

THE CURRENT STATUS OF REGIONAL INFORMATION INFRASTRUCTURE IN KOREA

Yong-Joong Kang
(klucas@hri.co.kr)

Information Infrastructure for A Knowledge-Based Economy

In response to the recent economic crisis, Korea has been trying to transform its economic system into a knowledge-based economy. Toward this end, information infrastructure is regarded as one of the most important success factors. In this context, the Ministry of Information & Communication (MIC) issued Cyber Korea 21 in March, its vision of information infrastructure for development of a creative knowledge-based economy. According to this vision, Korea will be ranked as the 10th

biggest knowledge-based economy in the world by 2002. To reach this vision effectively, Korea is striving for the early construction of information infrastructure, the enhancement of national productivity based on information infrastructure and the creation of new information- and knowledge-related business and jobs.

The construction of Regional Information Infrastructure (RII) is a part of the current overall efforts to develop the National Information Infrastructure (NII). However, the efforts to develop RII focus more on enhancing regional inhabitants' ability to utilize the telecommunications network rather than

Table 1. Information Indicators by Regions

City / Province	Percentage of households with PC	VAN service subscribers per 1,000 inhabitants	VAN service sales per 1,000 inhabitants (million won)	Percentage of IT industry to Gross Regional Product
Seoul	57.9	9.49	42.49	0.266
Pusan & Kyongsangnam-do	46.5	0.17	0.91	0.072
Inchon & Kyonggi-do	46.1	0.18	0.52	0.291
Taejon & Chungchongnam-do	34.3	0.22	1.03	0.106
Chungchongbuk-do	20.8	0.16	0.23	0.288
Kwangju & Chollanam-do	35.9	0.26	0.52	0.032
Taegu & Kyongsangbuk-do	30.7	0.11	0.32	0.307
Chollabuk-do	54.4	0.15	0.27	0.071
Kangwon-do	30.8	0.19	2.21	0.042
Cheju-do	N/A	0.17	0.31	0.025
Whole Country	44.5	2.24	9.93	0.196

Source: National Computerization Agency (NCA), *Informatization White Paper*, 1999; Korea Association of Information & Telecommunications, *Statistical Yearbook of Information and Telecommunications*, 1998

Note: Data for the table is from 1997, but the main trends and characteristics are not believed to have changed considerably in the last year or two.

building up the network itself, since the central government is playing the lead role in building up the nationwide telecommunications network as part of the NII plan.

Evaluating the Regional Information Infrastructure

At present, the level of RII varies somewhat among the different regions, which can be measured by several indicators. First, we can compare regions by PC popularization. The percentage of households with personal computers (PC) is highest in Seoul (57.9%) while lowest in Chungchongbuk-do (20.8%). As is normally anticipated, households in urban areas have

The regional gaps can be an obstacle to reaping the full fruits of the national information infrastructure. The regions with low-level information infrastructure could be a bottleneck to information flows.

more PCs than those in rural areas. In the future, however, the regional gap in PC popularization is expected to narrow easily and quickly. According to Cyber Korea 21, there should be an average

32 PCs among every 100 Korean people by 2002.

Second, it is possible to estimate inhabitants' actual use of information infrastructure through the subscribers and sales of Value-Added Network (VAN) services. VAN services include Internet Service Providers (ISP), PC telecommunication, on-line information providers, Electronic Data Interchange (EDI), reservation by computers, and other similar services. The number of VAN service subscribers per 1,000 inhabitants is 9.49 in Seoul and 0.11~0.26 in the other regions. In addition, sales per 1,000 inhabitants differs markedly between Seoul and the other regions. In Seoul, it amounts to 42.49 million won, while reaching only 0.31~2.21 million won in other regions per year. In short, with respect to the actual usage of information infrastructure, there is a serious gap between Seoul and the other regions.

