File management system of electronic government affairs

Su Ma

College of Computer Science, Xi'an Polytechnic University , No. 19 Jinhua South Road, Xi'an, Shaanxi Province, P. R. China

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ABSTRACT

As a new mode of administrative services, e-government in recent years has been rapidly developed and been popular all over the world. At same time, the electronic files related to the e-government affairs are also increasing, so its scientific management has been becoming more important. Based on this background, this article deeply analyzes the e-government environment files management related issues, establishes the business model, further improves the files management efficiency and puts forward constructive opinions and suggestions to file management in e-government.

Key words: E-government; file management system; database system

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INTRODUCTION

OVERVIEW OF E-GOVERNMENT AND FILES MANAGEMENT

As a service model innovation, e-government to rely on modern computer technology and telecommunications technology, the Internet-based information platform for the community and the public provision of public services, to further strengthen contacts and communication between the majorities of clients, greatly improving the efficiency of modern administration, currently the world has been a rapid popularization. At the same time, e-government to optimize the administrative, business integration, strengthen the management and service innovation to provide a solid basis and guarantee. Given the rapid development of e-government, as a variety of documents and files of the administrative activities of the whole record, whether in the form, content or management has also undergone major changes.

In fact, the file management to adapt to e-government development needs must be "four clear". First, clear the joint text documents, and files of e-Government information resources; is clearly related to department management and preservation of electronic records duties; Three clear of electronic records integrated management and service philosophy; management department has the rights and duties of guidance and monitoring of electronic files. In e-government, the status of other departments and management department and the duties both similarities and differences between the main problems: First, both the use of e-government system for online office [1]; both the use of electronic government system, to provide the community with the file information services; party and government organs in the e-government as a file management, other departments, does not matter, but the records management department must be careful to treat. The highest executive body the National Archives records management in China explicitly demanded that the records management must take a combination of management system of electronic documents and paper files. This provision of records management work carried out with a great challenge, because in the e-government, both the common document processing module, electronic document management module, and both have to do a seamless connection. Therefore, in the e-government research and development of management software, the electronic records management functions must be integration into, the real formation of the integration of e-government.

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At present, our local e-government development and construction, most between the administrative organs, institutions and government authorities and society in general people were more active, the establishment of a more seamless flow of information and communication, transmission and preservation mechanisms and channels to greatly improve the service performance of the executive to make constructive to try and explore, in order to further promote open government information to build an honest administration. However, due to various reasons over the country but there is a big imbalance in the e-government records management, and even the large gap. For instance, some local governments have electronic records management into the development planning of the construction of e-government, to give adequate attention; some local governments have not yet fully aware of the importance of records management in the e-government, not to mention take into consideration. Some places, in strict accordance with the requirements and regulations of the National Archives, the dual management of paper documents and electronic records; some places, although the development of relevant rules and regulations, but in practical work, the focus is on the paper documents management and preservation of electronic records does not give the relevant archiving, classification and preservation. The reason why that happens, we think it is mainly because of lack of professional background as a new thing, people file management systems and business models in e-government environment. In order to solve the problems in File Management System of Electronic Government Affairs, we analyze the problems, establish the business model and provide solutions to the problems.

