MIT Museum

As John Durant arrived as director in July 2005, the MIT Museum embarked on a major strategic review and planning exercise for 2006–2011. The exercise was led by a small team (John Durant, Beryl Rosenthal, Deborah Douglas, Claudia Majetich, and Mary Leen) but embraced the entire staff. It included two wider brainstorming meetings (chaired by President Emeritus Paul Gray) with faculty across the Institute and a meeting with representatives of the Graduate Student Council. The review embraced all aspects of the Museum's work. Consensus quickly emerged around a number of key points:

- The Museum should aspire to be a world-class arts institution.
- The principal goal of the Museum should be to engage the wider community with MIT's research and innovation.
- In the long term, a larger, better situated, and better provided facility will be needed.
- In the short to medium term, a number of key steps should be taken to develop the Museum's capacity for collections, exhibitions, and public programs.
- The first priority must be to raise the Museum's profile in the wider community.

The new five-year strategic plan was approved by the Museum's Advisory Board in October 2005. The plan identifies a series of key steps that must be taken if the Museum is to achieve its goal of becoming "a gateway between MIT and the wider community of students, scholars, and citizens that MIT recognizes a responsibility to serve." It also specifies priorities for collections-related, exhibitions-related, and programmatic work in the Museum during the 2006–2011 period. Henceforth, the progress of the Museum will be measured against the aims and objectives set out in the plan.

Strategic planning did not deflect the Museum from its operational responsibilities. The Museum served 82,270 visitors this year. Of these, 70 percent were adults and 30 percent were young people to age 18. This 14 percent increase over FY2005 represents a continuation of the recent upward trend in visitation. Visitors included 4,430 school students on self-guided visits, 1,292 school students in prebooked groups, and 152 home-schooled students.

Collections

The Museum added to all five of its main collections. Highlights include the archive of architect Mary Otis Stevens ('56), a number of holograms created by Swiss artist Carl Fredrik Reuterswärd, a model of the Apollo capsule and landing module developed by Grumman Aircraft for use by the engineers who designed the interface between the Lunar Excursion Module and the Apollo Command Module, and 28 robots representing some of the most important historical developments in robotics at MIT in the postwar period.

Museum staff processed 27 new loans and 109 formal research requests, hosted 45 on-site researchers, and supported a number of publishing and documentary film projects.

They also commenced work on a major digital collections management system with support from the Institute for Museum and Library Services (IMLS) and completed the first phase of a major collections storage rationalization program designed to make better use of the extremely limited space available for collections in Buildings N51 and N52.

Architecture and Design Collection

Curator Gary Van Zante acquired the archive of Mary Otis Stevens, a major modernist designer in the Northeast and one of the most significant female practitioners of the century. This was the Museum's largest architecture collection acquisition since the acquisition of the Architect's Collaborative in 1996. An archive inventory was completed in the spring with the help of interns from Tufts University, and a catalogue was developed in the fall with the help of an intern from the University of Vienna. Also, the Core Study Collection and William Rotch Ware Collection, the Museum's archive of the teaching collection formed at the founding of the architecture program in 1865–1867, were inventoried and rehoused.

The Museum acquired additional material for its collection of the work of Richard Filipowski, MIT professor of visual studies from 1952 to 1988.

During the year, Van Zante curated the following exhibitions: *Architecture and Revolution in Cuba* (Wolk Gallery); *digital_minimal* (Wolk Gallery); *Finding Form: Art of Richard Filipowski* (MIT Museum); *Shaping Structures: The Work of Waclaw Zalewski* (Wolk Gallery); and *Eladio Dieste: A Principled Builder* (Wolk Gallery), which traveled to the University of Florida, Roger Williams University, and the University of Minnesota.

The House of the Future, a traveling exhibition project, was launched with a meeting of an international team of expert advisers in May.

In addition to hosting and organizing a number of other meetings and undertaking a variety of teaching duties, Van Zante served on the nominating committee of the International Confederation of Architecture Museums (Rotterdam, the Netherlands) and on the board of directors of the New England chapter of the Society of Architectural Historians (which held its twice-yearly meetings at the Museum and the Department of Architecture). He published two articles in the journal *Places* and the National Trust magazine *Preservation.*

Hart Nautical Collections

The major collection management activity for Hart over the past year consisted of collaborative projects with other collection departments. Curator Kurt Hasselbalch cowrote a successful $100,000 IMLS grant to create a new digital collections management system for the Museum. The new system is expected to be in place by July 2007. The database will provide the infrastructure for more cost-effective collections management and far greater access to collections and will make our grant-writing efforts more competitive.

