

ASIDIC newsletter

No. 84, Fall 2002

ASSOCIATION OF INFORMATION AND DISSEMINATION CENTERS

Miriam Drake Re-Elected ASIDIC President Walter Finch Elected to Executive Committee Highly Successful Fall Meeting Held in Philadelphia

ASIDIC's Fall 2002 meeting was one of the most successful ever. It was held in Philadelphia's Sheraton Society Hill Hotel on September 22-24 and attracted 74 attendees. ASIDIC president **Miriam Drake** (Information Management and Planning) was Program Chair, and **Carolyn Finn** (ISI) was Local Host. The theme of the meeting was "Digital Content: Selling the Past, Present, and Future"; full details follow in this Newsletter. Elections were held for President and Member-At-Large vacancies; Miriam Drake was re-elected president, and **Walter Finch** (NTIS) was elected as Member-At-Large. On Monday evening, attendees enjoyed a visit to the Pennsylvania Academy of Fine Arts and an exhibition of paintings by Edwin Dickinson (1893-1978), an early American modernist.

Committee Reports

Treasurer: **Kevin Bouley** (NERAC) reported that the Spring meeting in St. Augustine showed a slight loss, but it is expected to be offset by a profit on the Fall meeting. ASIDIC's cash position remains low, so it is becoming difficult to make advance commitments to hotels and other venues for the meetings.

Finance: **Dan Jones** (NewsBank) reported that ASIDIC needs to manage cash and accelerate its receipts to improve its financial position.

Membership: Membership Chair Carolyn Finn reported that eight new members have joined ASIDIC since the spring meeting; they are listed below.

Executive: ASIDIC president Miriam Drake reported on the Executive Committee meeting. Steps are being taken to increase the value of membership. The Newsletter will soon be moved to a

members-only section of the Web site, and other features will be added to it. ASIDIC Secretariat **Don Hawkins** has assembled a collection of the Newsletters from the archives, dating back to the late 1970s. These will be digitized and added to the Web site. A database of historical information on ASIDIC is under development. Consideration is also being given to expanding the role of the Secretariat. To help ASIDIC's cash flow, the Executive Committee voted to increase dues to \$400 for Full Members and \$150 for Associate Members, effective with the 2003 renewals. Members are encouraged to send their renewals to the Secretariat early.

Sponsorship: ASIDIC thanks ISI, NERAC, and Information Today for their generous sponsorship support of the Fall meeting.

Elections

As mandated by the By-Laws to the ASIDIC constitution, elections were held at the Fall meeting. There were three vacancies on the Executive Committee: President and two Members-At-Large. The Nominating Committee, **Jay ven Eman** and **Marjorie Hlava** (Access Innovations), presented a slate of candidates: Miriam Drake for a second term as president, **Mike Walker** (NewsBank) for a second term as Member-At-Large, and Walter Finch (NTIS) for a first term as Member-At-Large, replacing Kevin Bouley whose term has expired. No further nominations were received at the meeting, so the slate was elected unanimously and congratulated. Kevin Bouley was appointed to a second term as ASIDIC Treasurer by ASIDIC president Miriam Drake. A list of Executive Committee members and officers for the coming year is attached to this Newsletter.

Pew Internet Report

ASIDIC President Miriam Drake recommended that ASIDIC members read a newly issued report entitled "The Internet Goes to College." It can be found at <http://www.pewinternet.org/reports>. The report discusses how college students—our future customers—use the Internet and their opinions of information. They see a world where everything is available through the Web, want to pay nothing, and share everything with their colleagues.

Outsell E-Briefs: A New Membership Benefit

As a benefit of ASIDIC membership, a free subscription to *E-Briefs*, the highly regarded weekly e-mail newslet-

ter produced by Outsell, Inc., a market research firm focusing on the information industry, will be provided to Members, beginning in 2003. Members are urged to renew early and ensure that their current e-mail address is provided to the Secretariat.

Spring 2003 Meeting

The Spring 2003 meeting will be held March 30 – April 1 at the Treasure Island Hotel, Las Vegas, NV. **Jay ven Eman** will be Local host. **Craig McKinnis** and **Paul Vizza** (Kiplinger Washington Editors) will be the co-chairpersons. As you might expect from people who work for a business forecasting company, the Spring meeting will focus on the future and what lies ahead in the information industry. The program will bring together senior-level officials who won't report on what they've done or where their businesses have been, but instead will look ahead and give their opinions of the trends and opportunities that lie in front of us all. Topics to be covered will include the outlook for content, technology, buyers and sellers of information, and industry financing. Mark your calendar now—this is sure to be one meeting you won't want to miss!

Future Meetings

The Fall 2003 meeting will be held at the St. Sulpice Hotel in Montreal, Canada. **Leslie Lees** (Nstein) will be Program Chair, and **Randy Marcinko** (Nstein) will be Local Host.