THE DEVELOPMENT OF E-GOVERNMENT TO FILE MANAGEMENT TO RAISE NEW PROBLEMS
2.1 The File Administration Department Management Object Change
In the e-government environment, the archives administration department management objects changes, mainly in the following three aspects. From the file it expanded to its current form predecessor -- file generation background, environment and the whole process. The past, the archives administration department of the government archives work guidance, supervision and inspection, although is also related to the file's predecessor -- current file form requirements, but in the e-government environment, the archives administration department of Archives -- the predecessor document forming requirements, is not limited to traditional archive link, but extends to the current document generation system development design functional requirements. The front control thought has been reflected in the National Archives Bureau drafted the "standards of electronic records filing and management" (GB/T18894-2002). This standard stipulated in article fourth general principles ": electronic file from the form should have strict management system and technical measure, ensure the authenticity, integrity, effectiveness and safety;
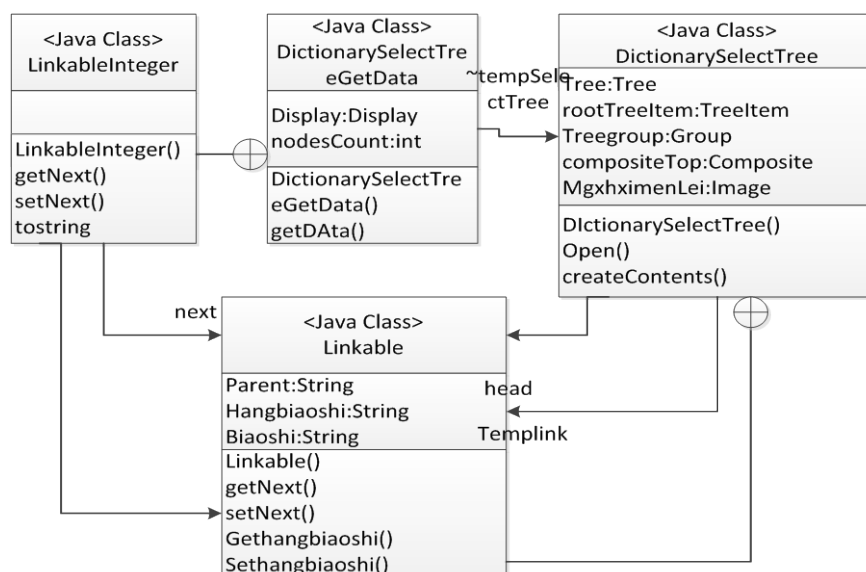

Fig. 1 Current file generation background, environment and the whole process

Deal with electronic documents collection, identification, formation, accumulation, archiving, execute whole process management and monitoring, ensure management work continuity. "Visible, in the e-government environment, the archives administration department of government archives management from file itself expanded to its predecessor -- current file generation background, environment and the whole process (Fig. 1).

From the Department of archives and records management functions into the information are closely related departments and software design and development company. Beijing Municipal Archives Bureau in 2010 89 units were investigated; the results showed a total of 75 units have been used for "integration with OA file integration management system software "or" independent file management system software ". In the 75 units, only 3 units of

the archives departments are using their own independent development of software. In addition, due to the construction of electronic government affairs that are used in the different database platform, such as Lotus Notes as platform, with SQL Server database platform, and the Foxpro database as a platform [2], a platform database produced by the electronic document platform is not the same. How different types of, stored in different database platform of the electronic file to the file management system, to achieve cross-platform data exchange, and the data can be shared with other departments, to achieve cross-platform client retrieval, has become the single department faced tough questions. Visible, the last file management department of archives work supervision, guidance is the main target of archives of various types, chamber (Department, office), but in the e-government environment due to government departments, business process reengineering, organizational structure changes, the original archives, room settings and functions will be changed, archives administration management department should track the change, guide the archives, room or competent information departments or responsible for information systems design and development software company, do a good job of electronic document generation, transfer, identification, archiving and preservation. Can say, below environment of electronic government affairs, archives administration department of the government supervision, guidance is not only for the unit's archives, but should be involved in electronic documents complete generation and effective, Security Archive departments.

For a unit from the archives to the reform of government institutions, emergence of the authority of the joint document management department appears. Due to its characteristics of archives, an archive management system of our government is relatively complex, decentralized management is its prominent features. Government departments separately manage their files, each file method and standard, even the management system and policy is different, resulting in management to standardization. With the reform of government institutions and e-government construction, some provinces and cities government approved the establishment of a document or document management center, keep the documents and files. The first end of file management practices is the city of Shenzhen, the city in 2002 October, the city's office issued a formal became the Shenzhen municipal archives document management center, unified management of the civic center each unit handing over the documents, each unit can establish special archives management organizations. Surface model of document management, study its nature, functions, procedures, methods, and archives, forming unit relationship of rights and obligations is be the first to bear the brunt of the task.

2.2 The File Administration Department Management Changes
In the e-government environment, the traditional archive management mode change, main show is the following three points. From the direct management, service to use the network information technology is the indirect management, service. Long-term since, the archives administration department perform supervision, guidance and service of the single way of comparison, the main means is the archives administration department shall be given the range of each unit files work one on one check or operational guidance; the two is the archives administration department through training, seminars, discussions and other forms to pipe range unit archives departments to provide advice, services, and access to information. In the environment of electronic government affairs, the archives administration department should expand its management and service mode, use of network information technology file management and services to government, achieve more standardized, more transparent management, to provide more convenient, more extensive services.

