Instructional software presented this spring at NYU. (Story on page 3.)

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Academic Computing and Networking at NYU is edited and published by New York University's Academic Computing Facility (ACF). Formerly the Academic Computing Facility Newsletter, the new publication's broadened scope is intended to include information about computing and networking activities at NYU's various schools, departments and administrative units.

Copies of Academic Computing and Networking at NYU are mailed to University faculty and staff and are also available from the ACF's Documentation Office (Room 306 Warren Weaver Hall). Students holding ACF individual computer accounts are included automatically in the newsletter's mailing list. This is the third issue published in the 1990-91 academic year; five issues are planned for 1991-92. Contributions from sources within the University are invited for consideration by the editor.

Unless otherwise indicated, articles are authored by members of the ACF staff. This issue includes articles and information contributed by the following members of other departments: Genine Babakian (Bobst Library); Seth Benardete (Classics, FAS); Mary Brooks (Computer Science, FAS); Joan Connelly (Fine Arts, FAS); Donald Chesnut (School of Law); Ogden Goelet (Near Eastern Languages and Literature, FAS); Helen Jones (Applied Science, FAS); Stephen Krause (Purchasing Services); Martin S. Nachbar, M.D. (Medicine and Microbiology, School of Medicine); Jean Reibman (NYU Medical Library); Aldo Scaglione (Italian, FAS); Mariya Yamamoto (NYU Book Centers).

Special contributions to this issue were made by the following ACF staff members and associates (in alphabetical order): C. J. Anastasio, Gary Chapman, Howard Fink, Ed Franceschini, Jac Fried, Ed Friedman, Bert Holland, John Kesich, Frank LoPresti, Henry Mullish, Gary Rosenblum, Stephen Rittersporn, Bill Russell, George Sadowsky, Stephen Tihor. Additional production assistance provided by Laura Gancasz, Carole Goodman, Charlec Leimberg, and Rita Santiago.

Newsletter Editor: Estelle Hochberg
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Note to our readers

Why a March/May issue? Although four issues of Academic Computing and Networking at NYU were planned for the current academic year, a University hiring moratorium and a staff shortage have made it necessary to combine the March and May 1991 editions into one issue (March/May 1991). As a result, some articles that were to have appeared in March and May have had to be postponed to the September 1991 edition. Five issues are tentatively planned for the 1991-92 academic year.

Those odd notes below many of the by-lines in this issue of the newsletter are electronic mail (E-mail) addresses. If you do not use E-mail but would like to, see the box on page 9 of this newsletter.
The contents of this third issue of Academic Computing and Networking at NYU reflect a growing trend in the availability and scope of network services accessible to scholars and administrators at universities. A number of articles in the current issue of this newsletter report services that can be acquired over Internet, the international network to which our local campus-wide network is linked. This is the result of cumulative investments in network infrastructure during the last several years, both in the United States and abroad. Physical network connectivity continues to expand, linking more and more institutions of higher education and research. As a result, an increasing number of network service providers of many types are likely to see the Internet as an effective way of reaching and providing services to a large and growing population of individuals and organizations.

For example, government funding agencies are starting to take advantage of the Internet. The National Science Foundation has recently made its publications — as well as its time-dependent agency news bulletins — available online through the Internet (see page 8). With the Bush administration now proposing major investments in a High Performance Computing and Communications program, it is very likely that additional government agencies will be encouraged to use networks to disseminate information and to interact with their constituencies.

More network services, coming from within NYU itself, are becoming available via our campus-wide NYU-NET. While BobCat has been network-accessible for several years, network users at NYU can now also gain access to the Law Library catalog system (see Academic Computing and Networking at NYU, January 1991, page 24) as well as to the catalogs of the Medical and Dental libraries (see the current issue, page 19).

An increasing number of library resources outside of NYU are also becoming available to NYU-NET users. For example, the RLIN catalog is accessible over the Internet free of charge on an experimental basis (see Academic Computing and Networking at NYU, January 1991, page 16). Furthermore, there are now over 50 major research libraries in the United States and an increasing number of foreign research libraries that are making access to their catalogs over the Internet available without charge. Whether such services will continue to be offered on a no-charge basis will depend upon how usage patterns and costs of offering the service evolve, but at the moment, there are many new and potentially interesting information sources available to all of us who use networks.

Along the same line, there is an increasing use of the Internet for access to scholarly databases in the humanities and arts. The Dante Project (see page 7) is an impressive example of the use of information and networking technologies to build and provide a rich source of material currently employed by students and scholars of Italian language and literature at NYU. A newly established international connection, from NYU's Fine Arts Department to an important database developed and housed at Oxford University's Beazley Archive, promises to be a fertile source of new information for scholarly work in the arts (page 8).

Finally, some of the many bulletin boards offered as a part of the Usenet News service provide other potentially useful sources of information. The Usenet News community, which "lives" on the Internet, reflects a different cultural approach to information retrieval and dissemination. Usenet News items are distributed to subscribers throughout the United States and within many foreign countries. While the content is generally technical and much of it is oriented toward computer-related topics, there are sections or "groups" devoted to other academic disciplines, as well as to recreational topics and event listings. Within the computing community, this network service is used extensively for the exchange of assistance with specific issues and questions. The Usenet "newsgroups" and their users form a relatively new culture, and one that may be important to be aware of and understand. (See pages 9 and 10 of this issue and page 25 of the January issue for information on Usenet News and on news reader programs for users of different types of computers.)

Networks, Computers, and Effectiveness

Network services can be exploited to save time and effort and to increase the effectiveness of a variety of academic and administrative endeavors. Electronic mail offers substantial advantages in efficiency and effectiveness for certain kinds of communication with one's colleagues. For example, it is becoming increasingly routine for papers and information in electronically editable form to be passed back and forth in seconds, via electronic mail, among co-authors at different universities.

The efficiency of electronic mail can

(continued on following page)
become especially evident when one needs to communicate with a group of colleagues who are geographically dispersed. To some degree, electronic communications services can obviate the need for face-to-face meetings, with their attendant cost and inconvenience. Electronic mail also helps eliminate the “telephone tag” that most of us find ourselves involved in from time to time, and thus, coincidentally, also has the potential to reduce external telephone costs.

Indeed, the use of computer technology offers a variety of ways in which we can make our everyday activities more efficient and also reduce costs for individuals, departments and the University. For example, a basic triad of personal computer productivity tools (word processing, spreadsheets and database systems) now commonly allows faculty, staff, and students — without any special computer expertise — to manage information and prepare many different kinds of documents with little need for technical or clerical intermediaries. Access to documents on a screen can result in less paper used for printing. Such savings may well be moderate for single individuals, but could in the aggregate result in meaningful reductions in costs for the University as a whole.

A New Computing and Networking Guide for NYU

In line with our transformation of this Newsletter to reflect academic computing and networking throughout NYU, over the coming summer we will be preparing the first edition of a new publication, A Guide to Academic Computing and Networking at NYU. This publication is intended to be a general reference guide to computing and networking at the University, and will supersede our earlier publication, Welcome to the ACF. (Much of the information provided by this earlier guide to ACF facilities will be subsumed appropriately in the new publication.)

We would like the new Guide to include all significant academic computing facilities and services that the NYU community might like to know about, so that entries will not be confined to public computing sites. For this reason, we will be contacting Deans and Department Chairs soon for possible contributions to the Guide and collaboration in preparing it. Please help us in our goal of putting together a truly useful publication, by providing information — either solicited or unsolicited — about facilities in your department. We will very much appreciate your assistance in this project.

Looking Forward to the Fall

As noted on our inside front cover, this issue of Academic Computing and Networking at NYU incorporates material originally intended for the March and May issues of the newsletter, and is the last issue to be published in the current academic year. This is in part our response to the University’s need to reduce overall expenditures.

The next newsletter will appear in September 1991. At that time, we expect to announce a number of new services, as well as the details of a new series of the computer colloquia that we co-sponsor along with the Faculty of Arts and Science (see page 3 for a report of some of this semester’s offerings) and a full schedule of ACF workshops, tutorials and seminars for current and prospective computer users.

As a newcomer to NYU, I have found the past eight months stimulating and instructive. I would like to thank the NYU faculty members, staff, and students whom I have met for the input and support which they have provided to me, and I look forward to continuing to work productively with you all in the future.

George Sadowsky
sadowsky@nyu.edu

At the ACF's instructional microcomputer lab in the Education Building.
NYU's Spring '91 Colloquia on Scholarly Computing

From Faculty-Authored “Courseware” to Parallel Supercomputing Techniques

The first three Spring '91 colloquia on the integration of computer technology into higher education featured innovative software and database applications in the sciences, in language and literature, and in the arts. They spanned the spectrum of academic disciplines and endeavors from the teaching of classical Greek literature to the simulation of planetary terrains.

Now in their second year, the colloquia are sponsored by the Academic Computing Facility (ACF) and the Faculty of Arts and Science (FAS), with support from Apple Computer, Inc., and the IBM Corporation. The series is becoming increasingly popular, drawing growing numbers of faculty members and students from diverse areas of study. (See the November 1990 and January 1991 issues of this newsletter for reports of colloquia presented in the Fall '90 semester.)

Innovative Hypermedia Uses at Dartmouth

Over eleven examples of multimedia instructional software and of software authoring tools and databases were presented at the first colloquium of the semester by Prof. David Bantz, Director of Arts & Sciences Computing at Dartmouth College.

Courseware discussed and demonstrated by Prof. Bantz treated topics in astronomy; earth sciences; molecular genetics techniques; German language, literature and culture; Dante's Divine Comedy; music composition; logic; and Chinese language learning. Two other Dartmouth-developed products which he demonstrated provide simple and flexible interfaces for courseware authoring and for the organization and presentation of information pulled from Dartmouth databases, both visual and textual.

Dartmouth became involved relatively early in the development of instructional uses of hypermedia and has a comparatively high rate of faculty participation in the authoring of courseware. All the software demonstrated by Prof. Bantz runs on Macintosh computers and was authored by Dartmouth faculty, students, and staff for use in instruction and scholarly research; much of it is HyperCard based.

Many of the Dartmouth products are also employed at other universities and are available for adaptation and use in NYU courses. NYU faculty members who are interested in viewing the software should contact the ACF at 998-3058; the ACF already has a number of demos of the Dartmouth courseware and will obtain any additional samples that you wish to see.

Supercomputing and the Space Program

The second colloquium focused on applications of new parallel supercomputing techniques to the
analysis and visualization of scientific data from recent NASA space missions. Dr. Terry Cole, who is Chief Technologist at the Jet Propulsion Laboratory in Pasadena, California, started with a brief introduction — geared for the layman — to the technology of parallel computation and its application to supercomputers, both currently and in the coming decade.

He concluded a very interesting presentation with examples of computer-generated images and films of Venus and Mars. These were simulated, with the use of supercomputers, from enormous quantities of data obtained in NASA's Magellan, Pioneer, and Viking missions.

**Hypermedia and the Study of Ancient Greek Culture**

An interactive database of information about the civilization of archaic and classical Greece was the subject of the third colloquium. Sebastian Heath, of the Department of Classics at Harvard University, spoke on the work that he has been doing as part of Harvard's *Perseus Project* and the implications of the Project for the teaching of ancient Greek culture.

*Perseus* was developed at Harvard as a multimedia environment for instruction and research in ancient Greek culture. It is currently in “beta testing” at universities around the country and is slated for distribution by Yale University Press in Fall '91. A demo version may be viewed at the ACF: call 998-3058.

*And more...*

As we go to press, additional presentations in the Spring '91 series will focus on the use of hypermedia in the teaching of Chemistry at NYU; the relationship of principles of auditory perception and computer music; and social issues arising from the use of information technologies in public organizations. A report of these will be included in the September '91 issue of this newsletter, along with a preview of the new colloquia planned for the Fall '91 semester.

—Estelle Hochberg

hochberg@acfcluster.nyu.edu
Courseware Catalogs and Demos Available for Examination At the ACF

A Wide Selection of Instructional Software That Can Be Obtained for Adaptation and Use In NYU Curricula

You Get the Most out of Aldus Software from Aldus Software.
• A Premiere Collection of Peer-Reviewed Educational Software from TASL, the Academic Software Library.
• Macintosh Educational Software Collection from the Chariot Software Group.
• National Collegiate Software from Duke University Press.
• Software Fair ’90 from EDUCOM.
• Instructional Computing Update a newsletter from Iowa State University.
• The Clearinghouse, Spring ’90 catalog from Iowa State University.
• Intellimation Library for the Macintosh.
• Mathematics Software from Conduit.
• Psychology Software from Conduit.
• English Software from Conduit.

Help from the ACF in Authoring, Selecting, and Using Courseware

ACF staff members are available to assist NYU faculty members in finding, adapting, developing, and implementing instructional software for use in their courses.

The ACF also maintains a small but growing reference library and equipment for courseware development and trial. Books and periodicals on the development and use of instructional software and hypermedia; software catalogs (see accompanying item); authoring software and courseware demos are available for examination. We welcome your interest: please call 998-3058.

- Wisconsin Catalog from the University of Wisconsin.
- Tools for Learning from the IBM Corporation.

Reported by CJ Anastasio
anastasio@acfcluster.nyu.edu

Additional Intensive HyperCard Courses Are Planned

The Academic Computing Facility is working with Apple Computer, Inc. to arrange additional intensive full-day courses in the use of Apple’s HyperCard. As in the past, these hands-on, small-group workshops will be open, free of charge, to all NYU faculty and administrators, and will be taught by training personnel from Apple Computer, Inc. They are as follows:

- HyperCard Fundamentals: An introductory-level workshop. Absolutely no background in computer programming is assumed, but previous experience with HyperCard and the Macintosh environment is necessary.
- HyperCard Stack Development: An advanced, two-day course introducing the fundamentals of scripting and how it fits into the overall design and development of HyperCard stacks, and covering the major design decisions and scripting operations necessary to make a successful stack. Prerequisites: Familiarity with the Macintosh and with HyperCard fundamentals.

As we go to press, sessions for the summer and fall semesters are being considered. Please call 998-3058 to let us know of your interest, for the latest information on dates, and to reserve a spot.

(Offered as part of the series of colloquia on the use of computers in the college classroom, these HyperCard courses are sponsored by the Faculty of Arts and Science and the Academic Computing Facility, with support from Apple Computer, Inc.)
A New Computer Course for Students in Many Disciplines

Introduction Combines Computer Concepts with Practical Experience

Computers are part of nearly every aspect of contemporary society—from textile to car design, animation to space exploration, and bookkeeping to high finance. Our rapidly expanding reliance on technology intensifies the demand for exposure to computing within an educational framework.

Computer Science is the field concerned with the design and use of computers. Undergraduates can major in computer science through the Department of Computer Science in the College of Arts and Science. Of course, this is not every student’s goal. However, getting some experience with computers while completing an undergraduate degree is an important part of most students’ college plans.

Principle and Practice

Many students intend to use computers as tools in their field of specialization and want to gain some level of understanding of them. The Department of Computer Science recently developed a new course for undergraduates at NYU. Called Computers in Principle and Practice (A22.0004), the course provides a variation on the standard academic introduction to computing.

Computer hardware and software concepts often seem mysterious to students simply because they are unfamiliar. The structure of a computer system is explained in the “principles” part of the course, which consists of several components: anatomy, the hierarchy from hardware to software, algorithms (methods to solve problems), programming languages, and artificial intelligence.

The practical component of the course enables students to use computers as a tool, no matter what their discipline. In the Fall 1990 semester, for example, assignments were placed in the context of the publishing of a newsletter, with obvious parallels to most practical arts. Students used computers to design, market, and collect information as if they were newsletter publishers. Students learned to edit text and to control format and graphics; they used a spreadsheet to acquire skills in making informed decisions (such as setting the price of the newsletter based on printing and capital costs); they discussed other computing tools for managing the information necessary to run a newsletter.

Student response has been enthusiastic. The course is intended for those who have little previous experience on computers or are unfamiliar with practical applications. Students use Macintosh computers and Microsoft Works, a program which includes word processing, spreadsheet, and database functions in a single package. The course design includes in-class demonstration, now comfortably accommodated by facilities installed by FAS in Room 509 Main which allow an instructor to project the monitor image to the class to illustrate techniques and processes.

Following Up

After completing an introductory computing course, students who want to continue studying computing will discover many opportunities within the university. “Computing” encompasses a variety of topics, and courses are offered in many of NYU’s colleges. In addition, there are workshops and tutorials given by the Academic Computer Facility (ACF). College of Arts and Science undergraduates interested in computing as a discipline or as a support element to other disciplines are encouraged to consider a major or minor in Computer Science. The minor complements the curriculum of many departments. For more information on the undergraduate program, call the Department of Computer Science at (212) 998-3094.

—Mary Brooks
brooksm@cs.nyu.edu
(Mary Brooks is Coordinator of the Undergraduate Division in the Department of Computer Science (FAS)).

Training for Visually Impaired Users of Computers

Individual, one-on-one instruction as well as class sessions in personal computer use tailored to the needs of visually impaired people are being offered by the Computer Center for the Visually Impaired (CCVI) at Baruch College of the City University of New York.

