In This Issue

Graphics
What's New in Graphics at the ACF

Data Archive
The ACF's Data Archive
"Covering the Bases" (Course Announcement)

Networks
Local Area Network
Network Connections, NYU and Beyond

Supercomputers
Applying for Time on a Supercomputer
The ACF's CONVEX "Compute-Server" Is On Line

Microcomputers
What's New in the ACF's Faculty Microcomputer Laboratory
Update on the ACF's Education Building Microcomputer Facility
PC Versions of SPSS and SAS Now Available, Under A Site License, to Members of the NYU Community
Update on Gift from AT&T

Mainframes and minicomputers
NOS/VE: A New, Second Operating System for the CDC CYBER at NYU
New Features Offered by NOS/VE
Upgrade of NOS Will Bring CDCnet and Other Changes for CYBER Users
Update On the UNIX Systems at NYU
CMS Now Available on the ACF's IBM 4381
For IBM WYLBUR Users, Some Recent Changes on IBM/MVS
Update on Applications Software on the ACF's Mainframes and Minicomputers

ACF User Services
Coming Up in Spring '88: A Wide Variety of ACF Talks, Tutorials, and Workshops

General Information
Accessing the ACF Under NYU's New Telephone System
Accessing the ACF
Under NYU’s New Telephone System

As most members of the NYU community are probably aware, the University has phased out the old rotary-dial telephone system, and installed a new AT&T touchtone system (System 85). Phone numbers, “dialing” methods, and procedures have changed. The following list contains some key ACF telephone numbers.

General Information about the ACF ...................... 998-3058
Account Information ........................................... 998-3030
Computer Documentation ................................. 998-3036
Tape Librarian ..................................................... 998-3452
Systems’ Status Recording .................................. 998-3433
Applications Consultants:
14 Washington Place ........................................... 998-3399
Tisch Hall ............................................................ 998-3434
Education Building ............................................. 998-3435
Warren Weaver Hall ........................................... 998-3037

Computer Operators:
14 Washington Place ........................................... 998-3457
Tisch Hall ........................................................... 998-3409
Education Building ............................................. 998-3421
Warren Weaver Hall ........................................... 998-3456

Getting further information. University Telephone Information, at 998-1212, is the new main NYU number. If you call that number, the University’s operators will transfer calls directly to the correct new extension. If you need further assistance, call General University Information, at 998-INFO (4636).

Dial-in access to ACF computers. New numbers have replaced the dial-in numbers on the old 460 and 598 exchanges.
If calling from          Dial          For (bps)
NYU ............................................. ext. 53626 .......... 110-1200
Off campus ................. 777-7600 ............... 110-1200
777-8178 ............... 110-2400

Dial-in access to the NYU Computer System Selector (the MICOM Port Selector, or “switch”) is normally through 777-7600. If you dial that number and get no answer, please try 777-6030 or 777-8730, instead.

-Wendy Robinson

To find out more about the ACF, call 998-3058. If we cannot answer your question, we will find an ACF staff member who can.

Reminder: Discounts on personal computers and personal computer software are available through NYU

New York University has arranged discounts on personal computers and related products for NYU students, faculty and staff. Discounts currently available apply to Apple, Zenith, IBM, Compaq, Hewlett Packard, and Kaypro products.

The Purchasing Services Division produces a flyer which explains personal computer discounts in full detail. The flyer is distributed at two locations: The Purchasing Services Division, 269 Mercer Street, fifth floor, and the Office of Student Life, Loeb, Room 208. As we go to press, an updated flyer, containing additional information, is being prepared.

A special order form is required to obtain a discount on the Apple, Compaq, IBM, and Zenith products. The form is also available at the Purchasing Services Division and at the Office of Student Life.

Special contributions to this issue of the Newsletter were made by the following members of the ACF staff and associates (in alphabetical order):

This issue was prepared on Apple Macintosh and Macintosh SE microcomputers, and produced on an Apple LaserWriter Plus using Aldus’ PageMaker 2.0. Photographs by Manuel Laqui. Drawings by Stephen Rittersporn.