From the independent management to development of cooperation with the relevant departments, the archives administration department for archival affairs macroscopically manages, due to "owning" thing, so is generally independent functions. While in the e-government environment, the archives administration department of archives information storage, security, fidelity and sharing requirements, is inseparable from the information department and the legal department, with the support of. The archives administration department in cooperation with the departments concerned [3], the common good electronic file generation, transfer, identification, archiving, safe storage, archiving files into the hall and the effective use of the work, is the electronic government affairs environment, new features of archives administration.

From the forced management to extend the management proposal, archival administrative department shall perform the duties of the administrative behavior, by their nature can be divided into compulsory and non-compulsory. The compulsive behavior refers to the archive administration in the laws and regulations stipulated in the scope of authority, without consent of the administrative relative person to take direct administrative behavior, such as archives administrative law enforcement inspection. Non mandatory behavior refers to the archive administration in the laws and regulations stipulated in the scope of authority, need approval from the administrative relative person's consent to take administrative behavior, such as archival business instruction. Long-term since, the archives administration department established management is carried out in accordance with the type of management, and in the e-government environment, except in information disclosure, confidentiality, ownership and protection of intellectual property rights in principle or policy issues, the archives administration department must be in

accordance with national laws and regulations of mandatory management, more and more should use national, industry or local standards for the proposed guidelines, the archives administration department to accelerate electronic document management standardization process, and make relevant information departments and related software companies to understand the standard content.

CHARACTERISTICSOFE-GOVERNMENTFILES MANAGEMENT AND PATTERN WITHTHE MAINSOLUTION
3.1CharacteristicsofE-governmentFiles Management
With the advent of the information age, e-government development, the file resources are increasingly subject to social concern and attention. Home Affairs letter of information resources is an important source of archival information resources to save the value of government information will be transformed into the file information, after identification. E-government environment, the integration and sharing of file resources is based on a relatively open, carried out by the interconnection network environment. Modern management and development work in order to make the file information in the network environment, we must study and understand the structure and characteristics of the file information in the network environment. Files computer management from the stand-alone environment up to the network environment, the file management scope expanded significantly, the depth is significantly increased, and the file information structure has undergone significant changes, specifically the following:

(1) File information from the past, mainly directory-level secondary information-based to become the Jinwen level information-based. Integration of electronic document management and records management, office automation systems to produce large amounts of electronic documents through the network system can be directly converted into the electronic file information in the e-government environment, there is no paper documents the formation of the electronic document file inventory, but also by electronic scanning and Chinese character recognition system consists of paper documents into electronic documents full-text information, which a file of information for the management of full-text level provided favorable conditions.

(2) File information in the network environment is no longer a simple text message, but by the text, images and sound and other multimedia information. The popularity of computer network technology, image processing technology progress and development of computer networks, storage and processing image information has opened up new avenues for the people. The image of the Internet, network information is illustrated and colorful.

(3) In a network environment, the file information database is no longer just stand-alone environment, relational database, and object-oriented database. The relational database used to store data, process the data from the other program. The object-oriented database stores not only data, but also storage and processing procedures for data. With the development of computer information network and the scientific management of the progress of the file, the file information database will be gradually distributed database.

(4) In a network environment, the file information needs to establish an integrated network of resources. Due to the rapid development of Internet technology, breaking the boundaries of traditional industries, geographies and nationalities, different industries, different areas of the sharing of information resources. File of the information society dynamic expansion trend, reflected in the file use the content, quantity, level and form of the retrieval of the integrated system, the user needs, the user to access a file information site, but also hopes to enter national, even international information network, so as to retrieve more information.

