



LibraryNotes

For Harvard Library staff

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siliconDeck Debuts

When Professor Lynda Applegate of the Harvard Business School was looking for the best resources to teach her course on Electronic Commerce, she turned to Baker Library's Business Information Services Center (BISC). There, a team of librarians led by Elizabeth Bibby responded by creating siliconDeck, an HBS Intranet site that features news, technical overviews, market and legislative information, as well as search tips and definitions. Launched this fall, siliconDeck is already very popular with HBS students and faculty. Whether making a one-time search, or tracking a specific topic on a regular basis, siliconDeck has become the place to start.

The rapid pace of change in the

information economy poses new challenges for the HBS learning model. "New business models don't come packaged in a case study ... students need to search for information on industries, markets, and companies," notes Professor Applegate. "siliconDeck is a high-tech, business information portal that supports students in their search for the information they need."

siliconDeck draws both on proprietary resources owned or licensed by Baker Library on behalf of HBS and on materials that are available freely on the Web. The site has links to sources of news and articles related to the information economy, as well as to site pages that bring together diverse resources on specific topics covered in the HBS curriculum. For example, the Research/Analysis page links to sources

of market analysis, company information, Internet statistics, news and journal articles, while the Connections page facilitates networking among HBS students, faculty, and alumni with e-commerce/high-tech interests. Additionally, a Notes page presents an overview of the site and includes the bibliographic reference; and in some cases, there is even a tip, explaining how to use the site to find specific information.

Users can send feedback by using the Comments feature found on each siliconDeck page. One student wrote: "siliconDeck is awesome! I intended to split my research in this area with a fellow student, but with this resource, it is no longer necessary." Following this success, Baker Library staff hopes to create other products of this type in the future.

Letter from the Director: HOLLIS II Update

The University Library has been looking for a number of years for a new integrated library system as a replacement for HOLLIS, a system that has functioned well but which is getting old and is likely to become less and less able to serve our needs as our environment changes. We are looking for a system based on a technology that will be viable for a number of years and allow future growth in functionality. However, because the Harvard Library is so central to the day-to-day teaching and research activities of the University and because our scale and complexity pose major challenges, we want a system that is proven to operate reliably. After extensive study and analysis by the University Library Council, librarian groups, systems specialists, and other constituents, the University Library chose DRA's new TAOS system as the best candidate among the possible successors to HOLLIS. It is based on new and promising architecture. It was, however, an unfinished system. The Library, therefore, expressed an intention to acquire TAOS when it was

demonstrated to work adequately at UCLA, where the system is undergoing its first large-scale installation. This seemed to be an approach that balanced prudence with our desire for a new, forward-looking system.

The installation at UCLA has been seriously delayed. It is currently being implemented, slowly and with many difficulties. It remains a potential system for us, but not one to which we can yet make a commitment. We have been monitoring the progress at UCLA, but also have been following the progress of the other systems that we considered when we chose DRA. The alternative systems are all in one stage of development or another, but none has been implemented in a large-scale American research library with the degree of functionality or level of system performance that we hope to see at Harvard. Thus, we cannot go forward with DRA at this time; neither does there seem to be a viable alternative.

We are aware of the frustrations associated with this situation for library staff and users. There are improvements in our systems that are being delayed. Nevertheless, a prudent

"watchful waiting" is our most viable—indeed, our only—alternative. We will continue to monitor the UCLA installation as well as the progress of alternative systems.

The good news is that HOLLIS, though well into its late middle age, continues to operate reliably. It is in no danger of expiring and is Y2K compliant. And we are upgrading it—as witness the new Web-based public interface—to make it as good as it can be.

The future is uncertain. If the UCLA installation is successful—as we and, even more so, UCLA fervently hope it will be—we are likely to proceed in that direction. But we are considering all options. (For more information on the UCLA installation, see their Web site at: <http://orion2.library.ucla.edu/>.)

