

Electronic Journal Collections: Cataloguing to Improve Access

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Abstract:

Traditionally, the way a library user would expect to find a journal is through the use of a title search in the library catalogue. Electronic journals should be no exception. One would expect to find a catalogue record for electronic journals, just as we do for traditional print journals. Integrated citation/journal collections and electronic journal collections produced by IAC, Academic Press and Johns Hopkins Press and other vendors complicate this issue. Such collections, although a very good product for many libraries, are difficult to catalogue at the journal level. It is a simple task to create a catalogue record for "Expanded Academic Index" or "Project Muse" at the collection level, but doing only this would diminish the usefulness and value of the collection. In the end, all a journal user wants is to read it. This is a principal service that libraries offer to their users. However, the way that an electronic journal is catalogued plays a significant role in the quality of the service the user receives, and the likelihood that the user will effectively find the journal he or she needs. It is obvious that few libraries would have the staff resources to manually catalogue these journal collections at the title level. This paper outlines the approach and system that Flinders University Library has devised to "semi-automatically" add catalogue records to maximise user benefit from the integrated citation/journal collections and electronic journal collections to which it subscribes.

Introduction

In May 1997 the Flinders University Library had access to over 14,000 electronic journals, most available through compendia, the largest being Lexis-Nexis. This rich source of full text material was only accessible from within the database provider's online service and most catalogue users were completely unaware that quick and easy access was potentially a click away. Although Document Delivery staff were aware that this material existed, it was time consuming to check each database provider's source.

The prospect of manually cataloguing and maintaining this huge source of material was daunting, but if the process could be automated in some way, the use of the catalogue as a finding tool would be greatly enhanced for both users and Document Delivery staff. Systems staff therefore started looking at ways we could make use of the journal lists available on provider's web pages as a source of brief MARC records.

Electronic Journal Collections

The collections chosen for this project included Expanded Academic ASAP and Computer ASAP from the Information Access Company (IAC) using SearchBank search software, Academic Press journals from the International Digital Electronic Access Library (IDEAL),

the Johns Hopkins Press journals available from Project Muse and Lexis-Nexis. We started with the smaller collections because of their size and also because their web page sources were much easier to manipulate than the large and complex Lexis-Nexis pages.

Dynix System

Flinders has been using the Dynix library system since 1991 and is fortunate enough to have made a partnership agreement with Dynix Australia, now Ameritech, which gives us access to the source code for customised programming. Although this allows us to make minor amendments to the main code to enhance functionality or suit local preferences, in the main part, most customisations are add-ons that interface with the Dynix system. This cooperative agreement has allowed us to automatically create and index Dynix MARC records from a simple text file.

Issues

Cataloguing

Manual vs Automated Cataloguing

Having decided that we should improve access to those electronic journals for which we pay subscriptions, we needed to decide how we would catalogue them. Ideally, they should be catalogued to the same degree that hard copy serial subscriptions are catalogued, ie. full MARC cataloguing on ABN. However, in a non-ideal world, it was impractical to manually catalogue and maintain many thousands of electronic journals, especially the 14,000 from Lexis Nexis, not only in time but also in cost. We therefore considered ways in which we could automate the cataloguing process to not only speed up the process and save money, but also to facilitate easy maintenance to ensure the records were kept up to date.

Full MARC vs Brief MARC

While full MARC records, complete with subject headings, would be preferable, there was no ready source for this data, that we were aware of, that matched our collections. We might be able to get individual records from ABN, but we could not request them as distinct collections. However, we could find lists of titles in each collection via the web that we could use to build brief cataloguing records. Until a ready source of full MARC records became available, perhaps from the supplier or ABN, we decided that brief records would at least give title access to this important source of full text data.

Separate vs Combined Entries

The next question to consider was whether to create separate entries for the brief MARC records, or, to append the electronic access information to an existing serials record in cases where we already had a subscription in another format. The Library's Committee on Electronic Journals recommended in its 1996 report that only one catalogue record should be created to cover all formats. It was thought that this approach would avoid confusion for users who are presented with multiple entries for the same title. Deidre Lowe (1998) reported a similar preference for the "one record approach" in her description of the Virtual Shelf Project at Monash University Library and policies being developed by the National Library of Australia's "Electronic Unit". However, for this exercise, we decided to create a separate catalogue entry for each electronic journal belonging to the consortium collections for the following reasons:

- easier to program
- no complex matching algorithm required
- not all titles had ISSNs to facilitate matching
- easier to identify and maintain as a group

- easier to delete as a group
- does not compromise integrity of normal MARC records

Separate records also allowed us to assign a pseudo GMD of [Electronic Journal] which allows global keyword retrieval for “electronic journal” and search limiting by GMD. The GMD also displays clearly in Dynix list displays so that users can easily distinguish the electronic format from hardcopy or microform formats, e.g.