Instruction is currently available in the use of adaptive computer equipment (voice, braille, and large print systems), WordPerfect 5.0, DOS 3.3, Lotus 1-2-3 and dBASE III Plus. Individual sessions cost $35.00 an hour, with free practice sessions. For further information, including fees for class sessions, please call the CCVI at (212) 447-3070.

—Extracted from a CCVI flyer
Networking to the Dante Project

Scholars at NYU Access a Database of and About La Divina Commedia

Networks already offer valuable services to scholars in the humanities, and many expect their use in these and other disciplines to continue to grow markedly in the coming years. Access to databases of scholarly information amassed and maintained at distant universities is an important network service.

Recent examples of scholars at NYU who are exploiting network services to enhance instruction and research include the Department of Italian (FAS). There, faculty and students are using NYU’s extensive network connections to access Dartmouth College’s Dante Project.

The Original Text and 600 Years of Commentary

The Dante Project is an extensive database for use by students of Italian language and literature. It contains the complete text of La Divina Commedia (The Divine Comedy), as well as over 600 years of commentaries linked to precise passages in this Italian classic dating from the early fourteenth century.

The Project has involved the work of experts at many participating institutions, among them Prof. Aldo Scaglione of the University’s Italian Department. For several years Prof. Scaglione has been a member of the Council of the Dante Society of America, whose past president, Prof. Robert Hollander of Princeton University, has been the major force behind the project. Selection of material to include in the project, formatting, and programming have been worked out over the years by Prof. Hollander in collaboration with the Council of the Society as well as staff and faculty members at Dartmouth. When this ten-year undertaking is finished, the entire text of 60 books of commentary—in English, Italian and Latin—will be available.

Online Databases and Research

Online databases like the Dante Project offer many advantages. In the case of the Dante commentaries, for example, many of the texts are rare and would be otherwise difficult to obtain. Here, they can be accessed almost instantaneously over the network.

The search capabilities of database software can also mean significant savings in time, as compared with more traditional methods of library search. For example, with the Dante Project, having made a network connection to the database, which resides on a mainframe at Dartmouth, one can make complicated searches and obtain results in a matter of minutes. Criteria by which one can search include the author, language, publication date, and type of commentary, the particular cantica or canto of the poem which one is investigating, or particular lines, words or phrases—whether in a commentary or in the original poem’s text.

Since searches that would previously have taken days can now be accomplished in minutes, scholars can concentrate on substance and analysis, rather than on the mechanics of search. Further, it is felt that, because online databases like the Dante Project make it easy to devise new searches and test one’s hunches, they encourage the positing of theory and the following of additional leads.

And for Macintosh Users...

Dartmouth has also produced an especially user-friendly HyperCard-based interface for individuals who are accessing the Dante Project from Macintoshes. Unfortunately, at present, this “front-end” can only be used at Dartmouth or with dial-in connections that are made via telephone and modem. For further information, please contact Larry Mingione at the ACF or the Dartmouth Dante Project (see accompanying box for numbers and address).

Accessing the Dante Database

The Dante Project database is accessible via NYU-NET and its connection to the Internet; however, you need an account on the Dartmouth system to use it. The ACF has obtained several such accounts for members of the NYU academic community who wish to try it out. For information on that trial account and for help in using it, please contact Larry Mingione at the ACF’s Faculty Microcomputer Laboratory (mingione@acfccluster.nyu.edu, 998-3043).

Individuals who wish to obtain their own accounts may apply to the Dartmouth Dante Project, 1 Reed Hall, HB 6087, Dartmouth College, Hanover, NH 03755; 603-646-2633 (dante@dartmouth.edu).

Also of interest...

A report of an NYU colloquium in which the Dante Project was presented appears on page 3.
NSF Publications and News Now Accessible Online Via Internet

New Network Service For Researchers In Sciences

National Science Foundation (NSF) publications have just become available online over the Internet, the international network to which NYU's campuswide network, NYU-NET, is connected.

They are available via STIS, a new electronic dissemination system that provides easy access to NSF publications, allowing users to search the full text of publications online. Simple and Boolean searches can be made by keyword and by pre-defined topics; they can be applied to the entire database or can be "filtered" to particular NSF organizations, types of material, and date ranges. The results of searches can be copied back or e-mailed to the computer from which one has initiated the STIS connection.

Connecting to STIS

Anyone with an account on an ACF VMS or UNIX computer — including holders of ACF Electronic Mail Accounts — can access STIS. There is no charge for the service, and a special STIS account is not required.

To do so, enter the command telnet stis.nsf.gov and, when you receive the login prompt, enter the keyword public. (Holders of the ACF's E-mail accounts should start by selecting "Telnet" from Menu 2, and then type stis.nsf.gov when prompted.) In the initial session, each user will be asked to make up an eight-character personal ID that will be his or her permanent STIS ID for future sessions.

You will also be asked to identify the type of terminal being used or emulated in your session. At this point it is probably a good idea to accept the system's offer of help: a number of important STIS commands must be issued by pressing particular keys or combinations of keys, and you will receive information on the placement of these important keys on your terminal.

NSF Publications

NSF publications are of particular interest to individual researchers in science and technology, in addition to sponsored research offices and science policy analysts. Publications available through STIS include the NSF Bulletin and Guide to Programs; NSF grant forms, program booklets and press releases; the NSF Telephone Book; reports of the National Science Board; abstracts of NSF-funded research projects; and analytical reports and news from the NSF's International Programs Division.

—Adapted from an STIS flyer.

Fine Arts Department Links to Beazley Archive

Network Access From NYU to Oxford's Database on Classical Greek Pottery

The Department of Fine Arts (FAS) has obtained access, via international network connections, to a major online scholarly database in the arts. Oxford University's Beazley Archive, which is housed in the University's Ashmolean Museum, has developed a relational database of Greek figure-decorated pottery of the sixth through the fourth centuries B.C. Its ten tables, which can be searched interactively in any combination, offer important data for many aspects of the study of classical Greece.

The Beazley Archive has asked Joan Breton Connelly, Assistant Professor in the Department of Fine Arts, to act as institutional executor at NYU of access to the database. In the spring 1992 semester, Prof. Connelly plans to offer a seminar in research methods for the study of Greek pottery and to employ data from the Beazley Archive in her course.

This is an important collaboration with Oxford University, one that is expected to further strengthen New York University's position as a center for the study of Greek art and to be a productive source of new research. A more detailed account will follow in the September issue of this newsletter.

—Joan Connelly
Department of Fine Arts (FAS)

A Greek Amphora ca. 550 - 530 B.C. (Courtesy of the Toledo Museum of Art.)
Publicizing Seminars Online

A New “Newsgroup” Reaches Readers in New York City and Surrounding Region

A recently created “newsgroup” brings online announcements of seminars, colloquia, conferences and similar events at institutions of higher education in New York City and in the neighboring regions of New York State as well as Connecticut, New Jersey, and Pennsylvania. It also provides an excellent means of publicizing academic events at NYU and of drawing faculty and students at other institutions to them.

Contributions from faculty members at other institutions have already begun to arrive at this unmoderated newsgroup, which was initiated by the ACF only a few weeks ago. While the newsgroup readership stretches to a somewhat broader area, the intention is that postings will refer to seminars occurring in—or within 100 miles or so—of New York City. Particularly welcome are announcements of events dealing with uses of computer technology in instruction and research in the humanities, sciences, and arts. However, announcements of seminars in all academic disciplines are encouraged, whether or not they bear on the use of computers.

Posting Announcements

You may send postings via electronic mail (E-mail) or, if you are already familiar with newsgroups and are a comfortable user of a news reader (like news or notes), you may prefer to use that facility to post your seminar announcement.

To post to nyc-seminars via E-mail, send an E-mail message containing your seminar announcement to the Internet address nyc-seminars@nyu.edu. If you are using E-mail on an ACFCluster machine (this includes holders of the ACF’s Electronic Mail Accounts), send it to in "nyc-seminars@nyu.edu".

From the IBM CMS system, use the format nyc-seminars at nyu.edu, instead.

Reading About Seminars

The programs that are most commonly used to read newsgroups are called “news readers”. Please see the January issue of this newsletter for an introduction to news readers. An article in the current issue (see page 10) provides beginning instructions for a news reader for and Macintosh users. To use a news reader on the ACF cluster of VAX/VMS computers, start it up by entering the command NEWS; then type HELP for instructions.

These announcements are also being collected on an electronic bulletin board that the ACF has established for those individuals who prefer to read them that way. The bulletin board, NYC-SEMINARS, can be accessed in the customary way by E-mail account holders and other users of the ACFCluster. It is also accessible from the ACF’s INFO system (select BOARDS from INFO’s main menu).

Announcement Archives

After about 60 days, entries will be archived and will be accessible via ftp. Use the command: ftp acfcluster.nyu.edu followed by: cd archives. (NYU-NET users may also connect to INFO and then select ARCHIVES.)

--Estelle Hochberg
hochberg@acfcluster.nyu.edu

Special note: Additional Local Numbers for PS!net Users

PS!net is a new individual dialup service that allows access to NYU computers from afar via a local call. It is being offered free of charge to NYU faculty, staff and students through the University’s NYSERnet affiliation.

The following local numbers have been added to those available to holders of PS!net accounts. (See the January 1991 issue of this newsletter for more on PS!net.)

Atlanta, GA: 404-659-6634
Buffalo, NY: 716-883-6743
Houston, TX: 713-652-9624
Portland, OR: 503-228-5660
Trenton, NJ: 609-890-6640

Dialups are at 300/1200/2400 Baud. Application forms for PS!net accounts are available from the ACF Accounts Office, Room 305 Warren Weaver Hall, 998-3035.

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To obtain an E-Mail Account...

The ACF’s Electronic Mail Accounts are available free of charge to all members of the NYU community—faculty, staff, and students. Electronic mail (E-mail) is also available automatically to individuals with accounts on ACF mainframes and minicomputers.

Faculty and staff members may request an E-Mail Account by sending an original letter on departmental letterhead showing the department’s address and phone number; please include your name, title, campus address and campus phone number. Students need a similar letter—one departmental letterhead—from a faculty sponsor; include name, title, campus address and phone number for both the student and the sponsor. Please send your request to the Academic Computing Facility Accounts Office, Room 305, Warren Weaver Hall.

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Netnews — a Macintosh News Reader

Netnews is a HyperCard stack for the Macintosh that allows you to read Usenet (also referred to as "news"), a world-wide electronic bulletin board which I described in the January issue of this newsletter.

There are two things that you need in order to be able to use netnews: first, the Macintosh that you are using needs to be connected to NYU’s network, NYU-NET, via either a LocalTalk or an Ethernet connection. Second, you must have a copy of MacTCP, which is a Mac driver for a set of communication protocols called TCP/IP. The ACF has established a site-wide license for the software, which means it will be provided free of charge to all members of the NYU community (see the article on MacTCP in this issue of the newsletter). Once you get MacTCP, just drop it into your system folder, and restart your Mac.

Netnews is a front-end to the news software; it depends on having the news articles on a host computer, and having NNTP (the Network News Transfer Protocol) installed on that host. The ACF provides this service free of charge to all members of the NYU community.

Setting It Up

Netnews contains a great deal of online documentation, all of it useful (portions of this article are taken directly from said documentation). When you first get a copy of the stack, click on (and hold down) the square "button" marked Commands. A menu will appear; move the cursor to Edit Configuration (see Figure 1) and release the mouse button. You will now have to fill in the requested information. For Host:, enter news.nyu.edu. This is the name of the news/NNTP server maintained by the ACF. (Later, you will be able to enter news.nyu.edu.) For From address for postings: enter your preferred E-mail address, or news@nyu.edu if you do not have one. For Organization for postings: enter your department, or New York University.

To obtain netnews...

Copies of netnews are available from the ACF's Faculty Microcomputer Laboratory (Room 316, Warren Weaver Hall).

There is no charge, but a blank, formatted 3.5 inch diskette is required and it is advisable that you call first to make an appointment. For further information or to make an appointment, please call 998-3044.

The others are self-explanatory.

One note of caution: messages are stored on the host by message number; these change from news server to news server, so if you later specify another server, all information as to what messages you've read will be automatically 'forgotten' by the netnews stack.

Getting Started

Once you have finished with the configuration, click on the button marked "Connect to Server". You'll see a graphic of a bridge being built, and then a stream of zeros and ones going across. If you do NOT see the bridge, or if an error box pops up, this means either (a) that you have misconfigured the NNTP host - check it again, (b) that you do not have MacTCP configured correctly (refer to the documentation provided with your copy), or (c) that the NNTP/news host is down. Ordinarily, (c) will NOT be the case. If you are certain that things are configured correctly and that your Macintosh is correctly connected to NYU-NET, please contact the ACF's Faculty Microcomputer Lab at 998-3045.

Selecting News Groups

When you connect to the NNTP host for the first time, or if a new group has been created since you last read the news, you will be asked if you wish to update your newsgroup list. (Netnews main-
tains two lists. The first is a list of all the news groups available, currently more than 1100; the second is an edited list that contains only those groups that you are interested in reading. You should answer yes, or else you won’t be able to see what’s in that newsgroup. This process can take a great deal of time, especially if you are using netnews for the first time. When it is finished, however, you will have a list of newsgroups to choose from. Choose as many as you like by clicking on the names. Click OK when you are done, after which a screen like the one in Figure 2, called the “group-list” card, will appear.

**Browsing and Reading**

To look at one of the groups, just select it by clicking on it, then click the “eye” button in the top right corner of the card. There are two ways to view messages in a news group - you can look at the messages one at a time, or view a list of the subject fields of the messages (we strongly recommend the latter, since it will greatly reduce the time you spend looking for news articles you wish to read). Radio buttons on the group list card allow you to select either of these (Note that you can use the arrow keys to scroll down whichever list you are currently viewing. Clicking on the curved arrow on the group list card disconnects you from the server, clicking it when you’ve entered a group returns you to the previous card.) If you select viewing by subject fields, then selecting a news group and clicking on the “eye” takes you to a subject list card. Here you can select the specific message you’re interested in by clicking on it, and then view it by clicking on the “eye” on that card. On the news group card, you can select whether you want to be shown only new messages, or all the messages in the news group. Messages that you have read appear with a check-mark (✓) on all cards.

**Choosing a Font**

Messages in the news groups are text-only, no graphics. The message format and usage has also evolved from line-based terminals, where all characters are the same width, lines are limited to 80 columns, etc.

This is very “un-Mac-like,” and netnews attempts to convert gracefully between the two worlds. When displaying messages, netnews gives you a choice of fonts via the Set Font menu entry in the pop-up menu. A mono-spaced font will keep most closely to the sender’s intent, particularly if elements of the message are lined up in columns. Monaco 9 or Courier 10 is best. If you prefer seeing messages in proportional fonts, you can leave the font set to one of the proportional ones (Geneva or New York), and then switch back to a mono-spaced font when something looks like it should be lining up vertically but isn’t. Netnews also converts tabs into spaces and replaces form feeds (which most terminals interpret as “clear screen”) with “00000000000000000000” followed by 24 blank lines — enough to get the next information off the bottom of the field.

The other choices are self-explanatory: to post a message, just follow the directions you’ll see after you click on Post Msg...

You can become proficient with netnews in just a short time. However, there are some limitations to netnews. It is not incredibly fast, and since it is a HyperCard stack, there is a 30K limit on how much can fit in a field. Other limitations are listed under the netnews home card: click the Limitations button. Overall, netnews is a very easy-to-use way to read the Usenet news.

—Gary Rosenblum

gary@acfcluster.nyu.edu

(Portions of this article were adapted from Netnews’ online documentation.)
MacTCP™ Is Site-Licensed for NYU

Recommended for All NYU Macintoshes With AppleTalk Links to NYU-NET

The Academic Computing Facility has obtained a site license for MacTCP™ on behalf of New York University.

MacTCP is Apple Computer’s implementation of TCP/IP (the Transmission Control Protocol/Internet Protocol) for Macintosh computers. MacTCP forms a foundation for network application software packages like terminal emulators and electronic mail programs. It is used by these packages for communicating over networks linking Macintoshes and host computers like the ACF’s UNIX and VAX/VMS minicomputers.

A Standard for Networked Macs

As maintainers of the campus-wide network, the ACF recommends that MacTCP be installed on all Macintosh computers which are nodes on NYU-NET—that is, on all Macintoshes linked to local AppleTalk networks connected to NYU-NET. Macintoshes that are not connected to NYU-NET do not need this software.

To Obtain MacTCP

Under the terms of the site license, the ACF may distribute on-disk copies of the MacTCP documentation and software to NYU departments for use on their institution-owned Macintosh computers. The software is for internal use only, and may not be distributed to individuals outside the University.

For additional information, or to arrange to obtain a copy of the software, please contact the ACF Faculty Microcomputer Lab at 998-3044. Recipients will be asked to complete a brief registration form agreeing to abide by the terms of the University’s license with Apple and providing us with a name and address to contact when future versions of MacTCP become available.

—Gary Chapman
chapman@acfcluster,nyu.edu

Data Presentation For ACF Micro Users

Personal computer packages like those listed below can be used to produce simple graphs, pie charts, and other representations of data and results for inclusion in papers and reports. The following are available to users of the ACF’s instructional microcomputer labs.

