E-Document Lifecycle Management
1. Project Introduction 8
  1.1 Background Information and Necessity 8
  1.2 Significance of the Project 8
  1.3 Directions and Strategy 9
  1.4 Organizations 11
  1.5 Implementation Process 12
  1.6 Achievements and Expected Benefits 13

2. Construction of an Advanced E-Document Distribution System 18
  2.1 Overview and Goals 18
  2.2 Background Information 19
  2.3 System Construction Process 20
  2.4 System Structure and Functions 26
  2.5 System Utilization Status 27
  2.6 Development Directions 29

3. Construction of the Records Management System 32
  3.1 Overview and Goals 32
  3.2 Background Information 32
  3.3 System Construction Process 33
  3.4 System Structure and Functions 38
  3.5 System Utilization Status 40
  3.6 Development Directions 41

4. Invigorating the System 46
  4.1 Establishment of a Legal Framework 46
  4.2 Distribution and Expansion of Scope 46
  4.3 International Cooperation 47

5. Conclusion 50
  5.1 Evaluation 50
  5.2 Future Tasks 50
E-Document Lifecycle Management

1. Project Introduction
2. Construction of an Advanced E-Document Distribution System
3. Construction of the Records Management System
4. Invigorating the System
5. Conclusion
1. Project Introduction

1.1 Background Information and Necessity
1.2 Significance of the Project
1.3 Directions and Strategy
1.4 Organizations
1.5 Implementation Process
1.6 Achievements and Expected Benefits
1. Project Introduction

1.1 Background Information and Necessity

The e-document lifecycle management project was promoted with the aim of securing a mechanism to electronically manage the entire flow, from document generation to transfer and preservation. To achieve this objective, the project involved building a stable receipt and dispatch system for electronic documents, thus making it possible to implement e-document distribution among all administrative organizations, including not only government offices but also other public institutions. This project has been carried out mainly along the following two lines: enhancing the e-document distribution system; and building a records management system.

1.2 Significance of the Project

The project is related to the government’s previous decisions with regard to its vision and goal of achieving e-government. Calling for innovation in work methods, the government selected three agendas; namely, electronic business processing; common use of administrative information; and service-centric business reengineering. High on the first agenda, that is electronic business processing, was a call for ensuring electronic management of documents through their entire lifecycle. Thus, the project came into being, and it was to comprise two main tasks: the first was to secure a sophisticated electronic document distribution system; and the second was to build an advanced records management system.
The first task put the utmost emphasis on expanding the scope of e-document distribution service. Specifically, it sought to include in the distribution sphere not only government administrative offices but also their affiliates and public institutions. On this basis, efforts would be made to secure a stable e-document system that can ensure correct delivery of original documents and confirmation of document receipt and dispatch. Eventually, the e-document distribution system would be connected to the administrative business information system, contributing to enhancing the effectiveness of administrative business.

The second task was aimed at automatizing and standardizing the entire flow of records – from collection to preservation, abolition, utilization, and information disclosure. It ultimately aimed to lay the foundation for electronic records management involving the e-document system, the archives system, and the repository system.

1.3 Direction and Strategies

The e-document lifecycle management project was promoted with the aim of maximizing business productivity through innovation of work methods. With regard to the task to enhance the e-document distribution system, the following guidelines were presented:

Firstly - improvement of the administrative efficiency by increasing the number of
organizations that can use the system. Secondly - service stabilization through the introduction of international standard methods. And finally, the enhancement of service satisfaction and utilization levels through the improvement of electronic document distribution functions.

Implementation strategies were established through stages. During the initial stage, an e-document distribution system based on the open-style standard method (ebMS) would be established. The second-stage strategy called for expanding the system and establishing a pilot system based on electronic P.O. boxes. Finally, the third-stage strategy envisioned expanding the electronic P.O. boxes scheme and setting up a delivery certification system.

[Figure 2] Promotion Strategy for E-Document Distribution System Enhancement

<table>
<thead>
<tr>
<th>Task contents</th>
<th>Document distribution target expansion</th>
</tr>
</thead>
<tbody>
<tr>
<td>Introduction of open-style method (ebMS)</td>
<td>Expansion of the open-style method and trial operation of electronic P.O. boxes</td>
</tr>
<tr>
<td>- Open-style method [ebMS] model construction</td>
<td>- Model for electronic P.O. box established</td>
</tr>
<tr>
<td>- Improvement of functions related to e-document distribution system</td>
<td>- Open-style method expanded and a shift from the existing method to the new one</td>
</tr>
<tr>
<td>E-document distribution extended to cover additional 108 organizations, including affiliates of central government offices (document distribution by open-style method)</td>
<td>- Trial operation of electronic P.O. boxes for organizations that were using non-standard e-document systems or were not using e-document systems at all</td>
</tr>
<tr>
<td>Expansion of electronic P.O. boxes using agencies</td>
<td>- Electronic P.O. box system extended to cover 193 additional agencies, including those in the judiciary branch</td>
</tr>
<tr>
<td>Establishment of delivery certification system</td>
<td>- Model for electronic P.O. box established</td>
</tr>
</tbody>
</table>

The task to establish the records management system was carried out under the following guidelines aimed at ensuring a record-keeping culture that meets the spirit of the era of participatory democracy. First, business processes and results should be thoroughly generated and managed in records, ensuring a transparent and responsible record-keeping administration. Second, the entire flow from generation of records to permanent preservation and utilization should be managed through a business-centric electronic records management system. Third, endeavors should be made to realize digital archives through the establishment of records information...
contents and to secure an integrated government-search system, thus preparing a mechanism to openly utilize records information and eventually expanding client-centric records information service. Fourth, emphasis should be placed on ensuring records management standards, enhancing national records management efficiency, and expanding the necessary infrastructure such as specialized professionals, facilities and equipment.

