1995

Innovations Affecting Us: ISI's Electronic Library

Judy Luther
ISI

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Recommended Citation
DOI: http://dx.doi.org/10.7771/2380-176X.1733

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Innovations Affecting Us

ISI's Electronic Library

Column Editors: Norman Desmarais (Providence College, Normd@Brownvm.brown.edu)
Judy Luther (ISI) (jluther@smtpgwy.isinet.com)

by Judy Luther

It is clear that end users want access to information when and where they need it, which means access to full text articles from their workstations. Full text has come to mean full image — a picture of the page as it appears in the print version of the journal.

Document delivery is also evolving. Users have had access via gateways to bibliographic databases and have received copies of articles through the mail or via fax. Many libraries want to load the bibliographic information and full image of a publication on CD-ROM or magnetic tape locally, provide online access to the information and have the ability to download, save, or print the results.

Over the last few years, pilot projects have been initiated by Elsevier with TULIP and by Springer Verlag, AT&T and U.C. Berkeley with Red Sage, to explore how this type of enhanced database might work and how it would affect subscriptions. Additionally, IAC, UMI and Adonis offer products with full text of articles from magazines and journals.

Furthermore, OCLC has recently announced two new full text alliances. Elsevier will make their scientific journals available over the OCLC network. OCLC also announced a partnership with EBSCO to provide full image articles from 1000 general reference journals from EBSCO's currently available products. OCLC plans to make their full-text files available for on-screen viewing and desktop printing by early next year.

The Institute for Scientific Information (ISI) has been working on development of an Electronic Library Prototype which will be tested at pilot sites during 1995-96. The Electronic Library, as defined for the pilot, includes approximately 1350 Current Contents life science titles, from the 7000 research titles which ISI indexes. What distinguishes this project is its size and scope, and the fact that it will be based on an economic model designed by ISI’s partners — the publishers and the pilot sites.

The project . . .

Designed to allow publishers, library administrators and users the ability to test the many variables related to electronic journal distribution, the Electronic Library Pilot will provide access to a significant amount of electronic literature in a controlled environment. The Pilot consists of Current Contents/Life Sciences (providing tables of contents, bibliographic data and abstracts for approximately 1350 journals) with the addition of full images of articles — where publishers have agreed to allow electronic storage and delivery — for those journals to which the pilot site subscribes. The system will deliver all this information directly to the users' desktops via their local area network (LAN).

There are four goals for the pilots: to develop technical systems required to support electronic distribution of journal delivery (data access, storage and retrieval); to create the internal systems necessary to facilitate implementation of the electronic library — including billing, accounting and business management reporting; to devise the economic models which will meet the needs of both the publishers and users; to record user behavior to evaluate the impact on traditional purchasing and usage patterns.

New technology . . .

IBM was chosen as the business partner to utilize the technologies pioneered by their development teams at IBM’s Almaden Research Center in San Jose, California. They will apply new technology developed to: provide advanced relational database functions which merge text and image, integrate systems at the pilot sites and to address copyright and security issues. IBM's client server design will permit ISI to manage a very large database and allow end users to utilize workstations running OS/2, MS/Windows and Macintosh.

Image encryption and watermarking techniques will insure that copyrighted material is protected as it moves through the network and that the end user receives an unaltered article image. Cache management will minimize the amount of storage needed on site to support a large collection as it permits retrieval of articles from the ISI central server over telecommunications lines so that it appears that articles are stored locally, thus saving storage costs.

The partners . . .

The pilot participants represent all types of libraries and include: Brookhaven National Laboratory, Glaxo Research and Development, Ltd., Lehigh University, The New York Public Library, Purdue University, and University College London. A medical library and another corporate site will be added to the mix.

Over 300 publishers are involved in discussions necessary to secure their permission to scan, store and deliver images. The many questions about security of the database and copyright concerns related to integrity of the data have been addressed. The technology being used by IBM will insure integrity and authenticity.

The model . . .

To access full text, users navigate through Current Contents and can either browse the table of contents of a particular journal or perform a subject search to identify an article. Either way, they will reach a bibliographic record which includes abstracts where available.

If the library has purchased a subscription to the journal in electronic form, they can view it online from their workstation.

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Did You Know?

Keeping up with all the new Home Pages available via the World-Wide Web can be a daunting task. So, here are a few you might want to take a look at:

http://lycos.cs.cmu.edu/

The Lycos Home Page: Hunting WWW Information. Considered by many to be one of the best search engines available for searching the WEB. Gets a lot of traffic, so give it a try off peak hours.

http://takebano.stanford.edu/yahoo/

Yahoo Home Page. A general Internet directory divided by broad subject categories. A fun place to browse. Also offers keyword searching. Another high traffic item.

http://carl.org/refsrc.html

Provides access to selected sources and information like the CIA World Fact Book, Zip Code Directories, foreign currency rates and stock quotations. Also provides links to a variety of gophers.

http://Thomas.loc.gov

Congress' Home Page offering full text of all versions of House and Senate bills. Searchable by keyword.

http://cancer.med.upenn.edu/

Oncolink Home Page. Provides both information on a variety of issues related to cancer as well as links to other relevant databases.

None of the brief explanations above does justice to the Home Pages cited. You could spend hours on any one of them, and still not view everything that these Home Pages contain. So, if you haven’t already, invest a little time in exploring. It is well worth the effort!!

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It can then be saved or printed which is done within the prototype software. This insures that the user has authorized access and a valid subscription.

When there is no institutional subscription to the electronic format, the user can place the request for the article electronically within the prototype and have the document delivered electronically to a local printer on the requester’s LAN, or sent via mail or fax. The more traditional alternative of going to the library to obtain a print copy is also available.

Since both publishers and libraries want predictability in revenue and expenditures respectively, the economic model is based on an annual subscription price with unlimited viewing. Printing rights are a point of discussion and will be determined by the individual publishers.

The schedule....

Installation of ISI’s Electronic Library prototype will begin in North America in August 1995. European sites will be added in January 1996. Initial plans call for an eighteen month test beginning with the actual usage of the prototype. Recommendations for future developments will be determined during the pilot.

Reports on user behavior will be totaled for all sites and shared with publishers and pilot sites. Journal usage based on viewing, saving and printing article images will be collected along with demand for document delivery for the publishers. Each site will receive user behavior and journal usage reports specific to their location.

Additional news releases will provide updates on planned developments. Any questions about the project can be directed to Jacqueline Trolley through the Internet (jtrolley@isinet.com) or by phone (800-336-4474 x 1449).