

V. LIBRARIES AND INFORMATION TECHNOLOGY (2002)

A. COLLECTIONS AND ACCESS

With collections totaling 31.9 million volumes, the more than 100 libraries throughout the University of California are surpassed in size on the American continent only by the Library of Congress collection. As a matter of policy, the collections of the ten UC campuses are considered to be a single collection, accessible to all UC faculty and students on a shared basis. Consistent with this policy, the University's California Digital Library (CDL) makes available a shared collection of library resources in digital form throughout the University. The CDL digital collection consists of almost 7,000 journal titles, 200 bibliographic and reference databases, nearly 8,000 finding aids for unique archival and special collections, and countless images of original research material drawn from the collections of UC libraries, museums and archives. Complementing these resources, the CDL Melvyl online union catalog provides Universitywide access to the digital and print library holdings of all UC campuses. An aggressive program of interlibrary resource sharing includes overnight delivery services, services enabling UC users to instantly place borrowing requests via the Melvyl Catalog for materials held anywhere in the UC system, and Web-based delivery of journal articles to users' desktop computers.

The Melvyl system is complemented by integrated library information systems at each campus that support acquisitions, cataloging, circulation and management functions, as well as providing catalog access to the holdings of the local campus. Access to the Melvyl system and the campus systems is available from any computer connected to a campus network or the Internet. This network of linked library information systems makes possible more efficient library operations and provides enhanced access to the holdings of all campus libraries, not only for the University community, but for other education segments and the general public wherever a connection to the Internet is available.

B. LIBRARY PLANNING

Library planning at the University of California has been focused on leveraging the strengths of campus libraries to make more material readily available to students and faculty throughout the system. The planning strategies have roots in the 1977 Plan for Development, which established the Universitywide catalog (Melvyl) and two regional library facilities. The **Library Planning and Action Initiative Advisory Task Force** was established in 1996 and charged with identifying organizational, budgetary, and functional changes required to ensure the continued scholarly and economic vitality of the University of California libraries, to guide library evolution over the next decade, and to ensure that immediate actions were taken in support of such changes and evolution. The Task Force recommendations, issued in 1998, included seven strategies:

- < seek innovative and cost-effective means to strengthen resource sharing;
- < establish the California Digital Library;
- < sustain and develop mechanisms to support campus print collections;
- < seek mutually beneficial collaboration with libraries, museums, other Universities, and industry;
- < develop an information infrastructure that supports the needs of faculty and students to disseminate and access scholarly and scientific information in a networked environment;
- < lead the national effort to transform the process of scholarly and scientific communication; and
- < organize an environment of continuous planning and innovation.

The California Digital Library had in fact already been launched in 1997. (See Section C below for further information.) Another result of the work of the Library Planning and Action Initiative Advisory Task Force was the creation of the **Systemwide Library and Scholarly Information Advisory Committee (SLASIAC)**. The Committee is charged with advising the University on systemwide library policies and strategic priorities, on systemwide long term planning for the UC libraries including the ten campus libraries and the California Digital Library (CDL), and on strategies that will enhance and facilitate the transmission of scholarly and scientific communication in a digital environment. In pursuing this charge, the Committee provides essential guidance to the University as it seeks to:

- < establish an environment that supports continuous planning and innovation for UC libraries;
- < develop policies and strategic priorities for the California Digital Library, including policies that support the extension of CDL services beyond the University;
- < implement strategies to sustain and develop both campus and shared print and digital collections and identify mechanisms that facilitate sharing resources across campus boundaries; and
- < initiate projects to improve the process of scholarly communication and assist faculty in distributing the results of their research.

In January 2000, the Systemwide Library and Scholarly Information Advisory Committee acknowledged the growing importance of digital materials in the composition of the University's research collections and endorsed the **Collection Management Initiative**, which has two components:

- < a Standing Committee on **Universitywide Library Collection Management Planning**, charged to oversee continuous strategic planning for collection management and to advise the Systemwide Committee as needed; and
- < the implementation, beginning in January 2001, of a study in which selected print journals in UC libraries for which electronic access is available through the California Digital Library are temporarily removed from the shelf. The results of this study will help

the University develop strategies, policies and programs for the future management of library collections consisting of both digital and print formats.

