

1 Info-communications in the 21st Century

1. The IT Revolution

The world is facing a big change in industrial civilization: the info-communications technology (IT) revolution. The IT wave, most recently exemplified by surging popularity of the Internet and mobile telecommunications, is hastening the paradigm shift, already in progress, from an industrial society to an information society.

At the moment, however, economic revitalization is a major concern in Japan, as are the aging of society, globalization, diversifying lifestyles, and the environment. All of these are problems that need to be dealt with over the medium and long terms, and many believe that IT will play a crucial role in solving them.

2. Expectations for New Info-communications Services

Internet User Survey indicates that the Internet is the most important info-communications medium in present daily life (more than even TV), as indicated by a score of 8.4 on a scale of 1 to 10. The score rises to 9.4 when survey respondents consider their daily lives five years from now, while cell phones/PHS scored 8.1 (Exhibit 2). Furthermore, *Study on the use of information & telecommunications equipment and services* reports that about 60% of people with PCs in their homes are connected to networks and that only very few people will have stand-alone terminals in the future (Exhibit 3).

Exhibit 2. Importance of Info-communications Media in Daily Life

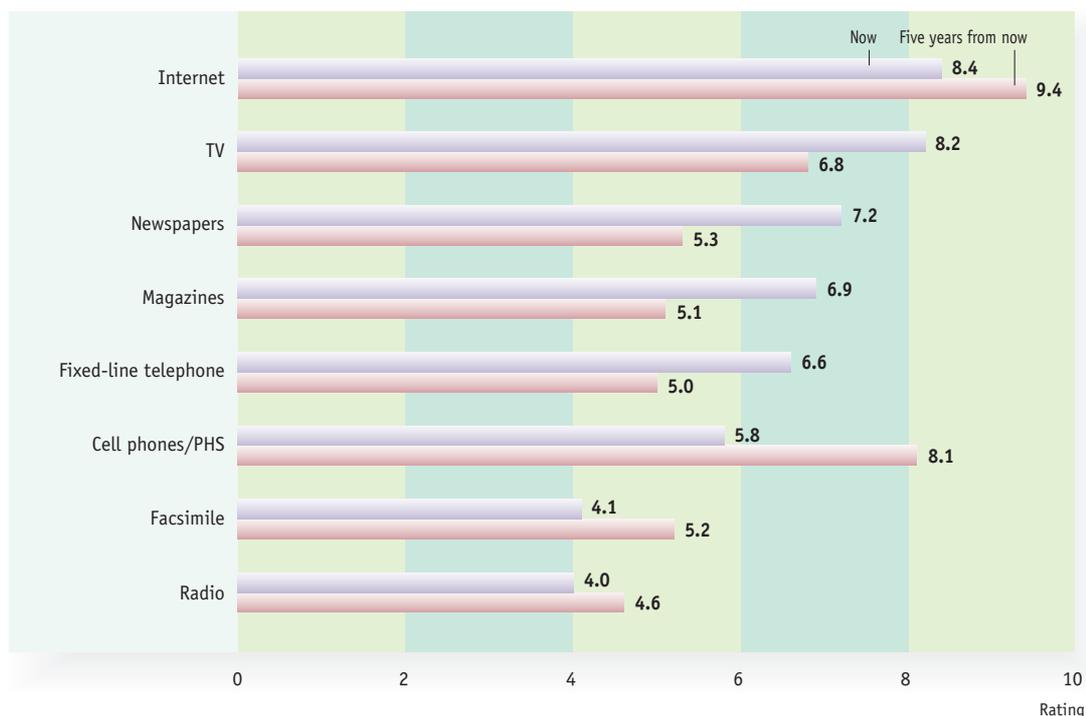
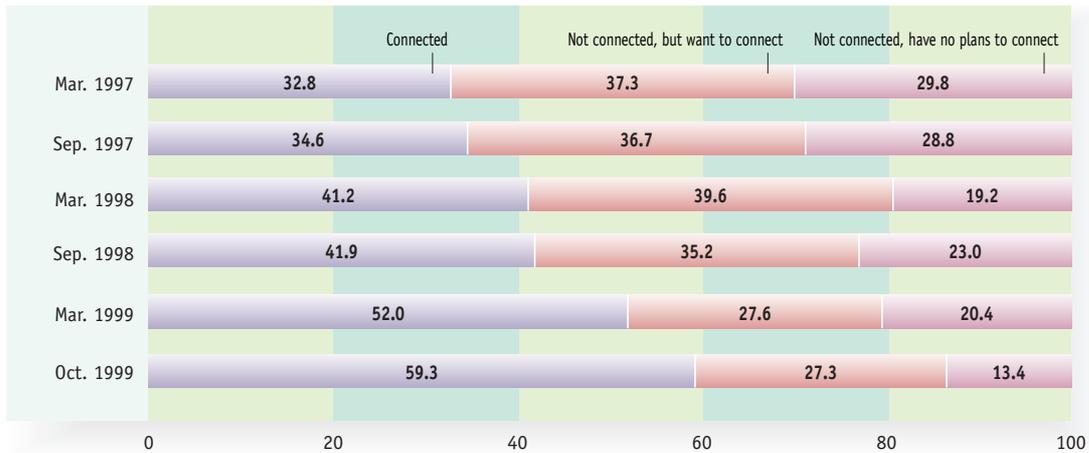


