Part 3

Update on ICT and Policy Outlook

Chapter 4

Current State of ICT

Section 1

Internet Usage Trends

1. Status of Internet utilization

The number of Internet users at the end of 2010 reached 94.62 million, an increase of 540,000 from the end of 2009 (a year-on-year increase of 0.6 percent). The Internet penetration rate was 78.2 percent (a 0.2 percent increase from the previous year). When Internet use was examined by device, 78.78 million people accessed the Internet from mobile devices (a year-on-year decrease of 1.7 percent) and 87.06 million people accessed the Internet from computers (a year-on-year increase of 2.3 percent) (Figure 3-4-1-1).

2. Challenges for safe and secure Internet utilization

When households were asked about harmful experiences associated with Internet use in the past year, the most frequently cited response, at 34.0 percent, was "received spam (but not including billing fraud)" at computers at home. The second most frequent response was "detected a computer virus but was not infected" at 19.1 percent (Figure 3-4-1-2).

Section 2

ICT Industry Trends

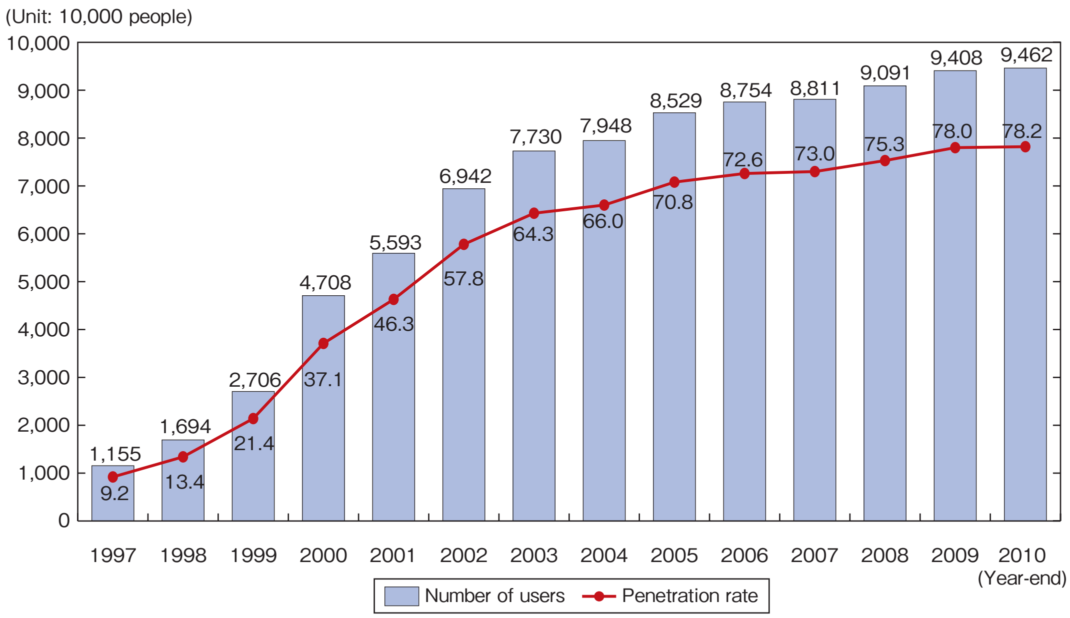
1. Economic size of the ICT industry

The ICT industry's market size in 2009 was 87.7 trillion yen (based on nominal domestic production), accounting for 10.0 percent of all industry and making it the largest industry in the country. The ICT industry had been growing since 2004 but contracted in 2008 along with most other industries. The ICT industry continued to shrink in 2009 (Figure 3-4-2-1).

