

Director, MIT Libraries

FY2012 was a year in which the [MIT Libraries](#) continued to consolidate and leverage the opportunities made possible by the Libraries' organizational restructuring of FY2011. With support from the provost, the Libraries' budget was stabilized at a "new normal" level that enabled the Libraries to resume forward thinking about the provision of information services and information resources to the MIT community.

One important step in resuming a forward-looking focus was a Library Council retreat held in January. In preparation for this meeting, and in subsequent planning processes, the MIT Libraries identified four areas of activity for special emphasis. Each initiative takes advantage of the experience and talent of new and existing Libraries staff, and several reflect recommendations of the Committee on the Library System and the MIT Libraries Visiting Committee. All are aligned with the future vision of the MIT Libraries. The initiatives are as follows:

- Creating a focused set of projects to improve near-term digital content management of specific collections and develop a shared understanding of the infrastructure and life cycle management approaches needed to manage digital content in the MIT Libraries over the long term.
- Developing an improved technical infrastructure to support the open access work flow, including creating more efficient ways to identify faculty-authored papers and automating deposits where possible.
- Improving the ease with which the MIT community can discover and use the wealth of electronic resources available via the MIT Libraries.
- Engaging with the MITx initiative to identify ways the Libraries can best support and partner with the initiative.

Each of these initiatives is led by a member of the Libraries' Steering Committee.

In FY2012 the MIT Libraries welcomed a number of outstanding individuals to our ranks, each of whom is already contributing significantly to the Libraries' vision for the future.

Tito Sierra joined the Libraries in January as associate director for technology. Tito brings a wealth of experience from both the academy and industry to his broad responsibility for technology strategy and management across the Libraries.

Micah Altman was hired in March as director of research and head/scientist, Program for Information Science. Charged with leading and growing the Libraries' active research program in applied information science, Micah brings deep experience in a broad range of research-oriented activities including information science, research data management, and scholarly communication.

In February, Nancy McGovern likewise brought her stature as a national and international leader in the field of digital curation and preservation to the newly redefined position of head, Curation and Preservation Services.

Other new positions highly relevant to the Libraries' vision include program head for the Aga Khan Documentation Center and digital archivist in the Institute Archives. Across the MIT Libraries, these and other redefined positions are key to the success of the MIT Libraries in the future.

Furthering the Libraries' new strategic focus and organizational structure are two Libraries fellow positions that were established in FY2012. These two-year fellowships enable the MIT Libraries to provide exceptional early-career library/information professionals with an opportunity to conduct research and contribute professionally to program areas of distinction and strategic importance. Both the Digital Curation and Preservation Fellowship and the Scholarly Publishing and Licensing Fellowship have attracted extremely strong pools of applicants.

Nor have the Libraries neglected the impressive strengths resident in our existing staff. In recognition of the ongoing impact of the reorganization on existing staff, training and professional development activity rose sharply during FY2012. The highly talented individuals who contribute to the MIT Libraries are a continuous source of energy and innovation for our work and mission.

Over the course of the year, the Libraries also bade farewell to five retirees whose collective service totaled over 145 years. FY2012 additionally saw the departure of Steven Horsch, who had ably led the Libraries' Office of Donor Relations and Stewardship since 2009. Steven's contributions are reflected in the growth in participation in the Libraries' annual appeal program as well as the many successful events hosted by the Libraries during FY2012.

Innovation continued to distinguish the Libraries' extensive service offerings during FY2012. A new service, Borrow Direct, allows MIT faculty, students, and staff members to request circulating materials directly from other research libraries in the Borrow Direct cooperative. Members of the MIT community who have MIT Libraries borrowing privileges and a Kerberos certificate are now able to borrow circulating books directly from the libraries of Brown University, Cornell University, Columbia University, Dartmouth College, Harvard University, the University of Pennsylvania, Princeton University, and Yale University.

Other examples of FY2012 innovation include:

- Two pilot projects that experimented with alternative approaches to purchasing electronic books at the point of need, a concept that significantly expands the collection development methods available to the Libraries
- The transfer of curation responsibilities for the Aga Khan Trust for Culture Archnet Digital Library to the Libraries, a project that involved considerable creativity

- A pilot project to manage and store video in the cloud using DuraCloud technology, a first step toward better stewardship of an increasingly prevalent medium
- Academic Media Production Services (AMPS) support of the initial, fast-tracked MITx course offering, a project that required creativity and agility well beyond the norm
- The extraordinary gift to the Institute Archives and Special Collections of Noam Chomsky's personal archives, a generous act that presents numerous opportunities for innovation as the collection is processed and digitized

Innovation also pervaded the Libraries' space planning activities in FY2012. Shepley Bulfinch completed a review of current Libraries spaces with the goal of discovering opportunities to develop innovative work and study spaces that will support 21st-century pedagogies and a changing student body. Dovetailing with responses to the Libraries' Triennial User Survey and the report of the Working Group on the Future of Campus Teaching and Learning Spaces (of which the MIT Libraries was a sponsor), this review illuminates exciting opportunities to transform a number of Libraries spaces for the benefit of on-campus education.

