



A BIMONTHLY REPORT ON RESEARCH LIBRARY ISSUES AND ACTIONS FROM ARL, CNI, AND SPARC

LIBRARIES AND CHANGING RESEARCH PRACTICES: A REPORT OF THE ARL/CNI FORUM ON E-RESEARCH AND CYBERINFRASTRUCTURE

by Diane Goldenberg-Hart, Communications Coordinator, Coalition for Networked Information

Over 100 leaders from higher education, libraries, and information technology gathered in Washington, DC, on October 15, 2004, at a forum titled “E-Research and Supporting Cyberinfrastructure: A Forum to Consider the Implications for Research Libraries & Research Institutions,” which was cosponsored by the Coalition for Networked Information (CNI) and by the Association of Research Libraries (ARL). The forum, spurred by developments in e-science and e-research, including a recent National Science Foundation report and the launch of a related study on cyberinfrastructure in the humanities, brought together representatives from over 75 different organizations.

Setting the stage for the daylong event were Sarah Thomas, University Librarian, Cornell University, and CNI Executive Director Clifford Lynch. Thomas discussed how the issues surrounding e-science and cyberinfrastructure fit well with ARL’s three strategic directions: scholarly communication, information policies and other public policies, and the roles of libraries in transformations of research and education. Her comments introduced a major theme of the day: the need for (and the challenges involved in) collaboration within and among educational institutions and research organizations. Thomas emphasized that without truly effective internal collaboration, external inter-institutional cooperation could not be fully successful.

Following on with the topic of transformations in higher education, Lynch laid the groundwork for the imperative to plan and act strategically. He emphasized the massive changes occurring in the practices of scholarship—changes that are occurring across all disciplines. He argued that new practices,

products, and modes of documenting and communicating research will have far-reaching implications for all organizations involved in managing the scholarly record and supporting the ongoing enterprise of scholarship, and that libraries in particular are in a central role due to their perspectives of managing the record across time and across disciplines. These changes in scholarly practice will create profound changes throughout the entire system of scholarly communication, and a failure to put into place effective new support structures in response to these changes would pose tremendous risk to the enterprise of research and scholarship. “This is what is at stake when we consider how to lead our institutions in addressing these new needs,” Lynch said. The role of libraries, he argued, will shift from primarily acquiring published scholarship to a broader role of managing scholarship in collaboration with the researchers that develop and draw upon it.

Revolutionizing Science and Engineering

Professor Daniel Atkins of the University of Michigan School of Information and Chair of the National Science Foundation (NSF) Blue Ribbon Advisory Panel on Cyberinfrastructure served as the day’s keynote speaker. In February 2003, the Atkins panel issued its report, *Revolutionizing Science and Engineering through Cyberinfrastructure* (<http://www.cise.nsf.gov/sci/reports/toc.cfm>). As part of its overall finding, the panel stated that, “a new age has dawned in scientific and engineering research, pushed by continuing progress in computing, information and communication technology.... The capacity of this new technology has crossed thresholds that now make possible a comprehensive ‘cyberinfrastructure’ on which to build new types of scientific and engineering knowledge

environments and organizations and to pursue research in new ways and with increased efficacy.”

In his remarks at the forum, Atkins described what he referred to as cyberinfrastructure-enabled knowledge communities (CKCs), also sometimes called collaboratories, or grid communities, in which synchronous, face-to-face collaboration would not be replaced, but augmented, by a range of asynchronous and geographically dispersed modes of collaboration, promoting learning, research, and engagement. These collaboration environments would include widely distributed and accessible high-performance computation and data services, including software, which is now considered to be part of infrastructure, and, additionally, they would include services, personnel, and the participation and collaboration of various organizations. Atkins spoke with passion of the current window of opportunity for research institutions to take a systemic view of what is needed to develop and sustain support for e-research. Reactive and opportunistic use and deployment of information technology will not produce the same innovations.

“We are no longer in an era when even a well-endowed institution can proceed alone,” Atkins said. What are needed are alliances among institutions, middleware, and federated libraries. He spoke of the need for the stakeholders to communicate with one another, understanding that the effort will have to be global in scope. Because collaboration is a critical element, the challenge, according to Atkins, is to find commonalities among interested groups.

Atkins explained that the digital library technologies and programs form a critical enabling component of the cyberinfrastructure movement, and he pointed out that both undertakings require an alignment of mutual self-interest among collaborators. Fundamentally, Atkins argued that knowledge communities are not just a way to do old things better, but that they could represent an opportunity for innovation, to do new things and to explore new methods—CKCs provide economic advantages, but they also provide a space for new synergy.

In the discussion following Atkins’s presentation, one key question addressed how meeting participants could return to their institutions and convince their campus leadership to invest themselves and their resources in projects of this kind. Atkins responded, “Don’t wait until you are asked. Step forward and convene symposia, share visions of the possibilities and look for opportunities for collateral learning and mutual self-interests.” Paul Courant, Provost, University of

Michigan, added, “don’t just drive it up” to institutional leadership, “drive it down” to faculty—a theme that was invoked repeatedly throughout the day.

