

Short Course on Electronic Publishing Solutions

Faculty:

Digital Art:
Bernie Stukenborg
Cadmus Professional
Communications
Linthicum, Maryland

Information Architecture:
Timothy Roy
Dynamic Diagrams
Providence, Rhode Island

Copyright Issues in a Digital World:
Edward W Colleran
Copyright Clearance Center
Danvers, Massachusetts

Paperless Publishing:
Cara Kaufman
Kaufman-Wills Group, LLC
Baltimore, Maryland

The XML Revolution:
Bill Kasdorf
Impressions Book & Journal Services
Ann Arbor, Michigan

Broadening Access to the Literature:
Barbara Gordon
American Society for Biochemistry
and Molecular Biology
Bethesda, Maryland

Searching vs Browsing:
Timothy Roy
Dynamic Diagrams
Providence, Rhode Island

Coordinator and Reporter:
Nancy Wachter
Lippincott Williams & Wilkins
Baltimore, Maryland

(Editor's note: This year the CSE Short Course on Electronic Publishing Solutions replaced the Short Course for Web Editors

offered in the past. Therefore, we are publishing a summary of the new course. As before, the CSE short courses preceded the annual meeting.)

Digital Art

Digital art is the most common "hole" in the publishing workflow. Key workflow steps include the author, peer and editorial review, sizing, scanning, and pagination and proofreading. In this workflow, a strong preflight process will ensure that the submitted digital art meets the standards that have been established. Digital art offers the chance to move to a fully electronic publishing process and earlier and better publish-before-print opportunities.

A digital art program requires planning and perseverance. Moving to digital art requires entirely new processes for checking, inventorying, and processing images. Your workflow must provide all the same information and verification that you have in a hard-copy workflow, but in the long term a successful digital art program will improve quality, reduce costs, and speed the publication process.

Information Architecture

The most important factors affecting the design of your Web site are the users, the content, and the business model. Who are your users? What do they expect? How will they use your site?

Reveal the value of your site. You will lose people if login is required right away. Users should be able to browse the site and get a taste of what is there. Leave the authorization to the last possible moment, and provide easy access to registration. Provide simple search options, and have a search box or search links on every page. Offer advanced search for "power" users.

Plan carefully. Changes in the plan, once you have begun, take time to achieve consensus and cost money. Among the many points to consider are your site goals and

business models, a thorough description of intended users, content analysis and specifications, site organization and navigation, functional specifications, plans for growth, user research and testing, human resources to update and maintain the site, and site-planning documents and diagrams.

Copyright Issues in a Digital World

The Copyright Clearance Center is the largest licensor of reproduction rights for text in the world. It represents rights-holders (more than 9600 publishers and thousands of creators).

Rights-holders are concerned about ownership, mass dissemination, and cannibalization of subscription sales. The information consumer wants simple, cost-effective licensing options. Through blanket licensing or transactional licensing that could include a security component, rights-holders' needs can be met.

Digital rights management (DRM) systems cover the digital management of rights, content distribution, secure transaction, and secondary permissions. Secondary permissions encompass republishing, ordering reprints, and photocopying. The complete DRM package issues licenses, delivers content, collects royalties, and provides customer service. Although new technologies can protect, license, and distribute electronic content, it is important to educate your customers on the importance of copyright compliance, develop materials to distribute to your constituencies, and work with trade organizations to spread the word.

Paperless Publishing

Paperless publishing is a "fully integrated and entirely digital process for taking manuscript from submission through production all the way to distribution". It consists of electronic copyediting and coding, electronic manuscript submission, online peer review, digital art, seamless production

tracking, and electronic content. It offers alternatives not available in a print-only world. Additional articles can be published online only; short versions can appear in print, but longer versions can be published on the Web; the possibilities for graphics have greatly expanded; and both video and sound are possible online.

When deciding to change from print-based to electronic publishing or a combination of the two, consider what your competition is doing, the technologic sophistication of your authors, reader demand, the need to accelerate publication, and costs. Simplicity and flexibility are crucial, and customization costs extra. Vendor selection is one of the most critical decisions to be made; investigate the vendor's stability, technology, system architecture, staff, security and support, training, redundancy and backup, client satisfaction, and intangibles such as attitude, understanding of publishing and process improvement, and vision of the future.

Once your system is installed and tested, promote its use through e-mail, announcement pages and editorials in your journal, instructions for authors, and your Web site.

The XML Revolution

XML (extensible markup language) is no longer a revolution; it is now a core technology of the digital era. It is independent of platforms and software. It enables interchange with unrelated parties and so allows reformatting and manipulation. It is easier to make tools for XML than for SGML, and it is more powerful and dynamic than HTML.

Although XML is derived from and compatible with SGML, it does not require

a document type definition. It eliminates many of the complexities of SGML and is more readable by humans than SGML. Unlike HTML, XML lets you invent your own tags; the focus is on meaning, so elements and attributes are named and defined.

XML is a family of standards: XSL, to define style sheets for XML; Xpath, to navigate XML structures; XSLT, to transform technology and scripting; and SLink and XPointer, to enhance linking. XML incorporates other standards; for example, it uses UNICODE (for character encoding). And it is used for many other "standards", such as the Open eBook Publication Structure and metadata standards.

Broadening Access to the Literature

The *Journal of Biological Chemistry (JBC)* exemplifies broadening access to the literature. *JBC* provides almost instantaneous free access to accepted papers to any scientist who is connected to the Internet. That is the "Papers in Press" option, in which the raw manuscript is posted when it is accepted by the journal. It is fast, reducing the time to publication by about 10 weeks. It establishes publication priority and is citable with the Digital Object Identifier (DOI). After publication, the papers in press proceed through the usual production route to *JBC Online* and print.

JBC has also archived its content (the years 1980 to the present). Through *JBC Online*, the user can link through to the *HighWire Library of Science and Medicine* to gain access to 11.7 million articles in more than 4500 journals. It is possible to set up "my favorite journals" and receive weekly updates from groups of journals in a spe-

cific field of interest. Alerting functions, ETOCS and Cidtract, allow the data to come to the researcher, rather than the researcher going to the data.

Other examples of this widening access are CrossRef (a central source for reference linking, enabling reference citations to be linked across publishers and services on the basis of the DOI) and BioOne (a unique aggregation of high-impact bioscience research journals in which scientific societies, libraries, academe, and commercial interests are collaborating to transform the scholarly communication process by providing expanded access to scientific research).

Searching vs Browsing

Searching is querying; browsing is based on an index with a top-down structure, going from a lot to a little. Searching demands user skills. Do they need just a simple text box, or will they need a help page? One solution only does not exist. Be aware of your users and your content and of what will match with both. The cost may be a factor, but it is not necessary to have a lot of expensive bells and whistles to build a strong search engine.

Browsing involves hierarchies of data. For browsing, feedback is critical for the user. Let users know where they are in the collections, and let them know what they are going to find. Two main choices are possible to structure your browser: faceted classification and cellars.

In summary, approach electronic publication on an incremental basis, plan and know what you want to do, have a structure up front, but implement it gradually. Enrich the process over time. 