Sidney Verba

Carl H. Pforzheimer University Professor and Director of the University Library

Comments or questions may be sent to HULAdmin@harvard.edu.

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 Harvard University Library
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Personnel

LAW LIBRARY

Matthew Ball is the new Collection Management Assistant in the Collections Services Division of the Law School Library. His primary responsibility is resolving bibliographic problems with items being sent to the Harvard Depository and also projects that involve reclassification of certain parts of the collection. Previously Matt worked at Emory University, where he was a EUCLID Implementation Specialist in the Circulation Department of Woodruff Library. He has a B.F.A. from Georgia State University and is currently enrolled in the M.L.I.S. program at Simmons College.

HUL PRESERVATION CENTER

Hilary Kline has joined the Harvard University Library Preservation Center as Preservation Project Librarian. Hilary is responsible for the management and oversight of preparing materials for microfilming. This includes establishing work flow, training and supervising new staff, maintaining statistics, and ensuring high-quality productivity standards. Most recently, Hilary was a Mellon Preservation Administration Intern at Columbia University. She has also interned at the Preservation Lab in Hillman Library, University of Pittsburgh, and at the Carnegie Museum of Natural History, also in Pittsburgh. Hilary holds a B.A. in History and General Science from Duquesne University and an M.L.I.S. from the University of Pittsburgh.

Valentina Urbanek is the new Staff Assistant in the HUL Preservation Center. Valentina started this position in August and is responsible for overall organization and management of day-to-day activities at the Center. She also provides programmatic support to the Preservation Officers, handles logistics for the department's library, orients new employees, and assists with financial operations. Valentina holds a B.A. in English Literature and Philosophy from Northeastern University, where she won a number of academic awards. Valentina has worked as a math tutor, piano teacher, and research assistant.

OFFICE FOR INFORMATION SYSTEMS

Catherine Palmer was recently appointed Production Services Technician in the Office for Information Systems. Catherine is responsible for maintaining and overseeing production

systems. This includes writing and implementing procedures and documentation, troubleshooting, and preparing reports. Catherine earned a B.A. in English at Boston University, and is currently taking a class in Information Science at the Harvard Extension School.

Ben Noeske is a new Systems Librarian in the Office for Information Systems, where he works on OLIVIA development for the Library Digital Initiative (LDI) team. Ben comes to Harvard from Simmons College, where he was Manager of Information Technology for the Graduate School of Library and Information Science, and where he recently (April 1999) graduated from the M.S.L.I.S. program.

RECORDS MANAGEMENT OFFICE

David Best was appointed Associate University Archivist for Records Management in August. Working in the University Archives, David is responsible for the administration, retention, and disposition of the University's contemporary records. This includes establishing goals and priorities for the Records Management Program, as well as surveying, classifying, appraising, and scheduling records. David also contributes to University Archives planning and administration. He was previously Assistant Archivist for Records Management and Acquisitions at the Massachusetts Archives. David holds a B.S. in Foreign Service from Georgetown University, and an M.A. in History from Boston University.

HUL ADMINISTRATION AND PROGRAMS

Melissa Groff is the new Staff Assistant in Wadsworth House, HUL Administration and Programs. Melissa assists with day-to-day office activities, maintains Web pages, supports financial operations, and arranges schedules. She also provides support for the human resources and publication programs. Melissa recently enrolled in the M.S.L.I.S. program at Simmons College and previously worked as the Assistant to the Associate Director at the Whitehead Institute for Biomedical Research. There, she was responsible for managing intellectual property and material-transfer databases, as well as monitoring intellectual-property issues. Melissa holds a B.A. in Art History/ Fine Arts from Dickinson College.

Notes and Comment

LIBRARY HOURS

Beginning Friday, October 29, and lasting until January 2000, Countway Library will be closed on Fridays. This will allow the construction crew to work at a quicker pace, and will also give the staff a respite from the disruption of construction. For more information, contact **Judi Beland**, Circulation Librarian, Countway Library (jbeland@hms.harvard.edu).

