

## **Automating Information Management in Your Organization – (II)**

### ***Managing Records***

Records classification systems are based upon provenance. This means that the primary system of control is based on the creator or creating entity, such as a ministry, office, or task force. A critical functional requirement is to identify creating entities and to track changes in that entity, such as names or functions over time. Without this functionality, the automation system cannot present evidence in context.

Automation system should also be able to sustain a hierarchical structure between elements in the records description. For example, records can be described at the group level, series, file, or in rare cases, item level. The primary level of control is the series.

While some automated systems can control information at the item level, this is not recommended as a priority for data entry until the records and information management personnel has control at the group and series levels. If the computer is programmed appropriately, it will allow for the separate input and retrieval of variables at each level of the hierarchy. Different descriptive variables will be active at each level.

For example, at the group level, description may focus more on the creating agency, while at the series level, the title of the records, dates and a description of the records will be emphasised. In some systems, elements are inherited from higher levels. This is a beneficial feature because it prevents needless duplication of data entry. This structure will allow for great flexibility in data entry and updating. To accomplish this, the system should verify that the previous level exists before allowing a record to be created on a lower level. Records classification systems should also act as a means of authority control and limit the variability of entries in fields, such as the creating agency and subjects. Finally, when determining the functional requirements of the computer for managing records classification systems, it is important to check that the field lengths used are sufficient to hold the data required and that the fields will accept alphabetic, numeric, alphanumeric, or structured data.

Possible fields in an automated records classification system may include the creating office, functions, open and close dates of the records, security level, retention period, disposal action and disposal authority.

### ***Life-cycle Tracking***

Monitoring records through their life is a key business function of the continuum approach to records management. In order to automate the life-cycle tracking process data elements must be collected at each phase in the cycle. Some data will remain static and relevant throughout the life-cycle while other data will change from phase to phase,

or even within a phase. Technical requirements needed to back up these functions include the ability to create information that carries over from one phase of the life cycle to the next without having to re-key in the data and the ability to alter other types of information, in some cases on a daily basis.

### **Static Elements**

Static elements are essential details necessary to manage records functions at a particular stage. These are additive. For example, information entered into the system in the current phase should be carried over to the semi-current and archival phases. Likewise, information added in the semi-current phase should be carried over to the archival phase. Even if records are destroyed, information about those record should be maintained and the system should always indicate that form and date of the disposal actions taken.

### **Semi-static Elements**

Semi-static elements represent changes in the physical location of the records and the operations surrounding use of records. These data include elements such as:

- Storage location
- Users authorised to have access
- Available/unavailable (generated automatically from charge-out data).

These data will change from phase to phase, although they may change within a phase.

### **Active Elements**

Active elements principally concern the use of records or charge-out data. These data will change frequently in all phases and include such elements as:

- Date of request for file
- Name/ID/location of requesting user
- Date of dispatch/production
- Date of transfer to another user
- Name/ID/location of user to whom transferred
- Date of last reminder if overdue for return
- Date of return to storage
- Number of times produced from storage in year.

### **Scheduling and Disposal**

As noted in the table and lists above Automation can aid in the management of the life cycle through computerisation of the processes of scheduling and disposal. Scheduling and disposal are excellent functions to automate because of the great time saving involved in automating the process of tracking records and alerting personnel to the disposal requirements. However, if any application calls for the disposal of records, this decision should be confirmed by the records office personnel responsible for all such decisions; people should not destroy records with only the authority of a computerised notification.

For the scheduling function to work properly, records staff must plan the processes well. Series, boxes, or files must be identified and coded to represent retention periods.

Information about the codes must be programmed into the computer. In some applications the coding scheme can also be linked to commercially available retention schedules, allowing retention codes to be applied automatically.

When planning to automate the scheduling and disposal function, it is important to ensure adequate safeguards are in place. For example, all disposal decisions should be approved and the actions recorded. Many governments and organisations have laws that require a permanent record to be kept of disposal actions as well as a summary of all records destroyed. It is also useful to ensure the application can produce appropriate histories, lists and reports, as well as box lists, lists of destroyed files, list of files transferred to archival storage and so on. The application should also be set up so that disposal dates are handled consistently. Some computers round numbers up or down to the first of the month or the end of the year. This approximation can cause inefficiencies or problems.

## ***Indexing and Retrieval Systems***

An automated records management system should be able to create and update indexes efficiently and automatically. This capacity provides better accountability for the records and information management organisation and better user access to records. Many users approach records according to subject rather than provenance. Automatic indexing also reduces duplication of effort and errors in indexing and updating. With a good indexing system, records personnel can search and create different subject lists with little advance notice.

In thinking about the technical requirements, records professionals should determine which data elements in the records need to be indexed and how the indexing parameters should be established. For example, titles are usually automatically indexed, with only relevant words in the title included. That is, no prepositions or other stop words (such as 'a' or 'the') are included. In addition, controlled vocabulary lists or keywords are usually used for indexing. Staff are responsible for updating keyword lists. Keywords could be linked to authority files of proper names and subjects that can be developed so that one word could mean that word and all of its synonyms.

There are many different ways to search an automated index. For example, users could search for information by identifying keywords, the names of agencies, dates, geographic names or type of record. When selecting a computer system, it is important to enquire about the search engine or the method of search that can be used. Some computer systems use 'fuzzy' logic in their search processes, meaning that the system will still retrieve the desired keyword even if it is misspelled or if it is in its plural or singular form. Others are able to search all the permutations of a word. In this case, the user truncates the word at some point, such as after the root, using a symbol designated by the system, such as an asterisk (\*). This symbol is called a 'wildcard.' When a computer receives a query using a wildcard, the search engine will retrieve all the possible permutations of the word. For example, 'swim\*' may be entered into the computer, and the search will reveal information about 'swimming' and 'swimmers'. Or 'educ\*' may be entered, and the computer will find information about 'education', 'educators' and 'educate'.

