# Part II
## Update on ICT and Policy Outlook

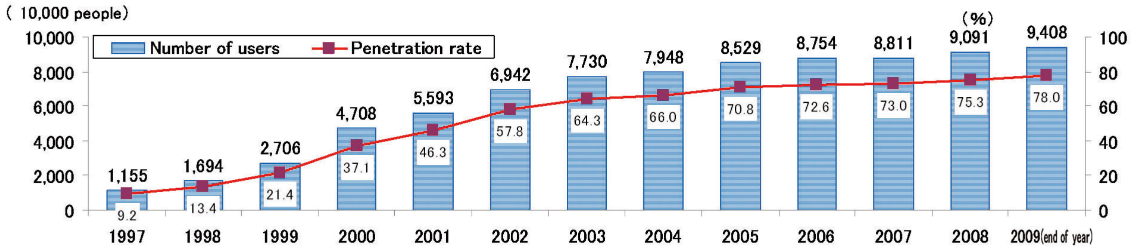
# Chapter 4
## Current State of ICT

## Section 1
## Internet Usage Trends

### 1. Status of Internet utilization

The number of Internet users reached 94.08 million people as of the end of 2009, an increase of 3.17 million people from 2008 (year-on-year increase of 3.5%), with an Internet penetration rate of 78.0% (a 2.7 percentage-point increase from the previous year) (figure 4-1). With respect to terminals for Internet use, users of mobile terminals increased by 5.04 million people from the end of 2008, reaching 80.1 million people. The number of PC users increased by 25.9 million people, reaching 85.14 million people.

**Figure 4-1 Changes in the number of Internet users and the penetration rate**

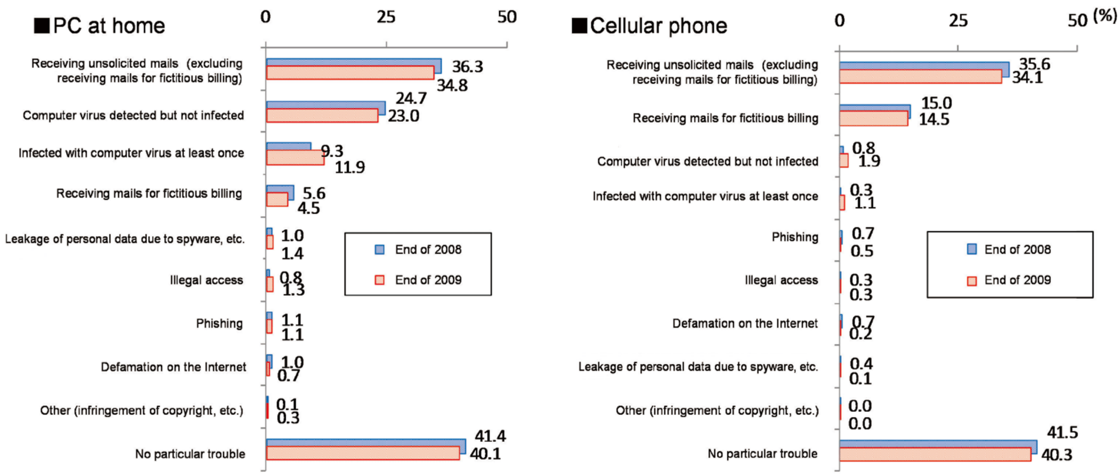



(Source) Ministry of Internal Affairs and Communications “Communications Usage Trend Survey” (2009)

### 2. Issues for safe and secure Internet utilization

With respect to problems associated with using the Internet at home, “receiving nuisance e-mails”is the most frequently cited response at 34.8%, followed by “computer virus detected but not infected” (23.0%) (figure 4-2). As for problems associated with cellular phones, “receiving nuisance e-mails”is the most frequent response at 34.1%, followed by “receiving mails for fictitious billing”at 14.5%.

