RICH OFFERINGS: E-PUBLISHING GROWTH AREAS

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This chapter focuses on the fresh challenges to acquisitions budgets posed by the new kinds of products brought to market in the last few years and those expected soon.

E-books (defined broadly to include monographs, reference tools, and primary source materials) open the discussion of growth areas in e-publishing. Increasing availability of comprehensive digital journal back files are described next, followed by a look at the growing tendency of publishers to aggregate and integrate ever larger large amounts of material.

Despite discouraging indicators of libraries' ability to absorb new costs, vendors have continued, as they must, to acquire new properties and build new products.

E-books

Now that e-journals are firmly established, e-books are coming into their own as the inevitable new frontier in collection development in all kinds of libraries. Publishers are offering a growing number of digital scholarly and trade monographs, reference materials, and an expanding array of historical texts.

Until now e-books have gained acceptance in libraries more slowly than e-journals. Attachment to books as physical objects and as artifacts contributes to resistance to the digital form.

Librarians recognize that readers interact with books differently from magazines or journals. Collection builders need to account for the various purposes books serve as they start to broaden selection activities.

Some questions to ask include:

- In an academic library, should titles be selected with the idea that large parts will be read online (or offline) by individual users—or primarily because they will support teaching with links from course websites or online reserves?

- Should the library focus mainly on e-books as reference tools used for quick lookup of more or less factual information?

- Can print tools be canceled?

- Scholarly research in all fields (even the sciences) draws on monographic content as well as journal articles, but are e-book acquisitions more important in some fields than in others?

- In public libraries e-books will be selected for cover-to-cover reading most likely for downloading to hand-held devices and also for reference purposes. Which e-books will people really read in bed or at the beach?

- What devices will be the most popular choices for readers—laptops, PDAs, or mobile phones—and with which software packages? Which vendor offers the best content and user service options?

Librarians from all types of libraries will first have to decide what kinds of e-books they want to buy and then figure out the best way to do it.

In 2001, when the e-book was young, the California Digital Library established a task force to carry out an in-depth study of how this format might fit into academic library collections.

The report concluded that e-books were not ready for prime time since publishers had not yet delivered the following:

- Intelligent pricing models that would allow for ownership (but not at a premium price), simultaneous use by multiple patrons, and the replacement of superseded issues at reasonable cost.

- A critical mass of titles beyond the basic undergraduate level and in subject areas besides the early concentrations in business, reference, and information technology

- Features that extend the reach of the printed book beyond mere replication in electronic form: for example, addition of multimedia, full-text searching, markup, reference linking, and so on

- Content independent of proprietary hardware and software

- Adequate rights for downloading, printing, copying, and sharing

- Ability to be integrated into normal acquisitions processes[1]

Many of the desirable characteristics the CDL study identified also are important for public libraries. In addition, publics want books in e-format by the most-read authors, multiple-copy access to best sellers when they are most in demand, and downloadable audio books.

Key events over the last few years have shaped the development of e-books and led to substantial progress in meeting these requirements as well as new possibilities for integrating e-books into collections.

Early experimentation

At the end of the 1990s, business consultants, the media, and the newborn dot.com producers of e-book readers combined to produce exaggerated predictions of the dawning of a new age of digital books. The publicity caught the attention of the electronic consumer and awakened interest among public librarians.

Early-adopter, risk-taking libraries implemented e-book programs, despite the formidable obstacles these programs presented, either to bring users what they were asking for or to introduce what librarians thought might become a popular new service.

These early adopters purchased (now discontinued) readers, followed laborious procedures to download titles to put on them, loaded these proprietary formats on different kinds of devices, and cataloged both the content and the readers.[2]

These pioneering public library experiments led to improved understanding of library needs on the vendor side and, together with convergence of reader technologies, have in time led to significant improvements in the prospects for more general e-book adoption.

NetLibrary-I as Catalyst

Although a small band of brave, hard-working librarians were willing to test the waters on their own, netLibrary deserves the credit for galvanizing widespread experimentation with e-books through enticing publishers to experiment and aggressively promoting the new medium to libraries.

The original company (referred to here as netLibrary-I) was founded in 1998 and quickly amassed $100 million in venture capital, including contributions from publishers such as McGraw-Hill and ABC-CLIO.

The netLibrary product was launched in March 1999 with the aim of becoming the biggest name in e-books. Marketing to libraries was initially aimed primarily at consortia.

To help create brand recognition, the company supplied cloth briefcases bearing its logo to registrants at the American Library Association (ALA) annual conference in 2000. Thousands of librarians, who had never thought about e-books before, were ready to try them out when their consortia received netLibrary proposals. And a surprising number still carry the bags providing free advertising for netLibrary.

Brand building and rapid expansion taxed NetLibrary's resources, however, and a short 14 months after the book bag promotion, netLibrary's royalty checks to publishers were bouncing and the company went looking for a buyer.

Customers began to worry about whether they would continue to have access to the books they had purchased. Although netLibrary promised to provide an archive, the choice of CD ROM as the potential storage medium would have posed problems for libraries.

Furthermore, publishers might have objected, since they had not agreed to have their books distributed this way. OCLC's acquisition of the company assured subscribers would continue to have access to what they had purchased.

In both its early incarnation and now, as part of OCLC, netLibrary has been a high-profile force in the acceptance of e-books in libraries. Its practices also have underscored a number of e-book implementation issues—besides how to assure that libraries wanting it can have long-term access to the e-books they buy.

E-books are poised for growth

Though e-books have progressed in fits and starts, momentum is building for them to become a significant focus of acquisitions activity in the immediate future. The Open eBook Forum (OeBF), a trade and standards organization for the industry, has stepped up efforts to promote sales to libraries, especially public libraries.

OeBF has formed a publisher-librarian interest group that holds regular conference call meetings. The forum also hosted a conference in March 2004 on "E-books in the Public Library."

E-books also were a hot topic at the June 2004 meeting of the American Association of University Presses and at least three program meetings were devoted to them later in the month at the ALA annual conference.

In addition, EBooks Corp., an online book distributor, introduced a new e-book platform at the ALA convention: EBL, the Ebook Library.

The accelerating progress of e-book development is driven by improved technologies, increased readiness on the part of readers, and the same commercial forces that fueled the growth of e-journals—publishers seeking market expansion and competitive advantage by leveraging their assets in a fast-paced industry.

With the American e-journal market possibly beginning to reach the saturation point, e-books offer publishers another outlet for content and possibly a way to produce new combinations based on other types of materials they may produce such as journals, reference works, or primary sources. In addition, standard works, long out of print but still relevant to current research topics, can be resurrected at relatively low cost to find new buyers.

Librarians will find they have multiple issues and options to sort out as they begin to think more seriously about what they might now want to do about e-books. "Libraries have almost too many choices," says a longtime follower of the marketplace. "Tough decisions about how and when to integrate e-books into collections will keep us all busy for the next several years."[3]

E-books acquired by academic libraries from e-book aggregators (at least up until now) have not typically been downloaded to hand-held devices but are accessed on the Web via platforms whose overriding purpose is digital rights management.

Browsing, viewing, downloading, and printing are governed by the business rules agreed on between the aggregator and the publisher. Publishers who sell e-books direct to libraries and serve them from their own web sites, of course, can enforce whatever access and use restrictions they choose.

Platforms also are constructed so as to present books either primarily as individual titles to be read (or sampled extensively) or as fully searchable databases whose main purpose is to help users find chunks of information on specific topics.

NetLibrary leans more toward the individual-title model; ebrary, and the reference book products to be discussed in a later section, function more like databases.

A key initial question for libraries then is which of these models makes sense for which types of books. Other considerations include:

- Whether to select subject-based bundles or to acquire e-books title-by-title

- If selection is title-by-title, whether to purchase both the print and the electronic version. (Though still not always the case, more titles are being published simultaneously in both formats and it is somewhat easier to integrate e-book purchase into normal acquisitions routines.)

- Whether to expand traditional selection criteria to new types of books, for example, textbooks

- Whether to rent the book for a limited period of time or to buy perpetual access. If perpetual access is desired, whether to pay the required fee up front or over a period of time, when these two options are available.

- Whether access and use rights are acceptable: How much text can be viewed, copied, pasted, or printed? Is reserve, course pack, or e-learning system use allowed? Is downloading for offline reading permitted?

- How well designed are search and navigation features?

- Are MARC records available?

- Does content beyond the printed text add real value?

- Is a significant amount of material missing due to rights restrictions?

Discussion of how these factors play out in choosing major e-monograph products follows.

E-book aggregators and e-book databases

netLibrary

NetLibrary still claims the lion's share of library e-book business, listing 7,800 libraries as customers. After purchasing the faltering company in 2002, OCLC moved immediately to be more responsive to library and user needs, adding more up-to-date content to the collection.

Maintenance fees also were raised to support the infrastructure for perpetual access. NetLibrary now offers 40,000-plus volumes from almost 500 publishers.

Despite the seeming ubiquity of netLibrary collections in libraries, selectors have never liked the product's one-user, one-book delivery scheme. As with print volumes, if someone checks out a book, no one else can use it until it is returned.

Like netLibrary's founders, OCLC has maintained that this model is what attracts high-quality content from major publishers, who still have fears of wholesale downloading and plummeting print sales.

Librarians have tirelessly pointed out the irrationality of replicating the traditional book circulation model in the networked environment. Recently launched publisher-run plans as well as other aggregators (such as ebrary) employ multiuser, site-based subscription models.

NetLibrary seems at last to be attending to the market pressure for a move away from their standard one-book, one-user model especially by cooperating with interested publishers to offer new options. For example, a specialized set of Judaic Studies materials is available as a bundled collection with unlimited access based on a weighted FTE-based pricing model.

NetLibrary also is glad to develop publisher-based collections with partners that have robust, broadly based lists or are strong in particular subject areas (such as the McGraw-Hill business collection).