Newsletter Editor: Estelle Hochberg
Editorial and production assistance: Martin Cozza, Maria Gonzalez, Wendy Robinson, Grace Tse.
Additional production assistance: Peter Chu.
What's New in Graphics at the ACF

Warren Weaver Hall Facility Offers Graphics for Faculty, Researchers, and Graduate Students

There are terminals with graphics capabilities at each of the ACF's sites. These are the terminals that are marked with broad yellow bands, and they are available to anyone with an account on an ACF computer. In addition, the ACF site on the third floor of Warren Weaver Hall houses graphics terminals and graphic print devices with further capabilities. These graphics output devices are available to faculty, researchers, and graduate students.

The graphics facility at Warren Weaver Hall at present is centered in Room 313, informally known as the "Graphics Devices Room." The room contains several types of graphics terminals, most of which emulate a Tektronix 4010 monochrome terminal by supporting vector drawing, but not color fill (see box). The AT&T Unix PC's and the GraphOn 230's are examples. Other terminals in the room offer additional features that are desirable when particular software products are used. For example, the statistical packages SAS/GRAPH and SPSS Graphics achieve best results with the Graphics Devices Room's Tektronix 4105a color terminal because that particular type of terminal offers color fill and is supported by those packages. On a still another level of sophistication are the Advanced Electronic Design Color Graphics Terminals (AED's), which offer color fill and are best utilized with the solid modeling program MOVIE.BYU.

Along with these terminals and PC's, the same room houses several printing devices from which a "hard copy" of one's graphics output can be obtained. The most convenient way of doing this is to use the Tektronix 4612 Graphics Screen Copier, which is attached to a DEC VT240 terminal. You start by having your graphical output displayed on the DEC VT240's screen—much as you would with any other graphics terminal—and then you use the Tektronix 4612 to copy the screen display onto paper. To generate hardcopy with the Tektronix 4612, you need only press a button. The copy generated, though, is monochrome; is only as good as the screen resolution; and is limited to terminals having a composite video signal output. A Decwriter IV dot-matrix printer offers an alternate means of obtaining monochrome hardcopy output.

For color graphics renditions on paper, the Graphics Devices Room has two pen plotters and an ink-jet printer. The Hewlett-Packard 7475A Graphics Plotter supports six individual pen colors and manual sheet feeding for paper and mylar (for transparencies). The Hewlett-Packard 7550A Graphics Plotter supports eight individual pen colors, and an automatic sheet feeder for letter-size paper. Operating in conjunction with each other, the Tektronix 4695 ink-jet graphics printer and the Tektronix 4105a terminal provide a basic color graphics workstation.

In addition to those we have mentioned above, several other terminals in the Graphics Devices Room are configured with a printer, in workstation fashion. A General Terminal Corporation SW10 terminal attached to a Hewlett-Packard Laser Jet printer serves as a WordMarc workstation. (While WordMarc is primarily a word processor, rather than a graphics package, it has graphics capabilities, particularly in its layout of Greek and mathematical symbols and expressions.)

**Fill** is a time-saving feature of some graphics terminals. It allows a program to specify regions on the screen and have them filled with particular colors. This can be much faster and more convenient than painstakingly specifying the color of each point within each region. On monochrome terminals, fill functions by turning all pixels within the specified area either off or on, or (in some cases) to a desired "grey" level of the monitor color (usually amber or green).

There are many software products available on the ACF's computers which can take advantage of the graphics capabilities of the equipment in the Graphics Devices Room. These include Chem-X, Graphic Outlook, MONGO, DATAPLOT, and NCAR's GKS Graphic System, in addition to SAS/GRAPH, SPSS Graphics, and MOVIE.BYU.