2. Contribution of the ICT industry to economic growth

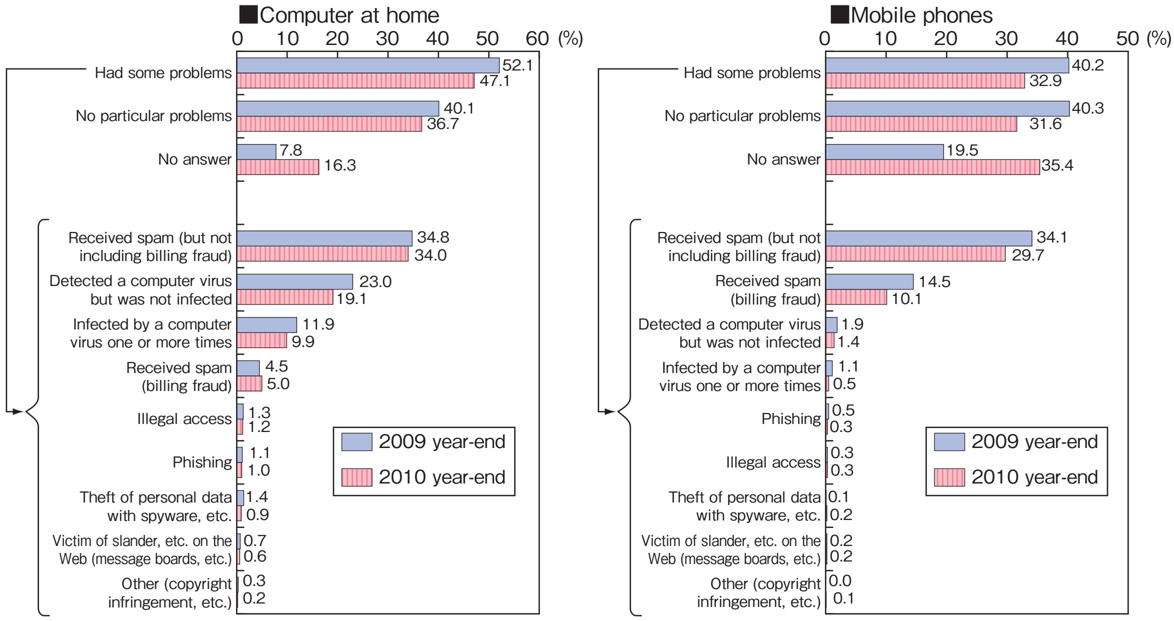
The ICT industry contributed -0.3 percent to Japan's -6.3 percent growth rate in real GDP in 2009. The ICT industry had been a positive contributor continually from 1996 and contributed negatively for the first time in 2009. Given that the real GDP growth rate was sharply negative in 2009, the ICT industry's minus growth remained slight in comparison to many other industries (Figure 3-4-2-2).

Figure 3-4-1-1 Transitions in Internet user numbers and penetration rate



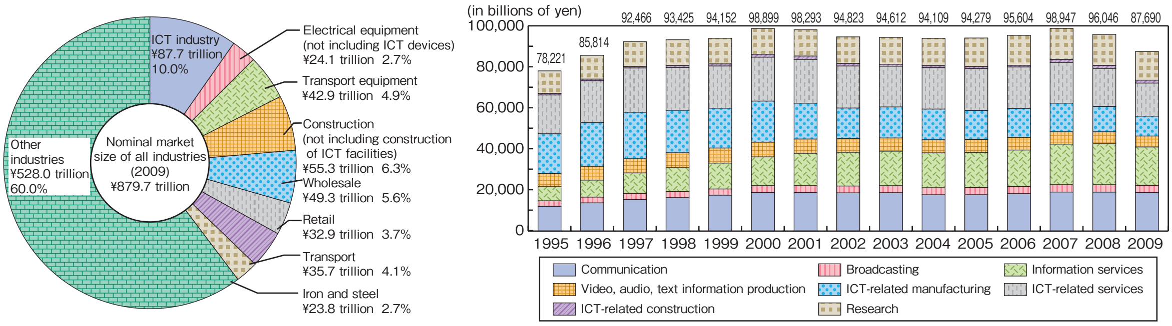
(Source) Ministry of Internal Affairs and Communications "2010 Communications Usage Trend Survey"

Figure 3-4-1-2 Harmful experiences associated with Internet use at households (multiple answers permitted)



