"The University, The Library, and Information Technology"*

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March 16, 1995
Bartos Theatre
Massachusetts Institute of Technology

Jay Lucker: Today's program is prompted in part by, and is structured around, a recent study sponsored by the Association of American Universities (AAU) and the Association of Research Libraries (ARL) in 1993-1994. The study addressed the issues of research libraries, research information, and technology.

Charles Vest: The study Jay has mentioned was divided into three areas of investigation: 1) the acquisition and distribution of foreign language and area studies materials, 2) national strategy for managing scientific and technical information, and 3) intellectual property rights in the evolving electronic environment. I will lay out some background to the study and then comment briefly on some of MIT's responses to the issues raised by the report.

The AAU decided to undertake this study for a simple reason. When the 56 university presidents who make up the AAU get together and talk about their budgets, the first topic that arises is the increasing cost of their library acquisitions and operations. So we decided that we wanted to try to think about how to deal with this issue more effectively and efficiently. Despite cuts in library purchases of journals and books, investments in acquisition and information storage overall have been increasing in recent years due to the establishment of sophisticated computer networks on campuses. So despite the economic pressures on our libraries, the AAU felt that there are great opportunities to build on the rapid acceleration of electronic communications, storage, and networking worldwide. The other motivation for the study was the advancement of the traditional university mission of teaching and research. The electronic environment is unlikely to evolve optimally to support this mission. The institutions that use the evolving electronic environment must therefore remain directly and deeply involved in shaping this environment. The task forces for the study therefore included research university presidents, senior administrators, faculty, university press directors and university librarians.

The first area of investigation — acquisition and distribution of foreign language and area studies materials — was stimulated by factors including 1) the growing interest of research universities in global issues, 2) increasing globalization, 3) the rising cost of foreign materials. The second area — national strategy for managing scientific and technical information — was stimulated by the rapid development of electronic communications and computer technology combined with the fact that most scholarly scientific information is still published in paper...
journals, which are growing in numbers and in price. These journals are increasingly controlled by a small number of commercial publishers. The third, most complex area of the study was intellectual property rights in the emerging electronic environment. The rights to intellectual property created by university faculty are often given to commercial publishers who turn around and sell them back to universities. Is this the right model for the future? Again, the problem is the small number of publishers who are raising prices beyond what many of us consider to be reasonable, and the lack of an adequate market force to constrain this growth.

The reports of the three task forces had a number of common themes. These themes included 1) the importance of ubiquitous access to networked information resources and to technical support, for all campus constituencies; 2) the need to accelerate electronic delivery of information resources; 3) the need for more effective management of intellectual property rights; 4) the advantages of emerging cost-based electronic publishing; and 5) the need for incentives for authors to participate in electronic networks; 6) the value of experimentation in network-based access, delivery and consultation services, and 7) the need to foster systematic discussions with all campus constituencies about these issues.

At MIT we are responding to the AAU/ARL report in several ways. We have established a campus task force on copyright issues. The MIT Press is publishing new peer-reviewed, all-electronic journals, and is developing some combinations of print and electronic publications, which Frank Urbanowski will discuss later. Finally, the MIT Library is involved in a number of experiments, including the Tulip project for full-text access to material science journals. MIT is also encouraging discussions of these issues through meetings like the Communications Forum.

Laura Gasaway: My topic is the copyright issues facing universities today. I served on the Intellectual Property Task Force for the AAU/ARL study. President Vest pointed out that the task force was motivated partly by the current model of copyright ownership controlled by commercial publishers, largely overseas publishers, which have become increasingly concentrated. Another reason for the creation of the task force is the erosion that has occurred in the concept of "fair use" of copyrighted materials. Our own universities have contributed to this erosion by capitulating to litigation or threats of litigation by publishers rather than arguing strongly for fair use. Fair use as defined in the Copyright Act is judged on the basis of four factors: purpose and character of the use, nature of the work, amount and substantiality used, and market effect. Fair use is not just a defense to copyright infringement, but is also a limitation on the copyright owner's exclusive rights.

