

## **DOCUMENTATION OF EXISTING ELECTRONIC RECORDS SYSTEMS**

Developing and maintaining up-to-date documentation about all electronic records systems is the role and responsibility of the agency records management analyst and /or records manager. Documentation is a written record detailing the design, functions and operating procedures for a computer system. Adequate documentation by the records management analyst and/or records manager will:

- Specify all technical characteristics necessary to read and process the files.
- Identify all defined inputs and outputs of the system.
- Define the contents of the files and records.
- Determine restrictions on access and use.
- Provide an understanding of the purpose(s) and function(s) of the system and its records.
- Describe update cycles or conditions and rules for adding, modifying, or deleting information.
- Ensure the timely, authorized disposition of records.
- Ensure efficient and timely migration of data.

## **RECORDS INVENTORY**

### **The Importance of the Inventory and Database Uses**

To establish a records retention program, it is necessary to complete an inventory of all agency records, including electronic records, and keep it current. It is important to find out what records there are, where they are stored, their quantity, and how they are used. The Records Retention Handbook published by CalRIM describes in detail the process for completing an inventory.

The sample STD Form 70, Records Inventory Worksheet, included in Appendix 7 of this Handbook, can be used to gather information on records series in all formats (see the records inventory section of the Records Retention Handbook for discussion of the item numbers on the Records Inventory Worksheet).

Item 4 of the Records Inventory Worksheet is designed to list the record medium of a records series. Electronic records may be maintained on magnetic storage media (magnetic tapes, cartridges, compact disks, and diskettes), on-line, or on optical disks. The record copy of information processed on the computer may also be in the form of data processing printouts or computer output microfilm.

With a mainframe or other computers operation, there may be databases that have multiple outputs. The outputs may create several records series because they are produced for separate divisions, the data is summarized differently, and the retention periods may vary because of specialized use.

For example, an agency may have an automated database for client information. One division uses it to do research and prepare administrative reports, which are maintained for three years, then reviewed for archival value by the California State Archives. Another division uses the same database for case management computer printouts, which are maintained for five years to meet federal reporting regulations. As records are inventoried in each division, each of these records series would be documented on an inventory worksheet.

There could also be a situation in which a database is created for one function. For example, a database of fiscal information may generate several reports, but if they all have the same use and the same retention period, they can be grouped as one records series: Fiscal Internal Management Reports.

*NOTE: You can develop a specialized inventory worksheet for automated information systems, which contains additional information useful for the data processing operation. For more information about this subject contact the Records Management Program for guidance.*

## **APPRAISING RECORDS**

### **Developing the Records Retention Schedule from the Appraisal Process**

Appraisal is the process of determining the value and thus the retention or disposition of records based upon their administrative and other uses, the evidentiary and informational or research value and their arrangement and relationship to other records. Appraisal uses the information gathered during the inventory to analyze records series and develop an official records retention schedule(s).

The first step in determining recordskeeping requirements for electronic records is to identify the records creators and users. In doing so, it is important to remember individuals and offices within an organization who may use records for different purposes. Some records may exist in several formats within one office. If such records

are needed for separate program purposes, the recordskeeping requirements may differ with the program. Such requirements, as determined during the records inventory, will be significant factors in deciding where; in what format, and for how long the electronic records are maintained. Records appraisal guidelines are further discussed in the Records Retention Handbook.

In addition to the information gathered during the records inventory, the following General Retention Schedules and their retention periods are listed on the DGS Procurement Website at [www.dgs.ca.gov/pd](http://www.dgs.ca.gov/pd). These General Retention Schedules are a primary resource for agencies to use during the records appraisal process:

- Personnel and Payroll Records
- Delegated Testing
- Fiscal Records
- Records Management Records and Related Documents
- Administrative and Common Use Records

Records series in electronic format may also be classified in other categories. For example, the records series "Support Services Records" is the appropriate classification for "mailing lists". The retention period for mailing lists is "Current Until Revised, Superseded or Rescinded." This classification and retention period are applicable to all mailing lists, whether the record copy is maintained electronically or on paper. The primary consideration in classifying a records series is its function, not its format and/or media type.

