The threats to privacy in the time of e-Democracy

Dr. Chang-Beom Yi
happyday@kisa.or.kr

Abstract

With the development of information and communication technology(ICT), an offline government where information is recorded on paper documents has been transformed into an online government established based on the Internet and information databases. Korea has rather a long history of improving public services through the use of information technology. It began to channel efforts into laying the foundation for an e-Government since the late 1970s. Vision of e-Government of Korea's current administration is "World's Best Open e-Government." In order to embody such vision, Korea has pursued service delivery innovation, administration efficiency and transparency improvement and true popular sovereignty and produced cosideable acheivements. A government official who tries to establish a successful e-Government is often faced with a dilemma that originates from a conflict between a demand for centralization and accumulation of information for maximizing of efficiency and a demand for decentralization of information for privacy and personal information protection. However, in the case of Korea, it seems that the implications of such dilemma were rather underestimated by government officials at the early stage of an e-Government project such as National Education Information System(NEIS) and the Electronic National ID Card System. The legal framework for personal information protection of Korea consists of the Act on the Protection of Personal Information Maintained by Public and the Act on Promotion of the Information and Communications Network Utilization & Information Protection which cover public sector and private sector respectively. Issues of personal information protection related with e-Government such as NEIS are supposed to be handled by the Deliberation Committee on Protection of Personal Information established by the Act on the Protection of Personal Information Maintained by Public Agencies. The Personal Information Dispute Mediation Committee(PICO) is an independent statutory body founded to protect personal information in the private sector under the Act on Promotion and Communication Network Utilization and Information Protection, etc. As the representative personal information protection organization in Korea, PICO undertakes alternative dispute resolution (ADR), in order to amicably settle disputes over personal information online or offline. E-Government may make two opposite effects on democracy. E-Government promotes "Direct Democracy". In the case of Korea, this effect of e-Government, the promotion of "Direct Democracy" has been obviously observed under the Roh Moo-Hyun's administration. Roh's administration has extended the scope of citizens' participation in policy-making and politics, but, on the other hand, it has been even blamed by the opposition party and some scholars for its excessive dependence on public opinions expressed on the Internet or policy suggestions directly by the public in the policy making procedures. The opposite effect of e-Government on democracy is that it provides a government more power and tools to monitor or surveil its citizens and increases privacy and personal information infringements of citizens, thus resulting the retrogression of democracy. In order to promote positive effect of e-Government on democracy whle reducing the negative effect to a minimum, it is recommended to adopt "Privacy Impact Assesment System", to establish an appropriate legal framework for personal information protection, and search for a balance point between centralization and decentralization of information in e-Government.

1. Introduction

The rapid development of information and communication technology (ICT) and exponential growth of the Internet use have brought revolutionary changes in all sectors including politics, public administration, society and culture. In addition, they have added significant economic and social values to information. Such changes have resulted in a paradigm shift in public administration. Offline government which information is recorded on paper documents has been transformed into online government established with based on the Internet and information databases.

1.1. The concept of e-Government

The Asian Development Bank suggests that, "e-Government is the use of information and communications technology (ICT) to promote more efficient and cost-effective government, facilitate more convenient government services, allow greater public access to information, and make government more accountable to citizens."

According to the World Bank, an e-Government refers to the use by government agencies of information technologies (such as Wide Area Networks, the Internet, and mobile computing) that have the ability to transform relations with citizens, businesses, and other arms of government. These technologies can serve a variety of different ends: better delivery of government services to citizens, improved interactions with business and industry, citizen empowerment through access to information, or more efficient government management. The resulting benefits of e-government can include less corruption, increased transparency, greater convenience, revenue growth, and/or cost reductions.

