



LETTER FROM THE PRESIDENT

This is, in so many ways, a time of new beginnings at JSTOR. Most obvious to us here in the New York office was our recent move. We are pleased to be in new space on Fifth Avenue and 17th Street. For those of you who may not have received our change-of-address notice, we have highlighted our new address inside.

In addition, at our October Board meeting, we invited three new Trustees to serve on JSTOR's Board. We are extremely pleased to welcome Nancy Cline (Roy E. Larson Librarian of Harvard College), Michele Myers (President of Sarah Lawrence College) and Rick Levin (President of Yale University) to the Board. They bring a wealth of experience that will be extremely valuable to JSTOR as we continue to grow and develop in this fast-moving environment.

But perhaps the news that will be of most interest to you is that we are preparing for the launch of the General Science Collection, our first new post Phase I cluster of journals. Enclosed you will find a description of this Collection, along with the fee schedule and other pertinent information. Although we have not yet established a firm release schedule, we expect that the first of the General Science content will be available in February 2000.

As we approach the end of the year and look to the future, we could not be more excited about the prospects for JSTOR. We are grateful for the support we receive from a wonderful and diverse group of constituents in the library and publisher communities. We look forward to continuing to build on that support and enthusiasm to create an entity of enduring value to the scholarly community.

Kevin M. Guthrie

INTERNATIONAL UNIVERSITIES FIND VALUE IN JSTOR

As network connectivity around the world continues to improve, the rate at which international institutions are choosing to participate in JSTOR is increasing rapidly. From Australia and China to Lebanon and Turkey, scholars, students and librarians are beginning to use and value the JSTOR database. Today, 75 international institutions in 18 nations are participating in JSTOR. The U.K. currently boasts the greatest number of JSTOR participants, thanks to the establishment of a JSTOR mirror site at the University of Manchester in March, 1998.

The earliest non-U.S. participants were from Canada. Seven of the nine Canadian participants are JSTOR Charter Libraries, which means they came in prior to April 1997. Another charter participant is Australian National University (ANU), one of Australia's premier research institutions, with 9,600 students and 1,200 academic staff. So far this year, ANU students and scholars have accessed the database more than 55,800 times, with Economics and Population Studies the most popular subject areas for research.

Colin Steele, University Librarian at ANU, notes that JSTOR is integral to the development of its "Library of the Future" policy, the goal of which is to expand the availability of information retrievable from campus desktops. Before participating in JSTOR, the ANU community did not have digital access to long runs of periodicals. Steele says that JSTOR is opening up new research avenues for library users. "Anecdotal evidence from post-graduate students in particular is that material has been found by typing in a key word in journals which they would not normally search," he explains.

JSTOR is proving its value not only to large research institutions like ANU, but also to much smaller universities such as Koc University in Turkey. Founded in 1993, Koc is a

private institution with 1,000 full-time undergraduate students and 100 graduate students. Because it is a relatively new school, having access to JSTOR has allowed Koc to acquire complete retrospective collections of important journals that it could not acquire any other way.

"It is virtually impossible for our library to comprehensively acquire, let alone store and preserve, the voluminous backsets of even the most critical titles, due to the lack of storage space as well as purchasing costs," says University Library Director Jane Ann Lindley. "JSTOR, therefore, is a fundamental part of our library's collection development strategy."

Access and storage space also presented a challenge for ITAM in Mexico City, a 3,000-student university with undergraduate and graduate programs in fields such as accounting, computer science, economics, and management. Despite the fact that ITAM had some journal collections and participated in an interlibrary loan program within Mexico and with the State of Texas, students were often unable to find the articles they needed. "With JSTOR, we now have a very complete collection of selected academic periodicals, a user-friendly searching interface and the guarantee of a growing quality collection," says Catalina Jaime-Alvarez, Library Director.

How popular is JSTOR on the ITAM campus? At the beginning of the academic year, says Jaime-Alvarez, graduate students in the economics department presented the library staff with an unusual "thank you" card. In it, the students expressed their appreciation to the staff for making JSTOR available on their campus.

