



Coalition for Networked Information

An Introduction & Program Plan 2010-2011

Mission

The Coalition for Networked Information (CNI) is an organization to promote the transformative promise of networked information technology for the advancement of scholarly communication and the enrichment of intellectual productivity.

Background and Leadership

The Coalition for Networked Information (CNI), a joint initiative of the Association of Research Libraries (ARL) and EDUCAUSE, promotes the use of digital information technology to advance scholarship and education. In establishing the Coalition under the leadership of founding Executive Director Paul Evan Peters, these sponsor organizations recognized the need to broaden the community's thinking beyond issues of network connectivity and bandwidth to encompass digital content and advanced applications to create, share, disseminate, and analyze such content in the service of research and education. Reaping the benefits of the Internet for scholarship, research, and education demanded—and continues to demand—new partnerships, new institutional roles, and new technologies and infrastructure. CNI seeks to advance these collaborations, to explore these new roles, and to catalyze the development and deployment of the necessary technology base.

Since its founding in 1990, CNI has addressed a broad and diverse array of issues related to the development and use of digital information in research and education environments. As the premier organization fostering connections and collaboration between library and information technology communities, we represent the interests of a wide range of member organizations from higher education, publishing, networking and telecommunications, information technology, government agencies, foundations, museums, libraries, and library organizations.

CNI is supported entirely from dues paid by its over 200 member institutions. Membership in the Coalition is open to all organizations—both for-profit and not-for-profit—that share CNI's commitment to furthering the development of digital information in the networked environment. We view our members as partners in advancing the Coalition's mission. Fall and spring membership meetings are CNI's flagship events, bringing together hundreds of representatives for a comprehensive update on critical issues.

CNI's program is guided by a Steering Committee to which sponsor organizations ARL and EDUCAUSE each appoint three representatives drawn from their member leadership; the current roster of Steering Committee members appears on the inside front cover of the printed Program Plan. Three "at large" representatives on the Steering Committee contribute additional perspectives. The chief executives of ARL, EDUCAUSE, and CNI serve as *ex officio* members of the committee.

CNI Executive Director Clifford Lynch has led the organization since 1997. Joan Lippincott, CNI's Associate Executive Director, has served since fall 1990. For more information about the Coalition's history and contributions, see the CNI Web site at www.cni.org; the timeline may be of particular interest.

Program Themes

CNI's work is structured around three central themes that we believe are the essential foundations of the vision of advancing scholarship and intellectual productivity:

• Developing and Managing Networked Information Content

The Coalition has played a central role in ensuring that the network richly engages the needs of scholarship, teaching and learning. We bring together many diverse groups that create and manage content, and work with these communities to advance the deployment of networked information resources. Changes in scholarly practices (particularly "e-science" and "e-research") require a close and continuing examination of information creation, aggregation, exchange and

reuse throughout the research and education community and society broadly; these developments, and the evolving roles of higher education and cultural memory institutions in facilitating and supporting them are a central part of the CNI agenda. Working within these contexts and others, CNI furthers the development of economic, policy, social and legal frameworks to sustain the creation and management of digital information and facilitate its access.

• **Transforming Organizations, Professions, and Individuals**

The pervasiveness of ubiquitously accessible digital information is transforming institutions, professions, and the practices of learning and scholarship. CNI focuses on the unprecedented need for collaboration among libraries, information technology and instructional technology groups, faculty, museums, archives, university presses, and other units in order to achieve success in this environment. In addition, we promote new alliances and partnerships with publishers, information technology and network service providers, scholarly societies, government, and other sectors. Organizations must understand their constituencies and adapt their services and facilities to current needs; they must develop and share new strategies, policies, and best practices. Professions need to develop new competencies and enter into new dialogues that cross traditional disciplinary boundaries. CNI seeks to facilitate these collaborations and dialogues and to help professions and institutions work together in program strategy formulation.