And the system should be established in such a way that business-based records can maintain their originality and authenticity to enhance evidential, administrative and historic meaning, and that the administrative information can be searched and viewed at any time and place.

[Figure 3] Implementation Strategy for the Task to Build a Records Management System

1.4 Organizations

The e-document distribution system enhancement task was implemented under the superintendence of the Ministry of Public Administration and Security (MOPAS). The records management task was carried out under the joint responsibility of the ministry and the National Archives of Korea (NAK). These two organizations executed these tasks under the guidance and evaluation of the e-Government Special Committee. The e-Government Special Committee checked the progress of the tasks and played the role of moderator when differences occurred between the two executing agencies. MOPAS and NAK separately decided policies necessary for implementing the tasks, and conducted fine-tuning on their policies. The National Information Society Agency was picked as an organization that would provide support in project
management, signing of contracts, and information technology.

The implementation team for the e-document distribution enhancement task was formed, with the superintendent at the e-government headquarters as its head. The team consisted of two groups – the general moderation group and the technical assistance group. The former was in charge of building a cooperative system within the team and moderating different opinions, overseeing the project progress and reviewing achievements. The latter was for analyzing systems related to the project, offering relevant data, and providing technical assistance.

The implementation team for the records management task was also inaugurated, with the NAK president as its head. A group headed by NAK’s preservation and management section chief dealt with opinion moderation with other organizations, establishment of implementation plans and project progress, as well as achievement reviews. The team built a cooperative system with MOPAS to promote the linkage between the e-document system and the repository system. It also formed a business consultation commission comprised of 56 central government offices and committees.

[Figure 4] Implementation Organization for E-Document Lifecycle Management Project

1.5 Implementation Process

The government pushed ahead with the e-document lifecycle management project, aiming to ensure electronic business processing in the public sector, including all the government offices. The principal objective was to secure a stable receipt and
dispatch system for e-documents for implementation of e-document distribution among all administrative organizations, including public institutions. This would ensure electronic management of the entire lifecycle document processing — from generation, to transfer, and preservation. The project was implemented in two main categories - enhancement of the e-document distribution system and construction of a records management system.

1.6 Achievements and Expected Benefits

Through the expansion of the electronic document distribution system and enhancing the distribution mechanism, the e-document distribution service was extended to cover not just government offices but public institutions, thus enhancing user convenience and reducing administrative costs. Also worthy of note is that the construction of an e-document distribution system based on open-style international standards helped improve the e-document distribution functions and enhance user-satisfaction and utility. It also contributed to strengthening the compatibility, scalability and stability of the distribution system.

By implementing the task for securing the records management system, Korea has built an electronic records management system that meets international standards.

<table>
<thead>
<tr>
<th>Year</th>
<th>Achievements</th>
</tr>
</thead>
<tbody>
<tr>
<td>2004</td>
<td>◇ Implementation of e-document distribution system enhancement ISP project (completed in December 2004)</td>
</tr>
<tr>
<td></td>
<td>◇ Archives system built at central government offices (completed in December 2004)</td>
</tr>
<tr>
<td>2005</td>
<td>◇ E-document distribution system enhancement stage 1 (for agencies using standard system)</td>
</tr>
<tr>
<td></td>
<td>◇ Enhancement of records management system (Automatic linkage system built)</td>
</tr>
<tr>
<td></td>
<td>◇ Gradual introduction of electronic document registers</td>
</tr>
<tr>
<td>2006</td>
<td>◇ E-document distribution system enhancement stage 2 (for agencies using non-standard system)</td>
</tr>
<tr>
<td></td>
<td>◇ Enhancement of records management system</td>
</tr>
<tr>
<td></td>
<td>◇ Gradual introduction of electronic document registers</td>
</tr>
<tr>
<td></td>
<td>◇ Establishment of Record Management System</td>
</tr>
<tr>
<td>2007</td>
<td>◇ E-document distribution system enhancement stage 3 (delivery certificate system built)</td>
</tr>
<tr>
<td></td>
<td>◇ Integration of electronic document registers</td>
</tr>
<tr>
<td></td>
<td>◇ Enhancement and connection with relative record management systems</td>
</tr>
<tr>
<td>2008</td>
<td>◇ Distribution to central government offices and local administrations</td>
</tr>
</tbody>
</table>
with strengthened functions, particularly those for management of transferred records and information search. In addition, records management processes were revamped, helping to ensure the authenticity, credibility, integrity and usability of records; as well as enhancing accountability and transparency in public administration through comprehensive recording of business implementation processes.
E-Document Lifecycle Management

1. Project Introduction
2. Construction of an Advanced E-Document Distribution System
3. Construction of the Records Management System
4. Invigorating the System
5. Conclusion
2. Construction of an Advanced E-Document Distribution System

2.1 Overview and Goals
2.2 Background Information
2.3 System Construction Process
2.4 System Structure and Functions
2.5 System Utilization Status
2.6 Development Directions
2. Construction of an Advanced E-Document Distribution System

2.1 Overview and Goals

Document handling at administrative organizations involves two main procedures - document generation through the e-document system and its delivery to receiving agencies.

