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Practical Approaches to Ongoing Changes in Scientific Journal Publishing

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Introduction

The rapidity with which scientific journals are moving into Web-based formats presents many challenges, both to library staffs and to their users. Our library, the University of Cincinnati Health Sciences Library, is in the fortunate position of being part of a state-wide consortium (OhioLINK), which has enabled us to quickly and easily provide access for our users to a large number of online journals. The greater challenge has been managing our individual online subscriptions. Dealing with each publisher's approach to the new medium requires judgement, skill and finesse.

The University of Cincinnati Health Sciences Library (HSL) is part of the Academic Information Technology & Libraries (AIT&L) organization. The HSL is what is called an Academic Health Sciences Library. The AIT&L also includes a College of Nursing library and a history of medicine library, the Cincinnati Medical Heritage Center. The University of Cincinnati consists of five separate campuses, which form a five-jurisdictional mini-consortium. Located in Ohio, we are also members of OhioLINK, a statewide system that enables us to access over 3986 electronic journals, over 1400 of which are in our subject fields. In addition, we also have access to a multitude of databases.

Other riches include the services of a Systems Support staff, who include the Web Master for the College of Medicine, plus systems designers and developers. Despite all of the technical assistance these people provide, establishing access and publicizing the titles to our audience devolves to a few librarians, who must fit all of this into their workload.

Tentative explorations of web-based journals began 6 years ago, when OhioLINK struck the first deal with Elsevier and Academic presses, and AIT&L hasn't looked back since. In addition to the consortial agreements at the OhioLINK level, we at the Health Sciences Library have entered into many agreements with publishers who offer electronic access to their paper subscribers. This paper will focus primarily on the activities relating to those accounts, the challenges and the lessons learned, and our vision of the future.

**Managing the Change to Electronic Format
Consortial:**

There is no doubt that the creation of OhioLINK and the "overnight" availability of Elsevier and Academic Press journals in electronic form plunged us into the deep end of electronic journal collection building. The original Academic Press – Elsevier contract provided access to 1,389 journals, of which approximately 900 were of interest to our users, and the agreements have continued to add state-wide access to web journals

every year. As mentioned above, we now have access to 3986 electronic journals, of which over 1400 are in our subject fields of interest.

Local Efforts:

Our agents for journal subscriptions, Blackwells, formerly Readmore and Harrassowitz, began supplying us with notifications of access to various journals for which we had print subscriptions. Not all of these were free, nor were all of the titles among our top 10 most-used journals, and it became obvious that a triaging system had to be put in place.

The categories were "Most Important to Library Users and Free"; "Most Important and Not Free"; "Most Important and Not Available," which included journals that had no web presence, or had it only for individual subscribers and not institutional subscribers. This is a simple file folder arrangement, not electronic. The file "Most Important and Not Available" has been invaluable, enabling us to answer quickly the frequent questions about such journals as Nature (before it became available to institutions.)

The first title that we set up independent of OhioLINK was the Journal of Biological Chemistry. This is one of the many titles that began with a "free trial subscription" to the web version of the title. The journal access was set up, but we had not done any major publicity other than word of mouth among the faculty. When a faculty member reported access problems, the Journal Collection Development Librarian had to have the ID and password in order to diagnose the problem, which was a typo in the IP list. The Journal Collection Development Librarian became the lead contact for all types of problems and issues. Also in charge of setting up the accounts, the Journals Librarian quickly learned the intricacies of electronic account establishment. First a search online had to be done for the license agreements, including any restrictions on use; followed by a determination of what IP addresses should be supplied to the site. To obtain the complete list of IP addresses, the list that had been supplied for JBC was used first, and gradually a complete list of IP addresses was built for our campus, building by building.

Presently, we are pursuing two tracks for adding electronic journals to our collection: (a) Via OhioLINK consortial arrangements, which involves no selection on our part, other than indicating how many titles in a proposed block purchase that we own, and (b) Our local efforts, whether it be setting up accounts for free access to online versions of print titles that we subscribe to, or budgeting the purchase of online access as part of the annual collection development activities, or responding to a desperate plea from faculty to add an essential title that has just become available.