For PC’s For Macintoshes

Spread sheets
Lotus Microsoft Excel
Excel Microsoft Works
Quatro

Data Analysis Programs
SPSS/PC* Statview 512+*
TSP SPSS 4.0
SAS* with Cricket Graph*
*Under site license to the ACF (on behalf of NYU), and thus available for purchase at reduced prices to qualified members of the NYU community. Contact the ACF’s Faculty Microcomputer Laboratory (998-3044) for further information.

Note: Nearly 60 software packages are available on the instructional micro lab servers. For a current list, visit one of the labs or call the ACF at 998-3058.

Macintosh Maneuvers

A Tip for New Mouse Users

Users of the Macintoshes at the ACF’s instructional microcomputer labs vary greatly in their Mac-expertise. Here is a tip that I have found to be especially helpful to new users. It applies to just about any Macintosh application.

To select, click before and shift-click after. This may be the single most useful and time-saving tip for beginning users of the Macintosh.

It works in just about any Macintosh application. That is, if you want to select a passage in a document, a set of cells in a spreadsheet, and so on, you (1) click the mouse button at the beginning of your proposed selection; (2) move the mouse to the end of the selection; and (3) hold down the shift key and click the mouse button.

Everything between the two points where you clicked will be selected. If the passage that you want to select is long, before you shift-click, use the scroll bar to roll the contents of the window to the end of the section you want to select.

This has a number of advantages over the click-and-drag method of selecting parts of Macintosh documents. It is a faster way of selecting long passages, and in general, it is probably more accurate. For example, if you inadvertently drag the mouse at any angle to a line of text, you may not select what you expect. This trick is especially handy for catching “invisible” formatting characters, like tabs and carriage returns.

—Howard Fink
finkh@acfcluster,nyu.edu
Keeping Your Macintosh in Good Working Order

If you own a Mac or use one regularly at work, here are a few cardinal rules that you should follow. They will help you maintain your Macintosh, and the data residing on it, in good working order.

**Rebuild Its "Desktop File"**
Your Macintosh keeps track of the contents of its hard disk in an invisible file called the "Desktop". Occasionally this file can be damaged, for example if your Macintosh is accidentally turned off rather than properly shut down. On a weekly basis, make sure this file is correct and up to date by holding down the Command and Option keys simultaneously while "rebooting" (turning on) your Mac. Within a few moments, you will be asked if you wish to "rebuild" the Desktop file. (Before selecting this option, you may wish to perform a backup of your important files.) Select "yes", and wait a few additional moments while your Mac system carries out your request. Immediately following this procedure, restart your Macintosh by selecting "Restart" from the "Special" Menu.

**Check for Viruses**
If you obtain new software or files on diskette from a friend, or if you buy new software, you should be on your guard against computer viruses. You can scan disks for viruses and install a virus protection mechanism with Disinfectant, a free anti-viral program available from the ACF Faculty Microcomputer Lab (998-3044).

**Simplify, Simplify, Simplify!**
Has your System folder become cluttered with unnecessary init, cserv, startup pictures, fonts, and the like? While there are many such small programs that make a Macintosh more fun or more attractive, these little programs do use memory and can sometimes conflict with each other or with an application package that you might be using. Sometimes mystifying problems with your Mac can result. In addition, occasionally a new version of the Apple operating system software will be incompatible with older programs of this type. Keep things simple by removing any unnecessary software from your System folder!

—Gary Chapman
chapman@acfcluster.nyu.edu

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**At the ACF’s Instructional Micro Labs**
NYU students, faculty, and staff may use ACF microcomputers under three types of accounts, at no charge to the individual: private microcomputer accounts, individual accounts, and class accounts. The latter two types of account are issued for specific academic purposes and allow priority access to ACF computers.

**Obtaining an ACF account.** For a private microcomputer account, simply bring your current, valid NYU ID to the Education Building or Third Avenue site and complete a brief application form; you will be established on the spot. Individual and class accounts are obtained through the ACF’s Accounts Office (Room 305 Warren Weaver Hall, 998-3035). There is no charge to the users of these priority access accounts, but a special form must be filled out and, for students requesting an individual account, an instructor’s signature is required. Please contact the Accounts Office for details.

**What's available at the labs.** The following microcomputer equipment is available at the ACF’s instructional microcomputer laboratories. All systems are connected to local networks linked to the campus wide network, NYU-NET: MS-DOS equipment is connected locally by Novell-based networks, running over Ethernet, and Macintosh equipment is linked by AppleShare and AppleTalk running over LocalTalk media. For hours of operation, please see inside back cover.

**Third Avenue North Residence hall, basement (62 computers):**
- 32 IBM and IBM-type computers with mouse and VGA color monitor
- 30 Apple Macintosh SE computers, with two floppy drives
- 1 Hewlett-Packard Laserjet III printer and 2 Apple LaserWriter NT printers
- Over 60 software packages

Currently available to private micro account holders and to instructional/research users (students and faculty with individual and class accounts) during all hours of operation (see inside back cover).

**Education Building, Second floor (90 computers):**
- 35 IBM PS/2 computers, model 555X, with mouse, VGA color monitor
- 35 IBM PS/2 computers, model 70, with mouse, VGA color monitor; 25 with numeric coprocessor and joystick
- 20 Macintosh Plus computers
- 2 Hewlett-Packard Laserjet III printers and 1 Apple LaserWriter NT printer
- Over 60 software packages

Available to private micro account holders from 8:30 a.m. to 1 p.m., Mon. - Fri., and to instructional/research users (students and faculty with individual and class accounts) during all hours of operation (see inside back cover).

**Tisch Hall, Room LC-8 (23 computers):**
- 10 IBM PS/2 computers, model 555X, with mouse, VGA color monitor
- 13 IBM PS/2 computers, model 30, with monochrome monitor

Currently available to instructional/research users (students and faculty with individual and class accounts).
Copying Multiple Files in WordPerfect for the IBM PC

Easy Backups to Floppy

Suppose you have an important file saved on the hard disk and you want to be sure that you have a copy of it on a floppy disk as a backup in case your hard disk fails or to carry away with you for some other purpose.

In WordPerfect 5.0 and 5.1, you would press List Files, FS, press Enter to accept the current directory, highlight the file in question, and select the sixth option, Copy. In response to the prompt: Copy the file to:, you would simply type: a: (to copy the file to the A drive) and in a second or so the file will be copied to the floppy disk in drive A. It will have exactly the same name as that on the hard disk.

This is all very well. But what if you have a hard disk containing about 300 files and you want to back up all but ten of them? It would be an arduous (if not error-prone) task to have to go through this process for each of the files in question. One method would be to mark each of the individual files to be copied with an asterisk. Then when you issue the command to copy, all the asterisked files would be copied.

Switching Case with WordPerfect 5.1

A Quick Tip for Users of The PC Wordprocessing Program

Have you ever typed a long segment of text and, to your dismay, looked up at the screen and found that you have inadvertently left the Caps Lock in the On position? Of course, the result is that all the text is displayed in uppercase.

Unlike the typewriter, WordPerfect does not require you to start all over again. This modern word processing program has the ability to convert the case for you. In WordPerfect 5.1 all you have to do is to block the text involved by pressing either Alt-F4 or the F12 key and extending the highlight to the rest of the text that you wish to convert to lowercase.

Once the text is highlighted, press the Switch key, Shift-F3. You then select lowercase from the short menu at the bottom of the screen and all the highlighted text is converted.

But that’s not the whole story. WordPerfect “knows” that after every period, the next word should begin with a capital letter, despite the fact that you have issued the command to switch to lowercase. You will notice that each sentence in the converted text starts with a capital letter.

And even that’s not the whole story. WordPerfect is smart enough to know that many words starting with the letter I (such as I, I’m, I’ll, and I’d) should not be changed, since they are always spelled with an uppercase letter I. These subtleties could easily be missed when changing case, but WordPerfect takes care of them for you.

And for Mathematica Users...

An item on the new version of Mathematica appears on page 35.
Computing at the Law School

PC Viruses

Protecting Your Software and Data from Them

In the past few weeks there have been numerous incidents of computer viruses at the Law School. The one particular virus that we have encountered, STONED, infects a PC floppy or hard disk and gradually makes all of the data on it inaccessible to the user. Once it has effected its damage, there is little that can be done to retrieve the deleted information. Most seriously at risk are computers with which many different floppy disks are used, like the ones in our microcomputer lab, student journal offices, etc. So far we have lost all the data on two hard disks and a few floppy disks.

At the Law School, we have always been skeptical of so-called "computer viruses". Generally speaking, most reports of computer viruses are grossly exaggerated; most seemingly inexplicable incidents and problems that occur while using computers have logical causes. However, viruses do exist and can be serious problems, as they can spread much like a biological virus from system to system causing damage. Most single users with standalone PC's are not at high risk of having their disks infected with computer viruses. Bulletin board services are common places where viruses lurk; if you download programs from bulletin boards, you should be careful that you are not also downloading viruses.

"Boot Sector" Viruses

There are viruses of all types. Some are harmless, flashing 'innocuous' messages across the monitor, and some are devastating, deleting files and wreaking havoc on computer networks. STONED is a "boot sector virus", which means that it infects the most critical area of a disk.

Like all boot sector viruses, the only way STONED can infect a hard disk is to boot up from an infected floppy disk. The floppy disk need not be a program disk; even if the floppy disk is not bootable and contains only data files, if you try to re-boot the machine with the floppy disk in the drive, the virus will infect the hard disk. However, the virus does not spread when you copy files from one disk to another; if you copy files from an infected disk to a new disk, the new disk will not carry the virus. Similarly, you can leave an infected floppy disk in a drive forever without getting the hard disk infected; the virus only spreads if the infected disk is in the drive—with the drive door closed—when you boot the machine.

Preventing Damage from Viruses

While there may be little we can do to retrieve data destroyed by some viruses, there are some things the user can do to prevent damage from viruses before it occurs.

The first rule is to never leave a floppy disk in a drive when you turn a machine either off or on. This rule particularly prevents the spreading of the "boot sector viruses" described above.

Another method of prevention is to scan your disks for viruses periodically with a virus-scanning program. The scanning program will scan a floppy or hard disk and report any viruses found. If viruses are detected, you can run the same program or a complementary one to remove the virus. Most likely the virus will be removed and your data should be fine.

Copies of virus scanning and eradicating software are available to Law School faculty, staff and students from the MicroSupport Office at the Law School. If you would like to check your disks for infection, and we strongly recommend that you do, call the MicroSupport Office at 998-6111 and we will give you a configured disk with a set of simple instructions. (Similar software for both IBM-type PC's and Apple Macintoshes is available to all members of the NYU community from the Academic Computing Facility's Faculty Microcomputer Lab (998-3044).)

The programs are "share-ware", which means they may be distributed free of charge. However, if you decide to use the program, it is up to you to register the software and to pay any fees associated with it. Also, as always, you should have backups of all your data.

—Donald Chesnut

(Donald Chesnut is the manager of the MicroSupport Services Department at the School of Law.)

Academic Computing and Networking at NYU, March/May 1991, page 15
Computing at the Medical School

Update on Hippocrates

Development, Use, and Curricular Integration of Instructional Software Continues Apace At NYU’s School of Medicine

Perhaps the most ambitious and comprehensive body of courseware developed thus far at the University has been produced at the NYU School of Medicine as part of the Hippocrates Project, under which teams of students and faculty have been developing multimedia teaching materials dealing with a broad range of disciplines within the field of medical education.

The Hippocrates Project has been guided since its inception in 1987 by Martin S. Nachbar, M.D., Associate Professor of Medicine and Microbiology at the School of Medicine. The Hippocrates Project and the courseware which it has produced were the subjects of a presentation by Dr. Nachbar in last spring’s NYU colloquia on the uses of computers in higher education (see the May 1990 issue of the Academic Computing Facility Newsletter).

Recently, we asked Dr. Nachbar for an update on the development of courseware at the School of Medicine and its integration into the Medical School curriculum. This article is a report of what he told us.

New Courseware, Disciplines, and Uses

The development and use of instructional software has been expanding rapidly at the Medical School since the spring ’90 semester. Several new projects in some disciplines for which courseware was not previously available have been completed. The collection of courseware produced by the Hippocrates Project now has representation in almost every discipline in the basic science curriculum at the School of Medicine and about one quarter of the clinical disciplines. Current work is targeted toward the continued expansion of the courseware collection throughout the entire curriculum.

All of the courseware runs on Apple Macintosh computers, some also requiring such peripheral equipment as videodisk players and/or special video and sound boards. The Hippocrates Project courseware tends to be used by students working in small teams in a specially established computer lab at the Medical School. In addition, some new multipurpose teaching labs equipped with mobile workstations are evolving.

Some of the interesting new material and uses are outlined below.

Diagnosing Mental Illness

Currently under development is a collection of multimedia material for instruction in detecting the signs and symptoms of mental illness. When it is complete, students will be able to examine descriptions characteristic of patients with psychiatric disorders and observe videodisk clips of real patients exhibiting these characteristics.

This multimedia “sight-and-sound” approach makes it possible for students to observe a patient’s body language or listen to his/her speech—an important instructional advantage, particularly in this subject, over conventional textbooks.

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A typical screen from the module “Signs and Symptoms of Mental Illness” by Craig Olin ’93 and Rebecca Jones, M.D. A description of the sign or symptom appears in the left window. A videodisk clip of a patient demonstrating the sign or symptom is shown in the upper right window and a transcript of the clip appears in the lower right. The transcript helps to decipher speech which is difficult to hear or to follow.
The courseware will also provide students with transcripts of patient interviews—assisting, for example, in the understanding of non sequiturs in a patient's responses.

The courseware has been "beta-tested" with small groups of students, and results indicate that it will be a very powerful tool for the teaching of this type of material. There are also plans to build self-tests into the program by summer '91. For example, students may be asked to capture a screen that shows a particular sign and symptom and to identify it.

**A Framework for Neuroanatomical Module Development**

The development of a "skeletal system" or framework for the Neuroanatomy modules produced by a Project team this past summer has resulted in a breakthrough enabling the quick creation of many separate modules. This prototype can be used to create courseware for the study of any anatomical target requiring multiple views and which needs to provide textual information.

As an example, students using the module can view both the surface and digitized slices of the brain. In each of the neuroanatomical modules developed within this framework, students have access to a sizeable database of visual and textual material as well as to screens for self-test and self-assessment.

Since screen design is held constant, to some extent new modules are self-assembling. Once the images are entered in a new module, a wordprocessor can be used to add the text. Cards are created and linked automatically. This model will also act as a template for a new module in General Pathology to be undertaken this summer.

The manner in which the Project's growing collection of neuroanatomical modules is being used is constantly changing, partly in response to students' and instructors' feedback, but also reflecting the nature of the material being studied.

For example, there are now about seven different multimedia modules being used in the neuroscience course. Some modules are now being used in a wet lab. Students work simultaneously with the courseware and with actual brain slices. Instructors have found that, with this arrangement, they need devote much less time to answering lower-level

(continued on following page)
Now you may test your prediction of loop length. The loop length which you have chosen is shown at the right. When you press the run button, the corresponding tip osmolarity will also be shown. A graph which plots osmolarity along the sequential segments of the nephron will also be shown. Press the run button now.

A "Lab" screen from the module "Countercurrent Mechanism of the Kidney" by Craig Richter '93 and James Sullivan, M.D.

Interactive instructions to the user appear at the upper left. A lab "window" on the right shows a cartoon version of a nephron (the kidney unit which concentrates urine). By clicking and dragging the loop sites, a student can change the length of the loop and produce a corresponding alteration in a solute gradient. After a series of such steps, the data is graphed and the user is asked to interpret the graph and to make predictions which can then be validated. Predictions and parameters are sent to a mathematical modelling program. The results are returned to the main program and graphed. One such graph is displayed in the lower left.

questions from students. This is because students can use "hot spots" in the computerized images—spots which, when clicked on with the mouse, yield information about the structure to both identify that structure and get basic information about it. This leaves faculty free to give more time and attention to students' higher level, more advanced, questions.

Other modules are being used for independent study in neurohistology. Use of the Hippocrates material has made it possible to teach this part of the curriculum without a faculty member being present.

Laboratory Simulations
Spiraling equipment and animal costs, growing sentiment against live animal experiments, and a shrinking core of faculty familiar with system physiology have all conspired to make the physiology laboratory almost extinct. To resurrect this important pedagogical exercise, a project team developed a prototype computer simulation, "The Countercurrent Mechanism of the Kidney". Comprised of three separate programs (an authoring tool, an animation package and a modelling tool) acting together seamlessly, this simulation was received enthusiastically this spring by both students and faculty in the renal portion of the Physiology Course. The program will act as the model for future computer simulations in Physiology, Pharmacology and Pathophysiology.

Interactive Lecture Material
Medical school faculty are starting to experiment with the use of interactive media for presenting information in a lecture setting. They have found that one advantage of this approach is that the lecturer can navigate the material freely and easily, moving back and forth pretty much at will.

The comparative ease with which animated displays can be integrated into the lecture is another source of appeal to instructors, as well as the ability to make judicious use of sound.

Finally, the graphing and modelling capabilities of the computer facilitate interactive exercises even in a lecture format.