A federal government task force recently issued its own report on intellectual property in the national information infrastructure (NII). One positive aspect of this paper is its statement that the intellectual property regime must assure broadest feasible access for users on terms that promote learning. However, the paper leaves out certain issues, such as distance learning, a growing phenomenon which represents the real market for higher education in the future.

Our own task force recommended several new models for copyright ownership and management. These include faculty maintaining their copyrights; joint ownership between the university and faculty; and university and joint ownership between faculty members and a consortium like the AAU. The question for the models is whether they will facilitate scholarly communications and the reduce the need for educational institutions to buy back information. All would involve a closer partnership between universities and their own presses, and greater allocation of resources to university presses. However, spending more on university presses may mean spending less in other areas, for example on the purchase of materials by libraries.

Universities want the same access and use of materials in the digital environment as they have in the current environment. Also, universities will want to use faculty-created multi-media works without having to get permission for each copyrighted item included in the work. Universities also want to amend a section of the act which permits instructional broadcasting but limits it to certain types of works. The need is to apply the exemption to 1) all types of works, and 2) distance learning. Libraries want to insure that users have the same right to browse electronically that they have in hard copy today. They also want to be able to provide copyrighted materials as part of an electronic inter-library loan service; to be able to create electronic reserve collections; and to preserve copyrighted materials in our collections, such as
Don Simpson: I am going to talk about foreign language and area studies acquisition. Faced with a situation of increased foreign publishing activity combined with a drastically decreased ability of North American research libraries to acquire foreign materials, the Association of Research Libraries (1989) applied for and won a grant from the Andrew W. Mellon Foundation for the ARL Foreign Acquisitions Project in 1990. The project involves several aspects: 1) a collaborative effort among scholars, librarians and related groups; 2) conducting pilot studies; 3) applying these studies to other areas; and 4) developing and implementing strategies to improve access to foreign materials.

The early information and action plans produced by the project in 1991-1993 engaged the full range of university expertise, as the AAU extended its attention to the impact of the rapidly developing electronic environment on scholarly communications. This impact, as mentioned, became the focus of the AAU/ARL study. The study's task force (TF) on acquisition/distribution of foreign language and area studies materials was charged with developing options for improving collection of, and access to, foreign language materials. To this end, the TF recommended implementation of a multi-institutional network of U.S. and Canadian research libraries. The electronic infrastructure is vitally important to the operation of this network.

This recommendation resulted in a pilot collaborative program involving the Center for Research Libraries (CRL), the Library of Congress, and several major North American research universities. Three initial demonstration projects target Latin American, German, and Japanese informational resources. The Latin American project is creating a prototype for comprehensive, interconnected collections of serials, official documents, and non-governmental documents published in Mexico and Argentina. The German project centers on history and social science documents published in Germany. The Japanese project targets Japanese language, scientific and technical information resources. All three demonstration projects address several strategic objectives such as 1) funding the electronic campus infrastructure; 2) providing support and incentives for scholars and faculty to accept remote access; and 3) resolving intellectual property rights issues. They also address serious questions such as enforcement of cooperative commitments and sustainable fee structures.

To conclude, creative energy and hard work are needed to reverse the failure to keep up with foreign acquisition needs. The AAU/ARL project is a step toward achieving that goal.

Jay Lucker: We face a dilemma. We have all these new technological opportunities to transmit scientific and technical information, yet we are tied into a paper environment and a bad economic situation. Over the past eight years, the 188 member libraries of the ARL have watched costs of serials and books escalate. Libraries have responded by cancelling subscriptions. It is in the scientific and technical area where the cost of journals has gone up most dramatically. Given this situation, the science and technical information (STI) task force, of which I was a member, was concerned with finding a better way to acquire scientific and technical information.