To electronically manage these procedures, MOPAS began promoting an electronic approval system and the use of electronic documents in 1998. Since then, the ministry has standardized electronic documents, and implemented their distribution by stage, beginning with central government offices, and expanding the system to cover local administrations.

Document processing at government administrative offices has shifted from a paper-based method to one under which documents are created and received electronically. But, various problems were raised, prompting calls for enhancing the e-document distribution system. Emphasis was placed on expanding the sphere of the system, and on securing a stable e-document distribution system.

Public institutions that carried out government-commissioned tasks frequently exchanged documents with the government. In consideration of this, MOPAS decided to expand the scope of the system to cover institutions affiliated with central government offices as well. Under this guideline, it was decided to enlarge the E-Document Distribution Center for the establishment of a stable e-document distribution system.

In addition, to secure stability and scalability of the document distribution system, a decision was made to change the document distribution method to the open-style
international standard method (ebMS: ebXML Message Service).

### 2.2 Background Information

To electronically manage the entire lifecycle process of public documents, MOPAS began promoting the electronic approval system and invigorating the distribution of electronic documents in 1998. After standardizing e-documents in 1999, the ministry gradually expanded the distribution of electronic documents, beginning with the central government offices in 2000. In 2001, e-document distribution began to be implemented between central government offices, and metropolitan and provincial governments. The next year, the mechanism was expanded to cover the administrations of small autonomous administrative units as well. In October 2002, the nation set a milestone of implementing a full-scale distribution of electronic documents involving all the public administrative organizations.

In September 2003, the Government E-Document Distribution Center was launched to realize electronic management of the entire document lifecycle process. With this, document processing at administrative organizations shifted from the use of paper documents to the generation and receipt of electronic documents. In addition, the electronic document system, the E-Document Distribution Support Center, the archives system and the records management system were all linked with each other, and connected to the government's electronic procurement services and administrative information systems of the local administrations. These developments led to the laying of the foundation for electronically managing the entire document processing, from generation to Distribution and preservation.

However, securing the foundation did not mean that there were no more problems. The following problems were raised regarding the e-document distribution system. First, there was the need to expand the system to cover public institutions as well. At that time when e-document distribution was under way, involving central government offices and local administrations by using the E-Document Distribution Center as the basis, document distribution between government administrative offices and their affiliates was still based on handwritten documents. So, document distribution involving the affiliates usually took two to three days, resulting in time wasting of time, manpower and costs, and lowering productivity. This problem brought attention to the need to expand e-document distribution to cover public institutions as well.
Second, there arose the need to address the problem involving organizations that used nonstandard e-document distribution systems or had no e-document system. For these organizations, e-document distribution was out of the question because the Government e-Documents Distribution Center provided support only for organizations with certified standard electronic document systems.

Third, there was a problem regarding the distribution method. For e-document distribution, the government then was adopting the MQ (Message Queue)-based polling method, under which receiving organizations were dependent on the center, as they had to bring documents from the center. This mechanism had poor scalability so it could not cope well with expansion of the system. Also, all the electronic documents in distribution concentrated on the center’s relay system, causing an overload that could possibly lead to an interruption in document distribution.

Fourth, there arose the need to secure openness, compatibility and scalability by introducing the ebMS method, which was the message service method for the international transaction standard of ebXML. Fifth, there was a call for addressing the capacity limitation of the government system, which had the maximum distribution capacity of 10 MB. There were also calls for improving the functions, particularly those to prevent forgery and alteration, and to ensure confirmation of document receipt and dispatch. These problems prompted calls for the improvement of the system through enhancing the system’s convenience, reliability and security.

2.3 System Construction Process

Enhancement of the e-document distribution system was selected as one of the core tasks of the e-government in 2003. Since then, the task has been carried out against the backdrop of the related previous achievements: namely, implementation of e-document distribution among administrative organizations, promoted since 1998, and the foundation laid by 2001 for e-document lifecycle management.

MOPAS in 1998 worked out a plan to invigorate the use of the electronic approval system and e-document distribution. In May 1999, the ministry launched a project to standardize electronic documents in order to support e-document distribution among different electronic document systems.

Reflecting this standard on the e-document system, the ministry gradually expanded
the implementation of e-document distribution based on the SMTP (Simple Mail Transfer Protocol) method. The method was first introduced for use among central government offices in July 2000. It was then expanded to include metropolitan and provincial governments in September 2001, and administrations of basic local administrative units in October 2002.

However, the SMTP method, a direct receipt and dispatch system between administrative organizations, could not guarantee certainty in document receipt and dispatch. It was also difficult to find out the cause when trouble occurred during document distribution.

To address these shortcomings, the ministry in December 2001 implemented an ISP commissioned research project to prepare ways to electronically manage the entire document lifecycle process from generation to preservation, as well as electronic document distribution development measures. In accordance with the outcome of the research, five kinds of standards, including standard electronic document system formats for administrative agencies and standards for electronic document distribution, were posted, which led to the introduction of new electronic document systems corresponding to these standards at various levels of administrative organizations.