### **Appraising Electronic Records for Records Management Purposes Includes Identifying the Record Copy Versus Working Document or Convenience Copy**

Drafts or working documents are normally kept only until the final version of a document is completed. For long or complex documents, several earlier drafts and the current draft may be retained to ensure document integrity until the final draft is approved. Previous revisions are then erased, and only the final text is kept.

However, a draft version containing information not included in the final version, but useful for preparing similar documents in the future, could be retained as a reference copy.

Often a document maintained in electronic format is a convenience copy; the record copy is in the form of paper, computer printout or computer output microfilm. For example, copies of correspondence may be kept on personal computers for the convenience of

copying part of the content for the next letter, or information in an automated database may be maintained as the record copy in computer printout.

If the only copy of the information is in electronic format, then it is the record copy. If the official copy was in another format that has been destroyed and the electronic information has not been destroyed, then the electronic file becomes the record copy by default.

*NOTE: Convenience copies of documents should be kept only as long as needed to meet the purpose for which they were created, and no longer than the record copy. This requires knowledge of where the record copy is being maintained in the agency and procedures to inform staff on the proper disposition of records. Unmanaged duplicates or convenience copies also pose a serious risk of litigation to an agency.*

Appraisal decisions on the retention of the record copy include:

- Total retention period each records series will be maintained based on administrative, fiscal, legal, and research, historical or archival values.
- Length of time a records series will have current, active use in the agency.
- Length of time a records series should be stored if there is a period of inactive use prior to final disposition.
- Appropriate format for a records series while it has current use and during any inactive storage.
- Potential archival value of a records series.
- Identification of confidential or private information.
- Identification of vital (essential) records.

Electronic records are directly impacted by their organization and the integrity of the records. During the appraisal process, any special concerns for electronic records should be addressed. For example, plans for records in electronic format that have potential archival value should be discussed with the staff of the Chief, State Archives and Museum Division, Office of the Secretary of State.

California State Archives accepts all records, regardless of the media. When records having historical value, as noted by the archivist on the retention schedule, are no longer needed for the current business of the agency, they will be made available to the California State Archives.

## **APPROVAL OF THE RECORDS RETENTION SCHEDULE**

All records, regardless of their format must be inventoried and scheduled per the State Records Management Act. Electronic Records are records that are machine-readable, as opposed to human readable. They must be accounted for in the same manner as their paper counterpart.

The State Administrative Manual, Chapter 1600, Records Management, the Records Retention Handbook and Records Retention Schedule Guidelines explain the statutory requirements, procedures, and process for developing, submitting, approving, and updating the records retention schedule.

Use of the STD Form 73, Records Retention Schedule (or a computer-generated facsimile of the form approved by the Forms Management Center) is required for all state agencies. When preparing the STD Form 73 for electronic records, you must enter the format and version, i.e., Word 6.0 in the “Remarks” section of the STD Form 73. STD Form 72, Records Retention Schedule Approval Request, which documents final approval, along with the STD Form 73 must also be prepared and submitted to the Records Management Program in triplicate.

The records retention schedule is reviewed and approved by the Records Management Program. Subsequently, the California State Archives reviews the schedule and “flags” archival interest. The approved retention schedule then becomes the agency’s *“official basis for management and final disposition of the records series listed.”*

NOTE: Convenience copies of records series do not have to be listed on the STD Form 73 since it is not necessary for them to be maintained the full length of the retention period. For example, if the record copy of "administrative correspondence" is listed on the records retention schedule as paper and there is also a convenience copy on the computer, the electronic copy does not have to be shown. However, convenience copies should be destroyed as soon as they are no longer needed.

## **CREATING ELECTRONIC RECORDS**

When electronic records are created as documents on computers or as data files in a database management system, records management principles must be applied to provide appropriate and effective recordskeeping practices that ensure statutory compliance.

## **ORGANIZING COMPUTER FILES**

In the absence of an electronic recordskeeping system, the usefulness of electronic records, the accessibility of electronic document files for use as needed by the agency and the efficient management of records in electronic format will be enhanced by:

- Grouping files into records series.
- Arranging files in a logical order.
- Standardizing filenames.

