

ELECTRONIC RESOURCES ACCESS : ISSUES AND RESOLUTIONS IN TWO ACADEMIC LIBRARIES.

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Abstract: In late 20th and early 21st centuries, library automation and the Internet revolutionized information access and library operations around the world. The effect on academic institutions has been profound. It enables users to access library resources from sites hundreds or thousands of miles away. Libraries in academic institutions can now provide information access to off-campus faculty and students wherever they are located.

To meet the ever increasing demands for information availability, academic libraries must now subscribe to electronic resources such as e-books, full-text e-journals and online bibliographic databases in addition to the printed formats. While the availability of these electronic resources enable remote access to needed information, concomitantly they present issues and challenges.

Some of the issues and challenges are;

- Access Control.
- Volatility of coverage by aggregation services
- Overlapping coverage of the same title by multiple vendors

This paper will describe in detail and depth these and other issues and challenges facing two university libraries in the United States and librarians' attempts to resolve the problems.

By the turn of the 21st century, library automation and the Internet had revolutionized information access and library operations around the world. The effect of this revolution has been profound, especially on academic institutions. Libraries in such institutions can now provide information access to off-campus faculty and students wherever they are located – even to sites hundreds and thousands of miles away.

To meet the ever-increasing demands from users for remote access to information, academic libraries now subscribe to electronic resources such as e-books, full-text e-journals and online bibliographic databases, in addition to housing these resources in their printed formats. While the availability of these electronic resources enables remote access to needed information, they concomitantly present issues and challenges.

Among these challenging issues facing librarians dealing with these electronic resources are:

- (A) Access Control
- (B) Workload and Personnel
- (C) Volatility in Coverage of Journal Titles by Resource Providers
- (D) Overlapping Coverage of Same Journal Titles by Resource Providers

(A) ACCESS CONTROL

With traditional printed journal subscriptions, libraries own the printed issues, which they can bind and archive, and any library users can come to the library building to use them. The library has total control of these printed materials and users' access



poses no significant problem, except for the requirement to post copyright notices adjacent to photocopiers in public areas.

With electronic journals, however, users' access becomes somewhat problematic, for the following reasons:

- Users increasingly do not want to come to the library and expect access to library materials from remote sites, sometimes even from other countries. This is borne out by 81% drop in usage of current issues of print journals at Virginia Polytechnic Institute and State University (Virginia Tech) over a period of six years.
- Since electronic materials are no longer physically located in the library, control of access to them is no longer under the purview of the library but under the dictate of providers, who are the publishers, vendors, and aggregators.
- Library users expect to access all articles seamlessly and readily from all remote sites.
- Providers use varying methods and technologies to control access to their products in different ways.

The expectation of library users for seamless access to all articles, and the providers' non-uniformity of access delivery is a critical issue many libraries are facing today. This issue is especially compelling for large academic libraries in the United States which have several campuses and offsite facilities located in different parts of the states, country, as well as in other countries. Virginia Tech, in addition to having research stations and off-campus centers all over the state of Virginia, also has a Center for European Studies and Architecture in Riva San Vitale, Switzerland. Similarly Washington State University libraries provide services to their urban campuses, agricultural research stations, extension offices, and learning centers throughout the state. Its university's Distance Degree Programs include students across the United States and in more than 15 countries. Providing access to these users is problematic because of the different ways providers allow access to their online materials. Some of them control access

- Through ID Login and Password.
- Through IP authentication.
- Through licensing policies.

All three methods pose inherent problems.

Through ID Login and Password

- IDs/Passwords have to be issued to individual patrons, which may not be feasible in large university settings, especially for popular resources.
- Issued IDs/Passwords can be easily re-distributed by legitimate users to unauthorized users.
- Patrons have to deal with many Passwords for a wide variety of titles or systems.
- Timeliness of access may be compromised while waiting to get needed IDs/Passwords.

Through IP authentication.