**Figure 4-2 Problems associated with Internet utilization in households**



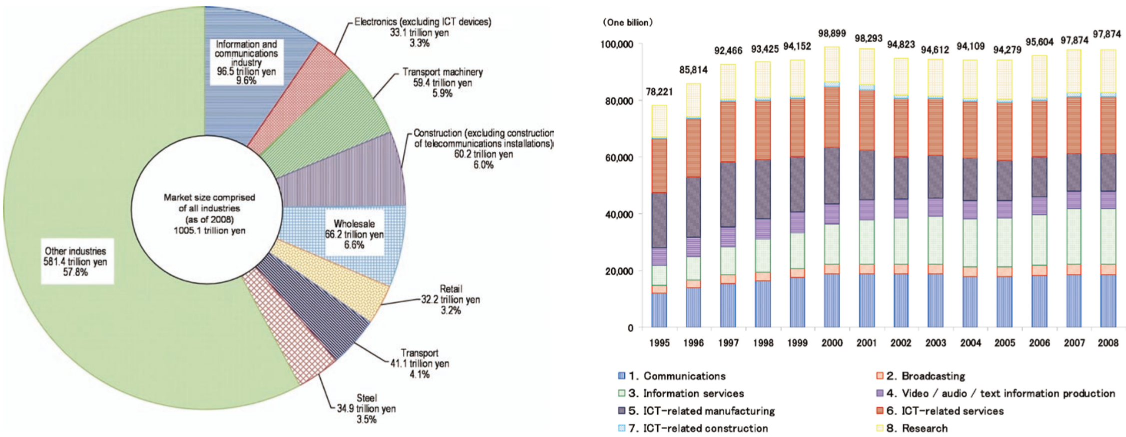

(Source) Ministry of Internal Affairs and Communications “Communications Usage Trend Survey” (2009)

# Section 2
## ICT Industry Trends

### 1. Economic size of ICT industry

Based on 2008 nominal domestic production, the ICT sector registered 96.5 trillion yen, which accounts for 9.6%, the largest of all industries (figure 4-3). When looking at the changes in its size, it had been growing continuously from 2005 onward, but like many other industries shrank during 2008.

**Figure 4-3 Nominal domestic production of major industries (breakdown) and changes in nominal domestic production of ICT industry (2008)**

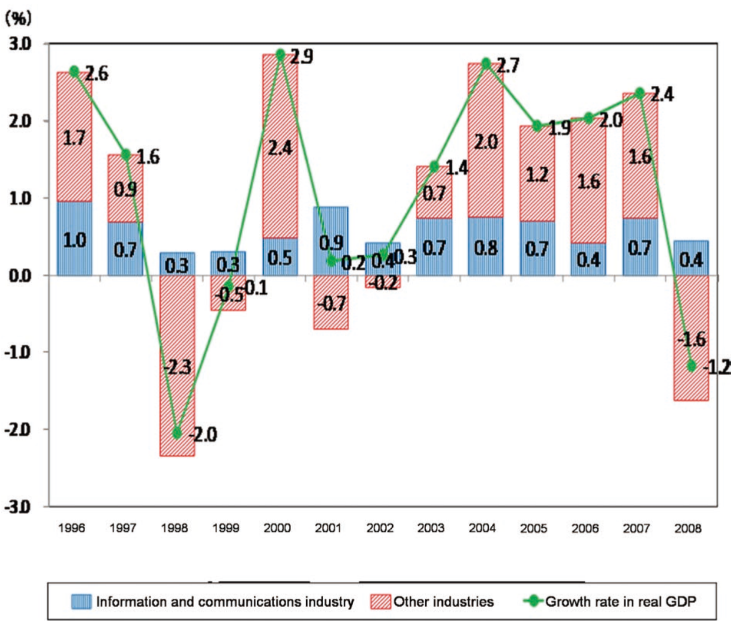



(Source) Ministry of Internal Affairs and Communications "Survey of Economic Analyses on ICT" (2010)

### 2. Contribution of the ICT industry to economic growth

The degree of contribution of the ICT industry to Japan's growth rate in real GDP (-1.2%) in 2008 was 0.4% (figure 4-4). The average contribution rate over the latest five years was about 34%. It is therefore fair to say that the ICT industry has consistently functioned as a driver of Japan's economic growth.