The National Virtual Observatory

As an example of the kind of groundbreaking innovation cyberinfrastructure has enabled in the sciences, George Djorgovski, Professor of Astronomy at the California Institute of Technology, presented his experiences and impressions in a discussion entitled “Virtual Observatory, Cyber-Science, and the Rebirth of Libraries.” The National Virtual Observatory (NVO) was described by Djorgovski as “a complete, dynamic, distributed, open research environment for the new astronomy with massive and complex data sets.”

The concept for the NVO grew out of the astronomy community’s need to cope with massive and ever-increasing data sets. Djorgovski explained that astronomers have been gathering and generating

enormous amounts of data, through analyses and theoretical simulations, and, thus, there has grown an ever-increasing need for high-quality storage, management,

and access methods: the provision of data-curation services has become a driving and critical issue in the field. The NVO offers a means to access stored data, but it also supplies researchers with computational services and tools with which to mine and analyze the data. Additionally, the NVO is linked to other virtual observatories around the world (the International Virtual Observatory Alliance), providing opportunities for international collaboration.

The NVO illustrates an innovation that is driven by the science but enabled by the technology; it represents a new type of scientific research environment in the field of astronomy, but the flood of increasingly complex data sets is presenting challenges across all sciences, and Djorgovski asserts that it is the advances in information technology combined with quantitative changes in data volumes that will produce qualitative changes in the way science is conducted.

The role of libraries in the midst of these sweeping transformations was, of course, on the minds of many forum participants, and the speaker expressed his own uncertainty. That libraries would be required to reconsider traditional roles was understood, and he emphasized that there would be a growing need for domain expertise. In this same vein the issue of printed material was introduced: in Djorgovski’s view, and for his purposes, journals, and perhaps books, are “obsolete formats”—much of his information gathering is done through constantly changing electronic sources, including

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blogs and data sets, which may or may not be subject to quality control. Therefore, he said, there is an increasing need for experts to determine and communicate what is worth having or keeping. He speculated that libraries could offer federated services much like those of the NVO. Libraries might affiliate with one another to provide two different types of services, for example, tracking on specific scientific domains and/or archiving and preserving data. These are inherently interdisciplinary tasks requiring the involvement of multiple institutions.

But many questions remain: Should there be quality control, and if so of what sort and through what mechanisms? How much domain expertise should be provided, and how should this be distributed between the work of the scholars and the work of libraries in supporting those scholars? One thing is certain, however, according to Djorgovski: the data must not be consolidated within any single institution—it must remain distributed, and cooperation is essential.

Djorgovski's presentation generated considerable discussion, notably concerning authentication, refereeing, and curation of data and of scientific results. He articulated very effectively how and why knowledge communities could be instrumental, indeed fundamental, in his discipline's ability to grow and develop, and he demonstrated how this premise is likely a universal truth at least across the science disciplines.

Humanities and Social Sciences

But how do the technology-driven changes in the nature and practice of research relate to other areas of scholarship outside the sciences and engineering? Paul Courant addressed this question in his conversation at the forum. He is Provost at the University of Michigan and an economist by training who currently serves as a member of a commission established by the American Council of Learned Societies (ACLS) to investigate cyberinfrastructure needs in the humanities and social sciences (see sidebar on page 5).

Unlike the sciences, which already share many common elements across disciplines, including a long history and a strong tradition of collaboration, the humanities face a more difficult challenge regarding the prospect of developing a common cyberinfrastructure. According to Courant, complete knowledge communities in the humanities and social sciences are more difficult to foster than in the sciences, due, in part, to a core difference between the sciences and the humanities and humanistic social sciences: in the humanities, data are not developed by scholars the way they are in the sciences. Scientists create instruments to record and develop data according to protocols of their own design. For humanists, "data" come out of the human experience. Anything in the cultural record can be "data." For social scientists, the sources and uses of data run the gamut

from scientific traditions (e.g., in experimental psychology, demography, and empirical economics) to humanistic traditions (e.g., the "linguistic turn" employed by many anthropologists and sociologists). The majority of social science work falls somewhere in-between.

Information technology can have profound effects on the ways in which we do our work, and, indeed, can make possible projects and inquiries that could not be conducted without the new technologies, but, in the humanities and social sciences, the fundamental research project, or purpose, remains unchanged. Courant emphasized the importance of this latter message as one for forum participants to take back to their home institutions. The value of widespread collaborative infrastructure is a tougher sell to humanists (than to scientists and quantitative social scientists) in particular because its universal benefits are not as immediately recognizable across the community, and while individuals may accept the overall value of such a foundation, they do not necessarily see a direct benefit to themselves. So, the challenge is to demonstrate that the payoff is high for the humanists through, for example, having ubiquitous access to data already in digital form and the potential of reformatting other data.

