# OFFICE OF STRATEGIC INITIATIVES

Established in fiscal 2001, the Office of Strategic Initiatives (OSI) expanded in fiscal 2002 to meet growing demands. Comprising the National Digital Library (NDL) and Information Technology Services (ITS), OSI is responsible for strategic planning for the Library's digital initiatives, which includes developing a full range of digital policies and operations for acquiring, describing, and preserving content created and distributed in electronic form (such as electronic journals and books, Web sites, and databases). In addition, OSI will manage the life cycle of digital materials as part of the Library's universal collection for the nation.

The primary focus of OSI in fiscal 2002 was to plan for developing and implementing a congressionally approved National Digital Information Infrastructure and Preservation Program (NDIIPP). The program was funded by a fiscal 2001 congressional appropriation of $99.8 million. NDIIPP goals are as follows:

- to encourage shared responsibility for digital content and to seek national solutions for the continuing collection, selection, and organization of historically significant cultural materials regardless of evolving formats;
- to provide the long-term storage, preservation, and authenticity of those collections; and
- to maintain the persistent, rights-protected access by the public to the digital heritage of the American people.

Development of the NDIIPP plan began with a yearlong, nationwide, fact-finding effort and included four major activities: (1) consulting with stakeholders in the archival and information technology community, (2) providing background research, (3) offering scenario planning, and (4) defining the components of the digital preservation infrastructure. Details of NDIIPP are now available on the program's new Web site at <www.digitalpreservation.gov>.

*The National Digital Information Infrastructure and Preservation Program Web site at <www.digitalpreservation.gov> provides information about the Library's collaborative efforts to preserve the nation's digital heritage.*

## NATIONAL DIGITAL LIBRARY PROGRAM

During fiscal 2002, the NDL continued to receive widespread acclaim as a provider of free, high-quality, educationally valuable American cultural and historical resources on the Library's American Memory Web site. Digital conversion activities at the Library are the product of an integrated program coordinated by OSI, the Public Service Collections, and the Area Studies Collections Directorates in cooperation with other Library divisions and other repositories. At year's end, more than 7.8 million items from the Library of Congress and other institutions were available online or in digital archives.

Fourteen new multimedia historical collections were added to the American Memory Web site, bringing the total to 116. Nine existing collections were expanded with more than 380,000 digital items. In addition, the ITS Digital Scan Center mounted seven new Library exhibitions on the Library's Web site, and three continuing exhibitions were updated (see also Appendix G: Online Collections and Exhibitions).

### Collaborative Initiatives

Work continued on International Horizons, a project dedicated to fostering international collaboration for joint digitization efforts. The National Library of Russia and the Russian State Library continued to contribute digitized historical materials to Meeting of Frontiers, an English-Russian bilingual Web site that is part of the International Horizons project. The Meeting of Frontiers site currently includes more than 6,800 bibliographic items with more than 100,000 digital files. Recent additions to the collection expanded the story of people from Siberia exploring the land that is now Alaska.

Historias Paralelas, another component of International Horizons, continued to grow with collections from both the United States and Spain. In fiscal 2002, items from the Library's Sir Francis Drake Collection of rare books and the manuscript collection of Hans P. Kraus Spanish American Documents were digitized and added to the site. Library of Congress staff members visited the National Library of Spain to strengthen the relationship between the two institutions. Also, after an agreement with the National Library of Brazil, the United States and Brazil began developing a cooperative Web site called Brazil's Evolving Culture: Mirror of the World.



*In 1943, Ansel Adams photographed the Manzanar cemetery. His photograph is one of more than 200 that document the Japanese internment at the Manzanar War Relocation Center in California. This photographic collection was made available on the Library's American Memory Web site in 2002 to mark the 100th anniversary of Adams's birth. (Photo by Ansel Adams)*

*The Atlantic World: America and the Netherlands* represents a collaborative digital effort between the Library of Congress and the Koninklijke Bibliotheek, the national library of the Netherlands. The pilot project, which will be released in July 2003 as part of International Horizons, focuses on Dutch exploration in the Americas and Dutch influence on American culture.

The Library partnered with the Open Society Institute (Soros Foundation–Russia) to sponsor a grant-awarding competition for digitizing historical collections in Siberian institutions, establishing a mobile digitization team in 2001, and receiving more than 2,000

digitized items in 2002. In addition, the Library of Congress and the Staats- und Universitäts-Bibliothek (SUB) of Gottingen, Germany, concluded an agreement for digitizing SUB's famous Asch Collection.