Although it is the nature of an annual report to focus on the novel and exciting, emphasizing only new achievements runs the risk of deemphasizing the extraordinary diligence and intelligence that were routinely brought to bear on the critically important work associated with our evolving and highly effective operations. The day-to-day responsibilities of instructing students; promoting, discovering, and preserving knowledge; and improving scholarly communication within and beyond MIT require, in the words of Diane Geraci, associate director of information resources, "exceptional service and innovative leadership across a wide range of programs and systems."

Because the MIT Libraries operate in the context of other academic and administrative units at MIT, innovations such as the "Digital MIT" initiative, the investment of Information Services and Technology (IS&T) in mobile applications, and the development of a vastly improved space planning framework have produced opportunities and workflow changes from which the Libraries have also greatly benefited. We thank our MIT colleagues for the advances made possible through those efforts.

The accomplishments of the MIT Libraries were too many and too varied to cover in detail in this brief overview; additional details are provided in the reports of the individual associate directors that follow. No annual report of the MIT Libraries would be complete, however, without sincere thanks to the staff of the Libraries, to the faculty and students who serve so thoughtfully on the Committee on the Library System, and to the new president of MIT, L. Rafael Reif, for his support of the MIT Libraries during his term as provost for the Institute.

Ann J. Wolpert
Director of Libraries

Administrative Services

Highlights of the Year

Administrative highlights of fiscal year 2012 included the following:

- Fiscal conditions returned to a normal albeit restrained status, with new budget allocations for the first time in three years.
- Due to the return to a normal fiscal state and the backlog of initiatives awaiting action, the number of positions posted and filled over the course of the year was unusually large.
- The Libraries commissioned a study by Shepley Bulfinch to assess the state of library spaces and to provide a framework for future space planning.
- The position of director of research was created to focus on the Libraries' Program for Information Science. Research activity increased substantially in the second half of the fiscal year.

The MIT Libraries' All-Staff presentations during AY2012 included the following agenda topics:

Fall

- Understanding Our Users: Themes from User Experience Studies
- Current Software Development and Analysis Activities
- New Department Brief: Specialized Content and Services

Winter

- Pilot Project to Preserve MIT-Created Video Using DSpace and DuraCloud
- Harvard Library Lab Project: The Challenge of Faculty Archives

Spring

- State of the Libraries
- Report of the Working Group on the Future of Campus Teaching and Learning Spaces
- Results of the Fall 2011 User Survey

Budget and Finance

Fiscal year 2012 can be characterized as a return to “normal” fiscal conditions at the Institute and in the Libraries. A budget request was submitted and an encouraging response was received, with new base additions in several categories as well as some nonbase funds. The most significant base budget additions were in collections, both to offset publisher price increases and to purchase additional content in support of Institute initiatives. The Libraries also received new base funds to restore a portion of the service hours cut in the FY2010 and FY2011 Institute-wide budget reductions. The loss of open hours was felt very sorely by students, and their strong desire to see them increased was recorded in multiple feedback loops. On the nonbase side, funds were allocated for several digital initiatives that extend the Libraries’ activities in important new directions. Without such seed funding, the Libraries cannot address the growing needs in critical areas such as digital preservation and archiving.

Several other specific fiscal highlights bear mention, as follows.

Furlough Savings

In FY2011, the Libraries imposed two weeks of mandatory furlough for all staff in order to meet budget reduction mandates without causing even deeper immediate cuts to collections, services, and staffing levels. Those temporary savings of nearly \$400K needed to be replaced with permanent savings eventually, and it was felt that would be possible as opportunities presented themselves in the short term—including greater operational and collaborative efficiencies, selective position attrition, and increased resource development. The Libraries made significant progress in identifying permanent savings in FY2012.

Increased Centralization

The Libraries’ 2010 reorganization presented an opportunity to restructure many of our fiscal practices with regard to operations. Those practices were further refined in FY2012 as experience was gained and as several administrative assistant roles were redefined and balanced. By centralizing most fiscal review and control activities—not purchasing but rather documentation and account reconciliation—we have improved compliance with required Institute practices and reduced the number of general ledger account inaccuracies. Essentially, time formerly spent by central fiscal staff adjusting and correcting local expense actions has been shifted to an earlier point in the process, eliminating most errors, satisfying audit requirements, and improving our ability to analyze expenses.

Serials Account Consolidation

In an effort led by Information Resources staff, the serials account structure within Aleph (the Libraries’ Integrated Library System) was changed from that of the divisional/branch libraries to a more consolidated structure reflecting the new organization. Changes were made to the account infrastructure in Aleph and SAP in order to synchronize the two systems.

Payment Consolidation

For many years, the Libraries have taken steps to increase the efficiency of vendor payment procedures since those activities produce thousands of transactions that carry a high administrative overhead. Due to workflow improvements in MIT's central fiscal offices, we can now consolidate payments to our largest monograph supplier (YBP) in a single monthly check, rather than having to order and process dozens of checks each week. This represents a substantial time savings for both the Libraries and MIT Accounts Payable.