To cope with this challenge, the ACLS commissioners have discussed the idea of asking funders to require recipients to follow certain protocols for the dissemination of their research that would promote advancement in making that research accessible in digital form and to do so in ways that support inter-institutional collaboration and collaboration among scholars generally. Courant observed that it will soon be true to say that, for many people, "if scholarship is not online, it does not exist. If scholarship is hidden, it will not be used. A robust cyberinfrastructure will enable people to find quality resources on the Internet. The absence of such an infrastructure will lead much good work and valuable material to be essentially invisible and forgotten." In a world where everyone uses the Web, that which cannot be found on the Web is in danger of not being found at all.

Additionally, users other than traditional scholars and students, e.g., members of the broader public whom Courant dubbed the "Google users and museum goers," would benefit from the availability of a humanities-oriented cyberinfrastructure that would increase their access to high-quality, authoritative information; this population may well increase demand and represent a significant driving force for development of the cyberinfrastructure. It is also essential to providing political support for the humanities more broadly.

Drawing on his academic roots as an economist and his experience as a provost, Courant spoke of the pressures that influence choices of institutional competition vs. cooperation. The scale of the cyberinfrastructure

vision, he concluded, is so great that it can only be achieved through global cooperation. Acknowledging that academic institutions will always compete in many ways, "when we reach the point of asking ourselves the question of going it alone or pursuing a goal with partners, the right answer is always to cooperate. The goal of the cyberinfrastructure, of libraries, is to advance human thought. If the academy, if the library, does not press that view, who will? Competition cannot successfully lead us to address such a fundamental issue as access to information." In support of his point that collaboration among institutions and their libraries will do no harm, Courant observed "None of our institutions will lose their 'brand' or be diminished in any way by contributing their scholarly content to a larger 'pie' of federated content."

Among the many questions and comments addressed to Courant, audience members expressed interest in his perspective as a provost with respect to copyright issues and the use of standards in making materials accessible. Regarding copyright, Courant emphasized that in the realm of teaching, an aggressive stance has to be taken. He observed that parents of college students could be engaged politically on this issue, and that librarians should make a business case to the entertainment industry that they can be allies and not threats by, for example, offering the industry services for the long-term preservation of their materials in exchange for their use for educational purposes. With respect to standards, here, he stated, there is a need for leadership from deans, department chairs, and provosts in promoting their use among faculty. The way he views it, money is wasted if standards that lead to interoperability are not applied when faculty create and post digital scholarship.

The Roles of Federal Funding

Both Atkins and Courant discussed the need to carefully shape research funding to provide incentives and play a major role in forming an environment conducive to the establishment of broad-based, far-reaching cyberinfrastructures, regardless of the field or discipline.

Dr. Sangtae "Sang" Kim, the next speaker, indicated that his organization, the Computer and Information Science and Engineering (CISE) Directorate within the National Science Foundation (NSF), created the Division of Shared Cyberinfrastructure because it recognized the need for long-term, continued support for, and management of, cyberinfrastructures. He discussed what he described as a culture change at NSF, and explained that funding from the new division is now more equally divided between new development and sustenance of operational systems and services. Cyberinfrastructure is not seen as an end in and of itself, but, rather, as being important in that it can enable new research in science and engineering. Further, as with many earlier investments in information technol-

ogy and computer-communications networking infrastructure pioneered by NSF, there may be enormous leveraged payoffs in terms of the way our society as a whole functions, not just in the scientific enterprise. According to Kim, "a billion dollars invested in cyberinfrastructure may well result in ten trillion dollars in economic growth."

Reactions to the Speakers

The reaction panel provided an opportunity for the participants to take stock of the day's presentations as they were framed by reflections from panelists with a variety of different roles within the higher education enterprise. It also allowed for the discussion of some additional audience questions about advancing cyberinfrastructure adoption and deployment.

Marjory Blumenthal, Associate Provost, Academic, at Georgetown University, put the day's discussions in perspective and reminded participants of important public policy issues raised when federal agencies approach funding for development of networks and supporting infrastructure. For example, the Department of Homeland Security (DHS) is charged to protect "critical infrastructure" for the nation; the way DHS approaches this challenge is very different from the way an agency with a research mission might approach building infrastructure, and this has already raised considerable privacy issues. She also highlighted the rising technology expectations of students and scholars and the challenges faced by institutions in determining how to pay for common technological enhancements without exacerbating communities of digital haves and have-nots. She called for more analysis of both the economics and the policy issues associated with achieving the cyberinfrastructure vision.

Carol Mandel, New York University's Dean of Libraries, identified three perspectives for the path to achieve the transformations called for by the speakers: institutional collaboration, human resources development, and inter-institutional partnerships. Within the institution she identified the need for libraries and information technology departments to extend current collaborations on digital libraries to develop the set of services that Dan Atkins described as "middleware".

