Electronic Journals Access at Alkek Library

Texas State University-San Marcos

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Abstract:

The author shares the actions taken at the Alkek Library, Texas State University-San Marcos, to provide efficient access to journal resources in all formats. Actions include creation of journal databases, linking URLs on bibliographic records with the corresponding URLs in the subscribed electronic journals database through Journal ID numbers, and development of a specialized search engine to search by a variety of search keys three different databases: 1) Subscribed electronic journals collections, 2) electronic journals in full-text databases, and 3) printed/microform journals.
With rapid advances in technology, library innovations, and the growing number of digital collections, the more use of electronic journals in libraries is inevitable. In such a changing environment, the librarians’ new role is to embrace new technologies, benefit from these technological opportunities for dissemination of information, and incorporate this new medium into their traditional role to facilitate and promote the usage of digital collections. The change in job titles, skill requirements, and job descriptions of new generations of librarians in the digital era is a reflection of expanded usage of electronic journals.

Enhanced access to information has changed the traditional role of both the library and the librarian. Linda Ashcroft and Stephanie McIvor state “electronic journals are becoming an established component of academic life, but the management of electronic journals can not yet be considered trouble-free.” For example, the maintenance of URLs in multiple records would double the catalogers' workload. Librarians must find ways to solve unfamiliar problems and issues resulting from using these new technologies. Jack Meadows identifies several potential problems related to electronic journals. He believes the immediate future of electronic journals depends on their relative advantages and disadvantages as seen by four participating groups -- authors, publishers, librarians and readers. Victoria Robertson's study suggests that electronic journals have had, and will continue to have, some impact on other library services and activities, but it is too early to judge the full impact of the electronic journals on library services.

Linda Ashcroft and Colin Langdon investigates benefits of and barriers to the purchase of electronic journals in university library collections. With regard to accessing electronic journals she points out that managers should ensure that their customers are “aware of what is available; able to access the material; able to evaluate the usefulness of materials.” Such technology is useful for library patrons too, as they can access journal articles within seconds, rather than hours or days in a print environment. In addition, “large collections of material can be searched and retrieved simultaneously and instantly.” Electronic journals could be “an important alternative form of document delivery.”

Providing access to electronic journals for current users and future archival access has been the main concern of serials librarians. However, electronic journals present new challenges for libraries in terms of access and management. Linda Rich and Julie Rabine in their survey of academic library website showed that “access to electronic journals is changing: libraries are certainly cataloging their electronic journals, but they have not abandoned their e-journal Websites. In fact, the e-journal sites are not only still being maintained, they are becoming much more elaborate and sophisticated.” They predict that e-journal websites will continue to grow.

Users need to be familiar with a variety of interfaces and search engines offered by the library and publishers' systems. Therefore, any attempt to make these
processes easier for the users will bring the library one step closer to providing a better service for its patrons.

The University of North Carolina at Greensboro Library has introduced an the “Journal Finder” interface for easier and more effective access to journal holdings and articles. Similarly, in an effort to provide patrons with a complete list of electronic journals the libraries in the Western Carolina Network (WNCLN) used the Serials Solutions data. These steps may include, but not be limited to, providing a search engine to access electronic collections offered by various publishers, keyword searching, browsing titles, simplifying the authentication process, and providing information on holdings of print titles. The aim of electronic journal projects at the Alkek Library, Texas State University-San Marcos has been and still is to address these access concerns as best as can be done with the available resources.

Electronic Journals in Alkek Library

The Albert B. Alkek Library at Texas State University-San Marcos has many scholarly journals in both paper and microform. Using the OCLC bibliographic database, the Library catalogs its periodicals and transfers cataloged bibliographic records into the local automated system, DRA (Data Research Associates). In addition, for many years serials titles have been entered into a local database known as CASH (Computer Assisted Serials Handling). In recent years, like many other libraries, Alkek Library has gained access to the electronic versions of some print journals in addition to journals issued in electronic version only. Access is provided either through vendor’s subscription agencies, such as EBSCO, JSTOR, ScienceDirect, Emerald, Project Muse, etc., or through commercial vendors’ full-text databases. In addition the library patrons have access to certain other e-titles through membership in regional consortia that the library did not have before.

Bound by license agreements, access to electronic resources has to go through an authentication process to limit access to university affiliated users. Obviously this is not a problem for those who access these journals from the Library or University computer terminals having a university IP (Internet Protocol) address. However, the library had to make sure that the entire campus community, including those who are distance learners, who gain access through private Internet service providers, can use these journals. EZProxy, a commercial software, allows authentication and provides off-campus access for Texas State University-San Marcos users.

Providing legitimate and effective access to all of these resources, efficiently maintaining the databases, cataloging and proficiently maintaining the URLs (Uniform Resource Locators) in MARC (Machine Readable Cataloging) records, and finding successful solutions to unfamiliar problems offer valuable experiences for colleagues who may be facing similar challenges. An Electronic
Journal Team with members from the administration, acquisitions, cataloging, collection development, reference, and electronic/web services was formed to address the new questions related to electronic resources. Members worked together and shared their concerns to ensure that the library would benefit from the new technologies while preserving the integrity of its role as a source of information.