As e-Government becomes more widespread in the region, one can expect a progression through six stages. Not all governments or agencies will reach all stages, and there will be much variety within a government, with different agencies at different stages. The stages are:

1. setting up an email system and internal network;

2. enabling inter-organizational and public access to information;

3. allowing 2-way communication;

4. allowing exchange of value;

5. digital Democracy; and

6. a portal taking citizens where they need to go.[1]

On the other hand, UN evaluated e-Government websites of about 190 countries and categorized them into four stages according to their level of electronic public administrative services in “Benchmarking E-government: A Global Perspective” published in 2001. The four stages are:

 Emerging Presence (32 countries): A government web presence is established through a few independent official sites. Information is limited, basic and static

 Interactive Presence (55 countries): Users can download forms, contact officials, and make appointments and requests

 Transactional Presence (17 countries): Users can actually pay for services or conduct financial transactions online

[1] http://www.worldbank.org/html/extdr/offrep/eap/eapprem/govpaperwescott.pdf

 Seamless or Integrated Presence (none): Total integration of e-functions and services across administrative and departmental boundaries

Korea was included in countries which were the third stage.

2. Development of e-Government in Korea

Korea has rather a long history of improving public services through the use of information technology. Korea began to channel efforts into laying the foundation for an e-Government since the late 1970s.

 From 1978 to 1986 : Computerization of Public Administration

 From 1987 to 1996 : Informatization of Public Administration

 From 1997 to Present : Establishment of e-government

2.1. Infrastructure for e-Government

2.1.1 IT infrastructure

Through the Five National Computer Network project of the early 1980s, the Comprehensive Plan for Korea Information Infrastructure Establishment project, and the National Basic Information System project of the late 1980s, the Korean government established a high-speed communications network and stored vital government records- resident registration, real estate, and vehicle records - in a digital format to create the foundation for an e-Government.

2.1.2 Legislations and policy

From late 1990s to 2000 legislative and judicial framework for expanding the use of information technology had been built. Framework Act on Informatization Promotion, e-Commerce Act, e-Signature Act, Electronic Promotion Act on Administration Processes for the Establishment of an e-Government and other laws were enacted.

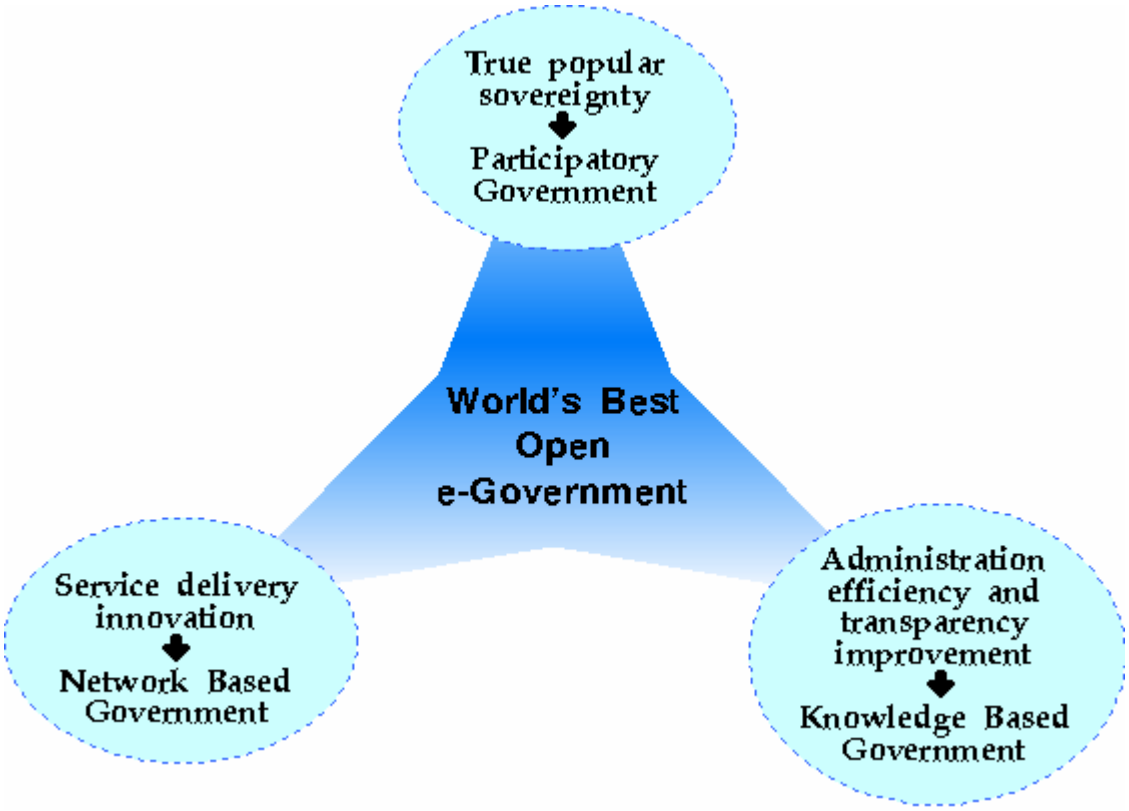
In January, 2001, the ex-president Kim Dae-jung announced a national vision for building a knowledge-based information society.The Act on the Protection of Personal Information Maintained by Public Agencies was enacted and the Special Committee for e-Government was organized. The Committee selected 11 major e-Government initiatives and successfully completed (October 2002) . On April 2003, the Technical Committee for e-Government was established under the Presidential Committee on Government Innovation and Decentralization in order to keep driving e-government initiatives forward.