MILESTONE

20 years

Cynthia E. Allen, Library Assistant, English Cataloging Team, Widener Library

CURRENT EXHIBITIONS

The 20th Century: Highlights of United States History through Government Documents

Various U.S. government documents and illustrated Widener texts provide a look at the years 1900-1999. What have we learned from the past century, and how will we put it to use in the future? Now through August 2000, Government Documents and Microforms Department, Level One, Lamont Library. Contact Pam Hays at 496-6942 for more information.

James Henry Blake's Hassler Expedition Drawings (1871-1872)

In addition to pencil sketches and watercolors of fish, this exhibition features photographs and manuscript materials chronicling the trek headed by Louis Agassiz from Boston to San Francisco via the Strait of Magellan. Now through April 2000, Ernst Mayr Library, Museum of Comparative Zoology. Contact Robert Young at 495-8253 for more information.

A Backward Glance: The Rough Riders at Montauk

This exhibition displays images from the Theodore Roosevelt Collection's set of Spanish-American War glass-plate negatives by photographer Dwight Lathrop Elmendorf. Now through December 1999, Theodore Roosevelt Gallery, Pusey Library. Contact Wallace Dailey at 495-2449 for more information.

Harry Elkins Widener '07

Harry Elkins Widener, Harvard Class of 1907, in whose memory Widener library was built, was an avid bibliophile who left his rare book collection to Harvard after his tragic death aboard the *Titanic*. This exhibition focuses on Harry Widener's undergraduate days and book-collecting activities. Now through May 2002, Rotunda, Widener Library. Contact Virginia Smyers at 496-8679 for more information.

Cherubini Sources at Harvard

This exhibit features recent acquisitions of Cherubini early editions, manuscripts, and other musical sources. Now through February 15, 2000, Richard F. French Gallery, Eda Kuhn Loeb Music Library. Contact Sarah Adams at 495-2794 for more information.

All Dressed Up: Women Book Artists Explore Sexual Identity

A sampling of artists' books that focus on women's roles in society. Now through October 2000 Lobby, Fine Arts Library. Contact Amanda Bowen at 496-1503 for more information.

The Raven and the Loon: Inuit Prints and Sculptures from the Chauncy C. Nash Collection

Sponsored by Tozzer Library and the Peabody Museum, this exhibition features carvings and prints made in Cape Dorset, a community in the present territory of Nunavut widely known for its artistic activity. The materials were donated to the Peabody Museum in the 1960s by Chauncy C. Nash, Harvard Class of 1907. The prints in this exhibition will rotate every few months. Now through May 2001, Tozzer Library. Contact Maija Lutz at 495-2253 for more information.

Visual Arts of the Theatre: Highlights from Recent Acquisitions, 1997-1999

An exhibition of recent acquisitions in the Theatre Collection. Now through February 4, 2000, Edward Sheldon Exhibition Rooms, Pusey Library. Contact F.W. Wilson at 495-2445 for more information.

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Review of Year One: 1998–1999

Editor's note: *In July, the Library Digital Initiative marked the completion of its first year. The following is excerpted from a recently published report that outlines LDI's first-year activities and accomplishments. Copies of the full report are available from the Harvard University Library Office for Information Systems (495-3724), or may be accessed online at the LDI Web site (<http://hul.harvard.edu/ldi>).*

Harvard University launched the Library Digital Initiative (LDI) in July 1998 as a five-year program to develop the University's capacity to manage digital information by:

- Creating the technical infrastructure to support the acquisition, organization, delivery, and archiving of digital library materials;
- Providing a team of specialists to advise librarians and others in the University community on key issues in the digital environment;
- Providing librarians and staff with experience in a wide range of technologies and digital materials; and
- Enriching the Harvard University Library collections with a significant set of digital resources.

The report outlines LDI activities in the first year, and highlights progress in the development of systems and services, the establishment of a grant program, related activities and collaboration. Since LDI has already improved Harvard's ability to manage and make available digital collections, the program shows promise for effective progress in the future.