OCLC tried subscription and simultaneous user-based models with the NetLibrary Information Technology Center. The six-month experiment, launched in 2004, provided the standard one-book/one-user pricing for selections from either a Core Collection of 800 titles or an Expanded Collection of 1,200. In addition, libraries had two other options for the Core Collection: a purchase model with either two or five simultaneous users or a subscription model.[4]

Libraries would need to purchase new editions of software manuals and other time-sensitive materials as they became available. Though librarians have a strong interest in online access to up-to-date information technology content, the introduction of this high-priced collection during a particularly bad budget year for libraries hurt market uptake. After the six-month experiment, OCLC took the collection off the market.

The IT Center (and the Reference Center discussed below) are part of a new direction for netLibrary. OCLC has consolidated all of its e-content sales under netLibrary. Librarians can expect to see more subject collections such as the IT Center that also will bring together full-text journal articles and other content owned or licensed by OCLC. These collections will be available as separate segments on the website with customized functionality.

In the meantime, netLibrary has no plans to deviate from the one-user/one-book mode of access for its standard collection. Renegotiation of many publisher agreements would be required to make a change like this and, presumably a redesign of the platform as well—both are expensive undertakings.

In the current model, users can print or copy only one page at a time. Libraries that want to offer offline reading can pay a pass-through fee for the Adobe Content Server.

NetLibrary is in the preliminary stages of consideration of use of its material in e-learning systems and is not yet actively working on the issue of authorizing reserves or course pack access. Delivering this kind of enhanced functionality requires establishment of agreements and mechanisms to return revenue to the publishers—more renegotiation, more rights management software redesign.

ebrary

Christopher Warnock, founder and CEO of ebrary, emphasizes that, though librarians have "mis-shelved" the company as an "e-book provider," ". . . in fact, ebrary has never been in the eBook business." What Warnock means is that ebrary is a content aggregator and technology platform provider rather than an e-book distributor.

Though book titles in the collection are accessible via free MARC records in a library's OPAC and can be read as books, ebrary is marketed as a fully searchable database much like a periodical reference database.

According to Warnock, "ebrary's streaming PDF technology, called 'ebrary Reader,' is not for reading books on screen but for conducting research across the full-texts of books, finding information once hidden between covers, and being able to maximize the library's existing resources from any word within the text of any book."[5]

Ebrary allows simultaneous, multiuser access, even to the same title at the same time. Users must download a proprietary reader that:

- Enables full-text searching across and within all books and other content in the database, such as reports, maps, and sheet music.

- Offers a variety of value-added services including customizable lookups in library-owned resources, such as dictionaries, biographies, bibliographies, and other types of online materials.

- Provides the capacity for Open URL linking to other sources on the Internet based on keyword or phrase queries.

- Permits cutting and pasting of one page at a time. Up to 10 pages may be printed and emailed.

Though ebrary has announced a database tailored for public libraries, ebrary's customer base has thus far been primarily academic libraries, with international subscribers greatly outnumbering North American buyers. U.S clients are college and smaller university libraries—many of which are either "universities without walls," or traditional schools with strong distance-learning programs.

Adobe Content Server: A system that integrates preparation, procurement, distribution, fulfillment, and rights management of digital content.

ebrary, http://ebrary.com

Ebrary has been adding content rapidly. The company's most comprehensive collection, Academic Compete, consists of 20,000+ volumes (up from 13,000 in a little over a year) from more than 180 publishers. The company has announced a price increase for 2005.

Holdings are grouped into five subject modules. Libraries can pick and choose among the various modules, but it has no provision for title-by-title selection. The standard pricing model is a flat fee per FTE student.

Ebrary serves smaller academic institutions well as a broadly based undergraduate e-book collection and as an economical way to add what the company describes as $1 million worth of books at a fraction of the retail cost.

EBL EBook Library

This newest entry into the e-book aggregator/distributor marketplace was conceived and created in consultation with librarians and publishers by EBooks Corp., the Australian online bookseller. EBL announced its existence at the 2004 ALA conference and will probably go live in the fall.

EBL specifically aims for the academic and research library market and will focus initially on scientific, technical, and medical (STM) books. Several heavy-hitter STM and scholarly publishers have announced participation and the company continues to line up additional content.

Focusing on the drawbacks of existing systems, EBL intends to build a better mousetrap. It has set out to offer flexible options for publishers to manage access to their content and for librarians to present it to their users.

Its pricing also is adaptable to differing needs. It has built in features—reserves and course pack capabilities, which are especially attractive to academic libraries. Books are full-text searchable and free MARC records are provided.

A basic premise of the EBL scheme is that the content and the e-book lending platform are purchased separately. Libraries make individual title selections from participating publishers that can be purchased from EBL or from designated agents (Dawson's is its U.K.-based distributor and Blackwell's is its North America-based distributor).

Libraries own the e-books they purchase just as they own whatever else they acquire for their collections. The price of the e-book is set by the publisher. EBL recommends the e-price should be equal to the print price, but publishers are free to charge either more or less for the electronic version. Libraries may negotiate discounts for high-volume purchases and special terms are available for consortia.

Libraries buy the EBL platform separately, at a one-time cost of $5,000 (or $6,000 if they want to spread out payments). An annual hosting fee is due one year later. This fee is $1,000 if paid up-front (or $1,500 per year, if paid in increments). These prices are preliminary. Final prices may be lower.

A pay-as-you-go option also is available. The idea is to give libraries of all sizes a way to provide the service drawing on whatever pots of money may be available.

EBL offers three standard access modes associated with different types of material: Non-Linear Lending, Textbook, and Unlimited—as well as a pay-per-use, Short Term Circulation option. Non-Linear Lending, the usual mode of access, takes a unique approach to publisher anxieties and the digital rights management problem.

EBL EBook Library,
www.library.ebooks.com

By eliminating the one-user/one-book, EBL allows for multiple concurrent use of a title for up to 325 loan days per year. The library sets the loan period and circulations can occur in any pattern: randomly (or evenly) distributed throughout the year or concentrated during certain high-use periods.

If a book has a one-week loan period and three users check it out on the same day, these will be counted as 21 loans. The book will then have 304 loans remaining for the year.

No magical significance is attached to the choice of 325. That number is simply what publishers feel comfortable with as an approximation of a year's use of a book and, in fact, has not yet been set in stone.

If the volume is in use for more than 325 days before the end of the year, libraries can handle this volume either by buying a second copy or by allowing demands on the book to be met in pay-per-use (Short Term Circulation) mode. E-mail alerts are dispatched to the library when the year's allotment of loans is running low.

The pay-per-use rental option also can be used as an alternative to interlibrary loan for access to books in EBL's collection that the library has not selected. Publishers set the rental fee, but they are encouraged by EBL to make charges competitive with typical interlibrary loan costs. The pay-per-use option is limited to a single user.

Though the Non-Linear Lending mode will predominate, publishers also can choose to define an e-book as a textbook or as the kind of material for which unlimited access should be provided. Textbooks will have a limited number of concurrent users. Titles that can be accessed an unlimited number of times by an unlimited number of users are usually reference sources and they will be priced accordingly.

For all books, printing is limited to no more than 20% of the pages in the book for each patron. Each user also can copy or paste up to 5% of total pages. Libraries can apply to the publisher for additional rights if desired.

Users can browse books before checking them out and download them to a PC, a laptop, or a PDA. Once downloaded, they also can transfer books to no more than two other devices. All activities are tracked by the EBL reader that automatically downloads with the book.

EBL has provisions for course reserve use of whole books or chapters within books and also will have a course pack arrangement. Revenue is returned to the publisher for these uses and various safeguards are built in to satisfy publisher concerns:

- Permission is granted to put one chapter per book on reserve at no charge.

- Only one user at a time can use it for a length of time specified by the library.

- If more chapters are wanted for reserve, they can be purchased for a small fee.

- Use of chapters for reserves does not count as a loan against the yearly allotment for the book.

- Books with a chapter on reserve still circulate to other users in the normal way.

EBL presents an example of how an online system can be designed to adapt to a range of requirements. The flexibility in pricing is a plus. The Non-Linear Lending Model provides a way to address multiuser access and peak-use periods.

The reserves plan allows simultaneous circulation of a volume and use of a chapter for reserve.

Giving libraries a lot of ways to benefit from the content they purchase, however, comes at a cost in administrative overhead. EBL requires the designation of a coordinator who, armed with a hefty manual, will set parameters for system operation.

If desired, individual selectors can be authorized to make selections and receive alerts when loan allotments for certain books are running out. Similarly, the interlibrary loan librarian can be designated to manage rentals. The library also would be able to set different loan periods for faculty, students, or other types of users for both books circulated and books rented.

For a large collection, responding to alerts could be a big job. Although the system can be set to automatically to purchase a second copy of a book that has been loaned 325 times before the year is out, most librarians would probably want to have some kind of review before purchasing a duplicate or authorizing rental. Patrons also will need a bit of instruction to understand their options.

All these examples illustrate both the beauty of how much can be done in the online environment and the downside of how complex it may become when the divergent needs of both publishers and libraries must be satisfied.

On the other hand, libraries can make the online environment simple by taking advantage of only some of the opportunities offered by EBL's finely tuned solution for maximizing their investment in e-books. Separating the purchase of the platform from the acquisition of the content and selling the platform at a reasonable cost coverable in several different ways are truly advanced ideas.

Knovel: Something new and different

Knovel might be loosely described as an aggregator of STM e-books, but that description would tell less than half its story. Knovel creates infoware by selecting content from standard scientific and technical reference works and combining it with software to manipulate it. The result is a relational database that helps applied scientists and engineers solve problems, rather than simply a collection of books.

Company founders have been perfecting the technology and the product for 14 years, migrating from floppy discs, through CD ROMs and then onto the Web. It is not resting on its laurels. Having made substantial inroads into the engineering information market, it now has its eyes on the life sciences. It is acquiring conference proceedings and datasets from professional societies.