3. Vision and achievement of Korea's e-Government[2]

3.1. Vision

Vision of e-Government of Korea's current administration is "World's Best Open e-Government." In order to embody such vision, service delivery innovation, administration efficiency and transparency improvement and true popular sovereignty are pursued by establishing "Network Based Government", "Knowledge Based Government", and "Participatory Government." This vision is consistent with the three goals of e-Government, "Productivity", "Transparency", and "Democracy" provided under the Electronic Promotion Act on Administration Processes for the Establishment of an e-Government.

[2] http://www.apectelwg.org/apecdata/telwg/29tel/eg/eg_06.pdf



<Vision of e-Government>

3.2. Achievement

3.2.1. Improvement of civil services

1) One-stop services: To simplify and reduce the procedures and documents required to obtain a license or an authorization or to report by integrating and sharing personal information which have been managed separately by an individual public agency.

2) Establishment of the Single Window e-Government[3]

- To allow citizens who access the Single Window e-Government (www.egov.go.kr) to use a certain government to have access to information regarding various government services at their fingertips
- To file complaints and disputes and to have them handled online
- To provide online applications for 393 major government services such as requesting transcripts and abstracts of resident registration and tax payment certification papers
- To make it possible for citizens to request academic transcripts online and to receive the transcripts via regular mail
- To allow citizens to go to any office of education to apply for and receive academic transcripts regardless of where their alma mater is located

3.2.2. Enhancement of administrative efficiency

[3] Special Committee for e-Government, " Korea's e-Government :Completion of e-Government Framework", Republic of Korea, 2003

1) To expand sharing of documents and to enhance efficiency through enabling real time administration.

2) Electronization of all work processes: To realize a paperless office, a electronic approval, a transmission of an official document through electronic means

3) Integrated management of information resource : To adopt and operate Knowledge Management System (KMS) in order to exchange and share administrative information, experiences ideas across public agencies

3.2.3. Democracy

1) Activation of political participation of citizens: To establish "Sinmoongo" website(http://www.sinmoongo.go.kr/) where an individual citizen can file a complaint or suggest a policy directly to the president, a provincial governor, or a mayor and to do a poll on a specific political issue.