Boolean logic is another method of searching. It allows users to broaden or narrow searches. This function is accomplished through the use of the conjunctions 'and,' 'or,' and 'not.' For example, the records office or records centre may contain older records from the transportation department and the finance department. A commerce under-secretary is interested in investigating the cost of airline use in the government. In a Boolean search using 'or,' airlines or finances, the researcher would get everything from the departments dealing with airlines (including regulation, local and international carriers and so on) as well as everything documenting finances (budgets, expenditures and so on). If the Boolean term 'and' is used with the same search, the researcher would only retrieve descriptions of records that dealt with both airlines and finances.

Retrieval queries should result in a selection of 'hits', or successful search items, from which one can select the desired hit or browse through to find the most appropriate hit. In some systems these are rated according to relevance or how well the system has determined that they matched the query.

It is important to note that such systems require extensive analysis on the part of records staff to identify and index records, so that information about them can be added to the computer. And, as mentioned above, standardised index terms are crucial. If a researcher typed in 'airlines' but the records office used the term 'airplanes' the search would find nothing, even though there may be useful information available. It is important to consider the costs and time involved with such work before commencing automated indexing systems, especially at a detailed level.

In more sophisticated systems, users may actually be able to access the full text of documents on the computer. Many word processing applications offer this feature on a document-by-document basis. Although appealing, full text retrieval in large document sets often produces an enormous response to general queries. This creates information overload and records personnel must learn how to construct more specific queries or develop other means to narrow down these large document sets.

Such wide access to actual documents, as opposed to descriptions of records, also presents security problems. Full text access requires the records office or records centre to establish guidelines about who can access what records. Some materials may be security classified or confidential, and policies would have to be established about whether or not to make those available electronically and to whom. Again, this process can be extremely time consuming and the benefits of full-text access have to be weighed against the costs of getting the information into the computer.

### ***Controlling File Movements***

Automated records management systems can also be used to control the movement of files throughout a records office, records centre or within an organisation. The ability to track current and previous file movements is an essential records and information management function. An automated file control system should be able to track files and automatically issue periodic reports. These reports might include a 'bring forward' (BF) and overdue memo to remind records management staff of the need to send a file; reports might also include queries to offices to determine if files are still needed or if they can be returned. Consolidating records tracking and control, manual processes such as file recalls, charge-out slips and paper-based bring forward files can be eliminated.

Computers can also streamline the process of charging out a file. For example, file control can be linked to an automated employee list containing all authorised users and identifying their security clearance level. When information requested has a security level higher than the user's, records staff can be alerted by the system when the records are being checked out. This user list would have to be able to be updated regularly. Charge out and check in can also be facilitated through the use of bar coding technology.

Every file and box in the records office, records centre or archival institution can be bar coded with a unique number. These numbers are entered into the system along with the other descriptive information. Whenever a box or file is removed from its records storage location, the bar code is read by a special scanning device attached to the computer and the name and location of the 'borrower' is noted. The efficiency of bar codes comes after all the bar codes are assigned to boxes or files and entered into the database. From that time on, no one has to retype that information; records staff simply swipe the bar code reader across the identification strip and they will automatically receive a description of the item. In any automated system, it is important to track records wherever they are, even if they never leave the records facility.

### ***User Registration***

It is also possible to use automation to register users of records and information. This could be applied to both internal and external users or researchers. As with automating the life cycle tracking process, one of the functional requirements of a registration system is that fields must be able to be modified frequently to reflect the status of users and records. Ideally, a registration system should generate the types of reports suggested below to better administer the records.

### **Registration Data**

Registration data should be constructed so that users can be tracked over time and can be contacted in case of problems with the records they used. Registration data is also a useful administrative tool to determine the most heavily used collections or the most popular research subjects. This information can be used to target audiences and to determine the most appropriate records to send to remote storage.

Registration data should be able to generate reports of all items used or, for users within the organisation, materials currently checked out and formerly requested. Once a user is registered, this can speed up the records delivery process by eliminating the need to reregister users at each request. This view along with the file tracking view can be used to trace records if parts of files have been removed when they are returned or if some purposeful file tampering has occurred.

### ***Reporting***

Reporting is a key requirement in any records and information management operation. The computer system should be able to generate a variety of regular and ad-hoc reports. For example, staff and users should be able to specify that they want to print only a portion of the index or a file label. Some of the common reports needed in a records management system are

1. a printout of the screen
2. alphabetic subject/file index
3. numeric code/file index

4. files reserved (BF) list
5. unavailable file notice
6. overdue file list
7. file recall notice
8. file charge-in/out history
9. file volume labels
10. volume open/close forms
11. closed file reports
12. files eligible for disposal
13. files/volumes destroyed
14. files/volumes transferred to archives
15. files/volumes transferred to inactive storage
16. statistics on actions performed
17. use statistics based both on individual users as well as on files and subject areas.

*Oyedokun Ayodeji Oyewole is the President of Records and Information Management Awareness Foundation (RIMA Foundation), a Not-for-profit NGO that seek to promote proper management and security records and information for the benefit of the society and humanity. He can be contacted at: [president@rimaw.org](mailto:president@rimaw.org)*