In June, 2000, the **Andrew W. Mellon Foundation** awarded the University a grant to support planning for the experimental program and, in December, 2000, funding for a two-year program of research and experimentation. See the web site at www.ucop.edu/cmi for more information.

C. ***THE CALIFORNIA DIGITAL LIBRARY***

On October 14, 1997, President Atkinson announced the creation of the California Digital Library. He envisioned a library without walls that would link together digital collections of knowledge and information, not just at UC but across the state and beyond, encompassing libraries, museums, archives, and other collections in the fields of science, art, engineering, history, and literature. President Atkinson charged the CDL with continuing the selection, building, management, and preservation of the University's shared collections of digital resources and applying new technologies to enhance sharing of the University's physical collections. The CDL licenses, acquires, develops and manages all kinds of digital materials -- including books, journals, monographs and photographs. CDL staff and advisory groups are drawn from every UC campus, from affiliated research laboratories, and from the UC Office of the President. The CDL [Directory of Collections and Services](http://www.cdlib.org/directory/) www.cdlib.org/directory/ gives library users access to a vast array of intellectual resources. (Due to license restrictions some resources are available only to UC faculty, students, and staff).

Four strategies define the Library's vision:

1. Building, Sharing, and Preserving Collections

CDL's commitment to supporting the University's scholarship depends on the development and acquisition of high-quality digital content. The CDL licenses scholarly materials, including abstracting and indexing databases and full-content electronic journals and databases. It creates digital access to unique and valuable special and archival collections of the University and of its California partners. Selection decisions are based upon rigorous criteria of quality and value, foremost for the academic programs of the UC campuses. Intense collaboration with the faculty and librarians across the University led to priorities for the founding Science, Technology, and Industry Collection (STIC). Collaboration rapidly expanded to establish priorities for Social Sciences, Humanities and Government information. The CDL provides access to the following digital resources and is exploring methods to ensure persistent access to them:

The [Online Archive of California](http://www.oac.cdlib.org/) (OAC) www.oac.cdlib.org/ -- a digital information resource that facilitates and provides access to materials such as manuscripts, photographs, and works of art held in libraries, museums, archives, and other institutions across California. The OAC includes digitized versions of many of these materials as well as archival finding aids, or

collection inventories that help students and scholars to identify relevant primary source materials.

Counting California <http://countingcalifornia.cdlib.org/> -- provides UC users and the public with one-stop-shopping for government data and statistics about California. Researchers and the public can discover and interact with current Census 2000 and historical census data, almanac-style statistics, county business data, and a range of education, crime, election, and demographic information from nearly a dozen different sources. Data comes from California State agencies as well as federal agencies.

Melvyl² Catalog www.dbs.cdlib.org/?CSdb=cat -- records for materials (books, archives, audio-visuals, computer files, video recordings, dissertations, government documents, maps, music scores, and recordings) in the libraries of the nine UC campuses, California State Library, California Academy of Sciences, California Historical Society, Center for Research Libraries, and the Graduate Theological Union. There are currently over 10 million unique titles representing over 15 million holdings.

California Periodicals Database www.dbs.cdlib.org/?CSdb=pe -- built in partnership with the California State Library, allows users to search the titles of serials (periodicals, newspapers, annuals, some monographic series, and other ongoing publications) owned by more than 550 California libraries. The database merges three sources of serials information: the California Academic Libraries List of Serials (CALLS), which includes the nine UC campuses, California State Library, California State Universities, Center for Research Libraries, California Academy of Sciences, California Historical Society, Stanford University, Getty Center for the History of Art and the Humanities, the Graduate Theological Union, and the Lawrence Livermore National Laboratory; the California Union List of Periodicals; and California medical libraries contributing to the National Library of Medicine SERHOLD database.

Thousands of electronic journals -- from major scholarly publishers and information providers.