IP Authentication is less intrusive and the preferred mode for most libraries because there is no need to give out passwords to users, there are no passwords for them to remember, and furthermore, libraries do not have to manage changing passwords mandated by providers. Despite these advantages, access through IP authentication remains a concern for large academic libraries for the following reasons:

- IP addresses are not contiguous in universities with off-site campuses and centers
- Some universities provide dial-in through a university modem pool where IP filtering may bar access to remote users
- Students and faculty who live and work off-campus increasingly have Ethernet connections instead of modems, and do not have IP addresses within the IP ranges of the university. Instead, they use addresses provided to them by non-university-affiliated Internet Service Providers (ISPs). For them, special arrangements such as the use of proxy servers that recognize legitimate library users on other authentication schemes, must be put into place.
- Many universities are now implementing systems by which users are not given permanent IP addresses. These systems dynamically generate and assign IP addresses “on-the-fly” for the use of one session. Though these systems of assigning IP addresses represent economies for the communications and computing centers for the universities, they make tracking of problems by IP addresses problematic for libraries.
- Computers that are locked behind “firewalls” by companies, agencies, or other controlling ISPs cannot be authenticated by any means and so are barred access to electronic resources of the library.

Through licensing policies.

Some licensing policies tend to be overly restrictive and do not reflect “real world” settings and needs. Some licensing policies restrict by site which can be defined as on-campus or as narrowly as the library building itself. Restriction by site poses problems as more courses and degree programs are being offered online and off-campus students and faculty increase in numbers. These off-campus students and faculty are regarded, and rightly so, by their parent institutions as full-fledged members of their university communities. Despite potentially varying distant locations, these off-campus students and faculty should have exactly the same access privileges and capabilities as their on-campus counterparts. However, with restriction by site they could be denied the same privileges and capabilities their on-campus counterparts have with regard to information access. A few licensing policies go as far as restricting by patron types. An example of this is WRDS (Wharton Research Data service) which can only be accessed by faculty, staff, and Ph.D. students only. Fortunately, due to pressures from libraries, many publishers like the New England Journal of Medicine, Nature and the American Chemical Society which had restrictive policies at the onset have since modified their policies and provide other options.

(B) PERSONNEL AND WORKLOAD

With the advent of e-journals, an assumption is often made that providers take over the work previously done by staff, and that less work from staff is required since “everything is online,” but in reality work is not reduced but shifted to new activities and responsibilities. Since e-journal collections are located on servers of the resource providers, library staff have to find new ways to track inventories. Journals have become elusive because they no longer are physical entities that can be held in the hand and placed in physical locations in library buildings. They are now tracked in some ILS system, or alternatively in locally maintained spreadsheet, or via online administrative modules made available by vendors, e.g. Elsevier’s ScienceDirect, or serials management services such as Serials Solutions.

With literally thousands of e-journals available in large academic libraries, this role involves substantial investment in time and effort in:

- establishing a gateway to providers’ servers
- maintaining active and accurate links to journal titles
- adding new journal titles
- deleting ceased and cancelled titles
- tracking titles that provide electronic access with print subscriptions
- ensuring coverage changes and title changes are up-to-date
- updating URL changes

Since information of this nature is rarely forthcoming from the providers themselves, library staff are at their own devices to track down the information. Many libraries have allocated at least one full-time position to overseeing electronic access. As the role of library staff has changed with the advent of e-journals, so has the role of public service librarians. Some of their new roles include:

- Teaching users some core competencies in information access since users are often overwhelmed by all the materials that libraries make available electronically.
- Serving as intermediaries between the library users and the staff who can “fix” access problems
- Educating users about what is and is not free access, whether a title is part of a consortial purchase, and if proxy access is permitted.
- Devising easy access for journal articles that become free after some fixed interval of time following their publication.

(C) VOLATILITY IN COVERAGE OF JOURNAL TITLES BY RESOURCE PROVIDERS

All libraries providing electronic full-text journals service are well aware of the issue of volatility in journal coverage and have experienced the frustration involved in coverage maintenance. Coverage volatility often results from:

- Providers dropping, adding, or modifying coverage without notifying their subscribers, and their title lists do not indicate what has been changed from one update to the next.
- Titles changing in an instant, and all traces of former titles disappearing, prompting frequent complaints from users regarding misleading coverage information. A sterling example is ProQuest’s Veterinary Medicine and

Veterinary Economics being available one day and gone the next, with everything deleted, current as well as backfiles. Another example is Elsevier's ScienceDirect whose inclusion of the Supplement of the American Journal of Cardiology is spotty at best.