| Your Search: Advances in Mathematics | | | | |
|---|----------------|-------------|----------------------|--------------------|
| TITLE | RESPONSIBILITY | CALL NUMBER | PUBLISHER | DATE |
| 1. Advances in mathematics. | | 510.5 A24 | Serial Academic P | 1965- |
| 2. Advances in Mathematics Journal] | | | | [Electronic |

Subject Access

While subject access is desirable, there was no easy way to create subject headings from title lists without manually cataloguing each title. Adding entries to existing full MARC records would solve the problem for those titles already held, but this would only represent a small percentage of the records added. We therefore decided to forgo subject access and rely on title keyword and global keyword access to provide a quasi subject access. It was also believed that most searches for electronic journals would be for specific titles and while subject access is useful, it would not be a primary access mechanism. In particular, we wanted to assist Document Delivery staff in reducing the number of external requests for material held in electronic journal consortia collections of which we were previously unaware when checking the catalogue.

ISSN links

Although ISSNs were available for the 794 titles in the IAC ASAP collections, we originally decided not to include them in the MARC records. An ISSN search option was not available on the OPAC menu and it was unlikely that staff would search for these titles by ISSN. The main reason though, was to avoid an extra step in the serials checkin process. Serials checkin is normally done by ISSN and when only one match is found, it is not necessary for the operator to stop and decide which list entry is the subscription in hand.

Link to Holdings

The decision not to include ISSNs has now been reversed because of the local holdings options available in SilverPlatter’s ERL 4 and OVID search software that rely on ISSN links to display local holdings information when searching ERL or OVID databases. Through the ISSN link, it will be possible to retrieve articles and immediately navigate to the full text via the URL that will be included in the local holdings field. In the mean time, ISSNs are now also available for the Academic Press collection that will assist this development.

Access

Electronic journal records are accessible through the following indexes: Title Alphabetical, Title Keyword, Global Keyword and Periodical Title. The ISSN index is only available on staff accounts and does not cover all records. However, ISSNs will be added to as many records as possible as time permits to facilitate the local holdings links described above.

Web OPACs

Electronic journal records were created not only to assist patrons to find the full text sources via the URL field, but also to make this access seamless via a Web OPAC interface. Unfortunately, Flinders is still awaiting funding for the implementation of a Web OPAC on its Dynix system and users must “cut and paste” the URL from the standard Dynix character based OPAC to their Web browser. We hope to install a Web interface over the 1998 Christmas break. In the mean time, Flinders is running a Z39.50 server so that it is possible for external web OPACs with Z39.50 search facilities to browse our catalogue and make use of the URLs.

Web Server

As part of the MARC record creation process, records are also exported through a template into HTML pages that are available on the Library’s web server at <http://www.lib.flinders.edu.au/resources/ej/a-z/index.html> both in subject categories and in an A-Z alphabetical list. Links are also provided to the list of journals maintained at the database provider’s site.

Direct Links vs Indirect Links

Unfortunately, not all URL links take the user directly to the full text of the electronic journal they may be seeking. In the case of the IAC titles from Expanded Academic ASAP and Computer ASAP, every electronic journal record carries the same URL <http://www.searchbank.com/searchbank/flinders>. This simply takes the user to the InfoTrac SearchBank service where they must choose the relevant collection (Expanded Academic ASAP, Computer ASAP or LegalTrac) and then conduct a general search of the entire journal collection. If the user wants to find a specific article, they must then enter sufficient bibliographic details to retrieve that article from a relatively small hit list. If they want to browse the contents of a specific journal title, they must choose the PowerTrac option, select the Journal Name List index and then enter the journal title. Articles are displayed in reverse chronological order, but it is not easy to navigate to a specific issue, especially if it is several years old.

The Academic Press titles available from IDEAL (International Digital Electronic Access Library) and the Project Muse titles provide specific URLs for each title that allow the user to navigate directly to the specific electronic journal from which they can choose a particular issue and article. A general search of all titles in the collection can also be done, which is the IAC default.

Viewers

While this direct access is preferable, output from IDEAL is only available in PDF format which can be quite slow to download, especially over modem lines at home. IAC offer a choice of 3 output formats which include reformatting for quick printing via the Web browser, the slower PDF version, and also an e-mail option to minimise online time.

IP Limiting vs Username/Password

Initially, IP limiting was the only method available to access these services that worked well for on-campus users, but was too limiting for external users not coming through a Flinders IP number, especially at a time when flexible delivery is being heavily promoted. Fortunately, IAC titles are now available through a password option. If the user’s IP number falls within the Flinders IP range, access is seamless, but if it does not, the user is prompted for a password before they may proceed. The password mechanism involves searching a file of valid patron barcodes which is held on the Library’s web server and refreshed each night

from the Dynix patron file. Password access for non Flinders IP numbers has also been introduced for the IDEAL Academic Press journals.

Reliability

A common complaint about Web resources is their unreliability over time. URLs change or disappear and broken links compromise the integrity of the Library's service. For this project, we rely on the links maintained by the database provider and assume that they are kept reasonably up to date.