Nearly 200 journal abstracting and indexing databases -- providing abstracts and indexes to tens of thousands of journals for scholarly research, instruction, and reference.

Dozens of specialized and reference resources -- such as the **Annual Bibliography of English Language and Literature**, the Combined Chemical Dictionary, the CRC Handbook of Chemistry and Physics, Congressional Universe, the Grove Dictionary of Art, Digital Dissertations, and Encyclopedia Britannica online.

2. Creating Tools and Services

The CDL is pursuing technological innovations that enhance services for discovering, sharing, accessing, manipulating, and integrating scholarly content in all forms. Already available are the

following tools and services:

- < Topical browsing of digital resources via the CDL Directory of Collections and Resources.
- < User-oriented views of/windows into digital resources.
- < Several thousand inventories, or finding aids for special and archival collections throughout California.
- < Update, a service that runs user-defined weekly searches to retrieve new items in selected databases.
- < Request, a service that enables UC-authorized users to borrow books via the Melvyl Catalog from any campus in the UC system.
- < *SearchLight*, a multi-resource search tool that allows a single starting place for users to search many different resources.
- < *UC-eLinks*, a service that easily links users from a search result to a list of print holdings, online full content, or an online request form for the item.

3. Supporting Innovation in Scholarly Communications

The development of the CDL is, in part, one of UC's responses to trends in scholarly communication: increased costs for traditional methods of communication; continuous and significant increase in the volume of scholarly information; and increasing demand for new technologies and new capabilities with little abatement in the demand for the traditional. UC is recognized by its national and international colleagues as a leader in exploring these challenges. CDL activities are focused on **eScholarship** <http://escholarship.cdlib.org/>, a program founded under the direction of the UC President, to support scholar-led innovations in scholarly communication and to explore alternative forms of scholarly publishing. The overall goal of eScholarship activities is the development of an infrastructure for digitally-based scholarly communication that:

- < Facilitates the expressed mutual interests of the University, its faculty, and the broader scholarly community;
- < Leverages the formidable capabilities and strengths of the University of California in order to provide effective national leadership in this area; and
- < Supports and extends experimental reconfigurations of the components of scholarly communication by communities of scholars themselves.

The eScholarship publishing models are:

Eprint Repositories

Discipline-based open-access working paper repositories, currently including social science, international and area studies, tobacco control, and dermatology.

Scholarly Journals

Dermatology Online Journal is hosted and connected to dermatology eprint services.
eNvironment is a new eJournal in Environmental Studies in development.

Monographs (in association with the UC Press)

Digital versions of titles from UC's *International and Area Studies Research Monograph Series*. Digital version of *Tobacco War: Inside the California Battles* by Stanton A. Glantz and Edith D. Balbach with extensive live links to the original materials upon which the book is based.

Data sets and databases

Data sets created by scholars working with the *Electronic Cultural Atlas Initiative (ECAI)* are in development. Tools and software, focusing on geospatial and temporal views, to allow use and manipulation of cultural data from ECAI.

The scholarly communities supported by *eScholarship* are:

By Discipline,

Environmental Science providing a new digital journal - *eNvironment* in development.

Tobacco Control assisting with primary source digital archives and eprint services.

Dermatology hosting the *Dermatology Online Journal* and eprint services.

International and Area Studies hosting digital books and eprint services.

Humanities publishing cultural data sets and new viewing tools.

Archaeology assisting with strategic planning for experiments in scholarly communication.

Through Strategic Partnerships,

Electronic Cultural Atlas Initiative international federation of scholars committed to new publications for cultural data sets.

UC Press editorial expertise for digital monographs, journals and experimental publications.

NSF Digital Library Initiative, Phase 2 research grant recipients assisting in the transfer of innovative enabling technologies.

bepress.com, *The Berkeley Electronic Press* co-developers of digital publishing tools.

4. Developing Strategic Partnerships

The success of the CDL in achieving and maintaining its charge is dependent on collaboration with librarians and academics on all of the UC campuses as well as with partners across California and the U.S.

