

AUTOMATION AND THEOLOGICAL LIBRARIES IN AUSTRALIA AND NEW ZEALAND

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Libraries around the world are turning almost automatically to the implementation of automated library systems - if, and to the extent that, they can afford them; however, the decision to automate needs to be taken on a more profound basis than simply "keeping up with the Joneses" of the library world. In the case of theological libraries (with severely strained resources of both personnel and finance - not to mention hawk-eyed administrators and board of management personnel) any move in this direction will need to be fully justified. This article aims to explore some of the issues which will need to be addressed before a decision to automate is made. The *ANZTLA Standards*¹ stipulate that modern technology should be exploited "where feasible" to provide better service; accordingly, the aim must be to see whether automation really will serve us better in our primary objective of providing service to library users.

The Current Situation

The first ANZATS institution (in reality a college of advanced education with a theological department) to become automated (in 1984) was Avondale College, Cooranbong, NSW; it operates cataloguing and OPAC subsystems on Geac software, as a member of the CLANN network. The first solely theological college to make the move was the institution now named Churches of Christ Theological College, Mulgrave, Vic. (in 1987); it operates on Ocelot software. It was followed (in 1988) by Trinity Theological College, Auchenflower, Qld; it operates a circulation system on 10,000 bibliographic records, using Meta-Marc software on a Sperry PC/AT computer. St John's Trinity, Auckland,

¹ Australian and New Zealand Theological Library Association, *ANZTLA standards for theological libraries*, 5.2.

became the first New Zealand theological library to automate in 1989. It was quickly followed by the Baptist Theological College of New Zealand in the same city - both running Catalist cataloguing and OPAC systems on an IBM PC (St John's Trinity) and an Ultra PC (Baptist). At about the same time, the Diocesan Resource Centre, Adelaide, SA installed a Dynix "schools" system and the Catholic Theological Union, Hunters Hill, NSW purchased a supposedly "upgraded" version of Prolib, intending to download records from OCLC. It was forced to abandon the system by the end of 1989 and has now purchased the new SEA-Urica software.

While all the above are (potentially if not actually) fully integrated systems, a number of other libraries have automated some part of their operations. The Catholic Institute of Sydney, Manly, NSW is using the Bibliofile CD-Rom database to establish its own database on an NEC computer. Mt St Mary's Seminary, Taradale, NZ and Tabor College, Plympton South, SA are establishing databases using Inmagic software. St Mark's, Canberra, ACT is operating a circulation system on a Double Helix database system. St Vincent Pallotti Seminary, Kew, Vic. is recataloguing its collection, using Molli software.

A number of other libraries are using computers for the production of catalogue cards and spine labels, for generating acquisitions and order lists, accession lists, and financial statements. Libraries which have joined the Australian Bibliographic Network include St Mark's (full service) and Parkin-Wesley Theological College, Wayville, SA, Nungalinga College, Darwin, NT, the Catholic Institute of Sydney, and the Löhe Memorial Library (search and products).

Philosophic Considerations

In assessing the likely impact of an automated library system,, it is fundamentally important to understand that the theological library is an academic library - in most cases supporting specific academic programs at the degree or diploma or certificate level and, in most cases, with some specific commitment (written or unwritten) to the support of theological research. In the light of such objectives, it is reasonable to expect that the right automated system, properly installed and

maintained, will substantially improve the efficiency and effectiveness of the research activities of users at all levels, allowing them improved access to information and substantially reducing the time taken in unproductive searching, thus allowing more time for critical reflection and creative writing.

The theological library will also aim to equip students with the skills required for a lifetime of professional self-education and growth. Since our graduates are moving out into an increasingly computer-literate society, in which the vast majority of local libraries - especially research libraries - are already automated, it is important for them not only to become familiar with such systems, but also to learn how to exploit the full research potential of the new information technology. Where better to develop such skills than in our libraries, which, for this purpose, will need to be automated?

It can also be expected, of course, that automation, when fully implemented, will substantially improve the efficiency and effectiveness of library staff in providing the wide range of services expected of a modern research-oriented library. Until fully established, it will put extra pressure and strain on library staff - and this also needs to be taken into consideration by college administrators.

