

PUBLISHING JOURNALS@UIC¹

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For several years now, the library community has been discussing open access journal publishing and institutional repositories as ways to ensure broad, permanent, and persistent access to scholarly work. Combined with the power of the Internet, these strategies have the potential to accelerate the discovery of new knowledge by facilitating sophisticated searching, text mining, and deep linking of multiple formats. These strategies may also serve to engage the library community in developing the infrastructure and skills base that could support a new, distributed, scholarly communication network. The University of Illinois at Chicago (UIC) Library has embraced such initiatives as natural extensions of its tradition and incorporated them into its recent Strategic Plan.

One of the key goals in the library's Strategic Plan is to take a leadership role on campus in promoting new forms of scholarly communication. Among the tactics to be used are building and populating an institutional repository and increasing our capacity to host open access journals. To advance these efforts, a half-time Digital Publishing Librarian position was established in fall 2005. Nancy John, an emeritus faculty member who had been the Assistant University Librarian for Systems, was named Digital Publishing Librarian. Under John's leadership, the library implemented DSpace and the Open Journal Systems (OJS) as key components of the UIC overall publishing strategy. Since institutional repositories have been addressed fairly extensively in the literature, this article will focus on the library's journal-publishing program.

Journal publishing at the UIC Library is part of a long-standing tradition of exploring and exploiting technology to make content more widely available on the Internet. In the early 1990s, the library saw the opportunity to begin providing locally produced information to a clientele well beyond the campus. It recognized a new role for libraries as electronic publishers and distributors. Subsequently, as a part of the university's larger community engagement mission, the UIC Library extended its online experience to develop and host Gopher and then Web sites for a number of external organizations, such as the Chicago Public Library and the US Department of State, among others. In addition to Web sites, in 1993, the library began publishing the *AIDS Book Review Journal*, an original electronic journal edited by a member of the library faculty. The journal was delivered via e-mail with historical files online in HTML. In 1999, the library took over publication of *First Monday*, begun in 1996 as

one of the first online-only, open-access, peer-reviewed journals. It was distributed through a Web site with articles in HTML and an e-mail alert service.²

Developing a Library Publishing Service with Open Journal Systems (OJS)

After considering several alternative publishing platforms, we identified the Open Journal Systems (OJS) as the most attractive option for publishing journals at UIC. OJS was attractive because it is open source and developed on a platform (PHP with MySQL) that matched the expertise of current staff. Despite OJS's newness at that point and its use of volunteer developers, we felt that the original developers at the Public Knowledge Project (PKP) had demonstrated a strong commitment to the software. OJS offered sophisticated functionality at a reasonable cost. We had followed the development of DPubS closely since the selection of DSpace as UIC's repository platform, but it looked like DPubS would not be available in the timeframe for this project. Moreover, while we could devote staff resources to this effort, we did not have other significant funds to invest. Other systems such as bepress and ScholarOne, though more widely in use, particularly in traditional publishing operations, were too expensive.

Designed to be installed on a local Web server, OJS facilitates electronic submission of manuscripts, manages the assignment of reviewers, tracks the progress of papers, and provides online publication and indexing. OJS enables effective scheduling of papers and planning of future issues. The look and feel of each journal can be easily customized using a style sheet and, if needed, modest PHP skills. Journal managers have options for continuous publication (publishing articles as soon as they are ready), the use of readers' tools (links that perform searches of authors or topics in Google Scholar, harvesters, etc.), and the inclusion of multiple formats such as podcasts. OJS has built its own Open Archives Initiative (OAI) harvester and is compliant with the OAI protocol to allow harvesting by other services. OJS also supports LOCKSS (Lots of Copies Keep Stuff Safe).³

Getting Started

Mark Mattaini, an Associate Professor in the UIC School of Social Work, played a key role in encouraging the library's role in journal publishing. He is the editor-in-chief of a journal, *Behavior and Social Issues (BSI)* that was freely available online and had a print version that required a modest subscription payment. In 2004, in conversations between the UIC Library and Professor Mattaini, we learned that the print subscription revenue was not sufficient to support the annual costs of producing the journal, which included payments to a

commercial ISP. To pay the deficit, Mattaini would send his co-editors an invoice at the end of the year, usually raising around \$3,000. Seeing an opportunity, the library proposed to provide a reliable, cost-effective publishing platform (preferably open source), relieving the editors of the commercial ISP fee, and perhaps enabling the journal to come closer to breaking even. The move would not involve a debate of principles or significant loss of revenue, as the editors had already embraced an open access model for the electronic version of the journal.

Mattaini agreed to test an installation of OJS at UIC and experimented for several months with a sample version of *BSI*. Mattaini soon convinced his board to move to UIC and the OJS software. Mattaini worked with the library and set up the parameters for *BSI* using the *OJS in an Hour* documentation.⁴ Seven years of *BSI* PDF backfiles were added using the OJS import tool. For the first seven years of the journal, only tables of contents were available online. These were imported while library staff keyed in keywords and abstracts. Scanning of the full-text of these issues has been left to a later time.