CDL joins with other libraries, including the California State Library

<http://www.library.ca.gov/> and the Library of California initiative

<http://ferguson.library.ca.gov:80/loc> to develop new, sustainable, methods and services for sharing resources. By extending the benefits of digital library collections and services this leadership benefits both the academic community and the general public.

Several major licenses for the full content of core scholarly journals, including those with the American Chemical Society and with JSTOR, include the flexibility to experiment with extending access to the California State University system, Community College campuses, and public and school libraries.

The CDL collaborates on grant proposals to explore strategic innovations in digital libraries. Partners have included the Berkeley and Santa Barbara campuses, the San Diego Supercomputer Center, and Stanford University.

CDL membership in the Digital Library Federation (DLF) <http://www.clir.org/diglib/dlfhomepage.htm>, Scholarly Publishing and Academic Resources Coalition (SPARC), and various consortia such as the International Coalition of Library Consortia (ICOLC) <http://www.library.yale.edu/consortia/> ensure cooperative progress in our mutually recognized goals. Additional information about the California Digital Library can be found at www.cdlib.org.

D. COPYRIGHT

Over many decades, the complex balance between the law of copyright, institutional tradition, business processes, and individual practice has evolved in ways that generally served the interests of institutions, individuals, and the public. Rapid changes in technology, law, and business are now compelling reexamination by all parties of their historic assumptions and practices. As a result of these forces, the environment in which copyrighted works are created, published and used by the University academic community is expected to be highly fluid for at least the next decade. Broad and ongoing consultation, continuous planning, and carefully-considered strategic action will be needed to inform the evolutionary development of policies and practices that can successfully meet the challenges raised by this period of turbulence and transition.

In 1997, in response to growing concern among faculty and academic administrators that existing University policies might not adequately reflect the realities of the digital world, the University convened a **Copyright Task Force**. The Task Force reviewed University policies and recommended revisions that were appropriate to enhance the creative work of members of the academic community. Subsequently, UC established the **Standing Committee on Copyright** <http://www.ucop.edu/copyright/> to help provide the guidance needed by the University. The Committee is charged to:

- < Initiate, encourage and monitor projects that make innovative use of copyrighted works, regardless of format, and assist faculty and students to both produce new works and make use of the works of others in ways consistent with law, policy, and the academic mission of the University.

- < Monitor the copyright environment and make recommendations to the University on how to align University copyright policy and management with the goals of the academic mission in the context of continuous and rapid change.
- < Monitor technological restrictions and contract practices that impede fair use and the advance of knowledge.
- < Recommend priorities and methods for continuous Universitywide education on copyright.
- < Assess the implications of new legislation for University policy and practice.
- < Make recommendations about substantive participation in national discussions and initiatives.

The Committee reports to the Provost and Senior Vice President -- Academic Affairs, and works closely with the Systemwide Library and Scholarly Information Advisory Committee (SLASIAC), the Technology Transfer Advisory Committee, and relevant standing Academic Council committees. Its work is informed by awareness of the interaction between copyright policy and policies governing academic personnel, faculty and student conduct, research, and use of University resources, including electronic communications facilities.

E. INFORMATION TECHNOLOGY

Technology dramatically improves data handling, process simulation, problem solving, creative presentations, and communication. New technologies are making possible unprecedented interaction with primary data and are enabling complex networks of communication among students and faculty. For students, these technologies create opportunities to grapple with real data and real problems early in their learning careers, linking them directly to the research enterprise. Participation in such a research process and mastery of the skills and the analytical rigor that it engenders will be lifelong assets for students, regardless of their field of study. Instructional technology allows faculty to bring their subject matter alive in ways that have not been possible previously. The University is committed to high-quality instructional programs and to ensuring that curriculum decisions regarding course content and presentation are based on intellectual and academic considerations that are not constrained by technology bottlenecks.

In March 1997, the University of California held an All-University invitational conference that brought together faculty, library, computing and instructional development professionals, administrators and students from throughout the University for an intensive consideration of the possibilities and challenges we face in incorporating new information and communication technologies into the heart of the teaching mission. The conference was intended to create an opportunity to clarify and affirm the academic values that inform teaching and learning and the purposes technology serves; enable participants to learn from colleagues' accomplishments with new technologies; showcase teaching and learning innovations based on new technologies; and provide a forum for thoughtful discussion of fundamental pedagogical, professional, and institutional concerns related to the new technologies.