Perhaps one of the most striking, attention-catching moments of the panel presentations came when Mandel observed that scientists are asking libraries to be "collectionless, stateless, egoless..." in this new design. Referencing a recent essay by Wendy Lougee of the University of Minnesota on diffuse libraries taking on a range of new roles as they become more deeply engaged in the creation and dissemination of knowledge (<http://www.clir.org/pubs/abstract/pub108abst.html>), Mandel pointed out a cycle of science libraries on campus. The cycle began with a small library in the department run by scientists, then run by librarians, to a virtual library,

then back to a science-owned “library,” and now to calls for librarians to manage the content.

In this context Mandel raised the challenge of developing human resources to achieve the cyberinfrastructure vision. This will require people with both domain and digital expertise and now is the time to start identifying how to develop this talent. As an initial step, she proposed encouraging partnerships between graduate students and subject librarians. Inter-institutional partnerships could be encouraged by requirements in grants such as was done in the recent Library of Congress grants from the National Digital Information Infrastructure and Preservation Program. To encourage a “de-branded, altruistic future” as envisioned throughout the day, she concluded that grant incentives are critical.

Indiana’s Dean of Information Technology, Brad Wheeler, began by describing the current environment as one rich with vertical, self-contained collaboration aimed at harnessing disciplinary knowledge. To be successful, the cyberinfrastructure needs to be built horizontally and to scale across disciplines and institutions. Wheeler spoke of the importance and difficulty of building organizational capabilities to collaborate, including stepping on local incentives that defeat inter-institutional collaboration and linking strategic goals to budgets so that progress toward the goals are assessed and stays focused. Finally he pointed out that all speakers confirmed that data curation is essential to the success of science but that, at present, this task is taken on by and within the disciplines, not by libraries, for example, the National Virtual Observatory. Wheeler concluded by saying that the time for leadership from libraries is now or the library will fade just as the family farm has faded.

Jane Bortnick Griffith, Assistant Director for Policy Development, National Library of Medicine, wrapped up the panel by observing that in the world of medicine, especially as digital information resources have expanded, users are looking for connections and integration of content across the range of formats. In her experience, it is not an “either digital or nothing” situation but a desire to have a seamless interface to integrate access to all these resources.

Echoing themes from Sangtae Kim’s presentation on the NSF cyberinfrastructure initiatives, she also pointed out that the same theme of recognizing value in the support of a common information infrastructure appears throughout the recently produced “NIH Roadmap” describing the future directions of the National Institutes of Health (<http://nihroadmap.nih.gov/>).

The closing plenary, led by University of California, San Diego, University Librarian Brian Schottlaender, provided some synthesis of the ideas introduced throughout the forum, as well as opening the door for continued discussion. Schottlaender noted that the profound change in scholarship will have a similar impact on the academy,

and he echoed the themes that dominated the day: collaboration and cooperation, within institutions, between them, and those of cooperation even in favor of competition. He and attendees summarized some of the numerous challenges ahead, including copyright, funding, achieving trusted federations to reduce redundancy, content curation and archiving, and personnel issues (e.g., domain expertise), among other things. Despite the difficulties, Schottlaender restated the imperative to advance the vision of innovations made possible by a comprehensive cyberinfrastructure in support of e-research which originated early in the day: “drive it up, drive it down, but drive it!”

The author acknowledges the significant contributions of Jaja Barrett, Joan Lippincott, and Clifford Lynch to early drafts of this report.

Presentations from the forum are available on the Web, <http://www.arl.org/forum04/>.

ACLS CONVENES HEARINGS ON CYBERINFRASTRUCTURE

The American Council of Learned Societies (ACLS) Commission on Cyberinfrastructure for the Humanities and Social Sciences has convened a series of regional, public, information-gathering sessions to hear from those interested in contributing to the work of the commission prior to issuing a report in early 2005. At these sessions, the commission heard from experts in a variety of fields—from those who are actively engaged in digital scholarship and teaching to leaders in libraries and archives, publishing and distribution, academic administration, information technology, and industry development. The intended audience for the commission’s report includes the scholarly community and the societies that represent it, university provosts, federal funding agencies (including but not limited to the National Science Foundation), and private foundations. The commission is chaired by John Unsworth, Dean of the Graduate School of Library and Information Science at the University of Illinois at Urbana-Champaign.

On October 26, ARL was represented before the ACLS commission by Fred Heath, Vice Provost and Director of General Libraries, University of Texas at Austin, and Past President of ARL. ARL’s statement addresses examples of how research libraries are now contributing to advance the emerging cyberinfrastructure and the challenges and barriers that are faced. The statement will be available on the ACLS Web site with other presentations from the regional hearings at http://www.acls.org/cyberinfrastructure/cyber_public_sessions.htm.

G. Jaia Barrett, Deputy Executive Director

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 the 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 Euclid¹ 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).² 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

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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 Libraries³ 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.*⁴

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>.

