

Electronic Journals Access at Alkek Library

Texas State University-San Marcos

Dr. Sam A. Khosh-khui

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About Author: Author is the Serials Cataloger Librarian/Library Webmaster at Alkek Library, Texas State University-San Marcos.

Email: sk03@txstate.edu, Phone: 512-245-2288 Fax: 512-245-3002.

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.¹ 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."² For example, the maintenance of URLs in multiple records would double the catalogers' workload.³ 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.⁴⁻⁵ 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.⁶

Linda Ashcroft and Colin Langdon investigates benefits of and barriers to the purchase of electronic journals in university library collections.⁷ 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."⁸ 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."⁹ Electronic journals could be "an important alternative form of document delivery."¹⁰

Providing access to electronic journals for current users and future archival access has been the main concern of serials librarians.¹¹ However, electronic journals present new challenges for libraries in terms of access and management.¹² 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."¹³ 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.¹⁴ 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.¹⁵ 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}

Title	Source Code	DBCN	E-ISSN	P-ISSN	URL	Holdings
19th-Century Music	EB	aba0545eb	1533-6606	0148-2078	ejournals.ebsco.com/direct.asp?JournalID=106444	
19th-Century Music	JS	aba0545js	1533-6606	0148-2078	www.jstor.org/journals/01482078.html	
A & SR	NA	aet6506	1534-7311	1534-7311	muse.jhu.edu/journals/asr/	
Academy of Management Journal	NA	axz7882	0001-4273	0001-4273	www.jstor.org/journals/00014273.html	
Academy of Management Review	NA	aat8497	0363-7425	0363-7425	www.jstor.org/journals/03637425.html	
Accounting Review	NA	ade6565	0001-4826	0001-4826	www.jstor.org/journals/00014826.html	
Accounting, Auditing and Accountability	NA	acz7314	0951-3574	0951-3574	www.emeraldinsight.com/0951-3574.htm	
Accounting, Auditing and Accountability Journal	NA	aeh5145	0951-3574	0951-3574	www.emeraldinsight.com/0951-3574.htm	
Accounting, Organizations and Society	NA	acz2658	0361-3682	0361-3682	www.sciencedirect.com/science/journal/03613682	
Accounts of Chemical Research	NA	aba0821	1520-4898	0001-4842	pubs.acs.org/journals/achr4/index.html	
ACM Computing Surveys	NA	axc1692	0360-0300	0360-0300	www.acm.org/pubs/contents/journals/surveys/	
ACM Crossroads	NA	aer6651	1528-4980	1528-4972	www.acm.org/crossroads/	

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:

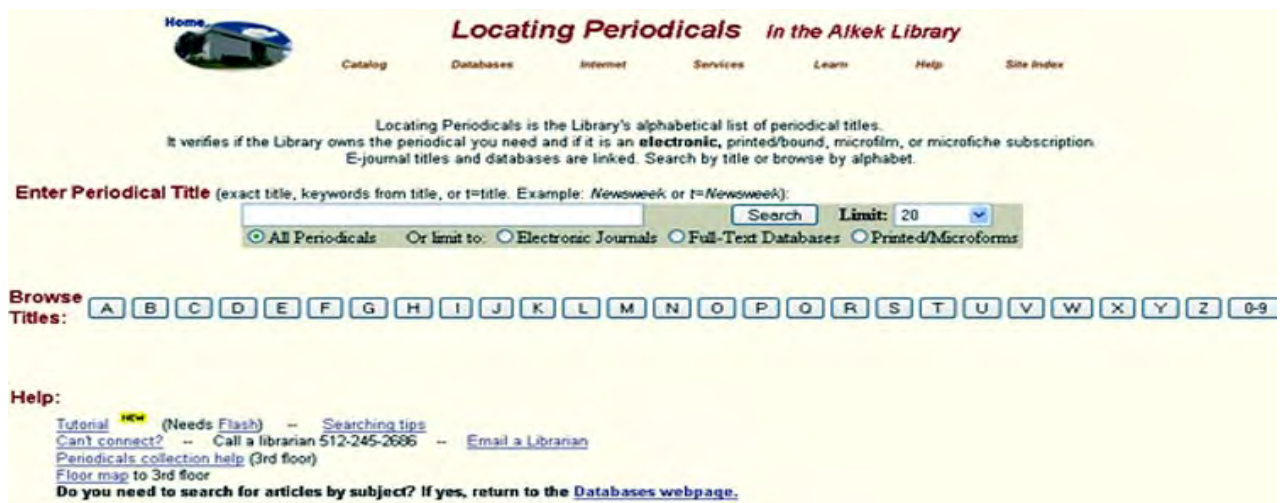
Each month the serials cataloging unit receives a digital version of the local CASH printout that is used to list printed/bound, microfilm, and microfiche periodical titles. Upon receipt of this list, it is imported to a database with the following fields:

{Title} {Call No.} {Bound Volumes Holdings} {Microfilm Holdings} {Microfiche Holdings} {Notes}

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).



