The Current Condition of Asian Information Infrastructure

Takashi KOMIYAMA*

Today, we are in the midst of a new revolution brought about by the convergence of communications and computer technologies. Information Technology（IT）is presently transforming the way we do business, the way we share information, the way governments are run, and the way social services are delivered. In short, it is transforming the way we live.

Keyword：information technology, information infrastructure, last-runner's benefit

アジアの情報基盤整備の現状を考える

小 宮 山 隆

情報技術がビジネスや生活を変化させている今日、アジアにおいても情報技術による劇的な変化が様々な面で見られている。注目されている中国やベトナムにおいても、情報基盤が発展しつつある。こうした国々では「後発の利」を活用して、情報技術を活用した発展のための新しい道を探ることが重要である。

キーワード：情報技術，情報基盤，後発の利

Revolutions in communication have often been at the center of changes in society. The invention of the movable type is widely considered to have ushered in the Renaissance as it led to the widespread dissemination of written knowledge. In the same light, the telegraph, the telephone, radio, television, and the fax machine have brought about profound economic and social changes all over the world.

Today, we are in the midst of a new revolution brought about by the convergence of communications and computer technologies. Information Technology（IT）is presently transforming the way we do business, the way we share information, the way governments are run, and the way social services are delivered. In short, it is transforming the way we live.

Information technology is reconstructing the basis of national economic power and holds great potential for changing the global balance of power. IT can reduce knowledge gaps both within countries and between industrial and developing countries.

So, each country is devoted to build and advance

*東京情報大学総合情報学部情報文化学科
Tokyo University of Information Sciences, Faculty of Informatics, Department of Media and Cultural Studies

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National Information Infrastructure（NII）. Nowadays, it seems that we all pursue a same dream and aim a same goal. Therefore, we find the same phrase as in "The Administration's Agenda for Action" of U.S. government, in "Building The Bridge to the Future"（Dialogue with ASEAN Leaders on the ASEAN Information Infrastructure Recommendations of the IT Private Sector Core Group: 28 November 1999, Manila, Philippines）.

Imagine how our societies would be radically enhanced if:

- The best schools, teachers, and courses were available to all students, without regard to geography, distance, resources, or disability;
- The vast resources of art, literature, and science were available everywhere, not just in large institutions or big-city libraries and museums;
- Services that improve the health care system and responses to other important social needs were available online, without waiting in line, when and where a person needed them;
- One could live in many places without foregoing opportunities for useful and fulfilling employment, by 'telecommuting' to one's office through an electronic highway instead of by automobile, bus or train;
- Small manufacturers could get orders from all over the world electronically—with detailed specifications—in a form that the machines could use to produce the necessary items;
- One can see the latest movies, play the hottest video games, or bank and shop from the comfort of one's home whenever one chooses;
- One could obtain government information directly or through local organizations like libraries, apply for and receive government benefits electronically, and get in touch with government officials easily; and
- Individual government agencies, businesses and other entities all could exchange information electronically—reducing paperwork and improving service.

In the case of Japan, the government planned "IT Basic Strategy" in 2000, and flagged "e-Japan" plan in 2001. The current condition is as below:

1. Advances in Network Infrastructure
   (1) Broadband at the World's Highest Levels
   (2) Development Mobile Internet
      - Increased use of the Internet from mobile phones
      - Increase in 3G mobile phones and advanced functions
   (3) Increase in IP Telephone and Hot Spot
   (4) Digitization of Broadcasting
   (5) Development of e-Government and e-Local Government
2. Technology Development and Standardization for enhancing International Competitiveness
3. Evolving Towards Ubiquitous Network

（According "Information and Communication White Paper 2004"）

The number of broadband users at the end of 2003 is estimated to have been 26.07 million（a 33.4% increase over the previous year and a 20.4% penetration rate）. Broadband users account for 33.7%

