Cataloguing for the Year 2000: Continuity and Innovation in a Changing Environment

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Abstract

During the last five years the bibliographic services function at the Library and Information Service of Curtin University has undergone an extensive process of restructuring, aimed chiefly to rationalise costs and encourage cooperative action. At the same time the technological environment has been and continues to be systematically upgraded. This paper examines the impact of these changes on cataloguing practices and workflows. Topics covered include: the history of cataloguing at Curtin, the impact of technological change on cataloguing practice, the use of multiple sources of MARC records and implications for authority control, the question of tailored records for specific user groups, the development of electronic statistics gathering, automated quality control, selection of material for outsourcing and the redistribution of cataloguing tasks.

INTRODUCTION

The aim of this article is to outline some of the processes and workflows which have evolved at Curtin LIS in recent years in response to enhancements to the technological environment and reviews of the cataloguing function.[1] It is not intended to provide a comprehensive picture of current practice, but rather to elucidate what is distinctive about the Curtin experience and to highlight specific instances of technological innovation. In the current technological environment, any system is necessarily prone to change and in any case represents a compromise between the interests of different stakeholders, so it would be misleading to suggest that what has evolved at Curtin represents a completed process. However, in terms of standardisation and efficiency current processes do mark the entry of cataloguing operations at Curtin into a qualitatively new phase of their development.

HISTORY

Historically, two main factors contributed to the development at Curtin of a distinctive, not to say idiosyncratic, cataloguing style. The first of these is perhaps connected with the university's origins as a teaching rather than a research institution. The library's relatively small size allowed browsing to be adopted as perhaps the main access method to the collection for users, with the catalogue playing a comparatively minor role. The official philosophy behind early cataloguing at Curtin stated:

[1] I should like to thank Karen Tang and members of the Bibliographic Services Unit at Curtin LIS for their comments on an earlier draft of this paper.

> The WAIT [i.e. Curtin] Catalogue is intended to be simple and easy to use. To this end, each catalogue record is as brief as possible and only the basic added entries are made. The catalogue is not meant to be much more than a finding list to the Institute's holdings. The information in the catalogue can be supplemented by the various bibliographic tools in the reference collection.[2]

Cataloguing was thus intentionally minimal and tailored to the perceived needs of specific user groups.

The second factor contributing to a distinctive cataloguing ethos at Curtin was the way in which automation developed. Library automation was embraced comparatively early and until adoption of DRA in late 1994, Curtin continued to operate and develop a library system which had been originally created in-house in 1971.[3] This permitted library systems staff to cater easily for the particular needs of library users within the Curtin community without the need (or in some respects the possibility) to comply to externally imposed standards if these disagreed with local requirements.

In the long term, while local policies undoubtedly aided the users for whom they were devised, they sometimes proved inadequate to Curtin's transition to a research institution and to the progressive shifting of interdisciplinary boundaries which has occurred during the 1980s and 1990s. Moreover, because decisions on standards and local needs were often taken in isolation from the wider library environment, resource sharing and specifically the full and efficient use of external bibliographic utilities became increasing difficult. At first fields and subfields that were not allowed for in the basic cataloguing outline were routinely (and automatically) stripped from incoming MARC records. Increasingly extensive local tailoring was applied to a wide range of records as Curtin standards devised in the mid-1970s became more and more out of date. Migration to DRA in 1994 provided an impetus for review. Significantly, the stripping of unwanted fields and subfields from incoming records was no longer practicable. MARC data obtained from outside sources began to be accepted unaltered and guidelines for original cataloguing were systematically revised to bring them fully in line with national and international standards.

THE CURRENT ORDER

The most recent restructuring of cataloguing at Curtin followed the report of an external review across the four public university libraries in Perth initiated by the West Australian Group of University Librarians (WAGUL) and conducted in February 1997.[4] The recommendations of the WAGUL report included suggestions

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[2] 'Philosophy Behind WAIT Cataloguing Style' *Pre-DRA Cataloguing Manual* p4 (March 1989)

[3] For a detailed history of pre-DRA automated cataloguing at Curtin see G Allen 'The Automation of the Curtin University of Technology Library' *Australasian College Libraries* vol 5 no 2/3 1987 pp49-62 and *Automation at the Curtin University of Technology Library, 1990* Curtin University of Technology Library Perth 1990.