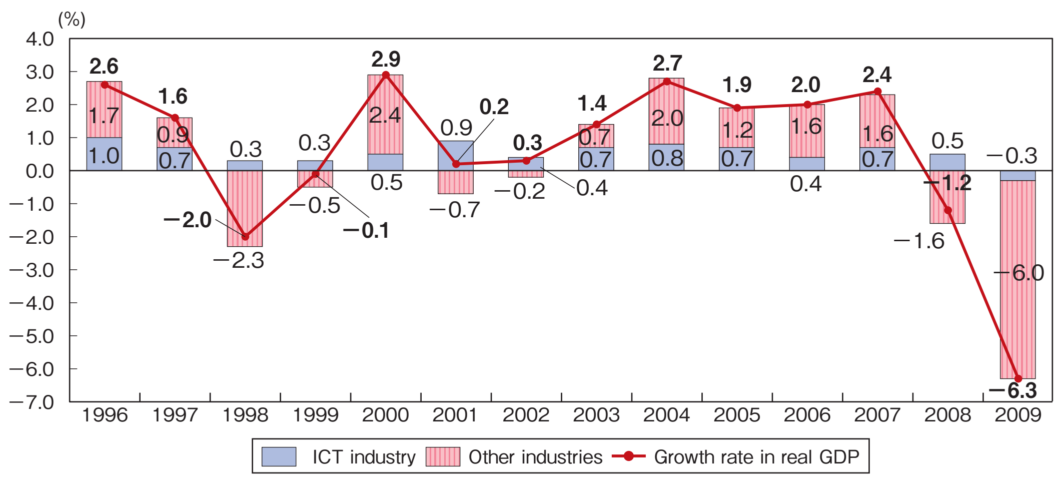
(Source) Ministry of Internal Affairs and Communications "2010 Communications Usage Trend Survey"

Figure 3-4-2-1 Nominal market sizes of major industries (based on domestic production) and transitions in the nominal market size of the ICT industry (based on domestic production) (2009)



(Source) Ministry of Internal Affairs and Communications "Survey on Economic Analyses on ICT" (2011)

Figure 3-4-2-2 ICT industry's contribution to real GDP growth

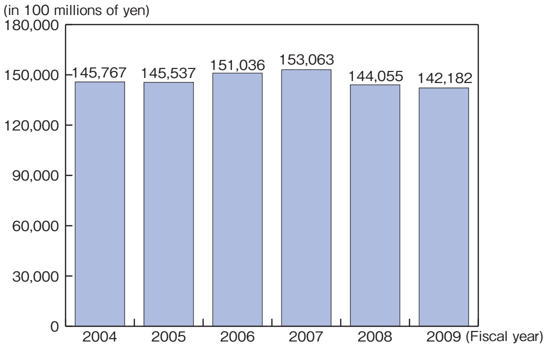


(Source) Ministry of Internal Affairs and Communications "Survey on Economic Analyses on ICT" (2011)

Section 3
Telecommunications Sector
1. Telecommunications market

Sales in the 2009 telecommunications sector totaled 14.2182 trillion yen (a year-on-year decrease of 1.3 percent) (Figure 3-4-3-1).

Figure 3-4-3-1 Transitions in telecommunications sector sales



※ Comparisons must be made with caution, as sales are the simple sum of figures from all responding carriers and each year the number of responding carriers changes.

Prepared on the basis of MIC "2010 Basic Survey on the Communications and Broadcasting Industry"

2. Telecommunications services

Subscriptions to fixed communications (subscription telephones and ISDN) are on the decline, whereas subscriptions to mobile communications (cellular phones and PHS) and IP phones are seeing steady growth. Subscriptions to mobile communications overtook those to fixed communications in FY 2000 and, at the end of FY 2010, they outnumbered fixed communication subscriptions by about 3.1 to one (Figure 3-4-3-2).

Section 4
Broadcasting Sector
1. Broadcasting market

Overall sales by all broadcasters, including revenue from broadcasting and non-broadcasting business activities, shifted from a growth trend to a decline in 2008 and this decline continued in 2009. Sales in 2009 totaled 3.8254 trillion yen (a year-on-year decrease of 3.8 percent) (Figure 3-4-4-1).

2. Status of broadcasting media uses

Subscriptions to all broadcasting services, except CS digital broadcasts, increased in FY 2009 (Figure 3-4-4-2).

