THE AUSTRALIAN ARCHIVES RECORDS INFORMATION SERVICE SYSTEM

Bruce Arnold and Hilary Rowell

As part of its ADP Program the Australian Archives has established a major database holding intellectual control information about records and their administrative context. That database—the Records Information Service (RINSE)—can be searched online by authorised users and generates a microfiche output (in registration, inventory and index format) which serves as the body of the organisation's main public finding aid. The input facility has been designed so that there are a number of automatic checks and validations to ensure that the data that is finally loaded is consistent and satisfies basic quality control criteria. One of the main features of the retrieval facility is that it allows the user to search online using a number of different retrieval options either singularly or in combination. The user also has a wide range of choices as to the amount of material that is displayed or printed.

RINSE and Intellectual Control

As most readers of *Archives and Manuscripts* are aware, the Australian Archives has established a major database containing intellectual control information about Commonwealth records and their administrative context. This article provides a brief introduction to that database—the Records Information Service (RINSE)—describing its structure, coverage and possible future development.

The following paragraphs may be of interest because they describe how the Archives has automated some of its intellectual control activities and outline the derivation of the organisation's main public finding aid from an online database.

Archives ADP Program

The Australian Archives is responsible for developing and administering policies, procedures and machinery relating to the control, accessibility, retention, destruction, custody, preservation and storage of Commonwealth Government records. The Australian Archives is organised into a central office (in Canberra) and regional offices (in all state and mainland Territory capitals).

In 1982-83 a major consultancy project was undertaken to review requirements covering the gathering, organisation and use of information about Commonwealth records.

This resulted in a strategy outlined in the 1983/84 ADP Strategic Plan. It highlighted not only the cost effectiveness of the proposed ADP facility but also its pivotal role in meeting the Australian Archives legislative commitments and providing a more effective use of archival material.

After the expansion of the Systems Management Section, the purchase of hardware and software, and further analysis of the work done on the consultancy project, specific applications were developed inhouse with short term contractors as needed.[1]

The major applications which have been developed are:

- Records Information Service (RINSE) System which covers the intellectual control of records. This was developed on BASIS.
- Physical Control System (PCS) which supports the activities of transfer, repository location and destruction of consignments; the issue of items to the search rooms and to agencies and their return; and the type and size of vacant repository space. This system was developed on ORACLE.
- Australian National Guide to Archival Material II (ANGAM II) which records information on those items in Archives' custody on which access decisions have been made. On-line access to the database is available to the public and a microfiche version will be produced shortly. This system was developed on BASIS.

A System User Manager position has been created for each system within the section responsible for the functions it covers. The RINSE User Manager is located in Records Data Services.

Pre-ADP Environment

As outlined in previous articles, the Australian Archives uses the Commonwealth Record Series (CRS) System as a management technique which underpins all major aspects of its operations.[2]

The system is based on the identification of record series and the agencies or persons who created and/or control them. Identifying and, where appropriate, descriptive information is prepared for each entity and links

noted between agencies, persons and series. Organisations (groups of agencies) and families are also identified and links noted.[3]

In the pre-ADP environment over 20,000 CRS System series and 5,000 agencies, persons, organisations and families had been identified, numbered and described.

The CRS System was being introduced into regional offices progressively replacing the earlier Accession System technique of control.[4] The proposal to computerise intellectual control provided an impetus to speed implementation of the CRS System. By the early 1980s all regions were using the CRS System for new transfers. By 1985 approximately half of Archives holdings were controlled under the CRS System and half under the Accession System.

Prior to the implementation of RINSE all the Archives intellectual control activities were handled manually. Registrations and inventories were prepared as handwritten drafts and approved before being typed. The associated indexes were compiled by hand using a Stripdex system. The authorised documentation was then photocopied numerous times, copies being filed by hand in loose-leaf binders in all Archives offices for consultation by the organisation's staff and clients.[5]

That process was resource-intensive and time consuming. It necessarily resulted in the generation of backlogs and inhibited the organisation's ability to respond effectively to administrative change, a factor of particular significance given the frequent restructuring of the Commonwealth machinery of government in recent years.

System Design

RINSE was specified and designed by Archives officers (within what are now the Records Data Services and Systems Management sections), following fundamental work on the overall system by the consultants in 1982-1983. That work had included an assessment of the organisation's current and future needs, a review of developments in other institutions and extensive consultation with regional and central office staff of the Australian Archives.

The RINSE System is made up of:

- a database and retrieval facility using BASIS.
- an input facility (using PL/1 to drive full screen data entry facilities) and temporary storage files. Approved data passes overnight from the temporary storage files to the RINSE database.

It was designed initially for online use by Archives officers, rather than the organisation's clients, while generating a variety of paper and microform outputs which serve as the main public finding aids.