—Martin S. Nachbar, M.D. (NYU Medical School) with Estelle Hochberg nachbar@mcclb0.med.nyu.edu and hochberg@acfscluster.nyu.edu
Medical and Dental Library Catalogs Are Newly Accessible Via NYU-NET

System Offers Online Library Catalogs, Clinical News Alerts, and More

The online catalog containing the records of books, journal titles, audio-visual material, and computer software found in the collections of the NYU Medical and Dental libraries officially opened February 4, 1991. Information is available online for items added to the Medical Library since 1976, and for all items in the Dental Library.

Accessing the Online Catalog

The new NYU Medical and Dental Libraries Catalog may be accessed via NYU's campus-wide network, NYU-NET. To do so, enter CONNECT MCLIBO in response to NYU-NET's ">>" prompt (note that the "0" is a zero); when you receive the "Login:" prompt, enter LIBRARY. Then follow the instructions to perform searches and obtain other information offered by the catalog.

To exit, at the main menu, press "D" (for "Disconnect").

News Alerts and Other Information

The online catalog also provides other types of information, in addition to the catalog entries noted above.

Announcements of the National Library of Medicine Clinical Alert News are broadcast over the main menu, and summaries may be obtained by selecting "I" (Library Information). This feature disseminates National Institute of Health clinical information of such significance that it cannot wait for publication in a scientific journal.

Choice "A" on the main menu, "Information Sources/ NYU Libraries", permits users to connect to the Research Computing Resource Network where NIH and NSF information can be found, along with various research bulletin boards.

Further Automation and Expanded Information Are Planned

The opening of the online catalog marks the completion of the first phase of an ongoing project to automate the Medical and Dental libraries. The second phase, which will run through the summer, will consist of the barcoding of the collection and the installation of the online catalog's serials module.

The serials module will provide detailed information about specific issues and volumes of medical and dental periodicals, including identification of the most recent issues received by the library and the date of its receipt.

The entire collection of the Medical Library will be listed, and the holdings of the Environmental Medicine Branch Library will be added. Online requesting and reserving of materials by catalog users will also be available.

During the third phase, MEDLINE and other biomedical databases will be mounted.

Software for the system was provided by Innovative Interfaces, Inc. It is the same software used for the NYU Law Library catalog. The software is mounted on a DECsystem 5400 with Reduced Instruction Set Computer (RISC) technology, 16.6 MIPS performance, the ULTRIX operating system, and 800 megabytes of storage. The system is housed in the NYU Medical Library.

—Jean Reibman
reibman@mclibo.med.nyu.edu
(Jean Reibman is Associate Director for Information Systems at the NYU Medical Center Library.)
Computing In the Department of Applied Science

Some Ways in Which Computers Are Used in Faculty Research

Computers are fast becoming an integral part of research and instruction in the Department of Applied Science (FAS). Here, faculty members and graduate students use a variety of equipment, including department-owned personal computers and peripherals; ACF PC’s, minis and mainframes; and supercomputers at national centers. The following notes provide a few recent examples of computer applications by department members and students.

Studies of Climatic Change

Prof. Martin I. Hoffert, Chairman of the Department and leader of the Department’s Earth Systems Group, specializes in mathematical modelling of climatic change associated with the greenhouse effect. This involves solving systems of differential equations describing the evolution of state variables (temperature, velocity, concentrations) in the atmosphere and oceans, under the influence of changing radiative forcing due to CO₂, CH₄, CFC’s and other human-produced greenhouse gases. He is using Cricket Graph, True Basic and a host of software for the Macintosh, some of which also allows us to communicate with supercomputers at Lawrence Livermore Laboratory.

Prof. Hoffert and Prof. Vladimir Myelitis are also working on a two-dimensional world ocean model running on a Cray supercomputer at Lawrence Livermore National Laboratory and developed by Danny Harvey at the University of Toronto. This model incorporates many features developed at NYU under DOE sponsorship. The output of programs run on the supercomputer is downloaded to the Mac for post-processing and graphics.

Life Support Systems in Space

Prof. Tyler Volk’s current research is being done as part of a NASA program referred to as CELSS (for Controlled Ecological Life Support Systems). Applied to life support in space, the CELSS concept is based upon the integration of biological and physical-chemical processes to construct a system that will produce food, potable water, and a breathable atmosphere by recycling all wastes. He builds computer models for CELSS and focuses on mass balances, chemical transformations and storage reservoirs in a dynamical system. In order to understand how plants respond to light, carbon dioxide, oxygen, humidity, temperature and nutrients, he specializes in crop growth models (see Figure 1). The model shows a three-dimensional plot for leaf emergence rate in wheat as a function of temperature and day length; it was produced using Mathematica and will be published in the journal Crop Science. Earlier models for the CELSS program were done using another program, Stella. The user of Stella creates a diagram in the program that corresponds to the model equations, and a hierarchical structure allows one to “open up,” examine, and change the various components at will (see Figure 2). Since the wiring diagram of model interactions is an integral part of the software, it is easy to recall the model’s structure after putting it aside for a substantial time.

Periodicity in Seasonal Temperature

During a visit to the British Library, Prof. Michael Rampino obtained some temperature data that had been recorded by the British ambassador to Baghdad during the early 1800’s. He was asked to find a project for a student from Stuyvesant High School to work on. With these data as his focus, he taught her how to use spreadsheet and statistical programs on both the IBM and Macintosh personal computers. Her report won her an honorable mention in the Westinghouse science contest. The next year the Stuyvesant intern found a sunspot signal, an eleven-year periodicity, in seasonal temperature data from all over the globe. A paper co-authored with the student reports these results and is slated for publication in a scientific journal.
Optimizing Space Shuttle Equipment

Murali Kadiramangalam, a research assistant, is using a three-dimensional finite element heat transfer code developed at Lawrence Livermore National Laboratories and running on the ACF's cluster of VAX/VMS computers. The code is helping us to optimize a space-power rectifying antenna (to be deployed in a future space shuttle mission).

Equipment in the Department

The department's computer equipment is composed of approximately 25 to 30 personal computers ranging from IBM PC's and IBM PS/2's to MacPluses and all the way through Macintosh IIci's. Peripherals include three LaserWriter LINTX laser printers and one Hewlett-Packard Laserjet Series II laser printer. There are also a Hewlett-Packard plotter, a Jandel Scientific Digitizer, a Datacopy 730 Scanner, an Apple Compact Disk and assorted other personal computer peripherals like dot matrix printers, hard disks and Syquest cartridge-tape backups. These computers and peripherals are available to faculty members for their research and to doctoral students. Other students may use the ACF's facilities for their work.

Personal Computer Use

Seth Potter, a doctoral candidate, has been doing research in advanced energy technology and climatology. His calculations are frequently done on the department's IBM-type personal computers, using either FORTRAN programs or Lotus 1-2-3. When FORTRAN is used, the results are imported into a Lotus file. The Lotus files are used to make graphs on the department's Hewlett-Packard 7550A Graphics Plotter for display in department seminars. If publication-quality graphs are needed, data from Lotus files are transferred to the Macintosh and re-plotted using Cricket Graph, since this software provides greater flexibility. Microsoft Word, PageMaker 4.0 and Quark Express are used on the Macintosh for papers for publication and for professional correspondence.

APL is also being used on the department's IBM computers for modeling dynamic systems. Ken Caldeira, another doctoral student, says that he can develop software in APL about ten times as fast as he could in other languages, because APL is an extremely concise and powerful language. Because APL has so many functions and operators, it takes time to learn how to use it, but the investment in learning the language pays off in rapidly constructed models that are very easy to modify.

APL has a lot in common with Mathematica, which is used by David Lischener as a programming language and by the other students as a symbolic and numeric calculator. Mathematica is excellent for doing symbolic mathematics. Its PASCAL-like control structures, APL-like operators and functions, LISP-like data structures make it a nice language to use if you have some "compute power" to spare. Versions of Mathematica are available for many types of machines. In the Applied Science Department, it tends to be used on departmental Macintosh II's and on the ACF's Sun computers.

—Helen Jones
jonesh@acfcluster.nyu.edu
998-8995
(Helen Jones is Computer Systems Coordinator in the Department of Applied Science (FAS).)
Library Offers Online Search Training for Students and Faculty through Dialog's Classmate

New And Efficient Search Tools, And A Broader Range Of Disciplines

Bobst Library is serving as a test site for a new online searching program this semester from Dialog Information Services, offering students training and direct access to more than 100 of Dialog's most popular bibliographic indexes and abstracts, numeric and full-text databases and directories in a variety of disciplines.

Using instructional materials from Dialog's Classmate program, Bobst has scheduled a series of workshops throughout the Spring semester to teach the necessary skills required to access any of Classmate's 108 databases. After attending any of the two-hour sessions, participants will receive a password entitling them to one hour of free searching.

Librarians have been searching Dialog on behalf of Bobst patrons since the mid-1970s. Until recently, however, Dialog exclusively used a command-driven system geared to trained specialists. Students and faculty were thus excluded from accessing Dialog's resources directly, and relied instead on mediated searches conducted by librarians.

Last year, with the introduction of Dialog's menu-driven Medical and Business Connections, students and faculty gained direct access for the first time to a number of health and business related databases.

**Searching With Classmate**

The introduction of Classmate represents an exciting new development in end-user searching. Not only does Classmate offer 24-hour access to a broader range of disciplines — including the arts, sciences, medicine, history, literature, psychology, business, and current affairs — but it also offers students the tools necessary to search these databases efficiently and economically. Armed with a greater knowledge of techniques such as key-word searching, optimizing search time, and downloading results, inexperienced searchers need no longer walk away worrying that they missed crucial material, or that their search results are too broad, or too narrow.

Unlike the menu-driven Medical and Business Connections, Classmate uses a simplified, command-driven system — the same used by Dialog's Knowledge Index. This allows users to create a more powerful, efficient search right away instead of working within the constraints of a slower — and more costly — menu-driven system. Furthermore, Classmate's use of command language instead of menus allows users to build searching skills over time.

Classmate's easy accessibility offers another major advantage. Using their passwords, students can reach Classmate from virtually any PC with a modem — on or off campus. And within Bobst, Classmate is available at any of the three reference centers or in the new Microcomputer Center, without which the Library would not be able to provide the hands-on training that is an integral part of the Classmate Program.

**Learning About Classmate**

Training workshops are being held in the Microcomputer Center throughout the semester, and are open to both NYU students and faculty. Those who attend any of the workshops will receive a password entitling them to one hour of free searching, after which students may buy additional search time at $20 per hour — a fraction of the cost of regular Dialog rates, which vary according to the databases used. No advanced enrollment is necessary, but attendance is limited to 25 people per session. For more information about Dialog's Classmate Program, contact Lise Dyckman at 998-2513, or stop by any reference desk in Bobst to pick up a copy of the workshop schedule.

—Genine Babakian
Special Events Coordinator,
Bobst Library
babakian@acfcluster.nyu.edu
New Portables, Printers, Rebates, a Macintosh LC and Lower Prices from Apple

With the advent of smaller, faster, and increasingly more powerful computers, it is not uncommon these days to see computers in briefcases, on planes, and in Bobst library. Ideal for students or professionals on the go, notebook-sized portable computers have been steadily increasing in their popularity.

New Portable from Zenith
The SlimSport 286 is a portable computer with the power of a desktop packed into a trim 9.25 pound package. Based on a fast 16MHz 80286 processor, the SlimSport has the capability to handle large documents in Word for Windows or complex spreadsheets in Quattro Pro or Lotus. The large-size high quality page-white VGA screen makes high resolution display of graphics or charts no longer a problem for a portable computer. A port on the back allows easy connection to a VGA color monitor allowing full 256-color display. A 1.44MB 3.5" floppy drive and a port for a 5.25" external floppy is built into the SlimSport, as well as 1MB of RAM. The autosensing AC adapter/battery recharger allows easy voltage conversion for the overseas traveling student or faculty member. A SlimSport with a 20MB hard drive is available from the Book Centers for an educational price of $1,899. A new 40MB hard drive SlimSport will be available soon and is educationally priced at $2199.

And from IBM
On March 26, the new portable computer from IBM was announced, marking "Big Blue's" entry in the lightweight computer market. The 7.7 pound package is based on a 20MHz 80386SX chip, has a 60MB hard drive, a VGA LCD display, and an AT bus architecture. No definite educational price is set yet, but it will not be inexpensive — probably in the range of $3500 to $4000.

Toshiba Portables and Printers
The popular T1200XE laptop computer from Toshiba gives 286/12MHz speed and performance in an 8.1 pound package. The super-twist LCD adjustable display is easy to read and ideal for long sessions on the road. Try out the T1200XE on display in the Book Centers. The educational price of the T1200XE is $1,765. For people looking for a low-cost, high performance portable for under $1500, the T1000LE is a zippy 80C86 9MHz processor based machine, has a 20MB hard drive, a 1.44MB 3.5" floppy drive, 1MB of RAM and a sidelite super-twist LCD display in a very light 6.5 pound package. The T1000LE is in stock and available now at the Book Centers for $1,355. Both the T1200XE and T1000LE will only be available from the Book Centers for a limited time while supplies last.

Currently in stock at the Book Centers is the ExpressWriter 420, Toshiba's letter-quality high speed dot-matrix printer. The Exp420 is educationally priced at $339; a display model can be viewed in the Book Centers' Computer Department.

WordPerfect Rebate
WordPerfect Corporation, the company which makes the best-selling word processing program, announced that it has discontinued its educational program but is instead offering mail-in educational rebates of $100 on selected WordPerfect programs to qualified NYU students, faculty and staff. For departments and offices at NYU, free-on-site licensing is available with the purchase of eligible products. WordPerfect 5.1 and the new WordPerfect 2.0 for the Macintosh are among the products eligible for the rebate. Rebate forms and more details are available from the Book Centers' Computer Department.

New Macintosh LC Is Here
For those who prefer the ease and user-friendly interface of Apple's Macintosh computers, the new low-cost color Macintosh LC is available now at the Book Centers. The LC is a 68020-processor based system with built-in color capability, a 40MB hard drive and 2MB of RAM in a compact package. It is available at the Book Centers for an educational price of $1595. The LC has built-in support for three Apple monitors: the 12-inch color display ($400), giving 256 colors and a resolution of 512 pixels x 384 lines; the 13-inch color display ($675), giving 16 colors and a resolution of 640 dots x 480 dots, and the 12-inch monochrome display ($205), giving 16 shades of gray. The 12-inch color monitor was specifically designed for use with the LC and fits very nicely on top of it — but it is grainier in appearance than...
(continued from preceding page)

the 13-inch monitor. The higher-resolution 13-inch monitor will provide better-defined character output but will only give 16 colors, as opposed to the 256, if the 12-inch color monitor is used.

There is a VRAM SIMM chip available from Apple which, if used with an LC and a 13-inch monitor, will give the full 256 colors. But with the VRAM SIMM, the customer who bought the 12-inch color monitor and an LC can enjoy 32,000 colors! The VRAM SIMM chip requires dealer installation and is available from any authorized Apple service center such as MPC. Also available as an option is the Apple Ile adapter card for the LC. The Apple Ile adapter card allows use of any of the large library of Apple II programs available and can be ordered from the Book Centers for $135. The LC, the 13-inch RGB, and the new 12-inch RGB color monitors are on display now at the Book Centers' Computer Department.

**Apple Lowers Macintosh Prices**

Prices for the higher-end Macintosh line, including the IIci and IIfx, have recently come down, making those machines more affordable and attractive to the "power" Mac user. Pick up the latest price list from the Book Centers where you can speak to an Apple representative, or call there to have the current price list sent to you first class mail.

**New Printers from Apple**

The new StyleWriter printer is an affordable ink-jet based model which has caused quite a bit of excitement with its arrival. The amazing new printer is on display and available now at the Book Centers for only $380 (list price $599). Only slightly more expensive than the "ole reliable" ImageWriter II dot-matrix printer (still available for $360), the StyleWriter is the dream-come-true, for many Macintosh users, having inexpensive, high-quality printouts. The 360 dots-per-inch (dpi) resolution of the StyleWriter allows Mac users to print both high-quality text and graphics on the same page. A 50-page sheet feeder and an extra ink cartridge (with an expected life of 500 full-text pages) come standard with the StyleWriter.

For those who can afford to spend a little more, true laser printouts are now within their grasp with the new Personal LaserWriter LS. Basically a revamped Personal LaserWriter SC, the LaserWriter LS sports a speedy 4-page-per-minute print time and background printing, so one can continue working while printing. Instead of using expensive SCSI cables as did the Personal SC, the LS comes with its own standard peripheral-8 cable that connects directly to the printer or modem port of the Mac. The LaserWriter LS is available now from the Book Centers for $835.

Both the StyleWriter and the LaserWriter LS use a new font technology from Apple called TrueType. TrueType allows easy font scaling, for sizes ranging from barely readable letters to letters as large as a page, without loss of quality. Although both new printers come with TrueType fonts, they also support Adobe Postscript fonts and Adobe Type Manager. TrueType requires Apple's system 6.0.7, but free system updates are available upon request from the Book Centers. Ask for more details when purchasing.