• **Building Technology, Standards, and Infrastructure**

The networked information environment relies on the development and deployment of standards and infrastructure components in order to enable the creation, discovery, use, and management of digital information on the Internet. The ability to use collections of resources in a unified, consistent fashion is essential and requires a continuing focus on interoperability of services. At the same time, promising new technologies need to be explored, assessed and tested, and sometimes adapted to the needs of the CNI community. No one institution acting alone can build the needed infrastructure or explore the full range of new technologies as they become available; it requires a coordinated, community-wide effort that also reaches out to other communities, such as the world of e-research. CNI seeks to highlight links between technology and policies at all levels, to offer a context for collaborative experiments and test beds, and to serve as a focal point for sharing knowledge about new technologies.

The specific program initiatives that further CNI's themes evolve from year to year. The initiatives and strategies planned for 2010-2011 are described in the *Program Plan* portion of this publication; most build upon and continue efforts already underway. Many of the initiatives seek to make strategic progress relevant to more than one theme.

It is important to recognize that the digital information environment is still changing rapidly. CNI is continually adapting its activities in response to new developments and opportunities. Indeed, CNI believes agility is essential in the current environment and invites a continuous dialogue with its members on the need for additional program initiatives. Because of this, the 2010-2011 *Program Plan* should be viewed as a snapshot of our thinking about priorities and opportunities as of late 2010 that will inevitably develop further during the coming year.

Policy and Consultative Activities

CNI acts as an important and respected voice on behalf of our community in a wide range of national and international policy venues. This is accomplished through our participation in the

ongoing scholarly dialogue; through collaboration with key funding agencies, such as the National Science Foundation (NSF), the Institute of Museum and Library Services, the National Endowment for the Humanities, the Andrew W. Mellon Foundation, and the Joint Information Systems Committee (JISC); through work on advisory groups of organizations such as Ithaka, RLG Programs of OCLC, and Microsoft Research; through service on numerous visiting and advisory committees for our member institutions; through contributions to standards efforts and standards organizations such as the National Information Standards Organization (NISO); and through participation in organizations such as the Internet Society.

Of particular note in this area are our recent contributions to the Library of Congress's efforts to map out a National Digital Preservation Program, to various studies and programs conducted by the U.S. National Research Council, to the NSF-funded open access implementation planning study, to the Campus Bridging Task Force of the NSF Advisory Committee on Cyberinfrastructure, to the Blue Ribbon Task Force on Sustainable Digital Preservation and Access, and to OCLC's Record Use Policy Council.

As a contributor and participant within a complex ecosystem of organizations that share common interests, CNI works with Internet2 on advanced networking applications and standards; with the Council on Library and Information Resources (CLIR) on scholarly communication, cyberinfrastructure, and preservation issues; with the New Media Consortium on the exploration and use of new media and new technologies in higher education; with the PKAL Learning Spaces Collaboratory on development of principles for technology-enabled spaces that enhance learning, and with the IMS Global Learning Consortium on interoperability between learning management systems and digital libraries. CNI works with the American Library Association (ALA) on policy and professional development activities. Our contributions extend to the programs of our sponsor organizations, ARL and EDUCAUSE, particularly to the EDUCAUSE Learning Initiative (ELI) and the Advanced Core Technologies Initiative (ACTI).

In addition to specific initiatives to address CNI's overarching program themes, the Coalition actively conducts an ongoing program of collaboration and advocacy to advance the development of digital information and its role in transforming organizations and scholarly activities. To this end, CNI works with scholarly societies, government agencies, publishers, and others.

On an international level, we collaborate with other organizations concerned with networked information, including the UK Office for Library Networking (UKOLN), the Digital Curation Centre, and the Joint Information Systems Committee (JISC) in the United Kingdom, the German Initiative for Networked Information (DINI), the German Research Foundation (DFG), Denmark's Electronic Research Library (DEFF), the SURF Foundation (the Dutch higher education and research partnership organization for network services and information and communications technology), and the Confederation of Open Access Repositories (COAR).

CNI works to provide our community with frameworks for understanding key networked information issues so that institutions can develop strategies to address these issues on the local, regional, or national level. We write white papers, reports, and articles, we present talks at conferences, and we make institutional visits that may involve meetings with campus leaders and presentations at public events and seminars.