Solutions to Unfamiliar Problems:

After many meetings the team developed local solutions that worked effectively for all parties, the library staff and the library users. The solutions presented here were not developed all at once and indeed went through progression and evolution. What follows are the latest results of the team achievements.

A. Creation of Journals Databases

The serial librarians created three databases for sources of serials and periodicals. The Alkek Library journal resources include periodicals in print, on microform, and in digital format. Access to electronic format is mostly achieved through subscription of electronic journal collections or single publications, and/or via full-text journals within databases by subscription to various available databases and indexes. The library also has serials in various media formats. This document does not address those.

1. Electronic Journals Database:

This database includes journals received through electronic collections via EBSCO, Emerald, JSTOR, Project Muse, ScienceDirect, etc. The database is sorted alphabetically by title. Each title in the database has the following fields (See Figure 1):

{Title} {Source Code} {Control No.} {E-ISSN}{P-ISSN} {URL} {Holdings}

Figure 1: Electronic Journals Database Sample Records
The code in ‘Source’ field is used to qualify identical journal titles received from more than one source: NA='Not Applicable', EB='EBSCO', MU='Project Muse', JS='JSTOR', etc.

The DBCN (Database Control Number) field is used as the journal identification to link each title in the database with its corresponding MARC record in the Library’s online catalog. This allows the serials cataloging staff to also use the DBCNs to link the URLs on the serials MARC records to their corresponding URLs on the local electronic journals list, and also to search journals by their database control numbers.

Both electronic and print ISSN (International Standard Serials Number) fields are used to report the title in the database to EBSCO in order to benefit from the company’s full-featured OpenURL. This practice allows all serials acquisitions staff, serials cataloging staff, and electronic journal services (Serials Solutions, etc.) to use one single electronic journal database. It also allows searching of subscribed electronic journals by either E-ISSN (ISSN for online version of the journal) or P-ISSN (ISSN for print version) numbers and can also link each retrieved title to its corresponding MARC record in the Library’s online catalog.

The user’s authentication is done through the EZProxy software. The ‘URL’ field is used to formulate the EZProxy in order to lawfully link a legitimate user to the appropriate journal Web site.

Finally, the ‘Note’ field is used to enter special provisions such as “Library has access to 2000-,” explanatory note.

2. Electronic Journals in Full-Text Databases:

The library receives a report from the Serials Solutions and or EBSCO, listing all electronic journal titles in the full-text databases that the library can access. In order to make these titles searchable in a locally developed periodical search engine, the content of each html file is moved to a database via a Perl script. The created database is sorted alphabetically by journal titles and consists of the following fields:

{Title} {ISSN}{Access Information}

3. Printed/Microforms Database:

Each month the serials cataloging unit receives a digital version of the local CASH printout that is used to list printed/bound, microfilm, and microfiche periodical titles. Upon receipt of this list, it is imported to a database with the following fields:
Like the other two databases, this list is also sorted by title. The call number is used to locate bound volumes that are shelved on various library floors. Holdings are identified by format to make it easier to locate the desired journal. The note may include information about an earlier or a later title, “see” references, merged titles, etc. Also, the note may clarify format other than print and microform since the system is older and has no other way of providing this information.

B. Creation of a Search Engine:

The “Locating Periodicals in the Alkek Library” (http://www.library.txstate.edu/ref/ejs/index.asp) web page is used to retrieve titles from the three previously described databases. (See Figure 2).

To enhance journal access, the library wanted to provide a powerful searching tool for the campus community to use that had the ability for remote access to electronic journals, a service that printed journals cannot offer. In the meantime the reference librarians wanted this searching tool to be simple enough so that it would not frustrate novice library users. The driving idea behind the development of a search engine was to have a single access point for all types and formats of serials publications. This would also provide for a wider range of electronic journals access for retrieving journals by their titles, link each title to its database where it is indexed, allow searching by ISSN, and customize the search interface to meet the library needs.
The author has developed a specialized search engine which enables users to search all of the above three created databases: the electronic journal subscriptions, full-text periodicals within commercial databases, and printed/microform subscriptions kept in the Alkek Library.

**a. Title Search:**

A searcher now has the option of either searching all three databases at once, or limiting the search to any one database. Although the search engine has the capability of searching in a variety of ways, the reference staff preferred to hide many of the options in order to make it simpler for the undergraduate students. Patrons can locate periodical titles by entering a key phrase, such as “American History” or “Journal of American History.” The former phrase will retrieve titles such as “Journal of American History” and “Reviews in American History.” Alternatively, one may choose to enter “t=Reviews in American History” to specifically search for only this particular title.