The screenshot shows the web interface for the 'Locating Periodicals in the Alkek Library' search engine. At the top, there is a navigation menu with links for Home, Catalog, Databases, Internet, Services, Learn, Help, and Site Index. Below the menu, a brief description states: 'Locating Periodicals is the Library's alphabetical list of periodical titles. It verifies if the Library owns the periodical you need and if it is an electronic, printed/bound, microfilm, or microfiche subscription. E-journal titles and databases are linked. Search by title or browse by alphabet.' The main search area features a text input field labeled 'Enter Periodical Title' with a placeholder example '(exact title, keywords from title, or t=title. Example: Newsweek or t=Newsweek)'. To the right of the input field is a 'Search' button and a 'Limit: 20' dropdown menu. Below the input field are radio buttons for search filters: 'All Periodicals' (selected), 'Or limit to: Electronic Journals', 'Full-Text Databases', and 'Printed/Microforms'. A 'Browse Titles:' section contains a row of buttons for each letter of the alphabet (A-Z) and a '0-9' button. A 'Help:' section at the bottom provides links for 'Tutorial (Needs Flash)', 'Searching tips', 'Can't connect?', 'Call a librarian 512-245-2686', 'Email a Librarian', 'Periodicals collection help (3rd floor)', and 'Floor map to 3rd floor'. A final instruction reads: 'Do you need to search for articles by subject? If yes, return to the Databases webpage.'

Figure 2: Periodicals Search Engine Entry Form

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)

Electronic Journals ISSN Search

- [Yale Journal of Criticism \(P-ISSN: 1080-6636\)](#)

Figure 3: An Electronic Journal Retrieved by its P-ISSN

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)

Electronic Journals ID Search

- [Systematic Biology \(ADK-5944\)](#)

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)

Electronic Journals Vendor Search

- ◆ [19th-Century Music](#) **JSTOR**
- ◆ [Academy of Management Journal](#)
- ◆ [Academy of Management Review](#)
- ◆ [Accounting Review](#)
- ◆ [Acta Musicologica](#)
- ◆ [Administrative Science Quarterly](#)
- ◆ [African Affairs](#) **JSTOR**
- ◆ [African American Review](#)
- ◆ [African Languages and Cultures. Supplement](#)
- ◆ [African Studies Review](#)
- ◆ [Aif. Journal of Comparative Poetics](#)
- ◆ [American Anthropologist](#)
- ◆ [American Economic Review](#)
- ◆ [American Ethnologist](#)
- ◆ [American Historical Review](#)
- ◆ [American Journal of Archaeology](#)
- ◆ [American Journal of Botany](#) **JSTOR**
- ◆ [American Journal of International Law](#)
- ◆ [American Journal of Mathematics](#) **JSTOR**
- ◆ [American Journal of Political Science](#) **JSTOR**
- ◆ [American Journal of Sociology](#) **JSTOR**
- ◆ [American Literary History](#) **JSTOR**
- ◆ [American Literature](#) **JSTOR**
- ◆ [American Mathematical Monthly](#)
- ◆ [American Midland Naturalist](#)

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):

Title : [Youth & society](#)

Call Number : HQ793 .Y6

Publisher : [Beverly Hills, Calif. : Sage Publications], [1969]

Subject Heading(s) : [Youth--Periodicals](#)

Display Related Subjects

Description : v. ; 22 cm. Quarterly Vol. 1 (Sept. 1969)-

Notes : Social sciences index 0094-4920
America, history and life 0002-7065 1970-
Historical abstracts. Part A. Modern history abstracts 0363-2717 1970-
Historical abstracts. Part B. Twentieth century abstracts 0363-2725 1970-
Sociological abstracts 0038-0202
Social welfare, social planning/policy & social development 0195-7988
Social work research & abstracts 0148-0847
Current index to journals in education 0011-3565
Bibliography of Agriculture v. 10, no. 3, 1995.
Also available via World Wide Web by subscription through Ebsco Online, OCLC FirstSearch Electronic Collections Online and through Ingenta.

Related URL : <http://www.library.txstate.edu/scripts/perl/ejs/link.pl?id=aaz7681>

DBCN : AAZ-7681

Holdings : **Item Holdings**

Figure 6: Portion of an Online Catalog Record Showing the URL

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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