Collection Development Adjustments and Issues

The advent of OhioLINK consortial agreements with publishers changed our collection development strategies immediately. A lot of titles were suddenly different. We were paying less for the subscriptions, but if we chose to cancel the title, the savings in collection dollars was much less, so the titles that were apart from the electronic collections were more vulnerable to cancellation than they had been previously, especially if the publisher(s) did not offer a web edition. Just identifying exactly where our collection dollars were going was a challenge. The decisions about selecting the big collections took place at a higher level than the Collection Developers at the jurisdictional level. Of course, the "greater good" principle operated here, and no one would take a step backwards.

Electronic journal purchases are more fluid than the rigid calendar imposed by print publishers, although there are exceptions to this rule. We have had problems with getting a firm price for the electronic access in time for budget planning. Some activations have been delayed by the necessity of gathering statistics: the number of graduate students, the number of faculty in a particular discipline, or the number of computers on a campus (!). Owing to the relative inexperience of some publishers in the electronic format, confirmation of payment before activation of accounts makes the activation process seem endless—although it generally does not take the 6 weeks print publishers commonly insist upon.

Budgetary Effectiveness

The effective use of collection dollars for electronic journals requires the same selection skills as any collection decision. Looking at individual title purchases, there are now more possibilities associated with a title, if the print version is separated from the electronic. The graphical content of the individual title must be considered, and if possible, viewed before making the decision to choose only the electronic format. Editorial content and scope of the title must be taken into consideration, and may allow for electronic-only purchase, if the title has a narrow focus. PDF format, if offered as a separate billable choice, should always be selected. Experience has shown that the clarity of illustrations and charts that PDF provides is essential to our patrons.

Once the titles have been purchased, diligence is necessary to track the use of the title, and the unbroken access to it. It is important to check the currency of the issues, to make sure you are getting what you paid for. When considering cancellations, the possibility of losing access to an online version must now be factored into those calculations.

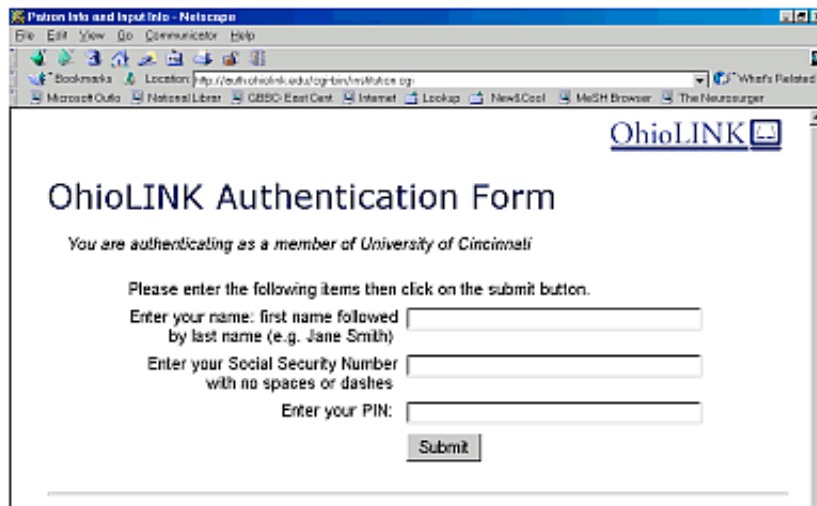
As alluded to above, when contemplating cancellation of a title that has electronic access via the OhioLINK consortium, a clear understanding of the licensing agreement for that particular block of titles is necessary in order to calculate the actual savings to the library. To quote from material supplied by OhioLINK, "Because a cancellation of a print copy does not affect the continued availability of the title through the EJC, a print cancellation cannot result in a reduction in the license fee equal to the full value of the traditional print subscription price. The impact on the library's share of the license fee will vary by publisher."