During fiscal 2002, the Library of Congress participated in developing the International Children's Digital Library (ICDL), a cooperative project with the Internet Archive and the University of Maryland to build a Web site containing international literature for children. The Library selected and digitized approximately sixty children's books from its general collection and its Rare Book and Special Collections Division as the Library's initial contribution to the site. The ICDL Web site was set to be launched on November 20, 2002, at the Library of Congress to coincide with the celebration of National Children's Book Week.

Six award-winning Library of Congress–Ameritech collections debuted online this year, bringing the total to twenty-two. Beginning in 1997, the Library sponsored this three-year competition with a gift from Ameritech Corporation to enable the public, research, and academic libraries, museums, historical societies, and archival institutions (with the exception of federal institutions) to digitize American history collections and to make them available on the Library's American Memory Web site. Those collaborative digital collections complement and enhance the Library's existing online resources. Thirty-three institutions received $1.75 million of support to digitize twenty-three projects.

OSI continued to broaden access to the unique materials digitized for American Memory and to encourage cooperation among repositories of cultural heritage. By September 2002, more than 120,000 records for items in nine American Memory collections were shared with other institutions by using the emerging standard of the Open Archives Initiative (OAI) Protocol for Metadata Harvesting. Included were maps, early movies, broadsides and other printed ephemera, sheet music, dance manuals, and four collections of photographs. Maps are added every quarter, a substantial addition was to be made to the broadside collections in fall 2002, and additions to the photograph collections are planned. For the collections made available so far, the records are available either in the MARC (machine-readable cataloging) format or as simple Dublin Core records. The records have been harvested for inclusion in several union catalogs of cultural materials, including the OAI service from the University of Michigan and the Cultural Heritage Repository from the University of Illinois at Urbana-Champaign. Using the OAI Protocol for Metadata Harvesting, the Library has contributed a total of seven collections to the Cultural Materials Initiative, a pooled resource that the Research Libraries Group is assembling from digital resources of participating members.

*Educational Outreach*

The Office of Strategic Initiatives continued to reach out to the education community through its electronic programs. Web sites such as Today in History, America's Library (a joint project with the Public Affairs Office), and the Learning Page provide useful educational materials to teachers, students, and the general public.

The Today in History site, which offers essays in American history for each day of the year, added a notable essay on the September 11, 2001, attacks on the United States. The site is as popular with students and teachers as it is with history buffs looking for a daily dose of American history.

America's Library, an interactive Web site for children and their families, added stories and activities based on the collections of the Library. The site has won numerous awards since its launch on the Library's Bicentennial date of April 24, 2000, and is one of the most popular online offerings of the Library.

The Learning Page was entirely redesigned in fiscal 2002 to increase its usefulness. Eighteen new lesson plans, designed by teachers who have participated in the Library's American Memory Fellows Program, were made available and included topics such as "The Civil War Through a Child's Eye," "Marco Polo's Travels on the Erie Canal," and "African Americans during the Gilded Age." A new feature, Immigration, was added to the Learning Page to show students how immigrants have shaped America. A Community Center was developed as an interactive section of the Learning Page to allow users to conduct online discussion boards and live chats based on a series of themes. Collection Connections activities were added to provide activity ideas for using the Library's digital collections in the classroom.

During the year, seventy-nine videoconferences, with participants from across the country, were held in the Learning Center. Learning Center staff members (Digital Reference Team) made presentations, led workshops, and demonstrated the Learning Page at the annual conference of the National Council for Social Studies Teachers, the American Association of School Librarians conference, the National Educational Computing conference, the Connecticut Educators Computer Association, and the National Middle School Association conference.

The Library held the third Adventure of the American Mind Summer Institute for teachers. The goal of the program is to aid educators in using online primary sources in the classroom as a way to develop critical thinking skills in students. The Education and Research Consortium of the Western Carolinas (ERC) sponsored the institute, which took place in Asheville, North Carolina. Before the summer institute, participants in the program attended a semester-long class at one of the following clusters: Brevard Community

College, Furman University, Mars Hill College, in the Carolinas at Montreat College, Western Carolina University, and in Arizona at Maricopa Community College. The institute included visits to the Library of Congress, the University of Virginia, and Monticello (Thomas Jefferson's home in Charlottesville, Virginia). The trip to Virginia and the Library of Congress was intended to give participants a "Jeffersonian experience" that would allow teachers to immerse themselves in the history of the third president and to view primary sources at the Library such as rare books and manuscripts relating to Jefferson, many of them in his own hand.

