subscriber count stood at 15.98 million, down as much as 8.6%, while the household subscribership was 41.3 million, down 2.0%. As of the end of September 1999, fixed-line long distance telephone carriers other than NTT, or NCCs (New Common Carriers), had 43.34 million subscribers outstanding, up 11.0%. Local NCCs had 52,000 subscribers.

4. ISDN

ISDN services are growing sharply. As of the end of September 1999, there were 5,141,175 basic-rate interface ISDN lines in operation in Japan, up 64.9%, and 62,822 primary-rate interface lines, up 59.5%.

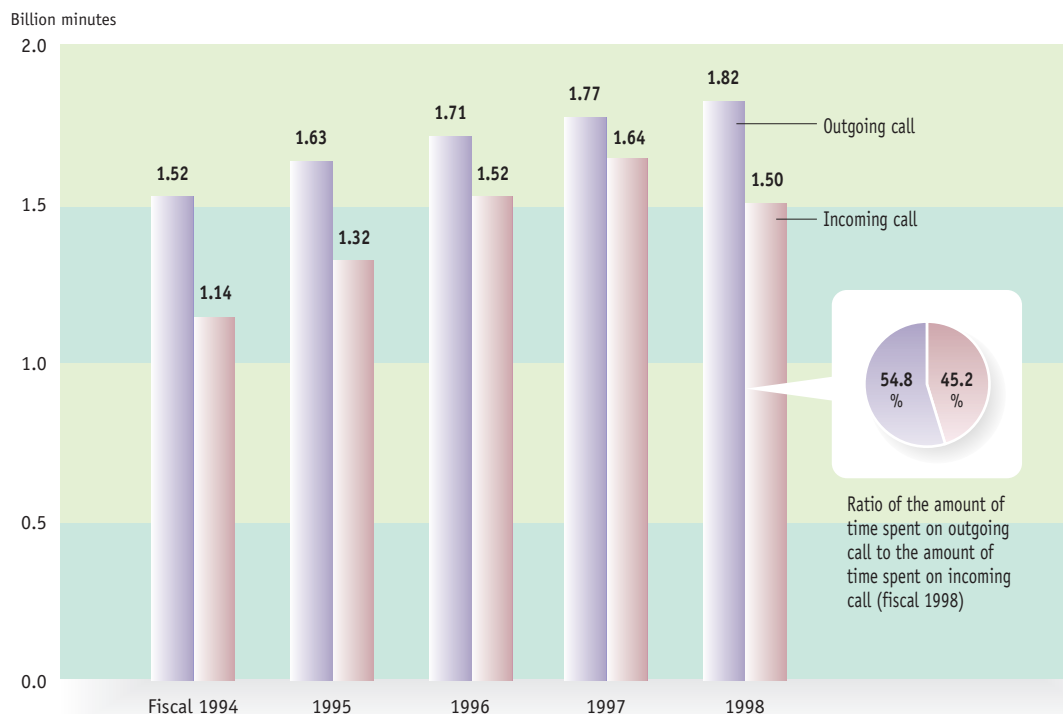
5. Pay Phones

There were 744,267 pay phones in operation in Japan at the end of September 1999, down 2.6%. The downtrend has been ongoing since fiscal 1991 due to growth in the use of cell phones. Due to declining usage, Japan Telecom Co., Ltd. removed all of its 1,162 pay phones (the count as of the end of March 1999) at the end of December 1999.

6. International Telephone Calls

Some 1,816,170,000 minutes of international phone calls were made from Japan in fiscal 1998, up 2.5%, while the total number of incoming calls came to 1,495,890,000 minutes,

Exhibit 38. Aggregate Amount of Time Spent on International Calls



Source: MPT.

down 8.5%. Although the differential between total outgoing and incoming call times had been declining earlier, it began growing again in fiscal 1998 (Exhibit 38).

7. Cell Phones and PHS

The NTT DoCoMo group and 21 NCCs had a total of 51,139,000 cell phone (portable and automobile) subscriptions as of the end of fiscal 1999, up 23.1% year over year. The number of subscriptions grew by about 10 million annually between fiscal 1996 and fiscal 1999. The number of PHS subscriptions, at 20 carriers, stood at 5,707,000 down 1.2% as of the end of fiscal 1999. PHS subscriptions peaked in fiscal 1997, but the year-over-year decline has since leveled off.

8. Pagers

The NTT DoCoMo group and 19 NCCs recorded another year of large-scale decline, 45.0%, to 2.07 million pager subscriptions as of the end of fiscal 1999.

9. Satellite Mobile Telecommunications

There are two satellite systems within the overall satellite mobile telecommunications network: one using geostationary satellites at an altitude of 36,000 kilometers above the equator and one using nongeostationary satellites. Both systems provide services via the satellites to ships, airplanes, and cars and other vehicles. The geostationary satellites used to provide mobile telecommunications services in Japan

are the INMARSAT and N-STAR communications satellites. Nippon Iridium Corp. launched a worldwide service via nongeostationary satellite in January 1999, but it was decided that in February 2000 that the company should be liquidated, and service was terminated in March.

10. Domestic Leased Circuits

At the end of fiscal 1998 there were 834,598 ordinary leased circuits in operation in Japan, down 8.9% year over year. In marked contrast, the number of high-speed digital circuits in use jumped 31.8%, to 254,589. Both trends—decreasing use of ordinary circuits and increasing use of high-speed digital circuits—have held for the past several years. For the first time, the number of high-speed digital circuits in use exceeded the number of code transmission circuits (a subcategory of ordinary leased circuits) in fiscal 1998.

11. International Leased Circuits

There were a total of 1,696 international leased circuits in use at the end of fiscal 1998, down 6.1%. By category, there were 147 voice grade circuits, down 7.0%, and 105 telegraph grade circuits, down a substantial 18.0%.

Additionally, for the first time ever the number of medium- and high-speed code transmission circuits declined year over year, by 5.1%, to 1,444. The proportion of medium- and high-speed code transmission circuits to the total number of international circuits stood at 85.1%, up 0.9 percentage point.