

# **Information and Communications in Japan 2005**

## **Feature: Stirrings of u-Japan**

**<Outline>**

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**Ministry of Internal Affairs and Communications**

# Feature: Stirrings of u-Japan

## <Objectives>

- To analyze the current status toward realizing u-Japan in 2010
- To analyze the progress in ICT use by individuals and companies since the launch of the e-Japan Strategy (2001)
- To make comparisons among Japan, the United States, and the Republic of Korea

## <Overall structure>

### **Chapter 1 Stirrings of u-Japan**

Section 1 Use of Ubiquitous Networks by  
Individuals and Companies

Section 2 ICT Use by Individuals

Section 3 ICT Use by Companies

Section 4 Network Infrastructure Supporting u-Japan

Section 5 Challenges Toward Achieving u-Japan

**Chapter 2 Current Status of Information and Communications (presenting data that indicate the current situation of information and communications)**

**Chapter 3 Trends of Information and Communications Policies (focusing on efforts made by the MIC)**

# Content & Key Points

## I. Use of Ubiquitous Networks by Individuals and Companies

- 1. u-Japan ..... P 1
- 2. People’s Expectations for Ubiquitous Networks ..... P 2
  - ◇ People have high expectations for “security and safety.”
- 3. Trend in Corporate Use of Ubiquitous Networks ..... P 3
  - ◇ Corporate uses of ubiquitous network tools (RFID tags, contactless smart cards, and new network-compatible devices) have made notable progress. Active efforts are also made in the USA and ROK.
- 4. Example Use of Ubiquitous Networks ..... P 5
  - ◇ The users had a high opinion of and a high degree of satisfaction with mobile phones with contactless smart card technology, RFID tags, etc., and believed that the services would spread in the future.
- 5. Japan’s Future Challenges and Solutions Using Ubiquitous Networks ..... P11
  - ◇ Solving social issues through the use of ubiquitous networks is expected to become widespread through efforts to establish the respective business models and satisfy other preconditions.

## II. ICT Use by Individuals

- 1. Progress in ICT Use ..... P12
  - ◇ The number of Internet users is 79.48 million and The percentage of broadband households to the total Internet households is 62.0%.
- 2. Changes in People’s Lives ..... P14
  - ◇ In line with the use of the Internet, the time for sleep, watching TV, reading magazines, etc. decreased, while the frequency of communicating with family and friends increased in terms of activity patterns. As for consumption behavior, most people gathered product information on the Internet.
- 3. Stimulation of Communication ..... P17
  - ◇ The utilization rate of mobile phone e-mail is far higher in Japan than in the United States and the Republic of Korea. In addition, blogs have rapidly come into wide use since 2004.
- 4. Online Shopping ..... P19
  - ◇ Compared to two years ago, the total amount of transactions, the frequency of use, and the degree of satisfaction have all increased. The characteristics of online shopping via mobile phones are selling in conjunction with magazines, etc., purchasing without making comparisons to similar products or other stores, and purchasing while en route. The purchases are lead by young females in their teens to those in their 30s.
- 5. Contents ..... P22
  - ◇ While the overall contents market has hit the ceiling, the market for online contents has expanded. The main Internet contents used are free contents.
  - ◇ The intent for future use of paid contents is high for music, games, and moving images, and the utilization rate of paid contents is overwhelmingly high in the Republic of Korea compared to Japan and the United States. Music distribution and VOD services are expected to come into wider use in the future.

## III. ICT Use by Companies

- 1. Enhanced Use of ICT ..... P27
  - ◇ The use of package applications increased for application software for ICT systems, and the connection of ICT systems between companies has advanced. The purpose for introducing ICT systems has changed from “reducing costs” to “expanding sales.” Efforts including “verifying cost-effectiveness” and “organizational/institutional reform for management of ICT systems” also made progress. An increased number of companies found the introduction of ICT systems to be effective.
  - ◇ Progress can be seen in the shift from mainframe systems to open systems in Japan, the United States, as well as the Republic of Korea. The rate of concurrently using both mainframes and open systems is relatively high in Japan.

- 2. Expansion of E-Commerce . . . . . P31
  - ◇ B2C transactions via PC Internet were conducted by 28.9% of all companies, and those via mobile phones were conducted by 9.1%. Many companies were scheduled or considering to conduct B2C transactions via mobile phones in the future. The future market size of B2C (market size in FY 2006 based on the 2003 level) is predicted to roughly triple in Japan and the Republic of Korea, and roughly double in the United States.
- 3. Expansion of New Businesses Using ICT . . . . . P32
  - ◇ With the expenditure for Internet ads exceeding that for radio ads in 2004, the Internet became the fourth largest ad medium. The amount of Internet transactions accounted for about a quarter of all securities transactions. The balance at Internet-only banks almost quadrupled in two years. The amount of sales by mobile contents providers tripled in three years.

**IV. Network Infrastructure Supporting u-Japan**

- 1. Progress of Broadband . . . . . P33
  - ◇ The number of broadband subscribers reached 18.66 million, continuing to achieve a steady increase. The broadband fees are at the lowest level in the world. Many non-users of FTTH intend to switch over to FTTH.
- 2. Progress of Mobile Communications . . . . . P34
  - ◇ The number of mobile phone subscribers is 87 million, and the number of mobile phone Internet subscribers is 75.15 million. The number of third-generation mobile phone subscribers rapidly increased to 30.35 million. The percentage of mobile phones supporting the Internet is outstandingly high in Japan and the Republic of Korea at about 90%.
  - ◇ Wireless LAN came into wide use at home and in companies. The number of base stations for public wireless LAN increased rapidly. The percentage of public wireless LAN users is 12.5%, which is lower than that in the United States and the Republic of Korea.
- 3. Progress of IP Networks . . . . . P37
  - ◇ The use of IP phones in households has become widespread. “IP-VPNs,” “Internet VPNs,” and “wide area Ethernet” are becoming widely used as the trunk systems for corporate communications networks.
- 4. Diffusion of Terrestrial Digital Broadcasting . . . . . P38
  - ◇ The shipment volume of receivers supporting terrestrial digital broadcasting increased rapidly. The degree of satisfaction for terrestrial digital broadcasting is high.
- 5. Japan’s Advantage in Information and Communications Equipment and Technology . . . . . P39
  - ◇ Japan has an advantage in intelligent home appliances and related parts. Although Japan has minor dominance in the market of mobile phone handsets, it has an edge in mobile phone parts.
  - ◇ With respect to ubiquitous network related technology, Japan has the advantage in “FTTH,” “next-generation mobile phones,” “network robots,” etc. On the other hand, ICT for safety and security, such as “IP traceback technology,” is more advanced in North America.

**V. Challenges Toward Achieving u-Japan**

- 1. Safe and Secure ICT Use . . . . . P40
  - ◇ From 80 to 90% of individual and companies in Japan, the United States, and the Republic of Korea are victims of ICT security incidents. The most frequently occurred incident is “spam” for individuals and “virus infection” for companies.
  - ◇ Overall, U.S. individuals and companies are taking the strongest measures. Phishing has grown into a social problem in the United States.
  - ◇ The priority challenges toward a ubiquitous network society include the vulnerability of ICT networks, illegal business practices using networks, copyright protection of digital assets, the regional gaps in advanced services, etc.
- 2. Digital Divide . . . . . P45
  - ◇ There are regional gaps in the availability of broadband services. The gaps are particularly large for FTTH.
- 3. Backbone Circuit . . . . . P46
  - ◇ The Internet traffic surged. The traffic exchanges on the Internet are concentrated in Tokyo. Decentralization of traffic exchanges will be a future task.