The structure we have now is clearly not working, since libraries are spending more money to buy fewer items. We need new mechanisms to deal with STI publishing issues. One mechanism would be to maximize the potential of network and desktop-based information creation and incorporation by scholars. However, we do not simply need a new method for publishing STI. We need to contain costs at the same time. The keys to cost containment are several: 1) retain copyright ownership by the authors of STI; 2) influence the prices charged for STI by publishers; 3) provide tools for faculty and students to use electronic information; and 4) find new, cost-effective ways for libraries to provide access to information. STI is an expensive field, because control of publishing is predominantly in the hand of a few, mainly overseas, publishers. As monopolists, these publishers have no motivation to change their pricing structure. American libraries are vulnerable to these foreign publishers in terms of currency fluctuations, and also in terms of foreign publishers' views on fair use and copyrighting.
The STI task force suggested several ways for universities to address this problem. First, universities must take more responsibility for controlling copyright and for publishing the output of their own faculty. Second, universities need to support electronic publishing, by providing mechanisms for submission and publication of articles — and access to them — on campus. This means supporting university presses. Third, the academic community must accept electronic peer-reviewed journals as being equal to paper publications. University presidents, provosts and department heads must work to convince faculty to think of electronic journals as on a par with paper journals.

Finally, we need to think about the ultimate storage and retrieval of electronic, as well as paper, information. One solution would be to establish national repositories for STI.

Frank Urbanowski: I'd like to start with an overview of the scholarly information process from the publisher's point of view, and to tell you about how the MIT Press, with the MIT Libraries, is experimenting with electronic journal publishing.

The traditional path of the flow of scholarly information starts with the author, goes to the publisher, and ends with delivery to the user. With the advent of technology and networking, there is a growing interest in the author taking on the publishing function. This is the natural instinct to bypass the middleman and go directly to the user. Some functions are not likely to change in a network environment, however, if we want to insure ease of access, quality, and usefulness of information. Throughout the process of scholarly information, value is added. The author adds value through, among other things, research and the assimilation of information. The publisher adds value through functions such as screening, selection, insuring high editorial standards, and design services. Functions like selection and and screening will be increasingly valuable and necessary within the emerging network environment. In addition, the publisher plays an important role in servicing readers and protecting ownership. Libraries also serve critical functions in the scholarly information process, including acquisition, cataloging, archiving, and information delivery.

Inside the MIT Press, computers have replaced traditional methods of editing, design and page layout. These changes have speeded up the time involved in publication, which helps us to recover costs. We also get the word out on publications to our readers via computer-mediated communications, such as the Worldwide Web. And we are conducting an experiment where the text of a book that will be published in a few months will be offered simultaneously on a Worldwide Web server. The MIT Press has also launched its first experiment in electronic journal publishing with a grant from Mellon. Our first purely-electronic journal, the Chicago Journal of Theoretical Computer Science (CJICS), will have its first article published next month. Articles will be received, edited, produced and archived electronically and delivered to customers and to file servers, individually or through libraries. Three other purely-electronic journals will come on line next year. The benefits of electronic journals include faster peer review and unbundled or article-by-article publication. Our journals will have "hot links" on Web browsers, forward pointers, and access to other resources such as data sets. We think the CJICS can make a go if it has 600 subscribers at $125 per subscriber. These journals offer the prospect of competition in scholarly publication without raising prices. The idea is to have a cost-based rather than a market-priced journal.

There are some problems, however, with electronic publishing. The hard problems are copyright protection and management and defining fair use. The easy problems to solve are technology, hardware, and software connectivity. The hidden problem is the cost of infrastructure training and support to become ready to use networked resources. There are also some things that will not change with electronic publishing, such as the existence of first-copy cost costs. What will change is distribution and access. Our sense is that the costs of printing, inventory, shipping, and collections will not be saved but will be deflected into user support and customer service in the electronic environment.