Another important indicator is the share of

the Information & Telecommunications (IT) industry to Gross Regional Product (GRP). A higher share means that a lot of IT workers reside in the region and the skill to use IT technology has spread far and wide. The regions in which the IT share is comparatively high are Seoul, Incheon/Kyonggi-do, Taegu/Kyongsangbuk-do and Chungchongbuk-do. They have a common point in that they have been well developed in the past high-growth periods. This implies that the central government's efforts to reduce existing regional economic gaps by luring new IT businesses to underdeveloped areas have been insufficient.

Regional Gaps To Be Narrowed

Judging from the above indicators, there are gaps in the different levels of regional information infrastructure development. These gaps are problematic and should be narrowed for three reasons. First, the regional gaps can be an obstacle to reaping the full fruits of the national information infrastructure. The regions with low-level information infrastructure could be a bottleneck to information flows. Second, the gaps in information infrastructure can give rise to gaps in economic growth. Information infrastructure is a critical social overhead cost and serves as source of a region's locational advantage in a knowledge based economy. Therefore, regions with low-level information infrastructure will not be able to attract companies and will remain underdeveloped. Third, information infrastructure will be essential for the residents' social welfare. In the future, medical treatment, education, daily information and government services will be delivered via information infrastructure.

Fortunately, both the central and local governments are placing emphasis on the issue and are trying to narrow the regional gaps. On the one hand, the central government is actively supporting the building of RII. For example, the Ministry of Information & Communication (MIC) is promoting projects such as Regional Information Center (RIC), Computer Education Project for Rural

Inhabitants, and RII model development project. RIC provides the inhabitants with various information on administration, daily life and business. There are now 45 RICs operating in medium and small cities or towns. In addition, the Ministry of Commerce, Industry & Energy (MOCIE), the Ministry of Government Administration & Home Affairs (MOGAHA), Ministry of Agriculture & Forestry (MAF) and Small & Medium Business Association (SMBA) are engaging in and supporting RII related projects like the Regional Information Center for Industrial Technology, Integrated Information Model for Administrative Service, Integrated Information Network for Agriculture, Forestry &

Fishery, and the Regional Information Center for Small & Medium Business.

On the other hand, local governments are dealing with more region-specific information infrastructure. They can figure out better exactly what the inhabitants need and what kind of problems should be solved. (See Table 2)

Adding to the governments' efforts, private telecommunication companies also play important roles to raise the standard of RII. PC telecommunication companies are offering online services such as regional information, local bank's home banking and local broadcasting through strategic alliance with local companies.¹⁾ **VIP**

Table 2. Major RII Projects by Local Governments

City / Province	Project	Contents
Kwangju	Kwangju Metropolitan Information Center Inc.	Providing local information, information education and carrying model project for RII
	Kwangju S/W Support Center	Supporting the start-ups and S/W companies
	Recycling Information System	Establishing database on recycle and environment friendly products, mediating the transaction, and smoothing the collection of the used goods
Kangwon-do	Kangwon-do's Basic Plan for Regional Information Infrastructure	Setting up the 3 staged plan for regional information infrastructure from 1998 to 2010
	Information System for the Management of Clean Stock Farm	Collecting stock farming information on database and distributing them to the farmers and customers
	Kangwon Internet College	Cyber teaching on general culture and computer
Chollabuk-do	Information System for Traditional Culture & Arts	Providing the information on topics including traditional culture, tourism and traffic.
	S/W Support Center	Activating regional economy by supporting local S/W companies
Chollanam-do	Chollanam-do Internet System	Providing regional information domestic or overseas and online administrative service
Cheju-do	Cheju's Integrated Information Network	Providing information from 59 organizations, such as administration, tourism, education and Cheju oranges
	Internet Homepage for Towns	Setting up the Internet homepage for 172 towns in the province

Source: National Computerization Agency (NCA), *Informatization White Paper*, 1998 & 1999

1) For example, NowCom Inc. is supplying regional information service, Eyes in Pusan and Kyongsangnam-do, Focus in Kwangju and Chollanam-do and Centis in Taejon and Chungchongnam-do.