The development of RINSE has involved no significant changes to the conceptual basis or practical application of the CRS System. The only changes to registration data have been the addition of some new retrieval codes to all registrations and the splitting of some fields. Of course the retrieval facility enables the retrieval and display of data in a wide range of combinations and formats not possible under the manual system.

The Database

The RINSE database, as noted earlier, utilizes the BASIS database management package.

From a retrieval and input perspective the database is structured around five modules, which equate to the basic CRS concepts:

- agency
- person
- series
- organisation
- family

The RINSE database provides a national coverage of CRS System controlled records held by the Australian Archives. Information held on RINSE is accessible from any region and covers all regions.

The database at the moment is restricted to CRS intellectual control information. Loading of Accession System information is underway and RINSE will eventually hold all CRS and Accession System data (see under Expansion of the Database below).

It was decided to create fields for all the data on existing agency, person and series registrations including basic identifying data (such as number, title/name, date range), links to related registrations (such as an agency's predecessors and successors; the agencies which created a series) and descriptive text (covering, for example, the establishment, functions and abolition of an agency).

Fields were created for basic identifying information only for organisations and families.

The entry of information from existing registrations was undertaken using external contractors. Technical and resource factors meant that this backlog was loaded in bulk using a special computer program, rather than individually through the input facility. Over 25,000 registrations, dating back three decades, were added to the database in this way.

Prior to implementing the retrieval and input facilities staff undertook data cleanup work to ensure that the data met basic system standards for retrieval and reporting. Some of the essential information in the paper finding aids was inevitably absent/incorrect or had been miskeyed.

Data cleanup provided an opportunity for the organisation to ensure that crucial data was correct and to standardize some formats and conventions which had varied during the development of the CRS System. The exercise was selective: not all data on every registration could be manually or automatically checked and where erroneous, corrected.

Data cleanup is necessarily an ongoing concern. However, in the ADP environment with a powerful retrieval tool, with simpler and decentralised data entry and clear procedures and standards in place, this task has now been largely delegated to regional staff. Major 'global' changes can be made directly to a number of registrations using BASIS rather than the input facility. Such changes have to be controlled centrally to ensure that the integrity of the data is not compromised by using two input facilities.

The RINSE database currently holds all registrations compiled using the CRS technique. There are over 26,000 series, with over 2,000 new series being added each year. It holds some 6,000 agency, person, organisation and family registrations (with a current growth rate for agencies of around 200 to 300 per year).

Input Facility

As outlined above, the CRS intellectual control information assembled by the Australian Archives prior to 1987 was loaded in bulk directly onto the database. However, all new registrations and revisions or cancellations of existing CRS registrations are entered via the RINSE input facility.

The processes are roughly analogous to the sequence of steps used for processing registrations before the implementation of RINSE.

Any new registrations or changes to existing registrations thus initially have a draft status, passing through a validation and approval process before being formally authorised and then added to the RINSE database.

Quality control is facilitated through a variety of validation mechanisms. Those validations range from the refusal of the system to accept incorrectly formatted data in some fields (for example, to accept alphabetical characters in a numeral-only field) to automatic warnings if new information fails to match related data already on the database (for example, a date conflicts with the date in a cross reference). The error messages displayed to the user highlight where the mismatch has occurred, enabling the user to return to the particular screen and make the necessary correction. Some entries such as title and date range are mandatory, thus ensuring a minimum standard for all registrations.

In essence, users entering data see two types of screen. Some screens look very much like a form. They are highly-structured, containing a sequence of individual entries. Other screens allow the entry of textual information (from a few lines to many pages, where appropriate) and utilize basic wordprocessing facilities.

The authorisation process involves a delegated officer (generally a different person from the individual who prepared the draft) examining each screen and then formally approving that draft, changing its status on the system from a draft to an approved registration. The approved registrations update the RINSE database overnight.

Microfiche and summary paper printouts covering additions to the RINSE database are produced to provide backup to enable staff to continue working should the RINSE System be out of operation. (Of course Systems Management apply normal data backup arrangements in addition to these specific user requirements.) A range of statistical reports about registration activity are also generated from the database.

Retrieval

There are essentially two main avenues for the retrieval of data from RINSE. Using menus staff can conduct online searches of the database, displaying information in a variety of formats via computer terminal (and making a paper printout when a copy of that display is required). Alternately, they can study information presented on computer-output microfiche.

At the present time (December 1988) only staff of the Australian Archives have online acess to RINSE. However, the extension of that access has been approved in principle. Members of the public or official clients will be able to search the database using terminals located in the Archives Reference and Guide rooms or agency offices.

Those clients, as noted below, at present use the ANGAM I microfiche generated from RINSE (rather than conducting independent online searches). However, they may request ad hoc paper printouts of searches conducted on their behalf by Archives staff.