Several large academic libraries are Knovel customers, and Knovel appears to be targeting this market for increased expansion. The Knovel database also functions as a powerful reference tool. More than 600 sci-tech reference standards (handbooks and other engineering bibles) can be searched simultaneously returning results identified as text words, index terms, figure captions, and so on.

The convenience and power of a continuously updated problem-solving machine does not come cheap. An "introductory collection" for a medium-sized library covering materials, mechanical, and chemical engineering might cost from $7,000 to $12,000.

Larger libraries would pay much more for more comprehensive collections. Academic libraries will have to decide whether interactive infoware belongs in their collections and whether it is something they can afford, through print cancellations or other means.

Information technology and e-commerce book aggregations

Safari and 24X7

Almost everyone in today's world needs more and better information about computers. Two established e-book aggregators—Safari Tech Books Online and Books24X7—stand ready to serve both the elementary needs of the layman as well as the detailed and constantly changing requirements of information technology professionals.

Books24X7 offers more than 4,000 e-texts from technology publishers such as Microsoft Press, Osborne/McGraw Hill, as well as top business titles from Harvard University Press, Wiley, and MIT in its collections ITPro, BusinessPro, and FinancePro. New titles are added every week, bringing the total to 1,600 in 2003.

The texts themselves are broken down into chunks so the precisely relevant piece of information can be most easily located. The product Web page promises "just enough, just in time." The database is sold on an annual subscription basis. An initial quote for one large library was $50,000 for one collection and $75,000 for two.

Safari was created in 2001 by two top publishers in this area: O'Reilly and Pearson Technology. The database also includes books and manuals with other well-known imprints; for example, Adobe, Sams and Que. Proquest has exclusive rights as reseller to libraries.

The sales model allows libraries to choose which titles they want and pay according to the number chosen, assigning each title a number of "slots." Contracts specify total expenditure and number of simultaneous users. Five hundred slots for two users costs $10,400. Most books use up one slot, a few, only 0.5 slots, and some as many as three.

The contract administrator can create reports of unused titles as well as the number of user previews of titles not in the collection. These reports can be used to identify titles for both selection and deselection. Both processes can be accomplished instantaneously through an easy-to-use Web form.

Safari's trade-in model is a good way to address the need for absolutely up-to-date IT information. The slots plan is a clever way to structure a projected-use pricing scheme.

STM publisher-based e-book programs

Medical publishers and their librarian customers showed an early interest in books online. *MDConsult*, a cooperative venture of the major medical publishers, launched on the Web in 1997 (It is now owned by Elsevier by virtue of the Academic/Harcourt acquisition). *Books@Ovid*, aggregating reference texts in medicine and nursing, appeared in 2000 with 14 titles from Lippincott Williams and & Wilkins and McGraw-Hill. A 2002 survey of 120 medical libraries showed 99% were offering medical texts online.

Major STM publishers have used aggregators to distribute at least some of their nonmedical titles, and most have also introduced e-book distribution programs of their own, a few quite recently. Some of them are beginning to offer book content along with journal content in electronic resource deals presented to consortia, with larger discounts for bulk purchases of both types of content.

As might be expected, publishers employ various pricing schemes, which are for the most part still rooted in a print production workflow. E-books may be published simultaneously with print or somewhat later.

Scientific and technical reference books are generally priced as separates either on a subscription plan or as an outright purchase at a base price plus an annual maintenance/update fee.

For example, Kluwer offers a suite of reference tools in four subject areas that can be purchased individually, as a subject grouping (discounted by 10%), or as a combined collection (overall discount: 20%). Most titles have a one-time base price plus a 10% annual update fee. A look at the offerings of a few of the big names will illustrate how e-book publishing is developing in the sciences.

Elsevier has published dual editions of two major multivolume encyclopedias since 2001: *Comprehensive Clinical Psychology* and *the International Encyclopedia of the Social & Behavioral Sciences.* It also acquired a robust e-reference book list with its purchase of Academic Press/Harcourt.

In spring 2004, Elsevier announced the intention of making substantial additions to the online reference and book content indexed in *ScienceDirect*, building mainly on the Academic acquisitions. Its stated goal is to increase the critical mass of material available via the platform and to put this "prestigious content into context."

Increased sales are likely to result as well, since users will want to link directly and immediately to nonjournal information they discover through *ScienceDirect.*

The new reference book line consists mainly of encyclopedias once part of the Academic Press list. Costs are linked to institutional size. Most have the same pricing ($300 for institutions with fewer than 10,000 FTE and $900 for places with more than 25,000 potential). A *Handbooks Online* offering is on the way.

Elsevier proposals to libraries now offer e-book as well as e-journal bundles.

The online book program consists mainly of annual review titles formerly published by Academic Press. Four science subject packages with four back years are now available as well as a Business, Economics and Management set.

Using the same FTE-based model as for the reference tools, the Business collection, for example, would sell for $2,220 to smaller institutions and $6,340 to large ones.

Both current numbers and back files of the multipart *Methods in Enzymology* are among the newly available material. At $3,000 to $10,000 the current issue price range for this essential experimenter's tool is close to the cost of the 33-title life sciences e-books collection. Institutions who want the back files too will have to find an additional $3,000 to $9,000.

Wiley began offering nonjournal content together with e-serials back in 2001, when it introduced online access to the laboratory manual series *Current Protocols.* Online monographs were introduced in 2002 with 300 titles in three subject-based collections. Eleven topical collections now contain more than twice as many volumes.

To facilitate discovery and use, Wiley book chapters have summaries that, in essence, serve as abstracts and digital object identifiers (DOIs) to facilitate linking. Wiley also sells online reference books.

Two major publishers are relying on third parties for their e-book platform. Kluwer distributes their monographs through netLibrary and Dekker has worked with the e-book services company Overdrive.[6] NetLibrary presents the Kluwer list as a special collection with its own set of parameters.

Most notably, Kluwer titles have multiple concurrent user access. On the other hand, printing, and copying are subject to the same rules as other netLibrary titles. E-books can be selected title-by-title and are discounted from the cost of print by 15% to 40% depending on the number purchased.

Dekker's relatively recent entry into the e-book distribution business and its partnership with Overdrive have led to some important differences in their product. The XML-based production process employed by Dekker allows for simultaneous publication of print and electronic versions.

All new titles will henceforth be available as e-books. Libraries can select individual titles and on payment of a 40% surcharge will have perpetual e-access for multiple concurrent users. Dekker titles are downloadable for offline reading via Adobe Reader 6.0 and have more generous printing and copying allocations than most scientific e-book offerings.

Kluwer offers a custom books option that allows for the use of book content in courses. Instructors can select material, which can then be made available in custom textbooks online or as print-on-demand paperbacks.

With the exception of Kluwer, whose books are sequestered on the netLibrary platform, STM publishers still see their websites as destinations for people who want to search across the journal, book, and reference sources they publish. Nevertheless, they all also offer free MARC records to assure easy location in the library OPAC.

When publishers sell their own e-books they usually bundle them as collections, except, as noted above, for titles specifically designated as reference books or for the selected titles they choose to deliver through aggregators like ebrary or netLibrary. (NetLibrary has certain books from five of the major STM publishers).

Tables 1 and 2 on page 19 provide a summary of various pricing models in use by a few of the major publishers, as well as other characteristics of their e-monograph access arrangements.

STM e-books are mainly sold by publishers as collections, rather than on an individual title basis (except, as noted above, for titles specifically designated as reference books or the selected titles they choose to deliver through the standard netLibrary model.

STM publishers' e-lists may include volumes that fall into the broad category of review journals—titles that libraries will have previously purchased in print on a subscription basis or as monographic series.

They are, in fact, much like journal issues published once each year, consisting as they do of many articles written by different authors to highlight new developments in particular fields of study.

The list of "Advances in…", "Research in..," and "Progress in…" titles being added by Elsevier will thus integrate well into the *ScienceDirect* platform yielding up search results that look much like regular journal articles.

Table 1. Characteristics of selected publisher e-monographs programs: Pricing, Selection, and ownership (perpetual access)

Publisher	# of Vols	Selection	Pricing	Access	Own
Dekker	500 +	Indiv. title selection	e = p + 40% surcharge for perpetual access. Discounts f. 5%-20% for 100+v.	Unlimited concurrent (hosted by Overdrive)	Y
Kluwer	1,240	Indiv. title selection NetLibrary	e = 100%; p=100%; e + p =120%. Discounts f. 15%-40% for 500+v.	Unlimited concurrent platform	Y
Wiley	600+	Subject collections, 4 areas, 11 subareas	Based on FTE and collections subscribed. Discounts for more than one.	Unlimited concurrent	Y*
Oxford Scholarship Online	700+	4 subject collections: Religion, Philosophy, Political Science, Economics & Finance	1) Sim. User model: f. $1425 for 1-5 users (discounts for multiple modules) 2) $9,100 unlimited site license for all modules	1) sim. user (1-5) 2) Unlimited concurrent	N

*Subscribers have perpetual access to books published during the term of the contract, but not to those published earlier.

Table 2. Characteristics of selected publisher e-monographs programs: Authorized uses and features

Publisher	Use Restrictions	Use for Coursepacks/ Reserves?	Other Features
Dekker	Copy 25 "selections" per day; Print 25 pages/per/day.		Downloadable via Adobe E- Books Reader for 150 days.
Kluwer	Print or copy 1 page at a time	"Custom Books" serve this function	Internal linking, but no outbound linking
Wiley	Download, view, copy, save, print, share 1 chap. for personal or research use	Yes	Transaction based access can be purchased for nonsubscribed titles. Chapter summaries w/DOIs link to related material within Wiley databases.
Oxford Scholarship Online	Print 5 pp at a time, but no more than 1 chapter or 5% of pages of any title	Yes	Provides abtracts. & keywords to A & I services; Internal X-refers, ref. linking to subscribed content via OpenURL

Scientists in several fields rely on large-scale standard works to support their research. For example, one of the earliest electronic resources to be made available to Big Ten libraries on a networked basis was *Beilstein's Handbuch der organischen Chemie*, a database covering organic chemistry from 1771 on, containing molecular structures, reactions, and other records.