Highlights, 1998-1999

The Library Digital Initiative will build a common infrastructure for the University comprised of union catalogs and a set of storage and delivery services that enable Harvard to effectively manage its distributed networked collections. New systems and services developed this year contribute to this infrastructure, while the LDI grant-funded projects test their functionality.

Critical to the success of an effective digital library are public interfaces that help users discover

the variety of available resources. Catalogs, a primary means of access to many traditional library resources, also fulfill this role in the digital environment. Two new Web-based union catalogs were launched in FY 1999, with a third in planning as part of LDI:

VIA

Visual Information Access is a catalog describing the rich variety of photographs, prints, drawings, paintings, and other visual resources held by Harvard libraries, archives, and museums. The initial contributors to the catalog are the visual collection departments of the Fine Arts Library, the Frances Loeb Library of the Graduate School of Design, the Schlesinger Library, the Harvard University Art Museums (including the Fogg, Sackler, and Busch-Reisinger Museums), and the Peabody Museum of Archaeology and Ethnology. A related development is OLIVIA, a system for creating and maintaining visual cataloging records for display in VIA.

OASIS

Online Archival Search Information System is a catalog of finding aids, providing access to information about the University's archival collections. Current contributors include Houghton Library, the Andover-Harvard Theological Library, Baker Library at the Harvard Business School, the Botany Libraries, the Harvard Law School Library, the Peabody Museum Archives, and the Schlesinger Library.

GEODESY

Geodesy is a new system that will provide access to geo-spatial data. It will support searching by "geo-reference," that is by location on the face of the earth. Functional and technical planning for Geodesy began this year, with initial implementation scheduled for next year. Key participants in the Geodesy project include the Harvard College Library Social Sciences Program and the Harvard Graduate School of Design.

The proliferation of Harvard-wide catalogs as well as other electronic resources (primarily commercial ones including indexing and abstracting databases, directories, electronic journals, and reference works such as dictionaries and encyclopedias) is creating an increasingly complex and confusing landscape for library users. To address this complexity, LDI has begun planning to replace HOLLIS Plus with a more comprehensive and powerful system for the Harvard community. Frequently called "portal pages," such systems present a single, organized view of Web-accessible resources and services.

Since LDI has already improved Harvard's ability to manage and make available digital collections the program shows promise for effective progress in the future.

Another major area of concern for digital libraries is digital resource storage and access. In response to this need, LDI has two new systems under development:

- A central repository will offer storage and access services for digital materials to the Harvard community that parallel the services offered by the Harvard Depository for traditional materials. Development of this service was initiated in early 1999 with initial implementation scheduled for the fall.
- Naming provides digital objects with persistent, location-independent identifiers to ensure long-term access regardless of the object's physical location, which may change over time. With the current rate of organizational and technological change, naming provides critical support to the multiple layers of linking made possible by the

web. The development of a Naming Service is well underway, with availability scheduled for early 2000.

One of the key aims of LDI is to provide expertise and technical assistance to libraries, archives, museums, and research projects involved in collecting or creating digital resources throughout the University.

DIGITAL ACQUISITION

Acquiring commercial digital materials is dramatically more complex than traditional library acquisitions. The Digital Acquisitions Coordinator assists Harvard librarians in addressing issues related to the licensing and acquisition of digital resources including product evaluation, negotiating licenses, and vendor management. Accomplishments in the first year include:

- Over 250 individual resources, including 226 new electronic journals, were licensed and added to HOLLIS Plus;
- Policies and procedures were developed for initiating and evaluating resources, and a distributed stewardship model has been implemented to monitor existing high-cost, high-impact resources;
- Financial management of cooperative purchases was dramatically improved, including a new model for allocating costs among faculty libraries based on usage; and
- A set of licensing guidelines will be available in December.

