

In order to provide ICT education to children, it is essential that teachers acquire the ability to utilize ICT in teaching. In fiscal 2003, 93.0% of teachers at public schools knew how to operate a computer, and 60.3% of teachers were able to use computers to conduct their classes.

2 Development of ICT experts

The difficulty of establishing security measures is mentioned by 66.8% of companies as one of the problems with using information and communications networks in companies. Many companies also feel anxious about the lack of employee awareness and lack of operational and managerial personnel. In-house ICT training is offered by 48.1% of companies, with the most common contents being “in-house ICT-related education and

training programs ” at 19.7% and “participation in external ICT-related education and training programs ” at 19.4%.

According to a study conducted by the Ministry of Education, Culture, Sports, Science and Technology, 15,706 people obtained master’s degrees in an ICT-related field in fiscal 2003, with 1,924 obtaining doctoral degrees.

Section 7

Digitization of Homes and Companies

1 Digitization of homes

As of the end of 2004, household penetration rates for information and communications equipment were 91.1% for mobile phones, 77.5% for PCs, 52.9% for facsimiles and 33.5% for car navigation systems (Figure 2-7-1).

Annual spending per household on information and communications services (the total of telephone communication charges plus broadcast reception charges) totaled 145,332 yen (a 2.8% increase over the previous year). Of this, fixed line telephone communication charges came to 48,829 yen (a 4.3% decrease from the previous year), mobile phone communication charges to 73,624 yen (a 8.7% increase over the previous year), and broadcast reception charges to 22,879 yen (a 1.3% increase over the previous year). While household consumption expenditure increased by 0.5% over the previous year, the proportion of information and communications charges within household expenditure increased to 4.0% (a 0.1 point increase over the previous year). Internet connection charges in 2004 came to 13,609 yen (a 29.4% increase over the previous year), and the proportion of information and communications charges including this figure within household consumption expenditure was 4.4% (a 0.2 point increase over the previous year).

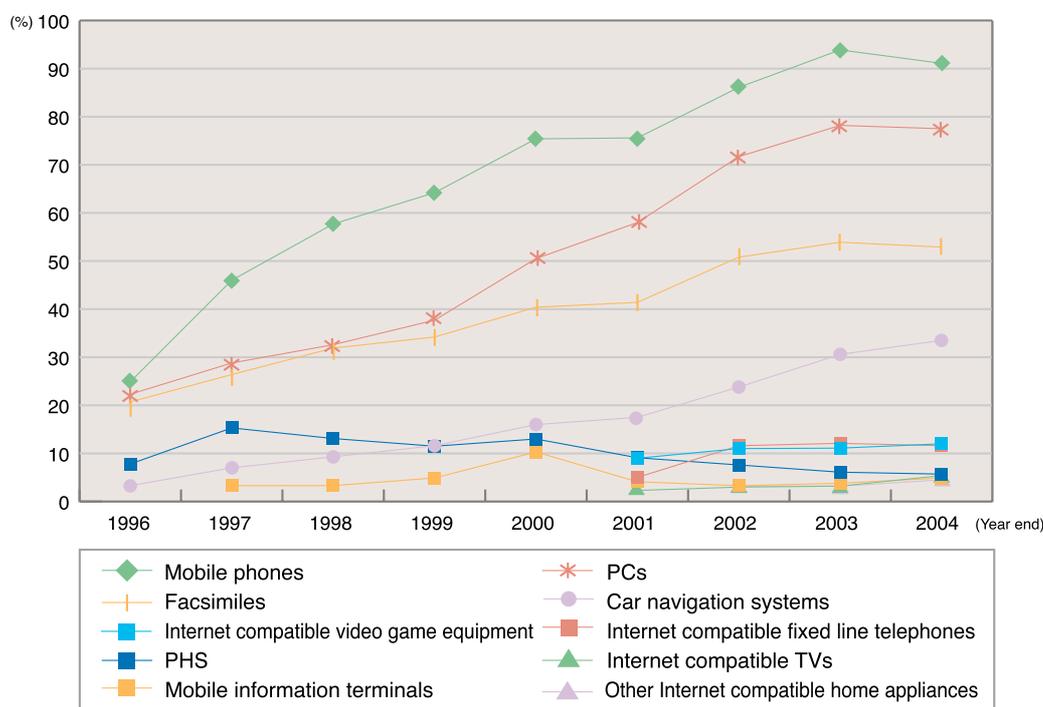
2 Digitization of companies

At the end of 2004, 73.7% of companies using the Internet (companies with 100 or more full-time employees) had introduced CATV lines, DSL lines, FTTH lines (optical lines), or wireless access (FWA, etc.). The maximum communication speed exceeded 1.5 Mbps in 60.7% of companies.

Of all companies, 2.5% had a full-time Chief Information Officer (CIO: an officer who controls and adjusts the management strategy and the information and communications strategy) at the end of 2004. When part-time CIOs are also included, 16.0% of companies had a CIO.

At the end of 2004, 8.5% of companies (a 0.9 point decrease from the previous year) implemented teleworking.

Figure 2-7-1 Transition in the household ownership of main information and communications equipment



Source: MIC, Communications Usage Trend Survey

Section 8

R&D

1 R&D in the information and communications field

In fiscal 2003, spending on science and technology research in Japan totaled 16.8042 trillion yen (a 0.8% increase over the previous fiscal year). Total industrial R&D came to 12.3227 trillion yen, and R&D spending by the information and communications industry accounted for 4.5565 trillion yen of this, or 37.0% of the total.

Research spending in the information and communications field by companies, non-profit organizations, public bodies, and universities in fiscal 2003 came to 2.4921 trillion yen.

2 Patents

Among the four priority fields (life science, information and communications, environment, and nanotechnology/materials) specified in the Science and Technology Basic Plan (approved by the Cabinet in March 2001), the number of patents registered was the largest for the information and communications field at 18,550 (a 4.8% increase over the previous year) in 2004.

The number of information and communications related patents registered in Japan between January and September 2004 totaled 13,271, which is 40.1% of the information and communications patents registered in the United States over the same period, and 2.3 times the number registered in Europe.