**A Better Macintosh Portable**

An improved version of the Macintosh portable has a lower price and is available now. The new version of the portable has a backlit display that can be seen easily in the dark, as well as a longer three-to-six-hour battery life. The new 2MB RAM, 40MB hard drive model is available from the Book Centers for $2705, and a 4MB RAM, 40MB hard drive model is educationally priced at $3025. Owners of the older portable can have their machines upgraded at an authorized Apple service center.

**Rumors**

New higher-end laser printers to replace the NT, IINT and NTX models are expected sometime near June. Also expected is a new line of portables, to be announced during the latter half of the year. They will be sleeker, trimmer models, based on the LC and SI technologies.

A new 68040 super machine from Apple is also expected to come out this year, perhaps by June, as well as the ever mysterious and elusive “System 7”, the next version of the Macintosh operating system.

—Mariya Yamamoto
Technical Support, NYU Book Centers
Three computer maintenance companies—LBM/Big Apple, Key Systems and CMI—are being evaluated by the Purchasing Department. Invoices are currently submitted to us by each of the companies for processing once a month. We have composed a questionnaire and, for the next couple of months, will be contacting those departments that are referred to on the service bills.

We will appreciate the help that you can give us by responding to our call and providing us with information on the type of service you received. Your responses will be used to rate the company’s service desk and field technicians, NYU’s account representative, and the overall performance of the company. The results will determine the likelihood of the company’s servicing NYU in the next fiscal year.

Updates

Zenith Data Systems now provides a free one-year on-site warranty on desktop computers purchased from 3/5/91 until the end of June. The one-year warranty covers all parts and labor, and service is provided by Bull HN. The account representative for NYU is Arthur Dimitri, and he can be reached at (212)277-9999 for additional information.

Apple Computer has decreased their higher education institutional prices, and have increased system RAM on several of their Macintosh Computers:

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<th>Price</th>
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<tr>
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<td>Macintosh Classic* 2MB HD40</td>
<td>$1019</td>
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<td>Macintosh SE30 4MB HD80</td>
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Macintosh IIfs 4MB CPU $4127
Macintosh IIfs 4MB HD80 $4519
Macintosh IIfs 4MB HD160 $4855
Personal laserWriter NT $1464
LaserWriter IINT $2250
LaserWriter IINTX $2810

*Includes Keyboard

Note that not only are these reduced prices, but in the case of the IIsi (both models) and the IIfs, Apple is also giving you more memory in their base configurations. (Of course, additional RAM can be purchased separately for both of these models.) For information on system configurations, please call Bruce Prevo, NYU’s Apple Account Representative, at (212)339-3729. For pricing information, please contact NYU’s Purchasing Services Division (998-1030).

Computer Maintenance

Computer Maintenance Inc. (CMI) has assigned a new account representative to NYU and have moved to a new address: 160 Pearl Street, 6th floor, New York, NY, 10005. If you have any questions concerning PC repairs or maintenance, please contact Mr. John Funkhouser. He can be reached at (212)425-8900.

LBM/Big Apple and Key Systems continue to provide computer maintenance and time and material service on NYU computers and peripherals.

For an information packet on purchasing procedures and profiles on the above three companies, please contact Purchasing Services at 998-1030.

New Product Announcements

Apple Computer has announced two new printers this March, the StyleWriter and the Personal Laserwriter LS. Both printers are designed for individual use and incorporate TrueType, Apple’s new font technology. Each printer comes with four TrueType font families: Times, Helvetica, Courier, and symbol. There’s no need to purchase additional cabling, cards or software drivers, since the LC and StyleWriter are both packaged with a system peripheral-8 cable as well as the Toner/Ink cartridge.

The Apple StyleWriter is a thermal ink jet printer which uses water soluble ink. The printer speed in normal mode is approximately one half page per minute and in draft mode up to one page per minute. The StyleWriter comes with a detachable sheet feeder which can feed up to 50 sheets of paper into the printer. The printer can also be used without the feeder for single sheets of letterheads, labels or envelopes. NYU’s price for the StyleWriter is $335.00.

The Apple Personal LaserWriter LS is a low cost personal laser printer. The Canon engine is rated at a maximum speed of four pages per minute. The multipurpose tray can accommodate 50 sheets of paper or five envelopes. NYU’s price for the LaserWriter LC is $737.00.

The new printers are not equipped with PostScript or AppleTalk and require Macintosh system software version 6.0.7 or later. They will work with any Macintosh personal computer with at least 1 megabyte of RAM. For the LaserWriter LS, a hard disk drive is required.

Hewlett Packard has recently...
announced the addition of a new laser to their family of laser printers. The new model is the Laserjet IIIsi rated at a print speed of 17 pages per minute. Westwood Computer Corp., NYU's current supplier of H/P products, has offered a two-week evaluation unit which will be delivered to the Purchasing Dept. the week of April 22.

A demonstration of the Laserjet IIIsi will be conducted by representatives from Westwood and Hewlett Packard on Thursday morning, April 25th, at the Purchasing Department. In the afternoon, Westwood will demonstrate two QMS PostScript laser printers. Models PS 410 and 810 are currently slated for the demonstration, but this may be changed. If you are interested in attending the demonstration or would like further information on the H/P or QMS line of printers, please contact Stephen Krause at 998-1032. If you cannot attend the demo but would like to see the Laserjet IIIsi let us know and we will arrange an alternate time during its two-week stay. Current prices from Westwood Computer are as follows:

<table>
<thead>
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<th>Model</th>
<th>Price</th>
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<tbody>
<tr>
<td>PS/2 Model L40 SX</td>
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</tr>
<tr>
<td>PS/2 Model L40 SX</td>
<td>$3,597.00</td>
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</table>
| IBM Corp. has announced a new laptop, the PS/2 Model L40 SX. This unit, with its rechargeable battery, weighs in at a total of 7.7 pounds. The standard features include a 20 MHz 80386SX processor, 2MB of 80 ns memory (expandable to 18MB), a 60MB fixed disk, a 3.5-inch 1.44MB diskette drive, a Video Graphics Array (VGA) resolution Liquid Crystal Display, an 84/85 key keyboard, and serial, parallel, keypad/mouse, VGA monitor, and external expansion I/O ports for attaching external devices. In addition, each system includes an external 17 key numeric keypad, an AC adapter, a rechargeable battery pack, and a carrying case. NYU's price for the PS/2 Model L40 SX is $3,597.00. Also announced as options are a data modem; a second serial adapter; a Trackpoint pointing device; 2, 4, or 8MB memory upgrades; a quick charger; and a car battery adapter.

For further information, please contact either Purchasing Services Division, Mr. Jeff Dong at Ext. 81032 or NYU's IBM account representative, Jeffrey Wagoner, at (212)745-2831.

**Product Demonstrations**

If your department is interested in having a piece of computer hardware or software demonstrated, please contact the Purchasing Department. Several NYU suppliers have suggested that they can provide demonstrations of some of their product lines. If there is enough interest, a product demonstration can be arranged.

**Used Equipment**

Occasionally, I receive calls from departments within the University asking me if I know of an NYU area or department that might be interested in purchasing...
ing computer hardware (and sometimes software) that they own but no longer use.

In most instances, I keep a list of the equipment, location and departmental contact person. In the past I have mentioned the item informally to departments that I thought might be interested in it. Now, we are thinking of making this a more regular service, and possibly also establishing an electronic bulletin board for the purpose of "recycling" used, University-owned computer equipment. The value of each product is normally decided upon by the departments or persons interested in the disposition or acquisition of it.

Note that this arrangement does not apply to personal acquisitions. Also, if the equipment is tagged by the Property Management office, arrangements must be made by the departments involved in the transaction to inform Property Management in writing that the equipment has been relocated.

What is available now. As of Feb. 22, 1991, two units within NYU have used equipment that they are willing to part with:

- Washington Square News: 6 Mac Pluses with no hard disks, 6 laser toner cartridges (Apple/Laser+), 6 anti-glare screens (for 19" monitors); contact Marc Bell at 998-4973.
- Property Management: 1 Epson LQ1050 printer; contact Larry Pender, 998-1045.

If you have hardware or software that your department no longer uses, or if you plan to upgrade and you would like to find a home for the equipment no longer needed, please let me know. The response I get in additional departmental equipment postings will help us determine whether this service should be continued. I can be reached by E-mail (see below) or by telephone (998-1032).

—Stephen Krause
Senior Buyer
NYU Purchasing Services Division
krause@acfcluster.nyu.edu

More Notes on Vendor Programs

DEC Documentation and Software

Discounts through ACF Participation in DEC Plan

Under an agreement between the ACF and Digital Equipment Corporation (DEC), NYU departments can purchase DEC documentation at 50% discount and are eligible for considerable discounts on DEC software.

DEC Documentation at Discount

The savings result from a package of programs called TEI ("The Educational Initiative"). Under one program, the Educational Software Library (ESL), any NYU department can buy DEC documentation for over 40 DEC VAX and ULTRIX software products, at 50% discounts. This includes documentation for DEC software running on VMS systems (like the ACF cluster) and on ULTRIX systems (like ACF3). Self-paced instruction (CAI) modules may be purchased at a 35% discount.

Like all of the TEI benefits, these discounts apply to institutional purchases only, and orders must refer to a University Purchase Order number. However, once you have prepared a P.O. or F.O., you may order over the telephone. Call 1-800-344-4825, identify yourself as a Software Library member, give them the ESL discount number 6544 (this entitles you to the 50% discount) as well as the NYU P.O. or F.O. number to which the invoice is to refer. For further information on ordering DEC manuals under the ESL, contact the ACF’s Documentation Office (998-3036) or send E-mail to Estelle Hochberg (see below).

Software Plan

A Campuswide Software License Grant Program (CSLG) and two related programs permit the use of nearly 300 VMS and ULTRIX software products on any DEC computer at NYU, without payment of the usual software license fees and at considerable discounts off other fees normally involved. By participating in this plan, a department can generally save substantially over what they would otherwise pay for DEC software, software updates, and technical support.

For further information, please contact Stephen Tihor at the ACF (998-3052, tihor@acfcluster.nyu.edu). If your department is at the Medical Center, please contact Ross Smith (263-5356, smith@mccib0.med.nyu.edu), instead.

—Estelle Hochberg
hochberg@acfcluster.nyu.edu
Ibycus at NYU

Database Furthers Classical Scholars' Research

Faculty members and students at NYU's Department of Classics (FAS) are using an Ibycus Scholarly Computer to advance their study of ancient literature. Named for a Greek lyric poet of the sixth century B.C., Ibycus allows users to read and to perform fast and flexible searches of compact disks containing texts in classical Greek, Latin, Hebrew and Coptic.

What this means is that scholars have at their fingertips a vast library of ancient texts, stored conveniently on compact disk, plus a fast and powerful tool that removes much time consuming "legwork" from research in this area. Texts and search results, complete with diacritical marks, can be quickly displayed and printed.

To find out about Ibycus and its use at the Department of Classics, we contacted Prof. Seth Benardete, who has been employing the system for several years in his research on various topics in ancient Greek literature. Much of this article is based on what we learned from him.

Scope of the Database

The Ibycus databases include the Thesaurus Linguae Graecae (TLG) collection of the standard editions of virtually all Greek literature from Homer (about 800 B.C.) down to the sixth century A.D. In addition, there are Latin, Biblical and Coptic texts from the Packard Humanities Institute (PHI). A comprehensive collection of documentary papyri—tax records, and so on—from Ptolemaic Egypt is being added to continually. While a substantial number of Latin texts is offered, this part of the collection is, as yet, far from complete.

To appreciate the scope of what is offered, and the potential impact of computer technology in the study of ancient literature, one needs to know that the total body of extant Greek literature is enormous—about ten times the size of the body of known Latin works. Prof. Benardete notes that a complete thesaurus of Greek literature would have been far too onerous and expensive a task to have been undertaken successfully prior to the advent of computers.

Searching with Ibycus

Several types of searches are allowed. At its very simplest level, Ibycus is a library of ancient Greek texts, and you might, for example, specify a particular work and look up a passage in it.

You can also search for two letters or more, a word, combinations of words, and alternate words. For example, you might look for all occurrences of both soul and mind in all works of Aristotle, or for all occurrences of either of the two words. Prof. Benardete sees the ability to search for alternate words as especially useful for the study of Greek, since it is a highly inflected language. Ibycus, for example, allows one to search simultaneously for every form of the six principal parts of a Greek verb may take.

You can apply a search to all of Greek literature (that takes about 1/2 an hour), to a particular author or authors, and to particular works or types of works. Searching the entire works of Aristotle is said to take less than a minute, while the plays of Sophocles require fewer than five seconds.

With every search, you receive a report of each occurrence of the word or phrase sought along with the surrounding text, and you can specify the number of surrounding lines that you wish reported. Word counts are also possible. The results of searches can be viewed on the screen, saved in a file and printed, if desired. Output files written to floppy disks can be read as text on an IBM PC or Macintosh and incorporated in documents prepared on those machines.

An Ibycus Example

Ibycus may be most useful as a tool for quickly confirming or disconfirming one's hunches.

For example, I had noted that in the middle play of Aeschylus' Oresteia the enclitic pronoun no (him, her, it) seemed to be markedly frequent. Ibycus confirmed at once that its fifteen occurrences were three to four times that in other plays. The frequency seems to have something to do with Orestes' reluctance to use the word "mother"; indeed, it is not until line 899 that he does so, and then to wonder whether he should kill Clytemnestra or not.

―Seth Benardete

(continued on facing page)
Developing an Egyptian Hieroglyphic Dictionary Program

Techniques for Multi-User, Multi-Lingual Databases

In my last article I outlined how EGV, my Egyptian hieroglyphic dictionary program, operated without going too deeply into some of the design and programming considerations. In this article I hope to explain an underlying technique that has proved almost immeasurably useful.

The central issue with an undertaking such as The Egyptian Vocabulary Project ultimately is data entry. The resulting database even in the initial stage of the project will be very large; a good estimate would be that there will be around 50,000 main entries along with one million bibliographic references, consuming a total of at least 55Mb in disk space. Even if we divide the labor entailed by these impressive numbers among five or more participating institutions, the amount of work will still be enormous. However, there are some database techniques which can greatly ease data entry while simultaneously reducing operator errors dramatically. I hope that our experiences here will help others design programs for easier entry of vast quantities of data.

Using a Lexicon

In many projects, a sizeable proportion of the data to be entered is repetitious; this is particularly true where bibliographical cross-references are concerned. For example, if all the words in a papyrus were to be entered into the database, it would seem quite wasteful to type and retype the short source title “Caminos, Pap. Pushkin 127” hundreds of times. On the other hand, further abbreviating a brief title such as this risks rendering the data so cryptic that it becomes difficult to understand, even for bear in mind if one is considering using Ibycus is the importance of framing one’s question carefully. Ibycus is most useful for confirming or disconfirming hunches (see box on facing page for an example); it is less apt as a tool for relatively undirected exploration or browsing, or as a means of stumbling upon an interesting research question.

Another limitation of the database of Greek literature, at least, is that, while it is comprehensive, it provides only one standard version of each work and thus, for example, does not offer a scholar the information that he or she might need to study variants in manuscripts.

—Estelle Hochberg

(ACF, hochberg@acfcluster.nyu.edu)

with Prof. Seth Benardete (Department of Classics, FAS)

(Ibycus, continued from facing page)

(The Ibycus system does have its own simple word processor, but it is rather rudimentary.)

Usefulness and Limitations

Thus, Ibycus is useful as a library of ancient texts, as a kind of dynamic concordance to classical literature, and as a tool for quickly gathering the material to test hunches and theory about ancient language and literature.

For example, with Ibycus, one can more easily follow changes over time in the syntax of a word than one can with standard paper dictionaries of classical Greek. In addition, searches are accurate and more complete and up-to-date than they can be with most dictionaries. The ability to ask for combinations of words is particularly valuable for tracing the evolution of the language. Classical Greek has many particles comparable to tones of voice in English, and the program makes it possible to study where these combinations first occur within the literature and how they may have changed over time.

Ibycus and programs like it have many potential uses for research. However, notes Prof. Benardete, one thing to

(continued on following page)
professionals, let alone for the beginning student. There is a simple and elegant solution to this quandary can be found in a "lexicon" or linking database. Imagine for a moment that you are in the Bibliography database. The process can be repeated for each of the remaining references to "Dog". Although this sounds like a rather convoluted process to store several book titles and page references, storing one or two digital integers is vastly more efficient than it is to store all the characters in the long title. This becomes especially apparent when a single standard reference may be cross-referenced thousands of times, or conversely, when one considers that a given entry may have a large number of references—two normal situations in a dictionary database.

In this fashion, an entry may acquire an unlimited number of references without burdening the Main database. Integer storage has a further advantage of allowing much more rapid searches for data. It is considerably easier for a program to scan a database for the number 2 than for the character string "B. Jones, ...", especially when B. Jones may have also written a text called "Feline Anatomy". Finally, the use of a lexicon offers an easy method for checking data entry. Because a number equivalent of a title (rather than the title itself) is entered in the cross-reference database, there is much less opportunity for the occurrence of typing errors like "D. Jones,...". A trivial mistake like this can effectively "hide" a reference from searches under its correct name.