Deficiencies of the Card Catalogue

The card catalogues in Australian and New Zealand theological libraries vary from very good to very poor; indeed, it is not at all impossible to find such variation within the one catalogue! But, no matter how good the card catalogue is by comparison with other systems of the same kind, it inevitably suffers greatly by comparison with the online public access catalogue.

The major problem is the inflexibility of the card catalogue. For example, to search for a particular title, you absolutely have to know the first word of the title, searching by subtitle is out of the question, and searching by subject requires the precise sequence of a complicated, subdivided subject heading. Of a similar nature is the obvious time it takes to flick through the cards and to physically move around the

catalogue.

Another major problem is the work involved in the establishment and maintenance of the card catalogue. Cards have to be typed and filed, the sheer volume of such work providing abundant opportunities to make mistakes, and the correcting and updating of subject headings by manual methods is a tedious and time-consuming process.

Another problem is the inconsistency in the style and standard of the entries in existing catalogues - due to the variety of standards and practices employed by various librarians at various times. Automation offers the opportunity to create a uniform standard and format of entries, as well as to upgrade that which is of inadequate standard.

Advantages of Automated System

The precise range of advantages to be gained from an automated system will depend on the number of subsystems acquired and implemented. There are many possibilities provided by automated systems which are simply not available to manual systems. Most automated systems can be purchased in modules; others must be purchased as total entities, whether all subsystems will actually be used or not. Depending on the options chosen, the following are some of the advantages which can be expected.

1. Improved service to users. The major advantage is the flexibility of searching the online catalogue by the use of keywords. It is possible to retrieve an item where only one or two words of the title are known; for subject searching the precise sequence of subdivisions of a Library of Congress subject heading is not important, nor even (with some systems) the preferred term. This flexibility results in many further advantages:

- The bookstock becomes more readily accessible.
- Subject searching is more efficient, as the parameters of the search can be re-defined as the search progresses.
- Bibliographies can be compiled in a fraction of the time required of a manual search.

- It may be possible for external users (eg. lecturers in their offices, other libraries, clergy in the field) to gain access to the catalogue from remote sites (eg. by means of a modem connection).

2. Greater efficiency in the use of staff time.

Libraries which have joined bibliographic networks (like the ABN and the NZBN) for copy-cataloguing purposes have demonstrated how dramatically such a level of automation can save staff time - which can then be redeployed to more productive effort. This is an area where a dramatic cost-benefit advantage is easy to demonstrate - even if the bibliographic records are being captured offscreen for the production of catalogue cards. The following are further ways in which automated systems can be expected to save time:

- They reduce labour-intensive clerical effort (eg. typing catalogue cards, filing catalogue cards, updating the card catalogue, checking donated items, production of overdue notices).
- Inventory control (ie. shelflist checking) can be done in a fraction of the time it takes to do it manually.

3. Improved administrative control.

An automated system can generate a variety of statistical data that are too time-consuming to compile manually. This will mean:

- Improved control of budgets.
- More relevant statistical information on the nature and use of the collection.

4. Resource-sharing.

Automation opens up many opportunities for more effective resource-sharing and rationalisation of resources with other libraries which are also automated.

- Interlibrary loans.
- Subject specialisation.
- Rationalisation of periodical subscriptions.

- Acquisitions control - especially in relation to expensive items.
- Union catalogue.

Features of Automated Systems

Some library systems are marketed in separate modules for each major function, others as a single package; in the case of the former, it may be possible to save money if not all subsystems are going to be implemented. The paragraphs which follow give attention firstly to features which can reasonably be required of the total package (whether modular or unitary) and secondly to features of individual subsystems. The reader is also referred to the relevant chapters of Dennis Reynolds, *Library automation*.² The following are features which can be expected of total packages:

- MARC-based (discussed below)
- Interface with ABN/NZBN - downloading and uploading
- All subsystems/modules integrated through a common database
- Quick and easy transfer between subsystems
- User-friendly operation, with copious help screens
- Vendor support, including training, maintenance and ongoing development.