METADATA

Digital library systems are driven by metadata, the information that makes it possible to find, access, use, and manage digital resources. The Metadata Analyst provides expert advice and design assistance for projects involving a wide variety of digital materials. Accomplishments in the first year include:

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LDI*continued from page 3*

- Design of a descriptive metadata model for visual resources that accommodates the different practices used by libraries, archives, and museums (developed for VIA and OLIVIA, see above);
- Participation in an effort to define national technical metadata standards for the long-term preservation of image files as part of a national standards effort; and
- Design of a metadata model for

describing the complex structure of traditional published works in electronic form.

REFORMATTING

Some of Harvard's digital collection will be created by digitally reformatting existing collection materials. Reformatting involves document preparation, metadata creation, scanning, image processing and quality control. The LDI Reformatting Advisor advises curators on appropriate reformatting strategies, helps managers locate skilled

vendors, and negotiates for products and services that conform to Harvard's guidelines. Accomplishments in the first year include:

- Developing local Web-based guidelines and information resources to help curators in decision-making about scanning print and film collections;
- Contracting vended conversion services for scanning 35mm color film and for optical character recognition (OCR) to create searchable text from scanned page

images and;

- Planning for a scanning facility, Harvard College Library Digital Imaging Group (HCL-DIG), that will offer services to Harvard departments and projects on a cost-recovery basis.

View the Library Digital Initiative Web site at <http://hul.harvard.edu/ldi/>.

Internal Challenge Grant Program: Round Two Awards

The Library Digital Initiative Grant Review Committee is pleased to announce the grant recipients for Round Two of the Internal Challenge Grant Program. This October, funding was awarded to two projects.

EDA KUHN LOEB MUSIC LIBRARY

Eda Kuhn Loeb Music Library received a grant for *Music from the Archive: A New Model of Access to Rare and Unique Sound Recordings*. With the goal of improving access to rare and unique sound recordings, this project will develop the methodologies and technologies for the Library Digital Initiative to integrate digital access to sound recordings and other digital objects. The project will provide online access to the finding aids, images, and audio files from three collections in the Music Library: The Laura Boulton Collection of Byzantine and Eastern Orthodox Chant, The Joseph Jeffers Dodge Duke Ellington Collection, and The James Rubin Collection of South Indian Classical Music. Not only will this project extend the development of LDI's systems and services, but it will also offer to students and scholars remote access to three of the Music Library's rare and unique audio-recording collections.

ARNOLD ARBORETUM OF HARVARD UNIVERSITY

Arnold Arboretum of Harvard University was funded for *Western China and Tibet: Hotspot of Diversity*. This project will integrate material from the collections of the Arnold Arboretum, the Harvard Map Collection, the Botany Libraries, the Museum of Comparative Zoology, the Harvard-Yenching Library, and the Harvard University Herbaria to estab-

lish online access to a selection of Harvard's historic and contemporary ethnographic and natural history collections related to Western China and Tibet. Beginning in 1924 with the Arnold Arboretum's Expedition to Northwestern China and Northeastern Tibet led by Joseph S. Rock, the historic collections include plant and bird specimens as well as photographs of the region's landscape, architecture, and people. By linking the various repositories, the project will allow students and scholars to move through time and within collections, accessing material that not only depicts the area's natural and ecological resources, but also documents the social and cultural histories of China and Tibet.

CONTACTS*Music from the Archive*

David Ackerman, Audio Preservation Engineer of the Archive of World Music, Eda Kuhn Loeb Music Library, Music Building, dackerm@fas.harvard.edu, 495-2795.

Virginia Danielson, Richard F. French Music Librarian and Curator of the Archive of World Music, Eda Kuhn Loeb Music Library, Music Building, vdaniels@fas.harvard.edu, 495-1624.

Western China and Tibet

Sheila Connor, Horticultural Research Archivist, Arnold Arboretum Horticultural Library, sheila_connor@harvard.edu, 524-1718 x111.

Carol David, Library Assistant, Arnold Arboretum Horticultural Library, carol_david@harvard.edu, 524-1718 x144.