## **RECORDS SERIES GROUPS**

Electronic files are created on a computer's hard drive, or on a networked hard drive, which holds large numbers of computer files just as a file cabinet holds large numbers of paper files. Paper files are organized into records series. A records series is a group of identical or related records that are normally used and filed as a unit and are evaluated as a unit for retention scheduling purposes.

This records series concept also applies to electronic records on the computer. Paper files are arranged by records series in file cabinets which have drawers and file folders. Similarly, electronic files should be arranged into records series on the computer. The organization of files is accomplished by using tree-structured directories in which major groupings of files are given a name (the directory) and sub-groupings in directories are given names (sub-directories).

The result is a hierarchical organization of information that allows files to be grouped according to function. The idea is that those files with similar uses can be organized together, while ones with entirely separate purposes can be placed in different directory structures or paths.

*NOTE: The primary advantage of a system using a tree-structured directory is that searches and retrievals can be made from a specific directory or subdirectory rather than having to access all of the files for every operation.*

Careful consideration is needed in the grouping of records and in the selection of a title, which appropriately describes the function of the records series. If the electronic files are convenience copies, the records series titles should be the same as those used on the retention schedule for the record copy in order to facilitate appropriate disposition.

The alternative to hierarchical organization is usage of an electronic recordskeeping system, together with a records management plan. These two items will provide the functionality necessary to manage all the records (including the computer files) placed under the system's control.

## **ARRANGING ELECTRONIC FILES**

### **Evaluate the Adequacy of the Current Classification Systems**

While completing the records inventory, a discussion and evaluation of the the adequacy and appropriateness of the current classification scheme (groupings of records) is necessary. In anticipation of related physical files, the classification scheme should be to incorporate information about the location and disposition of specific physical documents. For example, a physical record within the classification (i.e., personnel records) might be linked to an electronic document (i.e., e-mail) that should be accessible within that overall scheme. The main idea is to develop a system that is workable yet maintains record integrity.

As to indexing, consider developing a straight numeric system. Also consideration may be given to subject, geographic, chronological, or combination systems. Because each filing system has certain advantages and limitations, selection of the appropriate system should also be based on characteristics of the agency's records practices and software limitations.

*NOTE: To make usage easier the filing of electronic records should be coordinated and compatible with the filing system for paper and/or microfilm records. In any organizational unit there must be cooperation in the use of common assets, and electronic information is a critical asset.*

## **STANDARD TECHNOLOGY**

There are many benefits to standardizing the terminology used in naming electronic files:

- Accessing files easily and rapidly.
- Training new employees in less time.
- Avoiding the loss of information.
- Naming files quickly and easily.

- Sharing files more easily.
- Identifying groups of files eligible for disposition at the same time.

## **ELECTRONIC RECORDS INTEGRITY**

Various functions of software applications may affect the status and integrity of records created on a computer. Saving the file currently being created is one of these functions. A new record must be saved on the proper medium, or it will be lost when you turn off your computer or quit the application.

### **Copying and Erasing Files Has a Direct Impact on Electronic Record Integrity**

Most computer file-copying functions have a potential problem with direct impact on record integrity. It is important for computer users to keep in mind that they may be creating, manipulating, and deleting official state records. (The authorized process for final disposition of records, including recommendations for disposing of electronic records on magnetic media, is discussed in the section entitled Final Disposition of Records.)

If the user does not want to change the previous version, the file can be renamed or copied to a variety of alternative media so that multiple versions of the file are then available. Be sure to clearly identify the version so you can locate the most current version. Relying only on the internal computer generated creation date is not sufficient.

A problem in file management can arise when the copy procedure accidentally occurs in the wrong direction. If a user makes a backup copy onto a removable medium (such as a diskette) and then loads the backup copy from the diskette onto the hard disk, the preceding version of the file may replace the current file. Software functionality allows for creation of multiple versions.

Files that have been erased by individual record attribute (a specific identifiable document within the record) preserve records integrity. The user clearly intended to erase that individual file within a defined records management methodology and records retention policy. Users should be certain that the recordskeeping methodology is capable of assuring that the document has been permanently removed from the system. Otherwise, a liability may ensue if in the course of legal discovery, documents that would have otherwise been destroyed are inadvertently available because of poor records management. It is therefore important for agencies to follow appropriate procedures for disposing of electronic records as a part of their records management plan.

