

# GLOBAL INFORMATION SOCIETY WATCH 2008

*Focus on access to infrastructure*



# Global Information Society Watch

## 2008



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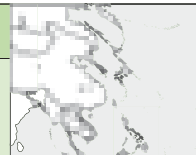
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# KOREA, REPUBLIC OF

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## Introduction

The Republic of Korea – more commonly known as South Korea – is one of the top ranking countries in terms of access to broadband internet and mobile telephones. According to the International Telecommunication Union's (ITU) 2007 statistics, the number of internet users per 100 inhabitants is 72.2, the number of broadband subscribers per 100 inhabitants is 30.62, and the number of mobile cellular subscribers per 100 inhabitants is 90.2. Reading from the same statistics, in 2006, the percentage of the population covered by a mobile signal was 99%. According to the Organisation for Economic Co-operation and Development (OECD), in 2006 the percentage of households that had broadband access was 94%.

Geographically, there are about 30,000 people who live in areas where wired broadband access is not available. Other than them, almost all citizens in Korea can subscribe to internet access services. Such high geographical coverage is mainly due to a population concentrated in relatively small urban areas and aggressive investments in telecommunication infrastructure by the government and private companies.

Since the early 1990s, the government has put various policies in place to ease the digital divide. Early government efforts included regional ICT roll-out initiatives and computer education for farmers and fisherpeople. However, a comprehensive digital divide policy was only implemented with the formulation of the first five-year digital divide plan in 2001. The second five-year plan (2006-2010) is currently in

progress. The second plan's major goal is raising the score of each vulnerable population group measured by a digital divide index that the Korean government has developed to 80% of that of the general population.

The most vulnerable populations are people with disabilities, farmers and fisherpeople, the elderly, and low-income population groups. Among these, farmers and fisherpeople and the elderly are lagging further behind than people with disabilities and low-income groups. Within each group, people who are older and less educated experience a greater sense of the digital divide.

The most significant socioeconomic factors affecting access for people with disabilities, low-income groups and farmers and fisherpeople is age, while for the elderly it is education.

In general, in these groups, people who score lowest on the digital divide index do not use the internet.

## Digital divide index

In 2004, the government developed a digital divide index to quantitatively measure the digital divide. Since 2004, it has annually conducted status surveys and published its results in a survey report and in a white paper (KADO, 2008).

The survey involves face-to-face interviews with 15,000 individuals: 3,000 respondents each from the general population, people with disabilities, farmers and fisherpeople, the elderly, and low-income earners.

The questions used in the interview cover the issues shown in Table 2.

Table 1: Growth of broadband access, 2001-2007

	2001	2002	2003	2004	2005	2006	2007
Subscribers per 100 inhabitants	18.47	21.83	24.22	24.82	25.32	29.08	30.46
Households with broadband access (%)	56.9	68.2	66.7	85.7	92.7	94.0	n/a

Source: OECD Broadband Statistics

Table 2: Categories for measuring the digital divide

Access	Accessibility of personal computers (PCs) and internet; type of PC; type of internet connection; ownership of other information and communications technology (ICT) devices	
Capacity	Competence in the use of PCs and the internet	
Usage*	Quantitative	Usage of PCs and internet; hours of PC use
	Qualitative	Helpfulness of PCs and the internet in daily life; usage of PCs and the internet in the recommended areas of use
* Usage score = (0.6 × Quantitative usage score) + (0.4 × Qualitative usage score)		

**Table 3: 2006-2007 digital divide indexes**

	People with disabilities		Low-income*		Farmers and fisherpeople		Elderly**		Average***	
	2006	2007	2006	2007	2006	2007	2006	2007	2006	2007
Aggregate	26.1	24.0	27	24.5	50.2	45.4	41.6	37.4	38	34.1
Access	14.6	11.2	20.4	15.8	30.5	23.3	17.1	9.9	19.8	13.5
Capacity	39	36.6	32.9	32.4	70.9	69.5	67.6	66.3	57.1	55.5
Quantitative usage	32.2	31.9	30.7	30.0	61.9	57.6	58.3	55.6	49.7	47.2
Qualitative usage	38	36.7	35.1	32.8	68.9	68.0	60.5	59.4	53.6	52.0

\* Beneficiaries of the NMLSS (National Minimum Living Standard of Security System). For example, in 2007, a household that has four family members and an income less than KRW 1,205,535 was eligible for the NMLSS.