In addition, collections staff developed and have begun to implement a three-year plan designed to improve the physical management of collections. Major rearrangements

of storage furniture have been completed, and proposals are being written to add new space-saving furniture systems. Due to the Museum's steadily growing collections and fixed space constraints, it is critical to make the most efficient use of the modest quarters available.

Use of the Hart Collections was close to the record level of FY2005. More than 1,300 inquiries resulted in $13,000 in gross revenue. Of this total, $5,000 was for use fees. Plans, photographs, marine art, and historical materials were requested for historic vessel restoration, replica vessels, models, design studies, personal displays, publications, and loans to other museums. A notable example is a new publication by Commonwealth Editions titled *Glass Plates and Wooden Boats* that reproduced 60 classic yacht photographs from the Museum's collections.

Hasselbalch taught two highly successful classes at the Museum in collaboration with MIT's program in ocean engineering, 13SEAS. He and his staff also continued sponsorship of their popular Independent Activities Period (IAP) "nautical skills" program for the seventh year. A new subject, The Art of Traditional Boat Design, was offered for credit within the Department of Mechanical Engineering.

Working with the director, Hasselbalch launched a new collecting and outreach initiative with the Woods Hole Oceanographic Institute (WHOI) and MIT's Earth System Initiative. This is a major step forward in documenting and collecting important past and emerging ocean science technologies. With WHOI as a partner, the Museum will assemble a world-class collection of ocean engineering technologies developed in collaboration with MIT professors, students, and graduates. Various outreach initiatives with these new partners are under development, including a $600,000 National Oceanic and Atmospheric Administration environmental literacy grant.

Holography Collection

In the absence of a curator of holography, registrar and collections manager Joan Whitlow responded to 50 research requests, two loan requests, and a number of requests for access to the collection by students in subject MAS.858 Creative Holographic Workshop.

As part of the strategic review, it was decided to launch the Holography and Spatial Imaging Initiative, which encompasses the following:

- An endowed, named curatorship in honor of the memory of Professor Steve Benton
- Growth of what is already a world-class collection, to embrace important new holographic material and new spatial imaging technologies
- Research and development work, particularly in the area of hologram conservation
- New exhibitions and traveling exhibitions
- New programs based on refurbishment of the holography laboratory in the basement of Building N52

Holography lab improvements are under way. An application was submitted to the Committee for the Review of Space Planning fund to replace inadequate ventilation and air circulation systems. Improvements will comply with environmental, health, and safety standards and will greatly enhance visitors' experience.

Science and Technology Collection

In the year's most significant acquisition, 28 robots (and related artifacts) were transferred from the MIT Computer Science and Artificial Intelligence Laboratory to the Museum. This represented a major step toward the Museum's goal of building the world's foremost collection documenting university-based artificial intelligence research. The Metropolitan Life Insurance Company donated two of the rarest American slide rules to the Museum (both full- and half-scale versions of Elizur Wright's Arithmeter). Dr. Robert Otnes donated an extraordinarily rare slide rule prototype (Universal Slide Rule) that had once been part of the Museum's K&E Company Slide Rule Collection.

Curator Deborah Douglas completed two exhibitions: *Scientific Settings: Photos of MIT Labs* (September 2005–January 2006) and *Scopes, Stationwagons and Solder: Unexpected Images from the Rad Lab and RLE Collections*. The Museum marked the inauguration of President Susan Hockfield with a special display: *A Celebration of MIT Presidents and Inaugurations Past* (May 2005–September 2005).

The curator responded to 225 separate inquiries, along with providing talks, lectures, and programs serving nearly 500 people. Also, she worked with graduate and undergraduate classes from MIT and the University of Massachusetts–Boston. Of particular note was the hosting of two national meetings: the Transportation Research Board's Transportation History Committee midyear meeting in July 2005 and the fall meeting of the Oughtred Society (dedicated to the history and collection of slide rules) in November 2005. These meetings brought national attention to the Museum and its collections.

Scholars, researchers, and journalists from MIT, the University of Glasgow, Rensselaer, Dartmouth, Harvard, Boston University Academy, the Chemical Heritage Foundation, the National Air and Space Museum, the Charles River Museum of Industry, the Tang Museum of Skidmore College, and the Boston Museum of Science all made use of the collection. The curator worked with media and documentary producers from KXLU, the *Daily News Tribune*, *Investor's Business Daily*, the *New York Times*, the *Boston Globe*, *Technology Review*, and *Wellesley Magazine*. In addition, she supervised eight interns and volunteers.

