

## **COMPUTER LABORATORY**

**John C. Sanders and Peggy M. Sanders**

I had hoped to be writing this annual report from the new Computer Laboratory in the Institute, Room 202, but two more preliminary phases to the actual move still await completion. A brief synopsis follows:

The overall scheme involves several people playing musical offices: moving the Computer Laboratory into Room 202; moving my office into Room



*Guardian man-bulls of east doorway. Gate of Xerxes, Persepolis*

205, which Oriental Institute Professor Norman Golb will vacate; and moving Professor Golb's office into Room 232, the Computer Laboratory's present location. Additionally, the former second floor fainting room, where the Institute's network equipment and Museum Education storage are currently located, will become the new computer server and network equipment room.

Here is how this process has unfolded. In September 1998 the process started by moving the Museum Education Office from Room 202 to Room 221. In early summer 1999 we moved part of the Museum Education's materials from the former second floor fainting room to the third floor fainting room. In July 1999 the required electrical work was completed in Room 202 and the former second floor fainting room. All that remains is adding additional computer network wiring to all three rooms and the electrical work required in Room 205, after Professor Golb has been moved. Both of these jobs should be completed by early October 1999. I will summarize the entire process, and breathe a sigh of relief that it is all over, in next year's *Annual Report*.

### **Center for the Study of Ancient Technologies and Environments (CSATE)**

Throughout spring and summer 1998 I worked with Oriental Institute Professor Ashhan Yener and several University and Argonne National Laboratory's scientists to outline the computer hardware specifications, networking and data backup strategy, and data management system requirements that were included in the Institute's 1998 CSATE grant proposal to the National Science Foundation (NSF).

**RESEARCH****New Oriental Institute Email System**

With the assistance of Mr. Christopher Barnard, the former computer systems administrator for the University's Computer Science Department who now works for the Chicago Board of Trade, the Institute switched its email system from Macintosh-based QuickMail to the built-in capabilities of a unix-based server. The Institute now has a more flexible email system with much larger storage capacity. The downside to switching was the four months (September 1998–January 1999) it took to instruct the Institute's faculty and staff, one at a time, on how to move email messages from the old to the new system, and teaching almost everyone in the Institute how to use the Eudora email program to access their new email account on our unix server.

The biggest headache involved email address books. Because of the way the old QuickMail program was written everyone's QuickMail address books could not be automatically converted into the format used by the Eudora program. I had the unpleasant task of informing each faculty and staff member that they would have to either retype or "cut-and-paste" all the names and addresses from the old to the new system. For some this was not very time consuming, for others it was a major task. At least the Eudora program's format for address books means that if we need to switch email systems in the future we will be able to automate that conversion process!

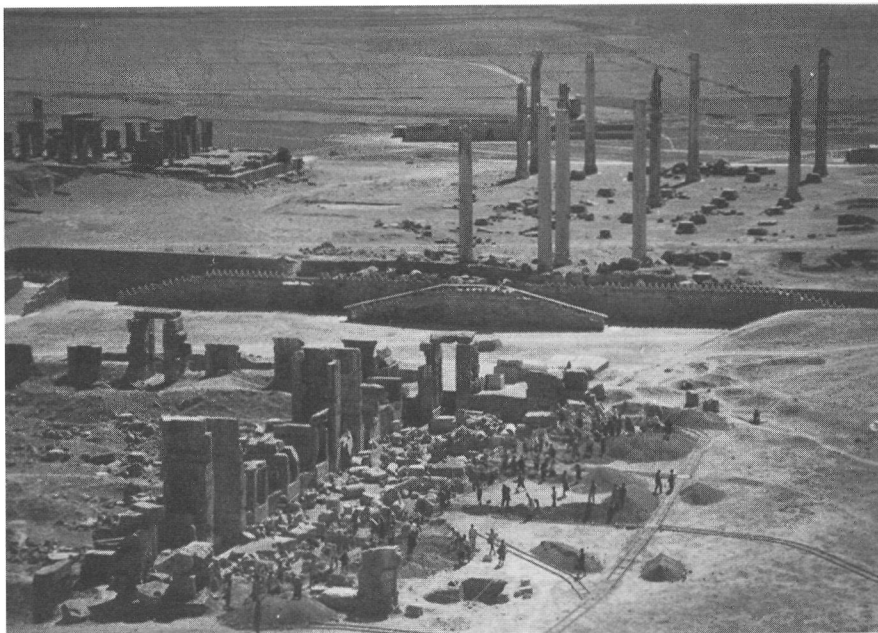
**Year 2000 Problem (Y2K)**

I started to perform the Y2K operating system updates on the Institute's four unix computers in March 1999. One is done, three to go before 31 December. We are making every effort to bring all our systems into compliance. We anticipate no problems with unix machines, few or no problems with Macintosh products, and will upgrade Windows 3.x and 95 computers to Windows 98 as quickly as possible. The Institute's two Windows NT computers will have service pack 5 installed to bring them into compliance.