\*\* Age over 50.

\*\*\* Weighted by the size of each group.

The digital divide index<sup>1</sup> is the difference between the score<sup>2</sup> of vulnerable groups and that of the general population. Before the calculation is done, the score is normalised based on the assumption that the score of the general population is 100. Therefore, the larger the digital divide index value, the larger the digital divide. The survey also includes a digital divide index in each category, using each category's scores.

The 2006 and 2007 survey results show that the gap in physical access is getting smaller in all of the population groups. However, in the capacity and usage categories, vulnerable population groups score only about half of that of the general population. The gap is especially large for farmers and fisherpeople and the elderly.

While the survey reports that age and education have the most significant influence among socio-demographic factors on an individual's achievement in access to and use of ICTs, income, occupation and gender influence the level of ICT take-up too.

When vulnerable populations are segmented further by age and education, there is a clear difference between the sub-groups. Except for people with disabilities, people who are 30 or older, with no high school education, scored less than 80% compared to the general population. Excluding the elderly and farmers and fisherpeople who have a college degree education or more, people who are 60 and over also scored less than 80%. In the low-income population group, excluding college graduates, people who are 40 or above scored less than 80%. Low-income individuals consistently scored less even compared to individuals of the same age and education level from the other population groups.

The most striking characteristics of people who score less than 80% compared to the general population is that they do not use the internet. Amongst these, only 1.2% of people with disabilities, 1.4% of low-income groups, 0.6% of farmers and fisherpeople, and 0.3% of the elderly use the

internet. In contrast, almost 100% of people who scored more than 80% compared to the general population in the four population groups use the internet. Therefore, digital divide policy in Korea should be focused on providing incentives for people who do not use the internet to use it, and removing barriers that prevent them from using it. The survey identified the top five reasons for people not using the internet. These were: "Not knowing how to use it and difficulty of usage"; "Difficulty of use by physically handicapped people"; "No need to use it"; "Not knowing what to do with the internet"; and "No time for use".

### Capacity and training

The fact that many internet "non-users" state that they do not need to use the internet or know what to do with the internet implies that they might not recognise the benefits of using the internet. According to the survey, of the people who think they do not need to use the internet, only 12.5% of them recognise the benefits of the internet, but still do not feel they need to use it. The remaining 87.5% are not aware of the benefits of using the internet, and because of this they do not think they need to use it.

Among the reasons for not using the internet, "not knowing how to use it and difficulty of use" was the most frequent. It suggests that many also feel uncomfortable about computers and the internet.

The government has launched a number of training programmes in the past, including PC training programmes in rural areas in the early 1990s, and a broad-based programme that aimed to train 27 million citizens from 2001 to 2004. At present, various ministries carry out their own training programmes targeting vulnerable population groups. Even with these training programmes in place, people still do not know how to use the internet, or why they need to use it. This indicates that training-related policies should be re-examined and redesigned.

Most of the training programmes have been done in classrooms that are set up in facilities such as social work institutions, educational facilities, or agricultural technology transfer agency offices. There are some training programmes

1 Digital divide index = {1 - (Vulnerable population score/General population score)} × 100

2 Aggregate score = (0.3 × Access score) + (0.2 × Capacity score) + (0.5 × Usage score)

**Table 4: Scores (as a %) by age and education compared to the general population**

		People with disabilities	Low-income	Elderly	Farmers and fisherpeople
Age 10-19	Middle school graduate and below	113.4	120.4	-	-
	High school graduate	133.8	128.1	-	-
	College graduate and above	-	-	-	-
Age 20-29	Middle school graduate and below	92.5	91.8	-	113.7
	High school graduate	120.0	119.6	-	111.7
	College graduate and above	132.6	124.3	-	127.4
Age 30-39	Middle school graduate and below	89.2	56.1	-	59.4
	High school graduate	107.5	90.4	-	105.4
	College graduate and above	124.6	118.4	-	120.1
Age 40-49	Middle school graduate and below	63.5	50.6	-	58.6
	High school graduate	89.1	76.3	-	90.7
	College graduate and above	124.6	97.7	-	123.3
Age 50-59	Middle school graduate and below	46.5	36.1	55.3	46.3
	High school graduate	74.6	64.3	86.3	75.2
	College graduate and above	105.2	67.9	119.9	106.7
Age 60+	Middle school graduate and below	27.9	22.2	40.8	29.7
	High school graduate	47.1	31.8	68.2	53.5
	College graduate and above	70.8	36.7	93.0	81.2
Average		76.0	75.5	62.6	54.6