STM publishers have been steadily introducing e-versions of these monumental works. Elsevier's *Methods in Enzymology* has already been mentioned. Two similar compendia are *Methods in Molecular Biology* and *Methods in Molecular Medicine* published by Humana Press

Volumes in these series are issued on a regular basis as new experimental techniques are developed or older methods are improved on. Around 50 new volumes appear per year. The content and frequency are well-suited to distribution as a searchable database and Humana has moved them online. Subscription cost of the product ranges from $9,500 to $20,000 depending on the size of the institution.

Other sciences have similar tools. More examples are: the 19 volumes of *Landolt-Bornstein New Series* (physics data) for $71,000 and the 345 volumes of *Lecture Notes in Computer Science* for $21,500. Online publication of an increasing number of these essential tools will have important budget implications for libraries with strong science programs. Once titles like this are in electronic form they become expensive must-haves.

E-books for the nonscientist

Oxford Scholarship Online

The world's largest university press is breaking new ground by introducing electronic monographs in disciplines where scholars are deeply wedded to the printed word. *Oxford Scholarship Online (OSO)* was launched in November 2003 after a five-year, $3.5 million development partnership with Ingenta.

Several forward-looking attributes stand out. *OSO* allows continuous reading and printing of an HTML page unit equivalent to five pages of text. A printer-friendly version for whole chapters will be released soon. Permission is granted to print a chapter or up to 5% of the pages of a title. At a resolution of 1024x768, the text is easy to read on the screen.

More importantly, *OSO* shows how the content of scholarly monographs can be seamlessly integrated into the network of online resources libraries now offer. Book chapters have abstracts, keywords, and DOIs. The DOIs allow chapters to be included easily in reserves lists or course packs. Abstracts and keywords permit chapters to be indexed along with journal articles in general-purpose aggregated databases.

OSO has internal links that allow users to go directly from notes in the text to the footnote listing and back. References to journal articles cited at the end of chapters contain links taking the reader directly to the text if it is in a source the library owns. Cross-referencing also brings up additional information about authors or ideas that occur within the database.

More than 700 books in history, economics, political science, and religion are included and plans are to add 200 new titles per year as part of the subscription. Unlimited site licenses for the whole collection are available for a list price of $9,100 annually.

Any combination of the four modules can be licensed with discounts for more than one. A concurrent user model also is offered. The lowest cost option is $1,425 for one module for one to five users. Consortium discounts are available.

Perpetual access is not an option. The Oxford University Press estimates that the print value of the titles in the database is $60,000, so libraries would not take many years before they have paid enough to own the books.

Project TORCH

Oxford University Press also is at the center of another major new e-books initiative that grew from discussions begun several years ago with the Mellon Foundation. The idea of The Online Resource Center for the Humanities (TORCH) is to create cross-searchable subject collections of backlist university press titles to be sold to libraries, thus contributing to the long-term survival of beleaguered campus-based publishers.

An initial 2003 grant produced a feasibility study. The new money will be used to define the technical infrastructure and to develop operating and business plans. The project is on a fast track, with the results supported by the current grant due to Mellon for evaluation in a year. If all goes well, launch may occur in early 2006. Though based at Oxford, TORCH will be an independent entity.

History E-book Project and Guttenberg-E

The Mellon Foundation has funded two other experimental projects, both of which involve testing the application of electronic technology to scholarly publication in history.

Gutenberg-E at Columbia University and the History E-Book project sponsored by the American Council of Learned Societies (ACLS) both aim to study the basic question of how to write and present history in the digital age.

The online format permits inclusion of entirely new kinds of supporting material—extended extracts or quotes from primary sources, interactive maps, video and audio clips, and numerous illustrations. A central issue is how to strike the right balance between the argument and the digital evidence displayed to support it.

To avoid overwhelming the substance of the work with too many bells and whistles requires intellectual, editorial, and technical judgment. Both projects also want to answer other questions, including, for example:

- What measures (besides conventional academic standards) will reviewers and publication selection committees need to use to evaluate electronic works before and after publication?

- What is the role of the publisher and the editing process in enhancing an online product?

- Do electronic works require different tenure and promotion review standards?

- What to scholars need to learn about e-publishing and how will they be taught?

- How will students and scholars interact with e-books? (Will they print them out to read them?)

The Gutenberg-E project was announced in an article in 1999 by Robert Darnton, then President of the American Historical Association (AHA).[7] In it he outlined a plan for averting the potentially imminent death of the scholarly monograph and its implications for traditional tenure-granting processes. Suggesting that publication of digital books might be the answer to the increasing expense of producing print books and the decline of library purchases, he made known that the Mellon Foundation was providing funds to convert selected history dissertations into e-books.

Since the beginning of Gutenberg-E, AHA has conducted a yearly competition and awarded grants of $20,000 to give scholars the opportunity to turn their thesis manuscripts into e-publications with the help of previous winners and the staff of the Columbia University Press.

Darnton warned at the outset "against expecting too much too soon, calling the project "a very thin edge of a very small wedge." Only a small number of monographs have been published so far and the cost of an annual subscription is a modest $195. The original intent was to issue titles that presses would find hard to publish because of low sales expectations, but of late the emphasis has shifted to higher interest contemporary topics.

From the start, the ACLS enterprise has had a dual function that implies a different business model. The History E-Book project was meant to digitize classic texts as well as to produce new forms of scholarship. The older titles are page images of the original print book with OCR searchable text.

The born-digital works are encoded texts created through an XML-based production process. These have hypertext links, internal navigation features as well as many other enhancements; for example, popup viewers for large images, external links to related websites, and to reviews in journals in *JSTOR, Project MUSE,* and other sources.

History E-Book was conceived as a searchable database of monographic content and not as a collection of self-contained information objects.

The authors of both Gutenberg-E books and the History E-Book born-digital series support the arguments of their texts with a generous number of illustrations, nonprint media, and primary source documents.

Both projects remain experimental and are not yet self-sustaining. Many of the intellectual and practical questions remain unanswered.

Historians are accustomed to linear narrative and explicit argumentation. Authors worry that presenting the evidence on which they rest their case may distract from the argument or cause readers to construct their own interpretations.

All agree that producing an e-book currently requires a high degree of collaboration between author, editor, and technical staff.

E-books and public libraries

Unlike larger academic libraries, when public libraries decide to do something, they don't talk about forever; they just go ahead and do it. Cleveland Public Library had tried offering e-books through netLibrary, but it was not satisfied with the content available. It also wanted its patrons to be able to use library card numbers, instead of special passwords, and to access e-books through the library's website.

Overdrive is a Cleveland-based e-book wholesaler and distributor with e-book creation capabilities and an online bookstore software solution. When CPL decided to build the ideal system, management opted to partner with Overdrive. The library invested $50,000 in development.

The system, which relies on the Adobe Content Server/E-Reader software, allows patrons to download titles remotely to many types of devices. It debuted in 2003 and also is available to member libraries of CleveNet (a 30-member consortium).

Though the service provides access to popular tiles from high-profile publishers such as Harper Collins, McGraw-Hill, Nolo Press, Scholastic, and others, more work needs to be done to entice other, equally desirable houses to participate.

The collection debuted with 1,000 titles and there are now 4,500 available. Circulation during the first 14 months was 13,100, with fiction accounting for 75% of loans. Surprising interest has surfaced in downloadable romance and teen books.

Test preparation manuals and tax guides work well. Patrons are not tempted to keep them, and they can fill in the blanks to their hearts' content since the mark-up disappears before the next user checks out the book. On the due date, the title disappears from the reader's laptop, PC, PDA, or Smartphone.[7]

The Cleveland success has launched Overdrive on a mission to bring e-books to public libraries. Quite a few have signed up, including King County Library System in the Seattle area and the New York Public Library. Librarians have played an active role in refining the system.

Some public libraries also have had success with netLibrary. Houston Public Library tried it out as early as 1999. So far the library has purchased almost 2,000 e-books and benefit from almost 30,000 offered through the statewide resource sharing program, TexShare.

Usage has more than tripled in four years, going from about 7,000 views in 2001 to 22,000 in the first eight months of 2004. For the future, however, the Library is considering setting up an in-house Adobe Content Server to deliver e-books for offline reading.

Downloadable audio books

Overdrive and netLibrary have both moved into an area that has appeal to all types of libraries and patrons. Though audio books have become a popular service with patrons (especially commuters), they pose many headaches for libraries: storage, replacing mangled tapes, rewinding, and so on, and are cumbersome for users as well.

Overdrive first demonstrated its new downloadable talking books collection at the Public Library Association Conference in 2004. The system uses Microsoft Windows Media format and will offer access on a wide range of devices including PCs, PDAs, portable audio players, Smartphones, and the Portable Media Center. The company is already thinking ahead to rights-managed downloadable video both for entertainment and instructional purposes.

NetLibrary will begin offering digital audio books at the end of 2004. The books will be fully integrated into the collection and retrieved by a keyword search of the database just as other forms of content are. Audio books will be downloadable to a number of different kinds of devices at either CD quality or radio-quality for faster downloading.

A sample is available at www.mcrosof.com/windows/plus/dme/SampleArchive.asp.

Just as sci-tech publishers are putting their reference books online, general reference book publishers are increasingly moving toward dual-format editions as well as the creation of entirely new types of reference of media.

Ready-reference tools work especially well in the online environment. No one wants to read a dictionary cover to cover, and a targeted search is perfect for bringing up a short entry explanation or description. Web availability changes reference books from the noncirculating, limited- to-open-hours essentials they have been to a flexible, 24/7 resource.