TECHNICAL STAFF OVERCOMES CHALLENGES TO KEEP JSTOR DATABASE ACCESSIBLE

Users understandably expect that online resources will be accessible 24 hours a day and 365 days per year. Like the telephone dial tone, a responsive server is one of those things that is not really appreciated; on the other hand, an unavailable server truly gets noticed. This fall we experienced a particularly dramatic string of events that provide us with an opportunity to describe the behind-the-scenes efforts that keep the JSTOR database up and running at all times.

Usage of the JSTOR database has been increasing at a rate of over 50% every six months. (To give a sense of scale, on October 27, 1999, JSTOR servers recorded 108,852 significant accesses, the equivalent of approximately 900,000 hits.) In order to keep pace with this ever-growing volume, JSTOR must continuously invest in new hardware. Upgrades to the three main JSTOR servers at the two U.S. mirror sites (University of Michigan and Princeton University) occur on a regular basis as the number of participants and usage on participating campuses increases. In general, we plan our hardware upgrades six months in advance, anticipating the expected peak load which follows the academic cycle. Our Fall 1999 upgrade was more complex than usual, but the

primary goal was simple enough - at least on the surface. We planned to add more processing power and speed to the system so that it could handle additional users. In addition, we wanted to ensure that should a single server fail temporarily the entire system would not be overburdened. The reality of the upgrade turned out to be anything but easy.

The basic plan called for the installation of faster processors in each of JSTOR's two Sun E-4000 servers, as well as the addition of two more gigabytes of memory to each machine. JSTOR's Sun Ultra-2 server was also scheduled to be replaced by a new E-4500 machine. Problems arose almost immediately. "We thought we would be in good shape when we ordered the hardware, but it arrived much later than we expected," explains Anne Holderreid, the systems administrator in JSTOR's Princeton office. "The new semester began in September and we watched usage go through the roof. We had everything we needed except one integral piece of hardware, and we couldn't go forward without it."

As the team scrambled to prepare an additional E-4000 machine to act as a server to handle the extra load, a more serious mishap occurred. A fire in the basement of the University of Michigan computer center severed the network connection between JSTOR's Michigan servers and the outside world. "There were fumes and toxic dust throughout the building, and it knocked out the Michigan servers," says programmer Ken Alexander. "The Princeton mirror site was left on its own to handle users." The team had to spring into action, reconfiguring the new E-4500 machine to act as a server in a single day - a job they had originally planned to do over a two-week period.

"Then a few more things happened," remembers Mark Ratliff, a programmer in the Princeton office. "A memory fault on one of the new machines brought the installation process to a halt. An all-nighter was required to get the machine running again. In addition, because we were installing so much new hardware, the University had to route new electrical circuits to us. This required an electrical outage that couldn't happen in the middle of the day, when usage is high. So we had to do it at 4:00 am."

"After all of the hard work, the system is performing very nicely," says Ratliff. Alexander adds, "We had ten processors running at 300 megahertz; now, we have 18 processors running at 400 megahertz, nearly doubling our capacity." Throughout this difficult period, JSTOR service was unaffected and users remained unaware that technical problems of this magnitude were occurring.

JSTOR President Kevin Guthrie attributes this to the commitment and dedication of the technical staff, which in addition to Ratliff, Alexander and Holderreid, includes Amy Kirchoff, Spencer Thomas, Nigel Kerr and Sarr Blumson. "The technical team persevered and overcame an incredible series of obstacles," Guthrie says. "All of us at JSTOR appreciate their tremendous effort and are extremely proud to be a part of a team that takes its commitment to its constituents so seriously."

Holderreid adds: "Everyone felt that they had to do whatever it took to keep everything up and running. We were all fighting for the same cause."