CNI alerts its community to our organizational activities, significant new publications, and important developments in the field via the CNI Web site, the CNI-ANNOUNCE e-mail list, and the CNI News RSS. Information about CNI's activities is also available through Twitter (twitter.com/cni_org), which serves as a complement to other communication channels. Through *CNI Conversations* (monthly, interactive telephone discussions between CNI leadership and members), we reach out to communities at

our member institutions via Web and phone-based program updates and topical discussions. Recordings of *CNI Conversations* calls are archived and freely available online (conversations.cni.org). We also make video of selected sessions from our membership meetings publicly available from CNI's YouTube and Vimeo channels (www.youtube.com/cnivideo, vimeo.com/channels/cni).

Meetings

The Coalition's semiannual membership meetings, scheduled for December 13-14, 2010, in Arlington, VA, and April 4-5, 2011, in San Diego, CA, highlight activities related to CNI's program themes, focus attention on significant new thinking and technology developments, and provide opportunities for members to showcase and discuss a wide range of emerging issues and developments in networked information. Some participants have developed knowledge communities within CNI and use the meetings as an opportunity to share ideas on a particular aspect of networked information and incubate new initiatives. Each member organization is invited to send two delegates, typically a senior information technologist and a senior librarian. Meeting participants are introduced to new developments that may reshape institutional plans in a forum that encourages collaborations and dialogues with others who share common interests. CNI has a long history of being the first to offer discussion of major networked information developments, including Mosaic, the National Science Foundation's (NSF) Digital Libraries Program, the Google Books Scanning program, and NSF's DataNet awards.

CNI regularly co-sponsors a conference in partnership with JISC and UKOLN as part of our ongoing collaboration with these programs. The last conference was held in Edinburgh, Scotland on July 1-2, 2010; the next meeting will likely be held in the summer of 2012.

CNI occasionally convenes invitational or public workshops to advance specific elements of its program plan. CNI also acts as a co-sponsor for other meetings relevant to the CNI agenda. This year these events included the 5th International Digital Curation Conference, "Participation and Practice: Growing the Curation Community Through the Data Decade," on December 6-8, 2010 in Chicago, IL, SPARC's 2010 Digital Repositories Meeting in Baltimore, MD on November 8-9, and the European Conference on Research and Advanced Technology for Digital Libraries (ECDL) in Glasgow, Scotland, September 6-10, 2010. ARL and CNI co-sponsored the forum "Achieving Strategic Change in Research Libraries," on October 14-15, 2010, in Washington, DC.

In addition, CNI will co-sponsor the Theory & Practice of Digital Libraries Conference (formerly ECDL), to be held in Berlin, Germany, on September 26-28, 2011, as well as an ASIS&T summit on data management in Denver, CO on April 1-2, 2011, the IS&T Archiving Conference on May 16-19, 2011, in Salt Lake City, Utah, the Joint Conference on Digital Libraries, scheduled for June 13-17, 2011, in Ottawa, Canada, and Open Repositories 2011 in Austin, TX, to be held June 8-11, 2011.

PROGRAM PLAN 2010-2011

The Next Twenty Years Project: A Celebration and a Look at the Future

With the 2010-2011 program year, CNI celebrates twenty years of leadership within our community. To recognize this milestone, and to set the stage for the next twenty years, we will be launching a special initiative that cuts across all of our program areas, and indeed reaches beyond them. The culmination of this effort will be the publication of a book tentatively titled *The Next Twenty Years*, to be released in conjunction with our December 2011 membership meeting. The purpose of the initiative is to provide a platform for considering developments that are likely to take place over the next 20 years in society, technology, communication, scholarship, higher education, and information in light of the stunning changes that have characterized the last two decades. Our intention is to encourage reflection and to both reassess and rejuvenate the visions that drive our collective work; our interest in the changes over the past decades is as prelude and context rather than recollection. We've chosen twenty years as a time horizon because anything much shorter can easily fall into direct and overcautious extrapolation; much longer time horizons really move us too readily into the realm of science fiction.

The book will be developed in three stages. In early 2011, we'll prepare a substantial opening essay which looks both backwards over the past two decades, spanning the end of one millennium and the start of another, and forward to the future; we will make this available on the Web site. In spring 2011 we'll solicit responses to this opening essay, with a deadline in late fall, 2011; these will be posted on the Web site as they come in. CNI will also reach out to prominent members of our community and to other thought leaders for their contributions. In late 2011, we'll author a concluding essay that synthesizes themes from the responses. We'll package the two essays, along with selected contributions, into a downloadable e-book (which will also be available via print-on-demand); all the contributions will be available on the Web site.