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¹ Project Euclid: Mathematics and Statistics Journals On-line, <http://projecteuclid.org/>.

² DPubS, <http://dpubs.org/>.

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>.

⁴ "AAUP 2005 Annual Meeting," <http://aaupnet.org/programs/annualmeeting/>.

SPARC PRESENTS WORKSHOP ON INSTITUTIONAL REPOSITORIES

On November 18–19, 2004, in Washington, DC, SPARC and SPARC Europe presented a workshop on "Institutional Repositories: The Next Stage."

The workshop gave participants an understanding of strategies critical to implementing and managing the successful long-term growth of their institutional repositories (IRs). Experienced leaders and supporting players in the IR field described practices applicable to a variety of technology platforms. A special focus was on tactics for working with faculty and researchers to make IRs a success.

Attendees included library directors, institutional repository managers, and university administrators. They learned the latest issues and ideas regarding institutional repositories, including:

- how to populate their IRs;
- how to manage policy issues surrounding their digital repositories;
- about authors' agreements, copyright, and other legal issues affecting IRs;
- about IR business modeling;
- how to better understand digital preservation;
- what other institutions are doing with their IRs; and
- about IR technical solutions.

Charles Phelps, Provost, University of Rochester, presented the keynote speech on "Scholarly Communication, Open Access, and Cost Control: How Do They Relate?" Jean-Claude Guédon, Professor of Comparative Literature, Université de Montréal, delivered closing remarks on "Institutional Repositories Can and Should Contribute to Academic Branding." Both speakers underscored the importance of developing digital repositories in ways that demonstrate their value for research purposes. Phelps urged the audience to identify a common discipline for which multiple institutions would contribute content locally, accelerating the speed with which institutional repositories add value to the discipline as a whole. Guédon also spoke to the importance of networking institutional repositories. He suggested the audience target electronic theses and dissertations as critical content for their institutional repositories because there already is a critical mass of institutions working in this area and peer institutions could add an evaluative layer on top of the networked content by assessing its use, as in citation impact studies. Developing a strong evaluative component of institutional repositories, Guédon said, would serve as a check and balance against the current monopoly of branding assigned through journals.

The workshop presentations are available on the SPARC Web site at <http://www.arl.org/sparc/meetings/ir04/ir04speak.html>.

BALANCING STAKEHOLDER INTERESTS IN SCHOLARSHIP-FRIENDLY COPYRIGHT PRACTICES

by Julia Blixrud, Assistant Executive Director, External Relations, ARL, & Assistant Director, Public Programs, SPARC

The charming town of Zwolle, Netherlands, served as the location for a series of meetings by copyright stakeholders. In this setting, authors, publishers, librarians, and university administrators addressed common interests in copyright management to ensure the widest availability of scholarly information.

The premise for the meetings was the need for universities to rethink their strategic role in the dissemination of academic scholarship. New technologies make the creation and distribution of scholarly work easier. How universities might raise awareness and educate their administrators and faculty about copyright and how to address the allocation of rights among the key stakeholders were the major topics of discussion.

A significant outcome of the meetings was a set of principles, "Balancing Stakeholder Interests in Scholarship-Friendly Copyright Practices" (see sidebar). These principles were to a great extent based on the Tempe principles,¹ and the report, "Seizing the Moment—Scientists' Authorship Rights in the Digital Age," from the American Association for the Advancement of Science.² In addition, the Zwolle group has collected and reviewed agreements between authors and publishers, institutional copyright ownership policies, and is creating a "copyright toolkit" that will help inform publication agreements and university policies.

Participants in the Zwolle meetings are using the principles to encourage other groups to begin discussions about copyright management. See, for example, articles by Fred Friend and Judith Harvey.³ Also, Rodney Petersen has elaborated on the need for universities to better manage their copyright in a recent *Change* magazine article.⁴ The Create Change Web site has published information on faculty management of copyright since its inception⁵ and SPARC recently issued two draft author's addenda to provide authors with different approaches to balancing rights.⁶ Copyright is important and academic institutions owe it to their authors to find ways to bring the issue of managing it to the forefront of discussions on scholarly communication.

The international attendees of the meetings were hosted by the SURF Foundation, a Netherlands organization that addresses network services, information, and communications technology. SURF served as the secretariat and convener for the meetings with a small group serving as a steering group. In addition, the Joint Information Systems Committee (JISC) of the U.K. became a partner in the Zwolle work.

THE "ZWOLLE PRINCIPLES"

Objective

To assist stakeholders—including authors, publishers, librarians, universities and the public—to achieve maximum access to scholarship without compromising quality or academic freedom and without denying aspects of costs and rewards involved.