NOTES AND COMMENT*continued from page 2**The Ballad of the Shameman and Betty Daybird*

A collaborative effort by Native American artists James Luna (Luiseno), Lori Blondeau (Cree/Saulteaux), and Bradlee Larocque (Dakota/Saulteaux), this installation presents a conceptual anthropological exhibition based on a fictitious Native American couple of this century. Through narrative objects and memorabilia, this project charts the life, times, and cultural contributions of two influential tribal members. Now through December 1999, Tozzer Library. Contact Maija Lutz at 495-2253 for more information.

1999 Anniversary Retrospective

An exhibition highlighting Alfred Marston Tozzer, the history and collection of Tozzer Library, and the publication, *Anthropological Literature*. Organized by Fran Breidenbach-Guiffre, Lori Foley, Emily Moss, and Janet Steins. Now through December 1999, Tozzer Library. Contact Maija Lutz at 495-2253 for more information.

Ruben Dario at Harvard: Books and Manuscripts from the Poet's Personal Library

Recently discovered selections from the library of Nicaraguan poet Reuben Dario (1867-1916), considered the father of Spanish Modernist poetry. Now through January 7, 2000, Amy Lowell Room, Houghton Library. Contact David Whitesell at 495-2509 for more information.

Soil Crust Communities

This exhibit details the biology and ecology of soil crusts found in diverse habitats such as the arid rangelands and moist coastal regions of the Antarctic and New England forests and coastal dunes. Through January 2000, Cabot Science Library. Contact John Carper at either 495-5353 or jcarper@fas.harvard.edu for more information.

TEOTWAWKI: Futuristic Visions in the Collections of Houghton Library

The new millennium provides a unique opportunity for reflection—whether it will be the end of the world as we know it (TEOTWAWKI) or just another turn of the page is anyone's guess. This exhibition includes examples from Houghton's Collections, ranging from the somber to the outlandish, of what the future might hold. Now through February 25, 2000, Exhibition Room, Houghton Library. Contact Karen Nipps at 495-2509 for more information.

Drawings from the New Yorker

This exhibition features a selection from the Melvin R. Seiden Collection of Original Drawings from the *New Yorker*. November 16 through January 14, 2000, Lammot du Pont Copeland Gallery, Pusey Library. Contact Anne Anninger at either 495-2444 or anninger@fas.harvard.edu for more information.

View the Exhibitions listing at <http://hul.harvard.edu/exhibitions/>.

Digital Imaging Facility Established

Widener Library is home to a new Digital Imaging Facility established by the Harvard College Library (HCL). Staffed by the Digital Imaging Group (DIG), the new facility complements the systems infrastructure that is being developed through Harvard's Library Digital Initiative (LDI) in support of the acquisition, creation, delivery, storage, and management of digital information resources of enduring value. With the development of the Digital Imaging Facility, Harvard's libraries have a new tool for extending their reach to the scholarly community.

The creation and distribution of digital reproductions of library materials is not unlike the traditional practice of circulating multiple copies of high-demand publications in order to facilitate access. By providing digital surrogates of collections, libraries can protect materials from repeated handling and the risk of loss, and at the same time enhance opportunities for discovery and research.

However, unlike other types of facsimiles (reprints, microfilm, and preservation photocopies, for example), digital copies are elastic. They can be delivered on a variety of media and recast, again and again, in new forms appropriate to the particular applications that they are intended to serve. Linked to descriptive indexes and searchable texts, digital images are integral features of some of the most powerful library applications available and under development today.

HCL plans for adding a digital imaging capability to the reformatting services it has traditionally made available to Harvard repositories began in 1998, as part of an ongoing commitment to exploit available technologies in support of teaching, research, and scholarship. Closely aligned with LDI's goal to build infrastructure, DIG's mission is to provide quality scanning services and staff expertise in support of creating persistent digital collections. The group has begun to work closely with LDI staff, HCL Information Technology Services, and various library departments to implement technical and management strategies consistent with LDI objectives. Scanning has been underway since August 1999.