Space

Space Study

The "Framework for Space Planning in the MIT Libraries: Phase One" study was produced by the architecture firm Shepley Bulfinch over the course of the year. The last comprehensive space planning effort in the MIT Libraries ("Libraries Master Plan") was completed in 2000 by Shepley Bulfinch as well. This year's process, which began in the fall of 2011 and was completed in early June 2012, focused on the development of a framework for library space planning for the next 5 to 10 years. Input was provided by numerous stakeholders including the Committee for the Review of Space Planning (CRSP), the Office of the Provost, MIT Facilities, the Faculty Committee on the Library System, the Library Council, and the Public Services User Experience Group. In addition to the Libraries' Desired Future State plan, the study took into account the important report of the Working Group on the Future of Campus Teaching and Learning Spaces (March 2012), as well as MIT's Vision 2030 Master Plan.

Capital Renewal Ranking Process

The Libraries participated in a new capital renewal ranking process instituted by CRSP in conjunction with its annual renovation request cycle. The ranking process created an opportunity for departments to weigh in on the relative condition and value of space assets under their control, in order to arrive at some common measures and priorities in terms of infrastructure renewal.

Projects Completed or in Process

The Barker eighth floor was converted from stack space to a dozen group study cubicles, funded jointly by the Libraries and CRSP.

A planning study funded by the Libraries to consider options for a GIS/data visualization lab/classroom was completed by Gensler and Associates in November 2011. In addition to articulating a program vision for the facility, it recommended a set of specifications that can be used to identify potential sites. An initial test fit in Hayden was unsuccessful, so alternatives will be sought in FY2013. Once a potential site is identified, a stage one design and cost estimate can be prepared for fundraising purposes.

In a project funded by the Libraries and approved by CRSP, the Barker Reading Room will be converted to a 24-hour study space by opening a new doorway directly from Building 10's fifth-floor elevator lobby. Concurrently the ceiling of the reading room,

including a central glass oculus, will be restored to its original state thanks to the generous gift of an anonymous donor. Work on both projects is expected to take place between August and December, with the new 24-hour service commencing in January 2013.

CRSP has agreed to fund restroom facilities on the fifth floor of Barker Library to meet the needs of the new 24-hour reading room.

CRSP funding has been requested for a full renovation of the east end of the Hayden basement (Building 14) to upgrade work areas for expanded resource sharing and digital scanning operations. This area is sorely in need of improvements.

CRSP has approved a project to create a staff work area for the expanded Aga Khan Documentation Center on the ground floor of Rotch Library (to be funded by the Aga Khan endowment).

The Digital Instruction Resource Center (DIRC) on the first floor of Hayden, which is the Libraries' largest and most heavily used instruction space, received upgrades to furnishings and equipment.

The Hayden vending machine area was upgraded with the addition of a coffee machine, fresh paint, a new tile floor, and improved lighting. These upgrades were carried out to provide minimum-level beverages and snacks for Hayden Library users who have been requesting a more convenient food service since Walker Memorial closed several years ago. This is no substitute for a café, but we hope it will help to mitigate the demand until a food service can be provided in Hayden.

Highlights from Other Administrative Areas

Assessment

The 2011 Triennial User Survey, developed last summer and early fall, was launched in October. The overall response rate dropped slightly from previous years (2005 and 2008) but remained relatively high (43.7%), with a consistent rate from faculty (31.6%). Summary results were shared with staff in January, along with a preliminary analysis in February. The results and the data derived from the analysis are expected to be used extensively over the next year by all sectors of the Libraries.

An assessment plan for calendar year 2011 that included 14 units of the Libraries was completed, and a summary was prepared for the Library Council retreat.

A "monthly metrics" pilot project was completed in April 2012, allowing the Assessment Team to experiment with various data visualization and infographics techniques, highlight possible areas of interest to staff, and encourage a higher level of awareness among library leaders.

A dashboard of metrics representing useful data about trends in library services, collections, and workflows was created in September 2011 and will be refined this fall.

For the first time, the assessment librarian led the annual process of gathering statistics for the Association of Research Libraries (ARL). Several statistics were updated, and a process was begun to centralize the ongoing coordination of statistics gathering with the assessment librarian.

Communications and Marketing

The Libraries' marketing team, formed in FY2011, continues to focus on improving the coordination and effectiveness of marketing efforts across the library system. During the past year the team completed over 40 projects in nearly all areas of the organization.

Integrated marketing communications are essential to increasing awareness of library services, news, events, and initiatives. Significant progress was made in coordinating news stories, advertising, and publicity across multiple media channels. The focus, in particular, was to increase our exposure outside of traditional Libraries news channels.

Communications continued to be a key component of many of the Libraries' outreach activities, bringing in audiences for a wide array of library workshops, study breaks, alumni and community events, concerts, and exhibits. These are important opportunities to engage with the MIT community and build positive impressions and awareness, further strengthening the Libraries brand.

The exhibits and events associated with the Maihaugen Gallery had an active and successful year. In particular, the *Glass at MIT* exhibit had broad appeal across the MIT community and led to engagement with the MIT Glass Lab, the Chemistry Department, the MIT Museum, the Connick Foundation, and other groups.