President's Column

By Miriam Drake

It is my honor and pleasure to serve as your president for another year. The

Executive Committee is a great team and works hard to keep ASIDIC operating for the benefit of our members. Your participation, attendance at meetings, and ideas make ASIDIC work. Volunteer to be a speaker, moderator, or helper. Plan to attend our 2003 meetings and let us hear about your ideas for ASIDIC.

The theme of our meeting in September in Philadelphia was digital content, a topic that will be on our agendas for years to come. Our speakers informed, enlightened, and at times, entertained us. Carolyn Finn, our local host, chose a terrific venue for the meeting and arranged a wonderful evening at the Pennsylvania Academy of Fine Arts.

The Executive Committee has spent several meetings discussing ways to create more value for our members. Thanks to Kevin Bouley for arranging access to *E-Briefs* from Outsell, Inc. for our members, and thanks to Outsell for providing this outstanding membership benefit. When we have received payment for your 2003 dues you will receive *E-Briefs*, a timely and important information service. We also are looking at a members' only newsletter. If you have any suggestions for adding value to your membership please let me know.

Our meetings for 2003 are taking shape. The spring meeting will be March 30 – April 1, 2003 in Las Vegas. The venue will be the Treasure Island Hotel. Our local host is Jay Ven Eman, and our program chairs are Craig McKinnis and Paul Vizza. Las Vegas promises a solid program, great networking opportunities, and fun.

In September we will be in Montreal, a European city with great food and sights to see. Our local host for that meeting is Randy Marcinko, and our program chair is Leslie Lees.

I am excited and enthusiastic about our meetings in 2003. I would appreciate hearing from you about suggested program topics and speakers. You can reach me at mdrake@bellsouth.net.

I wish you a safe, happy, and healthy holiday season and all of the best for 2003, and I look forward to seeing you in Las Vegas.

New Members

A SIDIC welcomes the following new members:

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TECHNICAL PROGRAM SUMMARY

Introduction

How do you convince your customers that information is not free—at least not always and not totally free? How do you establish a pricing model for your information product or service that is acceptable to your customers but also keeps you in business? Does the term “value proposition” apply to information products and services? Is all content created equal, or are some types of content more valuable than others and therefore suited to commanding premium prices? Can you sell the past? Is it profitable? Does it matter that you are selling archival content rather than up-to-the-second, mission-critical information? What have been the experiences of other information companies as well as information users that can help you create a business model that is appropriate for the 21st century? These and other topics are all relevant to the topic of this meeting.

Session 1: Digital Content For All Seasons

The Past

Marcus Woodburn,

ProQuest Information & Learning

ProQuest is building a digital vault containing 500 years of history. Users will be able to read about events as they were recorded day by day. ProQuest has the third-largest archive in the world (behind the Library of Congress and the British Library). It contains over

5.5 billion page images, 20,000 periodicals, 7,000 newspapers, 400 research collections, and 2 million dissertations, all housed in three climate-controlled underground vaults. Much of this archive stems from a vision by Eugene Power, who worked to save early English books threatened with destruction by World War II. Over 220 million pages from Power’s collection were the first to be digitized. They provide a fascinating view of the opinions and observances revealing the social mentality of the period. Other subjects include exploration, women’s issues, and health.

Newspaper archiving is a large project at ProQuest. The American Periodical Series shows readers what was in the news 200 years ago. Major newspapers digitized by ProQuest include: *The New York Times* (2.5 million pages from 1851), *The Wall Street Journal* (1.8 million pages from 1889), *Washington Post* (from 1877), *Christian Science Monitor* (from 1908), *Chicago Tribune* (from 1847), and the *Los Angeles Times* (from 1881). This collection contains a massive amount of historical information on the U.S. and must be tagged to make it useful to end users. “Zones” are used to break the pages apart into their components; images are split out and cleaned to enhance the OCR text. XML elements are then tagged, and publication-specific information is assigned to each article. Finally, the ASCII text is edited to 99.95% accuracy in headlines, bylines, first paragraphs, and photographs. Using article “zones” helps keep file sizes down, thus providing faster downloading, better OCR rates, and the ability to provide a threaded article capability. Advertisements are also included be-

cause they show designs, styles, and fashions; early celebrity endorsements; and real estate prices.

What is this archive worth? It is very expensive to create it. Is it a luxury? Data from the major papers sells very well, but other papers from small towns have useful material that cannot be processed because of a lack of demand.

The Present

Anne Mintz, Forbes, Inc.

Major trends in electronic publishing today are:

- *Consolidation.* It is hard for smaller companies to compete with large ones like Thomson, Reed-Elsevier, and Factiva. There will likely be only a few aggregators left in our business in a few years, which will not be good for publishing, but that is how it is.
- *XML.* Many publishers are converting textual data to XML for their own Web sites, but they are not all doing it the same way. XML is good for aggregators because it provides a method of tagging data fields, but it is not necessarily good for publishers. Many technology departments are developing these standards without consulting users, which may hinder searching. For example, multiple by-lines on a column may not be separated into their own fields.
- *Digital Object Identifiers (DOIs)* will soon be attached to every article, but publishers are resisting them. Publishers want to be known for their publications, not as article distributors.
- *Deep linking* is not popular, and moves to prevent it are occurring.