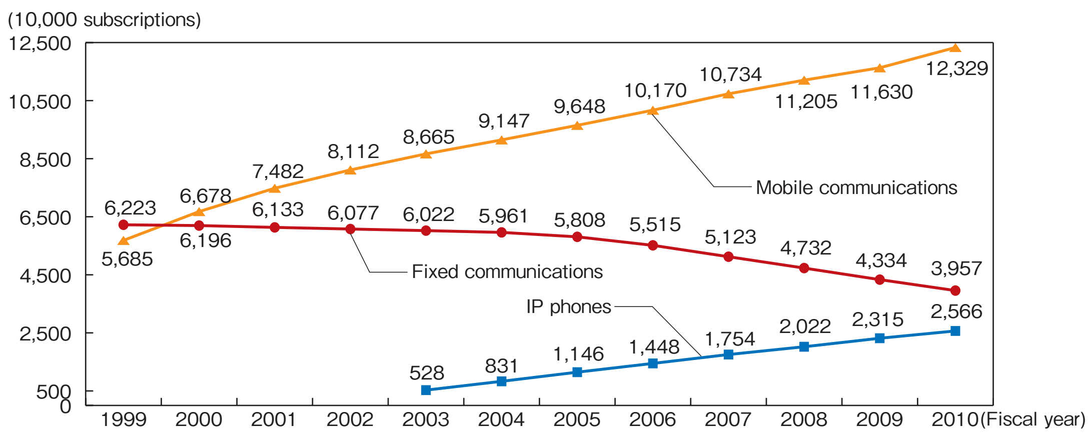
Section 5
Content Market Trends
1. Japanese content market trends

The Japanese content market reached 11.1595 trillion yen in 2009 (Figure 3-4-5-1).

2. Market size of the mobile content industry

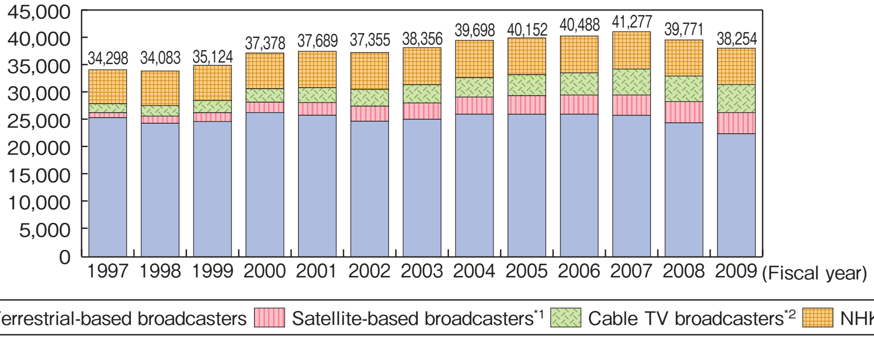
The market size of Japan's mobile content industry reached 1.6550 trillion yen in 2010 (a year-on-year increase of 8.8 percent). By segment, the mobile content

Figure 3-4-3-2 Transitions in subscriptions to fixed communications and mobile communications



Prepared on the basis of MIC "Status of Telecommunications Service Subscriptions" (March 31, 2011)

Figure 3-4-4-1 Transitions in the broadcasting sector's market size (total sales)