1. Achievement of this objective requires the optimal management of copyright in scholarly works to secure the clear allocation of rights that balance the interests of all stakeholders.
2. Optimal management may be achieved through thoughtful development and implementation of policies, contracts, and other tools, as well as processes and educational programs, (collectively "Copyright Management") that articulate the allocation of rights and responsibilities with respect to scholarly works.
3. Appropriate Copyright Management and the interests of various stakeholders will vary according to numerous factors, including the nature of the work; for example, computer programs, journal articles, databases and multimedia instructional works may require different treatment.
4. In the development of Copyright Management, the primary focus should be on the allocation to the various stakeholders of specific rights.
5. Copyright Management should strive to respect the interests of all stakeholders involved in the use and management of scholarly works; those interests may at times diverge, but will in many cases coincide.
6. All stakeholders in the management of the copyright in scholarly works have an interest in attaining the highest standards of quality, maximizing current and future access, and ensuring preservation; stakeholders should work together on an international basis to best achieve these common goals and to develop a mutually supportive community of interest.
7. All stakeholders should actively promote an understanding of the important implications of copyright management of scholarly work and encourage engagement with the development and implementation of Copyright Management tools to achieve the overarching objective.

Presentations from the meetings, along with other documents can be found on the SURF copyright site.⁷

¹ <http://www.arl.org/scomm/tempe.html>

² <http://www.aaas.org/spp/sfrl/projects/epubl/finalreport.html>

³ Frederick J. Friend, "Zwolle's Contribution to Good Copyright Relationships," *Serials* 17, no. 2 (July 2004): 196–199; Judith Harvey, "What Does ZWOLLE Stand For?" *Learned Publishing* 16, no. 4 (October 2003): 290–292.

⁴ Rodney J. Petersen, "Copyright Management for Scholarship," *Change* 36, no. 3 (May/June 2004): 62–66.

⁵ <http://www.createchange.org/faculty/issues/controlling.html>

⁶ <http://www.arl.org/sparc/resources/copyres.html>

⁷ <http://www.surf.nl/copyright/>

OLMS INFORMATION SERVICES

Lee Anne George, Publications Program Officer

LIBRARY SERVICES IN NON-LIBRARY SPACES

Excerpted from the Executive Summary of ARL/OLMS SPEC Kit 285 (November 2004) by Gordon Aamot, Head, Arts, Architecture, and Business Libraries, and Steve Hiller, Head, Science Libraries/Library Assessment Coordinator, University of Washington

Research libraries and librarians continue to seek new strategies for providing services to library users, including expanding services beyond library facilities and offering in-person library services in non-library spaces. This recently published ARL/OLMS SPEC survey presents library administrators with an overview of what types of library services are being offered in institutional non-library spaces, the nature of the spaces, what type of library staff are participating, and how the services are being marketed and funded. The scope of the survey focuses on regularly scheduled library services in non-library spaces and excludes course instruction and traditional library instruction services delivered in departmental classrooms.

Seventy-five of the 123 ARL member libraries responded to the survey and 41 of these have offered or are offering scheduled, in-person services in academic departments or other institutional spaces outside of the library.

Background

A review of the literature shows that the provision of in-person library services outside the library has been somewhat limited, but it is not a new phenomenon. Regardless of the longevity of these services, first contact has typically been with faculty. The early adopters most often moved out to academic departments, hospitals or other clinical settings, and computer labs. A significant number of more recently begun services follow this pattern, though the institutions that have initiated services within the last two years seem to be focusing more on where students gather, such as residence halls, study halls, and student unions. Of those services located in departmental spaces, the subject areas served cover a broad range of academic endeavor, led by the social sciences and descending through the disciplines to the fine arts and area studies.

Services Offered

There is some understandable variation in service offerings across locations. While provision of reference service and individual or group consultation ranks high across all reported locations—especially in departmental offices—workshops and demonstrations rank highest in computer labs, career centers, and hospitals or other clinical settings. Technical assistance is most often available in departmental spaces, computer labs, research labs, and writing centers.

Opportunities and Challenges

Respondents were asked to list up to three benefits and three challenges of offering library services in non-library spaces. Several themes emerged from the comments. One benefit is increased visibility for the participating librarians and the library by providing services on users' turf. Another benefit is the user convenience of providing needed services on users' own terms. A third benefit is the opportunity to establish relationships and connect with faculty and students in a way that can't be done in a traditional library setting.

Challenges mentioned include the process of negotiating and procuring access to scarce departmental space. Staffing and keeping the service a priority for the libraries is also a challenge. These services can be relatively labor intensive and require committed library staff and administrations to make them successful. If key participants leave for other jobs or are asked to take on additional responsibilities elsewhere in the library, non-library service programs can fall by the wayside. A related challenge is the question of scalability. How can a library provide this service for every department? Or, should it try to provide the service for every department? Lastly, respondents said that marketing and publicizing the programs are an ongoing challenge.

Conclusion

To flourish, these services appear to require a delicate balance of entrepreneurial and dedicated staff able to absorb the additional duties without additional funding, the ability to take advantage of local opportunities, access to appropriate non-library workspace and technology, and interested users. Individual librarian initiative was reported as the major factor in instigating new services; the reassignment or resignation of key staff members was also noted as a major factor in decisions to discontinue services.