EGV's Lexicon
For the EGV system we created a particularly useful lexicon consisting of a multilingual list of the commonly used abbreviated titles of standard references looking at excerpts from three databases as shown in Figure 1.

Here, each bibliographical reference in the Main Database has been stored as an integer in the Cross-Reference database. Notice that the first two databases are connected by the field called NCODE, while the second and third databases have BIBCODE in common. The function of the Cross-reference database is to link the Main and Bibliography files together. When someone wishes to obtain the bibliography for the first entry in the Main database, "Dog", the program will search the Cross-reference database for the corresponding NCODE. Once this has been found, the program will then have BIBCODE 2 (along with the page references), and this number, in turn, is tied to "B. Jones, Elementary Evolution"
and original sources that have appeared in Egyptological literature over the years. This is particularly important when a famous papyrus might be known by several aliases: "The Dialogue of a Man with his Ba", "Le suicide et l'âme", "Der Lebensmüde", "The Man who was Tired of Life", "Pap. Berlin 3024". This lexicon of variant titles, furthermore, permits the user to enter just a portion of a title, or even a numerical code. (Anyone who has worked in an office will realize how quickly such code numbers are memorized by virtue of their frequent use.)

In the EGV program the user first accesses the word in the Main database to which the cross-reference is to be attached, then enters either the code number or the text name. If a correct code number or short text name has been entered, then a proposed entry will appear on the screen (see Figure 2).

The operator can now accept the proposed entry, remove it, or even correct a previous incorrect entry. In Figure 3 for example, note how the operator has entered only the first three letters of the desired work, yet this was sufficient for the program to find and suggest the complete title. If the proposed title was not the one desired, then the user could simply reject the title and request another. Once the correct bibliographic entry has been made, it will appear among the references displayed when a bibliography for a word is requested. When the user has chosen a "non-standard" abbreviation for a reference, a beep signal sounds and the operator is prompted with the standard title. If the user is unfamiliar with the abbreviation—a situation common among beginning students — then the abbreviation may be "expanded" by pressing a key as shown in Figure 4.

Thus we come to what is ultimately the most important reason for the use of lexicons—they make things much easier both for the people who must enter the masses of data and the computer which must find it. The system outlined above eliminates much unnecessary typing while having simultaneously the advantage of allowing the student to learn something about the bibliography of our discipline. I am certain that other scholars who must deal with the difficult problem of standardization in a multi-user or multilingual database project can find some of the techniques outlined above helpful in designing their programs.

—Ogden Goelet
(Prof. Goelet is a member of NYU's Department of Near Eastern Languages and Literature (FAS).)

---

Press a letter to expand or Return to continue ...

Figure 3. Viewing Bibliography.

Press any key to return to Bibliography for record ....

Figure 4. Expanding Bibliography.
New and Updated Features of Base SAS

The Third in a Series of Notes on Version 6 of SAS

Version 6.06 is now the default version of SAS on the ACF's cluster of VAX/VMS computers (where it is available on ACFI) and on the IBM mainframe's MVS/WYLBUR and VM/CMS systems. In addition, Version 6.04 of SAS for the PC is available for use at the ACF's instructional microcomputer labs.

Two earlier articles in this Newsletter described SAS's new "architecture" and the "engines" used for input and output of files, and the use of the new WHERE statement and of "indexing" of data sets (see Academic Computing and Networking at NYU, November 1990, page 25 and January 1991, page 27). This note will outline a few additions and changes that have been made to some statistical and non-statistical procedures that are parts of Base SAS.

New Base SAS Procedures

The new procedures in Base SAS are CATALOG, PMENU, SPELL, SQL, and V5TOV6. PROC CATALOG provides capabilities for managing SAS "catalog" files in ways similar to those made available in the DATASETS procedure.

When SAS is run in interactive mode, PROC MENU changes the environment so that 'action bars' and pull-down menus are available. This feature would be of particular value to someone using a workstation or a microcomputer that supports Graphic User Interface (GUI) windows, such as X-windows or DECwindows.

PROC SPELL provides a speller for use with external files or with certain SAS text files, and PROC V5TOV6 converts Version 5 data sets to Version 6 format. (As was explained in a previous note, for most users this capability will not be needed. Version 6 of SAS will, by default, read SAS data sets that were created with earlier versions of the package.)

PROC SQL is an implementation of the Structured Query Language that can select and merge data from one or more SAS data sets, and create tables of data that can be processed by any other SAS procedure. Employing relational database techniques, PROC SQL can perform operations which might otherwise require the use of several DATA steps and PROC steps. It can save time for users who want to analyze a superset of data from several data sets, or to create subsets of cases and/or variables in an efficient way.

An example of the use of this PROC is:

PROC SQL;
SELECT color, MEAN(weight) AS avgwt
FROM work.farmyard
WHERE species = 'sheep'
GROUP BY region,color
ORDER BY avgwt ;

This example shows PROC SQL doing the work of a DATA step and of PROC

(continued on following page)
ICPSR Summer Programs in Quantitative Methods

From July 1st to August 23rd, 1991 The Inter-University Consortium for Political and Social Research (ICPSR) at Ann Arbor, Michigan will present a series of lectures and workshops in statistics, statistical computing, and social research methodology. Courses include Multivariate Statistical Methods, Scaling and Dimensional Analysis, Logit and Log-linear Models, Time Series Analysis, and others.

As a member of the ICPSR, NYU can recommend participation of faculty, graduate students, and other researchers for admission to this program. Graduate students may apply to receive academic credit for attendance. Individuals who hold a Ph.D. degree or who have an academic appointment of Associate Professor or higher may apply for “Visiting Scholar” status; if this is granted, tuition for four- and eight-week courses is free. Attendees for credit will be charged $400 for four weeks or $600 for eight weeks for any number of credit hours that may be elected. Modest grants to help defray living or travel expenses are available.

Descriptions of courses and application forms may be obtained from the ACF: contact Robert Yaffee (998-3402, Room LC-7 Tisch Hall).

—Bert Holland
holland@acfcluster.nyu.edu

Interactive Access to Thousands of Public Opinion Surveys

Through the Academic Computing Facility’s Data Base Archive, NYU maintains access to the extensive collection of public opinion surveys housed at the Roper Center for Public Opinion Research located at the University of Connecticut at Storrs. The Roper Center contains over 10,000 surveys covering every year since the mid-1930’s, and approximately 500 new studies are added yearly.

Included are surveys conducted by such leading organizations as Gallup, Roper, the National Opinion Research Center (NORC), CBS News and the New York Times, ABC News and the Washington Post, and other U.S. and foreign organizations. All of the individual items on these surveys, along with the first-level frequencies of responses, are very readily available by means of POLL, an on-line search and retrieval system which may be used by qualified NYU researchers. When further analyses of the data are desired, the staff at Roper will retrieve more detailed breakdowns of the results, for example by sex, political affiliation, etc. There are charges for certain searches, but the fees are generally fairly low.

For further information about using this service, contact Susan Shiroma of the Social Science Documents Desk at Bobst Library (998-2602) or Bert Holland at the ACF: (Room LC-7 Tisch Hall, 998-3401).

—Bert Holland
holland@acfcluster.nyu.edu

(continued from preceding page)

SORT, PROC MEANS, and PROC PRINT.

Changes To Base SAS Procedures

Among the more important changes to Base SAS procedures are the following.

The CIMPORT procedure can import SAS data libraries, SAS catalogs, and (if the transport file was created with the CPOR procedure from Release 6.03 or later) SAS data sets. In the COPY procedure, the EXPORT and IMPORT options have been replaced by the use of the transport engine name in the LIBNAME statement.

PROC CORR can calculate the usual Pearson product-moment and weighted product-moment correlations, Spearman’s rank-order correlation coefficient, Kendall’s tau-b, Hoeffding’s D, and Pearson, Spearman, and Kendall partial correlations. It will also now calculate Cronbach’s Coefficient Alpha.

PROC MEANS and PROC SUMMARY are now the same program. There are a few differences in their output, and PROC SUMMARY produces no printed output if it isn’t requested. PROC SUMMARY now computes skewness and kurtosis.

PROC SORT now has an option that will check for and eliminate duplicate BY values. Also note that if there is an appropriate index for a data set, it is not necessary to sort a data set in order to use a BY statement in a DATA or PROC step.

Finally, PROC UNIVARIATE can now produce an output data set containing any specified percentile value (whereas previously only certain default percentile values were calculated).

—Bert Holland
holland@acfcluster.nyu.edu
Graphics

An RS/6000 On Loan at the ACF

Available for "Hands-On" Testing at the Visualization Center

A
n IBM RS/6000 model 320 computer has arrived and is installed in the ACF's Visualization Center (Room 317, Warren Weaver Hall). The machine is on loan to the ACF from the IBM Corporation for the next six months or more for evaluation and demonstration purposes. It will be called demo2.nyu.edu with IP address 128.122.128.232 and will be accessible via NYU-NET by the time this article appears in print.

The purpose of the machine's "visit" to the ACF is two-fold. The first is to give ACF staff members an opportunity to become familiar with the RS/6000 hardware and with IBM's AIX/3 software, and to evaluate its suitability for various functions both within the ACF and as special purpose workstations that various departments and faculty members might wish to acquire. It is expected that the machine will be most useful for three dimensional scientific visualization.

Software for RS/6000 is available free or for a minimal charge to NYU departments that have purchased these workstations, as a result of the ACF's membership — on behalf of NYU — in IBM's Higher Education Software Consortium (HESC).

The second purpose is to give members of the NYU community a chance to "test drive" the system. A guest account (username "guest") provides easy access to basic documentation about the machine. Detailed hardware, software and documentation lists are available for viewing or printing. Access to the on-line manual pages, InfoExplorer (see below), SMIT (IBM's "user-friendly" System Management Interface Tool) as well as various demo programs, are also available through this account.

Trying the RS/6000

People who would like to work on the system should arrange for a trial account; to do so, please contact the ACF's Accounts Office (Room 305 Warren Weaver Hall; 998-3035). There is a sign-up sheet at the Visualization Center to reserve time on the system.

To find out what hardware is available on the system, log into the "guest" account and type more hardware. To have a copy of this file sent to the Visualization Center's Imagen laser printer, type print hardware.

Similarly, use the commands more software, print software, more documentation, and print documentation to view or print the software and documentation lists.

What's Available

As we go to press, a Silicon Graphics SGI graphics card and the system's printed manuals have yet to arrive but are expected shortly. However, all the AIX/3 on-line documentation is already installed, including IBM's InfoExplorer hyperext front end. Unlike some other hypertext systems, InfoExplorer is reasonably easy to use and is usable on ANSI terminals (DEC VT100 type terminals).

In addition to standard IBM AIX/3 software, the ACF will also attempt to obtain demonstration copies of third party software for the system. For example, if Wolfram Associate's licensing restrictions permit, we plan to install a copy of Mathematica on the RS/6000 for demonstration purposes. If there is other software which you would like to see running on demo2, please let us know — we will try get a copy.

—John Kesich
kesich@acf4.nyu.edu

Visualization Center To Get Color Scanner and Printers

The facilities of the ACF's Visualization Center will soon be enhanced by the addition of several new color graphics devices.

A color scanner will be added to allow the capture of color images from sources such as photographs and printed color material. These images can then be incorporated into a variety of machine-resident applications or added to documents that will be subsequently printed or recorded on electronic media.

Additional color printers are being acquired for the Visualization Center. With the new color printers, hard copy output on such media as paper or transparencies can be produced easily. It is expected that the color output will be used to enhance and augment research documents, reports, and presentations.

—Ed Friedman
friedman@acfcluster.nyu.edu
A DECsystem 5820 Will Replace ACF2 and ACF4

New Dual-Processor Machine Running ULTRIX Will Surpass the Combined Performance of the Two 11/785’s

The two VAX 11/785 computers known as ACF2 and ACF4 are going to be replaced very soon by one machine, a DECsystem 5820. The new machine, known as ACF3, is a dual-CPU symmetric multiprocessing computer running ULTRIX 4.1.

Faster, More Powerful Machine

Built around MIPS Computer System Inc.’s 25-megahertz R3000 chip, ACF3 offers roughly 18 times the raw CPU performance of a VAX 11/785. The 5820 has 64 megabytes of memory (upgradable to 256 MB) and access to two 9-track tape drives, two IBM-compatible 3480 tape drives, and one TK70 streaming tape drive.

The DECsystem 5820 is binary-compatible with all members of the DECsystem family, including the DECstation 2100/3100, DECsystem 5400, and the DECstation 5000.

Software on the New Machine

ULTRIX is a version of UNIX that is BSD 4.2-4.3 with System V. It complies with the POSIX, X/Open, GKS, PHIGS and OSF standards.

Languages and applications software that will be available on the new machine include if77 (MIPS FORTRAN compiler), cc (MIPS C compiler), CMLIB, NCAR-GKS, Maple, Mathematica, TeX, and DWB 3.1 (the latest version of AT&T’s Documentor’s Workbench which includes troff, tbl, eqn, pic, etc.).

There are also enhanced security features such as kerberos and C2-level security, DECwindows, Xwindows (Release 3), ULTRIX/SQL (a relational database management system similar to INGRES), awk (the newest version of awk), gnunemacs and most of the other gnusuite of programs, elm (a nice full-screen replacement for the usual mail interface), and many others. Also available is DECnet ULTRIX, a version of DECnet that runs under ULTRIX.

Help with the Move

Users of ACF2 and ACF4 who have special software requirements should send E-mail to “comment” expressing their needs, questions, and so on. All accounts and files will soon be moved from the two 11/785’s to the new machine. For users who (due to code requirements) must have access to a VAX, arrangements can be made to move over to a VAX 8600 running the same operating system as ACF2 and ACF4.

—Gary Rosenblum
gary@nyu.edu

Access To Remote Supercomputing Centers

The National Science Foundation supports a network of national supercomputer centers. The computing systems at these centers perform calculations at speeds usually many times faster than at the researcher’s home facilities. In addition, a center at Syracuse University is dedicated to the study and use of parallel computation.

The ACF Staff has experience with the use of supercomputers at some of these centers, and provides assistance in applying for and obtaining computing resources at them. Contact the ACF Accounts Office (Room 305, Warren Weaver Hall, 998-3035) for further information and to set up an appointment with a specialist to discuss your computing needs and to submit a request for resources at the centers listed below.

• Center for Theory and Simulation in Science and Engineering (Cornell University, Ithaca, NY). Two IBM 3090-600 J; FPS; networks include NYSERNET; IBM RISC System / 6000 for graphics.

• National Center for Supercomputing Applications (Champaign, IL). YMP 4/464; Cray2, Connection Machine also available.


• Pittsburgh Supercomputing Center (Pittsburgh, PA). CRAY Y-MP; Connection Machine 2; Iris, IBM RISC 6000 and two DECstations 5000 for visualization.

• National Center for Atmospheric Research (NCAR, Boulder, CO). CRAY Y-MP 8/864; CRAY X-MP/48; Connection Machine CM-2. (Access limited to atmospheric and oceanic sciences researchers funded by NSF.)

• Northeast Parallel Architectures Syracuse Univ. Center (NPAC, Syracuse, NY). Two Connection Machines, CM-1 and CM-2; Encore Multimax 520; Encore Multimax 320; A01ian FX/80. (A DARPA Center. Government contracts currently required for access.)

—Ed Friedman
friedman@acfcluster.nyu.edu

Academic Computing and Networking at NYU, March/May 1991, page 35
A New Version of Mathematica

More Functions, Capabilities, and Speed in Version 2.0

A new edition of Mathematica, soon to be available from Wolfram Research Inc., provides ever greater functionality. Version 2.0 offers enhanced graphics, speedier performance, and a vocabulary of built-in functions that has been increased from 560 to 843. In addition, new built-in sound capabilities have been added to the versions running on NeXT, Sony, and Sun workstations.

Formatting and File Manipulation

A number of these new functions address the formatting and file manipulation capabilities of the language.
- Files can now be read by record as well as by word and can be searched for sub-strings.
- Files and directories can now be managed without escaping to a shell.
- Output formatting has been enhanced to produce more publishable documents. Mathematical typesetting is still available only through TexForm.

Of Special Note

Among the many functions added to the program, a few are worth special mention. They include the following:
- Solutions to differential equations will be available with the words NDSolve and DSolve, for numeric and symbolic solutions.
- A more complete debugger has been implemented; called Trace, it returns an execution history as a list.
- Several new words to manipulate lists have been added to the many currently available.
- Lexical scoping for local variables using Module has been added to the existing dynamic scoping, using Block.

New Edition of the Mathematica Book

Mathematica, the book by Stephen Wolfram, is now in its second edition, having grown from 749 to 992 pages. The second edition reflects Version 2.0 of the Mathematica software and is available at the NYU Book Centers.

Mathematica 1.2 is currently running on the ACF Sun Servers — ACF9, ACF14, and ACF15 — and on the Macintosh IIci in the ACF's Visualization Center. It is also available on the Macintoshes at the ACF's instructional microcomputer lab in the Third Avenue North Residence Hall. Upgrades to the new version will be announced as they arrive and are installed.

—Howard Fink
finkh@acfcluster.nyu.edu

Reminder: Be careful with your passwords!