2) Opening of information: To open all information on a website including performance results of government and public corporate, policy documents, relevant legislations, etc. except national secrete

3) Legislature and Judicature Informatization: To build up the National Assembly Knowledge Base to realize an up-to-date electronic National Assembly, accessible by the general public an to systematize judicature information and its provision to the general public

3) Electronic voting: To conduct an electronic voting to elect a leader of a political party (Other elections such as a general election to select congressmen or a president election have not adopted an electronic voting scheme yet)

4. The threats to privacy in e-Government

A government official who tries to establish a successful e-Government is often faced with a dilemma that originates from a conflict between a demand for centralization and accumulation of information for maximizing of efficiency and a demand for decentralization of information for privacy and personal information protection. However, in the case of Korea, it seems that the implications of such dilemma were rather underestimated by government officials at the early stage of e-Government. Therefore, focus of e-Government was brought into integration or linkage of separate databases and this has been raising risks such as identity theft or personal information infringements by a government official or errors in a database.

4.1. E-Government and NEIS[4]

Alerting the opening of the home electronic civil service era, the Korea□Government (http://egov.go.kr) became available on November 1, 2002, enabling people to receive civil services "from application to issue" electronically, at home or work over the Internet. In 2003, the Korean people experienced the effects of the e-government, whose infrastructure was completed at the end of 2002. Accordingly, the public administration fields (such as the transfer of electronic reports and documents, finance and personnel) underwent an entire computerization transformation, significantly enhancing the efficiency and transparency of the administration. However, people resisted the promotion of the e-government project when many teachers led by Korean Teachers & Educational Worker's Union (KTEWU) began rising in arms against the National Education Information System (NEIS), one of the e-government subprojects.

The NEIS is the national educational administration information system, built by the Ministry of Education & Human Resources Development (MOE), in order to boost the efficiency of the overall educational administration and improve the working environment of teachers. Having started operations on April 11, 2003, the NEIS interconnects nearly 10,000 elementary and middle high schools, 16 cities and provinces' education government offices and affiliated agencies, and MOE via the Internet, in order to share education-related information.

Since the NEIS is designed to integrate and manage educational administration jobs in various sectors, parents can easily access various information(graduation certificates, transcripts, educational statistics and student

[4] Personal Information Dispute Mediation Committee (PICO),"2003 Annual Report", 2003 , <http://www.pico.or.kr>

information) on the Internet without personally visiting the school, and the teachers can guide students more efficiently and systematically and conduct diverse educational activities, thanks to the accumulated student data, such as performance records, from elementary school to high school. In addition, the system reduces a great amount of time and workload by eliminating the write-up or data consolidation process, accelerating thepromotion of faithful education policies, as well as decision-making processes, by providing basic data on a real-time basis.

Nevertheless, many argue that: 1) the government is clearly invading privacy and human rights by lawfully collecting and managing personal information of individuals; 2) if the recorded information gets leaked outside, they will likely be subject to commercial misuse; and 3) this system may become the means to control or push down teachers. Consequently, on December 15, 2003 the Education Informatization Committee, under the Office of the Prime Minister, finally decided to build and operate 3 separate systems, for school & education affairs (school performance records), school health (student health records) and admission & academic promotion, with regard to the NEIS. This plan is intended to spin off the said 3 sectors, out of the NEIS's 27 sectors (such as accounting, human resources, etc.), build and operate an individual server for each school or group server, for a few, independent of the integrated server, where the city and province education offices integrate and administer them. It is in the co-location method where the independent databases are operating under the consigned management.

Regarding the group server combining a few schools, the KTEWU insists on an independent server for each school, whereas MOE stands firmly for the logical separation of the group servers. Moreover, in terms of the right to request the deletion of personal information, the KTEWU demands that theinformation not wanted by the students should be deleted as much as possible, but the MOE emphasizes that the system must contain the entire common information, except for any wrong information. Hence, the MOE and KTEWU are expected to dispute over many implementation methods of the NEIS in 2004.