Communications efforts and activities for the next year will be guided by the results of the Libraries' 2011 User Survey. There is a wealth of data from the survey that will help inform our marketing and communications efforts and improve our ability to tailor messages and raise awareness with specific user groups. As the Libraries' resource development program is retooled and a new lead is hired, there will be opportunities to increase communications around the Libraries' fundraising efforts and the Institute's new capital campaign.

Desktop Support

Desktop support requests were down by 20% from FY2011 as a result of increased hardware standardization, as well as improvements to public printing and the deployment of Pano Zero clients to several locations in the library system.

The staffing level of the Desktop Support Team dropped from three full-time-equivalent (FTE) positions (one administrative, two support staff) to two FTE positions (one administrative, one support staff) with a departure in December. As a result, the contracted support from IS&T was increased from 20 to 28 hours per week to help offset the loss. Although this staffing level is adequate during most periods, it does not accommodate the project-oriented work that constituted a significant portion of the third staff member's time. Temporary solutions are in place or being sought.

Athena printers were deployed in Dewey and Hayden Libraries, completing the total transfer of public printing to IS&T infrastructure.

Human Resources

Significant recruitment activities included 13 new arrivals along with the posting of an additional 14 positions (seven administrative and seven support, a mix of both continuing and term). Many searches are currently in progress. The retirements of five senior staff over the course of the year reflected a combined total of 145 years of service to the MIT Libraries. The staff turnover rate of 9% was typical of recent years.

A Libraries fellows program was launched, and searches for two positions are currently moving forward. The program areas chosen for this new initiative are Digital Curation and Preservation and Scholarly Publishing and Licensing. More than 200 applications have been received.

Administrative staff salaries showed a significant drop relative to peers in the ARL salary rankings and, specifically, relative to MIT's strongest competitor for staff, the Harvard Library.

The percentage of underrepresented minorities on our staff dropped from 12% in FY2011 to 11% in FY2012. This figure has hovered between 10% and 12% for many years.

As expected, FY2012 marked the second year of a significant increase in skill development activities completed by Libraries' staff.

Keith Glavash

Associate Director for Administration

Information Resources

The Information Resources (IR) directorate is composed of departments whose work focuses on the spectrum of activities that support and sustain a wide range of content, from acquisition to long-term access: Acquisitions, Metadata, and Enterprise Systems; Collections Strategy and Management; Curation and Preservation Services; Information Delivery and Library Access; and Institute Archives and Special Collections. Together they provide exceptional service and innovative leadership across a wide range of programs and systems to manage the life cycle of information resources, with the goal of promoting discovery, preserving knowledge, and improving scholarly communication.

The key strategic directions laid out in the Libraries planning document, *MIT Libraries: Achieving a Desired Future State for 2015* (March 2009), guide the work of IR departments. They continue to evolve organizationally to create the next-generation research library — demonstrating that this is more of a continual process than an end state. Their work spans physical and virtual space and services. Many of their accomplishments fall under the rubric of building and strengthening relationships with faculty, students, and the MIT community; improving infrastructure for digital content management; and transforming library space. They also collaborate with strategic partners outside the

Libraries, working with the Office of the Dean for Undergraduate Education, IS&T, the MIT Press, and OpenCourseWare as well as with library consortia such as Borrow Direct and our Ivy-Plus peers (including direct work with the Harvard Library). Their work and impact are far-reaching and ongoing. Brief highlights are listed below.

Acquisitions, Metadata, and Enterprise Systems

Acquisitions, Metadata, and Enterprise Systems (AMES) continued its organizational evolution under the able leadership of two senior library managers and with the assistance of R2 Consulting. R2 recommended a radical restructuring along functional lines to enable the redeployment of staff to support the growth areas of digital content (content that is managed locally) and electronic resources (content that we license and is hosted elsewhere). The new structure is meant to encourage closer collaboration within AMES as well as across departmental lines. The new teams are Electronic Resources, Tangible Formats, MIT and Digital Publications, and Library Enterprise Systems. The latter will serve all of the teams, as well as provide technology-based services more broadly across the Libraries. While planning and implementing a change of this magnitude takes an incredible amount of time, the “regular” work of the AMES staff continued apace. Among their noteworthy achievements are employing a wide range of automated processes to improve cataloguing efficiency and reduce the handling of individual records; implementing record loading that provides accurate Barton links to electronic resources, thereby improving access to library users; successfully piloting a mediated deposit service for MIT technical reports and working papers to both improve service to departments, labs, and centers and increase submissions to DSpace@MIT; providing service enhancements to MIT’s OpenCourseWare, including custom taxonomy of course subjects; and providing improved statistics on how users access our electronic content to assist us in planning future service improvements. Other accomplishments that focused on acquiring content and making it available more quickly included participation in two purchase-on-demand acquisition pilot programs, pilot testing of new workflows for shelf-ready books in the sciences to get them to users more quickly, implementation of a new method for ordering electronic resources to streamline and track these important acquisitions more effectively, and upgrading to the latest version of SFX to manage and provide access to electronic content.