Access

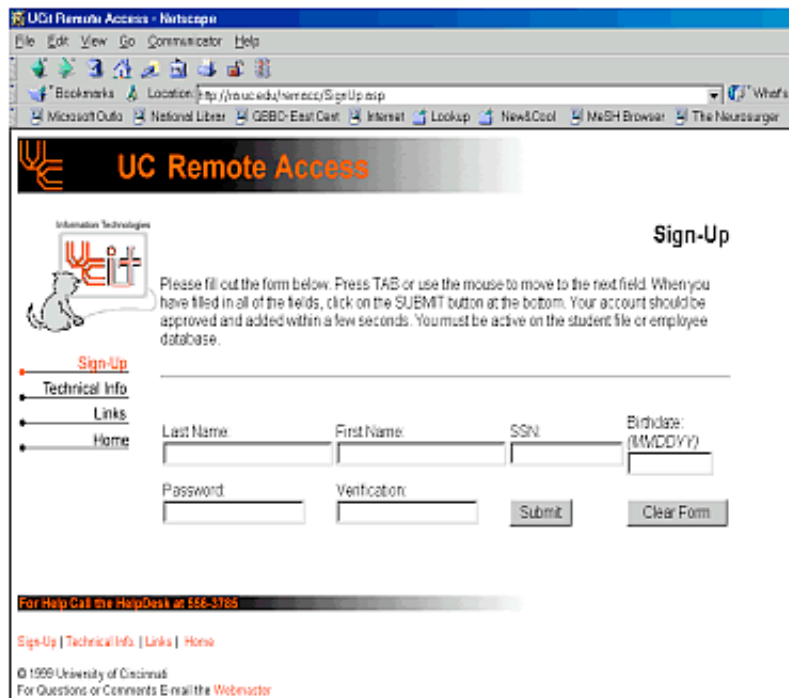
Access to most of AIT&L's online journals is regulated by IP address. Journals available through the OhioLINK statewide consortium are contracted as a group and consortium members' IP addresses are provided to the publisher. On the local level, subscriptions are primarily for individual titles, each with its own license agreement. Many of these individual license agreements also permit unrestricted local and remote access by IP address but there are others who limit access by location, by number of concurrent users or by workstation. For those titles with unrestricted access by IP address, there are additional challenges such as firewalls and proxy servers. We have faculty with joint appointments, who are entitled to access, but are sometimes impeded by the firewall between their labs or offices, and the library's server. We also have pockets of faculty who are University employees but whose work requires that they be located within the hospital, which does not have access to our resources, at least at the present time. Firewalls permit information flow from one side of the firewall but restrict information flow back in from the outside. Proxy servers using a dynamic IP can be problematic to journal access as most publishers depend on a stable IP address.

Both of these challenges have been overcome in time. The AIT&L Systems Support department has worked closely with affiliated organizations to make access possible. The affiliated institutions providing a range of dynamic IP addresses with which to work resolved the dynamic IP challenge. With the cooperation of the affiliated hospital using a firewall and with the help of the software PowerPath, information now flows in both directions. A separate path specifically for residents using Health Bridge, an Internet Service Provider, was also developed so that access to all types of AIT&L's electronic resources is available for hospital residents.

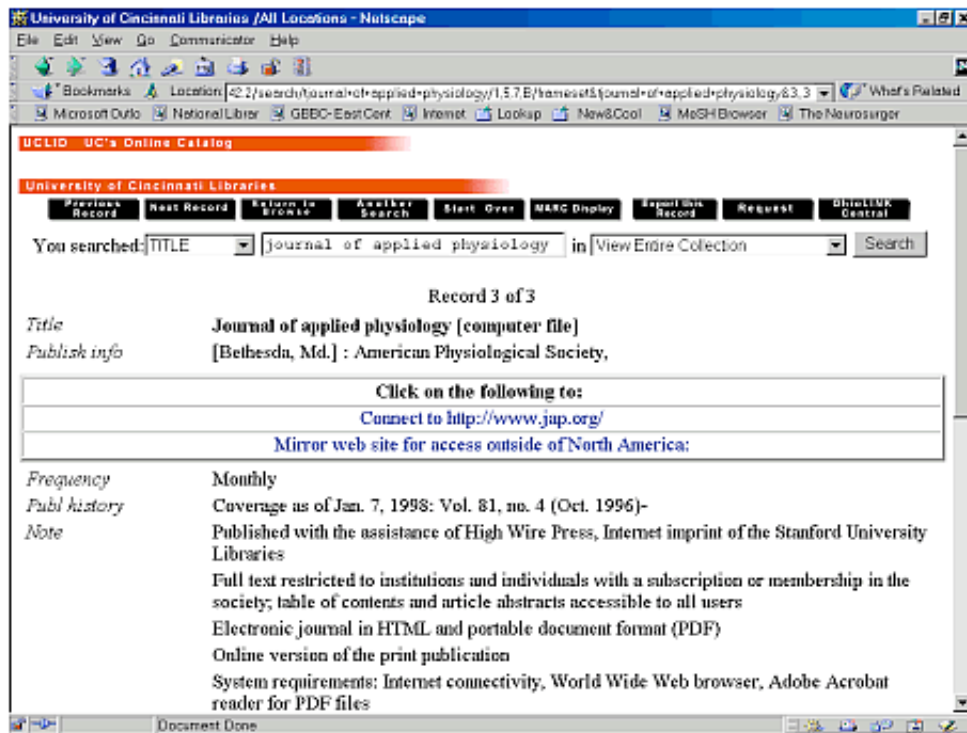
For University students, staff, or faculty, remote access is governed by whether the electronic journal is available through OhioLINK or is a title with a local subscription. Until this past year, remote access to all electronic resources required that UC patrons use the University as an Internet Service Provider. Then OhioLINK made remote access possible through any Internet Service Provider (ISP) as long as the user is in the University database and can verify that by providing their name, social security number, and a PIN number.