STAFFING

Bill Comstock, manager of DIG, comes to Harvard from the MIT Libraries, where he was Technical Supervisor for Document Services, an

innovative department that provides digital imaging and micrographics services for the MIT community. DIG also includes photographers Robert Zinck and Stephen Sylvester, who were instrumental in establishing the College Library's Photography Studio in 1994; as well as Stephanie Mitchell, formerly of the *Boston Herald*, and David Remington, who comes to Harvard from the Digital Imaging Program at the University of California, Berkeley. The four photographers will provide rotating coverage for both the Digital Imaging Facility and the Photography Studio, lending depth and breadth of experience to both programs. Scanning technician Mingtao Zhao works on all aspects of document scanning, including metadata creation, and also brings advanced computer skills to the group.

SPACE AND EQUIPMENT

The Facility was planned by Stephen Chapman, Preservation Librarian for Digital Initiatives in the Harvard University Library Preservation Center and the LDI Reformatting Advisor. Drawing on the experience of colleagues, consultants, and industry experts, Mr. Chapman developed a space plan and selected equipment. Jay Willwerth, Head of HCL Imaging Services, and Paul Bellenoit, Director of Facilities and Security for HCL, were instrumental in planning and overseeing construction.

The Facility is fitted out with

DIG's mission is to provide quality scanning services and staff expertise in support of creating persistent digital collections.

color-balanced, indirect lighting and environmental controls necessary to achieve high-quality digital photography, including color management when required. Lighting, surface finishes, and calibrated equipment create a viewing environment where digital images can be accurately evaluated against the source materials. The facility is currently equipped for grayscale and color digital photography, and black & white and grayscale scanning of printed materials.

Other services include the creation of



L. to R. Stephen Sylvester, Photographer; David Remington, Photographer; Stephanie Mitchell, Photographer; Bill Comstock, Manager of the Digital Imaging Group; Mingtao Zhao, Scanning Technician; and Robert Zinck, Photographer.

selected metadata, standards-based quality assurance procedures, a wide variety of image processing, and data transfer.

Although digital cameras and scanners are readily available in today's marketplace, there is a significant difference in functionality and quality between devices manufactured for the home and office, and the more versatile, high-end image capture systems that equip facilities such as Harvard's. The first camera system that has been configured balances quality with production. The benefits of this high-end, area-array camera are that pixels are rendered accurately and consistently, and that specialized software can be used to control tone and color reproduction. Depending upon the settings used, the camera captures 6 to 36MB files in just seconds.

Cool, UV-filtered florescent lights protect source materials from heat damage during photography, and an apochromatic lens designed specifically for use with digital camera systems eliminates subtle color distortions ("color fringes") commonly noticeable when images are dramatically enlarged.

While images of inferior quality may go undetected in the low-resolution derivative versions that are typically delivered to today's computer screens, the high-resolution monitors of tomorrow's desktop will be less forgiving. The carefully crafted master digital images that are being created for Harvard today are intended to serve as many future applications as possible.

BEYOND EQUIPMENT: THE IMPORTANCE OF IMAGE PROCESSING AND METADATA CREATION

The production of high-quality digital images, however, is only one of many objectives that must be met in order to achieve the broader goal of creating long-lasting library resources. The persistent value of digital collections also depends upon whether various aspects of digital images can be measured objectively. By routinely recording information about digital image production as administrative metadata, DIG will provide information managers now and in the future with documentation that is critical to understanding the visual characteristics of the original objects that the images represent, and to migrating image files without information loss. In addition, the integration between the DIG and LDI systems ensures that files and metadata can be moved efficiently to a digital repository where they can be given persistent names and can be managed over time.

