



# MIT LIBRARIES' NEWS

*A Report to the Faculty*

## *From the Director of Libraries*

As reported in the recently issued *Report of the Director of Libraries, 1988-89*, the academic year recently ended was one of considerable activity and change. The Libraries' strategic plan was produced, reviewed extensively with the Institute administration and within the Libraries, and implementation began. The major serial cancellation project undertaken in the previous year began to show results in a variety of ways. Serials expenditures were slightly less than the previous year reflecting the large number of cancelled titles but balanced by an inflation rate of about 8% for continuing titles. Funds generated through the cancellation program were made available for a number of new electronic subscriptions to CD-ROM based products. Funds were also provided for increased acquisition of monographs with particular emphasis on new and emerging areas of teaching and research and in areas where acquisitions have fallen behind. These include artificial intelligence, chemical engineering, environmental policy, linguistics, management, philosophy, history of science and technology, manufacturing and productivity, medicine, neurosciences, plant biology, robotics, art, foreign languages, music and theatre arts, psychology, and women's studies. In addition, two other areas were identified for additional support during the year: science for the non-specialist, and popular medicine and community health.

Among the gifts received during the year were a collection of 800 monographs in electrical engineering, computer science and acoustics from the firm of Bolt, Beranek and Newman; 2,400 books in mathematics, philosophy and literature from Professor Gian-Carlo Rota; and a collection of over 1,000 planning studies from Franziska Hosken. Major additions to the Institute Archives came from Benson Snyder; the MIT Alumni Association, and the Daedalus Project (human-powered flight). Papers of several faculty members were added to the manuscript collections: David Waugh (biology); Hurd Willett (meteorology); David Botstein (biology); and Charles Kindleberger (economics).

In the area of technology, the Libraries added clusters of Athena workstations in the Barker Engineering and Humanities Libraries. Dial access to Barton was formally opened to the MIT community and beyond. The Microreproduction Laboratory acquired a microfiche enlarger that utilizes a laser scanner and printer that can produce full size prints from microfiche quickly and economically.

Some 52,300 printed volumes were added to the collections and about 14,500 items, principally duplicate copies, were withdrawn. The total number of printed volumes on July 1, 1989 was 2,141,174. The number of volumes added to the collections over the past five years has been steadily decreasing reflecting two major factors: inflation in the price of library materials that is not matched by an increase in budget; increased reliance on electronic sources for both bibliographic and full text access. The rate of acquisition for microforms, principally microfiche, continues at a steady pace. The total number of microforms in the Libraries is now 1.7 million. Ten years ago, when the Libraries owned about 1.8 million printed volumes, the microform collection was 853,000. The ratio of microforms to books has gone, in 10 years, from about .5 to 1 to .8 to 1.

The MIT Libraries' online system, Barton, now contains almost 400,000 full bibliographic records. The total number of items listed, which includes books on order, books received but not yet catalogued, and items for which there are only brief records, is 538,000. There are almost 33,000 patrons who have been assigned barcodes and, typically, about 6,000 of them have material charged out to them. In a typical week in the fall of 1988, 27,700 people entered one of the MIT Libraries; over 10,000 items were circulated; and the staff answered 3,500 directional questions and 2,800 reference queries.

Copies of the *Annual Report for 1988/89* are available from the Office of the Director of Libraries.