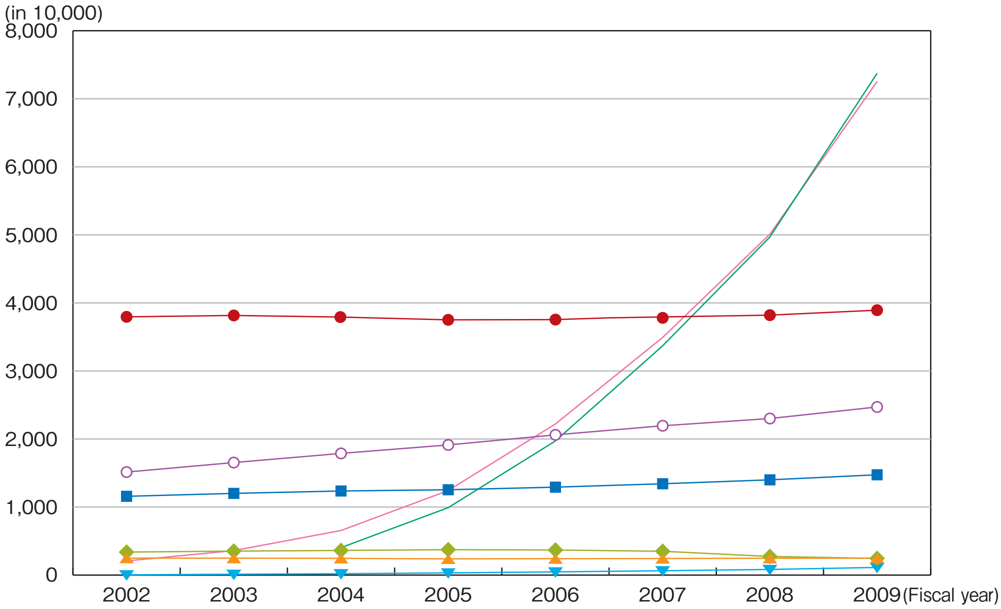


(Unit: 100 millions of yen)

	(Fiscal year)	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
Private broadcasters	Terrestrial-based broadcasters	25,523	24,488	24,823	26,466	25,960	24,863	25,229	26,153	26,138	26,157	25,946	24,575	22,574
	(Community broadcasts included in total above)	–	–	–	125	137	139	141	140	140	211	246	231	123
	Satellite-based broadcasters*1	913	1,327	1,607	1,891	2,335	2,769	2,995	3,158	3,414	3,525	3,737	3,905	3,887
	Cable TV broadcasters*2	1,644	1,931	2,244	2,463	2,718	3,076	3,330	3,533	3,850	4,050	4,746	4,667	5,134
NHK*3		6,218	6,337	6,450	6,559	6,676	6,750	6,803	6,855	6,749	6,756	6,848	6,624	6,658
Total		34,298	34,083	35,124	37,378	37,689	37,355	38,356	39,698	40,152	40,488	41,277	39,771	38,254

Prepared on the basis of MIC materials and the NHK Yearbook for each year

Figure 3-4-4-2 Subscriptions to broadcasting services



(Unit: 10,000)

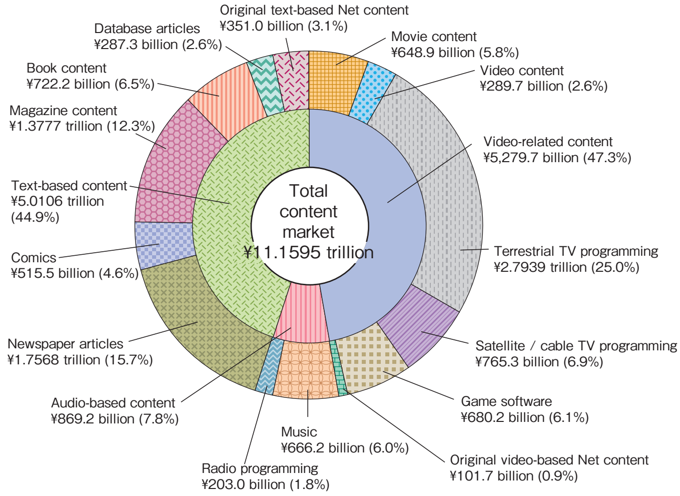
	2002	2003	2004	2005	2006	2007	2008	2009
Terrestrial-based broadcasters	3,795.3	3,815.7	3,792.1	3,751.2	3,754.7	3,780.4	3,820.2	3,893.2
NHK-BS	1,157.7	1,200.9	1,235.9	1,254.3	1,292.2	1,342.3	1,399.9	1,474.2
WOWOW	249.9	248.5	246.1	238.2	241.3	243.8	247.6	249.0
124/128° East CS digital broadcasters	338.3	352.3	362.1	373.7	368.5	350.1	273.7	245.6
110° East CS digital broadcasters	4.2	12.3	20.3	32.1	47.4	63.8	83.0	112.6
Cable TV	1,513.8	1,653.8	1,788.2	1,912.8	2,061.1	2,194.4	2,300.7	2,470.6

Reference: No. of broadcast receivers shipped

For terrestrial digital broadcasts	–	(107.2)	403.9	991.4	1,971.5	3,370.1	4,969.0	7,374.1
For BS digital broadcasts	208.2	360.0	655.3	1,242.5	2,221.1	3,492.5	5,010.0	7,254.0