We have just received notice of recent attempts to obtain the passwords of users at other institutions. Several different ploys have been used. They generally involve getting a user to change his or her password to a particular string or to enter it at a bogus prompt.

Never divulge your password, and never type in your password to anything but a legitimate system-provided prompt. Examples of legitimate password prompts are those that you receive as part of a login sequence (when you log on to a machine or when you telnet or ftp to a machine) or when you elect to change your old password. Also, here at NYU, the system administrators may ask you to change your password, but they will never ask you to change it to a particular string.

If you receive any such requests, or are unexpectedly prompted for your password, please notify the local system administrator by sending E-mail (on a UNIX machine) to the username "root" or (on a VMS machine) the username "system". If you have responded to any such bogus prompts or requests, immediately change your password to a different string and notify the system administrator. If for some reason you cannot send E-mail, please call the ACF Accounts Office at 998-3035.
Information Technology in the Health Sciences

The University of Tennessee, Memphis will host the Sixth Annual Information Technology in the Health Sciences Conference, May 15-17, 1991.

The conference will focus on the innovative use of information technology in health sciences education, biomedical research, and patient care.

This year's program represents a selection of medical related applications which address the 1991 theme, "Focus on Excellence."

The registration fee of $125 includes conference presentations, workshops, social events, and some meals.

The annual international conference is hosted by the University of Tennessee at Memphis, and is sponsored by Apple Computer, Inc., Digital Equipment Corporation, Siemens Medical Systems, South Central Bell/Southern Bell, and US Sprint.

For further information or to register, call 1-800-786-1991 or write: Information Technology Conference; UT Memphis; 877 Madison Avenue, Room 706; Memphis, Tennessee 38163.

--from an Apple release

SPSS Users' Conference To Take Place in June

The Second Annual Academic Conference for SPSS Users will be held in Montreal, hosted by McGill University, from Saturday, June 8th until Tuesday, June 11th 1991. The program will include sessions, product demonstrations and tutorials of interest to instructors using SPSS software to teach statistics, researchers using SPSS as a data analysis tool, and support staff providing technical assistance in the use of this popular package of statistical software.

For registration forms and further information, contact the SPSS Secretariat at McGill (Telephone: 514-398-3770; E-mail: spss@co.lan.mcgill.ca). Registration fees are $235 before May 1 and $280 after ($120 and $150 for students); a separate fee of $95 is required for a two-day seminar in institutional research.

--from a McGill University flyer

Conference on Use of Macintosh in Higher Education

MACADEMIA '91 will take place on June 18 and 19 in Philadelphia, hosted by the University of Pennsylvania in conjunction with Apple Computer, Inc.

MACADEMIA is an annual conference that focuses on the use of Apple Macintoshes in higher education. It is an opportunity to view and present instructional software covering a variety of disciplines and authored by faculty at institutions of higher learning.

This year, for the first time, attendance is being limited on a first come first served basis. As a result, there will be no walk-in registration, and pre-registration at the earliest possible date is strongly recommended. The registration fee is $75. NYU faculty members who are interested in attending should contact Bruce Prevo at Apple Computer, Inc. (212-339-3729).

Expanded Focus in '91

Emphasis this year will be on Engineering, Administration, and the Medical/Life Sciences. In addition, there will be special presentations of instructional software developed at the University of Pennsylvania for the Macintosh. An Apple "track" will focus on the new System 7.0 for the Macintosh, on new Apple products, on comparisons of the Macintosh with Windows, the use of Macintoshes in a mixed environment, and Macintosh development environments. Apple Computer's president, John Sculley, will be the keynote speaker.

An Intellimation demo area is planned, where attendees can try out an array of affordable, faculty-authored instructional software distributed through Intellimation for use in college-level courses.

--from an Apple release

(continued on following page)
Summer Institute On Supercomputing

The Pittsburgh Supercomputing Center (PSC) is accepting applications for its fifth annual summer institute on supercomputing. The Institute is an intensive two-week training course in supercomputing (July 15-16) and is open to 22 advanced undergraduates, graduate students, post-doctoral fellows and faculty whose research would benefit from the use of a supercomputer. Applicants need not have supercomputing experience, but must be proficient in FORTRAN or C.

Workshop participants will acquire hands-on experience with either of PSC’s two supercomputers: a CRAY Y-MP/832 or a Connection Machine CM-2 from THINKING Machines Corporation. In addition to attending lectures, attendees will participate in a group project and will be given the opportunity to produce an animation sequence of their project results on videotape.

All travel, accommodation, meal and documentation expenses will be paid for by a grant from the National Science Foundation pending approval and funding.

For more information or an application, please write or call Kristen Sossman, (412) 268-6677; sossman@a.psc.edu (internet); sossman@cpwpsca (bitnet). The deadline for applications is Friday, May 17, 1991.

— from a PSC flyer

EDUCOM’91 To Take Place in October

The next annual EDUCOM conference, "Computing and Culture," will take place on October 16-19, 1991 in San Diego, California, where it will be hosted by the University of California at San Diego.

EDUCOM is a nonprofit consortium of over 500 colleges, universities and other institutions, founded in 1964 to facilitate the introduction, use and management of information technology in higher education. Its annual conference is the principle such event for professionals who are planning the future of information technology in higher education. It brings together leaders in information technology in higher education, and is an opportunity for attendees to share the knowledge and experience of experts and specialists, and to learn of developments, breakthroughs, and innovations that are swiftly reshaping higher education.

Offerings include a wide range of sessions that target important areas of information technology in higher education, special workshops, and hands-on demonstrations, of the latest hardware and software innovations.

Featured speakers this year will include Sheryl Handler, President, Thinking Machines; Bill Joy, Vice President, Research and Development, Sun Microsystems, Inc; "Creating Future Computing" — a panel led by Sid Karin, Director of the San Diego Supercomputer Center; and Leon Lederman, Frank L. Sulzberger Professor, University of Chicago and Nobel Laureate in physics.

The EDUCOM Educational Uses of Information Technology (EUIT) Program Preconference Working Session is scheduled for October 15 and 16, just prior to EDUCOM’91.

Registration information will be mailed in May. For more information on EDUCOM’91 or the EUIT Preconference Working Session, contact EDUCOM at (202) 872-4200 or send e-mail to CONF@EDUCOM.EDU (Internet) or CONF@EDUCOM.BITNET.

— from an Educom flyer

Additional Events

- May 13-16. 2nd Joint European Networking Conference, Blois, France; contact: RARESEC@NIKHEF.NL.
- May 24-26. 7th Computers and Writing Conference, Biloxi, MI; contact: SCHIPKE@USMCP6.
- Jun 3 - 7. Graphics Interface ’91, Calgary, Canada; contact: USERSAMS@UALTAMTS.BITNET.
- Jun 3-14. The Visualization Experience, University of Illinois at Urbana-Champaign; contact: 217-244-1996.
- Jun 20-22. Using Computer Networks on Campus II, Easton, PA; contact: LLOY@LAFAYAC.BITNET.
- Jun 25-27. PC EXPO in New York, Jacob J. Javits Center, New York City, NY; contact: 1-800-444-EXPO.
- July 15-18. TeX Users Group 12th Annual Meeting, Boston, MA; contact: CVL@MATH.AMS.COM, telephone: (401)751-7760.
- Aug 2-7. Seminar on Academic Computing, Snowmass, CO; contact: DJBIRD@ORSTATE.
- Dec 15-18. Hypertext'91, San Antonio, TX; contact: HT91@BUSH.TAMU.EDU.
# Summer '91 at the ACF

## Important Dates for ACF Users

### May

<table>
<thead>
<tr>
<th>Date</th>
<th>Event Description</th>
</tr>
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<tbody>
<tr>
<td>Current</td>
<td>Instructors apply for Summer Session I and II computer Class Accounts as early as possible.</td>
</tr>
<tr>
<td>Current - May 15</td>
<td>Students who expect Incompletes for Spring '91 courses should apply for computer account extensions by May 15. (Instructor's signature required.)</td>
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<tr>
<td>Current - August 31</td>
<td>Individual Account holders who will not be using their computer accounts in 1991/92 should store their files off-line on tape or floppy disk.</td>
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<tr>
<td>May 15</td>
<td>Spring semester ends.</td>
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<tr>
<td>May 15</td>
<td>Class Accounts issued for the spring Semester expire.</td>
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<tr>
<td>May 15, onward</td>
<td>(Wed.) Instructors may apply for Fall 1991 Class Accounts ................................</td>
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<tr>
<td>May 16</td>
<td>(Thurs.) Commencement (ACF sites are open regular hours.)</td>
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<tr>
<td>May 16</td>
<td>(Thurs.) Summer Hours begin</td>
</tr>
<tr>
<td>May 20</td>
<td>(Mon.) Summer Session I begins.</td>
</tr>
<tr>
<td>May 20 - June 7</td>
<td>Students register for computer use for Summer Session I and/or II ......................</td>
</tr>
<tr>
<td>May 20 - Aug. 30</td>
<td>(Mon.) Individual Account renewal applications are being accepted for fiscal year 1991/92.</td>
</tr>
<tr>
<td>May 27*</td>
<td>(Mon.) Memorial Day* ..................................................................................</td>
</tr>
</tbody>
</table>

### June

<table>
<thead>
<tr>
<th>Date</th>
<th>Event Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>June 19 - 28</td>
<td>(Wed. - Fri.) Students who expect Incompletes in Summer Session I courses should apply for computer account extensions. (Instructor's signature required.)</td>
</tr>
<tr>
<td>June 19 - 28</td>
<td>(Wed. - Fri.) Students with Summer Session I Class Accounts should archive all files they wish to keep.</td>
</tr>
<tr>
<td>June 28</td>
<td>(Fri.) Summer Session I ends.</td>
</tr>
</tbody>
</table>

### July

<table>
<thead>
<tr>
<th>Date</th>
<th>Event Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>July 1</td>
<td>(Mon.) Summer Session II begins.</td>
</tr>
<tr>
<td>July 1 - 19</td>
<td>(Mon. - Fri.) Students register for computer use for Summer Session II, if they have not already done so.</td>
</tr>
<tr>
<td>July 4*</td>
<td>(Thurs.) Independence Day*</td>
</tr>
<tr>
<td>July 29 - Aug. 9</td>
<td>(Mon. - Fri.) Students with Summer Session II Class Accounts should archive all files they wish to keep after Aug. 9.</td>
</tr>
<tr>
<td>July 31- Aug. 9</td>
<td>(Wed.-Fri.) Students who expect Incompletes in Summer Session II courses should apply for computer account extensions. (Instructor's signature required.)</td>
</tr>
</tbody>
</table>

### August

<table>
<thead>
<tr>
<th>Date</th>
<th>Event Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>August 9</td>
<td>(Fri.) Summer Session II ends.</td>
</tr>
<tr>
<td>August 9</td>
<td>(Fri.) Student Class Accounts issued for the Summer Sessions expire.</td>
</tr>
<tr>
<td>August 12, onward</td>
<td>(Mon. - Thurs.) Instructors apply for Fall 1991 Class Accounts if they have not already done so.</td>
</tr>
<tr>
<td>August 31</td>
<td>(Sat.) Individual Accounts expire for the 1990/91 academic year at 11:59 p.m.</td>
</tr>
<tr>
<td>August 31</td>
<td>(Sat.) Deadline for storing files off-line on tape or floppy disk by Individual Account holders who will not be using their computer accounts in 1991/92.</td>
</tr>
<tr>
<td>Sept. 1</td>
<td>(Sun.) New and renewed Individual Accounts for the 1991/92 academic year begin.</td>
</tr>
<tr>
<td>Aug. 31, Sept. 1, 2</td>
<td>(Sat., Sun., Mon.*) Labor Day Weekend ..................................................................</td>
</tr>
</tbody>
</table>

### September

<table>
<thead>
<tr>
<th>Date</th>
<th>Event Description</th>
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</thead>
<tbody>
<tr>
<td>Sept. 5</td>
<td>(Thurs.) Fall semester begins.</td>
</tr>
</tbody>
</table>

* University Holiday
† See inside back cover for hours.
ACF Microcomputer Workshops

The ACF's non-credit, half-day workshops in personal computing are open to NYU faculty, staff, and students—both graduate and undergraduate. This summer, these hands-on workshops for users of IBM PCs and Apple Macintoshs will include sessions on the popular word processing programs WordPerfect and Word; graphics with WordPerfect; the spreadsheet program Lotus 1-2-3; and the database management system, dBASE IV.

In order to accommodate as many registrants as possible, it may be necessary to share computers. Registration is required, but there is no fee for the microcomputer workshops. To register, during the week of the workshop please call Henry Mullish (998-3039) for IBM PC workshops, or Howard Fink (998-3500) for Macintosh workshops.

**For IBM PC Users**

At the ACF's Education Building site, 35 West Fourth Street, second floor. Morning workshops will run from 9 a.m. to 12 noon, afternoon workshops, from 1 p.m. to 4 p.m.

**WordPerfect 5.1**
- **Introduction**
  - **Morning Workshops:** May 3, 24 • June 7, 21 • July 5

**WordPerfect**
- **Intermediate**
  - **Afternoon Workshops:** May 3, 24 • June 21 • July 5

**WordPerfect**
- **Advanced**
  - **Afternoon Workshop:** May 10

**dBASE IV**
- **Morning Workshops:** June 14

**Lotus 1-2-3**
- **Morning Workshop:** May 10
  - **Afternoon Workshops:** June 7

**WordPerfect Graphics**
- **Morning Workshops:** June 28

**For Macintosh Users**

At the ACF's Third Avenue North Residence Hall site (75 Third Avenue, basement) from 9 a.m. to 11:30 a.m.

**Microsoft Word**
- **Introduction**
  - **May 2 • June 6 • July 11**

**Microsoft Word**
- **Intermediate**
  - **June 13 • July 18**

**Other Events for Microcomputer Users:**

**ACF Seminars in WordPerfect for the IBM PC**

(At the ACF's Education Building site, 35 West Fourth Street, second floor. These afternoon seminars run from 1 p.m. to 4 p.m.)

- **Date and Time** May 1
- **Creating Maps** May 3
- **Blocking in WordPerfect** May 8
- **Mathematica** May 10
- **Search and Search/Replace** May 15
- **Speller and Thesaurus in WordPerfect** May 22
- **Equation Mode in WordPerfect** May 29
- **Sorting in WordPerfect** June 5
- **Mail Merge in WordPerfect** June 12
- **Footnotes and Endnotes in WordPerfect** June 19

For complete descriptions of these seminars, please see "Spring '91 at the ACF". Copies are available from the ACF's Documentation Office, Room 306 Warren Weaver Hall.

Macintosh Users:
Look for a complete schedule of ACF Microcomputer Workshops for Macintosh users in the fall.
New computer users at NYU are welcome to take part in the ACF's introductory-level "walk-in" tutorials. Reservations are not required. Simply arrive a few minutes early at the site where the tutorial is being given.

There is no charge, but participants should have a current, valid NYU I.D. In addition, some VMS, UNIX and IBM mainframe tutorials require a computer account. In some instances, it may be possible to arrange for training to take place at a location selected by the requesting instructor or department. Please call Frank LoPresti at the number below for further information.

Faculty may also arrange tutorials specially for their classes or research groups. For IBM WYLBUR or VM/CMS, call Ivor Smith (998-3434); for all other systems, Frank LoPresti (998-3398). All tutorials are about one hour long.

---

**IBM WYLBUR**

Tisch Hall, Room LC-8

**Mondays**
June 3, 10, 17, July 8, 15
5:30 p.m., 6:30 p.m.

**Thursdays**
May 23, 30, June 6, 13, 20
5:30 p.m., 6:30 p.m.

**Introductory Lectures**
Warren Weaver Hall, Room 102

**Fridays**
May 24, 31, June 7, 14 at 6:00 p.m.

---

**VAX/VMS**

Third Ave. No. Res. Hall, basement

**Mondays**
May 6, 13 at 6:30 p.m.
May 20, July 8, 15 at 1:00 p.m.

**Wednesdays**
May 22, 29, July 10, 17 at 4:00 p.m.

**Fridays**
May 3, 10 at 11:00 a.m.
May 24, June 7, July 5, 12 at 11:00 a.m.

---

**UNIX**

Third Ave. No. Res. Hall, basement

**Mondays**
May 6, 13 at 4:30 p.m.
May 20, July 8, 15 at 11:00 a.m.

**Wednesdays**
May 22, 29, July 10, 17 at 1:00 p.m.

**Fridays**
May 3, 10 at 12:30 p.m.
May 24, June 7, July 5, 12 at 4:00 p.m.

---

**Electronic Mail (VMS, UNIX)**

14 Washington Place, basement

**Mondays**
May 20, July 8, 15 at 2:30 p.m.

**Wednesdays**
May 1 at 4:00 p.m.

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**CAUCUS**

Third Ave. No. Res. Hall, basement

**Wednesdays**
May 29, July 10 at 3:00 p.m. and 6:00 p.m.

Note: Participants must have a VAX/VMS account.

---

**Karel (Mac)**

(Students must bring a double-sided, double-density 3 1/2 inch diskette.)