The *Encyclopedia Britannica* was probably the first major Web-based reference resource to be offered to libraries on an individual subscription basis. Shortly afterward, vendors like Gale began bundling important e-tools such as the *Encyclopedia of Associations*, *Contemporary Authors*, and so on for sale at discounted prices to consortia.

Gale also created resource center database products that aggregate a mix of content in a topical area. The *Biography Resource Center*, for example, has a core of Gale biographical reference tools supplemented with close to 1 million *Marquis Who's Who* entries, a few hundred periodical articles, and thousands of links to websites. These tools sell well in certain market segments.

E-reference publishers also have begun to create searchable databases along with new print editions of major, multivolume tools. Among the early notable products in this category are the Groves' dictionaries of art and of music and McGraw-Hill's *AccessScience*. *Grove Music Online*—a $30 million project—is more than an update of the existing text, since it includes links to audio clips and a significantly higher number of images than appear in the print version.

Grove Art Online has far more illustrative material than its paper counterpart, with more than 130,000 searchable images. Oxford's *Dictionary of National Biography,* due out in fall 2004, is the next blockbuster in this category.

Searchable databases of reference books

From major single title databases, publishers have moved on to multisubject aggregations. Serious products of this type were brought to market beginning in 2002 with *Oxford Reference Online,* quickly followed in 2003 by another British import, *xreferplus*.

Although they share their country of origin, these aggregations are two different kinds of products. *ORO* began as an aggregation of 100+ Oxford University Press ready-reference tools—dictionaries of all types, etymologies, and so on.

The short, factual content of the quick-reference sources has since been enhanced by the addition of the more in-depth treatments found in selected titles from the *Oxford Companion* series. Although this particular group of highly respected reference works offers a fairly broad coverage, it is nevertheless skewed toward the humanities and retains a little bit of a British accent. *ORO* is sold as collection with pricing based on size of the user community.

Putting branding over breadth of coverage limits the usefulness of *ORO.* Its British cousin *xreferplus* can answer more and different types of questions because it gathers together tools from many publishers on a wider range of subjects.

First refined and tested on a free web site, *Xreferplus* was initially marketed in the United Kingdom. Now that it has moved across the water with new headquarters in Boston, *xrefer* plans to add more high-end academic content for American buyers. For example, selected science titles have recently been acquired from Wiley.

Xrefer also has entered into a strategic alliance with Gale, described below. The database is expected to grow from around its initial 200 titles to 500 and, possibly 1,000.

Xreferplus is a technologically sophisticated product. A major selling point is that it allows for integration as well as aggregation in its database of sources. In other reference databases users can link from entries *within* individual reference sources to related material *elsewhere in the same book*. What is different about *xreferplus* is that it provides xreferences, *cross-references to* related content in *other books* in the collection.

The *xrefer* philosophy of integrating diverse sources through linking also is demonstrated by the assignment of static URL's for each subject area, title, and entry to allow for incorporation, for instance, into library-based subject guides or online instructional services.

OpenURL compliance also allows libraries to designate *xreferplus* as a target via their link resolvers to enable a search from a source database for a definition or additional reference information.

Xrefer's visualization feature maps clusters of related entries as a way of identifying additional relevant subject matter. Watching the complex molecules of information take shape on the screen is, if nothing else, a fascinating activity.

Content was originally limited to short-entry, ready-reference works, but *xrefer* has just announced another option. Libraries can now buy either the Ready Reference or a new Specialist Reference collection, or both. Specialist Reference offers more narrowly based tools with longer, more in-depth entries.

netLibrary Reference Center

NetLibrary also has added an aggregated database of reference titles to its special collections offerings. Reference book entry searching is offered and access is not governed by the standard netLibrary checkout system.

A sizable chunk of the several hundred volumes offered is from ABC-CLIO. Gale and Blackwell have contributed about a third as many, and Wiley has supplied a slightly smaller chunk as well.

Gale Virtual Reference Library (GVRL)

Gale's new *Gale Virtual Reference Library (GVRL)* is in an altogether different league than the three collections just mentioned, all of which emphasize finding a little bit of information on a lot of topics. Thomson, Gale's parent company, has brought to fruition with *GVRL* the aggregated database of reference sources it began thinking about way back in 1997. The idea then was to partner with the Committee on Institutional Cooperation Libraries to build a CIC electronic reference shelf—an integrated, full text, Web-accessible collection of significant reference materials.

The recently introduced *GVRL* trumps all competitors for size and depth since it will ultimately consists of about 200 titles from the various reference publishers in the Thomson Group, including many well-regarded multivolume standards.

CIC is the organization of 13 large Midwestern universities (football's Big Ten, now including Pennsylvania State plus the University of Illinois at Chicago and the University of Chicago).

Generous printing and e-mailing allowance apply for the article-length entries and persistent URL's permit use on reading lists, and so on.

An interesting recent development in the e-reference market is that Gale and *xrefer* have entered into a distribution partnership. Gale has decided to market *xreferplus* as the quick-reference component to *GVRL.* A search in *GVRL* can be repeated in *xreferplus* without re-entering terms.

Xreferplus, in turn, will be able to add some Thomson/Gale titles to its own database. Gale's own *Ready-Reference Shelf* product is limited to selected directory-type information extracted from 14 of its databases, so *xreferplus* provides a more comprehensive quick reference solution.

Marketing of reference databases shows that some publishers *have* learned a lot after 10 years of negotiating with libraries. Except for *ORO*, which does not permit title-by-title selection, these producers recognize they will sell to more (and to different types of) libraries if they allow purchasers to pick and choose what they want to put in a searchable reference collection.

Gale's pricing is based on a one-time purchase/ownership fee for each title, plus an annual access charge derived from the size of the population served. MARC records with URL links in the 856 field are provided free.

Xrefer has a pick-and-mix option that allows libraries to shape a custom collection, as well as an unlimited full collection choice. North American customers of the Ready Reference collection can choose 100 titles from a list of about 170 *(xrefer 100)* or the entire list *(xrefer Unlimited).* Customers pay a flat rate based on institutional FTE.

Libraries also can craft their own specialist collection, paying a specific cost per title, again based on the population served. NetLibrary offers its standard selection arrangements and pricing, with no provision for swapping out outdated volumes.

E-reference collection development issues

Developments in e-reference are a good illustration of the impact on library acquisitions of a growth area in a maturing e-publishing business. Spread before librarians now are a whole new array of somewhat similar, well-designed, and useful products to assess and evaluate. In addition, certain of their characteristics require decision-making processes that differ in some important respects from the procedures for selecting their print predecessors. E-reference sources:

- Like print tools, may be expensive must-haves that are even more pricey in digital format

- Like their paper versions, tend to fall into types rather than being unique in terms of the information they contain; such as quotation books and dictionaries of terms

- Are often leased rather than owned

- May be continuously updated

- May offer added value that is difficult to capture

These attributes present reference collection builders with special challenges.

How to pay for the online reference collection you need

Reference budget managers must initially decide:

- Whether to buy print or electronic or both

- How to address the reality that online reference tools are more often purchased as subscriptions instead of on the successive one-at-a-time basis more typical in the predigital era

Though many basic reference tools have always been annual subscriptions, a significant percentage in the paper era were one-time outlays. Some titles were bought once every few years when new editions appeared. Others were acquired, as issued, to supplement existing holdings of a certain type—for example, a new dictionary of American slang or a new guide to acronyms and initialisms.

Now a dictionary, a handbook, or some other standard that earlier might have cost a few hundred dollars once, has been transformed into a continuously updated database purchased either at a yearly rate or at a base price with an annual update or maintenance fee.

Publisher claims of frequent revisions in a field like philosophy, for instance, lack credibility as a justification for annual charges.[9] Also, the jury is still out on the question of whether the frequent updates subscribers pay for actually occur, since initial sales targets must be met before revisions can be financed.

Publishers prefer to talk about timely revisions than to point out they need continuing revenue from an online product to create the new features that developing technology permits or users demand, and to keep pace with industry requirements such as use statistics, OpenURL compliance, changing standards, and so on.

Reference librarians are concerned about the long-term affordability of online reference subscriptions. As Ann Bristow, head of reerence at Indiana University Libraries points out: an annual charge of $2,500 for an encyclopedia on a single topic simply will not fit reasonably into a reference department budget.

"These new costs are on top of old costs, and they don't scale," Bristow says, "We could find the money this year, perhaps next. It takes great optimism, however, to imagine $25,000 spent within one decade for access to one subject specific encyclopedia without a cost to pay in other parts of any library's collecting priorities."[8]

Despite the apparent logic that books not read cover to cover are perfect candidates for online-only distribution, important publishers of specialized reference tools still bring out print-only versions.

Most online reference works are issued in dual-format editions, even expensive-to-produce, multivolume sets. For example, Macmillan (a Gale company) is planning a new edition of the *Dictionary of Scientific Biography* that will take three and a half years to compile (the previous edition took 15!).

Gale's stance on electronic versus print is that the publisher's job is to provide content—choice of format is up to librarians. Historically, professionals have maintained that they can find an answer more easily by going to the shelf instead of negotiating an online search—though improvements in indexing and interfaces are changing this view.

Besides, if having both formats costs more, most libraries will be unlikely to be able to afford both. Reference collection builders may have to choose which tools make the most sense in which medium at least for the short term.

How to build the best online reference collection for your users

The sources offered by aggregators are meant to meet the general reference needs of different kinds of libraries with a wide variety of users. Publishers, eager to make them appealing, will add more titles to fill gaps or cover specialties.

The ability to tailor an online reference collection offered by Gale, *xreferplus,* and netLibrary is an empowering and desirable benefit. Libraries pay for this flexibility in scarce staff time to pick and choose titles, evaluate overall costs in terms of available dollars, monitor use statistics, re-evaluate choices weighed against new offerings, and so on.

As with aggregated, general-purpose periodical databases, larger libraries will probably think they need more than one bundled reference product to have a well-rounded collection. Smaller libraries too may simply want certain titles available from one aggregator but not from another.

