

Notes on Operations

Combining Traditional Journal Check-In and Claiming Activities with Electronic Journal Initiation and Maintenance Activities

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Electronic resources are revolutionizing libraries. These resources have dramatically changed the way libraries operate. The role of library staff has been changing, and many new activities have been added to technical services units. This article describes experiences in a university library to illustrate how electronic resources have affected traditional periodicals activities and how one library's periodicals unit staff has responded to these changes. Implications are drawn for other libraries.

For generations, most libraries have maintained records about journal issue receipts and attempted to obtain issues that were not received. These tasks have been handled in check-in and claiming units, typically located in acquisitions or serials departments. With the advent of electronic journals, these activities will become less prevalent and may eventually disappear. However, electronic journal subscriptions require new activities to set up initial connectivity and to ensure continued connectivity throughout the life of the electronic subscription. Where will these new activities reside in library organizations? Many options are available in the library's systems department, collection development department, Web department, or acquisitions department. This article explores one library's experience attempting to incorporate these new activities within an existing periodicals check-in and claiming unit of an acquisitions/serials department. Since this is a relatively new area for all libraries, the actual experiences in this endeavor and the lessons that were learned may be useful to other

libraries that might consider a similar change within their environment.

Literature Review

A thorough literature search of recently published articles on the impact of electronic resources on collection development and management was conducted. Most published literature reflects the issues concerning the collection development aspects of electronic resources. A few articles were found on electronic resources collection management. No articles were found on the management of electronic resources connectivity from the periodicals processing perspective.

The impact of electronic resources on library collection development and management is evident. Miller (2000) examines the history of electronic resources and academic libraries between 1980 and 2000 and concludes that librarians now work in a very different milieu from that of twenty years ago. Electronic resources have greatly affected traditional practices for selecting and accessing library materials.

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Thornton (2000) states that the autonomy of the local library will fade and the roles of librarians will change drastically as the purchase (particularly through consortial agreements) of electronic resources accelerates. Technology options and licensing issues are identified as the two primary factors influencing collection development activities for electronic resources (Davis 1997). These two issues also have influenced periodicals check-in and claiming activities in the electronic environment. Libraries everywhere are challenged to deal with the issues. Copeland (2001) discussed uniform resource locators (URLs) in union catalogs and focused on accessibility issues for electronic resources from the cataloging perspective. URLs provide the global address of documents and other resources on the Web. Copeland examined how URLs in catalog records obtained from member libraries are displayed, where URLs are best placed for patron access, and how effective participating libraries are in maintaining URLs in their local online catalogs and in the union catalog.

This article considers electronic resources from the perspective of periodicals work and addresses organizational structure, work flow, and staffing issues. Library periodicals staff facing changes in the periodicals process at other institutions may benefit from the experiences at the University of Nevada, Las Vegas (UNLV) libraries.

Background

The University of Nevada, Las Vegas, founded in 1957, is a young and fast-growing institution with a student population of approximately 24,000 and more than 700 full-time faculty. With the rapid development of new programs and changes in the curriculum of the university, the UNLV libraries are challenged to provide more comprehensive services to meet

instruction and research information needs. To meet growing expectations of faculty and students for ever increasing access to online journals and databases that they can use for remote research, the UNLV libraries have excelled at finding ways to build its electronic collection. In 1999, the libraries helped reconstitute the Nevada Council of Academic Libraries as a consortium that has collaborated on several projects. In 2000, the libraries became an affiliate of the Utah Academic Library Consortium, which led the libraries to cooperative electronic resources purchasing and sharing. In 2001, the libraries decided to purchase only the electronic version when both print and electronic versions of a journal were available. In 2002, the libraries began working with the EPSCoR Science Information Group to jointly license scientific, technical, and medical electronic journal packages. These initiatives and efforts have greatly enhanced the UNLV libraries' electronic resource collection. Although the libraries have had a flat materials budget for the past five years and a 5% cut in fiscal year 2002/03, they found ways to foster collection growth in electronic resources. The portion of the libraries' materials acquisitions budget allocated to the purchase of electronic resources has increased by more than 10 percent every year since 1999. In the past several years, the electronic resources collection at the UNLV libraries has grown from a handful of CD-ROM databases into a current collection of 163 electronic indexes and full-text databases and more than 8,000 electronic journals including aggregated database titles.

The rapid transition from print to electronic resources has made a great impact on library services in all areas. The maintenance of these electronic resources quickly became a major drain on the libraries' information systems librarian, who was hired to manage the libraries' Web environment.