One outgrowth of the Conference is the **UC Teaching, Learning and technology Center (TLtC)**, established in 2000, a center-without-walls that is intended to provide systemwide visibility to campus and faculty efforts in the development and use of teaching and learning technologies. The Center is also meant to provide complementary support to leverage those efforts for the benefit of the entire University. Teaching, Learning, and technology Collaborative (TLtC) Grants aim at furthering the innovative uses of instructional technology through partnerships within and across campuses. To date the TLtC grants program has awarded approximately \$350,000 in planning and large scale implementation grants. The Office of the President has allocated funding that will reach a steady state of \$600,000 in 2003-4.

In addition to the grants program the UC TLtC has begun an online publication called the *TLtC Webzine & Online Forum* (<http://www.uclt.org>). The Webzine & Online Forum includes regular feature articles on the ways in which UC faculty are integrating pedagogy and instructional technology as well as provides a wide array of resources and references categorized by topic as well as academic area. A Who's Doing What database of instructional activities offers faculty a chance to make public the kinds of work they are doing in their classrooms. There is also an email newsletter that provides subscribers monthly updates, including TLtC campus news, national news and resources, and upcoming events.

The University of California is a partner in the **CENIC** (the Corporation for Education Network Initiatives in California), a non-profit public benefit corporation, representing the common interests of California's higher education academic and research communities in achieving robust, high capacity, next generation Internet communications services. The Corporation's leadership is drawn from California higher education institutions and information technology industries. CENIC's mission is to facilitate and coordinate the development, deployment and operation of a set of seamless and robust advanced Internet communications services and to catalyze the development of advanced research and education applications in furtherance of California's leadership in the higher education and research community. CENIC seeks and encourages close partnerships with the private sector, government, and other segments of the education community. The first objective of CENIC has been to facilitate realization of the "California Research and Education Network - 2" (CalREN-2), an advanced services Internet that will serve all CENIC Associate institutions. More information CENIC and CalREN-2 is available at <http://www.cenic.org/>.

Various reports and White Papers on information technology and on copyright can be accessed at http://www.ucop.edu/irc/pubs_archive.html.

Publications and Policies on Information Technology

Publications

Copyright Considerations for Faculty: Authored Multimedia Instructional Materials

Discussion Draft - February 1996

http://www.ucop.edu/irc/pubs_archive.html

Discussion Draft on Copyright Considerations for Faculty Authored Multimedia Course Materials has been adopted by the University of California Committee on Intercampus Information Technology and Networking for Academic Purposes (CINITAP) as a framework for discussion of copyright issues.

University of California Copyright Legislation and Scholarly Communication Basic Principles

December 1996

http://www.ucop.edu/irc/wp/wp_Docs/wpd006.html

The core mission of the University of California is to foster the creation and dissemination of knowledge through research, teaching, and public service. To accomplish this task, it is essential that: a) scholarly communication be rich, multi - directional, and rapid; and that b) the cumulative documentary record be widely and continuously accessible for reference and use.

Policies

Policy on Copyright Ownership

<http://www.ucop.edu/ucophome/uwnews/copyr.html>

This Policy is intended to embody the spirit of academic tradition, which provides copyright ownership to faculty for their scholarly and aesthetic copyrighted works, and is otherwise consistent with the United States Copyright Law, which provides the University ownership of its employment-related works. Pursuant to Regents' Standing Order 100.4 (gg), the President has responsibility for all matters relating to intellectual property, including copyrights in which the University is involved.

UC Electronics Communications Policy
(2000)

<http://www.ucop.edu/irc/policy/>

The University of California encourages the use of electronic communications to share information and knowledge in support of the University's mission of education, research and public service and to conduct the University's business. To this end, the University supports and provides interactive electronic communications services and facilities for telecommunications, mail, publishing, and broadcasting.