No searches are case sensitive. Also one can limit the number of titles to be retrieved. The default value is 20 and can be decreased or increased to “No limit.”

**b. Title Browse:**

This search engine allows browsing the electronic journals in any given database, including titles beginning with numerals. (See Figure 2).

The alphabetical menu bar allows patrons to alphabetically browse through periodical titles, including titles that begin with numbers such as “19th-Century Music,” within all or a selected database. A green symbol is used for titles published by TxState that are available to everyone and do not need to be authenticated by the EZProxy server.

The electronic journal subscriptions database may be searched by some additional methods:

**c. ISSN Search:**

To search by either E-ISSN (i.e., the ISSN of online version of the journal) or P-ISSN (i.e., the ISSN of print version of the journal), one can enter ‘i={ISSN number}’; e.g., i=1080-6636, retrieves “Yale journal of Criticism.” Clicking on the title will link to the journal site via the Internet. Clicking on the ISSN will link to the WebCat (the Alkek Library online public access catalog) where one can see the bibliographic record and find out more about this title. (See Figure 3)
d. DBCN Search:

Similarly, to search by the Database Control Number, one can enter: ‘d={DBCN number},’ e.g., d=ADK-5944, retrieves “Systematic Biology (ADK-5944).” Clicking on the title will link to the web site for this journal and likewise, clicking on the Database Control Number will link to the bibliographic record for ‘Systematic Biology’ in WebCat. (See Figure 4)

Figure 4: An Electronic Journal Retrieved by its Database ID Number

e. Vendor Search:

To list subscribed electronic journals by vendor one can enter ‘v={a vendor key name}’ where the ‘vendor key name’ is a single word in vendor’s URL, e.g., v=jstor, will pull all titles received by the library from this particular vendor, i.e. JSTOR. This is mostly used by the serials acquisitions staff to obtain various vendors’ lists. It also may be used by reference staff to retrieve titles from a specific professional society or organization. For instance, v=OCLC, will retrieve all titles the library receives from OCLC. (See Figure 5)
Figure 5: Electronic Journals Retrieved by Vendor Search

Note: Vendor name at the end of some titles is a qualifier to distinguish duplicate titles received through different vendors.

C. Linking MARC Records to Electronic Journals:

Like many other libraries, the Alkek Library staff catalogs all electronic journals. To avoid duplication of information in bibliographic records having identical titles in various formats and/or by different publishers, the serials cataloging unit has a procedure to merge multiple formats; most often the print format, of a serial title onto one bibliographic record. If the library has no print subscription and have only a microform MARC record, then the e-journals will be merged onto the microform bibliographic record. If the library only has a duplicate e-journal by another vendor, then the serials cataloging unit merges all other e-journals onto it. In doing so, the serials cataloging unit transfers certain fields from the electronic journal MARC record to the main MARC record. All transferred fields are added to the end of the primary bibliographic record and before the “949” field (Local Processing Information) in numerical order except for those fields marked by an asterisk ‘*’ where they are in their normal location and remain on the bibliographic record when e-journal subscription ends. Those added at the end are deleted when e-journal is no longer accessible. Also, some transferred
fields may be modified with appropriate qualifications to denote the vendor’s name:

*007  Physical Description Fixed Field (Computer Files)
010  OCLC Number/Library of Congress Control Number (LCCN)
022  International Standard Serials Number (if different from print)
*530  Additional Physical Form Available Note
*538  System Details Note
753  System Details Access to Computer Files
856  Electronic Location and Access

The MARC tag 856 (Electronic Location and Access) is particularly important to the cataloging staff in an ongoing project. The serials cataloging unit replaces the existing URLs in the serials bibliographic records that currently link directly to the vendors’ website with the URLs that link to the corresponding titles in the electronic journals database that also link to the vendors’ website but first go through the authentication process. Although the URLs handled by the Serials vendors are relatively stable, keeping up with the changes is a huge task. To keep the cost down one should have only one place where the information is kept up-to-date and where all appropriate parties access the same data. This is what the serials cataloging is attempting to do (See Figure 6):

![Figure 6: Portion of an Online Catalog Record Showing the URL](image)

The main advantage of merging multiple bibliographic records and redirecting URLs to the main database is the elimination of maintenance of URLs in multiple locations which reduces maintenance cost in the long run. In addition, the URLs
on serials MARC records will be as up-to-date as the electronic journal list because changing the URLs on the “master” list in effect automatically affects the URLs in the corresponding MARC records.

Conclusion:

The process described here has brought Alkek Library at Texas State University-San Marcos a step closer to providing better Web services as library patron more fully utilize the electronic journal resources. Although this process is in the context of an academic library, hopefully the ideas will be useful to other serials librarians who are interested in developing similar solutions for accessing and processing their electronic journals. The author would be happy to share with other colleagues his ideas of developing similar scripts to achieve such goals and provide them with more detailed information. You may send your questions and comments to <sk03@txstate.edu>.

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Notes:


