While electronic publications can greatly increase a university community’s access to information, they also pose many challenges to the libraries charged with collecting and managing them. In the print environment, libraries purchase and own content in perpetuity, while in the electronic environment, they generally lease access to content for limited time periods on a subscription basis. This paradigm shift, often referred to as the “ownership vs. access” model, has profound consequences. The leasing of information is frequently governed by a license agreement entered into by the library and a publisher or vendor. As license agreements are contracts, and, in the United States contract law supersedes existing law such as U.S. Copyright Law, license agreements have the power to undo a user community’s rights to use information in ways long assumed in the print environment. Publishers and libraries must work together to negotiate agreements that benefit both. Beyond the development of fair license agreements, e-publishers wanting to market to academic libraries should design their products in ways that allow them to be easily integrated into a libraries greater e-collection and infrastructure. Today, many libraries are implementing products that integrate their individual e-subscriptions, allowing interlinking of abstracting and indexing databases with full-text sources, and providing the ability to search across multiple databases simultaneously. Publishers must also work collaboratively with libraries to address the issue of archiving in the electronic environment. The libraries role to continue to collect and preserve the history of our society is uncertain in the digital world, where most libraries are as yet unprepared and unequipped to systematically handle large volumes of electronic content. Even where they are able to do so, the contracts governing use of electronically published materials frequently forbid libraries from duplicating their content for archival purposes. For usability, e-publications need to be designed with levels of granularity that provide the ability to link directly to the article level in journals is essential. Article level linking is necessary for libraries to effectively integrate various systems via link-resolvers and course management software. Both publishers and libraries need to be able to collect information about the use of their e-content, so the development of standards for usage statistics must be achieved. In order to manage their e-collections, libraries need to be able to collect usage statistics, just as they collect and analyze circulation statistics for their print collections. A new international Code of Practice, developed by COUNTER, is gaining wide international support by librarians and e-publishers, as well as they professional organizations, and libraries are increasingly asking their e-publishers to be COUNTER compliant.

Keywords: license agreements; interlibrary loan; archiving; OpenURL; COUNTER; electronic publishing; link-resolvers; standards; usage statistics; ownership vs. access.

INTRODUCTION

As a Serials and Electronic Resources Librarian working in the Washington, D. C. area, I have had numerous opportunities to talk to publishers in the process of putting
their content online. I have been invited to serve on several journal advisory groups, and have had many informational meetings with publishers who were seeking the librarian’s perspective on how they should present their online journals. Through this process I became increasingly interested in the relationship between publishers and their library clients, as it is rapidly changing in the electronic environment. Last year I attended my first meeting of the Society for Scholarly Publishing to gain more perspective on this changing environment from the publisher’s point of view. What has struck me from these experiences is how little many publishers know about how academic libraries manage and make available their materials. Although initially surprised by this cultural disconnect, since libraries and academic publishers serve much the same audience, I think I’ve come to understand it. In the print environment, most libraries acquire the majority of their journals through subscription agents to handle every phase of the subscription process, from placement of initial order to cancellation, with the publisher. The acquisition of monographs is similarly done, with libraries using book vendors to acquire the bulk of their collections. In these scenarios, libraries and publishers simply have not had the opportunity to be in dialogue with one another. The electronic environment, however, is presenting a multitude of opportunities for publishers and libraries to come together in new partnerships that can benefit both.

While electronic publications can greatly increase a university community’s access to information, they also pose many challenges to the libraries charged with collecting and managing them. Unlike the print environment, where standards have long been established for the organization, preservation, and use of content, the electronic environment requires that an entirely new set of tools be developed and employed. Cataloging practices developed to provide bibliographic records as surrogates for distant objects (books, manuscripts, etc.) have lost relevance where access to the desired content is only a mouse click away. The libraries role to continue to preserve and archive the history of our society is uncertain in the digital world, since most libraries are as yet unprepared and unequipped to systematically handle large volumes of electronic content. Even where they are able to do so, the contracts governing use of electronically published materials frequently forbid libraries from duplicating their content for archival purposes.

Publishers of e-content face different aspects of these same challenges. Everyone is affected by the lack of standards and the ever-evolving technology makes planning for future development guesswork at best. As interlinking between disparate content becomes more common, publishers have a vested interest in how the linking relationships are organized—something they did not have to consider much in the print world. And publishers are increasingly being asked to reassure their customers that access to their content will be available over the long-term, putting the publisher in the role of preservationist and archivist rather than the library. Even the laws that the library and publishing world have relied upon to manage content and balance profit with concepts of “fair use” are being undone. Librarians and publishers must come together in new partnerships to face these challenges, and to discover solutions that can benefit both.