Figure 1-1-1 Number of Broadband Subscribers

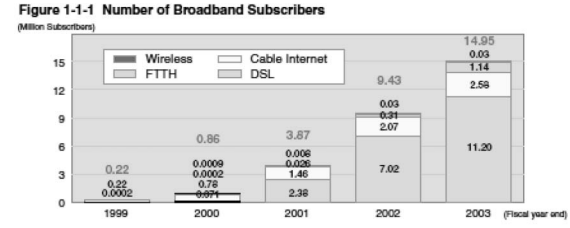
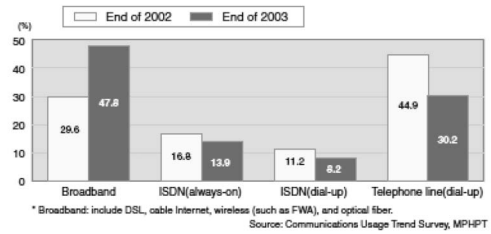
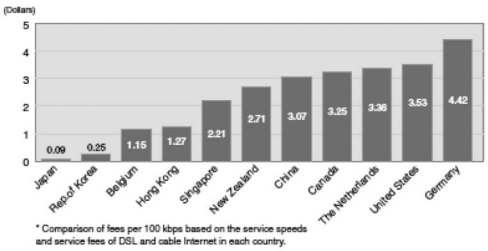


Figure 1-1-2 Internet Connection Methods from Home PCs



* Broadband: include DSL, cable Internet, wireless (such as FWA), and optical fiber.
Source: Communications Usage Trend Survey, MPHPT

Figure 1-1-3 International Comparison of Broadband Fees (cost per 100 kbps; July 2003)



of the total population of Internet users of 77.3 million. Thus, more than one in three Internet users access the Internet by broadband.

It is needless to say that the continuing fall in Broadband fees is one factor behind the rapid proliferation of broadband services. An International comparison of DSL and cable Internet fees converted to the cost per 100 kbps reveals that fees in Japan at the world's lowest levels. And it is evident that competitions among ISP（Internet Service Providers）, communication careers cause this continuing fall in fees.

However, the competitions bring us another phase. That is Digital Divide between "Center" and "Region", Big Cities and Countryside. In fact, Broadband service spread out from Big Cities to the circumference. Sometimes, it will take very longtime to reach to Countryside or not to reach there.

In Thailand, the number of Internet Users in the middle of 2001 reached 3.5 million, 5.6% of Population, 1.2 million of them lived in Bangkok. It is presupposed that the number of Internet users is increasing steadily at Countryside. In Vietnam, the number of telephone subscribers at the end of 2002 was estimated to have been 5.57million（a 17.8% increased over the previous year）, item-wise 3.66 million as fixed telephone; 1.9million as cell phone. The number of Internet Users in them, 200 thousand, over 80% of them live in Hanoi or Ho Chi Minh city.

The role of Education, I think, is to resolve a digital divide, not through teaching how to use some devices, not through personal training, but through giving a circumstance of touching computer and other devices connected to Network. For example, a primary school and junior high school have to be not also a field of study but a communication center of each area. It is necessary to children, who will be members of Network Society, to experience its convenience, its pleasure and its fearfulness. Both in Town and in Village, it is important to run a computer that fulfills the functions in one's own life. In this sense, I think the education is able to resolve digital divide. Don't be in a hurry. Make haste slowly.

At last, I would like to tell an episode. I went to Shanghai with Prof. HITOKOTO for field surveys in Feb 2002. I brought the morning news paper of which top item was titled "NTT will start IP telephone service this fall". I called many times in Shanghai, by VoIP. China Telecom has already started VoIP service.

So called "Last-runner's Benefit"? We encountered one more symbolic matter. Government of China had inhibited the usage of PHS（Personal Handy Phone）because of retarding the development of mobile phone（from cell phone to 3G/4G）. PHS was driven away by cell phone in Japan. While Government meet the demand, would lift of ban at first at Guangzhou（広州）. It was interested in an abandoned technology getting into the spotlight. For this technology would follow another way in Chinese Society.