Publishers want users to go to their site where they can market their products, not bypass it and go directly to the articles. A recent advertisement by Cambridge Scientific Abstracts in *Information Today* is interesting because it supports linking.

- *Multiple versions* of the same product may have different content, and they may differ in other ways, such as embargo times, etc. This is not good for the industry.
- *Disappearing content* is a major result from the Tasini decision. Sometimes, if publishers obtain permission from authors to reload their content, it is not reloaded. Librarians at the Washington Post are compiling a database directing users to such content. Photographs are also copyrighted, but publishers may not know when rights to them are given. Some publishers are withdrawing their data from aggregators. For example, Sage has taken its publications off the ProQuest and EBSCO databases.

The Future:

Content and Technology— A Symbiotic Relationship

Sue Feldman, IDC

The online content market, today estimated to be \$54 billion, is predicted to grow to \$110 billion in five years. Media, especially streaming media, will enter it in a big way. Purchasing of content in organizations is becoming increasingly decentralized; one person is no longer in charge of the content budget. Corporations and institutional purchases will remain the largest source of content purchasing revenue. There does not seem to be any agree-

ment on the preferred purchasing model; in a recent survey, respondents were about equally split between subscription or usage models. Purchasing decisions are based first on the ability to make one search for all content, and then depth or breadth of coverage. Other important considerations are search and retrieval capabilities, price, ease of integration, and other services offered. Content is often distributed through an information professional pushing it to users, corporate intranets, and direct remote access by users.

Content is very unstructured, and technology helps to create special collections of it and to provide access to those collections. Trends in content delivery are:

- Uniform access to all information: internal and external, both data and content;
- XML;
- Web services;
- More natural language processing;
- Hybrid systems incorporating algorithms, natural language processing, machine learning and some agent technology;
- Easier interfaces for end users; information professionals are not doing as many searches as they formerly did;
- More interaction and a move to systems that can remember previous queries and use them in searches; and
- Personalization of everything!

Business users are now in charge of information, not the IT department. Search engines are in demand more than any other content technology, but there is a growing demand for categorization and taxonomy building. Any content provider willing to license a taxonomy

will bring in extra revenue. Typical uses of content technologies include product early warning systems, customer relationship management, call centers, text mining for trends and patterns, and product catalog searches in tandem with database technology. These technologies are good for handling unstructured information because they can measure similarities between documents and queries. Relevance ranking and the ability to handle fuzzy language without pre-constructions will result in better retrieval for the user's queries.

Corporate end users spend 15-30% of their time looking for information. Only 48% of them are successful and then only about half of the time. The cost of lost productivity is more than \$6 million/year per 1,000 knowledge workers. Several new tools to help alleviate this problem show promise:

- Nexcerpt allows users to create alerts from natural language search results and publish them directly to the Web.
- Attensity extracts concepts and events from e-mail messages, Web sites, or databases.
- ClearForest stores relationships and contexts, and then uses them to answer questions.
- Clairvoyance extracts words from e-mail messages and tags.
- Linguistics Metamarker structures text, extracts the writer's intention or emotion and categorizes them.
- Phraser sorts collections on phrases.
- Inxight produces a visualization of a body of information.

Still missing from the technical world are an understanding of content and how people interact with it, ways to differentiate good and bad content, and good

taxonomies and categorizations. From the content area, we need tools to analyze content and integrate it with services, good semi-automatic integration tools for internal and external collections, speed and scalability, and the ability to share it (DRM makes it easy to purchase content but hard to hand it on).

Some facts to act on and suggestions:

- A single professional is no longer the sole determiner of services to buy.
 - We need tools and visual demonstrations of how to solve problems.
 - Business professionals generally cannot differentiate between providers and do not know content sources very well.
 - Current usage levels determine budgets for the next year.
 - Use technology to drive sales.
 - Integrate with the public Web; let crawlers in or send feeds to users.
 - Provide tools to move content from intranets to the Internet.
 - Providers should invite searching and browsing, give away some information to keep users returning, and make it easy to buy on an ad hoc basis.
 - They should seek partnerships with technology partners, many of whom are small companies.
 - Consider partnering with competitors to make it easy to deliver content from a single service.
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Session 2: Content Technologies

Active Paper Technology: Bridging the Gap Between Printed Information and the Online World

Kim Dail, Olive Software

Olive Software was founded in 1999 by a team of experienced entrepreneurs and technologists. It offers an e-publishing platform to produce XML archives. Olive is an American company with headquarters in Denver, CO, an international sales office in New York, NY and an R&D subsidiary in Israel. Some of its customers and partners include OCLC, The British Library, the *Washington Post*, the Brooklyn Public Library, University of Missouri, the *Daily Oklahoman*, the *Arkansas Democrat Gazette*, *Der Standard*, and the *Jerusalem Post*. The *Arkansas Democrat Gazette* had 2,500 customers accessing its Web site for \$49/year. After they began using Olive's platform to produce a database of local content distributed globally through the Internet, their subscription base grew to 7,200 users.