Online searches by Archives staff generally involve the following sequence.

Once the users have gained access to the RINSE retrieval facility they read a short text providing current information about the System and then select the option identifying the particular RINSE module (for example, agency or series) of concern to them from a menu.

Users are then presented with options covering a range of possible retrieval points. Agency registrations can be retrieved, for example, by title, by date range, by parent organisation, by region or by a combination of those points.

The System then retrieves the information, offering options which cover the display of the data. Officers using the terminals can display the information retrieved from the database in several variants: for example, as full registrations, as partial registrations or in list form.

In addition to access through the above menu driven retrieval facility available to most staff, certain users in Central Office with Administrator status can use BASIS language commands to retrieve data. This method is used for checking problems, monitoring standards, data cleanup and providing retrieval on rarely used options not available through the retrieval facility menus. This access requires a knowledge of the BASIS language and syntax whereas the RINSE retrieval facility being menu driven does not.

ANGAM I

The Australian National Guide to Archival Material (ANGAM), the organisation's main public finding aid, has three parts—the first part of which is now produced from RINSE.[6]

ANGAM I contains intellectual control information about Commonwealth records and the administrative entities or individuals which created them. Pending the entry of Accession System information onto the RINSE database ANGAM I consists of three elements:

- Administrative Arrangement Orders (produced by microfiching the paper orders);
- computer output microfiche generated from the RINSE database (CRS material); and
- registrations and inventories in paper format (Accession System material—partial coverage only).

As noted above, RINSE will include Accession System material in the future. Therefore, that data will be presented on the ANGAM I microfiche along with CRS material.

The presentation of that text is similar to the format used on the superseded paper registrations and inventories, being broken down into a sequence of entries.

The fiche have the following broad structure:

- an introductory text about ANGAM I and its use;
- Administrative Arrangement Orders and short introductory text about their basis or use (not COM);
- indexes to organisation, agency, family and person registrations;
- organisation (with inventories of agencies) and family registrations;
- agency registrations and inventories of series;
- person registrations and inventories of series;
- series registrations.

Implementation

As apparent from the comments above, the implementation of RINSE was a major task extending over several months. Extensive testing of the hardware and software (at a regional and central office level) was essential to ensure that the lines of communication were operating correctly, that there were no major 'bugs' in the software and that the existing data that had already been loaded was accessible to users in the correct format.

Detailed procedures, standards, operational guidelines and training material were devised by Records Data Services section officers for use by regional staff and those personnel in the Archives central office who would use RINSE. That documentation has been collected in the CRS Manual, which was the subject of an article in a recent issue of *Archives and Manuscripts.*

RINSE training was undertaken, region by region by central office Records Data Services staff and an officer seconded from the Staff Development and Training section.

The RINSE retrieval facility was implemented progressively in all regions in April-June 1987 as it was available and tested before the input facility. In September-November 1987 the input facility was implemented.

Expansion of the Database

Once the RINSE System was fully implemented and initial teething problems had been overcome, work was undertaken on a change to enable the loading of Accession System data on the RINSE database.

It had been recognised in the early 1980s that, as approximately half Archives holdings were controlled under the Accession System, it was essential that data from the System be entered on the computerised system. The option of converting all Accession System controlled material to CRS System control was rejected because of the resources it would have required. It was decided that with some modifications Accession System accession series could be entered on the RINSE database. Because of the potential complexities, detailed consideration of the problems was deferred until the RINSE System was operational.

The ability to add Accession System data to the RINSE database and thus enable its inclusion in the ANGAM I microfiche and its availability through the retrieval facility is seen as a major step forward. Previously only a very small portion of these holdings had been covered in the manually prepared ANGAM I because of the difficulties in preparing inventories for this backlog as well as keeping up with newly registered CRS material. The bulk of the Accession System accession series have now been keyed and loaded on a temporary database.

Work on cleaning up and modifying this data will occupy a high proportion of one officer's time in 1989. The date for loading this data

onto RINSE will be dependent on resources and hardware acquisition arrangements.

AWM Data on RINSE

Co-operation between the Australian Archives and the Australian War Memorial has been reflected in an exchange of intellectual control information between the two organisations. Summary data about the War Memorial's holdings of Commonwealth and other records has been keyed onto the RINSE database. It is therefore now available through the RINSE retrieval facility and in microfiche format as ANGAM III.

Functions

Work is underway within the Australian Archives to enhance the RINSE database. The development of most interest to occasional users of the Australian Archives and to readers of *Archives and Manuscripts* concerns the creation of an online function-driven retrieval system drawing information from the RINSE database.

That system would be very user-friendly, oriented towards direct use by the organisation's public and official clients. Users would enter one or more function terms (of their own choosing, rather than from a specified list of indexing terms) to initiate a search of the database. The computer would use an automated thesaurus to match the users own term/s with descriptors previously assigned by Archives staff to all registrations, before retrieving the identified registrations and displaying them to the user on screen.