Exhibit 3. Home PC Connection Rates

Source: Study on the use of information & telecommunications equipment and services, Nomura Research Institute, Ltd.

3. Info-communications Trends

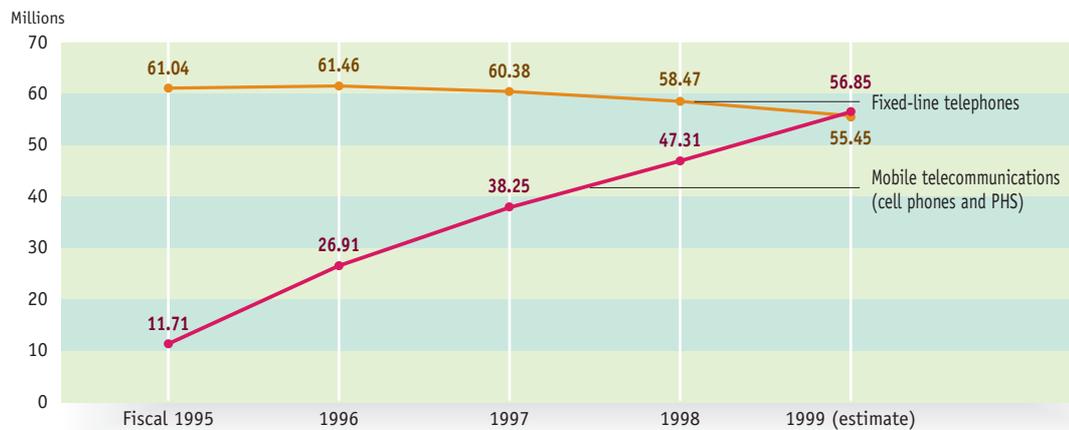
The Internet and mobile telecommunications are rapidly gaining in importance in Japan's info-communications sector. PC shipment volume in Japan grew 31.9% year over year in fiscal 1999, reaching 9,941,000, while shipments of color TVs slipped 0.3%, to 10,146,000 units (Exhibit 4). The total fixed-line phones of NTT East and West amounted to 55.45 million sub-

scription, while figures indicate a total of 56.85 million mobile telecommunications handsets (portable cell phones, automobile cell phones, and PHS handsets) in use at that time, meaning that the formers were overtaken by the latter (Exhibit 5). Moreover, roughly a year after NTT DoCoMo launched its i-mode service (which allows users to access the Internet via cell phone) in 1999, some 4.47 million subscribers