1. Online Public Access Catalogue

Consistent with library objectives and service ideals, the users should be the main beneficiaries of an automation project, this benefit manifesting itself chiefly in the area of information retrieval - through the OPAC. It needs to be user-friendly, providing copious help screens and/or prompts, and permit keyword searching on all fields of the bibliographic record; it being in the latter respect that the paradigmatic difference between card and computer systems really shows. Automation permits a completely new method of searching the catalogue.

²Dennis Reynolds, *Library automation: issues and applications* (New York: R.R. Bowker, 1985), chapters 12 and 13, p.361-467.

Whether the system is to be MARC-based or non-MARC is a matter of major importance discussed below, but either can be established largely by downloading records either from an online database (eg. the National Bibliographic Database of the Australian Bibliographic Network or the New Zealand Bibliographic Network) or an offline database (eg. Bibliofile on CD-Rom). In the case of the online database, it is a matter of attaching a holdings statement to an existing record (eg. for an ABN search and products user) or to an original record (which would have to be input in MARC format by a full service user in the case of ABN). In the case of the offline product, it is simply a matter of downloading the individual bibliographic record directly from the CD-Rom or tape to the local system.

Whether the existing card catalogue is to be supplemented (by simply being closed off but retained when the computer system is installed) or supplanted (by retrospective conversion) may be a matter for a cost-benefit analysis, but there is an obvious advantage in making the whole database available online through retrocon. Some libraries have managed to get special funding for such projects.

An obvious matter for early decision will be the number of terminals to be made available for public access; this will have a major bearing on the amount of computer power which has to be provided.

The following are some of the key features one would expect of a public access subsystem:

- Menu driven
- Help screens
- Keyword searching of all fields, including contents/notes area
- Boolean ("and/or") search operators
- Forward and backward browsing
- Truncated word searching

2. Cataloguing

If the public access subsystem is the most important (in terms of service to users), the cataloguing subsystem is the most basic and essential, and

it is this subsystem that is required to create the online database (whether by downloading from an external database or manual input). Thus, the cataloguing module is the core of the whole system, and a good system will be unified around this module, with quick and easy transfer from the online database to other modules and functions. The crucial question for this module is whether it is to be MARC (Machine Readable Cataloguing) or non-MARC based. Where the input of original cataloguing to national networks (eg. ABN/NZBN) is required, the MARC format is essential. Full service users of ABN, for example, currently do their cataloguing on ABN, then download a copy of the record created (either downline or by tape or diskette) to their own system; but, by 1995, it is envisaged that the opposite will be the case: they will create the record on their own local system and upload it to ABN.³

The following are some of the key features a good cataloguing subsystem will offer:

- Variable length fields
- Unlimited access points
- Integrated authority control
- Global authority updates
- Thesaurus (UF/BT/RT) or "see/see also" references
- Downloading of records from external databases
- Uploading of records to external databases

3. Circulation

While the volume of loans in most theological libraries is such that they can be handled reasonably well by manual methods, circulation control can be greatly facilitated by the use of barcodes and barwands. In an integrated system, items must be catalogued onto the central database before they can be charged out, but this operation can be implemented (by means of an abbreviated record and the addition of a barcode) at the circulation desk when the item is required, if it cannot be done

³ Warwick Cathro, "ABN's services in 1995", *ABN news* 43 (Jan.-Feb., 1989), p.1, 8-11.

beforehand; it is preferable, however, to have all items fully catalogued and barcoded before being made available for circulation. One of the big advantages of automated circulation systems is, of course, the quick and easy production of overdue/reminder/fine notices.

The following are some of the features which a good circulation system can be expected to offer:

- User-friendly charging and discharging
- Flexibility of barwand or keyboard input
- Integrated borrower and loan files
- Overdue and fine notices
- Holds reservation
- Audible flags/blocks on borrowers
- Stocktaking

4. Acquisitions

Where an acquisitions subsystem is integrated with the central database (i.e. catalogue), the checking of duplicates and the provision of order information to the public is facilitated. Such systems generally include desiderata files and financial management procedures.

The following are some of the features which would be expected of a good acquisitions subsystem:

- Printing of orders
- Vendor status and performance records
- Claiming facility
- Possible upload of orders to compatible systems (eg. library suppliers)
- Transfer of records from acquisitions to cataloguing
- Financial management

5. Serials

Because of the special problems associated with serials, serials subsystems are generally the last to be developed (Datatrek, developed

originally as a serials system, being the notable exception). Unless it is a particularly good program, it is not likely to markedly improve serials control or save time. Libraries with small numbers of current subscriptions may find that they can cope quite well with card systems.