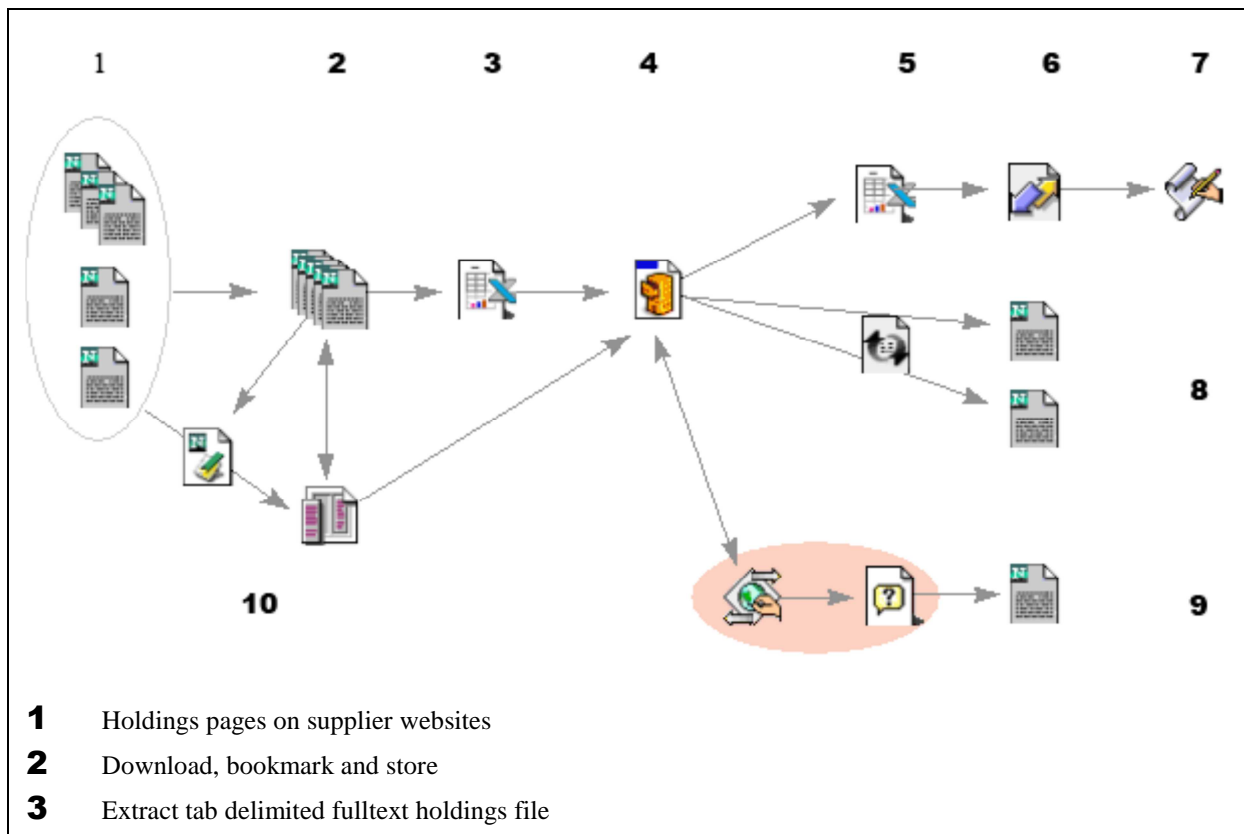
The original web pages are bookmarked in Netscape. On a quarterly basis the "What's New" function of Netscape is used to see if the supplier's web pages have been updated. If the pages have changed they are downloaded and compared with the page downloaded last time (usually Lexis/Nexis is the only source where this is necessary). Titles are checked for changes to full text coverage; such changes are extracted and input into the FileMaker database.

IAC have begun posting monthly changes to their databases on their website at the URL http://library.iacnet.com/searchbank/pubchanges/title_change_menu.html. These pages are checked monthly and updates made to the FileMaker database (average of 3-4 changes per month for our subscriptions).

The pages for Project Muse and IDEAL are not checked as frequently. Both of these sources are quite stable. Checks are made to see if the backfiles have been expanded and changes made to the FileMaker database as appropriate.

How We Did It

The following diagram illustrates the record creation process.



- 4** Import into local database
- 5** Export tab delimited holdings file
- 6** Import records into DYNIX system
- 7** DYNIX program converts records into MARC format
- 8** Export, through template into HTML pages (A-Z and subject based)
- 9** CGI interrogates database and produces HTML pages "on the fly" (Future enhancement)
- 10** Subsequent downloads - check bookmark - compare with original - extract changes - update database

Source of Data

Source data is taken from the database provider's home website. The following table shows the current URLs from which our source data is obtained.