This improved remote access to OhioLINK online journals, but remote access to local online journals subscriptions still requires that UC patrons use the university as one of their Internet Service Providers. Individual accounts are set up for each person through an online form set up by the UC IT department. If the user is in the student file or employee database in active status, the account should be approved and added within a few seconds.



Once an account has been set up, a user may access online journals either by following a link from UCLID, the online catalog, or the AIT&L Web Journal page. To make this possible, online journal titles are cataloged and bibliographic records entered via OCLC in UCLID, the university-wide online catalog, which also sends a record to OhioLINK, the statewide OPAC. Most OhioLINK titles are outsourced to TechPro at OCLC, who catalogue the big sets of journal titles. They create a separate record for the electronic version of the title. Some OhioLINK libraries, such as the University of Cincinnati, Bowling Green State University and Ohio State University also participate in cataloging new journal titles.



Individual titles once available are also added to the AIT&L Web Journal page. We have begun the process of editing records for all journals with electronic access to UCLID, and have incorporated that into the Health Sciences Library workflow for electronic journals.

As a point of access to all online journals, the online catalog works well with a few exceptions. One is that catalog records do not as yet indicate access restrictions. For instance there are individual online title subscriptions that are restricted to a particular university IP address range and users are often bewildered when they are unable to access a journal title and there is no apparent explanation. Another is that access is often available much sooner than the title can be cataloged. User demand for access requires that communication about access be broadcast as soon as it is available. Because titles are not always cataloged when their access is advertised, users are not necessarily aware that there are links to online journals from the online catalog. Still another is when an online journal record appears in the catalog before the account has actually been set up. Since some online journal cataloging occurs in a different campus library than ours, communication is not always as it should be. Another problem, which is being addressed, is that as records for paper journals are imported from OCLC, the fields that described the FirstSearch access to the online version were not deleted. Customers would click on these links, only to be thrown into the FirstSearch home page without a clue as to what happened. AIT&L, together with the other University of Cincinnati libraries, are seeking ways to manage problems such as these with good success.

Publicity

Online journal titles are publicized in a variety of ways. The primary way is notification via email. Staff from Cataloging and Collection Services (CCS) and Information Services (IS) departments has joined forces to publicize online journals as they become available. The Journals Collection Development Librarian created a faculty distribution list via email to announce to the entire Medical Center new title access. This list is now used by many departments in the Medical Center, and was an unexpected benefit of our work with electronic journals. A typical email states the name of the online journal, whether there are any access restrictions and what they are, how to access the online journal through a direct url and through the AIT&L web journal page. The subject line is always the same "Library News" – followed by the journal name. Although announcing new online journal titles via email has been an overall success, experience has taught us that the email message must be accurate, concise, and complete. Once the email message has gone out, the Information Services Librarian then adds

the new title to the Web Journal page on the AITL web site.