DEALING WITH UNAUTHORIZED USE OF A LICENSED DATABASE

By Ellen Finnie Duranceau, MIT Libraries, and Sherry Piontek, JSTOR

Much has been written, both in the published literature and on listservs, about licensing terms and conditions, but comparatively little has been written about what happens when those terms are breached. This brief case study presents a real-life example of how MIT and JSTOR worked together to address and resolve a situation when an MIT user inadvertently used JSTOR in a way that is not authorized by the JSTOR license agreement. In this case, a user was systematically downloading entire issues from the database.

Ellen Finnie Duranceau, MIT Libraries: Christmas Eve – or even the day before — is not the day I'd choose to receive a call from an information provider informing me that someone on our campus was breaching a license for one of our electronic resources. But it was indeed on the afternoon before Christmas Eve, as I was clearing my desk for a vacation to begin a few hours later, that I received a call from Sherry Piontek of JSTOR about our first (and so far only) breach. “Did you know that for the past three days someone at MIT has been downloading entire issues of journals from JSTOR?” she asked, politely and calmly. And thus began my first experience dealing with a breach.

Sherry Piontek, JSTOR: JSTOR has a responsibility to its contributing publishers to protect the contents of its database, and, fortunately, we have technology in place that assists us in fulfilling this obligation. This software enables us to spot unusual usage patterns that can signal unauthorized usage of the database. In this case, we noticed particularly heavy activity over the course of three days from a machine at MIT. By checking the IP number of the computer against our usage logs and tracking the activity, it was evident that entire issues of a journal were being downloaded. When we discover such unauthorized usage, our first step is for a librarian from JSTOR's User Services group to notify our primary contact at the site. Only rarely do we find ourselves forced to suspend access. Rather, we prefer to work with our library contacts to identify and inform individuals that their actions fall beyond the bounds of acceptable usage (see <http://www.jstor.org/about/terms.html>). This is how we came to be contacting Ellen just before her holidays began.

MIT: Sherry informed me, quite conversationally, as if mentioning a newly available title, that JSTOR's monitoring system had shown unusual amounts of printing from one IP address at MIT over a three-day period — including printing of entire journal issues, disallowed under the license terms. She gave me the IP, and, needless to say, I told her I would look into it immediately. I was grateful for Sherry's pleasant tone, because even without any pressure from her, my heart had begun to race. After hanging up the phone, I sat frozen, in rising panic. My first thought was “what do I do???”

JSTOR: From experience we have learned that contacts are often caught off-guard by our initial call or email, in many cases because they have never before been confronted with an instance of unauthorized usage. We try to provide as much information as possible in our first call: the IP num-

ber of the machine in question; an estimate of how extensive the activity has been; and the pattern of retrieval that we have identified. We also try to be prepared to tell our contacts exactly what we expect of them when they ask for help in determining what to do.

MIT: I was fortunate in that I had someone to call. The MIT Libraries already had a relationship with the network security team handling copyright compliance on the campus network: the “stopit” team. I called the chair of that group, who thankfully had not yet left for vacation, and she was able to quickly identify the user associated with the IP address JSTOR's monitoring system had identified. She was also familiar with the proper language and protocol to follow in approaching the user; she had experience talking to individual users in a non-threatening manner and getting them to stop their misuse. Within just a few hours, the misuse had ceased, and we had reported back to JSTOR.

JSTOR: It is great that MIT has established a resource on campus to help deal with situations like this. Because Ellen was aware of this resource and knew how to quickly make use of it, she was able to resolve the situation with less difficulty for both MIT Libraries and JSTOR than might have been expected. The fact that this misuse ceased so quickly was very reassuring to us.

MIT: Over the next few days, we worked with JSTOR to develop a plan to post special signs in the office where the misuse had occurred — an office reserved for visiting faculty members. This office was a particularly vulnerable spot, given the frequent turnover of visiting faculty and their lack of ongoing exposure to MIT's policies, or even, in some cases, to US copyright law.

JSTOR: We were very impressed by the quick actions taken by Ellen and the MIT “stopit” team, and were happy to help with their efforts to educate their users about the contents of our licensing terms. It is good to report that in every case of unauthorized usage that we have experienced, at MIT and other campuses, our contacts have been extremely pro-

Ellen Duranceau is the Assistant Acquisitions Librarian for Digital Resources in the MIT Libraries. A fuller discussion of issues related to compliance with license terms will appear in an upcoming issue of *Serials Review*, in the *Ejournal Forum* column, which is co-edited by Duranceau.