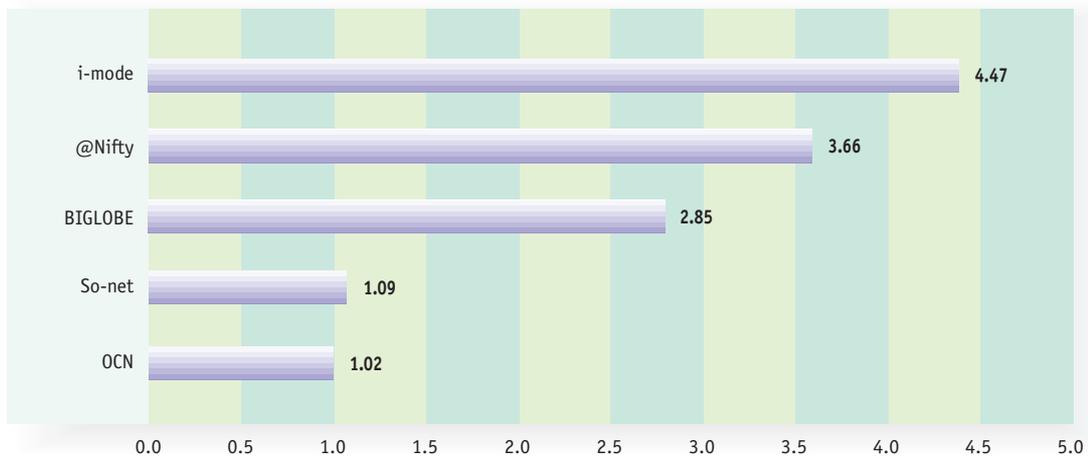
Exhibit 4. Domestic Shipment Rates of PCs and Color TVs

Note: Figures for color TVs include Hi-Vision and liquid crystal TVs.

Sources: Electronic Industries Association of Japan, Japan Electronic Industry Development Association.

Exhibit 5. Number of Contracts for Mobile Telecommunications and Fixed-Line Telephones

Note: The number of fixed-line telephone contracts is the total amount of NTT East and West.
Source: MPT.

Exhibit 6. Number of i-mode Contracts and Contracts with Major ISPs

Note: BIGLOBE as of 1999-end; So-net as of the end of January 2000; others as of the end of February 2000.
Source: Compiled from data of the respective carriers.

had signed on (as of the end of February 2000), making the company Japan's leading Internet service provider (ISP) in terms of number of contracts (Exhibit 6).

4. The Internet

As of the end of 1999 there were estimated some 27.06 million Internet users in Japan in the 15–69 age range, an increase of 59.7% year

over year. The outlook for 2005 is for 76.7 million users. The Internet reaches 19.1% of Japanese households, 31.8% of establishments, and 88.6% of enterprises, and these penetration rates are expanding (Exhibit 7).

5. Mobile Telecommunications

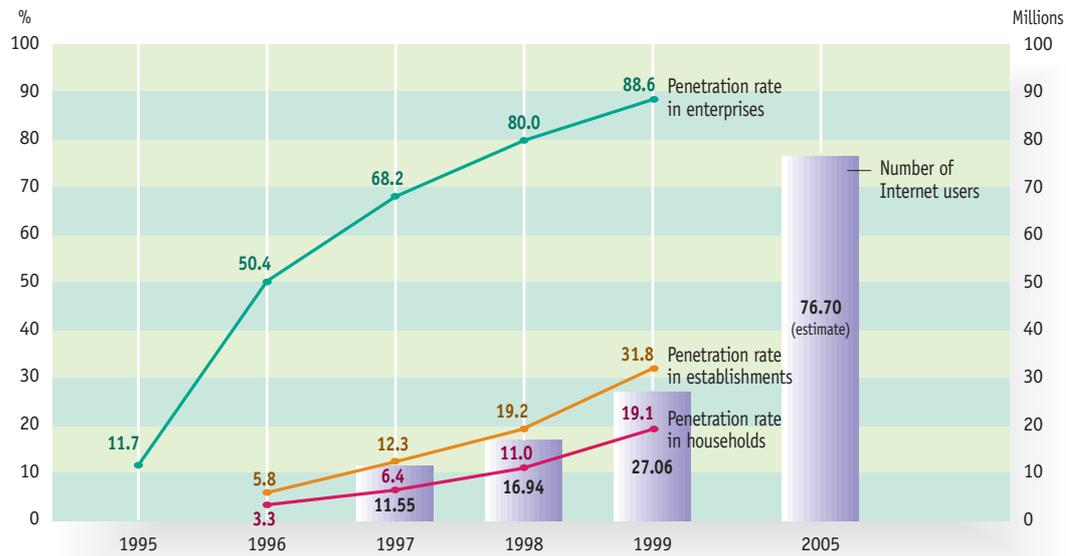
In its September 1999 report, the Next-Generation Mobile Telecommunications