[4] R Wade and V Williamson 'Cataloguing Costed and Restructured at Curtin University of Technology' *Australian Academic and Research Libraries* vol 29 no 4 1998 pp177-89.

regarding the streamlining of cataloguing procedures to eliminate remaining local practices and facilitate copy cataloguing. Principally at issue were local policies on the allocation of call numbers. In many cases these had initially been designed to give better browsing access to the collection, but had been introduced at a time when the collection was considerably smaller than it is now and based on long superseded editions of the Dewey Decimal Classification. With the introduction of the 21st edition of DDC, these policies were systematically reviewed and except in a small number of cases (principally the classification of art and literature, where the advantage of continuing previous practice was considered to outweigh the benefits of streamlining) the decision was made to adhere to the DDC schedules as written.

As a result of this streamlining process the amount of time spent amending copy records imported from external sources has been reduced enormously. Most copy is now accepted unchanged, providing that it is accurate and complete in the sense of containing a DDC number and LC subject headings. Apart from minor editing, only two categories of material normally require amendment: 1) literature and literary criticism, where a local variation on DDC has been adopted to allow for a fuller treatment of Australian literature, and 2) serials, which are still classified using a local adaptation of UDC. Certain other types of material are afforded particular scrutiny to ensure consistent treatment: 1) art, which Curtin prefers to classify by country whenever possible, 2) law, where DDC itself offers alternative classification patterns, and 3) primary teaching materials.

Restructuring of the Bibliographic Services area was also driven in part by the effects of university-wide voluntary separation scheme announced in March 1997 which resulted in the loss and non-replacement of several cataloguing staff. As of December 1999 the complement of the two work teams most directly associated with the cataloguing function (Specialist Cataloguing and Copy Cataloguing) was as follows (expressed as full time equivalents): 3.6 librarians, 1 technician and 4 library assistants (including 1 supervising library assistant). Contributions to the cataloguing process are also made by staff in other Bibliographic Services teams by, for example, downloading records at point of ordering or serials accessioning.

Technological Environment

Curtin operates a DRA "Classic" library system (currently version 2.5-1) on an Alpha computer managed by University Information Systems and Technology. Cataloguing and other Bibliographic Services staff have telnet access to the DRA system from networked PCs operating under Windows NT.

Access to the most frequently used cataloguing tools is made available in electronic format through the university Novell network. The CD-ROM versions of Dewey for Windows, Cataloger's Desktop (for MARC formats, LC Subject Cataloging Manual, Anglo-American Cataloguing Rules, LC Rule Interpretations, CONSER Cataloging Manual and Editing Guide, etc.) and Classification Plus (for LC subject headings) are thus available at each cataloguer's workstation. Access to the LC name authorities file is provided through DRAnet, a DRA mediated utility integrated into Curtin's DRA installation. The LC subject headings file is also available through DRAnet as well as through Classification Plus.

SOURCES OF RECORDS

Records are added to MARION (MArc Information ONline), the DRA Bibliographic database, from a variety of sources: original cataloguing using Netcat (the DRA cataloguing module), copy cataloguing obtained by Bibliographic Services staff from several different sources, records supplied with books ordered from Coutts and DA within the framework of the WAGUL agreement on consortium wide preferred suppliers, and specific outsourcing contracts for occasional backlogs or for Asian language materials.

Of records obtained from different copy cataloguing sources, LCMARC records are available for use immediately; they can be copied directly from DRAnet to MARION in real time. Records from other bibliographic utilites are loaded overnight into a DRA holding database from which they can be copied across to MARION. Consequently they are not available for use until the day following downloading.

Original Cataloguing

Only a very small proportion of records (approx. 7 per cent) is catalogued originally by Curtin staff.[5] Records are input into the DRA system using its cataloguing module, Netcat.

MARION

A small number of new records are created by copying and adapting records that already exist on MARION, usually for different editions of a work or different titles within a series where the majority of bibliographic data remains the same.

LCMARC

Library of Congress records are available via DRAnet and can be copied instantly across to LIS database. LC records are used as the primary source of data for materials from mainstream, particularly U.S., publishers, though as more MARC records are received with books from WAGUL suppliers reliance on LCMARC may be expected to diminish.

National Bibliographic Database

Australian NBD records are available through Kinetica using KineticaWeb. The "Request MARC Record" function is used to tag records for downloading. A file of records is transferred automatically each afternoon and transferred overnight to the DRA holding database. The NBD is the primary source of data for Australian materials.