The following are some of the features which could be expected of a good serials control subsystem:

- Subscription control
- Accessioning of issues received
- Claiming of issues not received
- Printing of orders
- Possible uploading of orders to compatible systems (eg. subscription agents)

6. Management

Certain management functions which are too cumbersome to be contemplated with manual systems become quite feasible with automated systems (e.g. monitoring the acquisitions budget by relating estimated costs directly to actual costs and following through the implications for the total budget). Statistical data can also be gathered automatically and calculations based on them generated very easily by the computer. Whether such functions are worth purchasing and/or implementing will depend on priorities and requirements of the individual library. Obviously, not everything that can be done should be done.

7. Other Functions

Other functions of computers which might be useful in a library include word-processing, database searching, electronic mail, interlibrary loans, desktop publishing, spreadsheets, etc. Whether such functions (if required) should be included on the same hardware as the main library software will need careful consideration. One of the more useful tools for a theological library would be fully tagged, machine-readable versions of the Greek and Hebrew texts of the Bible - providing a superior kind of

concordance.⁴

MARC or non-MARC?

The most far-reaching decision about library automation is likely to be whether to opt for a MARC or a non-MARC system. Not only will this decision have vast financial implications (since MARC systems are much more expensive than non-MARC), but it will have much more important implications for the quality and the flexibility of the database to be established. Typically, academic libraries choose MARC systems and school libraries choose non-MARC, with public libraries opting for one or the other according to their specific needs and the degree of sophistication required to meet those needs.

In a MARC (Machine Readable Cataloguing) record, the data elements of a bibliographic record are identified with tags, indicators, and subfield identifiers.⁵ The format was developed in 1968 by the Library of Congress for the distribution of LC cataloguing data. Following this lead, various countries developed their own MARC format (eg. USMARC/LCMARC, AUSMARC, UKMARC, CANMARC). During the 1970s, UNIMARC was developed as a format for the international transfer of bibliographic records; records are automatically converted from the originating country's MARC format to UNIMARC and then automatically re-converted to the receiving country's MARC format.⁶

The most important advantage of using the MARC format is for the successful and accurate sharing of cataloguing data.⁷ For example, the

⁴For more information on this subject, see John J. Hughes, *Bits, bytes and biblical studies*, (Grand Rapids: Academie Books, 1987), especially chapter 7, p.491-604.

⁵International Federation of Library Associations and Institutions, *UNIMARC: universal MARC format* (London: IFLA international Office for UBC, 1977), p.3.

⁶IFLA, p.vii-xiii

⁷Walt Crawford, "Library standards for data structures and element

Australian Bibliographic Network stores records in the MARC format; they can be extracted as minimum records (author, title, and record identifier), as full records (catalogue card format), or as complete records (MARC format), but they can only be input into ABN in MARC format.

While the successful transferability of records is therefore the most important benefit of the MARC format, there is a further payoff in the area of information retrieval on the local system - in terms of precision, accuracy, specificity, and speed - because the format allows for "meaningful selective retrieval".⁸ This means that specific tags and subfields can be retrieved without reference to any other tags or subfields in the record; a process which is simply not possible with non-MARC records.

One aspect of MARC which may deter many librarians (especially those not specifically trained for it) is the greater detail seemingly required for cataloguing in this format. While it must be granted that the format is quite detailed - as witness the attached hard copy representation of a MARC record (fig. 1) - it should be noted that it is not absolutely essential to "fill in all the blanks".⁹ A MARC record may be composed of as little as a record identifier (a RID number), a language code, and the title and statement of responsibility.¹⁰ Besides, some cataloguing systems will allow even an untrained cataloguer to catalogue in the MARC format - step by step - without any knowledge of the codes or tags; thus, you could be doing MARC cataloguing without really knowing it!

identification: U.S. MARC in theory and practice", *Library trends* 31 (Fall, 1982), p.267. See also Reynolds, p.327-374.

⁸Crawford, p.272.