While the quantitative data gathered by the survey [on topics such as staffing, funding, promotion, evaluation, and assessment] is informative, the many comments written by the respondents are especially important in establishing the context for understanding both the nature of the services and the challenges that libraries providing these services face. Although numerous challenges were noted, they seem to be outweighed by the opportunities and benefits—both direct and indirect—that come from reaching out to students, faculty, staff, and other library users in their own spaces and building personal connections between libraries and library users.

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For information on the complete SPEC Kit, see <http://www.arl.org/pubscat/pr/2004/announcespec285.html> or e-mail pubs@arl.org.

ARL ACTIVITIES

Kaylyn Hipps, Assistant Editor of ARL

ARL MEMBERSHIP PLANS FOR THE FUTURE

ARL President Sarah Thomas (Cornell) convened a meeting of 117 member institutions at ARL's 145th Membership Meeting, held in Washington, DC, on October 13–14, 2004.

Brian E.C. Schottlaender (California, San Diego), Chair of the ARL Task Force on Strategic Planning, led task force members in discussing the main points of a proposed Strategic Plan for 2005–2009: scholarly communication; information and other public policies; and teaching, learning, and research. The task force members spoke of the interdependent and transformative nature of the proposed directions for ARL and stressed that all need to be pursued interdependently. The Strategic Plan was presented and discussed as a conceptual framework with the understanding that the implementation plan still needs to be developed.

Sherrie Schmidt (Arizona State), Chair of the ARL Task Force on Governance, introduced the task force's preliminary report and recommendations. Task force members discussed their goals of improving communication among members and offering clarity and transparency in the governance structure of the Association.

Evolution of the National Learning Infrastructure Initiative (NLII)

Diana Oblinger, Vice President of EDUCAUSE, gave the keynote address on "Library Roles in the National Learning Infrastructure Initiative." She spoke of the importance for an organization to concentrate on shaping its future rather than defending its past. Looking back over the past 10 years of NLII, she articulated the values, objectives, and goals that will define its future agenda with a focus on enabling learning transformation. Ms. Oblinger's slides are on the ARL Web site, <http://www.arl.org/arl/proceedings/145/oblinger.html>.

Enhancing Public Access to Federally Funded Research

At the Federal Relations Luncheon Program, Lance Query (Tulane) convened a panel to discuss "Enhanced Public Access to NIH Research." Dr. David Lipman, Director of the National Center for Biotechnology Information, National Library of Medicine, National Institutes of Health (NIH), spoke about the issues involved in the NIH proposal to

make research articles publicly available on PubMed Central six months after their publication in a scientific journal. Heather Joseph, President and Chief Operating Officer of BioOne, talked about the concerns that scholarly publishers have about the impact of the NIH proposal on their budgets. In addition, Prue Adler, Associate Executive Director of ARL for Information Policies, reported on the status of key legislation that ARL tracks and what she expects for the remaining days of this session of Congress.

Introductions, a Salute, and Elections

Also at the Membership Meeting, six new member representatives were

introduced and welcomed to the ARL community: Mary Case (Illinois at Chicago), Colleen Cook (Texas A&M), Sheila Johnson (Oklahoma State), James Mullins (Purdue), Judith Nadler (Chicago), and Carton Rogers (Penn). Joe Hewitt (North Carolina) was saluted on his retirement.

The Board elected Brian E.C. Schottlaender (California, San Diego) as Vice-President/President-Elect and the membership elected three new members of the ARL Board: Joyce Garnett (Western Ontario), Tom Leonard (California, Berkeley), and Suzanne Thorin (Indiana). Joe Branin (Ohio State) and Frances Groen (McGill), whose Board terms ended in October, were acknowledged and thanked for their contributions.

At the conclusion of the Business Meeting, Sarah Thomas thanked the ARL membership, the Board, and the ARL staff for their support during her term as president and presented the gavel to Ann Wolpert (MIT) who began her term as ARL President.

— Excerpted from a report prepared by Judith Matz, ARL Communications Officer



National Library of Medicine (NLM) hosted a reception on October 13, 2004, for those attending the 145th ARL Membership Meeting. Pictured above are Sarah Thomas, University Librarian, Cornell University, and ARL President; Elizabeth Fee, Chief, History of Medicine Division, NLM, and director of the NLM exhibit "Changing the Face of Medicine;" and Betsy Humphreys, Associate Director for Library Operations, NLM. Photo by K.C. Morisseau, Jr., Photographer, Rose Knight Photography.