Beth Rosenson, Rapporteur
Acquisitions and Distribution of Foreign Language and Area Studies Materials

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Don Simpson
Center for Research Libraries

MIT COMMUNICATIONS FORUM
MARCH 16, 1995
ARL FOREIGN ACQUISITIONS PROJECT

- COLLABORATION AMONG GROUPS
- INFORMATION GATHERING
- PILOT STUDIES
- EXTEND TO OTHER AREAS OF THE WORLD
- DEVELOPING STRATEGIES
AAU TASK FORCES

- Acquisitions and Distribution of Foreign Language and Area Studies Materials
- A National Strategy for Managing Scientific and Technological Information
- Intellectual Property Rights in an Electronic Environment
DEMONSTRATION PROJECTS

- Funding of the electronic campus infrastructure
- Providing support and incentives for scholars and faculty to accept remote access
- Resolving intellectual property rights issues
LATIN AMERICANIST PROJECT

- MEXICO AND ARGENTINA
  - SERIALS
  - OFFICIAL DOCUMENTS
  - NON-GOVERNMENTAL ORGANIZATION PAPERS

- FUNDING
  - START-UP GRANT
  - PARTICIPANT CONTRIBUTIONS

- PROJECT COORDINATOR
GERMAN PROJECT

- SCOPe
  - HISTORY
  - POLITICAL SCIENCE
  - SOCIOLOGY
  - ECONOMICS

- LIBRARY OF CONGRESS

- ELECTRONIC DOCUMENT DELIVERY

- SEEKING GRANT SUPPORT
JAPAN PROJECT

- SCIENTIFIC AND TECHNICAL INFORMATION
  - COMPUTER AIDED MANUFACTURING JOURNALS
- NETWORK BASED ACCESS
- SHARED RESPONSIBILITIES
- INITIAL PRODUCT ON THE WWW
- DIRECT EXPEDITED DOCUMENT DELIVERY
• AREA STUDIES MICROFORM PROJECTS
  - CAMP, LAMP, MEMP, SAMP, SEAM
  - EAST ASIA AND EASTERN EUROPE

• AREA STUDIES COUNCIL
INTERNATIONALIZATION OF KNOWLEDGE

- INTEREST
- UNDERSTANDING
- BARRIERS
- CONVERGENCE
- INTERDISCIPLINARY
- ELECTRONICS

Serial Unit Price (+108%)
Serial Expenditures (+92%)
Monograph Unit Price (+46%)
Monograph Expenditures (+16%)
Serials Purchased (-5%)
Monographs Purchased (-23%)

% Change Since 1986

Fiscal year

Source: 1992-93 ARL Statistics
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MASSACHUSETTS INSTITUTE OF TECHNOLOGY
COMMUNICATIONS FORUM

MARCH 16, 1995

OVERHEADS OF MS. LAURA GASAWAY
CRITICAL COPYRIGHT

ISSUES FACING

UNIVERSITIES TODAY
BACKGROUND

The rights to intellectual property created by university faculty are frequently given to commercial publishers who then sell it back to universities.

* Concentration in small number of overseas publishers, especially in scientific and technological fields.

* Price increases for "re-purchase" of information at rates that exceed any reasonable combination of cost and profit.

* Lack of market constraints.
The concept of fair use is being eroded by

* University responses to litigation or litigation threats by publishers and

* Limitations by institutions imposed because of fear of exposure to liability.
FAIR USE

§ 107

... The fair use of a copyrighted work, including such use by reproduction in copies or phonorecords or by any other means specified by that section, for purposes such as criticism, comment, news reporting, teaching (including multiple copies for classroom use), scholarship, or research, is not an infringement of copyright."

- Purpose and character of the use
- Nature of the copyrighted work
- Amount and substantiality used
- Market effect
GREEN PAPER

Much of the debate and interest in the NII has been generated by the Green Paper:


Bruce A. Lehman, Commissioner of Patents, Chair (Working Group)

Ronald H. Brown, Secretary of Commerce, Chair, Information Infrastructure Task Force
INTELLECTUAL PROPERTY REGIME MUST:

1. Recognize legitimate rights and commercial expectations of owners of the works used in the NII environment, whether the work is used with or without their permission.

