

CONSORTIA AND THE BIG DEALS:
A NEW WAY OF DOING BUSINESS OR THE END OF THE TECHNICAL
LIBRARY?

Nestor L. Osorio
Northern Illinois University
DeKalb, IL, USA

Introduction

The literature of engineering and technology includes a variety of resources, the most commonly found in a library collection will be referred to in this paper as principal components of a collection. These principal resources includes [1]: journals, conference proceedings, bibliographic databases, monographs, reference books (manuals, handbooks, etc.), technical reports, industrial standards and specifications, product catalogs, and patents. There are also a number of other important reference sources for specialized areas such as maps, images, software, geological surveys, dissertations that are used in many libraries. For the purpose of this discussion an emphasis is made on the first group - the principal components - as mentioned before.

Engineering and technical databases were introduced to library patrons as early as the 1970's. For example, industrial standards, patents, product catalogs, and bibliographic databases have been around since the creation of on-line services such as DIALOG, ORBIT and STN.

The creation of the Internet and the further developments that took place early in the 1990's with the creation of the World Wide Web opened an opportunity for making scholarly technical communication available in a network-based environment [2]. Bailey[3], and Lynch [2] presented some of the initial discussions about how scholarly communication will operate in this new environment.

The publishing industry represented mainly by commercial, societal and academic publishers has been experimenting with technology and marketing strategies for several years. The newest marketing emphasis is for making the journals available in electronic format. There is also significant interest in the publishing industry for making other principal resources such as conference proceedings, monographs, reference books, and technical reports available in e-format [1]. For example, ENGnetBase corresponds to CRC Press' extensive collection of engineering handbooks on the Web [4].

If the present trend continues, soon most of the current technical information will be in e-format, and in many cases only in e-format. The questions being explored in this paper includes: will these publications be affordable by the average - in size and resources - sci-tech institutions, and under what conditions? what will be the role of sci-tech libraries in preserving technical information?

Consortia

Historically, consortia have had a very important role in the development of collections and services for the technical library. Initial cooperative efforts [5] were in the areas of computerizing technical processes; for services to users in special subject areas; for inter-library loan and in reference networking. For many years the greatest focus was on automation and in providing access to materials. Consortia programs continue to have a significant role, for example, in the development of virtual catalogs in collaboration projects such as resource sharing and personnel training. These efforts have been beneficial to the use and dissemination of technical information. In the last ten years consortia have been strongly supporting the purchasing of electronic resources cooperatively [6]. These cooperative agreements have given libraries some added buying power for general collections, the humanities and the social sciences but this is not the case for the highly priced market of scientific and technical publications. Nevertheless, if savings obtained in a group buying means shifting the costs from one group to another [7] what is then the net gain for all libraries? .

Consortia and Technical Electronic Collections

The library literature contains a great deal of articles, book chapters, reports and others items on the role of consortia in developing electronic collections for library users. Most of these pieces deal with library collections in general. The focus of this paper is to discuss the development of electronic collections for the scientific and technical literature, more specifically, about the principal resources that technical libraries need.

The 'economic of scale' purpose of consortia as indicated by Bostick [5] has now been utilized and expanded for the licensing of electronic resources with the premise that the consortia "weight" will provide a leverage for negotiating lower prices. Today the role of consortia as "buying clubs" for electronic resources represents one of their most important activities. This role is also their most questionable. Consortia "buying clubs" are basically reactive agents to the current status of scholarly communication, particularly for scientific and technical information. Their main purpose appears to be a survival one, a strategy that will allow libraries to buy time until a better solution for the technical scholarly information system is found. As a transitional strategy it has some merits but it can not be seen as a permanent solution.

Most publishers – commercial, societal and some academic – are entering the electronic market [8] at a fast rate [1]. One of their main objectives is the conversion of their paper journals into electronic format and making them available in the Web. A common marketing strategy prevalent among sci-tech publishers is to bundle these publications into large packages, these aggregations of journals are known as the "Big Deal" [9]. In addition, as indicated by Frazier [9] "the Big Deal will give the largest commercial publishers extraordinary power to control terms and conditions of the information market." Not surprisingly, the prices of scientific and technical journals continue to increase [8].

These so called "Big Deals" are leaving the technical library with no room to do any quality selection of titles - journal and other publications - [10] and most likely will

diminish the archival mission the library should have [11],[12]. As a matter of fact, it is difficult to assume that under today's existing archival strategies - made available by some of these publishing outlets – that copies of electronic publications in existence today will be available or will even be affordable 10 or 20 years from now. In addition, the “Big Deal” does not allow the sharing of documents with other libraries, therefore, limiting our ability to share resources [9].