THE SHIFTING PARADIGM: OWNERSHIP VS. ACCESS

A fundamental difference in the electronic environment is the way that libraries acquire information. In the print environment, libraries purchase and own content in perpetuity. With this purchase come rights granted under the “first sale doctrine” of United States Copyright Law, where ownership of a physical copy allows the purchaser
to lend, resell, or dispose of an item, as well as more specifically defined rights including United States Code (USC) 107, “Limitations on exclusive rights: Fair Use” and USC 108, “Limitations on exclusive rights: Reproductions by libraries and archives”, which are essential to the operation of the modern academic community. These provisions have long allowed academic libraries to serve their community’s educational needs, as well as to share resources across unaffiliated campuses through interlibrary loan services.

In the electronic environment, libraries generally license access to content for limited time periods rather than purchase it. This paradigm shift, often referred to as the “ownership vs. access” model, has profound consequences for libraries. The licensing of information is generally governed by a license agreement entered into by the library directly with a publisher, with no mediation by a subscription vendor. As license agreements are contracts, and in the United States contract law supersedes existing law such as U.S. Copyright Law, license agreements have the power to undo existing rights such as those sighted above. Publishers often see license agreements as a means to protecting their content in the digital environment where it can be so easily and inexpensively copied and distributed to multiple people simultaneously. While this is certainly an understandable concern, in seeking to restrict the use of their content, license agreements frequently prevent libraries from serving patrons and resource sharing with other libraries according to long established practices. It is imperative that libraries and e-publishers work together to create license agreements that meet both of their needs.

RESOURCE SHARING

Practices such as interlibrary loan, use of materials for course reserves, and classroom distribution of digital content are frequently prohibited by license agreements. Yet these resource sharing activities are essential to the scholarly process; such restrictions will eventually limit the broad dissemination of knowledge and its integration into further discourse. What it is important for publishers to understand is that librarians are champions of intellectual property rights, and have long been the gatekeepers of copyright adherence on their campuses.

Interlibrary loan, probably the most crucial service a library has to provide access to materials not held in their collection, while expressively permitted in Section 108 of the US Copyright Law is particularly at risk in the electronic environment. Yet academic libraries in the US closely adhere to further guidelines that were established to balance the needs of the publisher with that of the library community, so that interlibrary loan activities do not substitute for a subscription to or sale of a work. These guidelines were established by the National Commission on New Technological Users of Copyrighted Works (CONTU) which operated between 1975 and 1978 to address how the US Copyright Act of 1976 should deal with computers and copy machines. While the CONTU guidelines specifically address interlibrary loan in the context of photocopying, libraries have been adhering to them for decades and are applying them in the electronic environment. These guidelines protect the publisher by limiting the number of times per year that a non-subscribing library may borrow from a journal’s last five years of publication. Once this limit has been met, the borrowing library has several options: to cease to borrow articles from that title; to purchase the requested article from a document delivery service; to pay royalties to the Copyright Clearance Center or the Authors Registry; or purchase a subscription in order to meet user needs. Frequently the results
of a library meeting the limit on interlibrary borrowing is a decision to begin a subscription to that journal, thereby actually increasing the publisher’s revenue stream.

ARCHIVING
In the print environment, libraries have long served as the archives and preservationists of their society’s knowledge. This role is being profoundly challenged in the electronic environment, again largely due to the ownership vs. access shift and the control of information use via a license agreement. Electronically published materials are usually hosted by the publisher, on their own servers, and accessed via the World Wide Web by the subscriber, or licensee. This has negated the library’s ability to fulfill one of its basic responsibilities – collection building -- and it causes great concern. As Ann Okerson writes in an article in the journal *Library Trends*, “If it is now the publisher who insists on keeping information on his own servers, the better to control and monitor it, what incentive has that publisher (or vendor) for keeping that information fresh and accessible? Will he continue to charge users, year after year, for access to information for which they or their institutions have already paid in the form of subscriptions at the time of publication? The fear is that information which has lost its commercial value may disappear if left in the hands of commercial (both for-profit and not-for-profit) owners only…”

The question of who will archive digital information and how remains largely unanswered, although progress in the United States has been made. The Library of Congress has established the National Digital Information Infrastructure and Preservation Program, and is asking that research libraries partner with them to collect and preserve content. As David Seaman, director of the Digital Library Federation is quoted in an article in *The Chronicle of Higher Education*, this effort is “really the first serious national attempt anywhere to tackle the problem and the challenge of ensuring long-term retention of digital content.” The article also notes that one of the great challenges facing digital archivists is “persuading commercial publishers to let libraries participate in archiving the publishers’ copyrighted files.”