⁹ Reynolds, p.374.

¹⁰ IFLA, p.6.

Figure 1:

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# 0830240284 $.c
                                BIBLIOGRAPHIC DISPLAY
COLLECTION ID. 0,3

# 81-6297  Jb  05/12/81  05/28/81  04/25/82  ARK  LC
#EPS      $a  $Laffer, Arthur B.
#TILAO    $ac  $International economics in an integrated world /
           $Arthur B. Laffer, Marc A. Miles.
           $Santa Monica, Calif. :$Goodyear Pub. Co., $1981.
           $a  $8106
           $a  $ p. cm.
           $a  $Includes index.
           $ax  $International economic relations$Mathematical
           $models.
#EPSA     $ad  $Miles, Marc A., $1948-
#BN       $a  $0830240284
#CAL      $ab  $HF1411$.L334
#DDCF     $a2  $337/.0724819
#FFD      CONF*      FEST*      INDEX*x ME IN E*x
INTEL LV*  FIC*      BLOC*      LAN*eng  DAT KY*s
DATE1=1981. DATE2*   CNTY*cau  ILLUS*   REPRO*
CONTENTS*  MODRC*     CAT S*   GOV PUB*   CAT FORM*a
    
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Because this issue has such far-reaching ramifications, it is important to note that there may be a very great difference between a MARC format and what is described as a "MARC-compatible" format. In a definitive statement on USMARC, Walt Crawford warns that "MARC-compatible" is a much abused term.¹¹ He shows that true compatibility implies not only "convertibility" (from MARC format to another), but also "reversibility" (back to MARC format again) without any loss of information. Crawford warns that what is generally described as "MARC-compatible" is unidirectional compatibility (i.e. convertibility from MARC to the new format, but not back to MARC again). So what is glibly passed off as "MARC-compatible" by vendors may be just a subtle fraud - with disastrous consequences for the purchaser! Crawford says:

"There is nothing wrong with non-reversible formats, probably the most frequent non-MARC use of MARC records. What is wrong is blithely labelling such formats "MARC-compatible",

¹¹ Crawford p.272. See also Reynolds, p.372-374

when the only "compatibility" is that the data elements in the record can be algorithmically derived from USMARC records.¹²

At the time of establishing a computer database, it may seem that unidirectional convertibility is all that really matters, since the library would not envisage any future transfer of such records to any other system; however, it is not hard to imagine situations in which later transfer of the whole database might become necessary or desirable. There is the unwelcome prospect of the obsolescence of the hardware or the software and/or the collapse of the company supporting it. With over seventy automated library systems on the Australian market today, it would seem highly unlikely that the majority of these will still be on the scene in a decade or two! A much more cheerful prospect requiring the transfer of a database could arise from the amalgamation of libraries, the creation of a union catalogue, or the desire to upload cataloguing data to a bibliographic utility, such as ABN or NZBN.

So, if the advantages of the MARC format are desired, the decision needs to be for a genuinely MARC-based system or (with some loss of advantage) a "MARC-compatible" system in which "compatible" implies "reversible" to a MARC format. When you scrutinise the seventy-odd systems in the market place with these criteria in mind, you find that the field of investigation shrinks very dramatically! On the other hand, if financial considerations dictate a non-MARC solution, it needs to be done with full realisation of the limitations which such a format imposes; in particular, you will want to be very sure that your system and the company which supports it will still be operational twenty or thirty years down the track!

Guidelines for Selecting an Automated System

The following guidelines for the selection of an automated system are offered, not as the wise words of an expert, but as the writer's reflection of an amalgam of personal experiences and the opinions of various people, many of them offered at the plenary session of the 1989

¹²Crawford, p.274-277.

ANZTLA conference in Auckland.¹³

1. Choose software before hardware. It is essentially software which determines what the system can do. Software vendors will be able to give advice on what hardware can be used and what may be appropriate for a given situation.

2. Decide what criteria are essential for your library, and what features may be optional. A major consideration will be whether it must be a MARC system or whether it can be non-MARC - and the associated question of interfacing with a bibliographic utility.