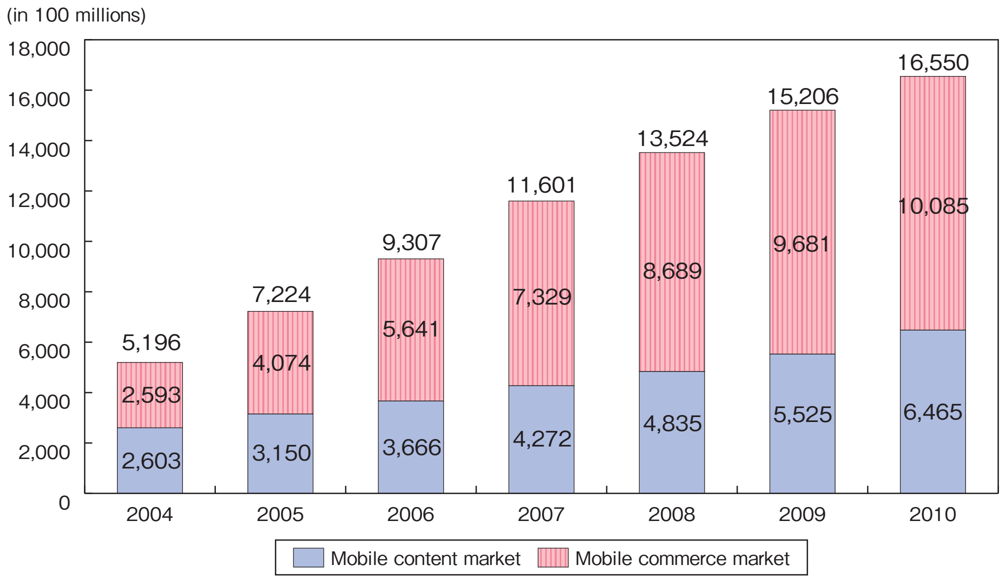
Prepared on the basis of the materials provided by JEITA, Japan Cable Laboratories, NHK, and the Ministry of Internal Affairs and Communications

Figure 3-4-5-1 Breakdown of the Japanese content market (2009)



(Source) Institute for Information and Communications Policy "Survey on Production and Distribution of Media and Software Content"

Figure 3-4-5-2 Market size of the mobile content industry



(Source) MIC "Survey on Market Trends in the Mobile Content Industry"

market segment was worth 646.5 billion yen (a year-on-year increase of 17.0 percent) and the mobile commerce market segment was worth 1.0085 trillion (a year-on-year increase of 4.2 percent), continuing the sharp increase from 2009 (Figure 3-4-5-2).

Section 6

Research and Development (R&D)

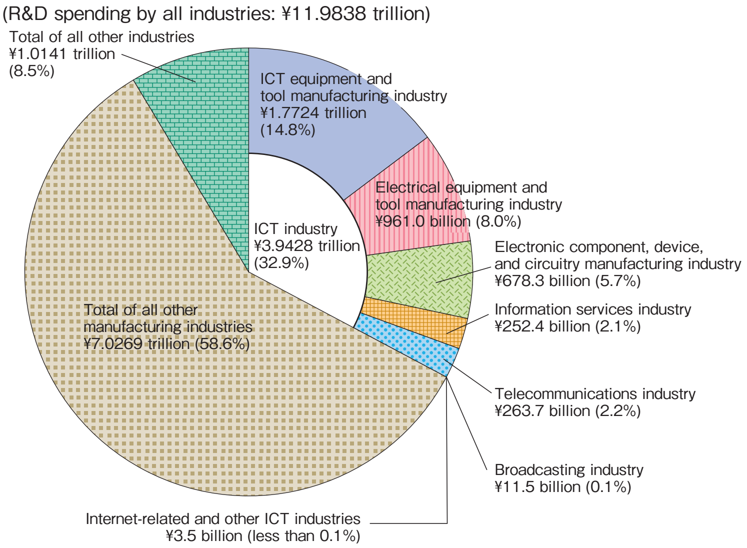
1. Research in the ICT industry

Corporate research spending, which accounts for about 70 percent of all scientific and technological research expenditures, was 11.9838 trillion yen in FY 2009. The ICT industry spent 3.9428 trillion yen on research, or 32.9 percent of all corporate research spending. By sector, the ICT equipment and tool manufacturing industry spends the most on research (Figure 3-4-6-1).