Active Paper is a multi-application e-publishing platform that provides preservation with accessibility. It allows a publisher to produce Web content that looks exactly as it does in print. Other applications are "electronic tear sheets", that can be sent to advertisers as proof of publication. Advertisements can be searched, and use of them online can be tracked because users must register to use the service, and every item has a URL.

To produce XML content, the output from an editorial system is fed into a server (or existing paper content can be

scanned), and an XML repository is created. From the repository, one can produce an archive, a daily newspaper, clipping services, etc. The system uses artificial intelligence to “understand” complex PDF pages and compile them automatically to an ActivePaper XML database. The XML is then automatically reformatted to produce multiple applications. Users can access a friendly XML editor to manage the content, publish subsidiary products, and conduct searches. All entities on a page can be searched and retrieved in either textual or HTML views. This system motivates people to pay for content.

Immortalizing Your Data: Positioning Your Information Assets for the Future

Eli Willner, Innodata Corporation

Not all electronic forms of data can be easily disseminated, and there are many ways to add value to data. We can make it:

- *Carry-able*: Even the simplest electronic representations allow you to copy your data onto electronic media and carry it from one place to another.
- *Easily disseminate-able*: Using the Web or wireless protocols to distribute data immeasurably increases your ability to reach wide markets.
- *Searchable*: The ability to do global searches greatly enhances the value of electronic data.
- *Bore-able*: Indexed searches, keyword access and metadata searches allow users to drill down.
- *Cut/paste-able*: Researchers benefit from the ability to excerpt selections from material. (Of course, securely controlling this ability is important to

the information owner.)

- *Integrate-able*: Consolidating data from diverse sources and presenting it in a uniform way is one of the most powerful benefits of the more sophisticated electronic representations.
- *Device-independent*: Data should work on every conceivable device, taking full advantage of each device’s features, but degrading gracefully on less powerful platforms.
- *Secure*: It is critical to have the ability to monitor who has access to data, to provide controlled access to advanced features, to charge, and to prevent unauthorized use.

The following table shows how various types of content possess these properties:

Property	Raw Text	Word Docs, etc.	PDF	HTML	XML, etc.
Carry-able	X	X	X	X	X
Disseminate-able			X	X	X
Searchable	X	X	X	X	X
Bore-able					X
Cut/paste-able	X	X	X	X	X
Integrate-able					X
Device-independent	X		X	X	X
Secure		X	X		X

In producing content, about 70% of the cost is in creating the raw text; other types content incur additional conversion costs, with XML adding the most cost—about 30% more.

From these data, we can conclude:

- A great deal of value is obtained even with the simpler formats (i.e. ASCII).
- The bulk of the cost in conversion is in the initial electronic capture phase.

- The value-added in converting to the most sophisticated XML-based formats is considerable.
- The cost delta to achieve these additional benefits is minimal.
- XML is the way to immortalize your data!

Innodata was founded in 1988 and has been a public company since 1994. It is based in New Jersey and has ten development centers worldwide. It is a “Large-Scale-Service” provider, offering a full array of conversion services, to all formats, content outsource services, abstract authoring, subject matter analysis and design, content repository provisioning and maintenance, information processing systems, and training.

Building A Digital Archive Through Collaboration: A Report From OCLC

Taylor Surface, OCLC

For the past 35 years, OCLC members have built WorldCat, a cooperative catalog. OCLC’s services have evolved from sharing a cataloging system for reprinting catalog cards to utilizing the shared catalog for interlibrary lending of materials and now to providing end-user access to searching the rich information in Worldcat. To accommodate these new activities, OCLC has created a new strategic initiative in digital and preservation resources. These new services are creating efficiencies in both scale and scarce resources to help cultural heritage institutions serve the needs of their users in the digital age.

OCLC has been investigating electronic archiving for nearly a decade. Development work began in January 2001 and a

division was created within OCLC in November 2001 to develop a business case for the archive. A key concept was the trust that OCLC has built up among its members during the past 35 years. Trust is earned through a combination of proven reliability, fulfillment of contractual responsibilities, and demonstrated sensitivity to community issues. Building a digital archive is a logical next step in OCLC’s evolution. The archive will help libraries manage metadata, which is the first step in digital preservation.

The Open Archive Information System (OAIS) was chosen as the appropriate model for the archive, and Oracle was selected as the development platform. The implications of being a third-party service provider were also examined.

The first materials to be archived were text and still images available on the Web. This decision was influenced by earlier work with the U.S. Government Printing Office (GPO) on a previous digital project. The GPO was willing to work with OCLC to define the requirements for the data format. Other interested organizations, such as state libraries, joined the project. Workflow procedures consistent with OCLC’s standards were developed. Data in the archive remains under the control of its owners.