Jay K. Lucker, Director of Libraries

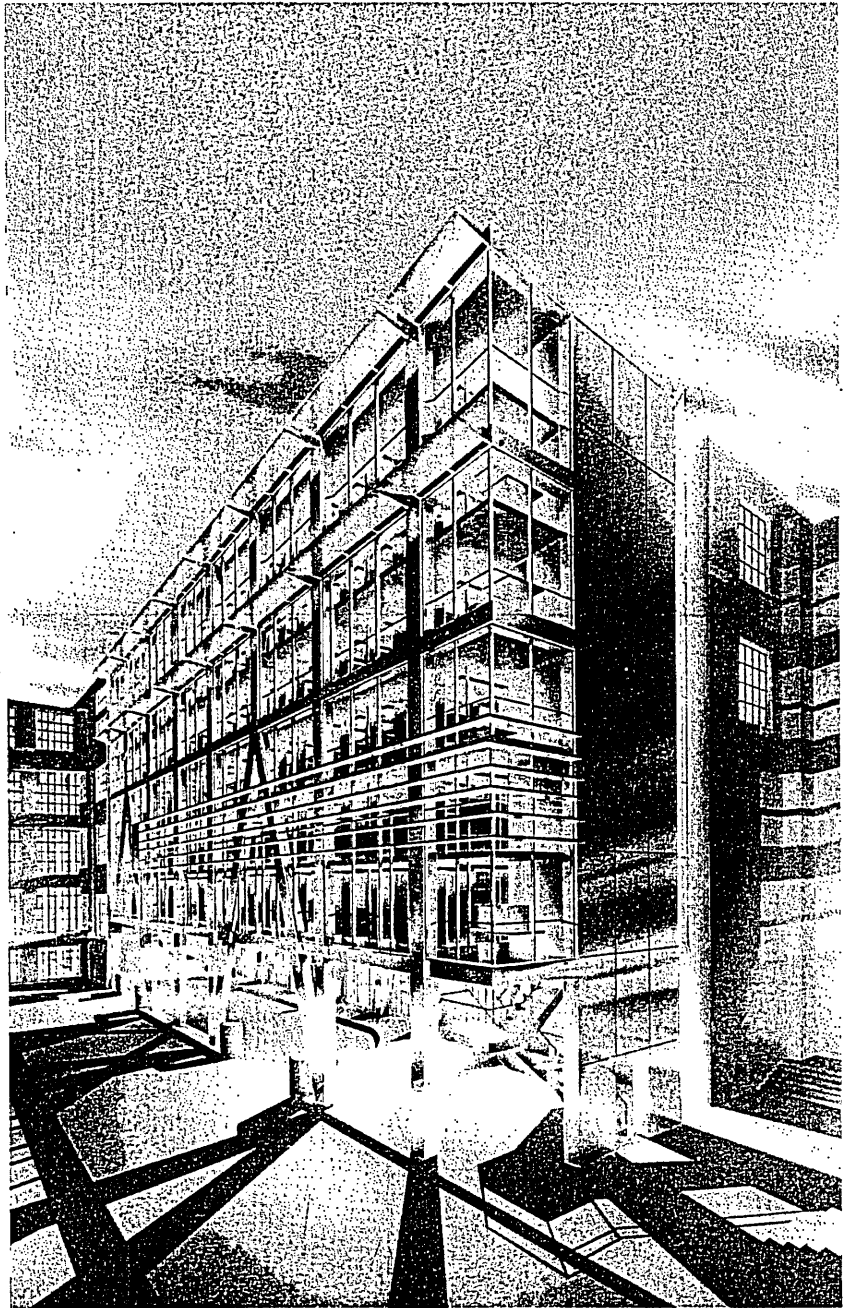
## *Expansion of the Architecture, Planning, and Art Library Will Combine Books and Electronic Information*

**N**ext year, when the expanded and renovated architecture, planning, and art library opens its doors, the MIT community will find a vastly improved study environment. The new facility, currently under construction, is designed to entice the mind and capture the eye, whether the reader's aim is study, research, or serendipitous discovery.

A new stack building will improve browsing and physical access to the collections now in storage. Telecommunications connections and workstations located on all floors of the library will give access to the campus network. CD-ROM indexes will be available for direct public use, to supplement or replace the online search services now offered by the librarians. Cable hook-ups will facilitate transmission of images from the Rotch Visual Collections.

Barton records for books, periodicals, and the visual formats will also be enhanced. The goal is to have online Barton records for all materials, regardless of format, as soon as possible. Although the conversion of records will not be completely finished by opening day of the new library, a cataloguing project is already facilitating access to many of the rich historic materials that are the jewels of the library's collections.

While increasing stack capacity and improving electronic access are the major aims of the expansion, new services are also being developed. Chief among these is the Boston Documents Room, where print and visual information about the Boston metropolitan area will be gathered and displayed as if in a laboratory.



*Architect's rendering of the addition to Rotch Library. The western end of the Bush Building is at left. (Photograph by the architectural firm of Schwartz/Silver)*

An environmentally controlled facility will be provided for the rare, precious, and fragile books and folios in architecture, art, and planning. A small, separate reading room will allow patrons to use these materials in comfort and seclusion. Other study spaces will be found in a variety of types and locations: reading-room tables in the renovated library, study alcoves and carrels in the stack addition, and specialized work areas associated with microforms, maps, indexes, and computer terminals.

The stack addition, which will triple the library's shelf capacity, is located in the back area shared by Buildings 7, 11, and 33. The addition is comprised of 6 book-stack levels rising the full height of Building 7 and connected to the library at level 2. Above level 2, the addition is separated from Building 7 by a narrow atrium topped with a skylight.