In a related development, the Government E-Document Distribution Center was set up at the Government Office Complex building in Seoul, functioning to relay electronic documents and manage all related records. These measures made it possible to launch full-fledged electronic document distribution in September 2003.

On the basis of these achievements, the task to enhance the electronic document distribution system began to be promoted in earnest in 2004 after mapping out a related Informatization Strategy Plan (ISP). The project was financed by a government budget of about 8 billion won till 2007.

<table>
<thead>
<tr>
<th>Year</th>
<th>Achievements</th>
<th>Implementation period</th>
<th>Budget</th>
</tr>
</thead>
</table>

[Table 2] Achievements of the E-Document Distribution System Enhancement Task (Unit : million won)
<table>
<thead>
<tr>
<th>Year</th>
<th>Gov’t e-document distribution system enhancement ISP</th>
<th>Stage implementations</th>
<th>Dates</th>
<th>Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>2004</td>
<td>Expansion of applicable agencies, strengthening of security</td>
<td>2004.6 - 2004.12</td>
<td>338</td>
<td></td>
</tr>
<tr>
<td>2005</td>
<td>Gov’t e-document distribution system enhancement Stage 1 implementation - For agencies using standard system</td>
<td>2005.6 - 2005.12</td>
<td>1,450</td>
<td></td>
</tr>
<tr>
<td>2006</td>
<td>Gov’t e-document distribution system enhancement Stage 2 implementation - For agencies using non-standard system and non-using agencies</td>
<td>2006.5 - 2006.12</td>
<td>3,475</td>
<td></td>
</tr>
<tr>
<td>2007</td>
<td>Gov’t e-document distribution system enhancement Stage 3 implementation - Work to supplement security and reliability</td>
<td>2007.7 - 2007.12</td>
<td>1,470</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td></td>
<td>6,733 (1,279)</td>
<td></td>
</tr>
</tbody>
</table>


In 2003, work was carried out to expand the e-document distribution system, building the second Government E-Document Distribution Center at the Government Office Complex building in Daejeon to secure the system's stability through load dissipation and a backup mechanism.

Also, an additional one was added to the existing E-Document Distribution Center at the Government Office Complex building in Seoul to support organizations that used independent networks (or the Internet) other than the government network. These measures helped secure a firm basis for stable operation of the e-document distribution system that began to be implemented in earnest in September 2003.


In 2004, the Informatization Strategy Plan (ISP) was established to work out detailed contents of the task to enhance the e-document distribution system. Measures were taken to expand the number of target agencies for the application of e-document distribution, as well as to strengthen security and other functions to ensure the stability of the e-document distribution system. A decision was made to execute these measures gradually in 3 different stages.
2. Construction of an Advanced E-Document Distribution System

[Figure 5] E-Document Distribution System Enhancement Chart

<table>
<thead>
<tr>
<th>Classification</th>
<th>Achievements</th>
<th>Year</th>
</tr>
</thead>
</table>
| Expansion of service-receiving agencies | - Extended to cover affiliates and public institutions  
- Applied to 108 standard system-using organizations  
- Applied to non-standard system-using organizations and those not using any system (429) | 2005  
2006 |

Source: 2004 e-document distribution system enhancement ISP

Beginning in June 2005, the first-phase of the e-document distribution enhancement task was implemented, with emphasis placed on the introduction of the open-style international standard method, as well as on the operation of a pilot program to expand the distribution system to encompass public institutions as well. During this stage, a new e-document distribution system, featuring a shift from the existing MQ method to the ebMS method, was developed.

After conducting a survey of public institutions that wanted to receive the e-document distribution service, a pilot program was launched in December, circulating e-documents among about 80 institutions that were using the standard e-document system. In a related development, a draft revision to standards related to e-document distribution was prepared, containing measures to address the drawbacks pointed out through the operation of the E-Document Distribution Center.


The enhancement task for the e-document distribution system entered its second
stage in May 2006. During this stage, the electronic mail box system was built to support e-document distribution for organizations that were using non-standard e-document systems or had not adopted the e-document system.

The e-document distribution method of administrative offices shifted from the MQ method to the open-style international standard method (ebMS), strengthening the scalability and security of the Government E-Document Distribution Center.


The third-stage implementation of the e-document distribution enhancement task began in July 2007. This stage saw the establishment of a delivery certification system that can accurately verify the receipt and dispatch of e-documents. The scope of e-document distribution expanded to cover the legislature, judiciary and executive branches of the government, constitutional institutions, and public institutions.

The delivery certification system made it possible to generate and manage trace history information needed for delivery certification for all e-documents relayed via the Government E-Document Distribution Support Center. It also enabled the sending and receiving organizations to review and issue delivery certificates. Linked to the government certification management system, it contained a function to preserve and manage delivery certificates in accordance with effective periods.


For about six months from February 2009, a follow-up task was implemented to expand the government’s e-document distribution system. There had been difficulties in providing stable service due to antiquated equipment. Also, the lack of duplication made the DB server vulnerable to trouble. These problems were addressed by reinforcing the equipment and establishing duplication, thus improving the system’s operational capacity and gaining reliability on its capability to cope with trouble.