In fact in Gale's case, to have all the major sources in business and literature, for example, a library would have to purchase more than one collection. Publishers' slicing and dicing of electronic content for different market niches often forces libraries to buy more than one product to cover basic needs.

Providing overlapping but useful reference content also is more problematic in the electronic realm. In print collections, for example, libraries typically have several dictionaries of quotations or business terms and so on, on the assumption that though they might be duplicative to some extent, each would contain unique content. Paying for these one-at-a time on at intervals is easier than paying for each on a subscription basis, either individually or as part of an aggregated database.

Can knowledge be preserved in its historical context?

A few vendors are willing to sell snapshots of databases. However, because they are fluid, continuously updated Web-based reference works are not in fact *ownable*. Preserving the thinking of an age and the work of some of its finest writers, as libraries sought to do by keeping the 9th and 11th editions of *Britannica,* is not a real option with today's reference online works. This limitation is not only important in relation to cultural history—patent lawyers, for example, also need information about the state of science and technology at given points in time.

How to produce the best return on investment

Reference tools are a specialized type of resource that librarians understand far better than users do. Most people know what common tools like dictionaries, encyclopedias, and almanacs are and what kinds of questions they can be used to answer, but many of the stately volumes that line the shelves of large, high-ceilinged reading rooms might as well be books-by-the-yard to the average patron.

Reference books are expensive to produce and shockingly underutilized, especially in terms of their cost. And, as a rule, e-reference tools that increasingly contain more than what is in print will cost a good bit more than their paper predecessors.

A key question then is the extent to which online access will increase awareness and use. Users are less likely to identify reference tools through records in the OPAC than they are to discover other e-monographs.

Putting a click-box or a hyperlink on the library's website called Oxford Reference Online or *xreferplus* will not mean much to the user about what can be found by drilling down to the next level.

E-reference futures

The staking out of a new area of electronic publishing provides libraries with wonderful new ways to serve users but also with additional costs for new online content that may or may not need to be tacked on to the expense of maintaining print in certain cases.

Furthermore, now that e-publishers have provided searchable, aggregated databases of reference tools, how far will they take libraries and what will it ultimately cost? A senior publisher at Gale envisions the reference database as the entry point into a subject with multiple links to standard texts, primary sources, and other materials—materials that libraries will then naturally want to add to their online collections.

The developers of *xreferplus* have two extensions in mind for their product. The first is to create the capability to cross-link not only among the titles on *xreferplus* servers but to other Web-based reference works as well. The second is to fully integrate reference sources at the point of need within any e-book or a full-text article.

Creating this kind of pervasive meta-reference service is an ambitious and expensive goal. If libraries want to see it accomplished, they will inevitably have to bear some of the costs of design and development.

E-primary sources

Original documents that are the grist for the research mill in the humanities and social sciences are another booming area in e-publishing. In the early days of the digital era, no one thought that all the esoteric sources in all the libraries of the world would ever be digitized and made widely available, but this paradise for scholars is growing closer. Even ephemera published hundreds of years ago are now available on online.

The surge in e-primary source production is driven by several factors. In the age of Google, educators increasingly want students to understand the importance of returning to the source for authoritative information. Curricula even in middle schools place emphasis on original materials.

In addition, humanists are stepping up for their share of the electronic resources pie. Locally, they are tired of seeing the lion's share of library funding go to science. Nationally, they are demanding attention to needs of nonscientists in the building of the domestic digital research infrastructure.

The Commission on Cyberinfrastructure for the Humanities & Social Sciences is spearheading this campaign. Formed under the auspices of the American Council of Learned Societies (ACLS) in spring 2004, the Commission is in response to the Atkins Report, *Revolutionizing Science and Engineering through Cyberinfrastructure*.

OCR: Method for the machine-reading of typeset letters, using optical sensing and a computer.

Early English Books Online, http://eebo.chadwyck.com/home

Text Creation Partnership, www.lib.umich.edu/tcp

The 2003 National Science Foundation study recommended a $1 billion investment to allow "people, information, computational tools, and research instruments to be connected on a global scale."

One of the central points of the Atkins Report is that technological advances not only facilitate research but also create the conditions for new modes of inquiry leading to the next wave of discovery. In forming the commission, the ACLS points to innovative social sciences and humanities projects that are "accessible and meaningful only in digital form" and suggests the humanities, like the sciences, have reached a defining moment requiring bold action to push through to an age of new insights.

The commission will delineate the communications and computational tools humanists will need and will also engage in consciousness-raising activities to help nonscientists understand the potential for innovation inherent in state-of-the-art computational, networking and visualization capabilities.

Besides necessitating robust computer systems in libraries, a new reliance in the humanistic fields on computational methods will likely increase the demand for purchases of primary source materials of all kinds.

In our post-disciplinary age, researchers in many fields stand to gain from the availability of large aggregations of historical documents, and vendors are already responding to this perceived need.

In addition, technological advances are fueling expansion in this area. Increased bandwidth and continuously improving optical character recognition (OCR) capabilities have enabled rapid progress here. In addition, both vendors and libraries are increasingly interested in partnering on product development.

Proquest/Bell and Howell Information and Learning blazed the trail to open this market in 1999 by successfully converting a massive corpus of material from microfilm to digital format. *Early English Books Online* (EEBO) contains 96,000 titles representing the earliest printed works in the English language. EEBO remains limited by the technology available when it was created, but nonetheless exposes this record of Western civilization to new uses and discoveries.

The product launched not only BHIL's Digital Vault Initiative but also established a model for partnerships with libraries to add to content and improve functionality as part of commercial conversion projects. BHIL cooperated early on with the University of Michigan and Oxford University to create the Text Creation Partnership, which currently includes more than 100 members.

Under this umbrella, participating libraries contributed funds ($50,000 over five years) and expertise to identify particularly important titles for text encoding to allow more effective discovery and retrieval.

The most recent release of EEBO brought the number of encoded texts produced through the coalition to 6,100. Similar partnerships have also been formed to enhance two other recently released major products.

The first of these is Gale's monumental *Eighteenth Century Collection Online (ECCO)*. Taking up where Bell and Howell left off, Gale decided to turn the Primary Source Media 18th century microfilm it had in hand into a comprehensive online collection of English language imprints for the 1700s. The idea was born in 2002 and the project was developed in a scant nine months. Gale now has available a quarter of million titles totaling 33 million pages.

According to the publisher, advances in OCR have been a key factor in both the speed of production and the accuracy of the output. Gale is able to put 1 million pages per day through a proprietary process that teaches itself how to produce better results.

Owing to this iterative optimization, documents produced now are measurably more faithful representations of the originals than those created at the beginning of the project. Gale may ultimately decide to reprocess at least some of the first documents to be converted. Term queries can be limited in various ways but, nevertheless, searching 33 million pages is likely to bring back large result sets.

Even with Gale's fuzzy match approach, searching problems still arise from variant spellings (prevalent in early texts) and errors introduced by scanning old-fashioned or hard-to-read typefaces. The Michigan-based Text Creation Partnership (TCP) will identify 10,000 critical texts for full, standards-based encoding to enhance *ECCO* usability.

Gale has been positioning itself for a major role in this market for some time. It acquired Primary Source Media a few years ago and has recently added Scholarly Research, Inc. With 1.5 billion titles in its vault, it has only just begun to convert large microfilm collections to digital format.

The next major project on the list is a collection of 19th century economic and business materials, which will dovetail nicely with other Thomson/Gale business products. A Shakespeare database to include prompt books also is on the way.

ProQuest/BHIL also has been digging into its well-provided larder of scholar's treats, with its *Historical Newspapers* project. Newspapers are deep reservoirs of information on more or less any subject. Papers converted so far are the *New York Times*, the *Wall Street Journal*, the *Washington Post*, the *Christian Science Monitor*, to be followed soon by the *Los Angeles Times* and the *Chicago Tribune*. Scholars will certainly try to convince libraries to buy archives of as many titles as possible.

Other companies are joining the two leaders. Newsbank/Readex, old-time producer of microcards, is now working on a digital version of 36,000 titles in Charles Evans standard *Bibliography of Early American Imprints.*

TCP hopes to enhance 6,100 titles. Lexis-Nexis and Readex are competing to bring out the U.S. Serial Set (the compilation of congressional reports and documents) in electronic format. This extraordinary record contains information from the end of the 18th century up through the latter part of the 20th century on an amazing variety of subjects enhanced by numerous maps and illustrations.

Other products could be added to this account of important commercial digital text projects, and the list will certainly continue to lengthen. Scholars and their librarians will lust after these tools—scholars because they can be the raw material for the making of a reputation; librarians, because they realize just how remarkable these resources are. Gale's marketing also reminds law libraries facing accreditation that they can add thousands to their volume count at stroke by purchasing their 19th and 20th century legal treatises.

The company also uses volume count as a selling point to both members of the Association of Research Libraries and those aspiring to be members.

Production schemes and processes that can handle a million pages a day and the development of an infrastructure to enable searching a database of 33 million pages is a costly enterprise. Prices for these huge corpuses and their associated MARC records are dizzying.

ECCO 's retail price tag is a half million dollars, though discounts are available for those who own the microfilm and purchase with a consortium. Multiple-year payment schedules give libraries time to scrape together the money, and Gale representatives are happy to make presentations to donor and alumni

groups. List price for the Lexis-Nexis Serial Set is $180,000 with a $1,500 annual maintenance fee. Though the retail price is considerably higher, a recent per-institution consortium offer for the complete Readex version was also $180,000.

When *EEBO* appeared on the scene research libraries were legitimately concerned about having to pay twice for content already purchased as microfilm. A typical consortium deal for purchase of *EEBO* and commitment to the Text Creation Partnership resulted in a total cost to one library of about $140,000 with additional annual charges of $3,500 for maintenance and $11,000 for unsubscribed microfilm.