<table>
<thead>
<tr>
<th>Day</th>
<th>Date</th>
<th>Time</th>
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<tbody>
<tr>
<td>Mon.</td>
<td>July 1</td>
<td>2:00 p.m.</td>
</tr>
<tr>
<td>Tues.</td>
<td>July 2</td>
<td>10:00 a.m.</td>
</tr>
<tr>
<td>Wed.</td>
<td>July 3</td>
<td>2:00 p.m.</td>
</tr>
<tr>
<td>Fri.</td>
<td>July 5</td>
<td>2:00 p.m.</td>
</tr>
<tr>
<td>Mon.</td>
<td>July 8</td>
<td>10:00 a.m.</td>
</tr>
<tr>
<td>Tues.</td>
<td>July 9</td>
<td>2:00 a.m.</td>
</tr>
<tr>
<td>Wed.</td>
<td>July 10</td>
<td>10:00 a.m.</td>
</tr>
<tr>
<td>Thurs.</td>
<td>July 11</td>
<td>2:00 p.m.</td>
</tr>
<tr>
<td>Fri.</td>
<td>July 12</td>
<td>10:00 a.m.</td>
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</table>

Each Karel tutorial is limited to 10 students. For more information, please call Jae Fried at 998-3436.

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**Microsoft Works (Mac)**

At the Education Building, second floor

<table>
<thead>
<tr>
<th>Day</th>
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<tbody>
<tr>
<td>Mon.</td>
<td>May 20</td>
<td>2:00 p.m.</td>
</tr>
<tr>
<td>Tues.</td>
<td>May 21</td>
<td>10:00 a.m.</td>
</tr>
<tr>
<td>Wed.</td>
<td>May 22</td>
<td>2:00 p.m.</td>
</tr>
<tr>
<td>Thurs.</td>
<td>May 23</td>
<td>10:00 a.m.</td>
</tr>
<tr>
<td>Fri.</td>
<td>May 24</td>
<td>2:00 p.m.</td>
</tr>
<tr>
<td>Tues.</td>
<td>May 28</td>
<td>2:00 p.m.</td>
</tr>
<tr>
<td>Wed.</td>
<td>May 29</td>
<td>10:00 a.m.</td>
</tr>
<tr>
<td>Thurs.</td>
<td>May 30</td>
<td>2:00 p.m.</td>
</tr>
<tr>
<td>Fri.</td>
<td>May 31</td>
<td>10:00 a.m.</td>
</tr>
<tr>
<td>Mon.</td>
<td>July 1</td>
<td>12:00 p.m.</td>
</tr>
<tr>
<td>Tues.</td>
<td>July 2</td>
<td>4:00 p.m.</td>
</tr>
<tr>
<td>Wed.</td>
<td>July 3</td>
<td>12:00 p.m.</td>
</tr>
<tr>
<td>Fri.</td>
<td>July 5</td>
<td>12:00 p.m.</td>
</tr>
<tr>
<td>Mon.</td>
<td>July 8</td>
<td>4:00 p.m.</td>
</tr>
<tr>
<td>Tues.</td>
<td>July 9</td>
<td>12:00 p.m.</td>
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<tr>
<td>Wed.</td>
<td>July 10</td>
<td>4:00 p.m.</td>
</tr>
<tr>
<td>Thurs.</td>
<td>July 11</td>
<td>12:00 p.m.</td>
</tr>
<tr>
<td>Fri.</td>
<td>July 12</td>
<td>4:00 p.m.</td>
</tr>
</tbody>
</table>
**Reminders**

**Obtaining Accounts for Your Classes**

Instructors, your Fall 1991 classes will each need a computer Class Account if their coursework will require use of the ACF's VAX/VMS, VAX/UNIX, or IBM computer systems. In addition, a class account on the ACF's Macintoshes or IBM PC's will give your students priority access to the computers at the ACF's instructional microcomputer labs. To apply for a Class Account, you must file form #ACF772. A separate application must be submitted for each class and for each type of ACF computer system that you would like your class to use. Each application must include a signature from the department's budget office, as well as a budget number against which the account is to be charged. Blank forms can be picked up in the ACF's Accounts Office (Room 305 Warren Weaver Hall), where your completed form can also be filed. Please call 998-3030 if you need further information.

The ACF Accounts Office cannot establish an account until they have received a properly completed form #ACF772. Once the account is established, your students will be able to register for use of their Class Accounts. Please do not collect your students' class cards or their computer-generated SIS-system course lists until they have registered for computer use. Your students will need their SIS lists in order to register.

**Student Registration for Computer Use**

Students whose courses are associated with Class Accounts on the VAX/VMS, and VAX/UNIX systems must register for computer use. (Class Accounts on the IBM mainframe computer are obtained for students by their instructor.) To register, students must bring their printed SIS-generated list of Confirmed Scheduled Classes and a valid NYU I.D. to the 14 Washington Place operator's desk, from May 20 through June 7 for Summer Session I and July 1 through July 19 for Summer Session II during the following hours:

* Mon. - Fri. 9 am - 11 pm.

Students in courses using the ACF's Macintosh and IBM personal computers must obtain a Microcomputer Access Card. To do so, please bring your SIS-generated list of Confirmed Scheduled Classes and your valid NYU I.D. card to the operator's desk at the Education Building site.

---

**It's Time to Renew Your Computer Account for 1991-92!**

Friday, August 31, is the expiration date for all unrenewed Individual Accounts on the ACF's VAX/VMS, VAX/UNIX, and IBM systems, and on the ACF's IBM and Macintosh personal computers. New Individual Accounts and those that have been renewed will begin on Sunday, September 1.

If you have not already done so, please renew your account for 1991-92. VMS and UNIX accounts can be renewed electronically from your terminal. To invoke this on-line account renewal form, type renew.

Paper renewal forms will be available in Room 305 Warren Weaver Hall for those VMS and UNIX account holders who prefer to use them. Individual Accounts on the ACF's IBM systems and personal computers can be renewed only via paper forms. Paper renewal forms must be signed by your program director or faculty advisor, and the financial officer of your school. These forms can then be submitted to the ACF's Accounts Office (Room 305 Warren Weaver Hall).
# ACF Tutorials, Seminars, and Workshops

## MAY

<table>
<thead>
<tr>
<th>MONDAY</th>
<th>TUESDAY</th>
<th>WEDNESDAY</th>
<th>THURSDAY</th>
<th>FRIDAY</th>
</tr>
</thead>
<tbody>
<tr>
<td>Instruction apply for Summer Session I and II computer Class Accounts as early as possible. Students with spring semester Class Accounts should archive all files they wish to save after May 15 (through Aug. 31). Students expecting incompletes apply for account extensions (through May 15).</td>
<td>Students expecting incompletes apply for account extensions (through May 15).</td>
<td>Seminar: Date &amp; Time Tutorials: E-MAIL, 4; SPSS/PC, 6</td>
<td>Workshop: MS Word Intro, 9-11:30</td>
<td>2 Workshops: WordPerfect Intro, 9-12</td>
</tr>
<tr>
<td>Tutorials: WordPerfect, 2:30 UNIX, 4:30 VAX/VMS, 6:30</td>
<td></td>
<td>Seminar: Search &amp; Search Replace</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Summer Session I begins Tutorials: UNIX, 11; VAX/VMS, 1; E-MAIL, 2:30; MS Works, 2 Students register for computer use for summer I until 11 Individual Account holders apply for annual accounts renewal (through 8/30).</td>
<td>Tutorial: Microsoft Works, 10</td>
<td>Seminars: WordPerfect Speller &amp; Thesaurus Tutorials: UNIX, 1; VAX/VMS, 4; Microsoft Works, 2</td>
<td></td>
<td>Workshops: WordPerfect Intro, 9-12 WordPerfect Intermediate, Tutorials: VAX/VMS, 11; UNIX, 4</td>
</tr>
<tr>
<td>Tutorial: Microsoft Works, 2</td>
<td>Seminar: WordPerfect Equation Mode Tutorials: Microsoft Works, 10; UNIX, 1; Cavs, 3;6; VAX/VMS, 4</td>
<td></td>
<td></td>
<td>24 Intro Lecture: WYLBUR, 6</td>
</tr>
<tr>
<td>Memorial Day Observed</td>
<td></td>
<td></td>
<td>23 Tutorials: MS Works, 10; SPSS/PC+, 3; IBM WYLBUR, 5:30, 6:30</td>
<td></td>
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</tbody>
</table>

## JUNE

<table>
<thead>
<tr>
<th>MONDAY</th>
<th>TUESDAY</th>
<th>WEDNESDAY</th>
<th>THURSDAY</th>
<th>FRIDAY</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tutorial: IBM WYLBUR, 5:30,6:30</td>
<td>Reminder: Students registration for Summer Session I class accounts ends Saturday, June 7.</td>
<td>Workshop: Microsoft Word (Intro), 9-11:30 Tutorials: IBM WYLBUR, 5:30,6:30; MS-DOS (Intermediate), 6</td>
<td>6 Workshops: WordPerfect Intro, 9-12; Lotus, 1-4</td>
<td>7 Tutorials: VAX/VMS, 11; UNIX, 4 Intro Lecture: WYLBUR, 6</td>
</tr>
<tr>
<td>Tutorial: IBM WYLBUR, 5:30,6:30</td>
<td></td>
<td>Workshop: Microsoft Word (Intermediate), 5</td>
<td></td>
<td>Workshop: dBASE IV, 9-12 Intro Lecture: WYLBUR, 6</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Workshop: WordPerfect Graphics, 9-12 Summer Session I ends</td>
</tr>
</tbody>
</table>

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For other important dates for ACF users — account registration and renewal, holiday schedule, and so on — please see page 39 and the inside back cover.

For further information on microcomputer workshops and seminars, please see page 40; on tutorials, see pages 41-42. Some events require reservations.

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**JULY**

<table>
<thead>
<tr>
<th>MONDAY</th>
<th>TUESDAY</th>
<th>WEDNESDAY</th>
<th>THURSDAY</th>
<th>FRIDAY</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Summer Session II begins.</strong></td>
<td><strong>Tutorials:</strong></td>
<td><strong>Tutorials:</strong></td>
<td></td>
<td><strong>Workshops:</strong></td>
</tr>
<tr>
<td>Students register for computer use for Summer Session II if they have not already done so, by July 19.</td>
<td>Karel, 10; Microsoft Works, 4</td>
<td>Microsoft Works, 12; Karel, 2</td>
<td></td>
<td>WordPerfect Intro, 9-12; WordPerfect Intermediate, 1-4</td>
</tr>
<tr>
<td><strong>Tutorials:</strong></td>
<td><strong>Tutorials:</strong></td>
<td><strong>Tutorials:</strong></td>
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<td><strong>Tutorials:</strong></td>
</tr>
<tr>
<td>Karel, 10; UNIX, 11; VAX/VMS, 1; E-MAIL, 2:30; MS Works, 4; IBM WYLBUR, 5:30, 6:30</td>
<td>Karel, 10; UNIX, 1; VAX/VMS, 4; MS Works, 4; Course, 3, 6</td>
<td>MS Works, 12; Karel, 2; SPSS/PC+, 3; MS-DOS (Intro), 6</td>
<td></td>
<td>Karel, 10; VAX/VMS, 11; UNIX, 4; MS Works, 4</td>
</tr>
<tr>
<td><strong>Tutorials:</strong></td>
<td><strong>Tutorials:</strong></td>
<td><strong>Tutorials:</strong></td>
<td></td>
<td><strong>Workshop:</strong></td>
</tr>
<tr>
<td>UNIX, 11; VAX/VMS, 1; E-MAIL, 2:30; IBM WYLBUR, 5:30, 6:30</td>
<td>UNIX, 1; VAX/VMS, 4</td>
<td>MS Word Intro, 9-11:30</td>
<td></td>
<td>MS Word Intro, 9-11:30</td>
</tr>
<tr>
<td><strong>And Some Reminders for the Fall...</strong></td>
<td><strong>Reminder:</strong></td>
<td><strong>Reminder:</strong></td>
<td><strong>Deadline for archiving of files</strong></td>
<td></td>
</tr>
<tr>
<td>Aug. 31 Labor Day Weekend (through Sept. 2)</td>
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<tr>
<td>Sept. 1 New and renewed Individual Accounts for the 1991/92 academic year begin.</td>
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<tr>
<td>12 13 14 15 16</td>
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<tr>
<td>Instructors apply for Fall '91 Class Accounts.</td>
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<td>19 21 22 23 24</td>
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<tr>
<td>Reminder: Individual Accounts for 1990/91 academic year expire Sat., Aug. 31 at 11:59 p.m.</td>
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<tr>
<td>26 27 28 29 30</td>
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<tr>
<td>Students with Summer Session II Class Accounts should archive all files they wish to keep after Aug 19, by Aug 9.</td>
<td>Students expecting incompletes apply for account extensions (through Aug 9).</td>
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<tr>
<td><strong>AUGUST</strong></td>
<td><strong>MONDAY</strong></td>
<td><strong>TUESDAY</strong></td>
<td><strong>WEDNESDAY</strong></td>
<td><strong>THURSDAY</strong></td>
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<tr>
<td><strong>And Some Reminders for the Fall...</strong></td>
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<tr>
<td>Ongoing: Instructors apply for Fall 1991 computer Class Accounts.</td>
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<tr>
<td>Aug. 31 Labor Day Weekend (through Sept. 2)</td>
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<td>26 27 28 29 30</td>
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</tbody>
</table>

*Academic Computing and Networking at NYU, March/May 1991 page 44*
Important ACF Telephone Numbers
General Information (ACF) 998-3058
Account Information 998-3035
Computer Status (recording) 998-3433
Computer Documentation 998-3036
Faculty Microcomputer Lab 998-3044
Tape Librarian 998-3452
Applications Consultants:
14 Washington Place 998-3399
Tisch Hall 998-3434
Education Building 998-3435
Warren Weaver Hall 998-3037
Third Ave. North Res. Hall 998-3500
Computer Operators:
14 Washington Place 998-3457
Tisch Hall 998-3409
Education Building 998-3421
Warren Weaver Hall 998-3456
Third Ave. North Res. Hall 998-3504

Dial-in Access to ACF Computers
If calling from Dial For (bps)
NYU 53600* 300 - 2400
Off Campus 995-3600* 300-2400
*Via NYU-NET, NYU's campus-wide network.

NYU Trolley route includes (6); weekdays, every 15 minutes during the academic year. ACF terminals are located in (2) and (3); microcomputers are at (2), (4), and (6).

1. Warren Weaver Hall
251 Mercer St., 3rd floor
2. Tisch Hall*
40 W. 4th St., lower concourse
3. 14 Washington Pl.
basement
4. Education Building*
35 W. 4th St., second floor
5. 715 Broadway
(IBM tapes only)
6. Third Ave. No. Residence Hall*
75 Third Ave., basement

*ACF Access Cards may be required for use of the microcomputers at these sites. For information, please call 998-3058.

NEW YORK UNIVERSITY
Washington Square Center
Guide to ACF user work areas and other facilities

 Hours at ACF Sites

<table>
<thead>
<tr>
<th>User Work Areas:</th>
<th>Regular Hours</th>
<th>Holiday Hours*</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Mon. - Fri.</td>
<td>Mon. - Fri.</td>
</tr>
<tr>
<td>14 Washington Place</td>
<td>8:30 a - 11:30 p†</td>
<td>10:30 a - 5:30 p</td>
</tr>
<tr>
<td>Tisch Hall</td>
<td>8:30 a - 11:30 p</td>
<td>10:30 a - 5:30 p</td>
</tr>
<tr>
<td>Education Building</td>
<td>8:30 a - 11:30 p</td>
<td>10:30 a - 5:30 p</td>
</tr>
<tr>
<td>Third Ave. North</td>
<td>10:30 a - 1:30 a</td>
<td>10:30 a - 5:30 p</td>
</tr>
<tr>
<td>Consultants:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>14 Washington Place</td>
<td>10 a - 9 p†</td>
<td>10:30 a - 5:30 p</td>
</tr>
<tr>
<td>Tisch Hall</td>
<td>9 a - 9 p</td>
<td>10:30 a - 5:30 p</td>
</tr>
<tr>
<td>Education Building</td>
<td>10:30 a - 1:30 a</td>
<td>10:30 a - 5:30 p</td>
</tr>
<tr>
<td>Third Ave. North</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>12 p - 5:30 p†</td>
<td>closed</td>
</tr>
<tr>
<td></td>
<td>9 a - 5 p</td>
<td>10:30 a - 5:30 p</td>
</tr>
<tr>
<td></td>
<td>10:30 a - 5:30 p</td>
<td>10:30 a - 5:30 p</td>
</tr>
<tr>
<td></td>
<td>closed</td>
<td>10:30 a - 5:30 p</td>
</tr>
<tr>
<td></td>
<td>closed</td>
<td>10:30 a - 5:30 p</td>
</tr>
<tr>
<td></td>
<td>closed</td>
<td>(To be announced)*</td>
</tr>
</tbody>
</table>

† Summer hours at the 14 Washington Place site (beginning May 16): Mon. - Fri. 8:30 a - 11:30 p (tentatively); closed Sat-Sun. Hours at all other sites remain the same.

* A final holiday schedule will be posted via our online news and bulletin board facilities. Note: The ACF offices in Warren Weaver Hall are closed on University holidays.
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