3. Assess software applications on paper before going to a demonstration - by matching its claims against your criteria. Ann Clyde's *Computer software for school libraries*¹⁴ lists and describes seventy systems available in Australia and several more have been released since the book was published. Only a handful of these are genuine MARC systems.

4. Beware of the slick demonstration and of claims which are not confirmed in writing. Most vendors have a "whizz kid" whose aim is to convince you to buy his/her firm's product, whether it is suitable for your purposes or not. Don't be fazed by computer jargon; if it can't be explained in simple terms, you are justified in assuming either that they are hiding something or that they don't know their product very well - and, either way, you stand to lose!

5. If possible, take another librarian with you when you attend a

¹³ For another account of the factors involved in selecting a computer system for a theological library, see Anne Davies, "Automation in the special library: a personal view.", *Bulletin of the Association of British Theological and Philosophical Libraries*, 2 (June 1989), p.13-18.

¹⁴ Laurel A Clyde, *Computer software for school libraries: a directory* 2nd ed. (Adelaide: Auslib Press, 1989). See also her article, "Library automation options for school and college libraries: some trends", *Australasian college libraries* 7:2 (June, 1989), p.73-81.

demonstration; the other person may see advantages and/or disadvantages which you don't spot, and will be a source of further reference after the demonstration.

6. If you are serious about a particular system, seek out a demonstration by a librarian in an actual library situation. Practising librarians will be more realistic about supposed advantages and observed disadvantages.

7. Assess the software vendor in terms of both long-term viability and support and development of the product.

8. Assess the viability of the hardware supplier. While you can't be absolutely certain of any firm's long-term viability in these economically uncertain times, it is reasonable to assume that the bigger firms will have the greater potential for survival.

9. As much as possible, avoid compromising quality for financial reasons. While this advice may seem a little unrealistic, you may need to consider whether an inferior automated system is really preferable to the existing card system, and whether perhaps a few thousand dollars is sufficient to outweigh a lifetime of superior quality and/or service.

Surveying the Scene

It is obviously impossible for any theological librarian adequately to survey and evaluate all the automated systems on the market. The notes which follow are drawn from the writer's very limited experience and the oral reports of many others, and there may be other systems just as good as, or better than, those which receive favourable comment here.

No attempt has been made to provide indicative pricing, as such estimates, in the writer's experience, vary greatly, even in cases where the same product, supplied by the same vendor, is involved. There is no real substitute for getting a specific quotation for your library, though Ann Clyde's book mentioned above does provide cost estimates.

1. MARC Systems

To survey the scene of the MARC systems is somewhat simpler than the non-MARC scene, as there are considerably fewer in this category; however, there is one (which also comes in a non-MARC version) which is widely acknowledged as the world market leader and is considered by this writer the "Rolls Royce" of library systems. Witness also this comment of the prestigious *Library journal*:

Dynix continued its record-breaking pattern with hardly a backward glance. Although the company sold 67 systems in 1987, Dynix sold a staggering 77 systems in 1988. Twenty-eight were sold in Australia, an area that the company clearly targeted last year. Despite these sales numbers, Dynix's avowed emphasis has been customer satisfaction and employee development. In the experience of the authors, this seems to remain an accurate pattern thus far.¹⁵

Dynix was developed in the United States in 1986, and has since been installed in more than 600 libraries around the world and more than 100 in Australia and New Zealand. Dynix is a library systems specialist, with a large support and development team. Its Australasian headquarters is in Adelaide. Dynix is based on the Pick operating system, widely acknowledged as the best operating system for handling vast quantities of textual data. It is flexible, user-friendly and reliable and is backed by first-rate support and training, plus an uncompromising commitment to further development and enhancement. While it operates on a variety of computers of a variety of sizes, it would accommodate the needs of most theological libraries on the recommended Wyse 286 or Wyse 386 PC. The vendor is so confident of its product that it actually guarantees specific response times (i.e. three seconds) for searching, provided the recommended hardware configuration is used.

¹⁵ Robert A. Walton & Frank R. Bridge, "Automated system marketplace 1988: focused on fulfilling commitments", *Library journal* 1 April (1989), p.41-52.