| Collection | No. of Titles | Source | IP Limit | Pwd | ISSN | Cover-age Note |
|------------------------|---------------|---|----------|-----|------|----------------|
| Expanded Academic ASAP | 700 | http://library.iacnet.com/jl/sb5091.html | Y | Y | Y | Y |
| Computer ASAP | 94 | http://library.iacnet.com/jl/sb5087.html | Y | Y | Y | Y |
| Academic Press | 224 | http://www.idealibrary.com/cgi-bin/www.idealibrary.com_8011/iplogin | Y | Y | Y | N |
| Lexis Nexis | 1842 | http://www.lexis-nexis.com/lnc/sources/libcont/ | N | Y | N | Y |
| Project Muse | 44 | http://muse.jhu.edu/journ_descrip/holdings.html | Y | N | Y | Y |

These have changed over time and the IAC titles now provide a flat file source for easier incorporation into an Excel spreadsheet. The other collections require varying amounts of text manipulation to massage them into a useable tab-delimited format. In particular, Project Muse requires the most text manipulation, but fortunately only has 44 titles. Journals made available by journal publishers have proven to be quite stable. The only significant changes seem to be the growth of backfiles. Changes in this coverage information are entered in the FileMaker database as appropriate. The 1,842 Lexis Nexis titles are a preliminary sample taken from the NEWS and LAWREV libraries. More will be added as time permits. Sample data from each source appears below:

Expanded Academic ASAP (700 titles)

| Journal Image | ISSN | Index | FT | FT | Mag | Bus | BF | FTBF | Image |
|---|-----------|-------|-------|-------|-------|-------|-------|-------|-------|
| | | Start | Start | End | Col | Col | Start | Start | Start |
| ----- | ----- | ----- | ----- | ----- | ----- | ----- | ----- | ----- | ----- |
| ----- | | | | | | | | | |
| ABA Journal | 0747-0088 | 1/95 | | | | | 1/91 | | |
| Adolescence | 0001-8449 | 3/95 | 3/95 | | | | 3/91 | 12/92 | 6/95 |
| Adult Learning | 1045-1595 | 1/95 | | | | | 1/91 | | |
| Formerly: Lifelong Learning: An Omnibus of Practice and Research 9/89 | | | | | | | | | |
| Advertising Age | 0001-8899 | 1/95 | 11/97 | | | B | 1/84 | | |
| Affilia Journal of Women and Social Work | 0886-1099 | 3/95 | 9/95 | | | | | | |
| Africa Report 6/95 | 0001-9836 | 1/95 | 1/95 | 6/95 | | | 1/91 | 1/93 | 1/95 |
| African American Review | 1062-4783 | 3/95 | 3/95 | | | | 3/92 | 12/92 | 3/95 |

Formerly: Black American Literature
 Forum 3/92
 Alcohol Health & Research World 0090-838X 1/95 1/95 M 1/92 1/92 3/95

Computer ASAP (94 titles)

| Journal | ISSN | Index Start | FT Start | FT End | Mag Col | Bus Col | Image Start | Image End |
|---|-----------|----------------|-------------|-----------|------------|------------|----------------|--------------|
| ACM Computing Surveys | 0360-0300 | 3/95 | 3/97 | | | | | |
| ACM Transactions on Database Systems | 0362-5915 | 3/95 | 3/97 | | | | | |
| AI Expert | 0888-3785 | 1/95 | 1/95 | 6/95 | | | | |
| Boardwatch Magazine | 0894-5209 | 1/95 | | | | | | |
| Byte | 0360-5280 | 1/95 | | | | | | |
| C/C++ Users Journal | 1075-2838 | 1/95 | 1/95 | | | | | |
| Formerly: C Users Journal 7/94 | | | | | | | | |
| CD-ROM World | 1066-274X | 1/95 | 1/95 | 1/95 | | | | |
| Incorporated into Multimedia World 2/95; Formerly: CD-ROM Librarian 1/93 | | | | | | | | |
| Communications News | 0010-3632 | 1/95 | 1/95 | | | B | 1/95 | |

Academic Press (224 titles)

Advances in Applied Mathematics 0196-8858, 1 August 1998
 Advances in Mathematics 0001-8708, 10 August 1998
 Anaerobe 1075-9964, 1 April 1998
 Analytical Biochemistry 0003-2697, 15 July 1998
 Animal Behaviour 0003-3472, 1 June 1998
 Annals of Botany 0305-7364, 1 July 1998
 Annals of Physics 0003-4916, 10 August 1998
 Appetite 0195-6663, 1 June 1998

Lexis Nexis (1842 titles)

Sample from Law Reviews (LAWREV) library
 ADMLJ - Administrative Law Journal from Spring 1993
 AIRFLR - Air Force Law Review from 1994
 AKRONL - Akron Law Review from Summer 1994
 ALALR - Alabama Law Review from 1993
 ABIJ - American Bankruptcy Institute Journal from February 1994
 AJCOMP - American Journal of Comparative Law from Winter 1996
 AJCRIL - American Journal of Criminal Law from Spring 1995

Project Muse (44 titles)

American Imago
 Volume 55
 Number Two, Summer 1998
 Number One, Spring 1998
 Volume 54
 Number Four, Winter 1997
 Number Three, Fall 1997
 Number Two, Summer 1997
 Number One, Spring 1997