Access to the digital archive is by conventional Web browsers. When a user clicks on a link to an object, a results page containing the name and owner of one or more objects associated with that bibliographic record appears, as well as a rights statement created by the object owner. When the user clicks on the object, the archive checks whether that user has permission to see that object, or if

the object is public. The archive is stored in a secure facility apart from the OCLC site, and all data is checked for virus before being added to the archive.

The OCLC digital archive began with materials in the public domain. Its future involves developing strategies for preserving non-public documents and other types of data, such as images. Rights management will inevitably play an important role going forward. It will also be necessary to foster cooperation with other digital repositories.

The XML Tsunami

George Kondrach, Isogen

(a division of Innodata Corporation)

A tsunami is "...a great sea wave produced by submarine earth movement or volcanic eruption...". It is an effect caused by earlier disruptive events which itself causes subsequent effects. The XML Tsunami is different than "XML Avalanche", "XML Explosion", or even the "XML Plague"!

XML came about because of the need for longevity of data. It represents a major change in how documents are structured. Each person can define different meanings for XML tags, for example, and each XML object simply lies waiting for software to operate on it. Some of the reasons XML was developed include proprietary notation (rtf, mif), and syntaxes that were undocumented, incomplete, short-lived, expensive, of limited fidelity (HTML), or unpopular (SGML). Ideally, XML will cause software to become commoditized. Metadata will elevate the status and value of information.

XML has two parts. The *syntax* is the method of representing the information. It must be formal, public, open, standard, and complete ("the same" for all). The *semantics* is the meaning that is represented. It must represent what people know about topical information in high fidelity and is different for each person. XML does not really "do" anything. The syntax and semantics represent "nouns" and "adjectives", with "verbs" being processing methods that software systems provide at runtime. Neither syntax nor semantics should cross into the domain of the other. XML is most useful for full knowledge representations.

Information supply chains remain too complex. XML can help create repositories, guide thoughts with semantic models, build products from a repository, and then publish and distribute them. Instead of reacting to markets, we can anticipate them.

XML is not a "drop-in technology" to propagate traditional processes. It does not replace publishing methods, but it best serves the engineering of productive cyber-market supply chains. Using XML, one can query, aggregate, build, and then deliver or publish into wholesale and retail markets less expensively.

Session 3: Content Pricing Models

Evolving the Past towards the Future

David Myers, Ovid Technologies

Ovid was founded in 1984 as CD-Plus and following the acquisition of BRS, the company was renamed Ovid. In 1995, Ovid became a public company. Wolters Kluwer acquired it in

1998, and in 2001, Ovid acquired SilverPlatter Information. It is now re-organizing with other Wolters Kluwer companies. In smaller or less developed countries, Ovid distributes content at the national level. It also works through consortia, and is currently focusing on expanding in the corporate market. The top 30 pharmaceutical companies are all Ovid customers. For publishers, Ovid functions as an agent and works with publishers on customers' behalf. By providing access to publishers' content, usage is increased.

The three main market segments are academic, which is viewed as the least flexible on pricing (price inelastic); medical/clinical, which is viewed as semi-flexible depending on the content; and corporate, which is the most flexible (price elastic). Corporate buyers generally can pass costs on to their customers and must stay ahead of the competition and support R&D.

Ovid now has 300 databases online, covering 1,900 journals and 450 books. It offers à la carte (electronic-only or electronic + print) pricing, and bundled pricing of collections. Collections appeal to institutions because they have only one purchasing decision to make. Some titles are sold because they are part of a collection and thus provide "coattails revenue" to publishers. Future pricing will be heavily based on electronic data; print will become the lesser component.

Ovid has three sales models:

- *Site pricing* has the advantages of unlimited access and no need to monitor usage, but there is no opportunity for up selling, even when adding other sites.
- *Full-time equivalent (FTE)* pricing can be used by institution to cut costs (by limiting FTEs), but there is no up selling unless more FTEs can be added.
- *Concurrent use* is a growth model, but it requires costs to be monitored and can be tricky to apply.

Royalties are generally paid to publishers as a percentage of net revenue plus a fixed portion. Pricing to customers was formerly based on a Suggested Retail Price (SRP) for databases. Full text was priced based on a fixed royalty to the publisher plus a margin, and pricing for books was based on the SRP. Current database pricing is based on the SRP plus a data fee plus a margin. For full text data in the future, we can expect to see value pricing, based on a markup of the electronic price plus a percentage of the print price. The revenue models of Current Science and Ingenta have flipped the publishing industry on its head because they charge the authors or publishers, not the customers or end users. Factors and concerns influencing pricing are:

- *Archival rights*: a main concern of customers. Without such rights, they must continue their print subscriptions.
- *Currency* and the latest updates: Users can make the latest decisions for their customer base.
- *PDF's*: Articles can be retrieved and read later.
- *Channel harmony*: Lessens conflicts among aggregators.
- *Consortia makeup*: Involved users may depress prices.
- *Conversion costs*: Very large for aggregators.
- *Free content*: Some aggregators charge for content that is free else-

where, which depresses prices.