OCLC

The OCLC database is accessed through OCLC Passport for Windows. Records are downloaded immediately to individual PCs and then transferred by ftp to the library Alpha. Records become available on the DRA system the following day. OCLC is

[5] The comparable figure for 1985 was 20 %: L Parisotto 'LCSH Tapes and Authority Control at WAIT' *Cataloguing Australia* vol 11 no 1 1985 p11.

used for publications not found either on LCMARC or the Australian National Bibliographic Database.

RLIN
RLIN records are available through KineticaWeb, and can be saved to individual PCs using the Keep Record facility, then sent via ftp to the Alpha. Because of the complexity of the transfer process, RLIN is used only very occasionally when no record is available from other sources.

National CJK Database
The Australian National CJK Database, accessed through Kinetica, is used occasionally for Chinese, Japanese and Korean material not found in other sources, records being downloaded in the same way as those from RLIN.

Marcom
The Australian distributor Marcom Projects makes MARC records available for the videos and other other audiovisual material available from them. Records can be downloaded from the Marcom website to individual PCs and then sent by ftp to the Alpha. Since better quality records are normally available from other sources and the search and transfer process is rather complex, Marcom has not been used as a routine source of copy cataloguing data.

SCIS
The database of the Schools Curriculum Information Service is used as the primary source for school textbooks and other teaching materials intended for Curtin's Teaching Resource Library. Accessed through the SCIS website, records are downloaded to individual PC and then sent by ftp to the Alpha.

COUTTS
Under the terms of the WAGUL agreement, MARC records are received with books ordered from Coutts Library Services in Canada. At present this represents most North American monograph imprints (with the exception of certain categories of material where Curtin wished to retain local policies or interpretations with regard to classification, notably art, law and literature). For each consignment of books sent to Curtin a file of records is made available on the Coutts server for downloading by Coutts staff. This file is then transferred to the Alpha by ftp.

DA
DA Information in Melbourne is the preferred WAGUL supplier for European and Australian imprints. At the time of writing Curtin has begun a trial period of obtaining MARC records with consignments of books. The process is similar to that already established with Coutts.

Outsourcing
Outsourcing is used from time to time to eliminate backlogs, for special projects and for categories of material for which Curtin is unable to provide the necessary expertise in-house, for example, some Asian language, non-roman script material. Unlinc has been the agency most frequently used for this type of operation because like Curtin they operate with a local DRA library system. They are thus able conveniently to import records directly from their database into the Curtin system or

to create records directly onto the Curtin database. Because of Unilinc's familiarity with the DRA system they have been used to add item records as well for Curtin material as well as creating bibliographic records. CAVAL has also occasionally been used for outsourcing projects with ABN/Kinetica used as the method of delivery to Curtin.

The following table gives an indication of the number of non-serial records obtained from different sources:

Three Months Ending	**June 1998**	**Sept. 1998**	**Dec. 1998**	**March 1999**	**June 1999**	**Sept. 1999**	**Dec. 1999**[6]
Original	324	511	108	210	263	280	245
MARION	18	74	21	40	43	89	76
LCMARC	1 427	2 002	1 232	696	1 024	1 357	682
NBD	1 904	1 776	1 815	2 064	1 492	1 475	2 269
OCLC	158	202	68	173	99	359	255
Coutts	0	0	0	495	213	1 085	1 031
DA	0	0	0	0	0	0	149
SCIS	0	0	0	0	4	70	86
Total	**3 831**	**4 565**	**3 244**	**3 678**	**3 138**	**5 715**	**4 793**

ELECTRONIC STATISTICS

Considerable staff time used to be taken up by collecting cataloguing statistics manually on paper and by processing and interpreting the results, which because of inevitable human error were widely recognised to be highly inaccurate. This manual gathering of statistics was replaced in early 1998 by an automated system. By exploiting the fact that the DRA item record contains a field with the date at which the item record was added to the database, and that this field remains constant unless changed manually, it has proved possible to calculate electronically the number of new or duplicate items added to the database within any specific date range. Using the "Permanent Location" and "Material Type" fields on the item record allows a further breakdown by library branch and by format of material. An online report containing this information can be generated in a few minutes by cataloguing staff.

A second program uses the extracted file of bibliographic records for a given date range to count the number of MARC records derived from each of the sources of copy cataloguing and those which are the result of original cataloguing at Curtin. It does this by interpreting the various control tags which appear on different classes of records either innately or as a result of local automatic transfer processes. Coutts records, for example, are identifiable by the presence of an 037 subfield b with the value "COUTTS". In addition, cataloguers insert into each record (against the margin of the 035 tag) a two digit identifying number according to the level of intellectual input required to complete the record to Curtin standards.