Each of these source pages was downloaded, bookmarked and stored for future comparison. After checking for page changes subsequent downloads are compared to the previous version to identify changes. The data was then imported into an Excel spreadsheet and cleaned up to ensure correct data appeared in each column. Sorting on the full text coverage column provided a simple way of deleting non full text titles. Common data such as the collection name and accessibility were added with fill down commands. IAC's provision of a flat file makes this task much easier now. The clean data was then imported into a File Maker Pro database that combines records for all electronic journal sources and contains the following fields:

| | |
|--------|--------------------|
| TITLE | |
| ISSN | |
| URL | |
| PARENT | eg. Academic Press |

| | |
|----------|---|
| USERNAME | if required |
| PASSWORD | if required |
| IPLIMIT | Yes if limited to Flinders IP range |
| FREE | No for paid subscriptions |
| TYPE | eg. PDF |
| COVERAGE | eg. 1994- |
| LIBRARY | Lexis-Nexis Library name |
| FILE | Lexis-Nexis File name |
| BACKFILE | eg. 1991- |
| SUBJECT | Faculty code for subject based web page |

A Subject flag is entered for each record to indicate which subject based web page the title should appear in, eg. "H" for the Faculty of Health.

For each collection, a tab delimited holdings file was exported which was then used as input to a locally written program (explained below). This program converted the text file into Dynix MARC records.

Output from the FileMaker Pro database was also exported through a template to produce HTML pages on the Library Web Server to give an alphabetical and subject based index to the electronic journal sources. A CGI script was trialed to interrogate the database and produce HTML pages on the fly. The CGI worked but the data was not volatile enough to justify the computing overhead and reduction of speed.

The source data is rechecked periodically for additions, deletions and changes. Different methods are used for different sources depending on volatility. Subsequent downloads are compared to the original using BBEdit which highlights differences between the 2 versions. Changes are extracted and used to update the FileMaker Pro database. Minor changes to the Dynix records can be handled manually; significant changes can easily be handled by deleting the original Dynix records as a group and reloading the entire collection.

Local Program Outline

A local customised uniVerse BASIC program was written to process raw tab delimited data to produce brief MARC records. Despite the complexity of the MARC record format, the program is less than 150 lines of code with only 50 lines required to build the MARC record. When the program is run, a choice of electronic journal collection formats is displayed:


```

LEADER 00000nas 2200000 4500
022 0 0001-8449
245 00 Adolescence$h[Electronic Journal]
538 Many of the articles from this electronic journal, which is part
of the Expanded Academic ASAP collection, are available in full t
ext via the Internet and can be accessed using Netscape on one of
the workstations located in each Library. Remote access users w
ill need to enter their Library barcode when accessing this servi
ce. Please ask at the Information Desk if you need assistance.
856 7 $uhttp://www.searchbank.com/searchbank/flinders

```

In addition, a number of non-public fields are created to assist in maintaining the data:

- Bib No.
- Electronic Journal Collection
- Date Created
- Cataloguing Source

A Holdings record is created in order to assign a collection code that displays under the call number label as "Electronic Journal". It was decided not to create an actual call number field, such as the URL, because in general, long URLs would not fit in the space available for call numbers. With a Web enabled catalogue, users can click on the URL link and connect directly to the electronic journal.

Maintenance

Every 3 months, the source data is reviewed and if significant changes have occurred, all records for a collection are selected and deleted using the Dynix utility Discard Holdings Records (DHR). This utility needed a minor amendment to allow Serials BIB records to be discarded as part of the process (standard Dynix only deletes monograph BIB records, not serials). The new batch of records is actually loaded first to ensure that access is not temporarily lost. Dynix re-indexing of the largest collection takes place in less than an hour.

Highlighting of Current Subscriptions

In addition, a further customisation has allowed us to highlight with inverse video all current serial subscriptions, including electronic journals. This feature not only makes it easier for users to pick the current serials record, but also assists Serials staff during serials checkin when there are multiple entries for a given title.

Problems

Initial Articles

After the initial load we noticed that some titles were not indexing properly. Upon further investigation we discovered that the original version of the program did not allow for initial articles such as "The". The titles were sorted in the "T" section of the index but only retrievable by searching under "Thd" and then browsing forward. This programming oversight was quickly remedied and the records were reloaded. After they had indexed correctly, the previous Holdings and Bib records were discarded using DHR.

Full Text or Not

Although the project was designed to only create catalogue records for full text electronic journals, we discovered that not all of the IAC titles were always available in full text. We therefore had to modify our access note to read "Many of the articles from this electronic journal ... are available in full text". Fortunately, this was an easy exercise that required a simple program modification followed by a reload and a simple deletion of the original records as outlined in the maintenance section above.