During the period, efforts were made to help relieve the inconvenience suffered by public institutions’ provincial branches, which had been virtually denied e-document distribution as the distribution involved only the main offices. To address this problem,
it was decided to try awarding multiple codes to public institutions so that e-document
distribution service would be available even to departments and branches of public
institutions. Initially, the measure was implemented at five selected institutions on a trial
basis.

A change was also made regarding the use of administrative electronic signature
certificates. Under the new scheme, the certificate issued by the Ministry of Education,
Science and Technology was granted compatibility so that it could be used along with
one issued by MOPAS, which had been the only previously acceptable certificate. In
addition, the expansion task involved the securing of a server exclusively for handling
broadcast messages, which had caused delays in document processing.

Measures were taken to address complaints raised by document distribution staff at
various organizations concerning monitor screen UI for handling trouble and errors.
This improvement has enhanced the system’s capability to effectively cope with
trouble.

The enhancement task during the previous years mainly focused on extending the
e-document distribution system. In contrast, the expansion task implemented in 2009
put emphasis on ensuring a more substantial system and improving user convenience.

2.4 System Structure and Function

For the enhancement of the e-document distribution system, it was decided to extend
the scope of target organizations to include central government offices’ affiliate
organizations and those under their control. To attain improved scalability, it was also
decided to change the distribution method from the MQ method, under which stored
documents were brought out of the Electronic Document Distribution Center, to the
ebMS method, which sends out documents.

In addition, it was agreed to build an external center for use by organizations that
were using their own networks (or the Internet) and to introduce the electronic mail box
system for organizations that were using non-standard electronic document systems.
Also promoted were measures to improve the credibility and convenience of the
government’s electronic document distribution system, particularly with regard to the
need to ensure correct delivery of original documents and to confirm document receipt
and dispatch.
2. Construction of an Advanced E-Document Distribution System

[Figure 6] E-Document Distribution System Enhancement Chart

2.5 System Utilization Status

The e-document distribution enhancement task led to the application of open-style international standards to the e-document distribution’s basic technology, thus strengthening the scalability, reliability and security of the center and the organizations. As a consequence, a system was put in place for public institutions as well as central government offices to circulate electronic documents in a stable manner. These organizations could realize paperless administration, departing from the conventional practice of circulating paper documents via persons, mail or fax. As electronic document distribution was made possible, the government and public organizations could firmly establish electronic business processing, which led to increased efficiency.
Through the e-document distribution enhancement project, e-document distribution service was extended to cover not just government administrative offices but public institutions. This made it possible for the government offices to exchange e-documents with public institutions, drastically improving their business processing capacity.

The application of the international standard distribution method (ebMS) and the establishment of duplicity at the Government E-Document Distribution Center made it possible to ensure speedy, correct and stable e-document distribution. In addition, the delivery certification system is equipped with functions to prevent document forgery and alteration, and to provide objective materials for verification. Thus, its development and implementation has helped ensure credibility concerning receipt and dispatch of documents, preventing related conflicts and securing a stable document receipt and dispatch system.

The number of organizations using the e-document distribution service was 762 when the third-phase of the e-document distribution enhancement task was completed in 2007. The figure went up to 1,283 as of August 2009. Specifically, these organizations included 45 central government offices, 248 local administrations, 294 educational offices and national and public universities, 342 public institutions, the Constitutional Court, and the Central Election Management Commission.

**[Table 4] Number of Agencies Using E-Document Distribution**

(As of August 2009)

<table>
<thead>
<tr>
<th>Year</th>
<th>2002</th>
<th>2003</th>
<th>2004</th>
<th>2005</th>
<th>2006</th>
<th>2007</th>
<th>2008</th>
<th>2009 (September)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number</td>
<td>46</td>
<td>286</td>
<td>307</td>
<td>550</td>
<td>656</td>
<td>762</td>
<td>891</td>
<td>1,283</td>
</tr>
</tbody>
</table>

**[Table 5] Type of Agencies Using E-Document Distribution**

(As of August 2009)

<table>
<thead>
<tr>
<th>Type</th>
<th>Central government offices</th>
<th>Local governments</th>
<th>Educational offices/institutions</th>
<th>Public institutions</th>
<th>others</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number</td>
<td>45</td>
<td>248</td>
<td>294</td>
<td>342</td>
<td>354</td>
<td>1,283</td>
</tr>
</tbody>
</table>

※ Due to organizational reshuffle, the number of central government offices changed from 58 to 45
2. Construction of an Advanced E-Document Distribution System

2.6 Development Directions

The government is now exerting efforts to further disseminate the electronic document distribution service, targeting public institutions that are not utilizing the service. At the same time, the government is trying to upgrade services provided to public institutions so that it can match the services offered to central government offices. It is also examining the possibility of expanding the scope of the electronic document distribution service.
E-Document Lifecycle Management

1. Project Introduction
2. Construction of an Advanced E-Document Distribution System
3. Construction of the Records Management System
4. Invigorating the System
5. Conclusion
3. Construction of the Records Management System

3.1 Overview and Goals
3.2 Background Information
3.3 System Construction Process
3.4 System Structure and Functions
3.5 System Utilization Status
3.6 Development Directions
3. Construction of the Records Management System

3.1 Overview and Goals

The task to establish an advanced records management system has been promoted to realize responsible administration through preserving all public records, to secure administrative transparency through the establishment of an electronic records management system based on business process, and to enhance the people's right to know through disclosure of recorded information and its expanded use.