[6] To 12 December 1999.

The statistics program also produces a report of all control numbers processed together with a coded listing of the statistical category into which they fall, and notes records which have been excluded because of anomalies in their encoding level or bibliographic level. This report was originally intended as a diagnostic tool for testing the operation of the statistics report programs, but also serves in its own right as a quality control mechanism and is obviously capable of extension to provide more comprehensive automatic checking of MARC records.

Table of Statistical Categories

0	Code not input, e.g. for records from Coutts, DA, etc.
66	Simple Copy Cataloguing
77	Changes Required to Descriptive Tags Only
88	Application of Local Classification Policies (Art/Law/Literature)
90	DDC Classification Required
94	Subject Analysis Required
96	Record Copied for Different Edition
Where more than one type of change is required the higher of the applicable numbers is used.	

A third program has recently been developed to count certain other categories of material which fall outside the range of the other two programs. These are firstly items added to Curtin's collection of microfilm accounting dissertations, which because they do not receive full cataloguing in terms of classification or subject analysis are excluded from the monograph count outlined above. Secondly this program counts the number of serial volumes which are made available for loan (and are thus given DRA item records for circulation purposes) and the number of bibliographic records created for individual special issues of serials or for individual items in monographic series whose primary means of bibliographic control is a serials record (serial "analytics"). As with the second statistics program, a diagnostic file is created which allows identification and manual correction of errors in coding or data input in both bibliographic and item records.

So far electronic statistics counting has been restricted to DRA item records and associated bibliographic records. Extension of the system to cover serial titles (other than analytics and serials for loan) is more problematic, since these do not have associated item records and the DRA file structure does not provide a useable date field anywhere in the serials "Copy" or "Holdings" files, which are used to define the branch location and extent of serial holdings. It is relatively easy to count the total number of serials held in the library system and to break this down by branch; it appears quite difficult, however, to provide the same information for titles/copies added within a specific time period.

Examples of Statistical Reports

New Titles Added by Material Type, 01/08/1999 to 31/08/1999

All Branches

Material type	New Titles	New Items	Dup. Items	Total Items
Books	1 594	1 743	328	2 081
Manuscripts	9	9	0	9
Books + MSS	**1 603**	**1 762**	**328**	**2 090**
Computer Files	15	17	0	17
Kits	1	1	1	2
Microforms	1	1	0	1
Sound Rec.	4	4	0	4
Video Rec.	45	48	41	89
Other A/V	18	18	0	18
Total A/V	**84**	**89**	**43**	**132**
Off Campus[7]	2	2	17	19
TRL Material[8]	169	171	8	179
Grand Total	**1 858**	**2 024**	**396**	**2 420**

New Titles added by Cataloguing Source and Degree of Curtin Input
01/08/1999 to 31/08/1999

	Marion	Lcmarc	NBD	OCLC	Coutts	SCIS	Other	Total
0	0	0	0	0	370	0	11	381
66	0	330	367	3	0	2	0	702
77	0	40	92	2	1	32	0	172
88	0	47	134	0	1	1	0	183
90	0	23	132	25	0	0	0	180
94	0	0	5	6	0	1	0	12
96	32	69	21	2	0	3	0	122
Orig.	-	-	-	-	-	-	106	106
Total	**32**	**509**	**751**	**38**	**372**	**39**	**117**	**1858**

[7] Materials belonging to the Off Campus Library Service and intended primarily for distribution to distance education students. Format is not indicated for this material in the DRA item record.

[8] Materials belonging to the Teaching Resources Library. As with Off Campus material format is not indicated in the DRA item record.

ROLE OF THE CATALOGUER

The simplification and removal of local in-house practices with regard to cataloguing, the full adoption of national and international standards and the introduction of electronic statistics collection have considerably decreased the amount of time required by cataloguing staff (professional cataloguers, technicians and library assistants) to complete the cataloguing process. Part of the time saved has been absorbed by a reduction of staff numbers. And although a certain amount of additional time is now spent on management issues relating to the use of records from multiple sources, at the same time staff have been able to devote more energy to new types of activity. For example, closer attention can now be given to the evaluation and negotiation of licences for electronic materials and staff have an increased role at public service points in the Robertson Library. The Copy Cataloguing Team has taken on the significant additional role of monograph accessioning. There is also potentially greater opportunity for the initiation and completion of project work, either on issues relating to maintenance of the catalogue database or to quite different library concerns outside the traditional purview of Bibliographic Services. Significantly, during 1998/9 the unit has been able to absorb the additional burden of the integration of the Kalgoorlie Campus library catalogue into the DRA database without major disruption to ongoing tasks.