The equipment in the Graphics Devices Room is available to faculty, graduate students, and researchers. Other, more advanced, graphics facilities are also present on the third floor of Warren Weaver Hall. These include devices to record graphic output on 35mm film for slides and videotape, and 16mm film for animation output. An Evans and Sutherland (E&S) PS300 graphics workstation is also available nearby.

- Jeffrey Bary, with William Biesty
The ACF's Data Archive

The ACF’s Data Base Archive (DBA) has several functions. It maintains a collection of social science data files. It acquires and stores data files needed by ACF users. In conjunction with Bobst Library, it keeps code books (in printed or in machine-readable form) which describe the contents of its data sets. It maintains online “help” files describing available data sets and instructing users in their use. It offers consultation on the acquisition and the computer-processing of large data sets.

Current Contents of the Collection

As of August 1987, the DBA had about 500 data sets in its possession. These files include demographic, political, social, economic, and educational data from both U.S. and foreign sources.

All data sets are stored on tapes that are housed in the tape library associated with the ACF’s IBM 4381 mainframe computer. Whenever possible, they are stored as Osiris-format files that can be transformed into SPSS-X or SAS system files as required. Using SAS, one can access any of the BMDP statistical programs. Alternately, raw data files can be created.

Upon request, the DBA will transfer data sets in appropriate formats to either the VAX/VMS cluster or to the CYBER computer. The ACF prefers that, to conserve storage space, users select the subsets of specific cases and variables which they will need for their studies. The DBA staff will extract these subsets from the larger data sets.

Acquisition of Additional Data Sets

Most of the data sets described above have been accumulated in response to users’ requests. The DBA maintains memberships in the Interuniversity Consortium for Political and Social Research (ICPSR) at the University of Michigan, and in the Roper Center for Public Opinion Research. The ICPSR membership provides access to its vast data holdings, to technical support from its data archivists, and to summer classes in quantitative methods held in Ann Arbor, Michigan. Membership in the Roper organization provides access to its data collection and to its online service, POLL.

The DBA staff will process requests for files held by either of the above organizations. It will also assist in the acquisition of other data sets required by NYU faculty, research scientists, or graduate student researchers in pursuit of their academic research. While at present the contents and organization of the DBA are oriented toward the social sciences, the ACF would gladly explore the possibility of including data from such other areas as the humanities and the physical sciences.

Code Books

Code books describing the contents of each of the data sets in the ACF’s DBA collection exist in either printed or machine-readable form (or both). The printed code books are housed in the Bobst Library, whereas the machine-readable ones are on DBA tapes.

Online “Help” Offers Descriptions, Instructions

Information about the current holdings in the IBM tape library, as well as those currently available for use on the VAX/VMS system(s), can be accessed through the ACF’s INFO system. You do not need a computer account to do so. Simply press the RETURN key on any ACF public terminal (or, if dialing in, dial 777-7600) to connect to the NYU Computer System Selector. In response to the SELECTION? prompt, type INFO and press RETURN. You will receive a menu and instructions for selecting the DATABASE “help” files.

Users with accounts on the ACF’s IBM WYLBUR system can get the same information by logging on to WYLBUR and typing HELPME DATABASE. However, you will need to modify your logon profile first, by adding the following line to your #PROFILE file:

X FRO HELPME USER PUB GRO PB

After modifying #PROFILE, save/replace it and then execute it by typing

X FRO #PROFILE CLE

(It will be executed automatically on all subsequent logons.)

Users on the VAX/VMS cluster can access the database “help” files by typing HELP DATABASE.

All of these “help” files not only describe the data files, but also contain instructions on accessing the data or the code books. Specific examples illustrate how to access these files using SPSS, SPSS-X, and SAS on either the IBM or the VAX computers. The “help” files on the IBM, VMS, and INFO systems are updated periodically, to reflect additions to the NYU collection, so it probably is a
good idea to check them from time to time.