Sherry Piontek is a User Services Coordinator in JSTOR's Ann Arbor office. One of her primary responsibilities is working with participating librarians on compliance issues.

fessional and have willingly worked with us to halt the activity.

MIT: While I do not recommend a breach of license as a relationship builder, I am pleased to report that the end result of our first breach was that MIT gained trust and respect for JSTOR. I also believe that JSTOR gained trust and respect for MIT. We learned JSTOR has a monitoring system in place to identify misuse, but that they wait for a strong pattern to emerge before notifying participants. When they did contact us, they acted professionally and in a non-threatening way to resolve the problem. JSTOR learned that we have a team in place to handle the problem quickly and efficiently, and that we take a breach of contract seriously. Although there was a breach of contract, the worst did not occur. Our access was not terminated and there was no lawsuit. Our experience proves a breach does not have to be a disaster, if both sides are prepared in advance, act professionally, and assume the best of each other.

JSTOR: We are happy to echo Ellen's belief that the resolution of this particular case at MIT resulted in a strong and mutually respectful relationship. In addition, her experience illustrates how necessary it has become for librarians to be prepared in advance for situations involving misuse of electronic resources, and we would urge all JSTOR participants to be aware of any local resources that exist to help in these situations. We at JSTOR are also willing to work with our contacts to increase awareness of compliance issues, and would welcome any ideas or questions you may have.

<http://www.jstor.org/>

COMMENTS

I would like to thank the people at JSTOR for this magnificent program. You have saved me so much time that I am able to write this e-mail at this moment. Keep up the good work!

Chad Horenfeldt, Student, University of Western Ontario

We just subscribed to JSTOR, and I'm very pleased. Above and beyond the content, JSTOR has a clean and well organized website and a good search engine. It's nice to be able to link directly to individual journals. Your statistical usage offerings are the best I've seen. Once again, you have a great product. Thanks!

Eric Eisinger, Librarian, Brookings Institution

I wanted to compliment you with the JSTOR online journals. I'm a serials cataloguer from the Utrecht University Library and I'm very impressed by the way you handle the online journals. It is very well organized, very thoroughly researched and maybe most importantly: a very accurate update service. In the last year or so I've catalogued about seventeen hundred online full text journals and I wish they were all like yours!

Gijsbert Kruithof, Librarian, Utrecht University, Netherlands

I must commend you on providing an excellent service for research. Having access to a search of journals at one's fingertips is an extremely useful and time-saving privilege. I have noticed you continue to add to your data base - keep up the great work!

Kevin Perkins, Student, York University

JSTOR DEBUTS LINKS FROM MATHSCINET

On October 1, 1999, JSTOR and the American Mathematical Society unveiled links between mathematical reviews on the AMS MathSciNet Database and math articles in JSTOR. "From this pilot project we hope to learn about the implications of enabling links from other databases," says Kevin Guthrie. "We are happy and proud to be working with the AMS, one of our first participating publishers, in this cooperative arrangement. What we learn from this experience will be extremely helpful in guiding our approach to enabling links from a variety of other sources. Although it has its complications, establishing convenient links among and between various information resources holds great promise for users and providers alike, and we are eager to make progress in this area."