Pricing Digital Content: Models For Archived, Current, and Future Content

David Ades, eMeta

According to a recent Forrester Research report (“Getting Paid For Content”, 2002), publishers must start acting like retailers, and set appropriate customer expectations. Discounting products cheapens their value in the eyes of the customer. Publishers must realize that product development focuses on the consumer, merchandising matches the right product with the right person, and marketing targets customer segments. Limiting and potentially irreversible pricing actions include setting unsustainably low prices at launch to enlarge the customer base, setting identical price levels for all customers, and failing to adjust prices in response to changing environments. Customer retention is a key to success. The cost of customer acquisition can easily exceed the value of the customer, so it is important to cultivate long-term customer value (which pay-per-view does not achieve), and reinforce the value of content. There are many forms of remuneration; publishers must become adept at exploiting all of them.

Customers can be induced to give vendors their personal data in exchange for a sale, which will facilitate targeting of promotions and raise the long-term value of the customer. Products can be priced individually or in packages. Package pricing reinforces multiple products/features, but product pricing gives more flexibility for multiple market segments.

Several pricing models are worth considering in the information industry:

- In the cable TV model, the user must purchase a package of lower-level essentials before they are allowed to add additional modules to fulfill their perceived needs.
- The recurring billing model begins with an initial commitment by the user, accompanied by a charge authorization. During a trial period, the price remains constant, but after the trial expires, prices in further billings are subject to change. Many products offered using recurring billing have experienced extremely high renewal rates.
- “Seats” can be priced individually or in groups. Generally, the cost per seat decreases significantly as the groups get larger. Seat pricing is preferred by some commercial organizations because the vendor can control precisely who get access, and because different pricing can be applied to different products.
- Concurrent user pricing models allow tailored pricing for individual products or bundled packages. They are often preferred by educational organizations because they are well suited to large numbers of users. Seat and concurrent models can be combined.

Examples of some pricing models currently in use:

- The *New York Times* sells bundles of articles. Articles can be purchased individually for cash, but a user can register to receive bundles of articles over time. Bundled pricing extends the relationship and raises the transaction value. The value of the *Times* archives has also been exploited by

- selling bundles of articles on a topic.
- The American Physical Society sells access to *Physical Review* using a variation on the cable TV model, in which tiered pricing is used to differentiate customer size
 - SmartMoney.com prices based on time value, differentiating between delayed and real-time market information and using “good, better, best” pricing and a recurring billing model.

The *New York Times* found that when the price for a consumer product was raised from \$9.95 to \$24.95, there was no effect on sales. In contrast, a scholarly publisher found that when prices were cut from \$15.00 to \$5.00 for articles, sales increased by a factor of 50, and revenue increased by a factor of 17. The conclusion one can draw from these examples is that it is important to test pricing models and not guess what effect they will have.

Linking Mission and Fee Schedules: Participation in JSTOR

Bruce Heterick, JSTOR

JSTOR originated at the Andrew W. Mellon Foundation in 1994 with a 750,000 page digital archive of ten journals in economics and history. It became an independent, not-for-profit organization in 1995. JSTOR converts backfiles of journals to a digital archive available on the Web. It was conceived as a way to relieve shelf space shortages in libraries. Almost all of its users are academic researchers in the humanities and social sciences. Because JSTOR is a nonprofit organization, it is thoroughly mission-driven, and has no profit motives.

Today, JSTOR has over 1,400 library

participants in 70 countries, with over 180 publishers contributing to the archive. It has five collections available, covering 26 disciplines, and containing 10 million journal pages. In 2001, JSTOR had 50.2 million accesses, 11.0 million searches, 6.3 million articles printed.

JSTOR is cost-based and value-driven. Access to JSTOR is exclusively by site license; there is no pay-per-view. Some questions considered in setting prices were:

- Will access be offered on pay-per-use model, or by subscription, or both?
- If by subscription, will the resource be delivered to individuals directly or via campus site license?
- If by site license, how is the authorized community of users defined?
- Will there be price differentiation of a single price?
- If the price varies, what classifying approach will be used to make the determinations?

Cost savings have been passed on to users in the form of reduced prices; royalties were paid to publishers for the first time this year.

JSTOR’s economic model is a fee structure linked to its mission. It imposes a one-time capital fee per collection to fund archiving responsibilities and an annual access fee that funds user support, finance, and administration. Usage figures show that JSTOR is economically productive:

- There are 831,087 articles in the Arts & Sciences I Collection (117 titles, 15 disciplines) with 356,978 full-length articles
- 52% of the articles have been viewed

(but 48% of the articles have never been viewed). In some disciplines, the most-viewed articles are very old.

- 30% of all articles have been printed.