We hope that this collection will be helpful for the CNI community in broadening thinking about future prospects and opportunities, in preparing better-informed and more robust strategic plans, and in expanding our focus beyond the very-near-term challenges and crises that have characterized so many institutional agendas for the past few years.

Developing and Managing Networked Information Content

The Coalition has broad interests across all forms of digital content that can be used to support research and education. We provide a forum for information on leading projects in this arena, including a showcase at the CNI membership meetings for innovative faculty projects from our member institutions. In addition, we track developments and promote strategies for the creation of digital collections, digital libraries, and federated services in support of digital content. Further, because digital content cannot be divorced from the processes of teaching, learning, and scholarship that both create and rely upon that content, CNI is deeply involved in issues involving changing practices of scholarship, the restructuring of scholarly publishing (including changes in processes like peer review) and the broader transformation of scholarly communication, and innovation in teaching and learning. Through our membership meetings, specialized conferences and workshops, collaborative initiatives with other organizations, and publications, we provide leadership on digital content policy and new directions in scholarly communication.

• Institutional Content Resources and Repositories

A centerpiece of CNI's work on networked information is built around the broad theme of the stewardship of institutional content resources—materials created by members of the institutional community, or that document the work, processes or intellectual and cultural life of an institution. The practice of such stewardship, which includes management, preservation, and access, is a central role for higher education and cultural memory organizations in the digital age. Our work here has two major components. One is to advance and structure the wealth of new digital content. The program includes our continuing

efforts to understand and highlight experiments in the creation of new types of scholarly works for the digital medium, such as successors to the scholarly print monograph or the development of electronic theses and dissertations; the disposition of materials collected through lecture capture systems; the implications of mass digitization of materials to support scholarship; and the availability of digital representations for existing collections of physical materials held in libraries, archives, museums, and audio/visual and public broadcasting groups. The second major effort focuses on approaches to managing the wealth of new content through the development of strategies such as the deployment of institutional repositories. Here CNI is addressing the full range of issues from policy and strategic planning through system architecture and standards for the management of complex digital objects.

We will continue to explore ways in which institutional strategies and systems need to connect to national and disciplinary-level data management and curation activities (such as those developing through the e-research initiatives described below), and some of the inter-institutional issues that arise from large scale research collaborations and virtual organizations.

A continuing priority is a focused ongoing re-examination and re-assessment of institutional repository (IR) services. The concept of the IR is almost 10 years old; CNI was deeply involved in the initial conceptualization of these services and the development of implementation strategies for them. Platform alternatives have multiplied and matured, and understandings about costs, as well as barriers to successful deployment, have become much clearer. Indeed, we are seeing significantly different deployment trajectories in different nations, particularly in the context of subject repositories and other disciplinary data management frameworks, and these are leading to new policy issues and requirements for various kinds of interoperability standards.

We are particularly interested in ways in which the impact of IRs might be measured, and their interactions with virtual organizations, faculty movement from one institution to another, and with stewardship of scholarly work associated with faculty retirements. We hope to begin to move forward on some work specifically focused on this area late in 2011 and extending into upcoming program years.

• **Institutional and Disciplinary Implications of E-Research**

The Coalition has long been engaged in efforts to chart, understand, and facilitate the transformation of scholarly practice through the use of digital content and advanced information technology as part of its fundamental mission. In the arts and humanities, CNI, in collaboration with partners such as the J. Paul Getty Trust, the American Council of Learned Societies (ACLS), the National Research Council (NRC) and ARL, continues to provide leadership in computing and the humanities and outreach to build collaborations with the museum community. In the sciences and engineering, CNI has recently been heavily involved in helping the higher education and library communities understand and frame emerging issues in cyberinfrastructure and e-science, with a primary focus on data sharing and data curation issues.