Statistics of Use

While available statistics do not provide conclusive proof that the inclusion of MARC records in the catalogue has increased electronic journal use in all cases, we did find some interesting figures in the following tables of IDEAL statistics for Academic Press journals that allow us to compare use with other universities.

| IDEAL Academic Press Electronic Journals | | | | | | | | | |
|---|---------------|-------------------|-------------------|-------------------|-------------------|---------------|--------------|---------------|----------------------|
| Use by Australian Universities | | | | | | | | | |
| Number of Logins | | | | | | | | | |
| University | Jun 97 | Jul-Sep 97 | Oct-Dec 97 | Jan-Mar 98 | Apr-Jun 98 | Jul 98 | Total | EFTSU | Per 100 EFTSU |
| University of Queensland | 155 | 2427 | 3052 | 4280 | 1529 | 835 | 12278 | 23566 | 52 |
| University of Sydney | 102 | 1142 | 1860 | 2090 | 944 | 453 | 6591 | 28032 | 24 |
| Monash University | 73 | 606 | 864 | 1384 | 841 | 539 | 4307 | 31072 | 14 |
| University of Melbourne | 51 | 560 | 684 | 1141 | 1201 | 601 | 4238 | 27297 | 16 |
| Flinders University | 16 | 1130 | 654 | 728 | 792 | 302 | 3622 | 9003 | 40 |
| University of NSW | 37 | 456 | 897 | 959 | 637 | 316 | 3302 | 23159 | 14 |
| University of Technology, Sydney | 8 | 488 | 540 | 790 | 928 | 146 | 2900 | 17314 | 17 |
| University of Adelaide | 46 | 365 | 421 | 1011 | 565 | 414 | 2822 | 12253 | 23 |
| Australian National University | 65 | 426 | 583 | 806 | 494 | 263 | 2637 | 8424 | 31 |
| University of Western Australia | 28 | 363 | 447 | 990 | 457 | 317 | 2602 | 12065 | 22 |
| La Trobe University | 2 | 402 | 480 | 881 | 428 | 185 | 2378 | 17803 | 13 |
| Macquarie University | 10 | 60 | 524 | 835 | 307 | 133 | 1869 | 13326 | 14 |
| University of Newcastle | 41 | 174 | 324 | 491 | 497 | 198 | 1725 | 14489 | 12 |
| James Cook University | 2 | 282 | 326 | 591 | 279 | 125 | 1605 | 7018 | 23 |
| Swinburne University | 23 | 362 | 208 | 393 | 283 | 188 | 1457 | 8533 | 17 |
| University of Western Sydney | 0 | 216 | 140 | 378 | 463 | 185 | 1382 | 20953 | 7 |
| RMIT | 40 | 99 | 256 | 444 | 231 | 117 | 1187 | 21377 | 6 |
| University of Tasmania | 26 | 135 | 126 | 448 | 237 | 212 | 1184 | 10243 | 12 |
| Griffith University | 38 | 275 | 168 | 327 | 240 | 130 | 1178 | 17362 | 7 |
| Curtin University | 0 | 336 | 272 | 345 | 129 | 52 | 1134 | 17504 | 6 |
| Southern Cross University | 3 | 511 | 91 | 68 | 136 | 58 | 867 | 6179 | 14 |
| Deakin University | 5 | 345 | 132 | 134 | 84 | 39 | 739 | 18806 | 4 |
| Queensland University of Technology | 19 | 94 | 102 | 310 | 106 | 41 | 672 | 23827 | 3 |
| Murdoch University | 11 | 35 | 114 | 250 | 82 | 103 | 595 | 7577 | 8 |
| University of South Australia | 40 | 180 | 91 | 98 | 140 | 46 | 595 | 17566 | 3 |
| Charles Sturt University | 11 | 114 | 110 | 110 | 101 | 49 | 495 | 12833 | 4 |
| University of New England | 3 | 140 | 167 | 84 | 36 | 62 | 492 | 8747 | 6 |
| Australian Defence Force Academy | 23 | 83 | 79 | 76 | 80 | 28 | 369 | 1427 | 26 |
| University of Wollongong | 4 | 88 | 66 | 100 | 59 | 43 | 360 | 9924 | 4 |
| Northern Territory University | 3 | 42 | 39 | 182 | 43 | 45 | 354 | 2790 | 13 |
| Victoria University of Technology | 9 | 77 | 90 | 120 | 38 | 14 | 348 | 12375 | 3 |
| Central Queensland University | 2 | 18 | 126 | 108 | 10 | 10 | 274 | 7749 | 4 |
| Australian Catholic University | 4 | 80 | 12 | 142 | 19 | 13 | 270 | 7210 | 4 |
| University of Canberra | 1 | 11 | 106 | 83 | 51 | 9 | 261 | 6807 | 4 |
| Edith Cowan University | 1 | 19 | 60 | 24 | 32 | 6 | 142 | 13892 | 1 |
| University of Ballarat | 0 | 2 | 32 | 77 | 28 | 2 | 141 | 3849 | 4 |
| University of Southern Queensland | 0 | 5 | 0 | 1 | 63 | 60 | 129 | 9706 | 1 |
| Totals | 902 | 12148 | 14243 | 21279 | 12590 | 6339 | 67501 | 512057 | 472 |
| Average | 24 | 328 | 385 | 575 | 340 | 171 | 1824 | 13839 | 13 |
| Flinders University | 16 | 1130 | 654 | 728 | 792 | 302 | 3622 | 9003 | 40 |
| Flinders as % of Total | 2% | 9% | 5% | 3% | 6% | 5% | 5% | 1.8% | 8.5% |
| Flinders compared to Average | 66% | 344% | 170% | 127% | 233% | 176% | 199% | 65% | 315% |

Statistics were compiled from both the American and European web sites.

