Local E-government In Korea

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1. National Informatization in Korea

2. Local Informatization: Concept and Progress

3. IT Governance Structure in Local Governments

4. Achievements So Far
<table>
<thead>
<tr>
<th>Master plan</th>
<th>Year</th>
<th>Policy goals</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cyber Korea 21</td>
<td>1998~2002</td>
<td>Online : Establish infrastructure</td>
</tr>
<tr>
<td>E-Korea 2006</td>
<td>2003~2007</td>
<td>Internet : Promote informatization</td>
</tr>
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<td>U-Korea</td>
<td>2006~2010</td>
<td>Ubiquitous : Expand services</td>
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<td>K-Korea</td>
<td>2008~2012</td>
<td>Knowledge : Create value and knowledge</td>
</tr>
</tbody>
</table>

**Smart Korea?**

- Open and collaborative government
- Sustainable government using green IT
- Mobile services
- Infrastructure for digital convergence
- Trusted information society
- Creative collective intelligence (web2.0, UCC, etc)
- E-inclusion and open governance
National Informatization Promotion Framework

Framework Act of National Informatization (revised in 2009)

National Informatization Strategy Committee

- CIO Council
  - Executive Committee for National Informatization Strategy
    - Subcommittee
    - Subcommittee

ICT Policies

Separation/Functional Combination

- National Informatization
  - Ministry of Public Administration and Security
- ICT Infrastructure
  - Korea Communications Commission
- ICT Industry
  - Ministry of Knowledge Economy
- Contents
  - Ministry of Culture, Sports and Tourism

Supporting Agencies

- KLID
- NIA
- KISA

Co-chair: Prime Minister, private sector expert
Secretary: Minister of MOPAS
Members: ministers, private sector experts (35 members)
Legal Framework


- Informatization in the public sector
- Promotion of IT use in the private sector
- Local Informatization: informatization of regions and cities for the improvement of the quality of life, the balanced development of regions, the reduction of digital divide, etc

Electronic Government Act (2001)
- e-government: use of IT in order to perform government business more effectively
- e-government initiatives

Digital Signature Act (1997)
- Safe circulation of e-document
- Government electronic signature certification system

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Privacy Act (to be enacted soon)
- Protection of personal information in public and private sector
- Right of privacy information
- ‘Privacy Committee’ under the president

Act on Promotion of Information and Communications Network Utilization and Information Protection, etc (1986)
+ Act on the Protection of Personal Information Maintained by Public Institutions (1994)
### Framework Act of National Informatization
- Enacted in 1995
- Objectives and principles of national informatization
- Promotion framework of national informatization
- Submission of 5-year master plan of national informatization to the NISC
- Submission of 1-year action plan of each government agency to the NISC
- Responsibility of CIO in each government agency
- Utilization of IT application services
- Standardization for information sharing and interoperability
- International cooperation
- Management and utilization of national knowledge and information bases: national knowledge portal
- Reduction of adverse effects: digital divide, information security, protection of privacy information
- Development of information culture
- Advancement of IT infrastructure
- Submission of annual report to the National Assembly every year

### E-government Act
- Enacted in 2001
- Objectives and principles of e-government
- Responsibility of government agencies to implement e-government
- Long term master plan in every agency
- E-government services: electronic processing of civil services, use of electronic documents, e-government portal, information security of e-government services
- Sharing of government information
- Utilization of EA
- Management of information resources: interoperability, standardization, shared services, development of IT human resources, integrated management of information resources
- Information security of government networks
- Auditing of information systems
- IT project review to prevent redundancy
- Performance analysis and assessment of IT projects
- International cooperation
### e-Government Initiatives

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<tbody>
<tr>
<td>Initiatives</td>
<td>Computerization of intra-government administration</td>
<td>Development of key government DBs and nationwide civil services</td>
<td>Partial connection of government services</td>
<td>Building “Networked Government” through information sharing and web-based service integration</td>
<td>Establishment of advanced knowledge information society</td>
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<td>Goals</td>
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<tr>
<td>Projects concerning local governments</td>
<td>• Computerization of each agency’s internal unit functions</td>
<td>• Government Administration Information Networks</td>
<td>• Municipal administrative system</td>
<td>• City and provincial administrative system</td>
<td>• GIS convergence services</td>
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<td></td>
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<td>• Construction and sharing of DBs: resident registration, real estate, car registration, etc</td>
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#### Four stages of online service development (UN E-Government Survey 2010)