PRESERVING AUDIO COLLECTIONS: ACTION PLAN DEVELOPED

Over the past decade there has been a growing interest in the preservation needs of sound recordings and other nonprint media. In July 2003, many of the key stakeholders in audiovisual preservation met to share their experiences and discuss the challenges ahead, specifically in the area of preserving sound recordings. "Sound Savings: Preserving Audio Collections," held at the University of Texas at Austin, was cosponsored by the School of Information's Preservation and Conservation Studies at the University of Texas at Austin; the Library of Congress; the National Recording Preservation Board; and ARL. The two-and-a-half day program featured talks by experts on topics ranging from assessing the preservation needs of audio collections to creating, preserving, and making publicly available digitally reformatted audio recordings. Conference attendees—critical stakeholders of the future of audio preservation—articulated seven areas for future action to move the field effectively forward. In a recent publication, ARL presents the symposium papers and the recommendations for future action. The documents are also available online at http://www.arl.org/preserv/sound_savings_proceedings/.

Publication Ordering Information

*Sound Savings: Preserving Audio Collections:
Proceedings from the Symposium*

Judith Matz, Editor • 2004 • ISBN 1-59407-663-4 • \$45
<http://www.arl.org/pubscat/order/>

ARL TRANSITIONS

Albany: Meredith Butler will retire as Dean and Director of Libraries effective July 2005.

Dartmouth: Jeffrey Horrell, Associate Librarian at Harvard, was named Dean of Libraries and Librarian of the College, effective February 2005.

McGill: Janine Schmidt, University Librarian at the University of Queensland, was appointed the Trenholme Director of Libraries, effective February 1, 2005.

Temple: Larry Alford was named Vice Provost for Libraries and University Librarian effective February 15, 2005. He is currently Deputy University Librarian at the University of North Carolina at Chapel Hill.

OTHER TRANSITIONS

Coalition for Networked Information: Diane Goldenberg-Hart was named Communications Coordinator effective September 13, replacing Shelley Sperry, who is now on staff at the National Geographic Society.

National Commission on Libraries and Information Science: Trudi Bellardo Hahn was appointed Interim Executive Director. She was formerly Manager of Library User Education Services and Adjunct Professor at the College of Information Studies at the University of Maryland.

LEADERSHIP ROLES & HONORS

Council on Library and Information Resources

(CLIR): The CLIR Board elected three new officers at its semiannual meeting October 29. Charles Phelps, Provost at the University of Rochester, was elected Chairman, succeeding Stanley Chodorow, Professor at the University of California, San Diego. Herman Pabbruwe, Chief Executive Officer of the Netherlands-based Brill Publishing, was elected Treasurer, succeeding Dan Tonkery, Vice President of Information Services at EBSCO. James Williams, II, Dean of Libraries at the University of Colorado at Boulder, was elected Secretary, succeeding Jerry Campbell, Chief Information Officer and Dean of the University Libraries at the University of Southern California. Paula Kaufman, University Librarian at the University of Illinois at Urbana-Champaign, will continue to serve as Vice Chair.

Jan Merrill-Oldham, the Malloy-Rabinowitz Preservation Librarian, Harvard University Library and Harvard College Library, was awarded the 2004 Paul Banks and Carolyn Harris Preservation Award for her accomplishments in preservation leadership. The Association for Library Collections & Technical Services will honor her during the American Library Association's Midwinter Meeting in Boston on January 14.

JAMES F. GOVAN, 1926–2004

James F. Govan, University Librarian Emeritus at the University of North Carolina at Chapel Hill (UNC), died October 2 in Chattanooga, Tennessee. In nearly two decades of heading UNC's libraries, Govan oversaw the building of the Walter R. Davis Library and led the preservation and conservation of UNC's rare book collection and materials at risk. He began his library career at the University of Alabama and was head librarian at both Trinity University in Austin and Swarthmore College before becoming University Librarian at UNC in 1973. Active in ARL, he served as president in 1983, and was involved in numerous national and international library organizations.



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ARL CALENDAR 2005

<http://www.arl.org/arl/cal.html>

- January 3–7 Introduction to Web Development with XML
Charlottesville, VA
- January 17 LibQUAL+™: A Total Market Survey with “22 Items and a Box”
*ALA Midwinter Meeting
Boston, MA*
- January 18 Following up on LibQUAL+™: Focus Groups
*ALA Midwinter Meeting
Boston, MA*
- January 18 LibQUAL+™ Dimensions and Total Scores: How Do They Relate?
*ALA Midwinter Meeting
Boston, MA*
- February 9–10 **ARL Board Meeting**
Washington, DC
- April 4–5 CNI Spring Task Force Meeting
Washington, DC
- April 7 Outcome Assessment Tools for the Library of the Future
*ACRL National Conference
Minneapolis, MN*

- May 24–27 **ARL Board and Membership Meeting**
Philadelphia, PA
- July 25–26 **ARL Board Meeting**
Washington, DC
- October 25–28 **ARL Board and Membership Meeting**
*Washington, DC
(Note new dates)*
- December 5–6 CNI Fall Task Force Meeting
Phoenix, AZ

Online Lyceum

Can't make it to our in-person events? Take a look at our Online Lyceum Web-based course offerings at <http://www.arl.org/training/lyceum.html>.

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