BSI has now been running on Journals@UIC for almost two years.⁵

Mattaini reports that hits have increased significantly since moving to OJS. The journal now receives about 18,000 visits per month, up from the 6,000 per month just before moving to OJS. *BSI* is OAI-harvestable and searchable through Google Scholar. It is being archived through UIC's LOCKSS server. The journal's financial state, however, remains unchanged. While the costs of the ISP have disappeared, print subscriptions have declined. A next step might be to explore more cost-effective printing options or for the editorial board to consider dropping the print altogether.

While the editors love the capabilities for tracking manuscripts and assigning reviewers, they are not yet sending manuscripts and receiving reviews through the system. This is due partly to a trust in the paper process, but also to a need for training. Editors and reviewers from different institutions gather once a year, often in locations without technology support, limiting the opportunity for hands-on training. The library hopes to address this issue by developing a Web-based tutorial.

Once *BSI* was underway, work turned to migrating a second journal, *First Monday*, to OJS at UIC. A monthly, *First Monday* began in May 1996 and had published 137 issues with 860 papers. Ed Valauskas, the editor, was struggling to manage the influx of manuscripts through e-mail and his memory. He wanted a system that would help him manage the

process and communicate more effectively with editors, reviewers, and authors. He was also interested in moving from HTML to XML and PDF versions and in improved search capabilities.

Valauskas is now using OJS to set-up and plan future issues and to receive and distribute manuscripts to reviewers. The journal is expected to be in full production on the Journals@UIC site late in 2007. *First Monday* will also be archived through LOCKSS.

Due to the number of articles, migration of the back issues of *First Monday* will take almost a year. The original HTML files must be reviewed to update links to the new site and then to create PDFs. The work is tedious and undertaken as time allows.

We have done little advertising to date of Journals@UIC. One press release was issued when *BSI* was ready to go. Most of the inquiries we have had since have been as a result of word-of-mouth among editors. Several editors have approached the library about hosting their journals on the UIC site. We have taken on a new journal, *International Journal of Internet Research Ethics*, edited by a faculty member at the University of Wisconsin-Milwaukee, and several other journals are weighing the possibilities.

Some conversations have led editors to decide to install the OJS software on their own servers after hearing how easy it is. Some editors on campus want to use OJS to manage the editorial processes of their journals even though the journals themselves are published elsewhere, including by commercial publishers.

Technical issues for us and our editors have resulted primarily from our decision to install OJS on a server managed by the academic computing center. While the library maintains its own servers for some activities, 24-7 monitoring and the archiving and backup services provided by academic computing are essential for ensuring the reliability of the system. Occasional glitches do result, however, from OJS being encompassed within the university's security system and from delays in implementing upgrades as other applications sharing the PHP and MySQL platforms need to be tested.⁶ Upgrades to the software take planning and testing, and changes to other entirely separate applications may bring down OJS. While these disruptions are minimal at this point, they do require careful monitoring.

The editors are largely pleased by the manuscript management that OJS provides. However, tools to check references, create links, and standardize formatting are needed to free editors even more to focus on the content of their journals. A commercial product of such a tool has been tested, though we recently learned that an open source version is in development.

The Question of Sustainability

The library is devoting substantial non-technical resources to its digital publishing and drawing on additional resources in academic computing. A half-time Digital Publishing Librarian devotes 25% of her time to the journals publishing initiatives. A programmer at the academic computing center has probably devoted 10–20% of his time. While the Digital Publishing Librarian need not be a programmer, it is essential that this person know enough about OJS and software logic to provide guidance to the programmer during upgrades and troubleshooting.

Funding has been requested from the UIC Provost for a full-time Digital Publishing Librarian and a half-time programmer. The programmer would probably be located in academic computing. Without the \$100,000 requested, the library will need to be very selective in taking on new projects until funds are found via reallocations and the full-time position is posted.

As editor of *BSI*, Professor Mattaini recently presented his perspective on sustainability, stating:

Going forward, perhaps our [the editorial board of *BSI*] greatest concerns involve sustainability. The current arrangement appears to be highly dependent on particular individuals (the Editor/Publisher, the University Librarian, the Digital Publishing Librarian, the head of ACCC, perhaps even the Provost). Personnel changes might result in changing priorities, and there is not an obvious deep bench in any of these areas. Even OJS, to my eye, currently seems to depend on a very small number of dedicated individuals.⁷

The editor and editorial board's concerns are legitimate and highlight the longer-term challenge all universities face. To provide a sustainable publishing service, it must be institutionalized. Publishing must link directly to the mission of the institution and be funded accordingly. We are early in that process at UIC, but we are taking steps to that end. As mentioned at the beginning, the role of the library as electronic publisher has been supported at UIC for over 15 years. We have articulated scholarly publishing as one of the library's strategic priorities. We have reallocated funds to begin to expand our program and have engaged the academic computing center as a partner. Further funding of recurring dollars from the Provost would be a significant sign of a campus-level commitment to publishing with support for both the library and the computing center.

A next major step is to integrate the digital publishing operations into the library organization. To date, the Digital Publishing Librarian has reported directly to the University Librarian. This is not ideal and reinforces the view of the dependence on certain individuals, but it is due primarily to the fact that there has not been a head of information technology for the last couple of years. With that position to be filled by the end of the year, we look forward to an analysis of the needs of a digital publishing unit and its intersections with other operations in the library.