4.2. The Electronic National ID Card System

The electronic national ID cards system plan initiated by the Korean central government in 1996 were intended to replace an existing national ID card with an IC (*integrated circuit*) card, so called a smart card, which stores thirty-five kinds of personal information including digital information about one's fingerprints. The smart card, once adopted, also would integrate systems and databases, which had previously existed separately, such as the resident registration database, the driver's license database, the national health insurance database, and the national pension database. From the efficient standpoint, an electronic national ID card system seemed to help governments to establish an effective e-government. However, citizens and NGOs showed their furious oppositions on the ID card system with worrying that careless adoption of the ID card system can result in tremendous privacy violations of citizens. As a result, Korean government had to give up the plan for the electronic national ID cards system.

4.3. A DNA Database for finding missing children

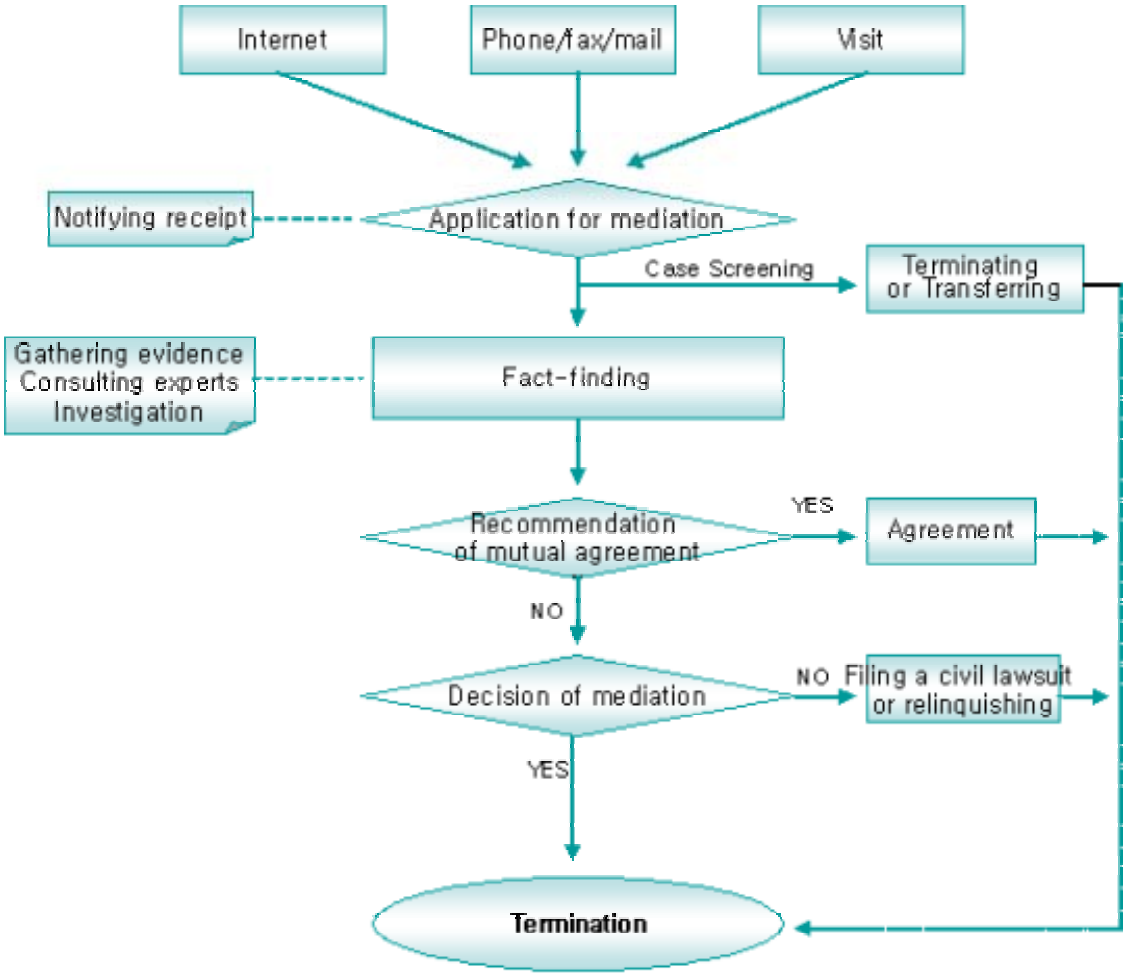
Korean police established a database which retains DNA information of missing children across the country and started to use it in order to find missing children last year. Two children have been found and returned to their home thanks to the DNA Database. When police had announced its plan to collect DNA information of people who were held in a social welfare facilities such as an orphanage or who were homeless and store such information in a DNA information in order for a DNA matching test to be conducted on families or relatives of missing children, there was tremendous resistance from NGOs and great concerns of citizens over potential risks on privacy of such plan. However, this plan has been implemented because in this case to find missing children was considered more urgent and significant than protecting their DNA information.