- Emerging 97%
- Enhanced 91%
- Transactional 66%
- Connected 62%
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Concept of Local Informatization

- Improve efficiency & transparency of local government
- Implement better government services
- Contribute to community’s economic growth
- Improve the quality of life
- Solve community problems (i.e. safety, crime, welfare, etc)

GOAL: Satisfying the needs of community
Local Informatization in Progress

1\textsuperscript{st} stage (1997~2002)
- Launching of local informatization

- Cyber Korea 21 (1996)
  - One of 10 national informatization areas
  - Goal: Solving of uneven regional development caused by rapid economic growth, development of local economy and improvement of the quality of life
  - Guideline for master plan
  - Support for local informatization projects: budget for pilot projects
  - Set up and reinforcement of IT governance structure in local governments: CIO, consultative committee, municipal ordinance for informatization, etc
  - Building of Internet infrastructure for local governments
    - Internet web pages, E-mail ID for all local government officials

2\textsuperscript{nd} stage (2003~2007)
- Promoting local informatization
- Beginning of digital convergence

- Basic Plan for Local Informatization (2002)
  - Goal: Competitive local governments
    - Improvement of the quality of life
    - Improvement of efficiency of local governments
    - Vitalization of local economy
  - Building of the basic environment for local informatization
    - LAN for each local government
    - High-speed Internet connection (20M~155Mbps)
  - Informatization of local administration
    - Municipal and provincial administration, human resource administration, local finance
  - Building information network villages (INVIL)
  - Computerization of land registration maps

3\textsuperscript{rd} stage (2008~2012)
- Maturing of local informatization

- K-Korea (2008)
  - Goal of national informatization: establishing an advanced knowledge information society based on creativity and trust
    - Creative soft-power
      - Utilization of public information, u-learning system
    - Infrastructure for digital convergence
      - Mobile services, TV-based services, u-city services
    - Trusted information society
      - E-inclusion, u-safety, cyber security centers for local governments
    - Efficient knowledge government
      - Collaborative work system, GIS-based convergence services, M-government, integrated management of IT resources
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IT Governance Structure

Local Council

Mayer/Governor

Informatization Consultative Committee
- Chair: deputy mayor/governor or high official
- Secretary: manager of IT department
- Members: members of the local council, private sector experts, managers of non-IT departments

CIO

Budget Department
- Deliberation and allocation of budgets

IT Department
- Master plan, standardization
- Municipal ordinance and rule
- EA and IT resources management
- Operation and maintenance of application systems
- Operation and maintenance of IT infrastructure
- Performance management, investment management
- IT education for government officials and citizens

Non-IT Departments
- Master plan for individual application system
- Development and maintenance of application systems

Outsourcing

IT Industry
Human Resources and IT Budget

- **IT department personnel**
  - Average number of officials in IT department: 7 (1997) to 16 (2009)
  - Ratio of IT department officials to total officials: 0.56% (1997) to 1.58% (2009)
    - Number of IT department officials: 1,189 (1997) to 3,813 (2009)
    - Total number of officials: 290,823 (1997) to 241,728 (2009)

- **IT manpower**
  - Average number of IT personnel: 25 (2009)
    - Provincial governments: 113, municipal governments: 19

- **CIO designated in** 97.14% of local governments (2009)

- **Consultative committees organized and in operation in** 91.5% of local governments (2009)

- **IT budget**
  - Ratio of IT budget to total budget in local governments: 0.5% (2009)
    - Central governments: 1.11% (2009)
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Informatization of Local Administration

- Informatization of municipal administration by the Ministry of Government Administration and Home Affairs (MOGAHA in short; now MOPAS)
  - Pilot projects to develop the standard system for 10 major processes in 1998~1999
  - Distribution of the standard system to municipal governments in 1999~2001
  - BPR/ISP and system development for the 21 major processes in 2002~2003
- Informatization of family registration affairs by National Court Administration and MOGAHA
  - Development of the system and construction of DB in 1999
- Informatization of local tax
  - Aggregate land tax in 1998~1999
Information Network Villages