System Committee of the MPT's Telecommunications Technology Council projects that the total number of future public land mobile telecommunication service subscriptions in Japan, including cell phones (portable and automobile) and PHS but not limited to

subscriptions for IMT-2000 service, will number 64.5 million at the end of fiscal 2000 and 81 million at the end of fiscal 2010.

Interpolating from these figures gives an estimate of about 79.03 million at the end of fiscal 2005 (Exhibit 8).

Exhibit 7. Trends in Internet Penetration

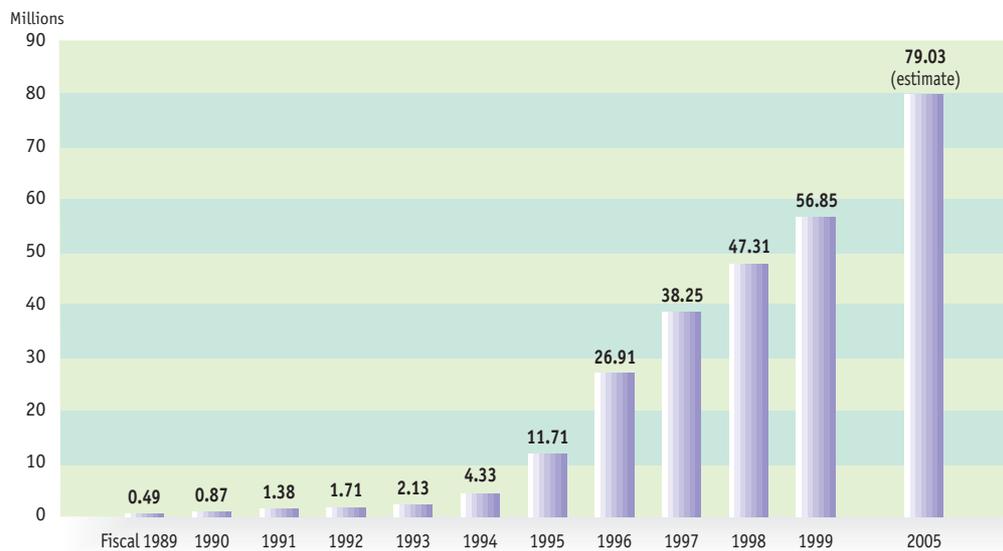


Notes: 1. "Establishment" is defined as a single physical location (excluding postal services and communications business) with five employees or more where the economic activity is conducted. That is usually called a store, a factory, an office, or the like.

2. "Enterprise" refers to business (excluding agriculture, forestry, fisheries, and mining industries) with 300 employees or more.

Sources: Survey of Info-communications Usage in Daily Life; Communications Usage Trend Survey, MPT.

Exhibit 8. Mobile Telecommunications Service Contracts: Past Trends and Future Outlook



Note: Figures include cell phones (portable and automobile) and PHS, and are as of fiscal-end. The projection for fiscal 2005 includes IMT-2000.

Source: MPT.