5. The Personal Information Dispute Mediation Committee(PICO)

The legal framework for personal information protection of Korea consists of the Act on the Protection of Personal Information Maintained by Public and the Act on Promotion of the Information and Communications Network Utilization & Information Protection which cover public sector and private sector respectively. Issues

of personal information protection related with e-Government such as NEIS are supposed to be handled by the Deliberation Committee on Protection of Personal Information established by the Act on the Protection of Personal Information Maintained by Public Agencies. However, the major role of the Deliberation Committee on Protection of Personal Information is to deliberate so that it does not handle civil complaints, recommend to comply with the Act, provide a consultation on policy and technology, nor have a PR function[5]. The Personal Information Dispute Mediation Committee(PICO) is an independent statutory body founded to protect personal information in the private sector under the Act on Promotion and Communication Network Utilization and Information Protection, etc. As the representative personal information protection organization in Korea, PICO undertakes alternative dispute resolution (ADR), in order to amicably settle disputes over personal information online or offline. It has carried out training and promotion of public awareness activities for consumers and businesses in order to raise the awareness of the significance of protecting personal information. It has also performed various research projects to contribute to the development of personal information protection in Korea.

PICO consists of up to 15 members, including the chairman, who are specialists in various sectors related to personal information, such as lawyers, technologists, scholars, and representatives of business associations and consumer organizations. PICO has been operating Online Dispute Resolution(ODR) system. The parties concerned may apply for consultation or dispute mediation by using the Internet (http://www.pico.or.kr), e-mail (pico@kisa.or.kr), telephone, mail or facsimile without personally visiting the office. On an average 1200 ~1300 complaints are filed and processed annually. Currently, more than 95% of the complains are filed via the Internet or e-mail, and the majority of the mediation proceedings such as listening to the parties opinions (a hearing), fact-finding, etc. are conducted online.



[5] Korea Information Security Agency, “2003 Personal Information Protection White Paper",2003

<ODR Procedure>

However, cases which could be remedied by PICO are limited to those of which the party has caused damage is a information and communications services provider or one of specific offline companies such a travel agencies , airlines, hotels, educational institutes,etc. As e-Government develops and surveillance over workers by CCTV, e-mail monitoring or LBS increases, it is needed to establish guidelines for the efficient use and management of personal information and a remedial system which can deal with such cases.

Responding to such necessity, it has been under serious discussions to revise the current legal framework and to establish a new body for personal information protection. Currently, the Presidential Committee on Government Innovation and Decentralization had already drafted a comprehensive personal information protection bill which covers both private and public sector including worker's personal information and is trying to pass it into law in the Congress.

5. Conclusion

5.1. The effects of e-Government on democracy

E-Government may make two opposite effects on democracy. E-Government promotes "Direct Democracy", though not perfect one, by enabling an individual citizen to express his/her opinion and to participate in policy making procedures more easily. In the case of Korea, this effect of e-Government, the promotion of "Direct Democracy" has been obviously observed under the Roh Moo-Hyun's administration. Roh's administration has extended the scope of citizens' participation in policy-making and politics, but, on the other hand, it has been even blamed by the opposition party and some scholars for its excessive dependence on public opinions expressed on the Internet or policy suggestions directly by the public in the policy making procedures.