**Figure 4-4 Contribution of ICT industry to growth rate of real GDP**



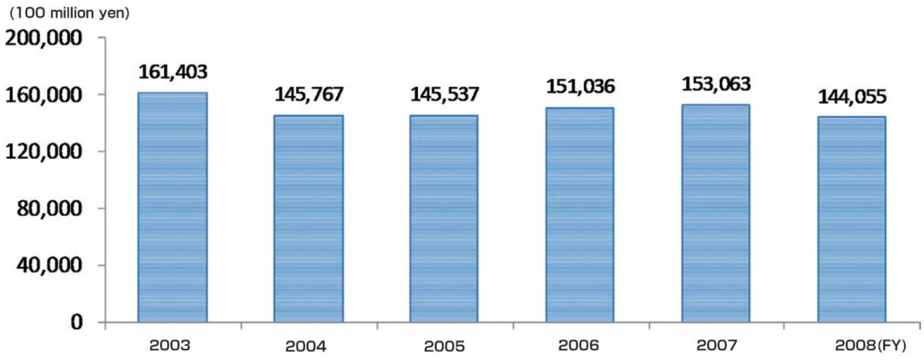

(Source) Ministry of Internal Affairs and Communications "Survey of Economic Analyses on ICT" (2010)

# Section 3
## Telecommunications Sector

### 1. Telecommunications market

In 2008, sales of Japan's telecommunications sector totaled 14.4055 trillion yen (a year-on-year decrease of 5.9%) (see Figure 4-5).

**Figure 4-5 Changes in the sales of telecommunications sector**

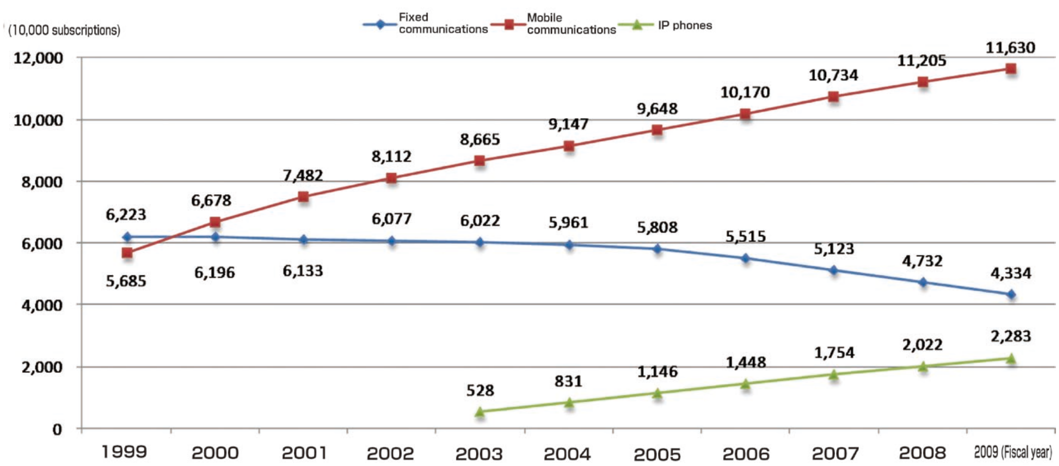



(Source) Compiled from Ministry of Internal Affairs and Communications "the 2008 Basic Survey on the Communications and Broadcasting Industry"

### 2. Telecommunications services

When looking at the number of subscriptions for telecommunications services, fixed communications (subscription telephone and ISDN) are decreasing, whereas IP phones and mobile communications subscriptions (cellular phones and PHS) are on the increase. At the end of fiscal year 2009, the number of mobile communications subscriptions (116.30 million subscriptions) reached approximately 2.7 times of that of fixed communications subscriptions (43.34 million subscriptions) (figure 4-6).