In the 2010-2011 program year, CNI will continue to engage e-research developments both in the sciences and the humanities. There is new urgency in this area in light of the requirements for data management and data sharing plans that the US National Science Foundation (NSF) has put in place as part of grant proposal submissions effective January 2011, joining the already-established similar National Institutes of Health requirements for data. We expect researchers will continue to see additional funding agencies imposing similar requirements. Faculty investigators will need guidance from both their funders and their home institutions on how to best meet these requirements, and they will be demanding new services at both disciplinary and institutional levels.

The NSF has launched major programs addressing data curation (the DataNet initiative, and also the Community-based Data Interoperability Networks program), and we will be highlighting developments from these programs in our member meetings. Following on the report of the ACLS Commission on Cyberinfrastructure for the Humanities & Social Sciences, CNI is participating in ongoing discussions about how to frame strategies for effective investment in digital humanities. We will feature work of projects such as those supported through the National Endowment for the Humanities High Performance Computing Initiative and the new multi-sponsor, international Digging into Data initiative, emphasizing computationally intensive research enabled by a robust infrastructure.

CNI is concerned with questions about availability of data related to scholarly work, and has been engaged in a number of discussions around open access, open science, and open data as they relate to this question, as well as discussions about disciplinary norms for data sharing. We will also continue to explore and document the ways in which data and computationally intensive scholarship are altering the nature of scholarly communication; the issues here include the legal and technical barriers to large-scale text and data mining; appropriate organizational, policy and technical strategies for linking articles and underlying data; and ways to construct scholarly works that are amenable to various combinations of human and machine use. Critical new developments here include the emergence of Virtual Research Environments as arenas for the interoperation of data and tools from multiple sources, and the need to better understand the complex architectural questions about the relationships among repositories, operational storage systems, e-research workflows, high performance network connectivity and powerful computational resources

Connecting our work in e-research directly to our program focus on institutional content resources, CNI will continue to examine institutional policy and planning implications of campus cyberinfrastructure initiatives in both the sciences and humanities, and consider how these can complement national or international cyberinfrastructure investments and strategies at disciplinary and cross-disciplinary levels.

• **Digital Preservation**

Closely related to, and supporting the programmatic focus on stewardship of institutional content resources is the Coalition's continuing work on preservation of a wide variety of digital content. This is a central issue not only in the shift to network-based scholarly communication but also in ensuring the continuity of the broad cultural and intellectual record in the digital age and the continued availability of evidence to support future scholarly inquiry. The issues here are not simply technical, but represent a fundamental social and public policy challenge with wide-reaching implications; we are particularly interested in trying to define and characterize the ever growing range of materials that should constitute parts of our cultural and intellectual record, including new areas such as social media in the broadest sense. CNI works closely with ARL, CLIR, the Andrew W. Mellon Foundation, the Library of Congress National Digital Information Infrastructure and Preservation Program (NDIIPP), NSF, Ithaka, the UK Digital Curation Centre (DCC), and RLG Programs at OCLC on the full range of technical, economic, and strategy issues surrounding digital preservation.

We will co-sponsor and co-chair the DCC's 6th International Digital Curation Conference, which will take place in Chicago on December 6-8, 2010, and co-sponsor the Imaging Science and Technology (IS&T) Archiving meeting, scheduled for May 16-19, 2011 in Salt Lake City, Utah. Digital preservation progress will continue to receive extensive coverage at CNI membership meetings.

The wide-scale adoption of networked information services and shift to digital content raises a set of new questions about risk management and business continuity planning for libraries and higher education institutions. CNI continues to be deeply interested in these risk management issues,

and in 2010-2011 we will be exploring so-called “cloud” storage systems and their implications for robust storage and digital preservation, as well as some of the thinking emerging from the exascale computing and massive storage communities on the development of resilient systems, and the ways in which these ideas can be applied to very large scale digital preservation.

Transforming Organizations, Professions, and Individuals

The pervasive nature of digital content and networks has led to transformations in the way the research and education community does its work. In this program area, we focus on the impact of changing technologies, new modes of communication and content creation, and the pervasiveness of digital content on organizations, including the changing nature of teaching and learning, the need for new services and skills in the professions, and the pressure on physical facilities to accommodate changing needs of user communities. CNI has a longstanding commitment to highlighting and advancing organizational initiatives that facilitate collaborations across institutional units and professional cultures, with particular emphasis on collaboration between librarians and information technologists. We have also fostered collaborations with instructional technologists, faculty, publishers, electronic records managers, archivists, and others. Our work on organizational and institutional issues includes a focus on evaluation and assessment strategies, recognizing the continuing need to understand the effects and contributions of advanced information technology and digital content.