2. Technology trading

The value of Japan's technology exports in FY 2009 was 2.0153 trillion yen, with 384.9 billion yen, or 19.1 percent of the total, exported by the ICT industry. Japan's imports of technology were worth 534.9 billion yen, with 318.3 billion yen, or 59.5 percent of the total, imported by the ICT industry. Thus, there was a surplus situation in the total amount of technology exports as well as in ICT industry technology exports.

Figure 3-4-6-1 Corporate research spending by industry (FY 2009)



Note: ICT industry research spending indicates the total research spending by the ICT equipment and tool manufacturing industry, the electrical equipment and tool manufacturing industry, the electronic component, device, and circuitry manufacturing industry, and ICT businesses (information services industry, telecommunications industry, broadcasting industry, Internet-related industries, and other ICT industries)

Prepared on the basis of MIC "2010 Research Investigation Report on Science and Technology"

3. Number of researchers

Of the 490,494 corporate researchers in Japan, 193,747 were employed by the ICT industry, accounting for 39.5 percent of all corporate researchers. The ICT equipment and tool manufacturing industry employs the most researchers of any ICT industry sector.

Section 7

Postal Service and Correspondence Delivery Business

1. Postal service

There were 24,529 post offices at the end of fiscal 2010. The breakdown by category shows that there were 20,233 directly managed post offices (including annexes and non-operational post offices) and 4,296 postal agencies (including those non-operational). By operational status, there were 24,137 post offices currently in operation and 392 not in operation. Note that the non-operational post office figure includes post offices temporarily closed due to the March 2011 Great East Japan Earthquake (Figure 3-4-7-1).

The postal service business in FY 2010 posted a net loss of ¥35.4 billion.

2. Correspondence delivery business

Since the Law Concerning Correspondence Delivery by Private-Sector Operators (Law No. 99 of 2002) went into force in April 2003, the number of entrants in the

Figure 3-4-7-1 Breakdown of the number of post offices (end of FY 2010)

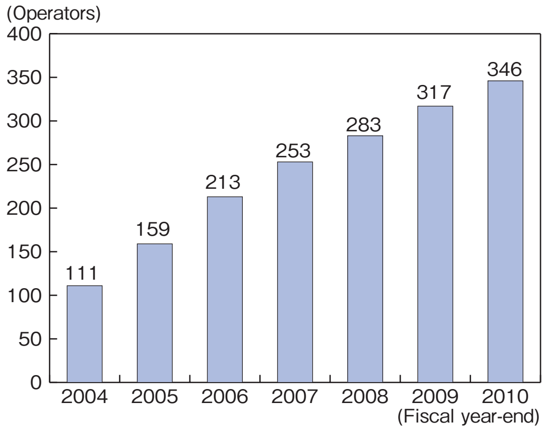
(in offices)

Operational postal offices				Non-operational postal offices				Total
Directly managed postal offices		Postal agencies	Subtotal	Directly managed postal offices		Postal agencies	Subtotal	
Postal offices	Branch offices			Postal offices	Branch offices			
20,060	36	4,041	24,137	137	—	255	392	24,529

Notes:
- "Postal agencies" are post offices operated by contract.
- "Non-operational post offices" are post offices that have been temporarily closed and where counter services have been suspended.
- Of the 137 non-operational directly managed post offices, 129 have been temporarily closed due to the Great East Japan Earthquake.
- Of the 255 non-operational postal agencies, 61 have been temporarily closed due to the Great East Japan Earthquake.
- Of the 255 non-operational postal agencies, 65 are providing outcall services by transfer employees or PR employees.
- Of the 36 annexes currently in operation, two have been set up temporarily as an emergency measure to replace temporarily closed postal agencies.

Prepared on the basis of MIC materials

Figure 3-4-7-2 Transitions in the number of special correspondence delivery operators



Prepared on the basis of MIC materials

special correspondence delivery business has grown steadily, but no entrants have come forth for the general correspondence delivery business. At the end of FY 2010, there were 346 operators in the special correspondence delivery business (Figure 3-4-7-2). Looking at the breakdown of provided services, a comparatively large number of operators have entered the No. 1 Service market.