**Figure 4-6 Changes in the number of subscriptions to fixed communications and mobile communications**



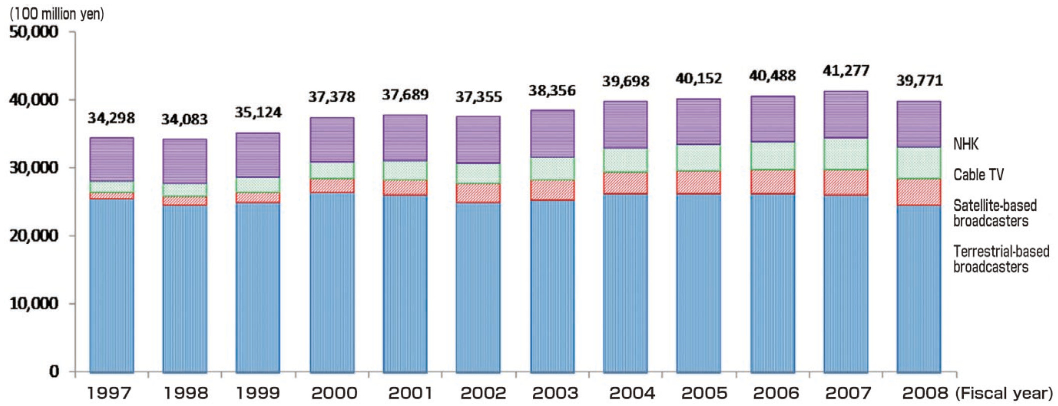

(Source) Compiled from the Subscription to Telecommunications Services (end of March 2010), Ministry of Internal Affairs and Communications

# Section 4
## Broadcasting Sector

### 1. Broadcasting market

Total sales in the broadcasting sector, including revenue from broadcasting and non-broadcasting business activities, had been increasing for four consecutive years, reflecting an increase in the number of pay-TV subscribers. However, fiscal 2008 saw sales fall to 3.9771 trillion yen (a year-on-year decrease of 3.6%) (figure 4-7).

**Figure 4-7 Changes in the market size of broadcasting industries**

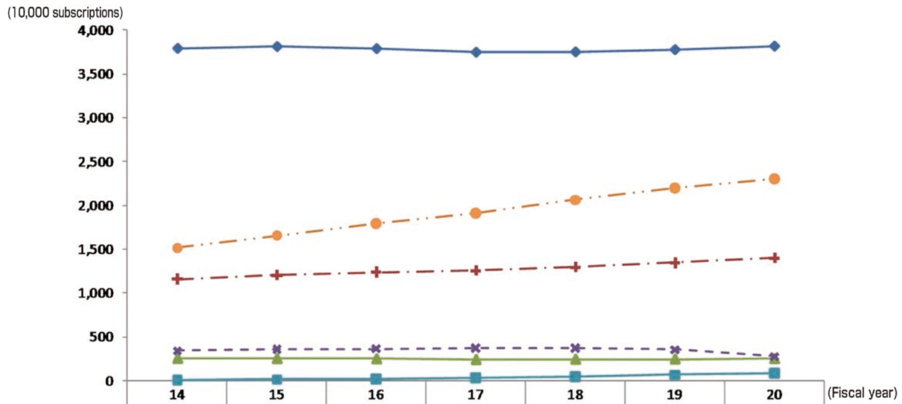



(Source) Compiled from materials provided by the Ministry of Internal Affairs and the NHK yearbook of respective years

### 2. Status of broadcasting media uses

Looking at the total number of subscriptions to broadcasting services, in FY 2008 the number of subscriptions to terrestrial broadcasting services[30] was 38.2 million, to NHK-BS satellite[31] 14 million, and to cable TELEVISION [32] 23.1 million (figure 4-8).