Collections Strategy and Management

By the end of its second year in operation, the Collections Strategy and Management (CSM) department had distinguished itself in several significant ways, including implementing sound fiscal management strategies for the collections budget entrusted to the Libraries by the Institute, demonstrating inspired business acumen when dealing with vendors and publishers, employing a combination of quantitative and qualitative criteria to drive decisions for purchasing library resources in response to user needs, and refining a rules-based approach to using space for physical collections in the Libraries as well as in our storage facilities. The latter effort continued to optimize the location of collections based on actual use and proximity to primary user groups, taking into account available space. This proved to be particularly helpful for the Libraries’ engagement with Shepley Bulfinch (the architectural firm employed by the Libraries) to develop a space framework for the next generation of the MIT Libraries. In addition, and in true MIT spirit, CSM ran two user-driven pilot programs that employed more

precise strategies for purchasing content specifically requested by library users. These “purchase-on-demand” programs augmented and complemented traditional collection development methods. In one pilot, requests for interlibrary borrowing were automatically turned into book purchases to be added to the collection if the requests met established criteria; in the second pilot, an electronic book purchase was triggered if an authorized MIT user spent a predetermined amount of time looking at an e-book, pursuing more than a few pages of text online, or attempted to print a page.

Curation and Preservation Services

The Curation and Preservation Services (CPS) department is the new name of Preservation and Conservation Services, and, as its name suggests, it emphasizes a broad life cycle approach to ensuring long-term access and curation for all information assets under the Libraries’ purview. Coordination of digital and physical preservation is now being conceptualized as a single process, and efforts in this area have been ably led since February by Nancy McGovern, CPS’s new department head. The department’s successes throughout the year were many. Highlights included an assessment of the preservation status of MIT electronic journals; establishment of a newly constituted disaster response team; completion of physical treatments for a gift-sponsored special collection, the Charles J. Connick Stained Glass Collection, and near completion of another, the Vail Access (Rare Book) Project sponsored by Thomas J. Peterson; and direction and mounting of the *Glass at MIT: Beauty and Utility* exhibition. With the arrival of a new department head, several additional noteworthy initiatives were launched, including a successful proposal for a strategic initiative in FY2013 to improve the infrastructure for digital content management, the acceptance of another proposal for a library fellow to work with CPS for two years, and the start of the transition to MIT of the Digital Preservation Management workshop series, the popular, award-winning continuing education program developed by Anne Kenney (Cornell University Libraries) and McGovern.

Information Delivery and Library Access

Building on its successful first year of operation, Information Delivery and Library Access gained its stride in providing high-quality, point-of-need information assistance and timely delivery of library materials to the MIT community in support of scholarship, teaching, and research. Of the many improvements to the department’s workflow and operations that allowed for enhanced services, one that stands out in terms of directly benefiting library users was the implementation of the new, user-initiated Borrow Direct book delivery service with our Ivy-Plus peers Brown, Columbia, Cornell, Dartmouth, Harvard, the University of Pennsylvania, Princeton, and Yale. Also important were a variety of enhancements led by the Service Operations team, including modernizing our policy for food and beverage use, developing options for improved computing in the Libraries, and adopting better signage and other graphics. Illustrating the department’s central role in the Libraries organization, Information Delivery and Library Access staff both led and contributed to many other cross-library initiatives—all consistent with our directorate’s vision of “access to information where and when you need it.” They partnered with other library departments to plan for a fundamental reshaping of the mediated services we provide to library users, implemented one of our user-driven “purchase-on-demand” pilot programs to acquire library materials most wanted by

the community, led the Discovery Promotion and Positioning Team in simplifying the presentation of key library resources on the Libraries' website, and contributed to the MIT Libraries Assessment Team and the 2011 Survey Analysis Team in support of the Libraries' goal of evaluating services and programs in order to be responsive to the needs of library users.

Institute Archives and Special Collections

Institute Archives and Special Collections (IASC) continued to demonstrate that it is a vital and essential component of the Libraries and the Institute. IASC's central themes this year were firmly launching its support for Digital MIT and significantly increasing outreach and instruction. With the support of the provost for a two-year position, IASC hired its first digital archivist. Real progress has been made in a variety of key areas including establishing born-digital archives and curation best practices and standards, accessioning and managing MIT administrative born-digital content, and developing a pilot digitization workflow. Outreach activities incorporating rare books and archival materials for internal MIT audiences, MIT alumni, and more broadly for locally hosted professional conferences continued to demonstrate that stewardship of these special materials does indeed make a difference to the educational and research mission of the Institute. An exceptional number of instructional sessions incorporated IASC content; prominent examples include rare book presentations during the Freshman Pre-Orientation Program and for Concourse, the freshman community focused on integrating science and humanities; several historical method class sessions on archival and rare book materials; and well-attended Independent Activities Period (IAP) sessions on diaries in the archives, book collecting as a hobby, and the very popular "weird science" session on the unexpected treasures in the archives. In addition, several other key initiatives moved forward under Tom Rosko's leadership: the Chomsky Archives was acquired and an archivist hired, the Vail Access (Rare Book) Project moved forward for its final year with a generous gift from Thomas J. Peterson, and external collaborations with colleagues at Harvard University Archives on "Zone One" (a Harvard Library Lab grant exploring the efficacy of a "rescue repository" for digital faculty archives) were completed.