- **Goal**
  - To improve the informatization level of farming and fishing villages and connect them to the intellectual information society in the 21st century
  - To bridge the digital divide between urban and rural villages by building an integrated network infrastructure

- **INVIL project governance**
  - MOGAHA: planning and budgeting, establishment of [www.invil.org](http://www.invil.org), PR
  - Local governments: budgeting, building of IT infrastructure for villages, IT training
  - INVIL (program manager and residents): establishment of INVIL operation committee, operation and management of INVIL information center, development of profit model

- **Achievements**
  - 24 demonstrative villages built in 2001, 363 villages by 2010
  - PC provision rate: 37.3% (2001) to 72.1% (2008)
  - Internet subscription rate: 9.2% (2001) to 72.1% (2008)
  - Sales of farming and fishing products through INVIL shopping: 2,356m won (2001) to 8,986m won (2008)
Focus of informatization: hierarchical and vertical connection between governments
- 67% of businesses of provincial governments are processed in connection with lower-level governments and central governments (BPR/ISP in 2003)
- 78.4% of local government businesses are carried out using IT (2006)

Informatization of municipal administration by MOGAHA
- BPR/ISP and system development for 21 major processes (2002~2003)

Informatization of provincial administration by MOGAHA

Informatization of human resources administration by MOGAHA

Informatization of local finance by MOGAHA and local governments

Informatization of local tax by MOGAHA and local governments
### Basic Plan for Local Informatization (2002)

<table>
<thead>
<tr>
<th>Local governments</th>
<th>Vision</th>
<th>Major projects</th>
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<tbody>
<tr>
<td>Seoul Metropolitan City</td>
<td>Knowledge-based E-Seoul for citizen</td>
<td>• Construction of Seoul Information Highway</td>
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<td></td>
<td></td>
<td>• Construction of Digital Media City, cyber education and training system</td>
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<tr>
<td></td>
<td></td>
<td>• Road management system: road and road facility management system, underground facility information system</td>
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<td>• Urban information system, DB of aerial photograph images, spatial data warehouse, information system for sewer maintenance, etc</td>
</tr>
<tr>
<td>Busan Metropolitan City</td>
<td>Advanced information city towards 21st century</td>
<td>• Knowledge management system, Internet-based civil services</td>
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<tr>
<td></td>
<td></td>
<td>• Urban information system, digital Busan transportation cards (for bus and subway)</td>
</tr>
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<td>• Industry and technology DB, cyber education system</td>
</tr>
<tr>
<td>Gangwon Do</td>
<td>Digital Gangwon</td>
<td>• Knowledge management system, e-document and archives management system, mobile administration service</td>
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<td>• Cyber East Sea ecological park, Baekdu Mountains ecology management system, culture and art information system</td>
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<td>• E-life movement, e-Green agricultural information system</td>
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<td></td>
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<td>• Satellite system in mountain villages, Gangwon Cyber University</td>
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</tbody>
</table>
U-City by Local Governments

2nd stage (2003~2007)
Promoting local informatization
Beginning of digital convergence

U-City Report (2009~2010)

- Seoul: U-Transport, U-Green
- Incheon: IFEZ U-City
- Namyangju-si: U-Water
- Suwon-si: U-Traffic
- Chungbuk: U-Safety, U-Subway
- Chungju-si: U-Administration
- Chungnam: U-Safety
- Yongi-gun: U-Security
- Jeonbuk: U-Healthcare for the old
- Jeonju-si: U-waste
- Kwangju: U-Subway, U-Culture, U-Gallery
- Sunchun-si: U-Ecology
- Jeju: U-Toutopia
- Daegu: U-Toutopia, U-Biz
- Gyeongbuk: U-Tourguide
- Gyongju-si: U-Culture Space
- Goryong-si: U-Gaya Tour
- Busan: U-Emergency, U-Tourism, U-Convention
- Ulsan: U-Safety, U-BIS
- Gumi-si: Ubi-Global City
- Gangwon: U-Tourism, U-Commerce
- Wonju-si: U-Wellness
- Chuncheon-si: Smart Leisure City

Map showing the distribution of U-City projects across South Korea.
e-Participation by Local Governments