The need to identify additional staff resources to centralize and support the workload became imperative.

In the fall of 2000, the periodicals unit, residing in the Materials Ordering and Receiving (MOR) department, assumed the responsibility of processing and ongoing maintenance of electronic resources. The periodicals unit was selected to take over the responsibility for several reasons. First, it had a traditional role in the processing of library periodicals. Second, it could provide one clear point of contact for vendors, publishers, and library public services staff for all electronic resources connectivity-related problems. Third, this transfer would free the information systems librarian's time to deal with the libraries' "Web-centric" related projects and issues. Finally, centralizing processing for all periodicals, regardless of the format, made sense.

Re-engineering the Periodicals Unit

In preparation for the implementation of the new work assignment, the periodicals unit went through an organizational change in early 2001. Prior to the change, the periodicals unit held periodicals management responsibilities, including holding statement maintenance, check-in, claiming, and binding of 6,800 print periodicals. It was staffed with one unit supervisor, three library assistants, and four student workers. The unit supervisor was responsible for maintaining holding statements and solving problems, while overseeing the operation of the unit. The three library assistants were responsible for three major periodicals processing areas: check-in, claiming, and binding. Periodicals unit staff had no responsibilities in maintaining electronic resources connectivity. The information systems librarian was the primary library staff member maintaining these resources. However, in

the summer of 2001, both the periodicals check-in and the claiming staff persons resigned. The vacant check-in position was transferred to another library department. In order to integrate the new process fully into the existing periodicals routine work flow, the following changes were made:

- The vacant claiming position was reclassified to a higher level to include the responsibilities of maintaining electronic resources. The person in this position no longer just performs traditional claiming activities. Initiating and maintaining electronic journals connectivity has become a primary responsibility of the position.
- The binding position was revised. With the rapid transition to electronic serials and reduced focus on binding monographs at the UNLV libraries, the position's workload had changed dramatically. Half of the position's time was thus reassigned to support traditional check-in and claiming activities.
- Student assistants were assigned more complex work with greater responsibility, including daily periodicals check-in that used to be performed primarily by the library assistants.

The shifting of responsibilities resulted in the claiming position becoming more specialized in maintaining electronic resources connectivity, while the binding position became more general. The student position responsibilities expanded. These changes ensured that the periodicals unit had a primary person in charge of the new work flow, while keeping the traditional periodicals processes moving smoothly. Involving student employees in daily check-in activities freed full-time staff to handle an increasing volume of work generated by electronic resources.

Skills and Training

One of the major challenges facing the UNLV libraries periodicals unit staff has been the need to develop new skills required for processing electronic resources quickly. A few years ago, tasks such as compiling lists of IP addresses for suppliers of electronic publications and using URLs provided by suppliers to check access to electronic journals were unknown. What skills and knowledge should staff working with periodicals have, in addition to a strong traditional periodicals-processing background?⁹ A preliminary list would include: a basic understanding of how journals are published and delivered online; knowledge of Internet and Web interfaces; information retrieval skills; familiarity with electronic publishing; basic understanding of license/contract terms; strong problem-solving skills; understanding of the interrelationships among departments in the library; and very strong communication skills.

Adapting to a new work flow is not always easy or comfortable, especially when a new set of skills is required. The library should provide the staff working with periodicals processing with opportunities for continuing education, whenever possible, to help them develop needed skills. This can be arranged in various ways, including in-house training, participating in online courses, and attending more formal workshops and conferences. At the UNLV libraries, the information systems librarian provided six training sessions for the periodicals staff. These sessions covered an overview of the Web environment and the basic concepts of hypertext transfer protocol (HTTP), the underlying protocol used by the Web to define how messages are formatted and transmitted); hypertext markup language (HTML), the authoring language used to create documents on the Web; and Internet protocol (IP), the system that specifies the format of

data packets sent over the Internet and the addressing scheme for sites on the network. The sessions also addressed how Web browsers, Web servers, and proxy authentication work, and why proxy servers are used. The classes presented a new picture of how journals, indexes, and abstracts are delivered in the Web environment and gave examples of many problems that the periodicals staff might encounter in dealing with electronic resources. After the training, the information systems librarian continued to work with the periodicals staff during the transition of responsibility. This gave the periodicals staff time to gain hands-on experience with the process. Meanwhile, vendors and publishers were invited to the library to provide training on their products. To learn the terms of license for electronic resource, some of the staff also took the Online Licensing Tutorial course offered by the ALA's Office for Information Technology Policy.