But institutionalization is more than just financial and organizational. The role of library as publisher must be embedded in the culture of our organization.

Our bibliographers have embraced the idea that conversations about scholarly publishing with faculty are a critical part of their responsibilities. One of our bibliographers is in fact one of

the journal editors using OJS to help manage the manuscript flow for a journal currently published elsewhere. She has been discussing open access with the editorial board and perhaps we will see the journal migrate to Journals@UIC in the future. It is also through one of our bibliographers that the University Librarian first met Professor Mattaini. And another has begun a project to identify the journal editors on campus.

Libraries are generating and collecting substantial amounts of digital information and the UIC Library accepts that we have a responsibility to archive and manage these resources for the long-term. The library guarantees editors that we will do everything possible to ensure that the content that we distribute through Journals@UIC is archived and will continue to be available. As stated above, we are currently using LOCKSS for the journals we have on our OJS installation. Should our program grow significantly, we may explore an agreement with Portico. As a member of the Committee on Institutional Cooperation, we are also exploring investment in a shared digital repository for Google-digitized books that would eventually be available to store locally created digital files, as well.

The Future

At this point, the UIC Library is functioning more as an electronic distributor than a full-fledged publisher. Ahead, however, are a number of decisions to be made that will affect the robustness of our efforts. Do we provide a free or fee-based back-issue conversion service for journals migrating to Journals@UIC? It would be most advantageous to users to have the entire back-run digitized if we have the rights to do so. What unit would be responsible for this digitization and how

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would it be integrated into our own priorities for digitizing library content? We will also need to decide if we are willing to take on subscription-based journals. OJS includes a subscription module and we have had preliminary discussions with some subscription-based journals. In addition to the philosophical issues, what are the operational and fiscal implications? Should we seek out monographs? If so, what system should we use to make them available? (We have just mounted our first monograph on our institutional repository, an out-of-print work by one of our history professors on campus.)⁸ Should we establish our own imprint as a number of other libraries have done? Do we want to help editors find and facilitate their relationships with small-run or print-on-demand printers? Do we want to focus our acquisitions of content on a few key areas, for example, titles centered on the Internet or titles in social work? And how far are we willing to go to help find new editors of journals if the current board members are ready to step down?

For now, the journals publishing program at UIC has modest goals. The first is to provide an easy-to-use, cost-effective platform to help editors sustain open access journals. If we can keep titles, especially those sympathetic in principle to open access, from moving to commercial players, we will have been successful. The second goal is to connect with faculty in one of their major professional roles where we have the opportunity to address such strategic issues as copyright, openness, findability, accessibility, and long-term preservation. Engaging with faculty as partners in publishing also helps us better understand disciplinary differences and monitor new developments in research and communication. Third, the journals publishing program will help us build staff expertise in content acquisition, editorial processes, and electronic distribution—all skills that will be invaluable in the library's own digitization efforts. And fourth, these efforts will affirm our leadership role on campus in facilitating action toward creating new systems of scholarly publishing.

We look forward to continued development of Journals@UIC and to learning from colleagues who undertake such publishing programs at their own institutions.

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and Nancy R. John



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¹ This article is based to a great extent on the presentations by Mary Case, Mark Mattaini, Ed Valauskas, and Nancy John at the First International PKP Scholarly Publishing Conference held in Vancouver BC, in July 2007. These presentations are available on the PKP Web site at <http://ocs.sfu.ca/pkp2007/viewabstract.php?id=17>.

² An overview of some of these early efforts can be found in Nancy R. John, "Putting Content onto the Internet: The Library's Role as Creator of Electronic Information," *First Monday* 1, no. 2 (1996), <http://www.firstmonday.org/issues/issue2/content/>.

³ Open Journal Systems (OJS) was developed by the Public Knowledge Project at the University of British Columbia. It was launched in November 2002 and is currently used by about 1,000 journals from around the world. Today, OJS is managed by a partnership among the PKP, the Canadian Center for Studies in Publishing at Simon Fraser University, and the Simon Fraser University Library.

⁴ <http://pkp.sfu.ca/files/OJSinanHour.pdf>

⁵ <http://www.uic.edu/htbin/cgiwrap/bin/ojs/index.php/bsi/index>

⁶ Details on these issues can be found in Mary M. Case and Nancy R. John, "Opening Up Scholarly Information at the University of Illinois at Chicago," *First Monday* 12, no. 10 (2007), <http://www.uic.edu/htbin/cgiwrap/bin/ojs/index.php/fm/article/viewArticle/1956/1833>.

⁷ Mark A. Mattaini, "Liberation and Struggle: An Editor/Publisher's Experience with Open Access & OJS," presented at the First International PKP Conference on Scholarly Publishing, Vancouver BC, July 12, 2007, text provided to the authors.

⁸ Michael C. Alexander, *Trials in the Late Roman Republic, 149 BC to 50 BC* (Toronto; Buffalo: University of Toronto Press, c1990), <http://hdl.handle.net/10027/99>.