Also during the year, Douglas successfully launched an innovative location-based storytelling research project. The goal of MIT Museum Without Walls is "to help reveal the hidden and the extraordinary in the MIT landscape, to put history and science in your hand and turn the world into a museum." This Institute-based effort is linked with plans to celebrate MIT's 150th anniversary in 2011; at the same time, the project aims to be scaleable and hence usable by any institution or community. The project raised seed money within the Institute to support a part-time project coordinator, Allan Doyle, to help develop a formal project plan and generate Institute-wide support. The Lord

Foundation recently awarded the Museum a $50,000 grant to support the development of a prototype during the summer of 2006.

Exhibitions

Five goals were set for the Museum's exhibitions for FY2006:

- Maintenance of a vigorous program of small temporary exhibitions in the Museum's main area and in the Compton and Wolk galleries
- Further development of the Museum's capacity to create topical, fast-changing temporary exhibitions on emerging technologies across the Institute, particularly in the context of the Ground Floor Expansion Project
- Development of a program of large traveling exhibitions in areas of special MIT strength and expertise
- Cost-effective update and renewal (but not, at this stage, replacement) of the galleries on the Museum's second floor
- Planning for a suite of new galleries as part of the new MIT Museum to be located (funding permitting) in the Metropolitan Storage Warehouse.

Robots and Beyond is currently in the process of fundraising for a planned refurbishment that will (1) reflect the transition from the Artificial Intelligence Laboratory to the Computer Science and Artificial Intelligence Laboratory (CSAIL), (2) incorporate recent research, (3) enliven visitors' experiences through an interactive actuated robot, and (4) create a *Robo Tuna* exhibit.

Emerging Technologies Initiative

Four exhibits were on display during the year: *TR35* (*Tech Review*'s list of 35 innovative researchers under 35 years of age); *iSPOTS: Living and Working in MIT's Wireless Community*; *COLLISIONbox #2: Cars and Stars*; and *Tech'ing It to the Next Level* (iCampus projects).

Learning Lab

Working with colleagues in the Center for Environmental Health Sciences, Beryl Rosenthal involved MIT Terrascope students in the early-stage development of a learning lab experience aimed principally at middle school students.

Compton Gallery

Three exhibits were installed in the Museum's Compton Gallery: *Scientific Settings: Scott Globus*; *Arnold Newman: Twentieth Century Photographs*; and *Pia Lindman: Embodiments.*

A long-term plan for the Compton Gallery has been created. Henceforth, Compton will continue to focus on the work of MIT and to serve the MIT community as its primary audience. It will offer two exhibitions annually: one derived principally from the Museum's collections and a second derived principally from work going on elsewhere at the Institute.

Traveling Exhibitions

Hacks are Back–Again: Six hacks from the Museum's collections have been installed throughout the student street in the Stata Center. *Seeing the Unseen: Photographs by Harold Edgerton* continues to tour venues throughout the country.

Education, Public Programs, and Outreach

The education, public programs, and outreach initiatives set five goals for the past year:

- Focus efforts on three principal target audiences: middle and high school students, adults, and the "MIT family" (students, faculty, staff, alumni)
- Build school programs around initiatives tightly linked to middle and high school curriculum requirements
- Develop the main Museum as a forum for (adult) public engagement with science and technology
- Innovate in the use of new technologies to facilitate public engagement with science and technology
- Create the Cambridge Science Festival in partnership with others as a principal platform for Museum outreach to the wider community

We proposed and implemented a slate of programs that focus on meeting the specific needs of the Museum's target audience. We introduced "Soap Box," an early evening salon-style public forum intended to encourage debate about important ideas and issues in science and technology. Begun in partnership with the *Boston Globe*, "Soap Box" gives its audience the chance to debate serious issues with world-class scientists and engineers in an intimate setting at the Museum. Speakers in the first "Soap Box" series included Dr. Robert Altshuler, Dr. Rodney Brooks, Professor Donald Sadoway, Professor Andrew Endy, Professor Nancy Kanwisher, and Professor Mitch Resnick. The "Soap Box" events were videotaped and are available at the MIT World website.

The "Object Lessons" series was expanded to include a schedule of gallery talks and special programs (some exhibition related and others more general in nature). The purpose of these programs was to make public the richness of the Museum's collections.

We completed the second and final year of our Graduate Students Office Graduate Student Life Grant (total of $13,260). Over the full set of events conducted in conjunction with the grant program, we reached approximately 2,250 graduate students. This year's events took place in September, February, and April. The April evenings coincided with an annual Boston-based academic conference on international development innovations. An exceptionally high level of networking marked the events. As a result of these evenings and the relationships that have developed over the course of the past two years, the graduate student community now recognizes the Museum as a comfortable, interesting, accessible, and relevant location on the campus. The Museum has been awarded a second grant for GradNight@the Museum in FY2007, and this program is currently in planning.