Academic libraries are increasingly asking publisher to give them the right to make an archival copy of their subscribed content, so that the library can ensure that the “collections” they are developing in the e-environment will be available for their users of tomorrow. Publishers must be willing to allow libraries to continue to play the role of archivist in the digital environment, or much of our society’s knowledge base could well be lost. E-publishers not willing to grant these rights are increasingly likely to find that libraries refuse to accept their conditions, and decline to license the content in question. American University’s own *Guidelines for the Licensing of Electronic Resources*, for example, states that “Long-term considerations are vital and should be given attention in any license agreement...At the very least, American University should be allowed to devise a way to archive and preserve electronic information that has already been paid for.” Ann Okerson points out that archiving solutions achieved by publishers and librarians “must emerge, because concern over archiving remains the barrier to dropping print subscriptions and print production—and if producers and librarians must support dual systems, the information world will remain hugely expensive. Real confidence in archiving futures will make it possible to leave print behind...” Clearly, e-publishers willing to collaborate with libraries on the archiving problem will find a much readier market for their wares.
IMPORTANCE OF “INTER-LINKABILITY”

E-publishers wanting to market to academic libraries should design their products in ways that allow them to be easily integrated into a library’s greater e-collection and infrastructure. Today, many libraries are implementing products that integrate their individual e-subscriptions, allowing interlinking of abstracting and indexing databases with full-text sources. The software that the library world is employing is largely based upon the emerging OpenURL standard. Meanwhile, the publishing world has been implementing reference-linking systems such as CrossRef. These two linking mechanisms can work together to provide services that benefit both the library user and the publisher.

CrossRef is an initiative of the Publishers International Linking Association (PILA). The CrossRef system relies upon the assignment of unique Digital Object Identifiers (DOIs), to link directly from a referenced article to that article itself. In this scenario, however, the publisher defines which instance of that referenced article will be referred to, and as Jenny Walker writes in *CrossRef and SFX: Complementary linking services for libraries*, this “would not be a problem if there were only ever one possible service – the publisher’s own – where such full text could be found. However, the reality is that the electronic full-text of the article could be found on some other service such as an aggregator service – or the institution could host the text locally. Furthermore, the article may be available at a particular institution only in print form and could be found on the library shelves.” For interlinking tools to be effective in the library context, then, linking must be localized to encompass the unique collection, both digital and print, of an individual institution – what Walker calls “linking localization”. This can be achieved by the use of the OpenURL framework, and it provides another opportunity for collaboration between libraries and publishers.

Information providers in the e-environment who have implemented CrossRef may well ask why libraries are asking them to implement yet another linking tool. As stated on the CrossRef web site, “This has caused some confusion concerning primary and secondary publishers who use the CrossRef/DOI system for cross-publisher links to full-text, because of the mistaken perception that the OpenURL and the DOI are competing technologies. They are not… [t]he OpenURL is in fact enhanced by interaction with the DOI system…” The OpenURL and CrossRef/DOI work together to increase the likelihood that the end user will make a successful connection between referenced content. Because the DOI directory is itself OpenURL enabled, it can recognize a user as being affiliated with an individual institution with its own local linkresolver. Information is then shared between the two systems that push the user to the most appropriate copy of the target content that exists within the institution’s system if available, or can take advantage of the DOI as an alternative. Libraries participate in this effort by becoming CrossRef Library Affiliates. Participation in CrossRef by both libraries and publishers benefits everyone – libraries and their users benefit from a more integrated e-collection, and publishers benefit from the increased likelihood that their content will be accessed, used, and cited.

Another outcome of the integration of disparate resources into a single system is the need for information providers to forge new relationships within the own community. The success of CrossRef indicates how powerful such new relationships can be. As CrossRef director Ed Penz has stated, “…CrossRef has been so successful because of the
excellent collaboration between publishers who have traditionally not been known to collaborate."  

But further collaboration is needed within the information industry before the potential of interlinking systems can be fully realized. Particularly important are the adherence to existing standards and the development of new standards to address issues that come to the forefront as we move increasingly into the digital realm.

STANDARDIZATION

In an article titled “Oh, the Places Linking will go!” Jill Grogg and Christine Ferguson note that while the DOI and the OpenURL are two obvious examples of the benefits of standardization, the “job is not yet done. There is an increased need for this type of standardization in other areas of the information industry to fully realize the potential of the OpenURL and context-sensitive linking…In the print world, if a citation is formatted v. no. for one article and vol. N. for another, a user can either deduce the sameness of the two citations or consult a reference librarian; in other words, such inconsistencies do not pose a tremendous roadblock to information retrieval.”  