carried out at homes by instructors or online. Online training programmes serve more and more trainees every year. An online training course usually lasts ten to fifteen hours, and face-to-face training twenty to sixty hours. Courses can be roughly categorised into three types: the first includes courses oriented toward daily life skills, such as online banking, online shopping, word processing, and internet searching; the second type includes courses that are targeted at specific population groups such as people with disabilities or the elderly; and the last type includes courses that develop capacity necessary for jobs or starting businesses. The government support for the training facilities covers the costs of instructors, equipment maintenance, broadband subscription and miscellaneous operational costs. While the number of training facilities is increasing, support for instructors is limited, and this in turn limits access to the training programmes offered. The government recognises the shortage of instructors and is trying to train voluntary instructors.

Since online courses are meaningless to people who do not use the internet, more home-visit training opportunities over and above face-to-face classroom training must be provided. It is highly unlikely that farmers and fisherpeople would be able to attend classes, even if the number of training facilities and classrooms is significantly increased, because some of them still live far from these locations. People with disabilities or the elderly could also

experience difficulties in getting from their homes to training venues.

### Appropriate technology

The survey found that a lack of attention to the access needs of people with physical disabilities and the elderly is also preventing take-up. The Korean population is aging very quickly compared to other countries. The ratio of the elderly in the low-income and the farmers and fisherpeople population groups is also higher than the general population.

Compliance with web content accessibility standards and guidelines is still very low. According to an evaluation of e-government sites of 198 countries conducted by Brown University (West, 2007), Korea received the most points overall. However, when one looks at the rating for each category – Online Services, Publications, Databases, Privacy Policy, Security Policy and W3C Disability Accessibility<sup>3</sup> – Korea scored 100% in all categories except W3C Disability Accessibility, where it scored 0% (the average was 23% for all 198 countries).

Article 20 of the Anti-Discrimination against and Remedies for Persons with Disabilities Act, which was enacted in April 2007, prohibits discrimination against persons with

<sup>3</sup> Based on the standards recommended by the World Wide Web Consortium (W3C).

disabilities by individuals, legal persons or government agencies in accessing electronic or non-electronic information. The article provides a base for obliging institutions to use accessibility standards and guidelines that have already been prepared by the national standardisation authority. However, the article is no more than a declaration because it lacks specific requirements and enforcement power.

According to a government estimate, about 360,000 individuals among people with disabilities need some sort of aiding device to use ICTs. In the last four years, however, national and local government agencies provided devices in only about 23,000 cases.

A promising way to encourage internet non-users is to develop new information access environments using home appliances such as digital TVs. The home appliance approach can also help the elderly who feel uncomfortable with the keyboard interface and operating systems.

### Action steps

- Provide more home-visit training programmes for people who have physical or geographical difficulties in attending training venues.
- Provide more tech support services for citizens that can help solve everyday technology needs and problems.
- Increase the financial support for instructors and support staff involved in training programmes.
- Compliance with web content accessibility guidelines should be made mandatory, at least in the government procurement of information systems and devices.
- Increase the financial support for devices that aid people with disabilities in accessing ICTs.
- Support the development of home appliance-based information access technologies, and provide financial assistance for buying and using these appliances, in addition to the current support for PCs and internet subscription. ■

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**GLOBAL INFORMATION SOCIETY WATCH 2008** is the second in a series of yearly reports critically covering the state of the information society from the perspectives of civil society organisations across the world.

**GLOBAL INFORMATION SOCIETY WATCH** or **GISWatch** has three interrelated goals:

- **Surveying** the state of information and communication technology (ICT) policy at the local and global levels
- **Encouraging** critical debate
- **Strengthening** networking and advocacy for a just, inclusive information society.

Each year the report focuses on a particular theme. **GISWatch 2008** *focuses on access to infrastructure* and includes several thematic reports dealing with key access issues, an analysis of where global institutions stand on the access debate, a report looking at the state of indicators and access, six regional reports and 38 country reports.

**GISWatch 2008** is a joint initiative of the Association for Progressive Communications (APC), the Humanist Institute for Cooperation with Developing Countries (Hivos) and the Third World Institute (ITeM).

**GLOBAL INFORMATION SOCIETY WATCH**

2008 Report

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