- On the web sites: Citizen’s proposal, cyber discussion forums, online survey, online poll
  - All 16 provincial governments provide e-participation services on the web sites
- Guro-gu([www.guro.go.kr](http://www.guro.go.kr)) started e-participation services in 1999
  - On the web site: Open Mayor’s Office, cyber discussion forum, online survey, bulletin board, cyber community
- Gangnam-gu([www.gangnam.go.kr](http://www.gangnam.go.kr)) started e-participation service in 2001
  - In 2001~2002: provides information about budget plans, policy and major projects and gets feedback from citizen using e-mail
  - On the web site: Open Mayor’s Office, online survey, cyber monitoring
- Seoul Metropolitan City started e-participation service “Seoul Oasis” on the web in 2006 ([oasis.seoul.go.kr](http://oasis.seoul.go.kr))
  - Citizen’s proposal → online and offline discussion by citizen, experts and officials to assess the feasibility → offline conference of mayor, high officials and experts to select as a policy → implementation of the policy → assessment of the policy
  - Mobile service in 2009, smart phone application(Android) in 2010
e-Participation by Seoul Metropolitan City

2nd stage (2003~2007)
Promoting local informatization
Beginning of digital convergence

Interaction with mayor
Citizen’s proposal
Cyber discussion forum
Bulletin board
Online poll
Cyber community

E-participation

Cyber community
Citizen monitoring

www.seoul.go.kr
GIS Convergence Service

- Administration service using administration system and geographical information system
- National GIS project since 1995
  - By MOPAS and the Ministry of Land, Transport and Maritime Affairs
  - Construction of DBs: topographic maps, common thematic maps, underground facilities maps, land registration maps
- GIS convergence service by MOPAS and local governments
  - Planning and pilot projects (2009), system development (2010)
  - Upgrade of administration system using GIS: map-based UI, administration service using smart phones (agriculture, road, traffic, health, farming area)
  - Smart safety service using GIS
  - Regional information service using GIS
  - Construction of thematic maps for administration

3rd stage (2008~2012)
Maturing of local informatization
### Convergence Services by Local Governments

- **3rd stage (2008~2012)**
  - Maturing of local informatization

- **Result of the survey (March 2010)**
  - ✔️ 63 local governments provides mobile services

### Survey Results

<table>
<thead>
<tr>
<th>Total</th>
<th>Total number of agencies answered</th>
<th>Digital Cable TV</th>
<th>IPTV</th>
<th>Mobile devices</th>
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</thead>
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<tr>
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<td>SMS</td>
</tr>
<tr>
<td>248 local governments</td>
<td>149 (60.08%)</td>
<td>6 (4.03%)</td>
<td>18 (12.08%)</td>
<td>49 (32.89%)</td>
</tr>
<tr>
<td>16 metropolitan city and provincial governments</td>
<td>15 (93.75%)</td>
<td>1 (6.67%)</td>
<td>2 (13.33%)</td>
<td>9 (60.00%)</td>
</tr>
<tr>
<td>232 municipal governments</td>
<td>134 (57.76%)</td>
<td>5 (3.73%)</td>
<td>16 (11.94%)</td>
<td>40 (29.85%)</td>
</tr>
</tbody>
</table>

- **Seoul Metropolitan City started 3-Screen service in April 2010**
  - ✔️ Using PC, mobile devices and IPTV
  - ✔️ Using PC, mobile devices and IPTV

  ✔️ Regional information (local news, culture, tourism, traffic, jobs, etc), reservation services of local events and facilities, civil affairs services, e-participation
Safe and Efficient Local Government

- Prevention of adverse effects
  - 16 local government cyber security centers established in 2008
  - Local government cyber security support center established in KLID in 2009: to provide 24-hour monitoring against disasters and cyber terrors and technical support to local government cyber security centers

- Efficient management of information resources
  - Development of EA reference model for local governments (2008)
  - Establishment of EA systems using EA reference model: Incheon Metropolitan City and Chungcheongnam-do (2009), Busan Metropolitan City and Kwangju Metropolitan City (2010)
  - Data center consolidation: Incheon Metropolitan City (2009~2011)
  - Development of data center consolidation model for local governments (2010)
Thank You