For these and other reasons, agencies should ensure that their electronic records are being properly managed by a fully functional electronic recordskeeping system that meets the specifications established by the DGS.

## **DATABASE MANAGEMENT**

The records management analyst and/or records manager and the information and/or systems technology manager, have specific and important roles and responsibilities dealing with database management. The records management analyst and/or records manager is concerned with the creation, management and disposition of records generated by databases, while the systems technology manager is involved with its creation, design, and management.

Creating records on a computer is one way of electronic filing. Another type of electronic filing system is database management. A database is a collection of data that forms the basis of an activity or step within a business process. The two elements essential to a database are coherence and organization. Coherence means the data are related to a specific activity or purpose. Organization means the data are related in such a way that users can meaningfully access parts of the database.

### **Methods Used to Arrange Records Within a Database**

- **Hierarchical databases** are tree-structured. That is, their logic goes from the broader meaning to a narrower meaning through one or several steps. Each step branches out into smaller units, and with each step, other options are eliminated. It is a process of "narrowing the field" to the desired item. Although this structure simplifies searching, it is not particularly well suited for extensive lists of information.
- **Relational databases** allow data to be accessed based on relationships among several data base files. This means that within a predetermined set of data fields and their relationships, you can retrieve specific information through one command.
- **Network databases** permit data to be arranged into groupings that can be connected through the use of pointers. These pointers give users a great deal of flexibility and speed in searching for data, although the pointer structure is relatively complex to establish.

## **Database Management Programs Also Access Information**

To retrieve selected electronic records, software applications usually search for data in one of two basic ways:

- Key fields in a database management system.
- Hierarchies of words or phrases in a full text retrieval system.

In the key fields method, specific data fields--such as social security numbers or titles of documents--are chosen in advance. When loading data into the system, the software builds key tables/files that contain cross-references to where the corresponding data are located on the storage medium. On receiving a request for a specific set of data, the software compares the request with the data contained in the key tables to determine if there are matches.

The full text retrieval method indexes all words, with the usual exception of such common words as “and,” “the,” and “of” to permit flexible and detailed searching of the data. The full text method involves searching the whole contents of documents to find what the user wants.

The best form of organization for a database depends on the content and how the information is to be used. The choice of organization is made during the database design.

## **Database Design**

Database design, much as a filing system design, entails the planning of interrelated records. It should start with an analysis of the users' needs and application requirements, and should consider the medium, unit definition, logic, indexing, and retrieval criteria. The selection, design, or adaptation of software is also part of the database design process.

Analysis and design of a database system is a complex process. A project team should be formed to work on the system. The project team should consist minimally of a project manager, technicians, a records management analyst and/or manager, and records users.

Although some help and advice may be available from suppliers, the ultimate responsibility for the design and implementation of the system rests with the individuals planning the records system.

## **Advantages and Limitations of Database Management**

Information may be stored in databases that contain either elements of data or entire documents stored in digital form. Significant potential advantages of database management systems for records management include:

- Faster access to information.
- Centralization of information.
- Flexibility of information retrieval.
- Reduction in miss-filing.

**Some limitations of database management systems are:**

- Cost of developing the databases.
- Cost of the necessary equipment and software.
- Need for additional expertise to administer and operate the electronic system.
- Cost of maintaining duplicate systems (in many situations) when electronic files, because of legal or historical requirements, cannot replace paper or microform documents.

## **Legal Guidance**

Crown Life Insurance Company v. Craig established that databases need to be handled as records. In a dispute between insurance companies, Crown Life was severely sanctioned by a lower court for failing to produce “raw data.” One of its employees had testified as to the existence of a database containing important policy information. Craig argued that the documents furnished by the company were insufficient and that they needed access to the raw data. Crown Life argued that the data was not a document (record in this meaning) for discovery since it had never been put into hard copy and that the discovery request did not specifically ask for the data.

The Federal court held that the notes to the 1970 amendment of Federal Rule of Civil Procedure 34 made clear that computer data is included in the description of documents. The court further held that the request for documents included any “underlying data” used to support or refute the documents and that Crown Life had a duty to make that data accessible.