Following the training, in the summer of 2002, the periodicals unit took over the entire responsibility for initiating and maintaining electronic resource connectivity. The periodicals unit is now expected to be a "switch station" that screens and solves problems related to electronic resources and that delegates problems to the appropriate departments, depending on whether the problems involve selecting, cataloging, or technology that are beyond the staff's training level. The staff's role is becoming more one of "traffic control," ensuring that ongoing communication does not get jammed between the suppliers' system and our local systems, as well as "maintenance," maintaining and fixing broken links.

Work Flow Change

As the periodicals unit staff started to work with electronic resources, they found the work flow that had served the unit well for print periodicals

check-in and claiming no longer functioned effectively. They also realized that—in the electronic resources culture—they could no longer work alone due to the complexity of ensuring ongoing access. The new medium of electronic materials simply does not behave like traditional print resources. To ensure that the work flow in the periodicals unit moved smoothly after all the changes, the MOR Department formed the Electronic Resources Connectivity Management group (ERCM) which consists of the head of MOR, the periodicals unit supervisor, and the electronic maintenance staff member who occupies the reclassified periodicals claiming position. The group meets weekly to address issues related to the electronic resources processing and to establish new procedures.

Two work flow charts were developed by the ERCM group. Figure 1 shows the periodicals process for print materials. Figure 2 shows the process for electronic resources. As Curtis pointed out, “it is difficult to use print based models for Web based serials. Each medium provides different challenges and problems to solve. This is certainly true of the check-in and claiming processes” (Curtis 2000, 139). Figure 3 provides an outline of the similarities and differences identified in these parallel processes.

Next Steps

Using aggregators for electronic journals has now become a practical means in most libraries for cost savings and efficiencies in the management of journals. This is especially true in the UNLV library, which is facing a static budget and staffing shortage. How to provide access to the aggregate titles? How to keep track of titles to be added or deleted from aggregate databases? What are the implications for the periodicals process? In the summer of 2002, the library purchased Serials

