

Section 8

R&D

1. R&D in the Information and Communications Field

In fiscal 2002, spending on science and technology research in Japan totaled 16.68 trillion yen (a 0.9% increase over the previous fiscal year). Total industrial R&D came to 12.12 trillion yen, and R&D spending by the information and communications industry accounted for 4.74 trillion yen of this, or 39.1% of the total. Research spending in the information and communications field by companies, non-profit organizations, public bodies and universities in fiscal 2002 came to 2.26 trillion yen. There were 995 joint research projects (a 30.4% increase over the previous fiscal year) in the information and communications field between national universities and companies, accounting for 14.7% of all (6,767) joint research projects between national universities and companies.

2. Patents

There were 17,703 information and communications related patents registered in 2003 (a 10.1% increase over the previous year). The number of information and communications related patents registered in Japan between January and September 2003 totaled 13,083, which is 44.3% of the information and communications patents registered in the United States over the same period, and 2.1 times the number registered in Europe.

Section 9

Trends Abroad

1. Overseas IT National Strategies

As with the case in Japan, new national IT strategies or revising existing strategies are also being formulated overseas in response to advances in information and communications. For example, Germany formulated in December 2003 a new IT action plan, "Informationsgesellschaft Deutschland 2006" (Information Society Germany 2006). The Republic of Korea also announced in December 2003 "Broadband IT KOREA Vision 2007".

2. Usage Status and Market Size of Telecommunications Worldwide

The number of Internet users worldwide continues to increase. According to estimates announced by the ITU (International Telecommunication Union), there were over 623 million Internet users worldwide as of the end of 2002.

As for worldwide usage of telecommunications services, the number of fixed telephone lines (including pay telephones) was 1.09 billion in 2002, and the number of mobile phone subscribers was 1.16 billion. The number of mobile phone subscribers continues to increase rapidly and the worldwide number overtook the number of fixed telephone lines in 2002. The scale of the world-

wide telecommunications market grew to 1.02 trillion dollars in 2002 (a 5.2% increase over the previous year), according to the ITU. Of this, the fixed communications market totaled 465 billion dollars (a 1.5% decrease from the previous year) in 2002, and is expected to decline slightly again in 2003, whereas the mobile communications market is growing considerably, totaling 364 billion dollars (a 14.8% increase over the previous year) in 2002.

3. Trends in Overseas Communications Carriers and Broadcasters

In the United States, Cingular Wireless, the second largest mobile carrier in terms of subscriber numbers, announced the acquisition of the third largest carrier, AT&T Wireless, in February 2004.

In the UK, various companies improved their financial situation, including BT, which had accumulated debts of about 28.0 billion pounds in 2001 in conjunction with overseas investment and obtaining permits for third-generation (3G) mobile communications, had reduced its debt to about 8.8 billion pounds by the end of 2003 through the sale of assets.