A Final Note

Two years ago, the Libraries implemented a new library organizational model, one meant to emphasize the increasingly Internet-based, interdisciplinary, international, and interinstitutional teaching and research environment that is MIT. IR departments have embraced the change necessary to meet the needs of library users working in this dynamic context and continue to evolve their internal organizational structures as well as the services they provide. They evaluate their practices and strive for best practices in every aspect of their work. They employ data-driven approaches to maximize efficiencies and improve services. Their ambitions are constrained only by the resources, both staff and financial, available.

This annual report represents only a high-level overview of the accomplishments of the IR departments. The rich details and numerous projects both large and small are well chronicled in the individual departmental reports. Please refer to them for a more thorough depiction of the breadth of contributions of the dedicated, dynamic, and innovative staff in the IR directorate.

Diane Geraci

Associate Director of Information Resources

Research and Instructional Services

The Research and Instructional Services (RIS) directorate works with MIT faculty, students, and staff to provide the library resources and services required for their success in research, teaching, and learning. Organized into five departments—Instruction and Reference Services; Liaisons for Departments, Labs, and Centers; MIT Video Production; Specialized Content and Services (SCS); and User Experience—RIS works to optimize the discovery of, access to, and evaluation and management of diverse scholarly information sources and types and offer high-quality spaces for reflective and collaborative work and learning. By promoting and providing a library environment that anticipates community needs, it sustains a culture of lifelong learning, experimentation, and innovation.

Essential to the Libraries' success in supporting MIT's mission is a keen understanding of faculty, student, and staff needs in the domain of scholarly information resources and tools. RIS staff, working with their colleagues in other library directorates, engage with the MIT community continuously. These rich interactions provide the Libraries with the knowledge required to develop a service portfolio that makes the entire MIT enterprise more productive in its educational and research endeavors. Through such means as one-on-one consultations, classroom instructional sessions, attendance at symposia and lectures, researching websites, and conducting focus groups, surveys, and usability studies, the Libraries triangulate relevant data to constantly evaluate service needs and promote best practices that will make the MIT "product" one that the rest of the world strives to emulate.

This report highlights many of the important accomplishments and activities of the past year. While these successes are typically products of collaboration across departments within RIS and more broadly across the Libraries and MIT, they are organized by their "home" departments within RIS.

Instruction and Reference Services

A new system-wide instruction plan has been drafted, and, once finalized, it will build on current successes to enable MIT community members to be productive in their use of scholarly information resources and tools in their current and future endeavors.

The Digital Instruction Resource Center Committee oversaw a major update, resulting in a greatly improved flexible classroom to support the Libraries' instruction program.

A joint project led by multiple departments to reshape mediated services developed an action plan that will be implemented this coming year, with the goals of providing a more consistent and improved user experience across service points, more effective deployment of staff, and increased opportunities for service innovations.

Work was completed on an infrastructure model to facilitate the creation of self-help documentation for the MIT community; issues specific to video tutorials are now being investigated.

The citation management training and expertise provided by the Libraries continue to be highly valued. Work has begun to analyze how such services might be expanded to encompass and integrate other aspects of personal content management.

Liaisons for Departments, Labs, and Centers

Liaison relationships with departments, labs, and centers (DLCs) were expanded to fill existing gaps, resulting in new assignments for the Media Lab, the Engineering Systems Division, the Edgerton Center, and the Center for Art, Science & Technology.

Liaisons continue to work closely with the Office of Scholarly Publishing and Licensing to fulfill the Libraries' role in supporting MIT's faculty open access policy. These efforts have contributed to over 70% of MIT faculty being aware of the policy and have led to improved efficiencies in recruiting papers.

In response to MIT's new Global Environment Initiative, the scope of the multidisciplinary energy group was expanded to include environmental issues. Also, a new group was formed to better understand how DLCs are using various media in their research and teaching.

MIT Video Production

The launch of MITx was ably supported by MIT Video Production. Responding quickly and with agility, the group provided critical editing services for close to 300 individual video files as well as multiple versions of each file and thus made an important contribution to the success of 6.002x Circuits and Electronics.

Video production in the field and studio and corresponding postproduction services experienced another year of high demand. Successful work included a collaboration with the Singapore University of Technology and Design and MIT's Teaching and Learning Laboratory that produced over two dozen short video lectures in support of their innovative new curriculum and a retrospective documentary highlighting Susan Hockfield's accomplishments during her tenure as MIT's 16th president.

Specialized Content and Services

Months of detailed negotiations among the Libraries, the Aga Khan Trust for Culture, and the School of Architecture and Planning led to the hiring of the first program head for the Aga Khan Documentation Center last fall, as well as January's successful transfer of the curation responsibilities for the trust's Archnet Digital Library to the center and SCS.

The Music Library published several new video oral histories and began work on converting 42 previously published oral histories on CD-ROM (some with accompanying written transcripts) to provide online access to all of the interviews and transcripts. Work also began on testing Variations software as a tool for providing streaming access to required music for classes.