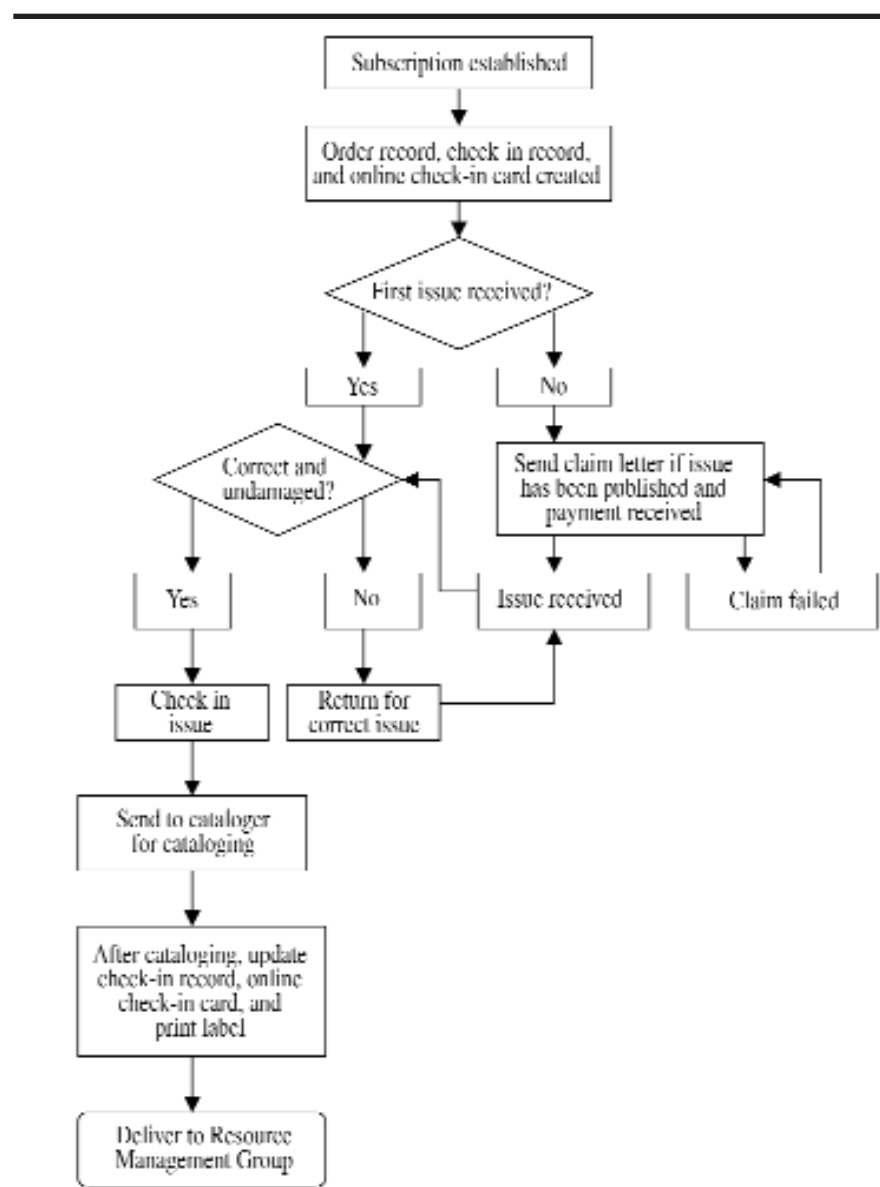


Figure 1. Print Materials Process Workflow

Solutions, a vendor database used for managing aggregate subscriptions. The periodicals unit was assigned to maintain Serials Solutions for all aggregate electronic journals to which the library has access. Also in 2002, the library implemented EZProxy software to manage electronic resources connectivity for remote access.

Continued increase of responsibilities in the management of electronic resources connectivity has brought

up questions about staffing. How can we move smoothly into the electronic information environment while maintaining the commitment to keep the existing work flow current for traditional formats with no additional staff? Print materials are not likely to become obsolete soon. Many print documents will not be digitized (Miller 2000). The UNLV experience has shown that operating in both print and electronic environments requires