**Chicago Hittite Dictionary Project**

The Oriental Institute's website took on a new role this year when Professor Harry Hoffner said he would like to use the Hittite Dictionary's homepage to distribute versions of forthcoming dictionary articles to a small, select group of Hittite scholars around the world for review prior to publication. Being the first such request I have had for the website, Charles Jones, Professor Hoffner, and I had several discussions about what file format to store the documents in and how best to serve up the documents to this limited audience. Because of the variety of computer platforms (Windows, Macintosh, and unix-based) these scholars might be using, the even-larger variety of word processing programs they might employ to view these documents, and the almost insurmountable problem of platform-specific fonts, it did not take us long to decide on the Adobe Acrobat Portable Data Format (PDF) as the preferred method.

Because Professor Hoffner only wanted a select group of scholars to have access to these dictionary documents, I created a password-protected directory within the Hittite Dictionary's section of the website, and each scholar was given this pass-



*Throne hall, portico, and north part, with Darius' Palace and Apadana in background. Persepolis*

word. All they had to do was download from the Adobe website the free “plug-in” for their web browser software of choice and install it on their computer system.

At this point the process goes as follows: as each new dictionary document is created by Professor Hoffner, I create a link to it in the Hittite Dictionary’s website, and he emails the group of scholars to inform them that a new document is ready for their review. They use their web browser to connect to the Hittite Dictionary website, click on the appropriate link, and the new dictionary article appears on their web browser exactly as it was created by Professor Hoffner, including all fonts, type sizes, and diacritical marks, regardless of which computer system or web browser software each reviewer might choose to use.

## **Persepolis and Ancient Iran**

For several years the Photographic Archives section of the Institute’s website has contained a catalog of the 999 photographs from a 1976 Oriental Institute text/microfiche publication entitled *Persepolis and Ancient Iran*. A comprehensive survey of archaeological sites in the environs of Persepolis, Iran, the catalog is divided into four sections, summarizing the major areas of investigation: the architecture, reliefs, and finds of the Palaces at Persepolis; the prehistoric mound of Tall-i-Bakun; Istakhr, the Islamic city mound; and the aerial survey flights conducted between 1935 and 1937. It did not, however, contain any of the actual photographs from the microfiche publication but was just a listing of each photograph’s caption.

During summer, fall, and winter 1998, Professor Matthew Stolper and one of his students, Michael Kozuh, scanned into computer files the 957 black and white photographs from this publication which were already printed and stored in the

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Institute's Photographic Archives. I then put out a call for volunteers to help process these computer images into a format suitable for inclusion in the Persepolis and Ancient Iran section of the website. When I advertised for volunteers I estimated it would take four to six months to complete the project, assuming we had several people working part time. Five Oriental Institute docents (Peggy Grant, Irene Glasner, Lyla Bradley, Nancy Gould, and Nancy Terras) volunteered immediately, and all were quick learners. They kept the pressure on me to provide them with the raw data they needed to do their job. Almost daily throughout February and March 1999, either Peggy, Irene, Lyla, Nancy, or Karen were in the Computer Laboratory using the Photoshop program to prepare the scanned images or using a text editor program to create the HyperText Markup Language (HTML) caption pages for each photograph. From a start date of 5 February the final photographs were put on the website on 30 March, a far cry from the four to six months I had originally thought!

Response to the availability of this large photographic collection via the internet by both scholars and the general public has been very positive. I applaud the perseverance of both Professor Stolper and Michael Kozuh, as well as our docents, and cannot thank them enough for the marvelous addition to ancient Iranian studies and the Institute's website that their efforts produced.