• Today’s Learners and Digital Content

A cross-cutting theme informing our work on teaching and learning in recent years has been understanding the increasing population of students who have grown up with computer and information technologies. While these students are often described as very different from older generations in their use of technology, many of the characteristics of their uses of information and technology—such as actively exploring and developing their own learning environments, working in groups, and producing, not just consuming, digital resources—have also been incorporated into the lives of most adult professionals. We help institutions understand the need to reconfigure some of their services and their physical and virtual spaces to reflect the ways in which our students work with technology and information today.

As both students and faculty increasingly produce new digital information, sometimes incorporating parts of others’ work and often in complex social software contexts, they have a pressing need to understand a wide range of issues including intellectual property, privacy, preservation, format standards, and metadata creation. A variety of literacies—information, technology, and visual—are converging as students, faculty, and others produce innovative digital content.

• Implications of Mobile Technologies

The faculty, staff, and students in our institutions bring a variety of mobile devices to campus and also use mobile devices to access campus information and services when they are at home, commuting, at work, or abroad. They bring increasing expectations for seamlessly using a variety of devices to access all types of services and information. Surveys of the general public and of academics show the increasing variety of mobile device ownership and the mounting popularity of these devices for many activities, including accessing schedule information, receiving security alerts, reading e-books, accessing e-journals or preprint collections, and participating in social networking activities. Many libraries participate in e-book programs and some loan a variety of devices, including tablet computers, portable audio players, video cameras, netbooks, and laptops.

A small number of institutions are experimenting with the use of mobile devices in teaching and learning, and researchers use mobile devices for data collection and communication in the field. Some new applications involve sophisticated geo-tagged information and augmented reality, or the use of portable devices as distributed “sensors.” Institutions are at varying stages of readiness in determining policies, services, and strategies for mobile devices. We will encourage institutions to develop cohesive strategies as they enter the arena of provision of content and services for mobile devices, and we will highlight campus strategies that incorporate services from a wide variety of institutional units, including libraries.

• **Learning Spaces—Environments and Services for Today’s Learners**

Many educational institutions are offering public service points or facilities where library and information technology staff share responsibilities to serve users; sometimes these facilities incorporate teaching and learning centers that bring together instructional technologists, faculty, information technologists, and librarians. Often these service points and centers are developed in conjunction with building renovations, expansions, or new building projects. CNI seeks to share experiences of institutions’ projects, to help identify best practices, and to assist institutions in developing programs that enhance the learning and research functions of the physical space.

CNI’s work focuses on learning spaces that have a particular connection with information organizations and professionals, such as libraries, learning or information commons, computing centers, multimedia centers, and centers for teaching and learning. Such learning spaces may incorporate formal classroom spaces but classrooms are not our primary focus. CNI also highlights learning spaces that have a cross-sector component, such as multimedia studios or information commons administered or staffed jointly by the library and information technology groups.

In 2010-2011 we will continue to feature our work on learning spaces, partnering with other organizations such as the EDUCAUSE Learning Initiative (ELI) and the PKAL Learning Spaces Collaboratory. We will offer sessions at several national meetings and we will identify and disseminate information about trends. We will work with some institutions as they plan renovations of their learning spaces. Our efforts will continue to explore such topics as linking the services offered in these facilities more closely to the teaching and learning program of the institution. As we continue to conceptualize the landscape of the impact of technology on teaching and learning, we will contribute to an ELI initiative on Seeking Evidence of Impact.