During IAP, we offered five different courses: Duct Tape Delusions (cosponsored with the Edgerton Center); Parachutes for Planetary Entry Systems; Sculpting with Light (hosted by Andy Zimmerman); Six Minutes of Terror: The Mars Exploration Rover's Entry, Descent and Landing; and The Art and Science of Boat Building (cosponsored by the Department of Mechanical Engineering).

Family Programs

As part of its commitment to public engagement with science and technology, the Museum commenced work on the Cambridge Science Festival, the first community festival of its kind in the United States. The festival will engage the larger Cambridge community in an annual celebration of science and technology. It launched in June 2006 with a kickoff meeting hosted by the mayor of Cambridge, Kenneth Reeves.

The Museum's monthly family program series, Family Adventures in Science and Technology (FAST), and the annual Friday After Thanksgiving (FAT) Chain Reaction with Arthur Ganson continued to attract substantial media attention and record numbers of enthusiastic visitors to the museum. This year FAST programming was more workshop oriented than in the past, when programs were of a more traditional tradeshow style. FAST contributors included the Department of Physics, CSAIL, the Institute for Soldier Nanotechnologies, MIT Motorsports, and the Theater Section. The annual FAT Chain Reaction attracted more than 1,500 visitors and more than 34 teams. An audience participation component, a family area, and a small shop were added to this year's event.

Other family programs that took place during the year included a series of holography workshops and gallery presentations by Betsy Connors of the Media Lab, six weekly drop-in programs during the spring, and partnership with the MIT Sea Chantey Singers, who performed and engaged visitors through the fall and winter months on our free Sundays.

School and Group Programs

The Museum's school and group programs have fostered an increase in the diversity of the Museum's audience by successfully extending its reach into traditionally underserved communities. The Museum continued working with the Cambridge Public Schools and the surrounding school districts. Partnering with the MIT Public Service Center and Office of Community and Government Relations helped facilitate this work. The Museum also served a large number of home-schooled students and their families.

For the fourth year, we held teacher professional development workshops through the Museum Institute for Teaching Science (MITS); several teachers returned with their classes during the school year. Beryl Rosenthal was made lead educator for the MITS Boston Collaborative.

School programs offered this year included "Color My World" (light, color, and the electromagnetic spectrum), "Here Comes the Sun" (solar and other alternative energy sources), "In the Blink of an Eye" (stroboscopy), "Lost at Sea" (navigational tools), and

"Watts Up!" (electricity). The Museum is now prototyping a structural engineering program for potential offering in the fall.

Despite school visits being down regionally as a result of increased transportation costs and the demands of preparing for Massachusetts Comprehensive Assessment System exams, annual attendance at both booked and self-guided Museum visits held fairly steady at 5,000–6,000.

The Museum successfully partnered with the Fay School for a second time in the middle school–level Rube Goldberg Machine Contest, funded by the Fay School Grandparents' Association, EMC2, and General Electric.

The Museum participated in a successful Microsoft iCampus grant in collaboration with Professor Eric Klopfer of the MIT Teacher Education Program.

For the fourth consecutive year, school vacation week became an opportunity to celebrate National Engineers Week. The Museum was able to implement a weeklong celebration thanks to the continued support of Dean Magnanti and Donna Savicki of the School of Engineering and Rod Brooks and Tom Greene of CSAIL.

Administration

Development

This has been an extraordinary year in terms of fundraising. Two alumni and three Advisory Board members very generously pledged a total of $1.75 million to fund our Building N51 Ground Floor Expansion Project. MIT's Committee for the Review of Space Planning fund is providing $750,000 in matching funds. These commitments ensure that construction can commence this fall and be completed by 2007. Forty-five individuals contributed to our annual Friends Program, providing more than $40,000 in unrestricted support. The Kurtz Family Foundation funded the exhibition of Arnold Newman photographs that was on view in the Compton Gallery. Four donors, including John Lednicky ('44), made gifts totaling more than $5,000 to the Hart Nautical Collections.

The Lord Foundation of Massachusetts renewed its support of the Emerging Technologies Initiative with a generous grant to fund the coordinator position and new exhibits and public programs.

We are grateful to several programs and departments at MIT for their generosity this year. The Council for the Arts provided funding for new exhibitions and the Friday After Thanksgiving Chain Reaction. The associate provost for the arts; Public Relations Services; the dean of the School of Humanities, Arts, and Social Sciences; and the Program in Science, Technology, and Society together have funded the first phase of our Museum Without Walls project. A Graduate Student Life Grant from the Graduate Students Office enabled us to host a series of three very successful receptions for graduate students.