The Learning Center hosted 392 programs for 7,173 visitors. The Learning Center staff designed several new workshops offered to educators and students either in the sixteen-seat computer classroom or off-site by videoconference. A total of 559 educators attended 38 in-house workshops, and 2,038 educators participated in 82 videoconference sessions. The Learning Center offered 160 theater-style programs for 3,362 guests and 17 informal programs at the alcove workstations for 48 guests. In addition, 28 programs for 863 guests used a combination of spaces in the Learning Center. In keeping with the Learning Center's focus on education, the classroom and videoconference participants were almost all classroom teachers, librarians, school media specialists, library science graduate students, and undergraduate education majors. The Learning Center continued to host foreign scholars and dignitaries plus members of Congress and their guests. Besides the active workshop and presentation schedule, the Learning Center staff used e-mail to handle more than 7,300 requests for information about American Memory and the Learning Page—twice last year's number.

## INFORMATION TECHNOLOGY SERVICES

Information Technology Services provided reliable and responsive support to the Library and its external customers in fiscal 2002. The Library's Web servers processed several billion transactions. Telephone operators responded to 59,720 telephone calls, and the ITS Hotline formally logged 10,445 requests and problem reports.

ITS welcomed a new director, James Gallagher, in July. At year's end searches had begun for a new deputy director and a special assistant. ITS added several staff members from the National Digital Library, who will contribute their significant expertise in digital conversion and project management. They also brought valuable knowledge of the Library's collections and curatorial work. Several staff members from the Computer Operations Group were selected to fill positions as multimedia specialists in the User Support Group.

*"Boy with Shadow," ca. 1950–1960, by Toni Frissell. When They Were Young: A Photographic Retrospective of Childhood is one of seven new exhibitions mounted on the Library's Web site by the ITS Digital Scan Center. (Photo by Toni Frissell)*

Use of the Library's online computer resources continued to increase while response time remained at a consistently high level. More than 2 billion transactions were recorded on all of the Library's computer systems, up from 1.3 billion in fiscal 2001. The public legislative information system known as THOMAS continued to be an enormously popular resource, with 12.9 million transactions logged on average each month as compared with 10 million monthly the previous year. Two new sections, Presidential Nominations and Treaties, were added to THOMAS, and the Status of Appropriations table—a frequently updated and heavily used resource—was redesigned.

ITS continued to play a crucial role in the Library's expanding presence on the Internet by providing enhanced technical support. Working with the National Digital Library, ITS mounted fourteen new American Memory collections and significantly updated nine others. Seven new exhibitions were mounted on the Library's Web site by the ITS Digital Scan Center. The center also updated the online versions of three continuing exhibitions: *American Treasures of the Library of Congress*, *World Treasures of the Library of Congress*,

and *Bob Hope and American Variety* (see also Appendix G: Online Collections and Exhibitions). Use of the American Memory collections increased from 28.5 million a month in fiscal 2001 to 38.8 million a month in fiscal 2002. America's Library logged more than 154 million transactions, an average of nearly 13 million a month—up from 11 million a month the previous year. The Library's online public access catalog recorded an average of more than 24 million transactions a month.

In addition, ITS created several new Web sites while updating and supporting existing sites. New Web sites designed by ITS included Emergency Management Information for Staff, International Horizons, Voice Systems, and LC Ethics. Use of the Library's Web site was enhanced by the redesign of the major public Web pages and the addition of a powerful search engine. ITS provided templates to help Library Web page designers take advantage of redesigned Web site formats and the new search engine. At year's end, the Library completed its fifty-fourth consecutive week on the top ten list of federal government Web sites as measured by Keynote, one of the leading commercial raters of Web site response times. The Library's site also received a number of accolades throughout the year (see also Appendix D: Honors).

