ARCHIVING ELECTRONIC JOURNALS: AN ANALYSIS OF DIFFERENT ROLE PLAYERS

By

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ABSTRACT

Electronic Journals have now been recognized as a major link in scholarly communication. They have brought a number of advantages to publishers, libraries and scholarly community. Along with these advantages they address number of issues and challenges. One of the major issues is in respect of archiving of the back issues of a journal. This has been addressed by various players like publishers, consortia, individual libraries and third party aggregators. This paper discusses the role of these players.

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0. Introduction

Electronic Journals have now been recognized as a major link in scholarly communication. The timely publication, ease in delivery, incorporation of multimedia contents, hyperlinking and search facility, etc. are some of the features which have attracted interest of both libraries and scholarly community. However, along with these advantages it has brought a number of challenges, out of which archiving is still an unsettled issue.

1. Archiving

In order to preserve the scientific and cultural knowledge of today, electronic publications have to be archived just as print publications have been. The issues of permanence and availability of information are critical for electronic journals which use web as the primary medium for communicating information. Archiving ensures that information survives in a usable form as long as it is wanted or retained for a period of continuing value.

Archiving of electronic journals is much more complex than archiving print journals. It addresses a number of issues. Rapid obsolescence and uncertainty about the physical life of digital documents are major concerns. It is also not certain that the documents will remain unaltered after publication. The dilemma as to which electronic format is best for archiving remains to be solved. This problem of format will certainly require continual attention as digital formats appear and disappear. The question, which e-journals should be archived, also needs to be addressed, and finally the major challenge of the

responsibility for archiving. Who will do it? Should this be the charge of libraries, publishers or some other entity? This issue is the main focus of this paper.

2. Who will Archive ?

This issue has been a topic of debate for a long time and still continuing. Number of models have been proposed and some of them are; archiving by publishers, consortia, individual libraries and archiving by third party aggregators.

2.1 Publishers

Many of the large publishers are creating their own archives of their products in electronic form as counterparts to their print products. Publishers began to realize that if the archival versions were stored in such a way that it could be reused, there would be additional benefit and revenue to be gained from the repository.

Two of the most notable publishers who have taken on archiving responsibilities directly are the American Institute of Physics (AIP) and the American Chemical Society (ACS). Both of these are learned, professional societies that are charged by their members with preservation of the knowledge produced in their respective fields. AIP is most notable for its well developed Archiving and Usage Policy (http://www.aip.org/journals/archive/index.html). Policies covered in the document include access rights of current subscribers, lapsed subscribers, and non-subscribers; downloading, and the availability of physical copies of the archive and the cost for these copies. The policy also defines the user AIP's approach commitment to archiving and its approach to technology migration, refreshing of media, and retractions and corrections. In the latter case, the original articles are not altered, but annotations are made to text explaining the retraction or correction to the article. The AIP has planned for one or more secondary archive sites, which provide backup and may be used to spread the access across multiple geographic locations. In addition, the primary archive is never used for its online searching service, but is archived to ensure that its contents are not altered.

Major Commercial Publishers also have their own archive for online journals. For instance, Elsevier Science Direct is archiving all their online journals, which come to around nearly 1,100 in number. Their archiving policy says that, the archive will be migrated, as the technology for storage, display or access changes, and an internal production archive separate from the Science Direct platform will ensure redundancy and the ability to recreate the files in case of disaster. In extremis a third party solution is provided for – " in the unlikely event that Elsevier Science should be unable to meet this responsibility, the archive will be turned over to one or more depositories chosen jointly by the publisher and an independent board of library advisors".

Blackwell Synergy is another major publisher in science and technology who is bringing out nearly 260 online journals. They have a clear archival policy. Their policy says " on termination of the subscription, the publisher shall, if so requested within 30 days of termination, provide the Licensee with assistance in obtaining continuing access for Authorized and Walk-in Users to that part of the Licensed Material which was published

and paid for by the Licensee within the Subscription Period from a third party's server provided that the third party shall be responsible for any content conversion from the format in which the Publisher provides the material. The Licensee will be responsible for any access fee due to the third party and for any fees associated with content conversion ".

Publisher archiving has its own demerits. Publishers are unlikely to maintain long-term archives unless they are financially beneficial to them. Another danger is that, this will create a centralization of information at a single site. A library may not get the usage statistics of the electronic journals by its users. Publishers fear that librarians use such information as a basis for canceling subscriptions. Moreover, not all publishers have a clear archival policy.

2.2 Consortia

Archiving by library consortia is another approach. This would involve libraries working together to collect and archive electronic sources on networked sites. Consortia are regarded as an effective strategy to increase the buying power of individual libraries over the short term and as an opportunity to maximize opportunities for cooperative collection building and for resource sharing over the long term. There are an expanding number of consortia at all levels, from local to international, and they are beginning to include other types of organizations as well as libraries, museums, hospitals, research groups, and historical societies. Some of them are given below.

1) CICNET

The CICNET Electronic Journal collection is an example for library consortia which is a cooperative journal archival project started in 1992 by the committee on institutional cooperation, a consortium of major research universities in U.S. CICNET staff have assembled a collection of freely distributed electronic journals from around the world which now numbers more than 600 titles (http://www.cic.uiuc.edu/cli/elecfin.html).