Changes that JSTOR is facing:

- We are preparing to deal with information that is 'born-digital', and has different (not necessarily lower) associated costs.
- We are preparing to deal with information that is available, electronically, in other resources.
- We are dealing with a community that is very concerned about the long-term preservation of these born digital materials.
- E-archiving is a natural extension of JSTOR's mission.
- Whatever products evolve from that work will carry fees that are once again consistent with the mission of the organization.

Session 4: Customer Panel

(Moderated by Carolyn Finn)

Myths: Useful and Useless

Paul Mosher,

University of Pennsylvania

Penn has 10,000 undergraduates, about the same number of graduate students, and about 3,000 faculty and staff. Its budget runs \$2-3 billion; it is therefore a big business. There are 15 libraries at Penn, serving 70 departments. Libraries exist to support the intangible outcomes of the faculty and students; they are not businesses. How much do students learn? What is a good idea worth? Libraries must know the interests of their clientele and put resources in those areas. It has been pre-

dicted that in 10 to 15 years, libraries will be on the way out, to be replaced by the Internet. This has not happened; capital expenditures for libraries in academic institutions have increased because:

- The Internet is more complex and has more resources than people thought.
- Search engines are not powerful enough.
- About 80% of the content on the Internet is for commercial purposes, not academic.

Today, we are confronted with the following:

- Print publication grows every year and has not stopped. Digital information overlaps printed information widely.
- Publications from Russia, China, and Eastern Europe are growing rapidly and must be collected.
- Libraries have become media independent.
- 87% of students feel that library resources are more reliable than those found by searching the Internet.
- The number of people going to the library and checking out materials is increasing.
- Students cannot study in dorms because of all the distractions, so they go to the library to study.

In 2001, the 113 members of the Association of Research Libraries collectively spent \$894 million for information resources; Penn spends \$11-12 million annually. Although its libraries are not really trying to save money or avoid spending, budgets are limited, so they will spend what they can get. Publishers are therefore guaranteed revenues. For the first time since 1986, serial unit costs

have declined. SPARC is having an effect, and e-journals are helping to control prices. We can expect e-journals to supplement, not replace paper journals. Nobody is robbing the publishers! Most libraries are working to conform to copyright laws in authenticating users of their systems; librarians generally are not effective thieves!

The Digitized World of Information: Are We There Yet?

Maria Varki, Widener University

Widener has 7,000 students, about 5,000 of whom are undergraduates. The library subscribes to over 70 online databases from 10 vendors. It has 2,300 print journals and 100 e-journal subscriptions. Because the library cannot afford multiple formats of the same information, about 100 journals per year are cancelled. About 27% of the use of information by Widener students and staff is interdisciplinary. There is a growing reliance on electronic resources by academics, with a high occurrence of nontraditional types of resources. Researchers who publish in e-journals tend to cite e-resources rather than print journals.

Users' expectations are high. Students expect mass availability of resources online. Embargoes are not acceptable to them; electronic access means current information is available now!

Some concerns about canceling print indexes and journals that are available online full text are:

- *Reliability.* We need continuity. Explaining to users why a certain module of a service or a database, or a journal title has disappeared from

the list of resources is a chore nobody wants to encounter. Changes in format or in content during the middle of the academic year cause chaos to users.

- *Perpetual access.* In an academic library, librarians make decisions about which services to purchase based on the expressed needs and interest of the institution's researchers.
- *Current information* without embargoes.
- *Coverage* of journals in full text databases. Are journals indexed cover-to-cover? It is often difficult to determine.
- *Quality.* Maintaining quality of the contents of the product is extremely important. Subject experts must review materials and decide whether different services are equivalent.
- *Source Naming.* Having names of products reflect the contents is extremely helpful to users. There are many one-word names for products (EBSCO, CINAHL, etc.); users do not know what they mean and thus have trouble finding the information they want.

Not Just Value. Values!

Susan Charkes, Rohm & Haas

Purchase decisions in a large company such as Rohm & Haas (17,000 employees) are generally made on the basis of price, coverage, quality, etc. But trust, dignity, and respect also enter into decisions. Every decision is made by a person in the context of a relationship. Human values should be supported in transactions. Most purchases of digital content are still made by information professionals. When an end user makes such a decision without the support of an

information professional, it is often an *ad hoc* decision made by a manager. The purchaser is out on a limb, so the vendor should support the decision maker and build trust by building products to fit users' needs.

Digital purchases put new strains on a relationship because information is becoming a commodity and trust may be lacking. Vendors need to appreciate the expertise and role of information professionals, understand the objectives on both sides, as well as how information is used to create value. Some of them devalue those skills and treat customers as revenue streams rather than as people with information needs. Provisions such as non-cancellation, unaffordably high priced products, and making it difficult to share information with colleagues lead to resentment and mistrust. Transaction factors often have a strong effect on the relationship between vendor and customer; human values are important to people.