The Libraries formalized their services for research data management, offering consultation, instruction, and expertise on best practices for developing research data management plans and other associated issues. The SCS team helped draft MIT's official response to the Office of Science and Technology Policy's Request for Information on Public Access to Digital Data Resulting from Federally Funded Scientific Research. It also supported MIT's participation in the ARL/DLF E-Science Institute, producing a report highlighting opportunities for MIT to improve its support for researchers.

Work continued with Harvard on the FACADE2 project, updating and improving the curator's workbench and exploring strategies for developing a successful approach to intellectual property concerns regarding project documents.

GIS Services evolved its support structure by reallocating existing resources to create two new positions: the geospatial data librarian and statistics specialist and the GIS support associate. Work was also done to upgrade the Geodata Repository System and the ArcGIS search tool.

The Social Science Data Services Program reviewed its membership in the Harvard-MIT Data Center to ensure that DLC stakeholders are satisfied with the service parameters.

The Charles J. Connick Stained Glass Collection project was completed and made accessible through the Libraries' online Dome visual collections.

The Distance Education group within SCS continued to provide essential services for MIT's teaching and research programs, offering nearly 2,000 hours of lecture capture in support of over 90 courses, supporting 11 video conferencing systems across campus, and consulting on numerous other installations this past year. The group also supported more than 50 live event webcasts.

TechTV's collection of MIT community videos now approaches 15,000. This represents a growth of 52% from last year. With the successful Touchstone integration, its use in support of course instruction has also increased significantly.

The Libraries participated in a pilot project to preserve MIT-created video using DSpace and DuraCloud. The project demonstrated that, with dedicated resources, DSpace can be used to store and retrieve video files and that DuraCloud represents a viable strategy for replicating this video content and thus enhancing its preservation. It also provided a number of lessons that will help inform the MIT Libraries in the next phase of establishing digital video curation and preservation practices.

User Experience

The Libraries' third Triennial User Survey was conducted last fall. With more than 7,000 responses and an overall response rate of 44%, it provides rich data to inform future service initiatives and determine awareness of and satisfaction with existing services. Although the data are still being analyzed, initial conclusions highlight users' appreciation of e-content, library spaces, and customer service.

Staff contributed to developing both a framework for library space planning for the next decade and the Institute-wide Working Group on the Future of Campus Teaching and Learning Spaces. The framework outlines opportunities to transform library spaces to further encourage and reinforce engagement with MIT's teaching and research activities, while the working group's report highlights how library space can be leveraged to enhance MIT's efforts to increase faculty-student interaction.

The Libraries' homepage was improved to make it easier to locate content owned or licensed for the MIT community. Based on usability testing, the page's tabbed search box was redesigned and relabeled to make options clearer and more intuitive for users.

In January the Libraries were incorporated into MIT's iPhone and Android app, giving smartphone users the ability to easily search and request books, manage their accounts, view library hours and locations, and ask questions.

Looking forward, the staff of the RIS directorate will continue to redefine the role of the MIT Libraries to keep pace with MIT's dynamic and evolving research and teaching environment. With a keen focus on improving the experience and productivity of faculty, students, and staff, RIS will continue to be agile, creative, and data driven, with an ongoing commitment to providing the best possible services with its available resources.

Steve Gass

Associate Director for Research and Instructional Services

Technology

This report highlights the accomplishments of the two groups that make up the Technology directorate—Software Development and Analysis (SDA) and IT Infrastructure. Together, these groups build and maintain the digital content management and delivery infrastructures to ensure that we acquire, store, preserve, manage, and provide access to MIT's intellectual output in all of its diverse digital forms. Additionally, they provide software development and systems administration

consultation for the staff of the MIT Libraries. The demand for technology expertise and support in research libraries has grown as library services have become increasingly digital and technology dependent.

The SDA group continued to provide software development, technology consultation, and systems analysis for numerous digital library projects. These contributions advanced several key initiatives for the MIT Libraries this fiscal year, including the open access initiative, emerging preservation support for library-curated content, and enhanced institutional repository services. Progress occurred despite continued challenges in staffing. Recruitment for two positions, a software engineer and a web developer, was a major focus of attention this year. The software engineer position was filled at the end of the fiscal year and will provide much-needed support for our expanding GIS service portfolio beginning in FY2013. Active recruitment for the web developer position continues.

The IT Infrastructure group continued to improve the MIT Libraries server infrastructure environment on several fronts, most notably in the areas of networked storage, security, and uptime. These systems improvements add up to a more robust infrastructure for the Libraries' ever-expanding information technology needs. The enterprise storage upgrade completed this year represents a significant modernization of our digital storage environment and will enable new capabilities in secure digital archive ingest, processing, and preservation in the coming year. The IT Infrastructure group continued to provide technology support for a growing portfolio of library services requiring server software tool deployments and upgrades. Finally, we experienced no significant downtime for any production systems this year.

Selected Software Development and Analysis Initiatives

Institutional Repository Upgrades

The software platforms that underlie the DSpace@MIT and Dome repositories have fallen behind the DSpace community release by two major release versions. Updating this software will provide the Libraries with several new important functions, notably the ability to perform curation tasks for preservation and metadata acquisition. Planning work was completed for a phased project to update the Dome and DSpace@MIT software platforms within the 2013 fiscal year. Preliminary work on the Dome upgrade has already been completed, with a production deployment scheduled for fall 2013.