MARC records listed at $100,000 could be had for $40,000, though it turned out that a considerable additional investment was needed to make them usable. Libraries buying microfilm segments of *EEBO,* as they were issued over the years since the late 1940s, would have already invested hundreds of thousands of dollars in these materials.

Unequivocally, these repositories are exceedingly useful both for the researcher and as part of the instructional process. But libraries will probably have to reach deeply into all the spare money pots—special purpose monies, windfalls, end-of-the-year funds, and donations—to pay for them.

All have annual maintenance charges that are reasonable but will probably rise over time since server upkeep for large files is costly. In the case of a database like *ECCO*, partner institutions will continue to supply new content and Gale will offer priced supplements as time goes on.

Given that the products already on offer represent the tip of the iceberg, paying for the best stuff left in the microfilm vaults will be present a challenge.

E-book futures: Are we there yet?

The idea of creating and distributing electronic books predates the Web. Various reference sources were sold on CD-ROM in the 1980s and 1990s. At the dawn of the digital millennium, however, many people thought that the age of the e-book had finally arrived.

NetLibrary began its campaign to create a market in the second quarter of 1999. According to a widely publicized report published in 2000 by Forrester Research (a forecaster of technology impacts on business), e-textbooks would be the opening wedge in the wholesale production and adoption of electronic books. The study predicted $7.8 billion in sales of digital textbooks by 2005.

On the trade book side, Simon and Shuster released Stephen King's e-only book *Riding the Bullet* in March 2000, selling it direct to consumers for $2.50. About 400,000 copies were sold in the first 24 hours and 2 million people tried to download the book causing hosting websites to crash. King made $450,000 in the first three days on the 61-page book and *PCWorld* proclaimed: "Stephen King ushers in the electronic book age!"

But a correction came quickly. A few months later King offered *The Plant*, an e-book to be released as a serial, chapter-by-chapter at $1 per chapter. About 172,000 people bought the first installment, but the number of buyers dropped to 74,000 for the second chapter. Even though King pulled the plug well before he wrote Chapter 8 (after which installments were to be free), he still made more than $450,000. Nevertheless, the bloom was off the rose as the dot.com bubble burst.

NetLibrary started its downward spiral. The rush to market with incompatible reading devices and content in proprietary format proved to be disastrous. The choice of consumers instead of libraries for the initial marketing pitch turned out to be wrongheaded.

Although to be fair to publishers, libraries might not have been interested anyway, since they were busy pouring whatever money they had into solidifying full-text journal article access through aggregated databases and publisher packages.

Since the e-books boomlet went bust, however, the major players have been quietly regrouping and building up for a new assault on the market. A growing consensus says that libraries, especially academic libraries, are the place to sell e-books.

NetLibrary, still the biggest stakeholder, gained strength through the OCLC purchase and is experimenting with new possibilities. Major STM, reference, and other book publishers see e-books as a promising source of new revenue.

Technical advances have made producing and delivering e-books easier. Print-to-digital conversion technology continues to improve and middlemen with middleware, like Overdrive, are available to help smaller publishers who lack the resources to enter the market. Going back to the criteria the California Digital Library study spelled out back in 2001, are e-books ready now to be the next big thing?

Are there enough e-books available to build balanced collections?

A critical mass of content is definitely coming into being, especially in the sciences, and the humanities and social sciences are not far behind. Harper Collins and other trade houses are building e-lists and e-books are the only area in trade publishing where sales are increasing (though at a modest pace).

Do e-books offer more than a replication of print?

Browsable tables of contents, cross-references, clickable footnotes, and links to cited references have added value to e-monographs, as have interactive features such as book marks, highlighting, and note-taking.

Knovel's products demonstrate, in particular, how an e-book can become a problem-solving tool. The ACLS History E-Book project and Gutenberg-E are pushing the bounds of the scholarly monograph. Major reference tools such as *Grove Music Online* offer audio clips and many supplementary illustrations. Dictionaries produce spoken pronunciations.

On the other hand, parts of print-books may be missing after electronic conversion if the publisher has been unable to secure digital rights to reproduce them. This situation is often a problem for illustrations and for material in older monographs, where identifying rights holders might be difficult and time-consuming.

Have the early problems of platform, format, and device dependence disappeared?

Significant progress has been made here as a result, in particular, of Adobe's strategic decision to integrate the reading of both PDF documents and e-books into Acrobat 6.0. The ubiquity of Acrobat on the desktop and its version for the

Palm OS-based personal digital assistants go a long way toward eliminating downloadable e-book device dependence.

Most publishers of Web-based online books, however, are exhibiting the same sort of silo mentality as in the early days of e-journals. Though some are open to using various channels for the distribution of their products, many major vendors are still bent on sequestering their titles in branded silos. The user must search multiple sites for comprehensive coverage of a topic.

Differing search engines and rights regimes mean that researchers will not be able approach all e-books in the same way. Having records in OPACs and metadata suitable for retrieval by federated search engines helps at the title level. But comprehensive inside-the-book cross-searching can only occur in databases aggregating books from all relevant producers.

E-books present many service issues for libraries. As more books are added to academic collections, interest will grow in having offline availability. Many publishers are still unenthusiastic about this possibility and also about e-book use for course reserves or in e-learning systems.

Can purchasing of e-books be integrated into normal acquisition workflow?

NetLibrary and EBL provide the opportunity to buy books through Blackwell's. NetLibrary also offers a convenient Web-based selection worksheet and a profile-based alerting service for new titles.

Book agents are recognizing the importance of integrating e-book and print purchases. Blackwells' has 40,000 e-books in its Collection Manager database. In addition, it also offers an e-reference consolidation service handling all aspects of purchase (licensing, authorization codes, and so on) for reference titles from many major publishers.

Baker and Taylor has ED (EContent Delivery) a content management platform permitting selection from a repository of 8,000 titles. The platform has the usual features: searching, browsing, bookmarking, and usage statistics. Downloading using Adobe Content Server technology also is supported.

But a library cannot just buy an e-book from an agent like a print book and add it to its website. E-books must be delivered via a platform to manage access and authorized uses. For example, a library can order a Kluwer title via Blackwell's Collection Manager and access it through netLibrary or Ebooks Library. Blackwell would handle the billing, pay Kluwer, and Kluwer would open the access on the netLibrary site to the IP ranges the library provides. (The library also could order the book directly from Kluwer.)

Most e-books from most publishers, however, must be ordered direct and often as part of a package. Packaging comes into play because selling, maintaining, and responding to service problems for just a few titles are not economically feasible for publishers.

Although title-by-title selection may sometimes be an option, a critical mass requirement (such as at least 50 books or 100 books) turns e-book buying into a major purchase decision.

E-book bundles also may be discounted as part of journal package purchase proposals. Preset subject-based packages are common. As with e-journals, cost advantages may exist when working directly with publishers. In addition, access rules may be more favorable on the publisher's than on the aggregator's platform.

Have reasonable pricing models emerged?

Publishers do not earn a passing grade here yet. Many pricing models exist and *reasonable* is not the best adjective to describe them.

Long-term access still generally comes at a premium: a surcharge of 55% for netLibrary books, 40% for Dekker titles.[9] The EBL Book Library seems a promising step in the right direction, however, though even its affordable model still balances on the horns of the dilemma of satisfying both publisher concerns and library needs.

Are adequate and appropriate use and access rights available?

Some platforms severely limit the text that can be viewed on each screen and most contracts do not allow much material to be downloaded, copied, printed, or shared. The most liberal arrangements generally permit copying and printing of no more than one chapter or 5% of a book.

Do librarians have a choice?

Some observers argue that e-books are no longer a matter of choice, but an absolute necessity, for if book content fails to go online it will cease to matter, especially in the context of instruction. E-dependent students may stop reading monographs and never experience the sustained argumentation they make possible.

The natural consequence of this view is that digital books must be fully integrated into the seamless web of information resources libraries present their users, just as e-journals now are. Metasearch engines must be able to retrieve e-books. Not only must bibliographic records in online catalogs be available at the title level with links to text, but links must exist at the chapter level and to book indexes.[10]

Oxford Scholarship Online demonstrates how links from within the book itself can tie the text (through link resolvers) to journal articles in the library's collection. The final step will be to enable linking of e-book chunks to all the library's online resources; that is, to allow users to click on a reference to a page or a chapter of a book appearing in a journal article or another book and bring up the associated text in e-monographs owned by the library.

Oxford and Wiley are both assigning DOIs to book parts to facilitate identification and linking. Other publishers who have also implemented DOIs to subparts of works are McGraw-Hill (8,000 articles in *Access Science*), Humana Press, and Corbis, an image and multimedia distributor lately purchased by Gale.

"A truly comprehensive linking network for online research content is probably within reach within a five-year time frame," says Amy Brand of CrossRef.[11]

Journal back runs

Many online journal programs date from the middle to late 1990s. As the years went by back files grew and publishers began to wonder whether money could be made, as well, from full digital runs of important titles.

Publishers' creation of CrossRef fueled development of back files as a new market opportunity. CrossRef-enabled links from cited references to text created the demand for quick access to older as well as recent material.

Researchers began clamoring for older issues of journals, and publishers have begun to respond by digitizing files beginning with first issues. These large back runs of critical journals (often already paid for once in paper form) present research libraries with yet another set of expensive purchases to fund somehow.

Elsevier Science began a massive program of digitizing complete runs of all its journals in summer 2000, starting with chemistry titles. By 2003 25 collections had been produced that are marketed in subject packages, except for separate offerings of two especially important journals, *The Lancet* and *FEBS Letters*.

Buying just some of these bundles can rapidly rack up a bill of a few hundred thousand dollars. Though the archives are a one-time cost, in 2004 Elsevier began offering supplements—runs of journals from recently acquired publishers, such as Harcourt, that fit into the existing subject clusters.

Wiley InterScience also is moving ahead in this area, with five subject-based collections and the premier chemistry title, *Angewandte Chemie*, as a separate offering. Taylor and Francis also is offering full runs of selected journals.