*Statistics from the American web site were unavailable for April 1998.

In the first table showing the number of logins, Flinders ranks 25th in total EFTSU, yet was the 5th highest user of the IDEAL journals. With only 1.8% of the Australian total EFTSU, it conducted 5% of the total searches. When expressed in terms of the number of searches per

100 EFTSU, Flinders with 8.5% of searches ranks 2nd behind the University of Queensland and has conducted over three times the national average number of sessions.

| IDEAL Academic Press Electronic Journals | | | | | | | | | |
|---|---------------|-------------------|-------------------|-------------------|-------------------|---------------|--------------|---------------|----------------------|
| Use by Australian Universities | | | | | | | | | |
| Number of PDF Downloads | | | | | | | | | |
| University | Jun 97 | Jul-Sep 97 | Oct-Dec 97 | Jan-Mar 98 | Apr-Jun 98 | Jul 98 | Total | EFSTU | Per 100 EFTSU |
| Flinders University | 8 | 610 | 317 | 461 | 691 | 236 | 2323 | 9003 | 25.8 |
| University of Queensland | 123 | 1275 | 713 | 998 | 1050 | 802 | 4961 | 23566 | 21.1 |
| Australian Defence Force Academy | 20 | 35 | 26 | 15 | 157 | 23 | 276 | 1427 | 19.3 |
| Australian National University | 43 | 325 | 373 | 399 | 299 | 143 | 1582 | 8424 | 18.8 |
| University of Adelaide | 38 | 242 | 140 | 260 | 507 | 348 | 1535 | 12253 | 12.5 |
| James Cook University | 1 | 159 | 137 | 169 | 312 | 52 | 830 | 7018 | 11.8 |
| University of Sydney | 64 | 694 | 425 | 707 | 633 | 340 | 2863 | 28032 | 10.2 |
| University of Western Australia | 49 | 164 | 172 | 210 | 301 | 272 | 1168 | 12065 | 9.7 |
| University of Melbourne | 48 | 408 | 273 | 471 | 966 | 441 | 2607 | 27297 | 9.6 |
| University of NSW | 31 | 279 | 480 | 463 | 552 | 312 | 2117 | 23159 | 9.1 |
| Southern Cross University | 1 | 262 | 11 | 42 | 137 | 66 | 519 | 6179 | 8.4 |
| Monash University | 28 | 395 | 399 | 482 | 723 | 439 | 2466 | 31072 | 7.9 |
| Macquarie University | 6 | 31 | 326 | 260 | 253 | 174 | 1050 | 13326 | 7.9 |
| Swinburne University | 26 | 167 | 37 | 55 | 143 | 185 | 613 | 8533 | 7.2 |
| University of Newcastle | 39 | 119 | 97 | 251 | 390 | 125 | 1021 | 14489 | 7.0 |
| Latrobe University | 2 | 237 | 153 | 289 | 278 | 123 | 1082 | 17803 | 6.1 |
| University of Technology, Sydney | 2 | 338 | 150 | 166 | 271 | 31 | 958 | 17314 | 5.5 |
| Murdoch University | 3 | 39 | 53 | 106 | 113 | 98 | 412 | 7577 | 5.4 |
| University of Tasmania | 1 | 62 | 48 | 182 | 131 | 98 | 522 | 10243 | 5.1 |
| Griffith University | 27 | 255 | 80 | 121 | 178 | 92 | 753 | 17362 | 4.3 |
| University of Western Sydney | | 138 | 60 | 133 | 313 | 99 | 743 | 20953 | 3.5 |
| Northern Territory University | 0 | 17 | 4 | 19 | 24 | 16 | 80 | 2790 | 2.9 |
| University of New England | 4 | 59 | 26 | 50 | 58 | 48 | 245 | 8747 | 2.8 |
| Queensland University of Technology | 4 | 28 | 166 | 305 | 61 | 44 | 608 | 23827 | 2.6 |
| Curtin University | 0 | 147 | 51 | 99 | 110 | 37 | 444 | 17504 | 2.5 |
| Deakin University | 4 | 256 | 47 | 40 | 56 | 17 | 420 | 18806 | 2.2 |
| University of South Australia | 24 | 149 | 29 | 16 | 99 | 64 | 381 | 17566 | 2.2 |
| RMIT | 20 | 54 | 81 | 54 | 183 | 70 | 462 | 21377 | 2.2 |
| University of Canberra | 0 | 7 | 68 | 34 | 31 | 4 | 144 | 6807 | 2.1 |
| Central Queensland University | 0 | 3 | 129 | 13 | 6 | 12 | 163 | 7749 | 2.1 |
| University of Wollongong | 1 | 51 | 8 | 54 | 36 | 30 | 180 | 9924 | 1.8 |
| Charles Sturt University | 15 | 49 | 21 | 24 | 71 | 30 | 210 | 12833 | 1.6 |
| Victoria University of Technology | 4 | 42 | 39 | 32 | 40 | 23 | 180 | 12375 | 1.5 |
| University of Southern Queensland | 0 | 2 | 0 | 0 | 79 | 57 | 138 | 9706 | 1.4 |
| University of Ballarat | 0 | 0 | 0 | 19 | 9 | 0 | 28 | 3849 | 0.7 |
| Australian Catholic University | 5 | 25 | 0 | 7 | 9 | 2 | 48 | 7210 | 0.7 |
| Edith Cowan University | 2 | 2 | 13 | 4 | 30 | 7 | 58 | 13892 | 0.4 |
| | | | | | | | | | |
| Totals | 643 | 7125 | 5152 | 7010 | 9300 | 4960 | 34190 | 512057 | 246.1 |
| Average | 18 | 193 | 139 | 189 | 251 | 134 | 924 | 13839 | 7 |
| | | | | | | | | | |
| Flinders University | 8 | 610 | 317 | 461 | 691 | 236 | 2323 | 9003 | 25.8 |
| Flinders as % of Total | 1% | 9% | 6% | 7% | 7% | 5% | 7% | 1.8% | 10.5% |
| Flinders compared to Average | 45% | 317% | 228% | 243% | 275% | 176% | 251% | 65% | 388% |