**Figure 4-8 The number of subscriptions to broadcasting services**




| | 14 | 15 | 16 | 17 | 18 | 19 | 20 |
|---|---|---|---|---|---|---|---|
| Terrestrial-based broadcasters | 3,795.3 | 3,815.7 | 3,792.1 | 3,751.2 | 3,754.7 | 3,780.4 | 3,820.2 |
| NHK-BS | 1,157.7 | 1,200.9 | 1,235.9 | 1,254.3 | 1,292.2 | 1,342.3 | 1,399.9 |
| WOWOW | 249.9 | 248.5 | 246.1 | 238.2 | 241.3 | 243.8 | 247.6 |
| CS digital broadcasters | 338.3 | 352.3 | 362.1 | 373.7 | 368.5 | 350.1 | 273.7 |
| 110 degree CS digital broadcasters | 4.2 | 12.3 | 20.3 | 32.1 | 47.4 | 63.8 | 83.0 |
| Cable TV | 1,513.8 | 1,653.8 | 1,788.2 | 1,912.8 | 2,061.1 | 2,194.4 | 2,300.7 |

(Source) Compiled from materials provided by JEITA, Japan Cable Laboratories, NHK, and the Ministry of Internal Affairs and Communications

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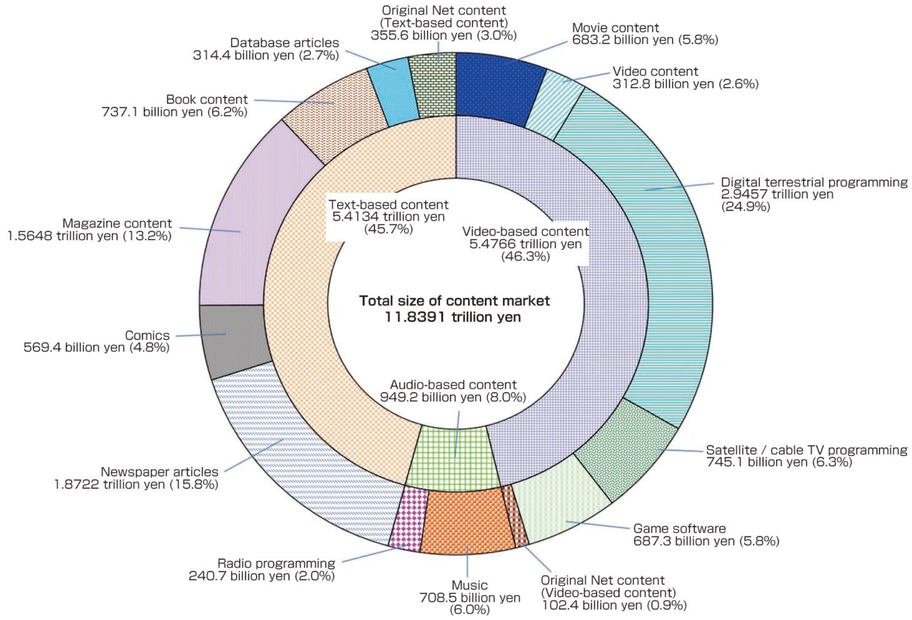
30 Number of terrestrial broadcast (NHK) subscribers is equivalent to the total number of full NHK reception contracts
31 Number of NHK-BS subscribers is equivalent to the number of NHK satellite TV subscriptions
32 Number of cable TV subscribers is equivalent to the number of contracts for licensed facilities conducting voluntary broadcasts

# Section 5
## Content Market Trends

### 1. Japanese Content Market Trends

The size of Japan's content market grew in 2008 to 11.8391 trillion yen. By type, the size of the visual content market was 5.4766 trillion yen (accounting for 46.3% of the total market), with the audio content market at 949.2 billion yen (8% of the total), and the text content market at 5.4134 trillion yen (45.7% of the total) (figure 4-9).