THE PRESERVATION FACTOR

While it may be some time before successful models for long-term preservation of digital files render digitizing an acceptable strategy for reformatting deteriorating library materials, preservation is nonetheless a compelling incentive for creating an in-house imaging facility. The administrative relationship of DIG to HCL's Preservation &

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DIGITAL IMAGING FACILITY

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Imaging Department demonstrates the Library's commitment to ensuring that source materials—especially those that are fragile, rare, or unique—are handled in a secure environment and are not compromised in the execution of any imaging project.

Integrated with the preservation program, DIG enjoys a close relationship with the HCL Conservation Lab and with special collections conservators in the Harvard University Library Preservation Center. Conservators will collaborate with imaging staff on an ongoing basis, and over the course of the next several months will train imaging staff to recognize a wide range of information media and binding structures—their special vulnerabilities and subtle signs of deterioration.

Microfilming staff in the Preservation & Imaging Department will be equally close allies of DIG. In cases where projects seek to both preserve and provide improved access to existing collections, hybrid solutions can be developed wherein the functionality of digital files is backed up by the permanence of preservation microfilm. Initiatives involving both the creation of microfilm from computer files and the production of digital images from preservation microfilm have been implemented successfully.

FUTURE DIRECTIONS

While during its first year of operation DIG will focus its efforts on projects that have been vetted through the Library Digital Initiative and/or the HCL Digital Library Working Group selection processes, additional digitizing services will be considered based on community feedback. Following is a list of projects in DIG's fall 1999 queue:

E-Reserves

This is a collaborative project undertaken by the Office for Information Systems and the Harvard College Library to experiment with providing traditional library reserves in an online environment. Five libraries in the College are participating in a four-semester demonstration project involving selected courses in the Faculty of Arts and Sciences. The project has tackled a broad range of issues, including selection policy, copyright, security, work flow, scanning, metadata creation, and online article delivery. Articles are scanned and converted to PDF documents for delivery from Web sites that have been created for each participating course. The E-Reserves system is undergoing significant revision to accommodate other faculties, media, and user populations.

DCPP

The Digital Contents Pilot Project (DCPP) is a collaborative effort

between OIS and HCL to test the concept that online access to the tables of contents for journals stored at the Harvard Depository will serve as an adequate substitute for browsing the printed volumes, especially if they are not well indexed in secondary sources. Nineteenth-century European local history journals that are in the public domain have been selected from the Widener stacks for the pilot project. Images of the tables of contents pages for the selected titles can be displayed on the Web through links in bibliographic records.

Nuremberg Military Tribunals

The Harvard Law School Library plans to make available on the Web selected items from its collection of documents related to the Nuremberg trials. These materials, which include everything from faded gray typescript to bold white type on a black background, will be digitally photographed. Data-rich, unprocessed images will be saved as "source" files, and derivative images will be optimized for Web viewing.

Harvard University and Radcliffe College Archives

Through this LDI Challenge Grant Project, the Annual Reports of the presidents of Harvard and of Radcliffe from the nineteenth and twentieth centuries will be digitized. Conversion will include the creation of digital images and processing of the images to create

searchable text. This project is conceived as the first step in building the Harvard/Radcliffe On-Line Historical Reference Shelf, a long-term undertaking to make basic sources for the history of the two institutions available over the Internet.

Harvard-Yenching Library, Hedda Morrison Collection

This LDI Challenge Grant project involves the digitizing of Hedda Morrison's photograph albums, a rich collection of images documenting the social, economic, and cultural life of China during the 1930s and 1940s. Catalog information and thumbnail images of the materials will be available in the new VIA union catalog of visual materials, and reference-quality images will be accessible on the Harvard network.

Baker Library

With LDI Challenge Grant support, Baker Library plans to digitize American trade cards from the 1870s through 1890s. These early forms of advertising are valuable sources of information for social and cultural historians. Catalog information and thumbnail images of the materials will be available in both the Baker Voyager online catalog and in the new VIA union catalog of visual materials, and reference-quality images will be accessible on the Harvard network.



A photograph held by the Harvard-Yenching Library from the Hedda Morrison Photographs of China Collection that will be digitized in the new HCL Digital Imaging Facility.



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