### 1905–1907 Breasted Expedition to Egypt and Sudan

Reminiscent of the Persepolis and Ancient Iran project above, a second publication of the Oriental Institute is in the process of being converted to a web-based format. With the gracious help of Docent Irv Diamond, the 1975 Oriental Institute text/microfiche publication entitled *The 1905–1907 Breasted Expedition to Egypt and Sudan: A Photographic Study* was scanned using optical character recognition software during spring 1999. A catalog of the captions for about 1,100 photographs taken by James Henry Breasted, the Oriental Institute's founder, during his early travels throughout Egypt and Sudan has now been compiled. Oriental Institute Research Associate Bruce Williams volunteered to track down the exact location of some of the Nubian sites Breasted photographed (the original print publication did not contain a map of the region locating the 70+ sites). This work still needs to be completed, but I expect this new addition to the Institute's website will be available in fall 1999. I anticipate seeking volunteers in early 2000 to once again scan the enlarged prints we have of these photographs in the Institute's Photographic Archives, and then to edit, crop, and process these computer files so they can also be made available to scholars and the public via our website.

### Epigraphic Survey Photographic Negative Database Program

Graduate student Jason Ur, who wrote the FoxPro source code for the Epigraphic Survey's new photographic negatives database management program, spent part of summer 1998 fixing minor problems with the program after its second season of use at Chicago House. By all accounts the staff is pleased with the program's speed and its ease of use when they need to retrieve information on a particular photograph in the database. The error-checking routines that Jason built into the "add a new record" portion of the program save time, reduce keystrokes, and eliminate many common data entry errors.

When the program was first written during summer 1997, I converted all of the data from the Epigraphic Survey's existing computer database into the new database structure through the use of several conversion programs that I wrote. Unfortunately, many hours of manual labor still lie ahead for the Epigraphic Survey staff in order to take full advantage of the new program's relational database capabilities because of the different file structures in the old and new programs. Some of this work can be automated through the writing of additional conversion programs, but some will require hours of retyping data. I hope to report on how this process is proceeding in next year's *Annual Report*.



*Detail of Bactrian tribute bearer. East stairway, Apadana, Persepolis*

## Adult Education Courses on the Internet

Working in conjunction with the Museum Education Office, I assisted Research Associate Steve Vinson and graduate student Nicole Hansen in developing two on-line adult education courses. Both were accessed via the Institute's website and our majordomo list server. Steve's on-line course, *Ancient Mariners*, operated during late spring and summer 1999. Nicole's on-line course, *Egyptian Folklore*, operated during summer and early fall 1999. In both cases all of their respective website pages were designed and created by themselves. I just offered constructive criticism and suggestions on issues such as file structure and image sizing and formats, and performed routine maintenance and file uploading procedures for both courses.

## Laboratory Equipment / Institute Resources

As predicted in last year's *Annual Report* the Computer Laboratory's 35 mm slide scanner was smoking throughout most of this year as several student workers, including Tasha Vorderstrasse, Aaron Burke, and Joey Corbett worked to scan the entire Ashkelon slide collection into digital format for inclusion in the Ashkelon database being developed by Professor David Schloen.

In December 1998 the Computer Laboratory acquired its first true Geographic Information Systems (GIS) software, a suite of programs called ArcView (the basic program, as well as the Spatial Analyst, the 3D Analyst, and the Image Analyst extensions). The software operates on the Laboratory's Windows NT computer and will provide tremendous capabilities for archaeological survey and site analysis.

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In January 1999, the Computer Laboratory's CD-ROM "burner" was brought on-line, so Institute faculty and staff can write data in CD-ROM format for long-term storage and archival purposes.

I want to thank Mr. Edward Anders, a member of the Institute, for his donation of a Macintosh Classic II computer system and modem to the Computer Laboratory. The computer found a new home in the Institute on the Security desk in the lobby.

I extend the same thanks to Mr. Christopher Barnard and his wife, graduate student Shelley Luppert-Barnard, for their donation of a Macintosh IICI computer and monitor, which spent the past year serving as a terminal for accessing the Research Archives On-Line Catalog from the new Stacks Room.

Lastly, I am most appreciative of the contributions given by Mrs. S. Chandrasekhar and Maggie Brandt to the Computer Laboratory's operations.

**World-Wide Website**

For further information concerning several of the above mentioned research projects, the Institute's World-Wide Web database and other electronic resources in general, please refer to (case sensitive):

[http://www-oi.uchicago.edu/OI/INFO/OI\\_WWW\\_New.html](http://www-oi.uchicago.edu/OI/INFO/OI_WWW_New.html)

The homepage for the Oriental Institute website is at:

<http://www-oi.uchicago.edu>

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