Each data set at NYU has an entry in the "help" files, indexed by a four-digit number. ICPSR data sets are numbered by the ICPSR study number, while all Roper files are listed under study number 0000. Information for each data set includes: a) author, b) study number and title, c) brief description of contents, and d) specific Data Set Name (DSN) to be used in accessing the file.

A printed listing of data sets available for use on the VAX/VMS computers may be obtained from the ACF's Documentation Office (Room 306 Warren Weaver Hall). If you have an account on the ACF's cluster of VAX/VMS machines, you can print your own copy by typing PRINT NYU$AIDS:DATASETS.

Consultation

The statistical analysis of larger data sets often makes heavy demands on computer resources, and there are some procedures that can make the processing of these data sets more efficient and economical. The DBA staff is available for consulting about computer-processing, available software, etc. ♦

— George Sharrard and Bert Holland

Course Announcement

Covering the Bases: Techniques for Data Research and Retrieval

Five-session Course to be Offered by the Academic Computing Facility and Bobst Library

In the coming semester, the ACF and Bobst Library will be conducting a free, non-credit course for students and faculty who are interested in exploring the availability, use and interpretation of data resources at NYU. This five-part course begins on February 5. It will include the following topics.

- accessing appropriate data resources
- print and online statistical resources
- creating and using local data files
- manipulation of data
- interpreting and displaying results

There will be hands-on use of such computerized data files as the General Social Survey and the U.S. census; statistical software packages; and commercial online databases.

The course's five sessions will take place on February 5, 12, 19, 26, and March 4 (all Fridays). All sessions will be from 10 a.m. till 12 noon in the Avery Fisher Center (Bobst Library, second floor).

Enrollment is limited. To register, and for further information, please call Melanie Dodson, Bobst Library (998-2454) or George Sharrard, Academic Computing Facility (998-3402).
Local Area Network

Interest in the University's new campus-wide network for data communications has been growing. The following is an updated version of a letter from ACF director Max Goldstein, in which he outlines the major options available to academic departments and individual department members. The original version of the letter was mailed out to faculty in late June.

All of the wiring that was originally planned for the University's LAN has been installed. As most of you know, NYU's LAN is a campus-wide local area network that will facilitate data communications within the campus and with the "outside world".

LAN services. For faculty and departmental administrators who obtain LAN connections for their office terminals and microcomputers, there are immediate benefits. Bobst Library's online catalog BOBCAT is now conveniently accessible via the LAN, as are the minicomputers, mainframes, laser printers and other computing resources available from the Academic Computing Facility (ACF). There are enhanced opportunities for collaboration — via electronic mail and electronic file transfer — with other faculty members and with students both within and outside of NYU. Over the next few years, as use of the LAN becomes more established, and as more departments and administrative groups connect to it, the number and variety of services available through the LAN can be expected to expand.

The LAN and the telephone system. The LAN is an integral part of the telecommunications project under which the University telephone system was recently replaced. It was determined early in the planning for that project that the new telephone system would not be capable of handling the growth in data communications that is anticipated at NYU over the next ten years, and that separate facilities for data traffic would be needed. These separate data traffic facilities will be provided by the LAN. Indeed, the University plans to virtually phase out the use of the telephone for within-campus data communications. This will help avoid overburdening the telephone system. Moreover, for departments and individuals, the LAN will mean a substantial savings in the long run over the cost of data communications via the telephone.

Connection fees. There is a one-time connection fee to use the LAN, but there are no on-going monthly charges after that. This differs from the telephone system, where there is a monthly charge for the duration of the service. (Users will, of course, also have to have a terminal or computer to connect to the system.) Depending on the type of connection needed, different types of connection devices will be used. To assure that the system remains coherent, all connections will be made by the LAN operations department.

Types of Connections

There are several types of connections that can be accommodated by the campus-wide LAN. Your choice of a particular kind of connection will be determined by issues specific to you or your department. In the following paragraphs, we outline the three principal connection methods and their associated costs and services.