Content Acquisition Challenges Today *Nikolai Kopelev, Glaxo SmithKline*

Today's information landscape is complex and heterogeneous. There is a growing number of overlapping commercial products with uneven coverage of various areas or disciplines. Poor integration of commercial information resources leads to low information literacy by end users.

Some companies are trying to manage the interaction between their users and information tools or resources. The situation today with the vendors is difficult. Many of them have rigid business models that are not well defined, with

inconsistent pricing based on sites or number of "seats". Sales staffs have limited knowledge about information products and services and their potential applications as well as limited knowledge about competitive products. They often have poor negotiation skills or no authority to make decisions. Technical issues include inflexible authentication and security concerns, user statistics that are not detailed enough, limited integration capabilities.

Selling content used to be an addition model, but now it is mainly substitution because so many products are available. It is important to know how products differ and how they can be used in the real world. The solution to these problems is partnerships between vendors and users. Vendors need to work with customers and not allow financial considerations to cloud the long-term view.

Session 5: CEO Panel

(Moderated by Tom Hogan)

Dan Jones, NewsBank

NewsBank started in 1972 producing a database of clippings from 100 newspapers with a print index. It appeared monthly and concentrated on urban affairs, people, and international and business information. In 1984, NewsBank acquired the Readex Microprint Corporation to get production capacity and expand its product line with United Nations documents, the GPO's Monthly Catalog, and databases of information on English language drama and the history of science. Its first CD-ROM product, a unified index to all their products, appeared in 1986. The full text of newspapers was also sold on a CD-ROM, but it was awkward to use because each paper

had to be distributed on its own CD-ROM. By the mid-1990s, full cover-to-cover versions of papers were being distributed over the Internet, and they became reference sources for school and public libraries. In 2000, these papers became NewsBank's first e-commerce product for consumers, and in 2001, they acquired Knight-Ridder's MediaStream business, which became another consumer product, NewsLibrary.com. In August, 2002, NewsBank launched its first major digitized product, the Evans Digital Collection of Early American Imprints, a collection of publications in America from 1639 to 1800. When complete, the collection will have 2.6 million images and will require 2 terabytes of storage. It is being digitized from microfiche that were generated from microprints.

NewsBank currently has 350 newspapers online with 150 million articles. NewsLibrary hosts 153 papers in its consumer product. These databases are widely used in schools as curriculum resources for students and for staff development. Some of the lessons learned over the years are:

- People are the foundation of everything.
- Change is constant; managing it is the key to success.
- Good business acumen gives better results than good creative thinking.
- Cash flow and profits are better than market share.

Some observations on the information industry:

- It is in turmoil.
- The market size has shrunk dramatically for publishers and aggregators.
- If we assume the market is saturated, lower royalties result from lower

prices.

- Current information has become commoditized. For periodical news information, price is the only competitive factor besides unique content.
- Is the market still large enough for three big-spending survivors?

Tom Hogan, Information Today

We are all journalists, editors, and content people. Peter Jennings said, "The one thing a good journalist wants is to blend into the background. We should never be the story." Editors and publishers should be unbiased in their views and reporting.

Information Today, Inc. (ITI) was founded 23 years ago as Learned Information, Inc. and began sponsoring the National Online Meeting. Its newspaper, *Information Today*, was launched in 1983. It now publishes eight magazines, three newsletters, an extensive line of books, and runs six conferences. In 2001, the directories published by R.R. Bowker were acquired. ITI produces three information databases: *Fulltext Sources Online*, *Information Science Abstracts*, and *Internet and Personal Computing Abstracts*. Annual revenues are now about \$22 million.

The company has grown "organically", by developing and expanding products, and by acquisition. Acquisitions include *Computers in Libraries* magazine and conference (both from Mecklermedia), *Information Science Abstracts* (from Documentation Abstracts, Inc.), *Fulltext Sources Online* (from BiblioData), *KMWorld* magazine (from VNU), the R.R. Bowker directories (from Reed El-

sevier), *Online*, *Econtent*, and *EMedia* magazines (from Online, Inc.), and *CRM* magazine (from Line 56). In evaluating potential acquisitions, the following questions are asked:

- Does it have market synergies?
- Is it produced in a medium or delivery platform we understand?
- Can we recover our investment in 3-4 years?

All the acquisitions have brought many changes to ITI. It went from a \$10 million company with no debt and 50 employees to a \$22 million company with \$9 million in debt and 125 employees. Control is now by the numbers instead of by intuition.

Many of the dot.com companies expanded too fast and spent money on lavish offices, perks, and high salaries for employ-

ees—and they failed. For example, the *Industry Standard*, a magazine reporting on the excesses of dot.com businesses, went from no revenues in 1997 to \$141 million in 2000, but it is now bankrupt. At its peak, it had 400 employees. It fell victim to the very phenomena on which it was reporting. The morals of this lesson are that successful companies recognize the need for agility and ability to change with the environment, and they follow basic financial realities. Remember the old African proverb that says, “Smooth seas do not make skillful sailors.”

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