• **Special Collections in the Digital Age**

The recent work of the ARL Special Collections Task Force—in which CNI has participated as a corresponding member—has provided a context and description of emerging trends that will help many institutions innovate in this area. More special collections programs are working to integrate their resources into the curriculum, working closely with faculty and students on digital projects. The ARL-CNI symposium, “An Age of Discovery: Distinctive Collections in the Digital Age” (held October 15-16, 2009, in Washington, DC) showcased many of these developments, and we will return to them in ongoing CNI meetings. Another area in which CNI has maintained a strong interest is in the changing nature of personal information storage and personal archiving, and the social and scholarly implications of these developments. A specific case in point is the institutional response to the acquisition of large, personal digital archives from scholars and researchers, as well as the personal archives of prominent intellectual, artistic, literary, political and similar figures. CNI will be heavily involved again in the second Personal Digital Archiving Conference, which will be hosted at the Internet Archive in San Francisco, February 24-25, 2011. The digital records of organizations are also

poorly explored; a particular area of CNI interest is the changing nature of the academic record caused by the deployment of learning management systems, IRs, and other scholarly support systems; this will have lasting policy implications for special collections and institutional archives.

• **Executive Roundtable**

CNI's Executive Roundtable series assembles executive teams (usually the chief librarian and chief information technology officer) from about 10 institutions for a focused two-to-three hour discussion of a specific topic of interest on the morning of the first day of the membership meeting. Launched at the fall 2003 membership meeting, the Executive Roundtables build on the theme of collaboration between librarians and information technologists that has been at the foundation of the Coalition. Past topics have included institutional repositories, campus open access policies, learning management system strategies, identity management, learning spaces, funding innovation, the university's role in the dissemination of research and scholarship, lecture and performance capture, and infrastructure to support research. The fall 2010 Executive Roundtable will focus on the opportunities and strategies that institutions are developing to address the campus mobile environment. The spring 2011 Roundtable is expected to focus on content licensing issues that cut across organizational boundaries, including electronic textbooks, content for learning management systems, and content to support mobile services.

Building Technology, Standards, and Infrastructure

CNI continues to be actively engaged in key areas of standards and infrastructure development. The Coalition is particularly concerned with facilitating the difficult and delicate transition of standards and technologies into operational infrastructure for the research, higher education and library communities. For example, federated identity management is becoming a key facet of infrastructure to support research.

In addition to the specific program initiatives described here, CNI participates in and tracks a wide range of developments in areas as diverse as identifiers, digital books, metadata standards, distributed and federated network services, harvesting technologies, recommender systems, and personalization technologies. As we look at an evolving landscape that includes commercial Web search engines, traditional library automation tools such as online catalogs, stand-alone abstracting and indexing databases, systems deployed by scholarly publishers, museums, and other content providers, and learning management systems, the Coalition is concerned with architectural and standards frameworks that can facilitate integration and interoperability. This perspective has motivated much of our work over the last few years on cyberinfrastructure, IRs, the various components of the Open Archives Initiative (including the protocol for metadata harvesting, the object reuse and exchange protocol, and, most recently, the Open Annotation work), and learning management systems.

• **Institutional Infrastructure to Support Research**

There is a renewed focus on campus infrastructure to support research programs. Developments include: policy, technical, and economic influences that are leading to a partial re-centralization of computing functions; radically new high performance network and distributed computing technologies; a rethinking of storage functionality and economics; requirements for long-term data management, curation and preservation; and growing faculty demands for informatics support services. An additional dimension of these needs involves information and technology intensive

collaborations among groups at multiple campuses (sometimes characterized as collaboratories or virtual organizations) and virtual research environments that enable such collaborations. Complementing the organizationally oriented work on e-research already described, CNI is also concerned with the institutional and cross-institutional development of technical infrastructure, with a particular focus on large-scale storage and data management (discussed in more detail earlier), and on collaboration tools and environments. Of particular concern is the persistently difficult integration of investment in national level research infrastructure and campus-level investments and approaches; we are participating in an NSF Task Force on Campus Bridging that is examining these issues, as well as working closely with efforts such as the EDUCAUSE Campus Cyberinfrastructure Initiative and the work of the Common Solutions Group.

• **Authentication, Authorization, and Access Management**

CNI takes a broad view of security, integrity, and access management issues as they relate to the management of licensed resources and the stewardship and preservation of digital content. New technological capabilities—peer-to-peer resource sharing and the ability for users to amass and maintain massive personal digital libraries which include large amounts of copyrighted material drawn from licensed databases—continue to raise complex questions with both technological and policy dimensions. CNI believes that we must continue to explore these new behaviors and practices and to reflect this broad view in the focus on systems and network security within the higher education community.