2) OHIOLINK

The Ohiolink consists of various types of libraries within Ohio (www.ohiolink.edu). Currently it has the collection of Elsevier Science, Academic Press, and Project Muse. The archive is available online to students, faculty and staff at Ohio higher education institutions

3) BYTES

BYTES (Books You Teach Every Semester) is a consortium funded by Mellon Foundation which consists of eight members of NERL (Northeast Research Libraries Consortium). BYTES is examining information about reserve collections in history and literature in the English language at eight of the eighteen NERL participating university libraries and attempting to answer underlying questions about how to digitize critical resources for teaching these subjects.

4) BIOLINE INTERNATIONAL

Bioline International is an iniative supported by the University of Toronto and is another example of how consortia will have opportunities to support truly innovative projects. Bioline is a non-profit organization that mounts online versions of bioscience journals and is increasingly expanding to include peer-reviewed but less-well-known journals from developing countries (http://www.bioline.bdt.org.br).

Apart from libraries, publishers are also forming consortia. For instance, Academic Press (AP) is creating a number of open consortia, which will make it possible for institutions that are not already members of a consortium to get all the consortium benefits that AP has to offer. Each institution deals with AP directly or through an agent and does not need to be concerned about consortial arrangements. Specifically, an Institution that makes a written agreement with AP to join an IDEAL Open Consortium (IOC) and pays the fees involved receives an IDEAL Virtual Library Card (IVLC), which provides worldwide web access to the full complement of 174 AP journals and/or 19 WBS/CL journals. AP is working with several subscription agencies to help it organize open consortia in various geopolitical areas.

There are attempt to form coalition in consortia at international level. For instance, International Coalition of Library Consortia (I.C.O.L.C, http://www.library.yale.edu/consortia/) is an informal, self-organized group comprising (as of September 2000) nearly 150 library consortia from around the world. The Coalition serves primarily higher education institutions by facilitating discussion among consortia on issues of common interest. They have formulated a statement of preferred practices to guide negotiations among electronic information providers, with regard to access, archiving, systems and licenses. In particular, I.C.O.L.C is seeking license agreements which (1) permits member libraries to take reasonable steps to archive content that they purchase or lease (eg. to make back-up copies) and (2) obligate the provider to guarantee perpetual availability of the content.

Consortia seem to be a viable solution from both libraries and publisher's point of view. It offers publishers the opportunity to sell to a very large number of users and to save on their marketing and administrative costs, and libraries get products at a lower cost.

2.3 Individual Libraries

Individual libraries have traditionally taken on the responsibility of archiving the world's knowledge. This has generally not been a formal, organized system, but it has worked nonetheless. But, the task of archiving electronic material is radically different from printed materials. It involves significant investments in technology, plus new kinds and combinations of skills and capabilities necessary to house, organize, and offer smooth access to information. The larger organizations and national libraries, however, have the resources for creating such archives. For instance, National Library of Australia's PANDORA (http://pandora.nla.gov.au/pandora/) project is an attempt to archive selected Australian online publications such as electronic journals, organizational sites, government publications and ephemera. Scholarly publications of national significance and those of current and long term research value are archived comprehensively. Other items are archived on a selective basis “to provide a broad cultural snapshot of how

Australians are using the Internet to disseminate information, express opinions, lobby, and publish their creative work." In all cases, NLA, in the absence of digital deposit legislation, seeks permission from the copyright owner before copying the resource for the archive.

2.4 Third Party Archiving

The third party option saves many libraries 'reinventing the wheel' on electronic archiving particularly technological migration, and could be more stable. The leading third party archiving example is the cooperation between publishers and OCLC for a digital archive of academic journals accessible through OCLC electronic collections . In its contractual agreements with publishers, OCLC obtains the right to mount all content at OCLC and create a permanent electronic archive. This includes the right to store in perpetuity, all of the journal content delivered to OCLC during the period of the contract and to provide ongoing access to libraries that have subscribed to this content, even if the publisher terminates its agreement with OCLC. The archiving policy statement also guarantees that, should OCLC be forced to discontinue the Electronic Collections Online, OCLC will provide libraries with digital copies of their journal subscriptions in a format that will enable them to locally mount and access the information using the current technology.

OCLC is not making access to archival material dependent on continuing use of the electronic journals service, nor seeking exclusive agreements with publishers that limit their choice of online distribution channels for their content. However, it will not provide libraries that discontinue the service of digital copies of their journal subscriptions for local mounting and storage.

JSTOR (Journal Storage), a venture spawned by Mellon Foundation is another third party aggregator who provides access to back volumes of printed journals. The core motive of JSTOR is to save libraries the cost of storing old journals. It plans to offer 100 journal titles within a few years. JSTOR has obtained the right to provide the content from the publishers of the journals contained in the databases, and copyright therein is retained by the publishers (http://www.jstor.org/).

In India, Informatics India Pvt Ltd (http://www.informindia.com) is acting as a third party aggregator through its J-Gate service. Its directory consists of 6000 e-journal (as of Nov, 28).

3. Conclusion

All these models have their own pros and cons. It's up to the library to decide which models to choose. The Task force on Archiving Digital Information has proposed that digital information creators, providers and owners should have the initial responsibility for archiving while certified digital archive should be given the right and duty to exercise an aggressive fail-safe rescue function. This sort of approach is attractive for electronic journals because most publishers will have an interest in maintaining access over time and will migrate the information themselves until such time as the journal is no longer of interest or economic value. It is at that time that the fail-safe mechanisms should be

activated. The role of organizations with a mandated national role for preservation (like National Libraries) will be important here.

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