



## *ARL Bimonthly Report 237* **December 2004**

### **The Development of an Open Source Publishing System at Cornell and Penn State Universities**

*by Terry Ehling, Director of Electronic Publishing at Cornell University Library. Prior to her Cornell appointment, Terry Ehling was Manager of the Digital Projects Lab at MIT Press.*

The Internet timeline is short and frenetic. The net has spawned occult acronyms, stupendous commercial failures, and now – for those of us who commerce in scholarly journals and monographs at the shallow end of the 21st century – many costly choices but few affordable options for the delivery of content.

In the less complicated 1990s, university presses thought small and worked alone. The first books and journals to be distributed electronically had established marquee value in the mid-90s: *The Concise Columbia Electronic Encyclopedia* (Columbia University Press) and *The Chicago Journal of Theoretical Computer Science* (MIT) are often cited as examples of “greenfield” projects.

Technical innovations and economic pressures still cast a long shadow over the scholarly publishing community. Readers’ and users’ appetites have become more sophisticated while the cost structures for managing and delivering book and especially journal content electronically have become far more complex.

Five years ago, the Cornell University Library submitted a proposal to the Andrew W. Mellon Foundation for the support of the design and deployment of a mechanism and environment for the online distribution of serial literature in mathematics and statistics. The resulting Project Euclid<sup>1</sup> was funded in 2000 and launched as a multi-model publishing service in early 2003. Today Euclid delivers nearly 40 journals to libraries and individuals under subscription, hosting, or open access delivery plans.

Project Euclid’s technology infrastructure is based on a modular digital library architecture and protocol developed at Cornell in the early 1990s. The model developed by the library from this early digital library instantiation is now known as DPubS (Digital Publishing System).<sup>2</sup> DPubS was designed specifically to organize, navigate, access, and deliver both open access and subscription controlled scholarly publications.

In spring 2004 Cornell University Library in partnership with the Pennsylvania State University Libraries and the Pennsylvania State University Press were awarded a \$670,000 grant from the Mellon Foundation to generalize and enhance the DPubS system and release the resulting improved version of the software under an open source license. The development goals for this project include:

1. *Creation of a general purpose publishing platform*
  - Redesign of the DPubS User Interface Service module to allow for the implementation of a scalable and extensible XML/XSLT architecture. This major upgrade to the system will provide a growing and diverse cohort of publishers with the flexibility to cost-effectively modify the look and feel of publication-specific pages and customize any related sub-components.
  - Redesign of underlying configuration and metadata services to support a full range of publishing entities and object types.
  - Enhance DPubS's capability to handle non-serial literature.
2. *Provide on-line editorial management services to support "peer review" activities*

These services would provide a suite of document management tools for use by journal as well as monograph publishers. Editorial management services might include: an online manuscript submission environment, with automated alerts; a reviewer database; multiple mechanisms for distributing papers to reviewers; a tool to collect and organize feedback from reviewers; a tool to track accepted papers through the editorial and composition process; sorting/queuing capabilities for organizing prospective journal issues; access mechanisms for forthcoming articles; and the ability to publish articles or entire issues by efficiently moving final copy from the editorial workspace to the public distribution space.
3. *Enhance the administrative functionality and interface*

This work would rationalize production workflow, allowing greater segmentation of tasks and the creation of simple tools to manage lower-level processes (adding new publishers, adding new content, producing usage statistics, troubleshooting user login problems, answering mail, etc.).
4. *Provide interoperability with institutional repository systems*

We anticipate broad interest from adopters of institutional repository systems, especially DSpace and Fedora, in providing electronic publishing services via DPubS.

The first joint DPubS v.2 beta project between Cornell and Penn State will involve the delivery of *Pennsylvania History: A Journal of Mid-Atlantic Studies*, a publication of the Pennsylvania Historical Association, published by the Penn State University Press. Current and backfile content for this journal will be available in late 2005.

Penn State University Press has forged a strong alliance with the Penn State University Libraries<sup>3</sup> and this signal relationship, supported by senior administration at the university, makes Penn State an ideal development partner for this initiative.

Cornell University Library is also working with its own press to deliver digital editions of the press's prestigious Comstock Publishing Associates titles, a distinguished list of general interest handbooks and reference works in the life sciences and natural history.

The DPubS v.2 collaboration between Cornell and Penn State, while focusing primarily on technology developments, is also very much about establishing a framework for an intra-institutional partnership between university presses and libraries. The project's overarching agenda involves fostering a community that will support the ongoing development of an open source publishing system, and exploring sustainable business models for scholarly publishing activities within the academy.

Presses and libraries can leverage one another's strengths. Together they can offer a broad range of sophisticated, cost-effective publishing services to their communities. Our hope is that DPubS v.2 and the collaboration that will deliver this system to the stakeholders in the scholarly communications ambit, will result in a blueprint for vigorous alternative publishing and distribution programs. The release of the software under an open source license is anticipated in 2006.

*A panel discussion on library-press collaborations and status report on DPubS v.2 developments is scheduled for the 2005 Association of American University Presses (AAUP) Annual Meeting in Philadelphia.*<sup>4</sup>

*This article originally appeared on the AAUP/ARL Web site dedicated to the Year of the University Press, <http://aaupnet.org/arlaaup/projects/cornell.html>.*

– Copyright 2004 Terry Ehling

## Endnotes

1. Project Euclid: Mathematics and Statistics Journals On-line, <http://projecteuclid.org/>. [back to text](#)
2. DPubS, <http://dpubs.org/>. [back to text](#)
3. See Nancy Eaton, Bonnie MacEwan, and Peter J. Potter, "Learning to Work Together – The Libraries and the University Press at Penn State," *ARL Bimonthly Report*, no. 233 (April 2004): 1-3, <http://www.arl.org/newsltr/233/libpress.html>. [back to text](#)
4. "AAUP 2005 Annual Meeting," <http://aaupnet.org/programs/annualmeeting/>. [back to text](#)

▲ [Back to top](#)

Ehling, Terry. "The Development of an Open Source Publishing System at Cornell and Penn State Universities." *ARL*, no. 237 (December 2004): 6-7. <http://www.arl.org/newsltr/237/opensource.html>.

---

[Table of Contents for Issue 237](#) | [Other Scholarly Communication Articles](#)



ARL policy is to grant blanket permission to reprint any article in the *Bimonthly Report* for educational use as long as full attribution is made. Exceptions to this policy may be noted for certain articles. This is in addition to

the rights provided under sections 107 and 108 of the Copyright Act. For commercial use, a reprint request should be sent to ARL Publications Program Officer, [Lee Anne George](#).

© The Association of Research Libraries

Maintained by: [ARL Web Administrator](#) Site Design Consultant: [Chris Webster](#) Last Modified: January 3, 2005