- Coverage lost due to a change in publisher of the journal. For example, Journal of Evolutionary Biology which was by Elsevier from 1997-1998, switched to Blackwell in 1999. Thus, from 1999 it is no longer available through Elsevier's ScienceDirect but through Blackwell's Synergy service, without the rights to access being transferred from Science Direct to Synergy.
- Resource providers' non-cognizance of libraries' established rules regarding serial title changes, resulting in former titles continuing to be listed as current issues on providers' lists or absorbed into the date range for a new title.

(D) OVERLAPPING OF COVERAGE OF SAME TITLES BY RESOURCE PROVIDERS

Libraries facing shrinking budgets are trying to acquire quality information in the most efficient and effective means possible. To achieve this, many are joining state, regional, and national consortia for better group subscription discounts.

Some consortia in the United States are:

- VIVA, (the Virtual Library of Virginia) which is a consortia of 39 state-funded and 28 private colleges and universities.
- OHIONET, a state consortia with 300 member libraries ranging from academic, public, special, school, and "others"
- ASERL, (the Association of Southeastern Research Libraries) which has 37 research and eight state library members in the Southeastern United States
- GWLA, (the Great Western Library Alliance) which has member libraries from over half the country.

Examples of some non-US consortia are:

- CHEST, (Combined Higher Education Software Team) in the United Kingdom with 750 member libraries
- DEF (Danish Electronic Research Library) with 242 academic, public, and special member libraries.
- FinELib (the national Electronic Library of Finland) with 97 academic, public, and special member libraries
- COSALC (the Coalition of South African Library Consortia) with 41 member libraries.

**For more information on library consortia, go to the homepage of the International Coalition of Library Consortia (ICOLC) at: <http://www.library.yale.edu/consortia/>*

Even though the price per journal is lower when libraries subscribe to electronic journals through package deals for consortia, there are numerous overlaps in coverage of the same titles, and libraries end up purchasing the same journals from different providers. Table 1 shows a few of the duplications of electronic journals in Virginia Tech and Washington State University.

Table 1

Overlapping Coverage of Journal Titles	
<u>Journal Title</u>	<u>Resource Provider</u>
Acta Physiologica Scandinavica	ECO, Synergy
Advances in Drug Delivery Review	Ingenta, ScienceDirect
Journal of Veterinary Medicine	ECO, Synergy
Journal of Animal Ecology	ECO, JSTOR, Synergy
Journal of Animal Science	Highwire, ProQuest
Veterinary Dermatology	ECO, Ingenta
Veterinary Immunology & Immunopathology	Ingenta, ScienceDirect
Veterinary Microbiology	Ingenta, ScienceDirect
Veterinary Parasitology	Ingenta, ScienceDirect

Duplication of subscriptions to the same journal through different providers thus invalidates the lower price per journal of package deals. Besides negating lower prices, overlapping coverage by different providers create confusion among library users because of their different user interfaces. This in turn creates challenges for reference and bibliographic instruction for public service librarians.

To alleviate the confusion for users, Washington State University libraries use SFX, an article linking software program to list multiple resource providers for the same title in order of the most preferred. For example, the Highwire link for a journal could be listed before the ProQuest link.

CONCLUSION

Throughout the 20th century, librarians have faced and surmounted the challenges posed by new formats of materials, from print to microforms, audio-visual materials, CD-ROM, computer software, and machine-readable data files. Beginning in the mid-1990s, electronic journal access through the internet has made librarianship more challenging.

Even though major issues inherent in electronic access management have been raised, not all have been resolved. Librarians are continuing to seek ways to make access for users as easy as possible. While they are confronted with the challenging aspect of hunting for creative solutions, they are rewarded in seeing the surprise and amazement of users when told that they can access needed journal articles and other library resources with their computers from their homes, offices, laboratories, and even from remote Mongolia and the seclusion of Antarctica.

Like colleagues before them, librarians of the 21st century will succeed in surmounting the challenges posed by electronic access of library resources. Part of their eventual success is because librarians consider challenges not impediments, but opportunities to improve the accessibility of their clientele to their libraries' resources. The other contributing factor to success is their innate disposition in injecting an element of fun in all their undertakings. Fun is an essential ingredient in any profession but especially in librarianship. As Thomas E. Nisonger noted in his

(1996) article *Collection Management Issues for Electronic Journals*. "You should have fun being a librarian because you are not going to get rich being a librarian". So as long as librarians continue to have fun in resolving problems, challenges currently posed by electronic access of information will be successfully met.

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