ONGOING CONCERNS

The main continuing cataloguing tasks required to enhance consistency within the catalogue database and to increase the facility and effectiveness with which the scholarly community is able to access Curtin resources are quality assurance, authority control and the contribution of Curtin records to the National Bibliographic Database.

Quality Control

Records are checked against items received at the time of cataloguing (that is, when the local call number is added) and any necessary amendments made. For the majority of items this check is performed by library assistants and because of the volume of material involved is necessarily fairly cursory. An additional level of checking is performed on certain categories of material (for the Reference Collection and for the Teaching Resources Library), where there are particular requirements for bibliographic description and access, and changes made as appropriate, in the first instance by a library technician.

In addition, a series of quality control programs is run periodically against the catalogue database. These identify, for example, records with invalid language codes, bibliographic levels and record types, records where essential fields (245, 260, 300) are missing, and records with repeated non-repeatable fields. The identified records can then be corrected manually.

The diagnostic program produced as part of the electronic statistics package (see below) also identifies certain invalid codes (encoding level and bibliographic level) which can then be corrected manually. There is considerable potential for expanding this aspect of the package to embrace more comprehensive quality control over

bibliographic records. This would be particularly useful since the statistics programs already routinely identifies records recently added to the database.

Authority Control

Before conversion to DRA considerable attention was paid to authority control within the catalogue database.[9] However, the pre-DRA authority system was not carried over and at the present time there is no systematic approach to authority control. Moreover, some headings in the present database resulting from the pre-DRA authority system are in direct conflict with forms established by the major bibliographic utilities. Thus MARION contains a large number of duplicate name headings because prior to the introduction of DRA date and other qualifiers were removed from incoming data. These pre-DRA forms now exist in parallel with fuller forms on incoming records. A small amount of authority work is currently carried out on an *ad hoc* basis and in response to requests from client groups. For example, a small number of cross references have been input for names which exist in confusingly different forms (e.g. Chifley Ben → Chifley, J. B. (Joseph Benedict), 1885-1951) or for subjects where LCSH differs significantly from Australian practice (Australian Aborigines → Aborigines, Australian). One result of deriving catalogue records from multiple sources is that headings from different subject thesauruses enter the database. Headings not coded as LC (principally MESH and SCIS headings) are routinely deleted during the cataloguing process. Although in principle Curtin has adopted the Australian extension to LCSH, there is in practice little attempt to ensure that it is implemented except in specific cases, notably the headings for Australian Aborigines. The question of authority control is one that will need to be squarely addressed in the relatively near future.

NBD Contributions

Perhaps the major outstanding task for cataloguing staff concerns the contribution of holdings and bibliographic records to the National Bibliographic Database, an exercise which is expected to begin in the year 2000. Following an initial decision not to join ABN made chiefly on cost grounds,[10] Curtin records have been added to the NBD only sporadically, and because no attempt has been made to maintain the accuracy of holdings which have been added, a necessary first step is the deletion from the NBD of all existing holdings data. Now that anomalous local practices have been almost entirely eliminated, however, it should be a relatively simple matter to accompany this step with an ongoing commitment to contribute new holdings and bibliographic records and also to load those over perhaps the last two years. In order to ensure retrospective loads at an acceptable standard it will be necessary to begin a systematic upgrading process, the nature of which will vary depending on the category of record targeted. Many of the more recent records, for example, require little or no attention, while some groups, following corruption during a conversion project in the early 1970s may well require recataloguing from scratch. The prioritisation of this preparatory work, and hence of retrospective loads to the NBD, has yet to be determined.

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[9] Parisotto pp8-13.

[10] Allen p54.

CONCLUSION

At the end of 1999 cataloguing at Curtin is emerging from a lengthy and sometimes traumatic period of change which has seen major revisions of policy with regard to internal practice, to external relations with bibliographic utilities and library suppliers, and to technological environment. This change has been accompanied by a reduction in staff hours devoted to the cataloguing function and the need to accommodate complex database management initiatives such as the 1998-9 integration of records from Curtin's Kalgoorlie campus into the main library system. However, the streamlined and dynamic operation which is already largely established should provide a solid foundation for the efficient and timely provision of Curtin bibliographic information well into the 21st century.