Nature has issued a 10-year back file. The pricing model for this must-have item includes a base fee linked to the size of the institution and an ongoing annual fee. The cost of this product drove the Big-10 libraries to consider a cooperative project to digitize out-of-copyright issues prior to 1923.

More years of the *Nature* archive must be on the way, especially since the Nature Publishing Group announced a digital archive of the daughter research journals in August 2004.

The nonprofit professional societies do not want to be left behind here since they want research published in their journals to receive the same attention as older commercially published articles.

The American Chemical Society has opted to charge a so-called reasonable annual access fee for its archive, with no institution paying more than $4,500/ per year. IEEE also has gained agreement from some of its participating societies to add legacy content and hopes to have a complete archive in due course.

Many journal back runs have not yet been created, but librarians can expect more activity in this area. A survey of close to 300 publishers in 2003 sponsored by the Association of Learned and Professional Society Publishers (ALPSP) found that at least 10 publishers have digitized their journals back to volume 1, issue 1 and that commercial and not-for-profit publishers have an equal interest in making available older material.[12]

In December 2003 ALPSP offered a seminar for "smaller publishers who might be feeling pressure to convert their own back files."

The Institute of Physics (IOP), which completed digitization of its back files in a one-year project presented some interesting data on use and market acceptance:

- Articles published in 1985 receive about the same use as those published in 1965.

- 20% of overall IOP site accesses were accounted for by the back file.

- More than 200,000 articles were downloaded from the older issues in 2003— 10% of the total.[13]

The development plan described at the ALPSP conference by the speaker from Sage Publications provides a good illustration how electronic publishers spin off products that are hard for libraries to resist. Sage is a high-profile social science publisher with a reputation for high-quality products.

Through 2002 Sage was satisfied with offering its journal content through aggregators with a one-year embargo, or free with print to subscribers. Concerned about a loss of visibility for the Sage brand and other aspects of the aggregator relationship, it began to consider new directions.

Market research and observation showed that selling bundled, subject-based journal packages with back runs might be a successful strategy. Sage then took the risk of building its own subject-based product line in partnership with Cambridge Scientific. The result is Sage Fulltext Collections, consisting of packages of titles in sociology, criminology, communications, and politics and international relations.

The success of the digital journal project has encouraged Sage to lay plans for portals in the various subject areas that would integrate other materials it publishes—reference resources, monographs, and textbooks.[14]

Given the multiple types of content it now distributes, the American Psychological Association (APA) also is likely to set up a gateway soon to serve as the best single place to go for information on psychology.

One-stop shopping

The Sage plans to be a one-stop-shop for sociology, for example, illustrate the next logical evolution in e-product development. Once a critical mass of content has been digitized from a diversified publisher's various product lines, thinking about how to take advantage of linking capabilities to combine the various elements together in new kinds of products makes sense. This kind of integration is going at OCLC where all digital materials have been brought together under a new EContent division and introduction of a series of broadly based databases is planned. Other big players have big plans.

Gale's new "learning" platform

Gale, a trusted name in reference publishing and a Thomson company since 1985, has been positioning itself for some time to produce aggregations of secondary and primary sources. The company has acquired two major microfilm text producers—Primary Source Media sometime ago and Scholarly Resources in 2004.

Primary Source Media brought with it a stash of premier microfilm collections such as the Sabin collection of Americana and the Goldsmith-Kress Libraries of Economic Literature.

With Scholarly Resources, Gale adds a treasure trove of important film collections on national and international topics based on Library of Congress and National Archives and Records Administration holdings and other sources. This acquisition will permit Gale to move on from *ECCO* and the 18th century to documenting events and developments in the 19th and 20th centuries. The company also has signed a multiyear agreement for the *Times (London) Digital Archive* (1785-1985).

Gales' grand design for aggregation and integration is spelled out by its president in an interview in June 2004. The company is in the process of building a single platform for the information resources it produces—its aggregated databases (*Infotrac* and its siblings), the digitized historical film library it has been amassing, its substantial database of reference tools, and its e-books.

Plans also are in place to bring in textbooks from Thomson Higher Learning and other specialist materials in areas not previously marketed heavily to the academic market. The ultimate aim is to allow users "to experience differentiated content that helps to teach them what they need to learn."[15]

Realizing Gale's plan requires building a new infrastructure and creating repository technology, middleware, and a powerful cross-searching capability. This kind of major investment surely will need to be recouped in charges to library customers.

Elsevier's Scopus

Sage plans for content integration are a modest version of what mammoth Elsevier has in mind. Not satisfied with *ScienceDirect* as a destination for information about science, technology and medicine, Elsevier has been working for two years on *Scopus*, billed as the "largest single Abstract and Indexing (A&I) database ever built."

Scopus will cover 14,000 journals from 4,000 publishers with cross-disciplinary access to 27 million abstracts. A global source, the tool will include indexing of (presumably) previously hard-to-find, journal content from Europe and Asia. Also, according to promotional literature, it will respond both to researchers' need to trace cited references outside their own discipline and to reduce their frustration in trying to "evaluate huge quantities of information."

Elsevier is proud of having involved both librarians and researchers in the development of *Scopus*. A white paper on the website describes this user-centered approach, which involved 300-plus researchers and more than 20 research institutions. (The University of Pittsburgh played a major role.)

Elsevier's goal was to focus on how researchers find information so as to reduce technical complexity and make system use as intuitive as possible. The white paper reviews knowledge gained from discussion and observation of scientists' behavior.

One interesting finding is that users prefer an advanced search screen rather than a simple search box despite its complicated appearance. Though users say they rarely use many of the options, having them displayed provides clues on how to refine their first, usually broad, term search.

With *Scopus*, Elsevier is taking aim at Thomson/ISI *Web of Science* market share by offering more comprehensive title coverage as well as citation searching, ISI's hallmark service. As of now citation searching in *Scopus* is limited to the last 10 years, but Elsevier is weighing the addition of more years.

Web of Science can point to features distinguishing it from *Scopus*. The ISI emphasis has always been on selectivity rather than comprehensiveness. *Web of Science* indexes, abstracts, and tracks citations in 8,000 of what it defines as the most useful journals.

ISI's coverage of scientific journals begins with 1945, and it is working retrospectively back to 1900—a project to be completed in 2005. *Web of Science* also tracks the social sciences and the humanities.

As of October 2004, Elsevier had not yet announced how *Scopus* will be marketed. For example, will *Scopus* be sold as a sort of upgrade of *ScienceDirect* or as a completely independent product?

A late summer 2004 press release in advance of the November launch suggests Elsevier wants to hook end users on *Scopus* by offering long-term trials. Early

word on pricing is that cost will be based on population served (differentiating between students and faculty). To ease the sticker shock, installment plans and other flexible payment options will be offered. *Web of Science* and *ScienceDirect* are both exceedingly expensive tools. Will big libraries feel they have to have both?

Notes

[1]Lucia Snowhill, "E-books and Their Future in Academic Libraries: An Overview," *D-Lib Magazine* July/August 2001. www.dlib.org/dlib/july01/snowhill/07snowhill.html.

[2]Roberta Burk, "Don't Be Afraid of E-Books," *Library Journal* , April 15, 2000, p.42-45.

[3]Andrew K. Pace "The Library eBook makes a Comeback" *E-Book Foreword Magazine, Special Edition*, May 2004. www.forewordmagazine.com/photos/eWordMay2k4.pdf.

[4]Based on a January 2004 price list, two users would cost 40% above the purchase price the first year and 25% per year forever after; five users would cost 15% above purchase price in the first year and 65% for year two and beyond. If the library does not care about owning the titles, they can be had on a subscription basis (one user/one book) at an annual fee at 90% of list price, renewable on a year-to-year basis. The cost can be controlled, of course, through the number of titles chosen, but libraries must select a minimum of 200 titles.

[5]"ATG Interviews Chris Warnock," *Against the Grain,* June 2004. p. 66-69.

[6]Robert Darnton,." A Program for Reviving the Monograph," *Perspectives*, March 1999.

[7]Brian Kenney , "The Virtual Gets Real," *Library Journal,* v. 128, no. 15 (Sept. 15, 2003) p. 32-35.

[8]"Just how often does an article on logic need to be updated?" is a question posed In Ann Bristow "Acquiring Reference Tools: Some Thoughts on Current Issues," *The Acquisition Librarian*, 29 (2003) p. 18.

[9]Even at this high rate, netLibrary keeps the door open to raise the long term access fee (the Content Services and Support fee) after five years, if "technological obsolescence" or "cessation of third party vendor support necessitates migration to a replacement platform."

[10]See Shirley Hyatt and Lynn Silipigni Connaway, "netLibrary" *Ariadne* 33, and Lynn Silipigni Connaway, "Electronic Books (eBooks): Current Trends and Future Directions," *DESIDOC Bulletin of Information Technology* , v. 23, no. 1 (January 2003), p. 13-18.

[11]John Cox and Laura Cox, " *Scholarly Publishing Practice: the ALPSP Report on Academic Journal Publishers' Policies and Practices in Online Publishing*," June 2003.

[12]Tony O'Rourke "Digitizing Your Journal Backfiles: A Practical Approach" Association of Learned and Professional Society Publishers Seminar London, Dec. 1, 2003. (Powerpoint presentation: www.alpsp.org/events/previous/s011203.htm).

[13]In the meantime, Ebsco has developed new products in two areas covered by the Sage collections: the Sociological Collection and the full text Communications and Mass Media Index. Libraries with strong programs in these areas (and perhaps others) will have to decide whether both products are needed to address their institution's particular needs.

[14]Rob Paulis, "Beyond the Cost of Conversion" Association of Learned and Professional Society Publishers Seminar London, Dec. 1, 2003 (Powerpoint presentation www.alpsp.org/events/previous/s011203.htm).

[15]Paula Hane, "Thomson Gale Upgrades the Learning Experience," *Information Today*, June 2004.