**Figure 4-9 Breakdown of the Japanese content market by type (fiscal 2008)**

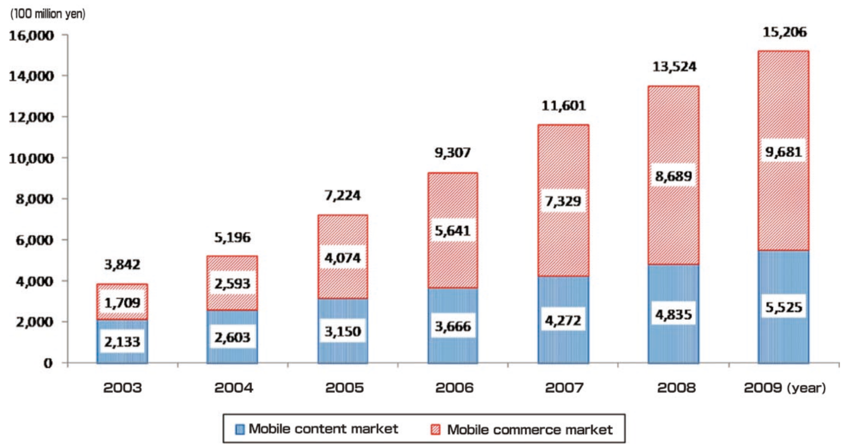



(Source) Survey on Production and Distribution of Media Software, Institute for Information and Communications Policy

### 2. Market size of the mobile content industry

In 2009, the market size of Japan's mobile content industry registered 1.5206 trillion yen (year-on-year increase of 12.4%). By market, the size of the mobile content market was 552.5 billion yen (year-on-year increase of 14.3%) and that of the mobile commerce market 968.19 billion yen (a year-on-year increase of 11.4%), showing a drastic increase, similar to in 2008 (figure 4-10).

**Figure 4-10 Market size of the mobile content industry**

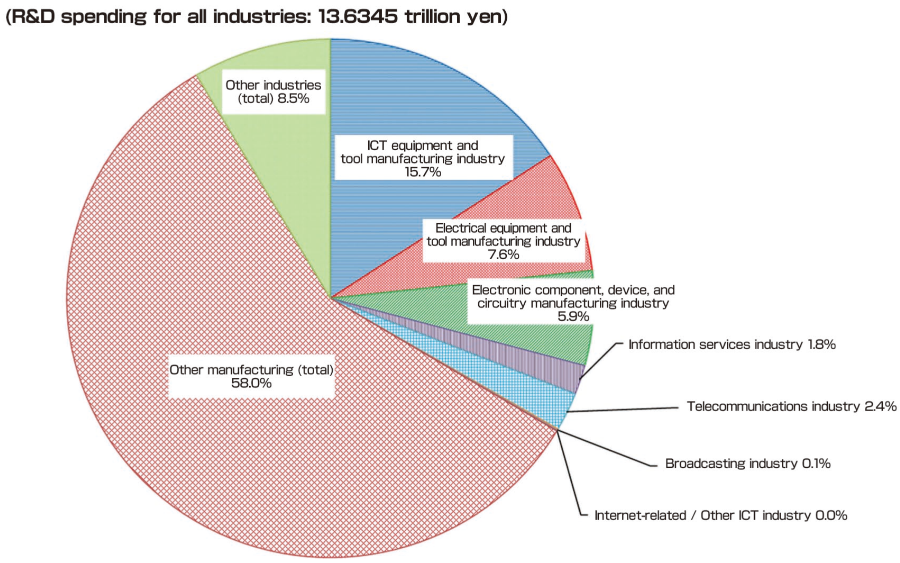



(Source) Ministry of Internal Affairs and Communications, Survey on Market Trends of the Mobile Contents Business

# Section 6
## Research and Development (R&D)

### 1. Research in the ICT industry
Out of total corporate R&D spending (13.6345 trillion yen), research spending by the ICT industry (4.5743 trillion yen) accounts for 33.5%. Research spending for ICT equipment and tool manufacturing makes up the majority of research spending by the ICT industry (figure 4-11).