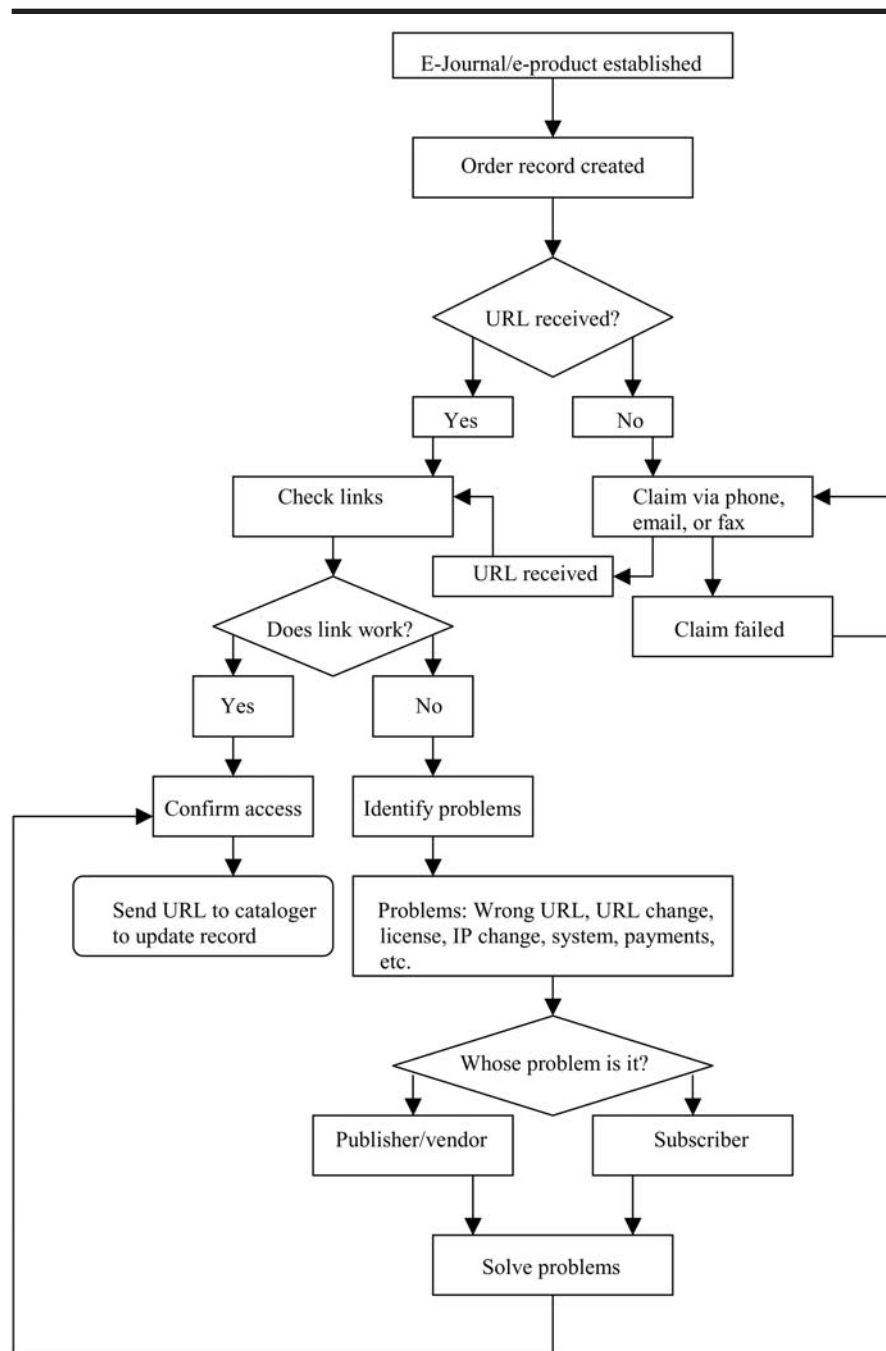


Figure 2. Electronic Resources Process Work Flow

additional periodicals staff time to annotate periodical records, update holding statements, prepare last volumes for binding, link records of print subscriptions to online versions, and monitor the status of print and elec-

tronic titles. The workload in the periodicals unit will be doubled unless the library cancels existing print subscriptions when adding electronic versions of these titles to its collection. The claiming and binding workload will not

decrease if the library continues to apply traditional policies and procedures for claiming and binding during the transition from print to electronic.

Additionally, managing electronic periodicals is more time-consuming than managing print-based titles. Our statistics show that in the print culture, the periodicals staff can check in an issue in a minute or two, while in the electronic culture, it can take an average of five to seven minutes to check a good link. If it is a problematic link, it can take an hour, days, or even weeks to get it working. An increasing workload in testing and confirming access to electronic resources is expected. Drexel University's experience shows an increasing workload for the technical services staff in providing access to electronic journals after its transition to an electronic journal collection (Montgomery 2000).

Continued evaluation of existing staff resources is essential for a successful management of the periodicals work flow. In the beginning of 2003, the UNLV library decided to hire an electronic resources librarian to support the acquiring of electronic resources. The person in this position will work directly with the periodicals staff as well as librarians from other departments in the library. The electronic resources librarian will also participate in reviewing licenses and contracts and facilitate the acquisitions of electronic resources. The periodicals unit will continue to face the need to evaluate its policies and procedures for both the print and electronic resources processes. The electronic resources librarian will make a major commitment to the management of electronic journals.

Implications for Other Libraries

The UNLV library experience suggests several areas that libraries may wish to consider as they seek effective and

	Print journal	Electronic journal
Differences	Physical issue delivered	URL delivered
	Check in issue	Check link
	Verify issue	Confirm access
	Claim for missing issue	Claim for missing link
	No licensing	Licensing
	Space needed	Little space needed
Similarities	Binding	No binding
		Maintain connectivity
	Establish subscription	Establish subscription
	Pay for subscription	Pay for subscription
	Renew/cancel subscription	Renew/cancel subscription

Figure 3. Major Differences and Similarities

efficient approaches to processing electronic resources.

Having a clear communication and support system in place within the library is extremely important. Many times, the periodicals staff has to work closely with the systems department to understand the technical issues involved in checking and confirming access to electronic products. Problems arise, such as why an engineering professor cannot access the product from his or her office or why a certain IP address does not work. Sometimes the periodicals staff also must consult with the collection development librarians to ensure that the license agreement/contract is signed and all user needs are met before the link can be received. Many questions need to be answered. Should we link to a product if the connection to the product is authenticated via user ID and password? Should we set up the link if access is limited to only one location in the library? Should we confirm the link if the access to the product is no longer free? The library needs to have written documentation that clearly spells out who and which department is responsible for what part of the process so that the periodicals staff knows where and who to ask for support.