Authentication and authorization are now established as essential infrastructure components for network-based services and have become a particularly critical need as institutions increasingly rely on site license agreements with information providers, implement online and distance education initiatives, and form consortia for resource sharing or educational initiatives. They are an essential underpinning for data sharing and data reuse. The Coalition has been pursuing a program to define technology approaches, standards, best practices, and policy and business issues for such inter-organizational authentication and authorization infrastructures. Working in partnership with Internet2, EDUCAUSE and InCommon, we continue to seek to advance progress in this area.

• **Identity and Research Management Systems**

Building on work beginning in the 2007-2008 program year, we will continue exploration of the potential future convergence, or at least linkage, between identities as established by campus-based identity management systems on one hand, and personal names as used in the context of scholarly communication, citation, and bibliographic control and name authority on the other. Historically, these two worlds have been completely separate, but the emergence of sophisticated author rights retention strategies, institutional and disciplinary repositories, advanced bibliometrics and webmetrics, and similar developments, are clearly bringing them into closer alignment. CNI convened a workshop in the spring of 2008 to map some of these developments and help build an agenda; we plan to re-evaluate developments in the 2010-2011 program year in light of rapidly developing initiatives such as ORCID, VIVO, and new interest in the prospect of the interchange of individual profiles in various contexts. One additional area of exploration emerging from the 2008 workshop is the growing use of name, biographical, and prosopographical databases as infrastructure for additional scholarly work and how these relate to developments in name authority and identity as well as text mining and genealogy.

RECENT PUBLICATIONS BY CNI STAFF

Selected Recent Publications by CNI Staff

- Lynch, Clifford A. "Imagining a University Press System to Support Scholarship in the Digital Age." *Journal of Electronic Publishing* (Fall 2010).
- Lippincott, Joan K. and Clifford A. Lynch. "ETDs and Graduate Education: Programs and Prospects." *Research Library Issues* 270 (June 2010): 6-15.
- Lippincott, Joan K. "A Mobile Future for Academic Libraries." *Reference Services Review* 38, no. 2 (2010): 205-213.
- Lippincott, Joan K. "Information Commons: Meeting Millennials' Needs." *Journal of Library Administration* 50, no. 1 (January 2010): 27-37.
- Lynch, Clifford A. "Jim Gray's Fourth Paradigm and the Construction of the Scientific Record." In *The Fourth Paradigm: Data-Intensive Scientific Discovery*, edited by Tony Hey, Stewart Tinsley, and Kirstin Tolle, 177-183. Redmond, WA: Microsoft Research, 2009.
- Lynch, Clifford A. "Special Collections at the Cusp of the Digital Age: A Credo." *Research Library Issues* 267 (December 2009): 4-10.
- Lippincott, Joan K. "Learning Spaces: Involving Faculty to Improve Pedagogy." *EDUCAUSE Review* 44, no. 2 (March/April 2009) 16-25.
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Serving as Committee Members, CNI Staff Contributed to these Selected Recent Reports:

- OCLC Record Use Policy Council. *WorldCat Rights and Responsibilities for the OCLC Cooperative* approved by the OCLC Board of Trustees on June 14, 2010, effective August 1, 2010.
- Laurence F. Johnson, Alan Levine, Rachel S. Smith, and Sonja Stone. *2010 Horizon Report*. Austin, TX: The New Media Consortium, 2010.
- Blue Ribbon Task Force on Sustainable Digital Preservation. *Sustainable Economics for a Digital Planet: Ensuring Long Term Access to Digital Information*, February 2010.
- Blue Ribbon Task Force on Sustainable Digital Preservation and Access. *Sustaining the Digital Investment: Issues and challenges of Economically Sustainable Digital Preservation*. December 2008.
- National Science Foundation Task Force on Cyberlearning. *Fostering Learning in the Networked World: The Cyberlearning Opportunity and Challenge, a 21st Century Agenda for the National Science Foundation*, June 2008.
- Library of Congress Working Group on the Future of Bibliographic Control. *On The Record: Report of the Library of Congress Working Group on the Future of Bibliographic Control*, January 2008.

Most publications, as well as selected presentations and interviews, are available online via <http://www.cni.org/publications>.

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