Selection Role of the Technical Library

The short-term benefits of these packages are very attractive but in the long run it can significantly weaken the position of the library within the system of scholarly communication [9]. The selection role of the library will be minimized since there is no reason to critically review every title in a package [10]. The evaluation methods for the use of electronic resources are mainly based on the number of times a page is visited. There is no real statistical evidence that these counts are acceptable ways of “selection” and the few initiatives for creating fair evaluation techniques and data standardization are just not enough. For example, the ARL's “Measurement for Electronic Resources” [13] site, does not have any significant statistical analysis to offer. The truth is that there are no proposals for the creation of real statistical models capable of evaluating what is being counted. Publishers are not motivated – as long as their invoices get paid by their dedicated customers - and the consortia people are too busy trying to survive the next round of price increases or the new round of printed journal cancellations in their home institutions.

We must stress the unique characteristics that the science and technical literature have always had. While electronic collection building strategies such as the purchasing of e-materials through consortia and the packages offered by publishers might have some merits for the licensing of resources in the arts, humanities and social sciences, it is doubtful that they represent real long standing solutions for technical information. Circum-passing the selection and review process done by librarians should be a serious concern to the profession as a whole [14].

Not only is the technical scholarly information system in a chaotic state but the whole purpose of the technical library - our business - is apparently diminishing.

Archival Role of the Technical Library

Long-term preservation of materials has been a major activity in our profession. The problem of preserving digital materials is a very complex and expensive one [14], to the point that it is possible to say that the most reliable and economical methods of archiving library materials today are still deacidified paper and microfilms [15]. Some very interesting initiatives have emerged in the last few years, for example, BioOne [16], JSTOR [17], and SPARC [18] to remediate the problem of preserving digital collections but we are still a long way from reversing the trend of what is in progress of rapidly being lost. Not only our ability to make selection decisions based on intellectual processes is being abandoned, but also the capability of the technical library of maintaining the important role of being the archival of professional accepted technical information is also

at risk. We must remember that one of the strengths of libraries has been "our ability to provide access, both now and in the long-term future, to important resources..." [15] The Federal government of the United States does not have a coordinated plan for the archival of documents in digital format [11] including the archival of technical information. Also, one of the most ambitious efforts in preserving electronic information is the National Digital Information Infrastructure and Preservation Program (NDIIPP) of the Library of Congress but in their more recent report [19] no mention is made about the preservation of scientific information because at this point the Library of Congress is not addressing issues related to this type of literature. Therefore, if depending on high cost publishers is not a valid way to envision the archival of digital information and since we do not have a real and clear picture of the role of other entities like professional societies and government in this endeavor, then the role of the technical library as the archival for technical information is in very serious doubt.

Copyrights and Authors

At the center of the problems related to technical scholarly communication is the issue of authors' copyrights. Copyrights issues are very important to untangle the vicious circle of serials cancellations and higher prices of technical journals. The intellectual property rights as concerns the authors, and their institutions must be re-evaluated. Grimwade [20] has said "Nearly every element in the creation and development of research information is highly subsidized. Researchers are supported with government (or corporate) grants; they write their research papers in their offices with their institutions' word processors; and they send off the manuscripts using their institutional mail service. Using their employers' telephones, fax machines, and E-mail accounts, they participate in the peer review process." Shulenburg [21] added to this topic: "I no longer believe solutions that fail to deal with the ultimate ownership of scholarly communication, i.e. copyright, are viable. I have reached this conclusion because I believe in the market. What the market is telling us now is that the scholarship published in many academic journals has real economic value." The role of the for-profit publishing industry - commercial or societal - has to be re-evaluated so they are not the only driving force behind technical scholarly publishing.

The Need a Scientific and Technical Communication Model

The reason why consortia cooperative licensing of technical electronic resources will not be an effective economical solution was explained back in 1994 by Lynch [2] when referring to the economics on scholarly communication in the network environment said: "the goal of the commercial publisher is thus to design products and pricing schemes that maximize profits." In relation to the practice of running professional societies as a business Lynch added: "has led association managers to transform publications programs into massive revenue streams as part of efforts to maximize income". It is a reasonable expectation to assume that these priorities in the market place are going to continue [23].

Therefore, from our point of view as gatekeepers of scholarly information, and keeping in mind that libraries are institutions created and maintained for the collective benefit of the community [12], it is urgent that the creation of new economic models for scientific information will ensure not only our own existence - the technical library - but also the

survival and continued growth of a healthy system for the dissemination of technical information. The cultural and economic benefits of developing such a system to the whole of society are hard to argue against.

There are already in place some important economic models worth investigating. Two examples of publishing journals are BioMed Central [22], and SPARC [18]. Examples for providing archival storage are BioOne [16] and JSTOR [17]. These efforts are highly commendable but it is worth noticing that only very few electronic technical journals – particularly in engineering and technology – have been developed so far. Therefore, it seems appropriate to create an Engineering/Technology Central type of service.

Gass [23] has proposed passing the cost of publication to authors and institutions, a strategy that has been recently adopted by TheScientificWorld Journal [24] and is also supported by the Public Library of Science [25]. The ScietifiWorld Journal and BioOne has created clusters of specific subject related article collections. One of the activities of SPARC is concentrating on subject related journals with the purpose of creating retrospective archives.