Terminal-to-LAN connection. This is the simplest connection possible. It permits a terminal (or a personal computer in "terminal emulation" mode) to reach other computers on the network. For example, it permits an individual with a terminal to reach ACF computers, and allows him or her to reach the Library's online catalog, BOBCAT. The cost is $450 per connection.

Personal-computer-to-LAN connection. If you have a personal computer and you want to connect to the LAN and to use the inherent processing capabilities of the personal computer (file transfer, resource sharing, and the like), there are many possibilities. Conceptually, the simplest is a direct connection from the personal computer to the LAN. This is estimated to cost between $1,000 and $1,800, depending on the network functions which you will require.

For a department in which several personal computers are located physically close to each other, another approach may be more cost effective: the department could put these personal computers on a small PC network and then connect this network to the campus-wide LAN. Such an arrangement would cost about $1,000 and up per personal computer. It would require a small PC acting as a "server" for the department's network of PCs; connections between each PC and the departmental PC network; and a connection between the PC network and the campus-wide LAN. The estimated cost takes these into consideration. However, additional wiring, if needed, might increase the cost somewhat.

Please see the facing page for a chart showing some of the services available through the LAN, and some of the options you might want to consider. For more about network and electronic mail connections within and outside of the University, please see the article on page 8.

Local Area Network continues on page 8.
Do you want a connection to the NYU LAN?
You will want to connect to the NYU LAN, and have an account on an ACF computer system, if you wish to do one or more of the following from your office, using a terminal or a microcomputer:
- Exchange electronic mail with colleagues or students within or outside of NYU.
- Run software on ACF minicomputers or mainframes.
- Print on ACF laser printers.
- Read various electronic bulletin boards.
- Connect to Bobst Library's online catalog, BOBCAT.

What kind of connection do you want?
The kind of connection ("asynchronous" or "network") will vary depending upon your situation. This chart may help you begin to determine what will best suit your needs. Most individuals will need further assistance. Please call 998-3058 to make an appointment with an ACF staff member who can help you.

Use this chart to...
- begin thinking about local area networks.
- get a sense of some of the issues involved in networking.
- prepare for a discussion with ACF staff members about what would be appropriate equipment to meet your needs.
Network-gateway-to-LAN. The cost of creating departmental local networks is discussed in the previous paragraph. Local networks that are already in existence can also be connected to the campus-wide network, at a cost of $3,500 to $10,000, depending on the kind and quantity of data traffic. For example, those departments which have workstations (such as SUN's, IBM RT's, Macintosh II's, or Microvaxes), or plan to acquire them, will most likely have their workstations networked together by a local Ethernet. These local networks would require a gateway connection to the campus-wide LAN.

How to Proceed

We urge departments and individual faculty members to begin to explore the best means for handling their data communications needs in the future — and to do so as soon as they can, so as to allow for proper planning. Some may find that, for the time being, continuing to use modems with auxiliary telephone lines will be sufficient. (In the longer run, the University plans to phase out the use of auxiliary lines for data communications.) Others may already have direct wiring connections to a single computer or to the NYU Computer System Selector, and may feel that they will not need additional communications connections or services. For many individual faculty members and departments, however, the features of the campus-wide LAN will provide substantial benefits — whether they already have some communications connections, or are just starting to consider bringing computer and network applications to their academic endeavors.

The ACF will gladly meet with faculty and departments to discuss their data communications needs as they may relate to the use of the LAN. Faculty members and department representatives should contact Ed Franceschini at the Academic Computing Facility (x83050).

- Prof. Max Goldstein

Network Connections, NYU and Beyond

The figure on the facing page depicts network connections within and outside of NYU. It was prepared by systems programmer Bill Russell, who is responsible for network management at the ACF.

Explanation and Legend

In the figure, the rectangles are computers and network routers. The cloud-shaped objects represent networks. Networks, computers, and network routers that are shaded in grey use TCP/IP, a network protocol which was recently adopted as an international standard.