JSTOR HAS MOVED TO A NEW LOCATION:

120 FIFTH AVENUE
NEWYORK, NY 10011

Telephone 212 229.3700

Facsimile 212 229.6841

Statistics for
January 1, 1999 - November 4, 1999

Total Accesses:	12,692,803
Searches Performed:	3,025,757
Articles Viewed:	2,374,156
Articles Printed:	1,001,587
Pages Viewed:	5,799,607
Total issues available:	27,798
Total full-length articles available:	286,945
Total articles:	729,220
Total pages currently available:	4,389,060
Number of participating institutions:	567
Number of participating journals:	117
Number of journals available online:	112
Number of participating publishers:	67

***JSTOR General Science Collection
Content and Fee Structure for U.S. Academic Libraries***

With Phase I completed, JSTOR continues to pursue its mission to build a reliable archive of important scholarly literature, as well as to dramatically improve access to that literature. We are pleased to announce that our next collection of journals, the General Science Collection, will contain nine titles and approximately 1.4 million pages of scientific journal literature. The material included in this archive will reach back to the 17th century and will cover more than 800 journal years! Because of its size and complexity, the General Science Collection will be released in chronological segments over the course of 2000. The first release of content will be in mid-February, and the collection will be completed by December 31, 2000.

Users of the database will be able to display and print high-resolution page images of the journal articles as they were originally published, in addition to being able to search the full-text by phrases, concepts, or individual words. In addition to being a valuable research resource for scientists and a rich teaching and learning resource for faculty and students, the General Science Collection will be a treasure trove of information for historians of science.

<i>Journal</i>	<i>Dates</i>	<i>Moving Wall</i>
Philosophical Transactions of the Royal Society of London	1665 –1886	Title changed and split
Philosophical Transactions, Series A: Mathematical, Physical and Engineering Sciences	1887 – moving wall	5 years from the present
Philosophical Transactions, Series B: Biological Sciences	1887 – moving wall	5 years from the present
Proceedings of the Royal Society of London	1832 –1904	Title changed and split
Proceedings, Series A: Mathematical, Physical and Engineering Sciences	1905 – moving wall	5 years from the present
Proceedings, Series B: Biological Sciences	1905 – moving wall	5 years from the present
Science	1880 – moving wall	5 years from the present
Scientific Monthly	1915 – 1957	Absorbed by ‘Science’
PNAS (Proceedings of the National Academy of Science)	1915 – moving wall	2 years from the present

***JSTOR General Science Collection
Fees for U.S. Academic Libraries***

Institutions will pay two fees for access to the General Science Collection, an Archive Capital Fee (ACF) and an Annual Access Fee (AAF). The ACF is a one time only fee designed to help insure that JSTOR has the necessary resources to meet its archival obligation to migrate data and software systems as technology evolves. The AAF helps cover the recurring costs of updating the archive, and maintaining access and support services for participating institutions. Each participating institution is offered a site license permitting access to the General Science Collection to all faculty, staff and students registered at the institution. These licenses vary in cost depending upon the JSTOR class of each institution. Please see JSTOR's "Methodology for Classification" at <<http://www.jstor.org/about/class.html>>. Previous participation in JSTOR Phase I is recognized through reduced fees for this collection.

The costs of creating this collection have been high. We are grateful to have received support from The Howard Hughes Medical Institute, The Josiah Macy, Jr. Foundation, and the Andrew W. Mellon Foundation to help offset the significant costs of its creation. This support has allowed us to reduce substantially the one-time fees associated with participation in this Collection.

<i>JSTOR Class</i>	<i>General Science Only</i>		<i>Phase I Participants</i>		<i>Charter Participants</i>	
	ACF	AAF	ACF	AAF	ACF	AAF
Very Large	\$10,000	8,000	7,500	8,000	7,500	6,000
Large	7,000	5,000	5,250	5,000	5,250	3,750
Medium	5,000	3,000	3,750	3,000	3,750	2,250
Small	3,000	2,000	2,250	2,000	2,250	1,500
Very Small	1,000	1,000	750	1,000	750	750

Because the complete General Science Collection will be released in portions over the course of 2000, participants will be invoiced for only one-half of the Annual Access Fees listed above during the first year. Institutions will be responsible for the full AAF after the entire collection is available, beginning in 2001. For institutions that have access to the resource for a part of any year, the amount of the AAF will be prorated to match the number of months for which the library has access to the collection.

Please contact:
Carol MacAdam
Associate Director for Library Relations
120 Fifth Avenue, Fifth Floor
New York, New York 10011
Email: clm@jstor.org
Phone: 212-229-3700