Once construction of the new stack building is completed, the collections and staff will move into it temporarily while the old library space is renovated for study and service areas. While the library plans to function as normally as possible during construction, periodic closings and other disruptions to service may occur at intervals during the building and renovation process.

The building project is the first new library construction to be undertaken on the campus since the opening of the Dewey Library in the Hermann Building in 1965. Barker Engineering Library, which occupies the space under the dome in Building 10—incidentally the site of MIT's original "general library"—was refurbished and renovated in 1970. The Hayden building, where the Science and Humanities Libraries and the Libraries' administrative services are located, was opened in 1950.

Rotch Library of Architecture and Planning—named for Boston architect and library benefactor Arthur Rotch—moved into the second floor of Building 7 along Massachusetts Avenue in 1939. Despite a 1955 renovation that added to the library the east side of the first floor, spaces for books, readers, and staff have been inadequate and overcrowded for the last two decades. The present site solution was reached after extensive feasibility studies by the architectural firm of Halasz and Halasz and the examination of more than 20 alternative locations for a larger library to serve the School of Architecture and Planning and the Institute's art programs.

The building and renovation project is scheduled for completion in late 1990, roughly an 18-month construction period. Schwartz/Silver are the architects for the project; George H. Macomber Company is construction manager.

Margaret E. DePopolo, Rotch Librarian

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## ARL Report on Serials Prices

The Spring, 1989, issue of *MIT Libraries' News* reported on the problem of rapidly increasing serials prices and on MIT Libraries' project to identify titles for cancellation in response to that problem. The Association of Research Libraries (ARL) published two commissioned reports which examine the problem.

The first of these, a report by Economic Consulting Services, Inc., concentrated on four large publishers that have been responsible for some of the largest price increases: Elsevier (Netherlands), Pergamon (U.K.), Plenum (U.S.), and Springer-Verlag (West Germany). The analysis compared increases in prices (per page) for a sample of over 100 titles to estimated publishers' costs. The contractor's analysis of the data indicated that the publishers' profits had increased between 40% and 137% during the period 1973 to 1987.

The second report, by Ann Okerson of Jerry Alper, Inc., provided an overview of the issues. She identified several predominate causes of the present crisis:

*Increases in prices well beyond apparent increases in costs*  
*Exchange rate fluctuations*  
*Growth in volume of published research*  
*Competition for promotion, tenure, and grants*  
*Market dominance for scientific, technical, and medicine journals by a relatively small number of publishers*  
*The combination of high fixed costs and an inelastic market*  
*The recent domination of scholarly journal publishing by commercial publishers in lieu of professional organizations and scientific societies.*

She also outlined various effects these price increases have had on ARL libraries:

*Use of resources allocated to other budget lines, e.g. monographs, binding, preservation*  
*Requests for and receipt of supplementary allocations (bailouts) from university administrations*  
*Considerable uncertainty in managing budgeting processes*  
*Subscription freezes (a policy not to add new titles) and cancellations*  
*Reduction of budget support to the social sciences and humanities (since the largest price increases have been for science serials).*

Ms. Okerson concludes that "Research libraries face a crisis in their ability to purchase, store, and distribute the results of research." She bases this conclusion on the following observations:

*"The proportion of ARL libraries' materials budgets devoted to serials expenditures is increasing at a rate which threatens to consume the entire budget within a period short in comparison with library time horizons."*

*(At MIT, 65.5% of the materials budget was spent on serials in 1986/87; by 1988/89 this had increased to 69%, in spite of our cancellation project.)*

*"ARL libraries' serial holdings have ceased growing and actually decreased over the last three years."*

*(In 1986/87 MIT Libraries had 21,296 active serial subscriptions; by 1988/89 the number was reduced to 21,019.)*

*"The proportion of the 'serials universe' held by ARL libraries is decreasing markedly."*

*(The Bowker International Serials Database listed 104,300 serials in 1986/87. MIT Libraries' active serial subscriptions (21,296) represented 20.4% of these. By 1988/89 the database had expanded to 108,590 while MIT subscriptions had been reduced to 21,019, representing 19.4%.)*

As a result of these two reports, the ARL Committee on Collection Development developed the following recommendations for ARL action, which were endorsed by the ARL Board on May 12, 1989:

*"First, that ARL lead efforts with external constituencies to communicate the nature of the problem and the actions needed to address the causes of it as well as to develop several library-oriented consumer advocate services.*

*Second, that ARL orchestrate actions to introduce greater competition to the commercial publishers. Suggested steps include advocating the transfer of publication of research results from serials produced by commercial publishers to existing non-commercial channels and encouraging the use of innovative non-profit alternatives to traditional commercial publishers.*

*Third, that ARL form a partnership with scholarly groups to examine the scholarly publishing process and to find ways to manage the explosion in research and knowledge and the concomitant explosion in publishing."*

MIT Libraries, as a member of the Association of Research Libraries, supports these actions.