An initiative of this nature will focus on the development of electronic sci-tech journals. Engineering/Technology Central can be formed by a cluster of engineering and technology related publications following the accepted norms of scientific communication and where authors or institutions will cover for the cost of publication. As PubMed Central, this system will need funding from a government agency such as the Department of Commerce or the Department of Energy. A further step is the incorporation of the other principal components of technical literature - journals, conference proceedings, bibliographic databases, monographs, reference books (manuals, handbooks, etc.), technical reports, industrial standards and specifications, product catalogs, and patents – as indicated previously.

Finally, a portal for technical information has to have the support from academic institutions, non-for-profit publishers, societal publishers, small publishers, industry, government agencies, international organizations and the whole community of engineering and technical professionals.

In conclusion, technical libraries will be part of a network where each member is responsible for developing the components of the clusters. Faculty members and librarians in each location will be able to select at the title level the most relevant materials for their own institutions that are offered by other institutions' clusters. Each member of the network will be responsible for archiving their files. Access will not be free, but the selective access of technical information at each institution will not be subject to the pressures of a high-cost uncontrolled market.

References

1. Conkling, Thomas W. Engineering information resources on the Web. *Journal of Library Administration*, 30 (1/3) 2000: pp. 121-138.

2. Lynch, Clifford A. Scholarly communication in the network environment: Reconsidering economics and organizational missions. *Serials Review*, Fall 1994: pp. 23-30.
3. Bailey, Charles W. Scholarly electronic publishing on the Internet, the NREN, and the NII: Charting possible futures. *Serials Review*, Winter 1994: pp. 7-16.
4. ENGnetBASE. <http://www.engnetbase.com/>
5. Bostick, Sharon L. The history and development of academic library consortia in the United States: an overview. *The Journal of Academic Librarianship*, 27 (2) March 2001: pp.128-30.
6. Hiremath, Uma. Electronic consortia: Resource sharing in the digital age. *Collection Building*, 20 (2) 2001: pp. 80-87.
7. Landesman, Margaret, and Johann van Reenen. Creating congruence between consortial goals & emerging initiatives in scholarly publishing. Poster Session, American Society for Engineering Education, Engineering Libraries Division, 2001.
8. Van Orsdel, Lee and Kathlee Born. Periodicals price survey 2002: Doing the digital flip. *Library Journal*, 127 (7) April 15 2002: pp. 51-56.
9. Frazier, Kenneth. The librarians' dilemma. contemplating the cost of the "Big Deal". *D-Lib Magazine*, 7 (3) March 2001. www.dlib.org/dlib/march01
10. Michaelson, Robert. The Big issue – The future of electronic publications. Newsletter on Serials Pricing Issues, December 19, 2000. www-mathdoc.ujf-grenoble.fr/NSPI/Numeros/2000-254.html
11. Warner, Dorothy. Why do we need to keep this in print? It's on the Web...': a review of electronic archiving issues and problems. *Progressive Librarian*, 11-20, Spring 2002: pp. 47-64.
12. Atkinson, Ross. Contingency and contradiction: The place(s) of the library at the dawn of the new millennium. *Journal of the American Society for Information Science and Technology*, 52 (1) 2001: pp. 3-11.
13. Measurements for Electronic Resources (E-Metrics). <http://www.arl.org/stats/newmeas/emetrics/index.html>
14. E-Journal Archive DTD Feasibility Study, Prepared for the Harvard University Library, Office of Information Systems, E-Journal Archiving Project, Office for Information Systems, by Inera™ Inc., December 5, 2001.

15. Mann, Thomas. The importance of books, free access, and libraries as places – as the dangerous inadequacy of the information science paradigm. *The Journal of Academic Librarianship*, 27 (4), July 2001: pp. 268-281.

16. BioOne. www.bioone.org

17. JSTOR. www.jstor.org

18. SPARC. www.arl.org/sparc

19. Friedlander, Amy. The National Digital Infrastructure Preservation Program. Expectations, realities, choices and progress to date. *D-Lib Magazine*, 8 (4), April 2002. www.dlib.org/dlib/april02/

20. Grimwade, Alexander M. Commentary: Why science journals are so expensive. *The Scientist*, 13 (3) Feb. 01 1999: pp. 12-14.

21. Shulenburg, David E. Moving with dispatch to resolve the scholarly communication crisis: from here to NEAR. In: *Confronting the Challenges of the Digital Era*. Association of Research Libraries, Proceedings of the 133rd Annual Meeting, Washington, D.C., 1998.

www.arl.org/arl/proceedings/133/shulenburg.html

22. BioMed Central. www.biomedcentral.com

23. Gass, Steven. Transforming scientific communication for the 21st century. Two new models: e-print moderator and shifting costs from reader to author. *Science & Technology Libraries*, 19 (3/4) 2001: pp. 3-18.

24. TheScientificWorld Journal. www.thescientificworld.com

25. Public Library of Science. www.publiclibraryofscience.org