The task was aimed at constructing a business-based records management system through automation and standardization of the entire flow from collection of records to preservation, utilization, eradication, and information disclosure. Specifically, it envisioned constructing a standard model for a business-centric electronics records management system that can be used throughout various organizations, distributing the system to central government offices, and linking it to related systems in order to electronically manage the entire flow – from the generation of records to preservation and utilization.

3.2 Background Information

The National Archives of Korea (NAK) began to take action in 1999 to address the problem of low business efficiency at archive systems that were manually handling the entire flow – from the collection of records to preservation and utilization. NAK enacted the “Law on Management of Public Organizations’ Records (Records Management Law)” for systematic management of national records. The law provided a basis for securing a records management scheme for electronic documents.

In 2001, government-commissioned research was carried out on expanding
e-document distribution. The research was followed by measures to promote e-document distribution in earnest. In 2003, enforcement regulations of the Records Management Law were revised, stipulating mandatory electronic management of all the records generated at public organizations effective January 2004. This prompted the need to prepare a system for preservation and management of electronic records registered with the e-document system.

Accordingly, the government decided to establish an electronic system that would manage the whole process from document generation to preservation and utilization through automation and standardization. Under the envisioned system, the process would flow from the e-document system (working-level desks at each administrative office) to the archive system (archives at each administrative office), and further to the central records management system (the National Archives of Korea). Establishment of this mechanism was selected as a roadmap task for e-government.

As a measure to electronically manage the preservation and utilization of electronic documents generated at each organization, the government decided to construct at public organizations an archive system equipped with standardized schemes for the entire records management process. The government plan called for the distribution of the system to central government offices by December 2005.

However, the traditional process-based business environment was undergoing change. This development and expansion of public participation in state affairs prompted calls to realize transparency in public administration through the recording of the entire policymaking and implementation process. There were also calls for enhancing the accountability of government officials participating in major policymaking processes. In addition, there were suggestions that the government try to utilize records as knowledge resources, departing from the past practice of simply preserving and managing them. To accommodate these various demands and suggestions, the task underwent changes to the contents before being implemented.

### 3.3 System Construction Process

In 2003 when the establishment of a records management system was selected as a core task of e-government, the enforcement regulations of the Records Management Law were revised, making it mandatory to electronically process all the records generated at public organizations. Thus, the envisioned records management system
was promoted with the goal of electronically managing the entire records management process from generation of records to preservation and utilization.

As a specific measure, the government sought to build an archive system that can electronically store documents generated through the e-document system, and to distribute it to central government offices, special administrative agencies, and local administrations.

However, the original plan had to give way to a grander scheme, as the government sought to introduce a business management system that would electronically encompass all the business implementation procedures, including policymaking processes. The President also called for a fundamental reshuffle of the national records management system (August 2004). These developments led to the promotion of a business-centric records management system.

In July 2005, the E-Government Special Commission reported a plan to carry out an ISP project for renovating the national records management system. Accordingly, the Records Management Law and its related enforcement regulations were revised in October 2006 and in April 2007, respectively. According to this law and regulations, the government built a standard records management system and distributed it to central government offices. The government spent about 29 billion won toward this project.

### Table 7: Achievements of Records Management System Construction Task (Unit: million won)

<table>
<thead>
<tr>
<th>Year</th>
<th>Achievements</th>
<th>Implementation period</th>
<th>Budget (by individual agency)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2003</td>
<td>o Archive standard format developed and certified (17 kinds)</td>
<td>2003.11</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>o Trial operation of archive system at central government offices</td>
<td>2003.12 – 2004.5</td>
<td>1,100</td>
</tr>
<tr>
<td>2004</td>
<td>o Distribution of archive systems to central government offices completed</td>
<td>2004.10 – 2004.12</td>
<td>12,808</td>
</tr>
<tr>
<td></td>
<td>- 56 central government offices and 132 special administrative agencies</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2005</td>
<td>o Records management system renovation ISP</td>
<td>2005.9 ~ 2006.2</td>
<td>865</td>
</tr>
<tr>
<td>2006</td>
<td>o Records management system standard model built, related systems connected</td>
<td>2006.7 ~ 2006.12</td>
<td>1,801</td>
</tr>
</tbody>
</table>

Archive system standards were fixed in 2003 after applying them to some organizations on a trial basis in 2002. Based on these standards, the archive system was set up at four government offices of the Ministry of Education, the Ministry of Commerce, Industry and Energy (now the Ministry of Knowledge Economy), the Ministry of Patriots and Veterans Affairs, and the Small and Medium Business Administration in a pilot project implemented during a five-month period from December 2003.

The archive system was distributed and established in earnest from October 2004, starting with 56 central government offices and 132 special administrative organizations. By December 2005, the system was introduced in an additional 582 organizations, including local governments and educational offices, increasing the total number of organizations using the system to 708. Thus, the electronic foundation was laid for establishing the national records management system which involves the flow from processing departments (the e-document system) to repositories (archive systems).


The task for the establishment of the records management system underwent a shift in direction because of the need to accommodate changes in the related administrative environment. The new guidelines called for realization of responsible administration through the recording all public business processes, securing administrative transparency through the establishment of business-centric electronic records management system, and the promotion of the public’s right to know through disclosure and utilization of recorded information.