Additional publicity consists of articles in the AIT&L Newsletter from time to time, and library-wide email announcements. Several service desks: the Information, Circulation, and Serials, have a notebook listing all of the online journals with information on how to access them. Publicity is by necessity an ongoing effort and it can be challenging to do consistently and well. It is one of the most difficult aspects of managing electronic journals.

Challenges

Budgeting for the future:

From past experience, we predict that we will need more sophisticated computational controls of the journals budget, with enough predictors to allow "What if" questions to be answered in an accurate fashion. Communication from our consortium deal-makers about contract details of purchases will have to be transferred in a timely fashion. We believe that our spending patterns will continue to change from the concentrated dump of most of our serial collection dollars at the beginning of the fiscal year, to a more spread-out spending. This allows a little more flexibility, but requires close monitoring year-round.

Archiving:

One of the most discussed topics right now, archiving still hasn't been resolved. Several ambitious projects are underway: the Council on Library and Information Resources' Commission on Preservation and Access Activities, the Internet Archive, OCLC, the Long Now Foundation's 10,000 Year Library, and LOCKSS (Lots of Copies Keeps Stuff Safe), a software being written by Stanford Libraries (HighWire Press), that will allow individual libraries to archive immutable materials delivered over the web. Older initiatives include the Los Alamos National Laboratory Physics Archive (1991), and the Universal Preprint Initiative. Elsevier announced its intent to permanently archive the journals offered through ScienceDirect. We are very interested in the LOCKSS project, and will keep abreast of its progress with an eye to joining the project.

Successes

A major success for AIT&L has been creating access to over 3,986 online journals since 1997. Access to approximately 3,783 is due to the University's participation in the OhioLINK consortium, while approximately 205 are local online subscriptions. The OhioLINK journals, being a consortia collection, are not all in our patron's subject areas, which reduces the number of online journals that are particularly

pertinent to our users to approximately 1,400. Nonetheless, OhioLINK has enabled AIT&L to provide access to far more online journals than we could afford to do alone.

Another success is the faculty email distribution list created by the Journals Collection Development Librarian. It has proven to be key to the online journal notification and publicity process because of its collocation of primary journal users and the speed with which faculty can now be notified of the availability of a new online journal. The faculty distribution list is now used for other notification purposes throughout the Medical Center as well, confirming the usefulness of this tool.

As a first step toward creating a one-button access point to all of AIT&L's online journals, the Web Journal page is successful. Developed by the Information Services Librarian, the initial goal was to provide one location for a list of local online journal subscriptions. It seemed only sensible to include a link to the OhioLINK journal collection as well. The Web Journal page also provides the opportunity, that the online catalog does not, to spell out specific title information such as username and password or licensing restrictions. As a vehicle for providing access to online journals, the Web Journal page will continue to evolve, as AIT&L gets closer to its goal of one-button journal access.

A greater cooperation among the university libraries has evolved as more publishers make groups of their journals available electronically. Cost and access sharing among libraries with overlapping subject areas such as the Health Sciences, Engineering and Chemistry/Biology libraries has become more common and will likely continue to increase in the future. Cooperation is a positive means of providing access to more journal titles across broader jurisdictions.

Faculty interest in greater access to electronic journals has been constant and demanding. Fortunately, through communicating the challenges of the process, we have been able to involve faculty and garner support. Many are willing to participate in e-journal use surveys, and to work patiently with us to resolve their access problems.

Finally, a great deal has been accomplished without additional help. There have been no funds for student assistance, so essentially it has been two individuals, with help from others on occasion, who have worked together to provide access to individual electronic journal title subscriptions and to publicize them to our users. One of the reasons we have been able to accomplish as much as we have, with not much assistance, is that we are in two service areas of the library: Technical and Public. The Information Services Librarian was able to move into a place of responsibility for the public web pages, and understood the value of having all of the journals present on the AIT&L web site. The Journals Collection Development Librarian is in a position to receive early notifications of web presences of our subscriptions, and to correspond with both subscription agents and directly to the web site. We have a very good grasp of the IP addresses, and the people responsible for issuing them, and they, correspondingly, understand dimly that we need to know when new addresses are issued. We are able to coordinate our publicity efforts via the email announcements, and to highlight the various methods of access to a wide audience.