NYU's local area network. In the left portion of the figure, NYU's local area broadband network (or LAN) is represented by a closed double line. Also depicted in that portion are baseband connections (mostly Ethernet) between the LAN and various divisions and departments at NYU. For example, there is a connection between the LAN and Bobst Library's BOBCAT system, which is, in turn, connected to the network RLIN. As another example, NYUCCVM, the ACF's IBM mainframe computer housed at the University's administrative computing center, UCC, is connected directly to the LAN, to the network BITNET, and to computers at GBA, the ACF, and CIMS.

Network names. ARPANet stands for DARPA Research Network; BITNET, for IBM RS/6000-based Host to Host Network; BrookNet, Brookhaven National Labs Network; CCNET, University Computer Center Network (DECnet); CSNET, Computer Science/Math Network; EARN, European Academic & Research Network (RSCS based); InterNet, for "internetworking", is a network of TCP/IP networks; JANET, Joint Academic Network (Great Britain); JVNC-NET, JVNC SuperComputer Center Network; MlibNET, Research Data Network; NetNorth, Canadian BITNET (RSCS-based); NSFNet, National Science Foundation Network (connects all supercomputer Networks); NYSERNet, NY State Education & Research Network; RLIN, Research Library Group Network; UUCP/USENET, UNIX™ UUCP-based Network.
What the Networks Do

The following are some notes and observations on what these networks do.

• The ACF connections to NYSERNet and JVNC-NET give users high-speed, reliable access to all National Science Foundation supercomputer centers. Connections to the growing NYU LAN (the new campus-wide local area network) will improve access to the external networks from within the University, and reduce the burden on our internal telephone system.

• Most of the networks depicted here can be used to transport electronic mail and files. In addition, some network connections enable individuals who are at a very great distance from a particular computer to access it from another computer center for interactive use or for job submittal. Thus, a person at another university which is on one of the TCP/IP networks shown in the figure might, with the appropriate account authorization, be able to connect to a computer at NYU and use it directly.

• Currently, some of our users have to make long distance telephone calls to use our computers from home. Networks make it easier for NYU to cooperate with other universities in making arrangements which allow users...

Network Connections continues on page 13.
Applying for Time on a Supercomputer

The National Science Foundation (NSF) supports a variety of supercomputer centers with CRAY's, CYBER's, and other computers able to do calculations at speeds many times those of the fastest machines at New York University. The Academic Computing Facility has experience with these centers, and can provide assistance in getting time. Through a Local Allocation Committee (LAC), we have block grants of time on both the Control Data Corporation CYBER 205's at the John von Neumann Center at Princeton (JVNC), and on a CRAY XMP at the Illinois National Center for Supercomputing Applications (NCSA). In the next few months, time on an ETA\textsuperscript{10} supercomputer will be available at the JVNC. The LAC block grants can be used for research initiation while you are waiting for formal grants of time and for instruction.

We encourage all NYU researchers who have a legitimate research or instruction requirement for a few hours of CYBER-205 or CRAY XMP time to apply for a LAC grant from the NYU time blocks. Social scientists as well as physical and biological scientists should consider using these unique resources. Please note that you do not have to be an NSF-supported researcher to apply for time. The criterion is the merit of the science, not the source of your funds.

If you need help in deciding if supercomputing is for you, or which supercomputer you should apply to, please contact Herbert Bernstein (998-3038), Room 308 Warren Weaver Hall. In some cases, arrangements for reimbursement to the NSF by your sponsoring agency may be required. For all centers, if you already have an NSF grant or contract, you may request time from the appropriate NSF research program. The NSF Office of Advanced Scientific Computing, (202) 357-9776 or 357-9717, can help direct you to the right program office.

Requests for fewer than ten hours of time should be directed to the NYU Local Allocation Committee. Instructions and forms for applying for supercomputer time --- whether from the LAC, directly from the Centers, or from the NSF --- are available in the ACF Accounts Office, Room 305 Warren Weaver Hall. Anna Moore is the Supercomputer Accounts Manager (998-3034).