2. Ensure that users have access to the broadest feasible variety of works on terms and conditions that "promote the progress of science and the useful arts."
"Like the library exemption, the educational use exemptions are provided in addition to the fair use and other general exemptions, which are also available to educational institutions."  p. 60
CLASSROOM EXEMPTION

§ 110(1)

"Performance or display of a work by instructors or pupils in the course of face-to-face teaching activities of a nonprofit educational institution, in a classroom, or other similar place devoted to instruction."

* All works covered

* For audiovisual works or display of individual images, copy must have been lawfully made
MULTIMEDIA WORKS

* Faculty seek the right to prepare and use multimedia works in teaching

- Impossible to deal with the permissions for occasional use

- Combining works electronically should be no different if:

  1. Works individually owned by the school

  2. Use will be limited to classroom use or distance learning
§ 110(2) restrictions

- Limited to nondramatic literary or musical works

- Performance or display must be:

  1. Part of systematic instruction of nonprofit educational institution,

  2. Directly related & of material assistance to teaching content of the transmission, and

  3. The reception must be made primarily for reception in classrooms or other similar places normally devoted to instruction.
* Limited to nondramatic literary or musical works

* Universities seek expansion to cover all types of works

  - Video is a particular problem (teachers & librarians treat video as any other informational work, the Act does not).

  - Multimedia also increasingly a problem
LIKELY RESTRICTIONS

* Limit access to formally enrolled students

* Seek licensing for repeated use of materials (via transmission)
DISTANCE LEARNING

* Increasing phenomena

- All levels of education through professional and graduate schools

- This is where the market for colleges will be in the future

- State-wide distance learning networks
PROBLEMS FOR DISTANCE LEARNING

* Need to expand definition of where transmission can occur

* Need to expand types of materials, especially video and multimedia

* Need to deliver reserve materials to distant learners
BROWSING

LIBRARIANS BELIEVE THAT USERS SHOULD HAVE THE RIGHT TO BROWSE ELECTRONIC INFORMATION

* Limited to publicly marketed copyrighted (plus public domain works)

* Green Paper - "As more and more works are available primarily or exclusively online, it is critical that researchers, students and other members of the public have opportunities online equivalent to their current opportunities off-line to browse through copyrighted works in their schools and public libraries." P. 133
INTERLIBRARY LOAN

LIBRARIES WANT TO BE ABLE TO PROVIDE COPYRIGHTED MATERIALS AS PART OF AN ELECTRONIC INTERLIBRARY LOAN SERVICE.

License agreements could restrict this ability.

However, libraries seek this but not without following the CONTU guidelines - the suggestion of five.

LIBRARIES MUST RECOGNIZE:

Resource sharing does not do away with the need to follow the ILL guidelines.
ELECTRONIC RESERVE COLLECTIONS

* Adhering to the ALA Reserve Guidelines

- Amount of materials reasonable........

- Means not the equivalent of course packs

- Generally, the library owns the material and it is not repeated from term-to-term
PRESERVATION

LIBRARIES WANT TO USE ELECTRONIC TECHNOLOGIES TO PRESERVE COPYRIGHTED MATERIALS IN THEIR COLLECTIONS.

* Types of works (out-of-print, little market, loss of cultural heritage)

* Digital works

* Software

* Electronic copies of exiting print works
DIGITIZATION OF SLIDES & OTHER IMAGES

* Faculty & libraries want to digitize university-owned slide for use in teaching

* Enhances ability to use in the classroom

- Distance learning

- Network availability
"The current copyright statute has proved to be remarkably education-resistant. One part of the problem is that many people persist in believing that laws make sense."

Jessica Litman

The Exclusive Right to Read, 13 Cardozo Arts & Ent. L. J. 29, 50 (1994)