3.2 The Main Mode of E-government Files Management
In the construction of e-government records management system must take into account that it is an integral part of the e-government. Therefore, we must proceed from the global e-government to build the file management system, on the one hand, e-government system built on the Internet platform, therefore, be able to direct social and public services, to fulfill the functions of the government. In a network environment, files, information diversification grid Bureau, both traditional text information also has a large number of multimedia information in the form of information management is also diversified. Single file management mode is bound to be new and modern management model. Home mode (homepage), is similar to the management of archival information in the form of the fond. It will focus together a variety of information about a particular institution or individual to be comprehensive introduction. Free-text mode (free text), it can be effective control of unstructured text information System and management. It is mainly used for the organization of the file text database. The hypertext mode (hyPertext,), he is the network node to node as the basic information to the link between the nodes is connected to the associated file information organized into a network structure. The hypermedia mode (hyPermedia), in hypertext format text, tables, images, sound and animation and other multimedia information in a networked environment, together, allowing users to freely browse through the extensive connectivity of the network structure, in a variety of

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media information, to find any media contained in recorded the relevant information. Database schema is the use of database technology for unified management of archival information, from remote off-site retrieval. Online catalog mode (list online). File information under uniform rules and format of cataloging the archives of information provided by the network archives, file directory data through the network for timely delivery and exchange, to form a logical directory database for all users of the online queries to retrieve. E-commerce model (E-business) is the use of paid services for file information electronically on-line user.

3.3 The Main Problems of E-government Files Management
3.3.1 Make File Information Network Construction in the E-government Environment Standardized Work, and Strengthen the Legal System

Standardization is a prerequisite for archival information integration network and one of the important principles, including hardware standards, software standards and data standards. To this end, the State to devise a unified plan, starting from the global government information, in the country, promoting the archival database standardization of bibliographic and bibliographic format, structure and type of consolidated database, standardize the user interface, the preferred international, national common standards; network construction using broadband switching, network management and transmission control, communications technology, have a high degree of unified communications procedures, technical specifications and information format on the LAN network architecture development of national standards in order to achieve seamless between the LAN Internet; formulate and improve relevant laws and regulations to improve the standardization level of the building, which is the file management information for the healthy development of the fundamental guarantee [4].

3.3.2 File Network Information Service Must Be Reconstruction of New Knowledge System
E-government construction and integration of information resources is a new career, a large number of not only understands information technology, e-government knowledge, but also understands records management, information organization and knowledge of computer operations complex and technical personnel. File Network Information Service should strive to learn the multi-disciplinary knowledge, and re-build their own knowledge systems and to adapt to the needs of electronic information services.

3.3.3 Reatea File of Information Security System, and Protection of Intellectual Property
E-government construction in the file management system must take into account that it is an integral part of the e-government, it must precede from the global e-government to build the file management system, first, the application of information security infrastructure, PKI/CA, the establishment of a trusted and authorized applications. In Internet conditions, application and management of electronic records need to e-Cert to regulate the rights and use of the electronic seal, to ensure the integrity of electronic records, non-repudiation and security, confidentiality requirements. Secondly, the government electronic records, data backup, the establishment of emergency response and disaster recovery system.

3.3.4 Relyon Scientific Research Institution, and Development of File Management Technology
File management technology is one of the important techniques in long term development. Since e-government is a new thing, no experience, therefore, it is necessary to rely on tertiary institutions, scientific research institutions and archives planned, step by step, the system carried out research work (Figure 1). The traditional file management and information technology organic integration, to play the comprehensive advantages of archives management.

THEBUSINESSMODELOFE-GOVERNMENT FILE MANAGEMENT SYSTEM
In research and practical application of modern e-government system, electronic records management system business modules (Figure 2). Need of special note here is this business model is established based on the OAIS reference model, the main role of the functional modules of this system which is as follows.

4.1 Collection of Electronic Figure Files
In this model, the object of the electronic file information collected is the electronic document based on the provincial government and its departments, such as Hall, Commission, Bureau, Office and other government agencies to implement e-government management in official activities and various types of electronic documents. These documents in accordance with the operation of the program after the document will form the so-called electronic files. This process includes the steps of the electronic document creation and processing of two links, the creation of electronic documents containing draft, proofread, finalized, approval, and issuance and issued a document, the final form of the so-called e-file. The electronic document handling process, including electronic files and record them, and receipt, registration, Chengpi and contractors, and other steps. At the same time in the process, but also for the classification of electronic documents, sorting, cataloging, it will do as well as archiving and other aspects of the work. After the above processes and the necessary link, it will proceed with the acquisition of

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electronic files.

The electronic file information collected is to accept the information provided by the electronic document issued by the data package (SIP), and then prepare for electronic document storage and management of electronic document data. Its main function is as follows: (1) to accept SIP; (2) do a good job of SIP audit acceptance; (3) AIP electronic documents generated in accordance with the standard data format standard; (4) from AIP. To filter out the information needed by the electronic file information database; (5) the necessary electronic record keeping and electronic file management and data update.