Accordingly, the “project to link the archive system and the national repository system” was replaced with the “project to establish an Informatization Strategy Plan (ISP) for
records management system renovation." This change was aimed at preparing the foundation for reforming the entire record management process and constructing a business-centric records management system.

Amid this development, a measure was prepared for integrating the records management system with the existing records classification system and the government functions linkage model (BRM). Also, processes and functions were redesigned in a way to make it possible to ensure business-centric electronic records management.

Based on these measures, the standard model for the records management system (records management functions and document keeping format) was presented for general use at various organizations.


In 2006, the standard records management system for general use at various organizations was developed, reflecting the ISP. Work to connect the system with the government function linkage system was completed. In addition, a function was secured to link the e-document system and the records management system by using the linkage API of the two systems.

The basis for renovating the records system was secured with the development of a standard system equipped with functions for receiving records from the business management’s e-document system, preserving records, disclosure and reclassification, evaluation such as abolition screening, transfer to the archives management system, and search and utilization.


Work was launched to connect the records management system with other related systems and enhance the system itself. The related systems to be linked with the records management system included the business management system, the central archives management system, the integrated information disclosure system, and the digital signature certification system.

In addition, in preparation for the integration of the business management system and
the e-document system, work was conducted to enhance the records management system's existing functions so that they could reflect major changes in document formats, accommodate the environment of various organizations, and reflect user requests expressed through its pilot operation process. Before expanding the new scheme to central government offices, its pilot operation was implemented at the Ministry of Government Administration and Home Affairs, the Ministry of Construction and Transportation, the Korea Coast Guard, and the Cultural Heritage Administration of Korea.


An integrated information search function has been established at the Nara Depository which is linked to records management systems of various organizations and the central archives management system. This mechanism serves as a nationwide channel for search and utilization of records-related information.

F. Episodes Related to System Construction

It was quite a complicated and difficult job to build the records management system because it required various linkages to other systems (the business management system, the government function linkage system, the digital budget and accounting system, etc.). Therefore, it could not but be affected by the progress and scope of other systems being constructed under other policy roadmaps.

Changes in the contents and schedule of these various systems were not properly reflected in the records management system. To address this problem, the “national tasks real-time management team” was formed at MOPAS in April 2006 with the participation of a ministry department in charge of constructing the records management system. This made it possible to jointly promote the various systems such as the government function link system, the On-Nara system, the records management system, and the state affairs management system, and ultimately, build a successful records management system.

Also, endeavors had to be made to overcome the negative sentiments of a number of government officials who were accustomed to old systems and lacking in proper understanding on the new system. These endeavors included training sessions (at 771 organizations) on the newly introduced records management system, numerous
workshops and briefing sessions, as well as working-level operation consultation meetings (in March and April).

3.4 System Structure and Functions

The newly constructed business-centric records management system is based on the following concepts:
First, the new system manages systematically all the records generated through the entire process of any task, departing from the past practice of recording just the results, usually on paper documents. It has a new business and records classification system based on the classification of government functions (BRM).

Second, through the screening of classified records (every five years) and the strengthening of search and access functions, the new system allows government officials to conveniently utilize the records for their business while providing various kinds of information to the public.

Third, the new system ensures automatic records management by linking the records management process to business process. It also emphasizes the four major criteria presented in international standards – authenticity, integrity, credibility and usability.

In short, a standard model that can be used government-wide in the future has been established by constructing a new system reflecting the improved business-based records management process.
Also worthy of note is the establishment of the Nara integrated search function, which can be used to search record information through links to the records management system and the central archives management system. It is a nationwide portal service that can be used to conveniently search and utilize records-related information.
3.5 System Utilization Status

The distribution of the records management system to central government offices was completed by November 2008. Initially, the gradual distribution of the system to local administrations began in 2010, starting from 10 test-operating institutes. The system will also be distributed to the Offices of Education and public organizations from the same year.

[Table 8] Records Management System Distribution Status

<table>
<thead>
<tr>
<th>Classification</th>
<th>No. of agencies</th>
<th>Distributed</th>
<th>Not distributed</th>
</tr>
</thead>
<tbody>
<tr>
<td>Central government offices</td>
<td>44</td>
<td>44</td>
<td>0</td>
</tr>
<tr>
<td>Local government offices</td>
<td>246</td>
<td>10</td>
<td>236</td>
</tr>
<tr>
<td>Offices of Education</td>
<td>456</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Total</td>
<td>746</td>
<td>54</td>
<td>236</td>
</tr>
</tbody>
</table>

(As of December 2009)
When the nationwide distribution of the system has been completed, Korea will secure a foundation to prevent the loss and intentional discarding of important national records as well as to safeguard and utilize them.

Thorough this management of records, Korea will contribute to ensuring transparency and accountability in administration. It will also lead to the laying of the foundation for providing information on unclassified records to the public. The public’s right to know will be significantly enhanced and ordinary citizens will be able to conveniently search records via the Internet.

The system will drastically lessen the burden of related officials through automation of businesses such as records transfer and product status reporting. It will also reduce manual work, resulting in reduction of time needed for processing specific tasks. These effects will translate into improved productivity, generating an effect of saving about 8.1 billion won a year from the national budget.