Section 8

Overseas Trends

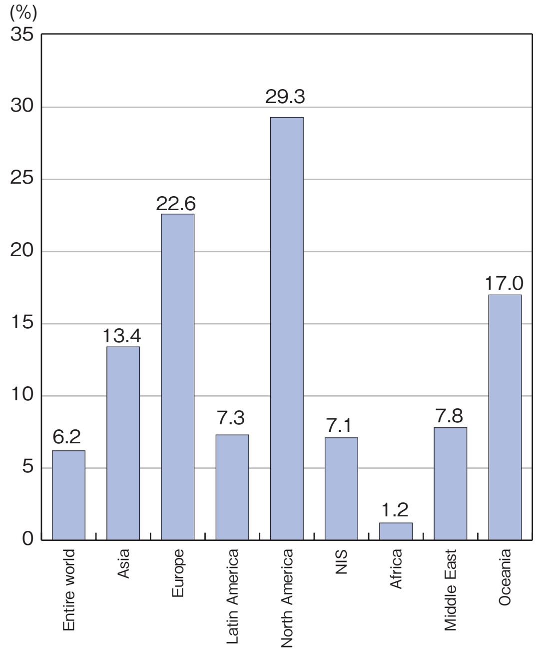
1. Penetration of global communications services

There were 1.20 billion subscriptions to fixed phones in 2009, with an average annual growth rate of 1.0 percent between 2004 and 2009. There were 4.68 billion cellular phone subscriptions, with an average annual growth rate of 22.1 percent between 2004 and 2009 (Figure 3-4-8-1).

2. Internet penetration rates by region

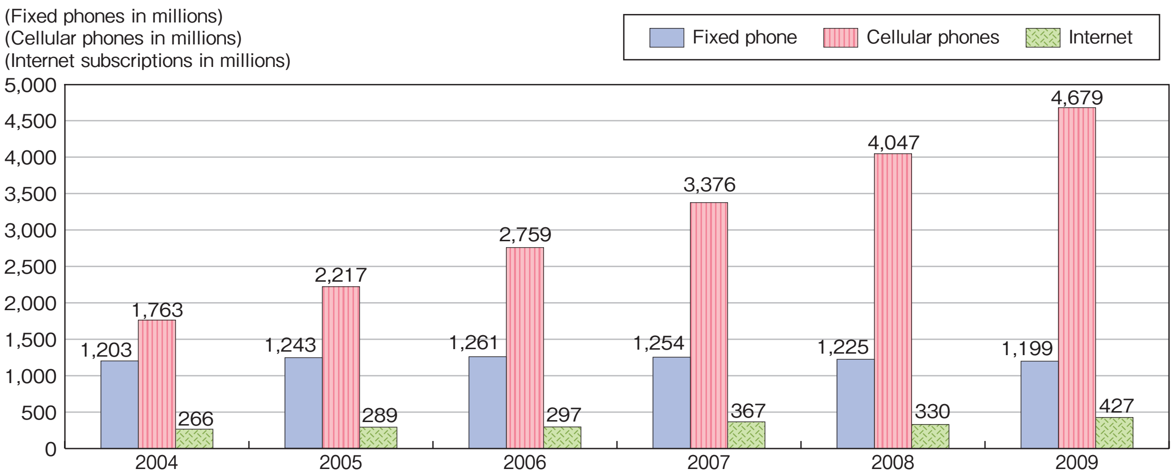
The average Internet penetration rate worldwide was 7.1 percent (number of subscriptions divided by population). By region, North America had the highest penetration rate, at 29.3 percent, followed by Europe (22.6 percent), Oceania (17.0 percent), and Asia (13.4 percent) (Figure 3-4-8-2).

Figure 3-4-8-2 Internet penetration rates by region (based on number of subscriptions) (2009)



Prepared on the basis of the ITU Statistics Database (http://www.itu.int/ITU-D/ICTEYE/Indicators/Indicators.aspx)

Figure 3-4-8-1 Number of subscriptions to fixed phones, cellular phones, and the Internet



Prepared on the basis of "World Telecommunication/ICT Indicators Database 2010, 15th Edition," ITU