4.2 Storage of Electronic Files
Electronic archival storage is the main work of AIP storage, maintenance and retrieval. Among them, storing work contains from electronic archives collection work in retrieval of AIP and the permanent storage. Management storage level work primarily selected electronic archival storage medium as well as the retrieval of frequency, and storage medium for AIP updates to provide technical support. Do the electronic file transfer program and the specific error of the audit and inspection, this work is equivalent to the archives acceptance so important. Provide support for destructive data recovery and backup. To provide AIP electronic file management so as to meet the various needs of the users of electronic archives.
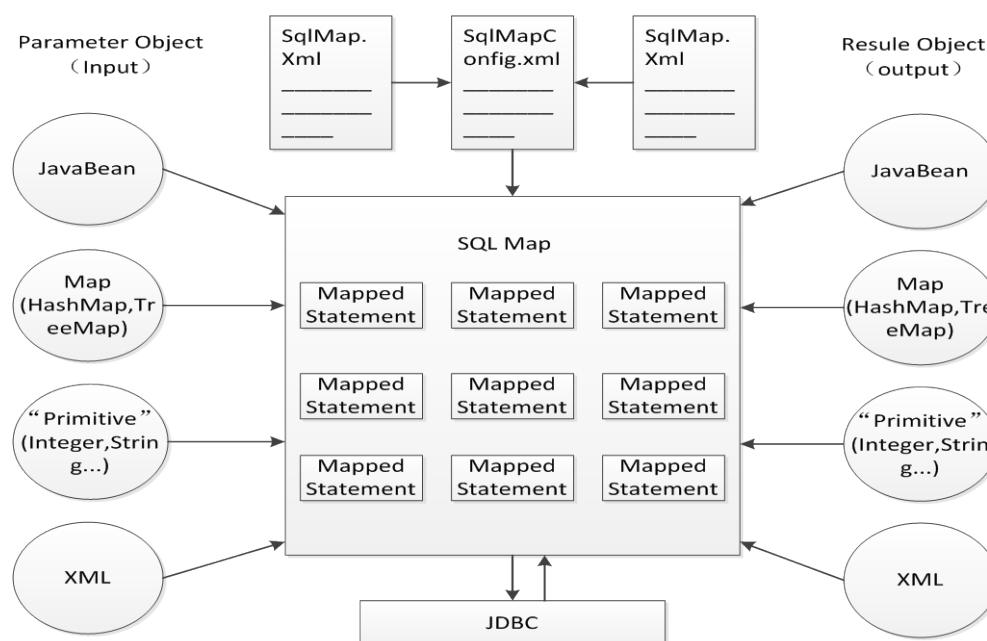

Figure 2. Business modules of electronic records management system

4.3 Electronic Files Data Management
Electronic archives data management is the main entry, operation, maintenance, custody and access information (mainly used for electronic file mark) and the management of data (mainly for the management of electronic archives) etc.. Specific include: The electronic archive management (mainly is to maintain the database framework and the relevant parameters of integrity);To do a good job of electronic archives database description information and management data update; To provide support for electronic archives data query and generating the appropriate reports.

4.4 The Global Management of Electronic Files
Electronic files management work is to provide global electronic file management system overall operation. Its main contents include:
(1) The electronic file provider consultation with an electronic file of a specific protocol;
(2) A review is presented of the electronic file whether meet the archives management standards and requirements;
(3) Strengthen the software and hardware of the system configuration and management, make archives management system to meet the needs of modern information technology and the vast number of users the change of demand;
(4) The electronic file operation for real-time monitoring and management;
(5) Updating the electronic file content;
(6) Establishing and perfecting the Archives standards and regulations;
(7) Activating the electronic archives users prior to the custom request, and provide the corresponding information

service.

4.5 Electronic File Preservation Planning

Electronic records preservation planning refers to the real-time monitoring of the external environment, and put forward to ensure that users of long-term use of electronic archives management system is proposed, even before computing environment become the past. The main work is as follows: To the electronic file content assessment; To develop electronic archives related standard and policy; Monitoring the external environment and user needs change; The design of electronic archive information template, and applied to the corresponding AIP and SIP; To develop detailed transition plan (mainly used for logical filing), ensure the smooth use of electronic archives and management.