**Figure 4-11 Breakdown of corporate R&D spending by industry (FY2008)**




(Source) Compiled from 2009 Research Investigation Report on Science and Technology, Ministry of Internal Affairs and Communications

### 2. Technology trading
In FY 2008, the value of exports of technology of Japan's ICT industry was 439.1 billion yen (year-on-year decrease of 6.8%) accounting for 19.7% of all industries. On the other hand, the cost of importing technology was 335.7 billion yen (a year-on-year decrease of 21.0%), accounting for 56.0% of all industries. For both the total amount of technology trading and for the ICT industry specifically, there was a surplus in exports.

### 3. Number of researchers
Out of total number of corporate researchers (492,805 researchers), the number in the ICT industry is 203,005 researchers, accounting for 41.2%. The majority of researchers in the ICT industry are in information and communications equipment and tool manufacturing.

# Section 7
# Postal Service and Correspondence Delivery Business

## 1. Postal service

There are 24,531 post offices as of the end of fiscal 2009. The breakdown of this figure shows that there are 20,236 directly managed post offices and 4,295 post office agencies, and that 24,280 of all post offices are operational and 251 are non-operational (figure 4-12).

The net income of the postal service for fiscal 2008 was minus 47.4 billion yen. Ordinary income was 56.9 billion yen.

**Figure 4-12 Breakdown of the number of post offices (end of FY2008)**

(Unit: offices)

| Currently operational post offices | | | | Non-operational post offices | | | | Total |
|---|---|---|---|---|---|---|---|---|
| Directly managed post offices | | Basic service post offices | Subtotal | Directly managed post offices | | Basic service post offices | Subtotal | |
| Post offices | Annexes | | | Post offices | Annexes | | | |
| 20,191 | 36 | 4,053 | 24,280 | 9 | — | 242 | 251 | 24,531 |

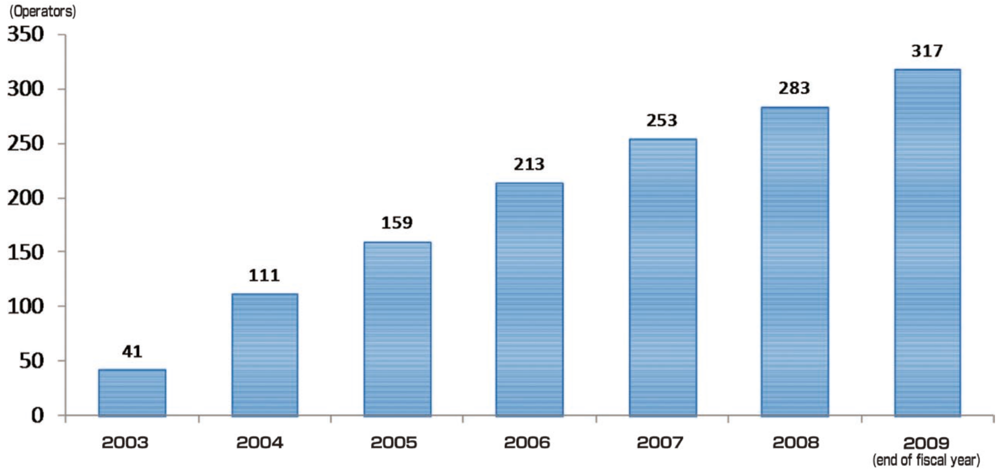
(Source) Compiled from materials provided by the Ministry of Internal Affairs and Communications

## 2. Correspondence delivery business

Following the establishment of the Law Concerning Correspondence Delivery by Private-Sector Operators in April 2003, although no entries have been made to the general correspondence delivery business, the number of new entrants to the special correspondence delivery business has seen steady growth, with a total of 317 new entrants as of the end of FY2009 (figure 4-13).

Sales of special correspondence delivery operators in fiscal 2008 came to 3.5 billion yen, registering an increase of 21% over the previous year.