Long Term Goals

Of the many long-term goals for AIT&L's online journals, the principal one is to provide one-button access to online journals. The goal is a web page that contains a complete list of available online journals with a search engine that will take the user to the desired title in the list and a link from that title directly to the online journal, bypassing any registration or password requirements. Currency of all links will be monitored by software that will notify the appropriate web administrator of broken links. Updates in content or location will be handled by the managing bodies of the journals and will no longer be something that we must implement. Is this ambitious? Perhaps, but it is something to strive for in the long term.

In fact, research has begun by talking to others who are further along with one-button access than we are.

We're learning about the types of software that have been used, the time and personnel involved, what the journal sources were, and the amount of vendor cooperation. In time we will put together a proposal for management. Library administration is very supportive of the one-button access project, but funding remains a challenge.

Two other libraries in the University group have lists of the electronic journals or databases in their disciplines. The Business and Engineering librarians have put a great deal of time and effort into creating comprehensive lists of their online resources. One list is searchable, based on keywords in the descriptions of the databases, while the other consists of lists divided into subject areas. Both the Colleges of Business <http://www.libraries.uc.edu/libinfo/business/biz-fulltext.html> and the Engineering <http://www.engr.lib.uc.edu/selfhelp/alphalist.htm> librarians rely on student help to maintain these lists.

Other, more immediately achievable goals include link-monitoring software, adding a search engine to our web page, gathering use statistics, creating a database of all AIT&L electronic resources, developing a class or a series of handouts on how to access and print full-text journal articles, and continuing to improve cooperation and communication among the university libraries.

With the assistance of AIT&L's web administrator, we hope to be able to set up link-monitoring software and a search engine in the near future. Gathering use statistics may be more of a challenge. Initially we are contacting publishers to see what they can provide. Some publishers already provide statistics: PNAS, and the OhioLINK consortial titles all have numbers of use by month, etc. The challenge lies in the interpretation of the numbers, of course. For those who do not offer that service, we will need to pursue gathering use statistics locally. We expect that this will be an ongoing project.

Necessity is forcing the creation of a database for all AIT&L's electronic resources to become an immediate goal. As the number of electronic resources grow, it is increasingly difficult to easily extract pieces of information about the various aspects of the electronic collection. A database will make it much easier to sort information and pull out what is needed in report form at any time. We may be able to use the existing serials database, which is an Access database, to house the electronic journal information. Creating the database will be a learning experience and may take some time to complete. However, the long-term benefit will outweigh any initial hurdles.

We also plan to develop a class and/or a series of handouts outlining the many ways to access online journals. The handouts may become part of an orientation packet for University newcomers, and simply be available for patrons to pick up in the library. We have been asked to draft such a guide to be mounted on the web page of the Office of Research at the College of Medicine. The class will demonstrate the various methods of access and may be offered at the beginning of each term or more often if requested.

Developing and maintaining the electronic journal collection will be a consuming part of our work lives for a long time to come. It has been fascinating and challenging to be involved in such a major format shift. As publishers continue to push forward into online publishing, we will be close behind juggling access, collection decisions, funding, archiving, and all the other issues that must be resolved in order to continue to provide our patrons with the journals they require. We look forward to meeting the challenges as they arise and resolving them in a practical fashion.

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Archiving web sites

PubMed Central/E-Biomed:

Varmus HE-biomed: a proposal for electronic publications in the biomedical sciences.

<http://www.nih.gov/welcome/director/ebiomed/ebi.htm>

<http://www.pubmedcentral.nih.gov>

Robinson, J. HighWire Press ensures that online publications don't get lost in cyberspace.

<http://www.stanford.edu/dept/news/pr/00/000204highwire.html>

Open Archiving

<http://www.openarchives.org>

Scholarly Electronic Publishing Bibliography

<http://info.lib.uh.edu/sepb/sepb.html>

Electronic journals of use to the electronic serials manager:

Newsletter on Serials Pricing Issues. Marcia Tuttle, ed. To subscribe, send an email to listserv@gibbs.oit.unc.edu, with the message Subscribe PRICES your first name your last name..

Serialst.. Also edited by Marcia Tuttle. To subscribe, send an email to seredit@LIST.UVM.EDU. The list is archived.

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