Carol J. Fleishauer, Associate Director for Collection Management and Technical Services

## What Is a University Archive?

You are asked to evaluate the undergraduate degree requirements in your department. You think that this same issue was examined about ten years ago, but the secretary has no records of that study. Does anyone have them?

You are teaching a class that studies the ongoing relationship between MIT and the City of Cambridge. Would anyone at the Institute have materials that you could use to investigate this topic?

Your filing cabinets are completely full, and boxes of old materials fill your office. It is increasingly difficult to find a folder that you recently filed. Is there anyone who can offer advice on files management? Does anyone want any of this material?

Your laboratory is about to celebrate the 25th anniversary of its founding. Where are the records about when and why it was established? Can anyone help find material for an anniversary publication and exhibit?

The Institute Archives and Special Collections, a unit of the MIT Libraries, is available to help answer each of these questions. Faculty members, as well as administrators, students, and staff, need information about the Institute for a variety of administrative and historical purposes. The Archives has the responsibility to assure that an adequate documentation about MIT is assembled and preserved for research. The collections include the official records of MIT and the personal papers of many faculty members. The Archives also holds rare books, MIT theses and technical reports, and published material about the history of MIT. The Archives' holdings are complemented by the MIT Museum, where historical artifacts and visual materials are preserved and displayed. The following brief synopsis shows how the Archives can help you.

### Faculty Records

The most visible record of your accomplishments are journal articles, published books, and technical reports. Although of considerable importance to the scholarly community these published results provide only a partial record of your work. They provide little evidence of your daily research and teaching

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### Notes on a Magnetic Storage Method

An ~~un~~ <sup>un</sup>settled idea for a 3-dimensional storage array using gas discharge cells was discussed in 4/28/77 to 5/1/77. The system there would be most difficult to put into practice because of the non-uniformity of the glow discharge pattern. Also the time required for gas stabilization ~~is~~ recovery may be excessive.

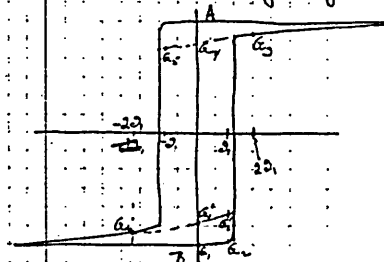


Fig. 1.

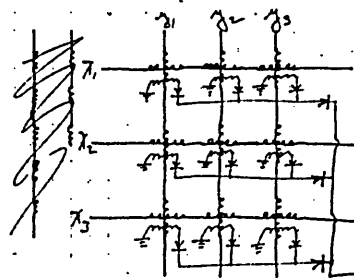


Fig. 2.

or your role as a consultant to government and industry. For this reason the Archives collects files of correspondence, laboratory records, and teaching materials from the faculty. Personal papers are given to the Institute through a legal gift agreement that controls the long-term ownership and use of these materials. The collection is made available to researchers in accordance with your wishes.

When you no longer need your records daily, contact the Archives for advice on filing, preservation, and storage. The Archives can also provide you and your staff with assistance in files management to ensure efficient storage and retrieval of documents from your office files.

### Administrative and Historical Research

You may be asked to carry out an administrative study or prepare an anniversary celebration or a festschrift. Some material may be available in your administrative offices. The resources of the Institute Archives, however, often provide a more comprehensive source of information. Your questions may be answered through records already given to the Archives by your department or another MIT unit. You are invited to contact the Archives whenever you need assistance, and the reference staff will

help in locating and researching the available sources. We can also provide information concerning thesis specifications.

### Teaching and Research

The Archives, like the other units of the MIT Libraries, works to support the teaching and research activities of the Institute. Manuscript, archival, and published sources are available for your own research and teaching. The Archives' staff can tailor sessions for your students on the availability and use of manuscript sources or on the rare book collection. Isaac Newton somehow becomes more relevant when students can examine a first edition of the *Principia*. Undergraduate and graduate students are invited to explore the Archives as sources for research projects.