SEA-Urica is a recently upgraded AWA product which performs most of the functions of the Dynix, notably excepting the ability to index and search contents notes. Like Dynix, it is Pick based. It also has the facility to "walk you through" the creation of a MARC record. Although Urica has been placed mainly in very large libraries, the upgraded product will operate also in the PC environment. It is marketed by SGA Pacific, trading under the more familiar name of AWA computers, combining the worldwide expertise of General Automation (United States) and Sanderson (United Kingdom).

Datatrek is atypical in that a complete, integrated system developed from what was, originally, only a serials control system. It operates on IBM and Macintosh computers and seems to have most of the features which would be required of a theological library.

MARC-2 is a very new product, developed in Adelaide by Unique Office Equipment to complement its Concorde schools system. On paper, it looks impressive, but is too new to have had any notable impact on the marketplace.

Meta-Marc (formerly MicMarc) has also been developed in Australia. It is based on the Xenix operating system. It has been criticised for its lack of flexibility. Potential purchasers should check out two unconfirmed reports: an earlier, more optimistic, one that it is being rewritten; a later, more pessimistic, one that the vendor is in receivership.

BLISS (Bacone Bay Library & Information Search System) is another Australian product, functioning on Xenix and Unix operating systems. It also looks good on paper, but it has not been possible to see it in demonstration.

Hermes was developed originally for the Bond University, which is currently reported to be looking at other systems. It is marketed by Library Systems of Australia and is being promoted as a school library system.

There are other systems which have a good reputation among academic libraries; the writer's failure to evaluate them could be because of

presumed excessive cost, lack of installations or contacts in Adelaide, or the inability to see a demonstration. Thus, omission from this list is not necessarily a value judgment.

2. Non-MARC Systems

The field of non-MARC library systems is much more perplexing than the MARC field; there are so many available and so many seem to have much the same features. Some are incomplete; others may have particular strengths and corresponding weaknesses. Because they are developed typically for school and public libraries, they may be rather weak in some of the features required of theological libraries; in particular, they tend to be strong in circulation and weaker in the search/enquiry subsystem. If they are incomplete, it is most frequently the serials control subsystem that is lacking.

Dynix markets a "schools" system which is much cheaper than the fully-featured system. It is one of the systems chosen for schools by the Education Departments of South Australia and Victoria. It is equally as flexible and user-friendly as its fully-featured counterpart.

Concorde was developed at Concordia College, Highgate, SA and is marketed by Unique Office Equipment, Adelaide. It is very flexible and user-friendly and combines some additional features (such as booking of audio-visual programs) especially applicable to the school situation.

Book, developed and marketed by Stowe Computing, Adelaide, is very popular in the public library field. It is currently being upgraded to an academic library system.

Ocelot, originally a Canadian system, is marketed in Australia by Ferntree. It has been placed in about 150 libraries, mostly of primary and secondary schools. It is one of the systems selected by the Education Department of Victoria for its schools.

Catalist has been developed in New Zealand. It currently lacks a serials subsystem, but its cataloguing and circulation subsystems are functioning very well in the two theological libraries in which it has been placed. Its screen displays are visually impressive.

The above are systems with which the writer has some acquaintance; there are obviously many others - which may be equally as good. As noted above, there is also one which has been tried and discarded by a theological library.

At the very bottom of the cost scale is the **Bookmark** software (under \$200), developed in South Australia at the Angle Park Computing Centre. It handles circulation quite well, but is very limited in search capability. A more promising low-cost option would be the **Inmagic** software, which sells for about \$1500. Techsearch, Adelaide, has developed several programs to function with Inmagic, including **BIBCAT** for downloading records from ABN (with the alternative of keying in manually) and for the production of catalogue cards.

Conclusion

While it is hoped that the advice given here may be helpful to theological librarians contemplating the implementation of an automated system, nothing can substitute for careful research and investigation by the individual librarian. It is vitally important to know why you want an automated system and to search for those features which are of greatest importance to the individual situation. This is, moreover, an area in which theological librarians can be of help to one another - by sharing their experiences, both of their investigations and of the on-site operation of the various systems.

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Pettee Users: if you have made any significant or interesting modifications to suit your collection, would you care to submit them to Trevor Zweck before the conference. He will be leading the workshop on Pettee, and would be pleased to receive your submissions as soon as possible.