Machines, however, are largely incapable of making such distinctions. Grogg and Ferguson continue by using letters to the editor as an example: “A & I services handle these in diverse ways: Some create one large file for all the letters in an issue, some index each letter separately and provide a citation for each contributor, and others may handle the letters in neither of these ways, but in an entirely different manner. How does the OpenURL handle this? The answer is simple. It really can’t. Citations need to be standardized for computers to decipher the metadata.”

USAGE STATISTICS

In order to manage their e-collections, libraries need to be able to collect usage statistics for their online content, just as they collect and analyze circulation statistics for their print collections. Yet this is another area where standardization has been lacking. A new international Code of Practice has been established to help publishers and vendors develop this consistency. This Code of Practice was developed by a group known as COUNTER, for Counting Online Usage of Networked Electronic Resources. COUNTER is gaining wide international support by librarians and e-publishers alike, as well as their professional organizations, and libraries are increasingly asking their e-publishers to be COUNTER compliant.

While the ability to gather COUNTER compliant usage statistics is a valuable service to libraries, e-publishers can benefit from being COUNTER participants as well. COUNTER “provides vendors/intermediaries with the detailed specifications they need to generate data in a format useful to customers, to compare the relative usage of different delivery channels, and to learn more about online usage patterns.” As Brian Kenney points out in an article in Library Journal, “By providing statistics that are consistent, credible, and compatible, publishers give librarians tools to demonstrate just how popular and useful online products and services are, thus helping ensure that adequate funding is provided for their purchase. In turn, this practice will supply publishers with the courage of their convictions: they’ll be able to show purchasers just how effective their resources are.”

Knowing your customer’s online usage patterns can provide additional opportunities for targeted marketing strategies and increased revenue. For example, many e-resources are licensed for use by a limited number of simultaneous users. Institutions often use usage statistics to evaluate whether their users are experiencing too
many “turnaways” when all available user “seats” are occupied, and will purchase additional simultaneous user rights accordingly. While COUNTER has focused on counting journal usage in the past, Kenney reports that a major objective “is to enhance COUNTER’s value to other library collections by extending it to cover e-books and other content types and by deepening it to provide more granular reports, such as usage of individual articles. This will be of great value to publishers and authors, as well as librarians, who will be able to identify the most heavily used articles as well as the types of institution or department where usage is heaviest.” More information about COUNTER, including guidelines for implementation, can be found on the COUNTER web site.

GRANULARITY

The level of granularity that e-publishers have designed into their systems is another factor that is of import to libraries. The ability to link directly to the article level in journals or aggregator databases is essential. Article level linking is necessary for libraries to effectively integrate various systems via the link-resolvers discussed earlier, but the need extends beyond that. Course Management software programs such as BlackBoard and WebCT are rapidly growing in popularity. Where interlinking to an article, journal is possible, these resources can be seamlessly integrated into online courses.

CONCLUSION

The advent of e-publishing has revolutionized the way information is packaged and distributed. There is little question that print resources will continue to migrate to electronic formats, particularly in the area of journal publication, and that new, born-digital publications will proliferate. Having information available online provides extensive value-added service in the academic environment, with the ability to link across e-resources, integrate content into courseware management programs, and provide access around the clock, seven days a week. Issues of archiving, resource sharing, and standardization will be resolved out of necessity. Librarians need to be respectful of publishers concerns that their revenue will dwindle in an environment where content can so readily be shared, and publishers need to be aware of the benefit that libraries provide by helping protect their rights under existing copyright law, and their ability to integrate disparate content into a workable whole. Libraries and publishers have a unique opportunity to forge new relationships as they face the challenges of the e-environment—to work in a spirit of collaboration rather than competition.

NOTES

1 Further information about the CONTU guidelines are available at <http://digital-law-online.info/CONTU>.
2 Further information about the Copyright Clearance Center is available at <http://www.copyright.com/>.
3 Further information about the Authors Registry is available at: <http://www.authorsregistry.org/authorinfo.html>.
Further information about the National Digital Information and Infrastructure and Preservation Program is available at <http://www.digitalpreservation.gov/>.


OLSEN, ref. 6.

From American University Library’s Guidelines for the Licensing of Electronic Resources, a non-published document.

OKERSON, ref. 4, p. 686.

Further information is available in OpenURL Framework for Context-Sensitive Services at the National Information Standards Organization web site at <http://www.niso.org/committees/committee_ax.html>.

Further information is available at <http://www.crossref.org/>.


Further information about CrossRef available at: <http://www.crossref.org/02publishers/16openurl.html>.


GROGG, ref. 15.


KENNEY, ref. 19.