4.6 Use of Electronic File

Electronic files using mainly refers to ensure that the electronic file management system for storing information description, location and availability of complete and correct, and allow users to request and receive electronic archives. The main work is as follows:

(1) Receiving user information demand;
(2) Setting electronic file access permissions;
(3) Generating corresponding electronic archive information packets and sent to the user, in accordance with customer demand for the necessary operation,

PATH SELECTIONOF OPTIMIZATIONOF E-GOVERNMENTFILESMANAGEMENT

5.1 Focus on Electronic File Management Standards and Processes

From practice to practice, strengthen research on electronic records management standards and specifications, and is actively used in the management of electronic documents. Vigorously to learn from the latest theoretical research and practical experience, the establishment of a scientific, standardized, rigorous electronic records management system. Develop the system of registration and archiving of electronic records and electronic records archive content, archiving, archiving time and archiving program to make clear and specific provisions. Laws and regulations on electronic records management is not standardized lack of interoperability, coupled with electronic file itself there are some technical defects, the moment the most important thing is to take paper files and electronic files in parallel file management system. Establish and implement e-government records management system at the same time, continue to do the traditional paper-based archiving and management, the effective realization of the complementarity of the modern file information and harmonious functioning. This is so not only can solve the file management of evidence and the certificate can be resolved files provide access to and sharing of information resources.

5.2 To Strengthen the Front-end Control and Management of Electronic File

An important theoretical basis of modern records and archives management is well-known "file continuous body theory". This theory holds that the information file, and gradually over the process of the file, in fact, is a former successor from a continuous process. That is created from the file, or even dating back to the system design before the file was created, has been archiving and between them is a continuous logical management process. Intervention and management can be in any stage of the process according to this theory, file creator and manager, and file workers to achieve their respective purposes, and the mutual influence and interference does not exist. Therefore, the file management can advance to file the front-end, from the file creation, enhance document management, thus ensuring the files in the process of formation of selective manage. This management philosophy, its essence is the front end of the file management thinking. In terms of the management of electronic records, need this kind of management approach [5]. To strengthen the front-end management of electronic records, in accordance with the purpose of records management, and dynamic tracking scan, to help form a more complete database of information created from the beginning of the file.

5.3 Strengthen the Security of E-government Information System

Really good job in the security of e-government information systems and archives, it is necessary to select the materials and materials of good information storage media. Strict electronic records of the carrier material off, and effectively improve the life of the electronic file carrier, to lay a solid foundation for the permanent custody of the files. Secondly, ensure the security of the network system. Network system security mainly refers to the external environment and equipment for its own safety. To create a good network of indoor environment, strengthen the control and management of the network environment temperature and humidity needs to be stressed here is to strengthen the prevention of fire. To focus on the operational security of e-government system, positive by logging restrictions, rights management, and file attributes and other management tools to further strengthen the security management of electronic records. To do a backup of the file information database, to prevent any eventuality, to

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ensure information security. To strengthen the virus protection of e-government work to prevent the intrusion of hackers and viruses. To be updated in real time virus software to prevent interference and disruption of external and independent from the information carrier of e-government information systems. At the same time, the links do not need to read and write files through the use of "diskless workstation" to strengthen the information security management of electronic records.

5.4 Cultivate and Foster High Overall Quality Team of the Information Management
The modern electronic files management is an emerging set of file management, information science and computer science and technology in one cross-edge disciplines. Electronic records managers must have a solid foundation of professional, familiar with the remote communication technologies and Internet technology, proficient in computer technology before archiving, classification and management of electronic records. No, simply unable to engage in this work, cannot participate in the electronic document and records management, retrieval and system planning, of course, cannot become qualified electronic records managers. Especially for all kinds of computer viruses and hackers, intrusions, and they will do nothing. At present, our ability to, in close connection with computer technology and records management technology is also one of the few with file management talent. Therefore, must be determined to cultivate and foster a large number of higher overall qualities of professional and technical personnel. Recently, we should actively existing electronic records management staff, technical training, and continuously improve their business. The long run, establishment of the relevant professions and disciplines in colleges and universities to train high-quality files and engineering talent, effective adaptation to the needs of electronic records management personnel.

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