We also have competed successfully for public funds. In July we received an Organizational Support Program grant from the Massachusetts Cultural Council to fund core programs. In September we were awarded a Museums for America grant of $101,150 from IMLS for a two-year project designed to enhance the collections information management system, expand the system's capacity, provide wider and more efficient access to collections, and plan for future digital collections management.

Retail and Functions

Earned income continued on an upward course. In FY2006, corporate and Institute clients rented the Museum for a total of 70 events, a 19 percent increase over FY2005, and gross revenues increased by almost 28 percent.

The Museum's small store continues to grow, with revenues up this fiscal year by approximately 25 percent. In the previous four years, the store had focused on the youth market, with an emphasis on informative, high-quality kits related to engineering and the sciences. To better reflect the Museum's focus on an adult audience, the retail line has expanded to include household items as well as games, books, and gadgets.

Public Relations and Marketing

Josie Patterson, director of public relations and marketing, focused on improving the Museum's communication infrastructure by targeting and expanding distribution of communication materials. She created new print and visual materials to promote and communicate the goals set forth in the Museum's strategic plan and to use in launching the new "Soap Box" public program series and the Cambridge Science Festival, a key event that will significantly raise the profile of the Museum on a regional and national level.

Timeliness and message consistency are important components of any marketing plan. On a monthly basis, Patterson creates a museum calendar that is printed and posted on our website, and also uses similar content for a monthly e-newsletter begun in April. In addition, each week Patterson updates web site news announcements and e-mail press. News announcements are sent to local press outlets, and we have been modestly successful during the past year in attracting articles and reviews by the *Boston Globe*, *Cambridge Chronicle*, and *New York Times* and travel industry magazines.

In support of the Museum's fundraising efforts, Patterson developed the booklet *The New MIT Museum*, a highly visual summary of the Museum's strategic plan. The graphics used in this publication are the foundation for a new graphic identity plan that will be phased in over the coming years as the Museum expands to the building's first floor and hosts various types of events.

The marketing director position also incorporates the duties of a community and government liaison. Patterson established relations with the Cambridge Public Schools and city councilors, enthusiastic supporters of the Cambridge Science Festival. The Museum coordinated a kickoff event at City Hall on June 20, 2006, that was attended by 40 people from local government and the university community. Patterson

also oversaw the creation of a website and graphic identity for the festival, http://cambridgesciencefestival.org/.

Personnel

Dr. John Durant assumed the positions of director of the Museum and adjunct professor in the MIT Program in Science, Technology, and Society on July 1, 2005. Two new members of the collections staff also arrived in July: Frank Conahan, assistant to the curator of the Hart Nautical and MIT General Collections, and Laura Knott, assistant to the curator of architecture and design. In September, Jon Markowitz Bijur joined the staff as education coordinator, and Beth Nakamura was hired as administrative assistant. Josie Patterson, an experienced professional in strategic planning, communications, and marketing, was hired as director of public relations and marketing in the fall. Britt Boughner is working with us this year as program manager for the Public Opinions on Science Using Information Technology (POSIT) research project, directed by Professor Eric Klopfer. Ariel Weinberg is the newest member of the staff, having arrived in June to serve as assistant to the curator of science and technology.

In July we bid farewell to Jenny O'Neill, our curatorial assistant for seven years, who so expertly served all of the researchers who used our collections and also found time to work on special projects to improve storage and access to special collections. Stephanie Hunt, who had served very capably and creatively for the past two years as the coordinator of our Emerging Technologies Initiative, resigned in January to relocate to New York.

Interns and Volunteers

The Museum greatly benefits from the contributions of volunteers and student interns, and we had a record number of 21 this year. During summer 2005, student volunteers from Needham High School, Newton South High School, and Lexington High School served at the Museum. An undergraduate student from Stanford worked in collections, and an MIT student presented exhibit-related demonstrations. Graduate student interns from several programs, including the Harvard Graduate School of Education, Simmons College's Graduate School of Library Science, and the Tufts University Museum Studies Program, provided valuable assistance in collections and public programs. Throughout the year a dedicated group of adults, each with expertise in particular areas, worked on collections projects and in public programs. This summer we had two undergraduates, one from Connecticut College and the other from Barnard College, whose internships were generously funded by their schools.

John Durant
Director

More information about the MIT Museum can be found at http://web.mit.edu/museum/. Additional project documentation on the Emerging Technologies Initiative is available at http://web.mit.edu/engineering/emergtech/.