It is critical that the periodicals unit establishes a system in which claiming for an undelivered product, a missing or broken link, can be done in

a timely manner. In the print environment, the claim cycle for a title is established according to the frequency and regularity of the title. The claim cycle for electronic resources, however, is based on connectivity. Once an order is placed, the expectation is that access to the product will be available immediately. Once a link is missing, the problem will be noticed right away. Time has become an important factor in the claim process of electronic resources. The periodicals staff no longer has the luxury of a six- to eight-week waiting time for a follow-up claim. Whatever they do will have a direct and immediate impact on the library users who now expect to have access. It is important that a weekly claim cycle be set up for newly purchased products to ensure the orders are placed by suppliers and URLs are sent. A daily claim process should be set up for any problems identified or reported regarding missing URLs or broken links. In order to expedite the claiming process, a generic e-mail account or a phone line designated for the process will be helpful.

The library should have a tracking system for all electronic titles ordered to ensure uninterrupted service. The renewal process for electronic resources has proven to be more complicated than the renewal process for print materials due to the licensing and legal issues involved. Renewal requires

a thorough review of all aspects related to the product (i.e., changes in price, terms of contract, package deal, clauses prohibiting cancellations, possible consortium purchasing). If there is a payment problem or a product is not renewed prior to its expiration date, a link can suddenly become invalid and access to the product can disappear without warning. A tracking system should allow the library to generate reports on any renewal information for all purchased electronic resources whenever needed. The report should include the title, renewal date, supplier, last invoice date, and how the title was purchased so that the library can determine well in advance when and whether the title should be renewed or invoice paid. Never wait until a renewal notice is on one's desk to make a decision.

The library should take the initiative to contact its major subscription agents and publishers to establish a system so that the library can be notified of change in a timely manner. To ensure that the system works, the library should write its requirements into vendor service profiles or other service agreements between the library and its suppliers. If the library keeps both print and electronic versions of the same journal, the periodicals unit staff should watch for any possible title change information in print issues at the time of journal check-in.

The library should have effective reports to manage the workload statistics for electronic resources activities. The tracking mechanism used for check-in and claiming print materials does not transfer to electronic materials. In the print culture, the check-in rate has always been recorded. In the electronic culture, should one record how many URLs have been tested in an hour, or should one record how many phone calls have been made to hook up a link? What kind of management information associated with the electronic resources process will be

useful? The following two reports are identified as important at the UNLV libraries for the periodicals unit to keep on a daily basis for electronic resources process activities:

- *Report on Electronic Titles URL Checking.* Data recorded in this report are total URLs checked, total URLs working and total URLs not working, date URLs checked and confirmed, time spent, vendor, and performer's initials.
- *Report on Identifying and Solving Problems with Online Resources.* Data recorded in the report are resource title, date problem reported, description of problem, person reporting problem, action taken, result, date problem resolved, and comments.

Data can be drawn from these reports to assist managers in determining staff productivity for online periodicals processing and to use as part of periodicals unit staff performance evaluations. It can also be used to evaluate vendor and publisher performance.

The periodicals unit staff must share an ongoing commitment to keeping access to electronic journals available to users. In the print environment, once an issue has been checked in, the issue will be shelved or sent to a cataloger if it is a new title. The periodicals check-in process ends here. Later, if an issue is missing from the shelf or a user cannot locate an issue, a member of the public services department normally would deal with the problem. With electronic resources, however, if a user cannot

access a product, periodicals unit staff are responsible for identifying the problem and re-instituting access.

Conclusion

The future of library periodicals processing will be very different from what it is now. Clearly, with the rapid development of new technology in publishing and disseminating human knowledge, academic libraries will become more and more "Web-centric" in terms of providing library services. Increasingly, the staff will have to determine why a link does not work rather than why an issue has not arrived. Increasingly, the staff will be spending more time in making sure that access is delivered appropriately and on time. How to manage and direct changes in the serials world is a challenge faced by library administrators, managers, and staff working with periodicals. A number of good models can be adapted.

Placing management of electronic resources in the periodicals unit works best for UNLV for several reasons. Centralizing periodicals processing, regardless of format, facilitates efficient work flow. It provides one clear point of contact for vendors, publishers, and the library's public services staff for all issues related to periodicals and also improves communication and problem solving. It utilizes the current periodicals staff members to their maximum potential. It frees library systems staff to focus on other Web-based problems. Other academic libraries may learn from the UNLV experience and implement a similar change within their organiza-

tion, depending on their own institutional structure.

Evaluation and fine tuning of the organizational structure are essential for continued success. Re-engineering the periodicals unit for the new process has provided several advantages at the UNLV libraries in facilitating the transition from a print to an electronic environment, but also has resulted in a system that requires ongoing review and change in order to keep both the traditional work flow as well as the work flow for electronic resources moving smoothly.

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