ITS led a Library-wide effort to implement a new correspondence control system (ccmMercury). The new system from WorkDynamics Technologies Inc. provides electronic assignment, routing, and tracking of official correspondence and the development of draft responses. The system can accommodate traditional or electronic formats. The original documents can be scanned for distribution while originals are retained immediately by the Records Management Division. This new paperless solution to the correspondence control problem was implemented just as concerns arose about paper correspondence after the discovery of anthrax in the Hart Senate Office Building.

The ITS hotline realized a long-held goal of providing twenty-four-hour-a-day, seven-day-a-week support to Library staff members. The Library now serves a customer base that is active around the clock. The many Library staff members who support the electronic collections and systems are increasingly engaged in work outside of normal business hours. Staffed primarily with contractors, the hotline relies on a growing, online knowledge base to provide first-line responses to callers. Having this constant presence of technically sophisticated staff members provides the opportunity to identify system problems in a more timely manner and to reduce the delay in effecting a return to service.

The Telecommunications Team was responsible for upgrading 1,582 network connections from Token Ring to Fast Ethernet technology in 2002. Logistical barriers to completion of this work in the Adams and Jefferson Buildings have led to an evaluation of wireless network technologies as a solution in some instances.

ITS completed its sixteenth year of providing customized computer training to the Library of Congress staff. During the year, course offerings included File Management, Windows 2000, WordPerfect 9.0, GroupWise 5.5, Quattro Pro 9.0, and Hewlett Packard Scanner Techniques. With the introduction in February of ccmMercury, ITS conducted training for more than 200 staff members in the use of both the proprietary, stand-alone client software and the Web-enabled version. In all, approximately 530 staff members benefited from focused training sessions.

Working with expert consultants, ITS completed a comprehensive analysis of commercial storage options to identify products most appropriate to the Library's digital storage needs. The Library currently maintains eighty terabytes of online storage, and at year's end ITS was evaluating proposals to increase that base by at least twenty-five terabytes. During fiscal 2002, ITS upgraded its tape backup capabilities to ensure adequate levels of remotely stored backups of critical data. ITS added three new IBM RS/6000 servers to the enterprise computing facilities. Those servers are PS 690 models with eight-way POWER4 Turbo processors.

Responding quickly, ITS staff members supported the Library of Congress's Emergency Management Team in the hectic weeks following September 11, 2001 (9/11), and the subsequent anthrax testing of the Library's buildings. Furthermore, the ITS Telecommunications Administration Team provided extremely responsive support to the Senate Sergeant at Arms and the Office of the Attending Physician as they rushed to set up an anthrax testing station at the Library's child care center. Similarly, ITS staff members supported the effort to prepare the Landover Annex facility as an emergency management center.

In February, the Library accomplished a significant upgrade to the application software underlying the integrated library system (ILS), which is used by more than 3,000 staff members and by thousands of public users. The upgrade required months of innovative and coordinated planning among Library stakeholders, the vendor's staff, and ITS with the challenging goals of minimizing downtime while ensuring system integrity throughout the process. The result was a successful upgrade that will serve as a model for expediting future upgrades.

Working with a high-performance computing consultant, ITS and the ILS vendor conducted system performance analyses that resulted in a multiyear plan to meet the priority goal of improving access for ILS users, both inside and outside the Library. During the year, a new ILS database was set up for the Congressional Research Service (CRS), and an inventory management system for the off-site book storage system at Fort Meade, Maryland, was being planned for coordination with data from the ILS.

Several new application systems that are based on the Remedy software platform offer new levels of administrative controls over critical Library processes. Capitalizing on the reusability of code and increasing staff experience with Remedy, its developed new Remedy-based systems at a much quicker rate than was previously possible. For example, the Office of the General Counsel now tracks all requests of depositions, briefs, and other legal services through a customized system built on that platform. Similarly, the Law Library's request tracking system—Basic Activities Tracking System—was expanded and enhanced so it can be integrated into the workflow across the Law Library. The Collaborative Digital Reference Service (cdrs) pilot project, conducted jointly by the Library and the Online Computer Library Center (oclc), was designed and operated on Remedy during its successful first phase. The pilot concepts of cdrs were then integrated into the expanded and renamed QuestionPoint system.