### 3.6 Development Direction

The overall plan calls for distributing the records management system, which is equipped with functions to receive such records as newly changed document management cards from the distribution-integrated business management system, to local administrations including 16 metropolitan cities and provinces, beginning in 2009. The plan also envisions building an electronic system to manage periodicals and audio-visual records as part of efforts to ensure management and utilization of various kinds of records in addition to electronic documents.

An index system will be built to cover the entire process from the generation of document management cards to their preservation and utilization. In addition, location information service will be provided to ensure better utilization of electronic records. These measures will help accomplish a government-wide records management system. At the same time, continued endeavors will be made to enhance the system by adding new functions to accommodate user requests.
Establishment of records management system

Establishment of legal framework and system basis
- Establishment of legal framework for records management
- Designing of records management standards
- Standard model construction
- Promotion of common understanding on system introduction

Expansion of the system's function scope

Enhancement of records management system
- Enhancement of standard model functions
- Linkage to related systems
- System expansion to central government offices and affiliates

Completion of government-wide electronic records management

Expansion and completion
- Expansion to local government and Public institutions
- Continued enhancement work
- Completion of government-wide electronic management
- Completion of advanced records management system

[Figure 9] Development Directions for Records Management System
3. Construction of the Records Management System
E-Document Lifecycle Management

1. Project Introduction
2. Construction of an Advanced E-Document Distribution System
3. Construction of the Records Management System
4. Invigorating the System
5. Conclusion
4. Invigorating the System

4.1 Establishment of a Legal Framework  46
4.2 Distribution and Expansion of Scope  46
4.3 International Cooperation  47
4. Invigorating the System

4.1 Establishment of a Legal Framework

Related laws and regulations were revised for enhancement of the e-document distribution system. There arose the need to revise the “E-Government Law” because it mentions only central government offices in its definition of e-document distribution. So, beginning in 2004, revision of the law and other related regulations was promoted. In March 2006, related business management regulations were revised, and nine months later, the “E-Government Law” was also revised. Through these revisions, legal grounds were secured for including public institutions in the application of e-document distribution and the digital signature system.

Laws and regulations concerning the records management system also underwent revisions. The “Law on Public Records Management” was thoroughly revised in October 2006, and its enforcement regulations were prepared and went into effect six months later.

The revised law extended the scope of public management of records to include not only records generated and received by government and public organizations but private-sector records that deserve preservation because of their value or their public nature. The revisions were also directed toward ensuring a shift from preservation of paper documents and a simple management of business results to an advanced system that can electronically manage the entire process of business. They also contained stipulations for disclosing and providing access to recorded information.

4.2 Distribution and Expansion of Scope

To ensure electronic management of the entire document lifecycle process, endeavors should be made to more effectively manage and operate the basic environment of the e-document distribution system. The government plans to integrate various organizations related to e-document distribution, thus making it possible to provide a one-stop service and to ensure electronic distribution of more diverse documents.
The records management system has been linked to the function classification and business management systems. After completing its connection to the central records management system, the records management system will be gradually distributed to organizations at various levels.

4.3 International Cooperation

NAK has implemented training programs for foreign archival officials as part of efforts to intensify international cooperation in records management and to help enhance Korea’s international status through disseminating innovation in the nation’s archival culture.

In accordance with the Korea-Mongolia Records Management Exchange Agreement signed in 2002, NAK has conducted training for Mongolian archival officials since 2003. NAK is seeking to sign similar exchange agreements with various countries.

NAK is also planning to actively participate in the activities of the East Asian Regional Branch of ICA (EASTICA), strengthening cooperative ties with other participants and proactively promoting international records exchange and other cooperation projects.
E-Document Lifecycle Management

1. Project Introduction
2. Construction of an Advanced E-Document Distribution System
3. Construction of the Records Management System
4. Invigorating the System
5. Conclusion
5. Conclusion

5.1 Evaluation
5.2 Future Tasks
5. Conclusion

5.1 Evaluation

The task to enhance the e-document distribution system satisfied the need to expand e-document distribution, which had been available only among central government offices and local administrations, to cover first-tier and second-tier organizations affiliated with the central government offices as well. It has also helped establish a system that makes it possible to implement e-document distribution among organizations using various e-document systems.

The task to build the records management system led to the construction of a world-class records management system linked to the function classification and business management systems. Thorough recording of public administrative activities will help realize responsible administration. Speedy utilization of administrative records and data will improve productivity and enhance the quality of public service. Thus, the task has helped create an environment in which government officials can contribute to innovative work methods. It has also ensured thorough the preservation of records, and promoted the public’s right to know by increasing opportunities to gain various knowledge and information from the records.

5.2 Future Tasks

Through the implementation of the e-document distribution system enhancement task, the government has provided momentum needed for invigorating the usage and distribution of electronic approvals and documents. It has also expanded the sphere of the service, covering the legislative, judiciary and executive branches of the government as well as other constitutional organizations and public institutions. From now on, efforts should be exerted to secure stable operation and management of the system, and to disseminate the use of electronic documents to private organizations.

The task to build the records management system has been implemented consistently, contributing to speedy settlement of the central records management
system and eventually, helping to secure an advanced mechanism in this area. For further development of the system, various measures should be taken, including enhancement of Archival Information Package transformation system and the security certification system for electronic records as well as introduction of the digital signature solution.

In addition, there is a need to exert efforts to build digital archives that can electronically manage and permanently preserve both electronic and non-electronic records, and provide information service transcending time and space regarding stored records.