I hope this introduction to the Archives answers many of your questions about our operations. The Archives is open Monday through Friday, 9-5. A *Selective Guide to the Collections* is available in the Libraries or from the Archives. If you are interested in obtaining a copy of the *Guide* or want more information about any of our services, please contact the Archives (3-5690).

Helen W. Samuels, Institute Archivist and Head of Special Collections

Page from Jay Forrester's 1940 laboratory notebook proposing a magnetic storage method for computers. (Furnished by the MIT Institute Archives)

## New Librarian Staff

Carol Fleishauer joined the staff as Associate Director for Collection Management and Technical Services on October 1, 1988. In this position she has overall responsibility for the Libraries' collections as well as its Cataloguing, Acquisitions, and Bibliographic Database Services Departments.

Ms. Fleishauer came to MIT from the Stanford University Libraries where she had served in increasingly responsible positions since 1978. At the time of her departure she held the position of Chief of the Acquisitions Department. Carol has also held professional positions at



Carol J. Fleishauer, Associate Director for Collection Management and Technical Services. (Photograph by L. Barry Hetherington)

the University of Vermont and the University of Wisconsin. She is involved in activities of the American Library Association.

In the year that she has been here, Carol has been an active participant in the Library administration. She is currently planning for the Libraries' retrospective conversion project which will allow the Libraries to add approximately 200,000 records to the online database.

Carol A. Zoppel, Assistant to the Director of Libraries

## Computer Science and Artificial Intelligence Catalog Published

MIT has played a notable role in the evolution of the computer through such developments as the Whirlwind Computer, magnetic core memory, time sharing, artificial intelligence, and robotics. The MIT Libraries reflect the Institute's active interest in this area with the largest collection of electrical engineering materials in North America. The particular strengths of the collection are in electronics, solid state physics, electric power, telecommunications, computer science and artificial intelligence.

Access to these resources has been made available to a wider audience through two recent publications of the G.K. Hall Company. *The MIT Catalog of Computer Science and Artificial Intelligence* is a compilation of the Libraries' holdings in the areas of computer science and artificial intelligence through December 1986. The *Catalog* is updated annually by the *Bibliographic Guide to Computer Science* which, in addition to the holdings of the MIT Libraries on these subjects, also includes those of the Stanford University Libraries.

The 15,000 titles listed in the *Catalog* represent monographs, serials, MIT technical reports, and conference and symposia proceedings acquired by the Libraries since its founding as well as MIT theses catalogued since 1974. It is a comprehensive listing of primarily English-language publications in all aspects of computer science, programming, systems analysis, systems design and applications of computers to other scientific and technical fields. Additional topics covered include: computer industry, office automation, computer security, computer laws and legislation, computer-assisted instruction, and machine translation. Due to the Libraries long-standing exchange programs in the USSR, numerous monographs in Russian are present in the *Catalog* as are a significant number of materials in Western European languages.

Copies of both publications are available in the Barker Engineering and Science Libraries as well as the Institute Archives.

Carol A. Zoppel, Assistant to the Director of Libraries

## MIT Network Access to Barton

In a collaborative effort, the Libraries have been working with MIT Information Systems staff to provide access to the Barton online catalogue via the campus computer network. With anticipated implementation of this project in Fall 1989, any user of a computer on the network will be able to access the Barton catalogue. For example, faculty can search Barton from their offices as if searching Barton within the Libraries.

Network access to Barton is a component of the Libraries' vision of the "workstation as a window on the library", which was identified in the Libraries' Strategic Plan and was described in the first issue of the *MIT Libraries' News*. In addition, this project is one of several cooperative endeavors between the Libraries and Information Systems.

Initial network access to Barton will support eight ports and will complete the range of access methods available to users: Barton terminals have long been available to users in the Libraries, and "dial Barton" access has been available since March, 1989.

The Institute computer network connects a wide variety of computers, from basic workstations to the new Cray supercomputer. The network currently supports over 2500 computers available to undergraduates, graduate students, faculty and staff. The Libraries' are particularly excited about access to Barton through Project Athena, which will augment support for undergraduate education.

As a result of network access to Barton, the Libraries' anticipate a significant increase in the number of Barton searches. Currently, Barton processes approximately 3500 searches per day, including use within the Libraries and four dial-in lines. Retrospective conversion, which will begin in Spring, 1990 and will provide machine-readable cataloguing records for the Libraries' collections covering the period 1964-1974, will also increase the use of Barton. These efforts are reflective of the Libraries' desire to increase the depth and breadth of its information services.

T. Greg Anderson, Associate Director for Systems and Planning

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