**Figure 4-13 Changes in the number of special correspondence delivery operators**



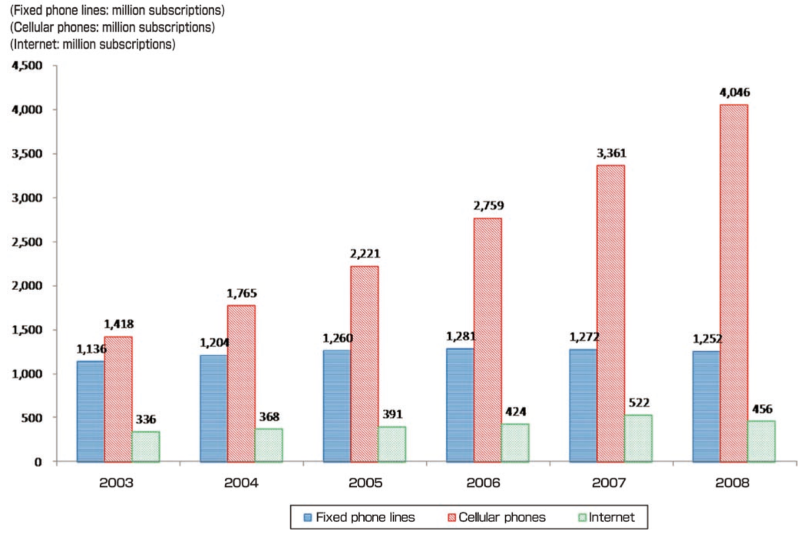

(Source) Compiled from materials provided by the Ministry of Internal Affairs and Communications

# Section 8
## Overseas Trends

### 1. Penetration of global communications services

The number of lines for fixed phones in 2008 was 1.25 billion lines, with an average growth rate of 2.5% per annum over the period 2003-2008. The number of cellular phone subscriptions was 4.05 billion lines, with an average growth rate 23.2% per annum over the period 2003-2008 (figure 4-14).

**Figure 4-14 Number of subscriptions to fixed phone lines, cellular phones and the Internet**

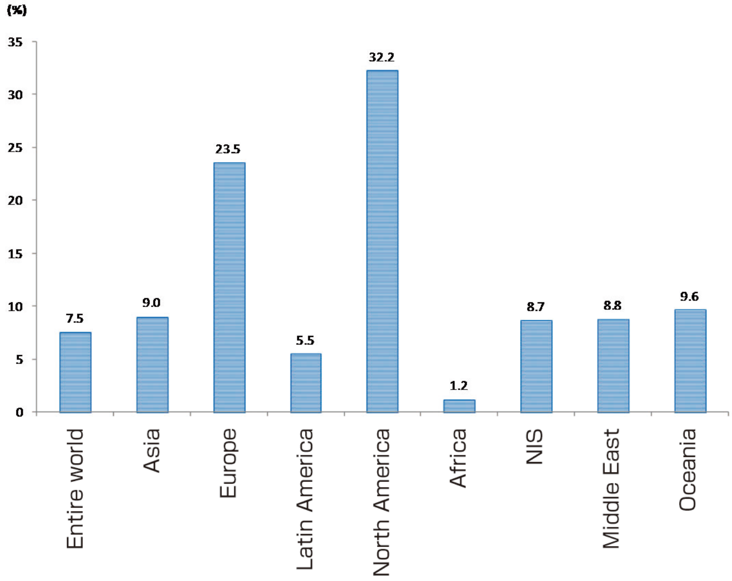



(Source) Compiled from the ITU Statistics Database (http: //www.itu.int/ITU-D/ICTEYE/Indicators/Indicators.aspx)

### 2. Internet penetration rate by region

In 2008, the global average internet penetration rate (number of subscriptions divided by population) was 7.5%. By region, North America has the highest penetration rate, at 32.2%, followed by Europe (23.5%), Oceania (9.6%) and Asia (9.0%) (figure 4-15).

**Figure 4-15 Internet penetration rate by region (based on number of subscriptions) (2008)**




(Source) Compiled from the ITU Statistics Database (http: //www.itu.int/ITU-D/ICTEYE/Indicators/Indicators.aspx)