The opposite effect of e-Government on democracy is that it provides a government more power and tools to monitor or surveil its citizens and increases privacy and personal information infringements of citizens, thus resulting the retrogression of democracy. Therefore, e-Government has to be more than just efficient government. It must include the concept of e-governance, which transforms relationship between a government and its citizen and realizes e-Democracy in the end. A government should try as strenuously to protect the values of e-democracy to build an efficient e-Government. The values of e-Democracy such as privacy, security, accountability, and participation of citizens tend to be easily overlooked because they are difficult to quantify, while cost or timesaving can be easily measured. However, if an e-gGovernment is developed based only on efficiency and effectiveness without sincere consideration of those values of e-Democracy, the e-Government will lose its legitimacy, in the end.

5.2. To embody e-Democracy through e-Government

Korea is still technically at war. This special political situation has allowed Korean government to collect citizens' personal information extensively and to retain and manage them under National Resident Registration System without serious oppositions from citizens except one on the adoption of the national electronic ID card system. This might made result in negligence of government officials in protecting citizens' personal information. By the same token, it seems that the procedures of establishing an e-Government system such as NEIS lacked hearings of citizens' opinions. Such exclusion of citizens at last has caused the oppositions against NEIS after government's announcement of its plan on NEIS resulting in the waste of budget and a exhaustive controversy cross the nation due

Therefore, it has been suggested that Korea should adopt "Privacy Impact Assesment System" which was already adopted in Canada and the U.S. In Korea, to legislate for the adoption of "Privacy Impact Assesment System" is currently in the process. Once " Privacy Impact Assesment System" is adopted, the privacy impact of computerization or data collection projects proposed by government entities should be evaluated before such projects are initiated and the results of the evaluation should be reflected to the projects in order to prevent unexpected social conflicts and waste of administrative costs.

It is also necessary to revise the current legal framework to improve level of personal information protection in e-Government. The current Korea's legal framework has some problems in the aspect of personal information protection. For example, "Resident Registration Act" and "The Act on the Protection of Personal Information

Maintained by Public Agencies" allows public agencies to share information databases only with approval of Minister of Government Administration and Home Affairs. In addition, the Electronic Promotion Act on Administration Processes for the Establishment of an e-Government allows comprehensively data matching of personal information.[6][5] Without solving such problems, there will be another NEIS in the future. It is also urgently requested to establish an independent body from the Administration for personal information protection.

Lastly, the balance point between centralization and decentralization of information should be searched for in order to reduce concerns about privacy infringement and to bloom e-Democracy. The integration and linkage of separate databases may increase the efficiency but at the same time they raise risks of personal information infringement. On the other hand, excessive decentralization of information may cause inefficient administration thus undermining the original goals of e-Government. Therefore, it is important to hear and collect opinions of citizens across the society about the balance point between centralization and decentralization of information and to establish legal and institutional framework which can embody such balance point. Such balance point may vary by project, organization or country.

Bibliography

1. Clay Wescott: “E-GOVERNMENT: ENABLING ASIA-PACIFIC GOVERNMENTS AND CITIZENS TO DO PUBLIC BUSINESS DIFFERENTLY”

2. The Presidential Committee of Government Innovation and Decentralization: “e-Government in Korea”

3. Special Committee for e-Government: “Korea's e-Government :Completion of e-Government Framework”

4. Personal Information Dispute Mediation Committee (PICO): "2003 Annual Report”

5. Korea Information Security Agency: “2003 Personal Information Protection White Paper"

6. Park, Joon-Woo: “e-Government by citizens”

[6] Park, Joon-Woo, “e-Government by citizens”, Citizens' Action Network