The Library received special supplemental funds to create a remote alternate computing facility to ensure the continuance of computing and telecommunications service to the Congress and the nation if a disaster occurs on Capitol Hill. Working with staff members from the House, the Senate, the Architect of the Capitol's Office, and the General Accounting Office, its evaluated many candidate sites for an Alternate Computing Facility (acf). At year's end a final decision was reached, and planning was under way to install telecommunications services and computer room hardware. The acf will create a fully redundant facility for the continuance of computing services in the event of catastrophic failure on Capitol Hill.

In March 2002, the Congressional Alert Service (cas) was added to the Legislative Information System to personalize legislation tracking by congressional staff members. Whenever a new bill or a change in bill status matches predefined criteria, an alert notice is sent by e-mail. cas was created jointly by its developers and the Congressional Research Service's automation staff members. Working together, they defined the cas requirements. As a result of this successful collaboration, the delivered system is accurate and stable.

The new crs Products system completed its first installation phase at the end of fiscal 2002 and was on target for final implementation in early fiscal 2003. The system searches the summaries of crs Products, rather than bibliographic records, and it gives direct links to the full documents in a choice of formats, such as pdf and html. crs Products fulfills crs's goal of furnishing congressional staff members with the most relevant crs documents in an easy-to-use format.

Infrastructure support for crs and Congress was increased with the relocation of the crs office automation and quantitative analysis servers to the its computer room. The relocation brought those mission-critical devices into an environment with consistent and

redundant power, dependable cooling, and card-controlled access. Also noteworthy this year was the installation of router-based encryption of e-mail between CRS staff members and their customers in the House and Senate.

During the year, ITS continued to safeguard the Library's information systems resources by implementing technology solutions and oversight for the Library-wide Computer Security Coordination Group. No significant computer security incidents were reported. An internal penetration study initiated by the Inspector General's Office revealed no significant holes in the Library's network or computer defenses. Online and instructor-led security awareness training was provided to 1,800 staff members, bringing the Library into compliance with the 1987 Computer Security Awareness Act. A pilot for online professional security training was initiated. An active publicity campaign included a successful Computer Security Day celebration, brown-bag lunch briefings, articles in the Library's staff newsletter, and an expanded computer security Web site. E-mail filtering software intercepted more than 63,000 potential viruses. E-mail spam filtering software shielded staff members from more than 500,000 junk e-mail messages. Additional firewalls were implemented and virtual private network connections, which provide secure access from remote sites, were extended locally and to the Library's overseas offices. On the policy front, a draft document of the Library-wide information security policy was submitted to the Deputy Librarian for initial review. It sets the foundation for developing application-specific security reviews.

Support for the Copyright Office included the continuing development of a Web-based replacement for the Copyright Office In-process System (COINS); collaboration with the vendor, the Corporation for National Research Initiatives, for turnover of development work on the Copyright Office Electronic Registration, Recordation, and Deposit System (CORDS); and participation by ITS staff in the Copyright Office's Business Process Reengineering effort.

Major accomplishments for the Copyright Office's Licensing Division System (LDS) included implementing the refund subsystem that automates the process of authorizing, verifying, and issuing a refund to cable, satellite, and Digital Audio Recording Technology (DART) system operators who have overpaid their copyright royalty fees. The new subsystem allows for the online entry of a refund and up to three levels of verification (depending on the amount to be repaid) in the examining section before the refund is automatically transferred to the fiscal section for payment. At that time, the new subsystem allows for the online entry and verification of a refund authorization, an actual refund, and, in cases where a refund cannot be cashed, a refund cancellation. The existing application was converted to Oracle Forms 6i and the Windows 2000 platform. Also, new

LDS user reports were developed, and a cable name and address file was produced for the Government Printing Office contractor.

With a total of twelve staff members devoted to multimedia productions and to a growing awareness among the Library's managers of the desirability of making events available on the World Wide Web, the development of programming for the Library's Web site increased significantly. ITS provided digital media products for an expanding customer base in the Library. Notable products have included an introductory video to explain the new online reference program, QuestionPoint; coverage of programs including the Benjamin Botkin conference for the American Folklife Center, the *New York Times* Writers Panel on 9/11, and the Abraham Lincoln Institute; new entries to the growing body of the Globalization and Muslim Society Series; and the Librarian's "Welcome" message for the National Book Festival.

ITS again produced the *Library of Congress Telephone Directory* in cooperation with staff members throughout the Library. More than 5,000 copies were distributed. The online Searchable Employee Directory was updated by the ITS staff throughout fiscal 2002.