Open Access Initiative

While we continue to streamline the open access content acquisition process, as well as add new DSpace workflow and public functions, a parallel effort has begun to identify a longer-term solution for open access content management. Commercial systems, such as Symplectic Limited's Elements, are being evaluated and tested, and substantial work has been done to estimate the effort of integrating with such systems. In the meantime, incremental improvements continue to be applied to the current system.

Video Content and Cloud Storage

SDA joined members of the Specialized Content and Services department, along with the DuraSpace organization, to explore the challenges of storing and managing video content. A pilot project to manage and store video using the DuraCloud cloud storage service was initiated and completed in FY2012. A large set of videos produced for the MIT 150th anniversary event were identified, described, and written to DuraCloud storage as part of the pilot. The pilot yielded numerous valuable insights into the challenges of managing and storing video that will inform future efforts in this space.

Exhibit3 Project

A crown jewel of the research work done under the auspices of the SIMILE project is the Exhibit data-publishing platform. This widely used tool had been limited to small collections, but a project with MIT Libraries and Zepheira (funded by the Library of Congress) to extend its capacity by integrating a server back-end was completed successfully in FY2012. The Exhibit3 platform will continue to evolve as adoption of the new platform grows within the Exhibit open source community.

VIVO

The evaluation of VIVO, a semantic web platform designed to facilitate scholar and research discovery, continued in FY2012. VIVO is being evaluated as a potential tool to improve the Libraries' technical infrastructure in support of the MIT faculty open access policy. The potential of VIVO lies in its ability to represent, manage, and build relationships between MIT-identified authors and their scholarly work.

MIT Digital Theses

The e-thesis management program was reinvigorated in the fall of 2011 and progressed substantially in FY2012. The deployment of a "Dropbox" version of the software for the student community has significantly enhanced the submission process. A technical roadmap for progressively enhancing the e-thesis management system has been established, and pilot communities have been recruited. SDA will also contribute to a new initiative to revamp the "Vireo" software platform that underpins our service.

FACADE Curator's Workbench

The MIT Libraries continue to provide technology guidance for FACADE (Future-proofing Architectural Computer-Aided Design), a multiyear research-funded project to create a center for excellence around architectural archives. This year the MIT Libraries received support under the Harvard Library Labs program for a collaborative project with Harvard to update one important component of the FACADE tool chain, the so-called "Curator's Workbench." This tool allows metadata assignment, tagging and identification of large collections of architectural project data, and creation of preservation-friendly 3D computer-aided design models. Substantial work has been done, and the project is scheduled for completion in fall 2012.

Selected IT Infrastructure Initiatives

Enterprise Storage

This year the IT Infrastructure team completed the migration of MIT Libraries data to an EMC VNX5300 NAS enterprise storage device. Significant workload analysis and growth projections were completed in collaboration with IBM and EMC sales engineers to identify the proper specifications of the device. A competitive bidding process supported by MIT's Procurement Office enabled the Libraries to acquire the device at a price point significantly below both list and normal nonprofit educational discount levels. Migration of production data to the new storage infrastructure occurred without data loss or disruption of service. This infrastructure upgrade will significantly improve the Libraries' ability to service growing digital storage needs over the next few years.

Security Upgrades

Two server security upgrades were introduced this year to further improve system stability and continuity of service. The IT Infrastructure group worked with IS&T's Network Operations group to build virtual local area networks for the Libraries' server infrastructure. Additionally, port filters were installed on our servers. These two upgrades will help to protect our infrastructure from hostile external network traffic and lower our risk of becoming the target of a successful computer hacking attack.

Web Infrastructure Upgrades

The IT Infrastructure group made significant progress, in collaboration with the User Experience department, in improving the Libraries' public-facing and staff-facing website infrastructure. This work included a major deployment of the WordPress Multi-Site content management system, numerous upgrades to supporting back-end software (e.g., PHP), and data migration from MediaWiki wikis to IS&T's Confluence wiki system. Additionally, servers were configured and deployed in support of the e-thesis management program. The IT Infrastructure group also supported major upgrades of the Ex Libris SFX system, a critical component of electronic resource delivery.

Process Improvements

The IT Infrastructure team worked on the formalization of MIT Libraries processes and procedures to improve internal service responsiveness. The team established a single point of contact for reporting infrastructure and desktop support issues. New guidelines were established to improve communications around scheduled maintenance of computer systems. Additionally, the team developed standard protocols for developers and system managers to submit and track requests for infrastructure work.

Looking Forward

The demand for technology expertise, development, infrastructure, and support for digital projects and technology-intensive library initiatives continues to grow, stretching the capacity of the Libraries' technology systems and staff. Progress has been made on the technology-staffing front, with the appointment of an associate director for technology in January 2012 along with a new software engineer hire at the start of the new fiscal year. We also expect to fill a vacant web developer position in the fall. These new hires will increase the Libraries' capacity to grow and expand their digital library infrastructure, enhance the discovery and access of electronic resources, enable new library service offerings, improve staff workflows, and advance long-term digital preservation.

Tito Sierra

Associate Director for Technology