Future Changes

A user review of the RINSE System was conducted in mid 1988. Detailed questionnaires were distributed to RINSE users in all regions and central office seeking comments on all aspects of the system.

The changes which resulted from the review have been made to the system and at the time of writing (December 1988) are being tested. The changes will result in a major improvement in the format and presentation of reports using laser printers. Other changes increase efficiency.

The system will undergo a major technical revision with the introduction of the new version of BASIS (Release L) due to the enhanced data entry and storage capabilities. The functionality of the system will not be changed.

It is anticipated that Release L of BASIS will be available in late 1989 and the conversion of RINSE to Release L is plannned to commence in early 1990.

As Release L offers a number of additional and improved capabilities, it is anticipated that a review of the system to recommend on changes to

functionality will be undertaken after the technical conversion has been completed.

Conclusion

In conclusion, the Records Information Service (RINSE) System offers significant and tangible advantages for the Australian Archives and its clients.

The registration process has been speeded up, to the gain of Archives staff and its clients. In comparison to the several months formerly required for the manual preparation, approval, typing, copying and central distribution of a paper registration, information about records and associated agencies or individuals is available quickly (generally on a 24 hour turn around). Decentralised data entry and approval with machine assistance has increased productivity and (arguably) intangibles such as work satisfaction: the production process has been shortened and staff have been relieved of much checking or editing of an essentially mechanical nature.

The automatic generation of a substantial part of ANGAM I and of other indexes, listings, reports and statistics has resulted in tangible resource savings, allowing the Archives to assign those officers to other activities (e.g. the revision of registrations affected by administrative changes).

RINSE offers significant advantages through its rapid and flexible retrieval and presentation of intellectual control data. A large number of options are available singularly or in combination—this means that searches or displays can be selected for the occasion, whether it be an Archives officer wanting detailed information about a previous series or a search undertaken on behalf of a large central agency requiring basic machinery of government information covering a number of outriders in the portfolio and a listing of the series those bodies produced.

RINSE was produced by the Archives 'in house'. It will be relatively straightforward to streamline and further refine, building on user comments gathered through fault-reporting, reviews and other mechanisms. However, the refining has to take place alongside day to day operation of the system.

End Note

This article benefitted from comments and suggestions made by staff in the Records Data Services and Systems Management Sections involved in the development and implementation of the RINSE System.

FOOTNOTES

1. The Archives ADP facility is based on a PRIME minicomputer (9955 Model 2), situated in the regional office at Mitchell, ACT. The computer has a capacity of 32 megabytes

of main memory and 8 storage units, each of 750 megabytes capacity. The machine is linked to a network of over 115 PRIME PT200 terminals and laser and dot matrix printers located in all regional offices of the Australian Archives and in the central office. Case multiplexors (models 815, 825 and 850) are used to handle communications. The operating system is PRIMOS. A picture of the wider ADP program is given in successive editions of the *Australian Archives ADP Strategic Plan* and in *ADP in the Archives – Managing information about Government Records*, a paper by Colin Pitson for the 10th International Congress on Archives at Bonn, September 1984.

2. A picture of those manual activities and finding aids is provided in a sequence of articles by P.J. Scott, G. Finlay and C.D. Smith which appeared in *Archives and Manuscripts* from 1978 to 1981.
3. In summary, an Agency is a record creating body (e.g. a government department or Royal Commission) with its own record keeping system. A Person is an individual (e.g. a Prime Minister) associated with the Commonwealth and whose records in archival custody reflect that involvement. A Series is a group of records which resulted from the same accumulation or filing process with the same numerical, alphabetical, chronological or other identifiable sequence; or are of similar format or informational content.
4. The Accession System allocated a number to each accession (or batch) transferred by an agency or person at one time. Sub-numbers were allocated to each series identified within the accession (e.g. MP234/1, Indexes; MP234/2, Correspondence). Therefore a general correspondence series from which material was transferred to archival custody annually would have a new accession series number for every transfer (e.g. MP234/2, MP375/2, MP458/1 etc). This contrasts with the CRS System where a series is allocated a number (e.g. CRS A571). This covers the series wherever it is located: series consignment numbers are allocated to each transfer of that series (e.g. CRS A571/1, A571/2).
5. Prior to the introduction of RINSE the Archives maintained around 22 sets of finding aids nationally, involving the annual copying and insertion or withdrawal of up to one hundred thousand sheets of inventory, registration and index documentation.
6. ANGAM II, as mentioned above, is a separate database covering information on access decisions. ANGAM III, described later in the article, contains synoptic intellectual control information about the Australian War Memorial's holdings of Commonwealth and other records.