In the 2nd table that looks at the number of PDF downloads, Flinders ranks 1st in terms of downloads per 100 EFTSU and 5th in overall downloads. Flinders made 7% of the total downloads with only 1.8% of the EFTSU population and again made more than three times the national average number of downloads.

Why are Flinders' statistics significantly higher? We'd like to think it was a result of the automatic MARC record creation, but of course it could be due to a number of factors, including links from our electronic journals web page; promotion by our subject librarians;

publicity in our Library newsletter; and the fact that we loaded the MARC records very early in the statistical period covered.

We suspected our statistics would be high, partly because of user feedback and also from anecdotal evidence. Students from other institutions who have access to reciprocal catalogue facilities were requesting access for electronic journal titles that they already had access to in their home institution.

Alternative Solutions

Not everyone can approach this problem in the way that Flinders has. Some libraries do not have local systems expertise to automatically create their own MARC records; some may not think the records are of sufficient quality to include; and some may not believe the time and effort involved is justified.

Vendor Supplied MARC Records

Of course, a better solution would involve the provision of full MARC records from the database provider and perhaps they should be lobbied to provide this additional service. This would not only improve subject access to this body of material, but would hopefully also increase usage and help library managers justify the continued expenditure on access subscriptions. A posting to the CAUL Datasets e-mail list revealed that EBSCO provides MARC records for full text titles in EBSCOhost databases that may be useful to those libraries that subscribe to this service.

CAUL Supplied MARC Records

Another option might involve CAUL supplying MARC records for those collections that it negotiates access to, perhaps through an arrangement with the database provider. However, MARC records supplied in this way would of necessity be generic, whereas the ones created in-house can be tailored to display quite specific access notes.

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Steve Thomas (1998) from the Barr Smith Library adopted a different approach to the task of creating catalogue records for electronic journal collections. At Flinders, we created the internal Dynix BIB and MARC.BIB records directly, from which we could then export normal MARC records if required. Steve used Perl scripts to create the MARC record first which was then loaded to the Dynix database using standard MARC load utilities. As Steve concludes in his paper, the ease of programming depends largely on the structure and complexity of the source data. Where Steve used Perl scripts to extract the relevant source data, we imported the source text into an Excel spreadsheet and manipulated the data manually, thus splitting the work load between several people.

Exporting MARC Records

Although we have not given serious consideration to sharing our program, it would be possible to export the MARC records we have created for use by other libraries if they thought the brief records would be useful. Of course, we would need to amend the program to create generic access notes and negotiate suitable reimbursement for any custom work performed. It is hoped though, that alternative sources of full MARC records will soon become available that will provide better access. When our project commenced in early 1997, we did not think this a likely possibility for some time and chose to proceed with our project as an interim solution.

Limitations

The limitations of this process are obvious. The pseudo MARC records are quite brief and would probably not pass muster in the eyes of many professional cataloguers. They lack subject analysis of any kind, carry no imprint or collation and in many cases carry a generic URL that does not lead the user directly to the full text of the specific electronic journal.

Conclusion

Despite the brevity of the records and the generic nature the IAC URLs, we have found that the inclusion of 2,900 pseudo MARC records has greatly improved access to a large body of full text material that would otherwise be largely under utilised. As more users come to accept this type of access, it opens up opportunities for the Library to cancel the hard copy subscriptions of some of the lesser used titles to help relieve the pressure on an ever stretched serials budget.

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