For further information, contact Ed Friedman (at 998-3051, Room 325 Warren Weaver Hall), the site coordinator for the JVNC, and Jeffrey Bary (at 998-3049, Room 324 Warren Weaver Hall), the local coordinator for the NCSA and for Cornell's Center for Theory and Simulation in Science and Engineering.

The ACF's CONVEX "Compute-Server" Is On Line

The Academic Computing Facility has acquired a CONVEX computer, which will provide "mini-super" number-crunching service to our users. The machine is tagged, informally, a "mini-super" because it offers a programming and execution environment with many of the features of a true supercomputer, albeit at a fraction of the speed. As a result, codes prototyped on a CONVEX will transfer to true supercomputers without much difficulty. In some cases, the speed on the CONVEX itself is sufficient for production runs.

The new machine is particularly suitable for FORTRAN programs involving vector and matrix calculations. We expect it to be helpful to individuals engaged in developing and adapting large production codes for eventual use at supercomputer centers around the country. It will also serve as the final "production" machine in some cases. To keep the machine available for these two kinds of uses, we will be encouraging individuals with accounts on the CONVEX to use it as a "compute-server" — that is, to do most interactive editing and documentation on other, more appropriate machines, and to save the CONVEX for the kinds of computing tasks for which it has been designated.

The CONVEX runs a UNIX 4.2 BSD operating system. Faculty and graduate students who are interested in working on the CONVEX may apply for an account by filing form ACF770. Blank forms are available in the ACF's Accounts Office, Room 305 Warren Weaver Hall. For a reference copy of the CONVEX manual set, inquire at the ACF's Documentation Office, Room 306 Warren Weaver Hall. To access the CONVEX from the NYU Computer System Selector, you enter "ACF10".

- Herbert J. Bernstein

- Herbert J. Bernstein
What's New in the ACF's Faculty Microcomputer Lab

In recent months, the ACF’s Faculty Microcomputer Lab has acquired some interesting new hardware and software for inspection and trial by NYU faculty and research staff.

New Hardware
An Apple Macintosh II, Apple’s new top-of-the-line Macintosh, provides a faster processor, color graphics and more expandability than Apple’s previous Macintosh line. A Datacopy 730 Scanner can capture graphics images for either the PC or the Macintosh. A NEC Pinwriter P6 is a very quiet 24 pin dot matrix printer. The IBM PS/2 Model 60 is IBM’s newest AT-level computer. A very fast AT, the Model 60 comes with a 3 1/2” disk drive, 1 megabyte of RAM, and the new VGA graphics chip, all as standard equipment. Attached to the Model 60 is IBM’s new write-once optical disk drive, storing 200 megabytes on a single disk cartridge. In addition, there are a Data General One Model 2 laptop computer, an AT&T UNIX PC 7300 with a 20Mb hard disk drive, assorted models of “mice”, an AT RamPage and a J-RAM add-on memory expansion board, and various Ethernet boards for networking.

New Software
Software acquisitions include products for use on Apple Macintoshes and IBM PC’s.

For the Macintosh, Apple’s AppleShare Network File Server provides shared disk space for Macintoshes on an Appletalk network. PageMaker 2.0, by Aldus Corporation, is the latest version of the popular page composition program. Illustrator 1.0 by Adobe, a more sophisticated drawing program than MacDraw, can perform “smoothing” on MacPaint pictures. The Macintosh Programmer’s Workshop (MPW) is a set of powerful tools for developing new Macintosh applications. Hypercard is an exciting new information management tool from Apple. Textures by Addison Wesley Publishing, Inc. is the powerful TEX typesetting program for the Macintosh. TOPS from TOPS is a file-sharing LAN designed to link IBM PC’s and Apple Macintoshes (also available for the PC, see below). TOPS also has a file format translator for several popular microcomputer applications. Microsoft's popular word processing software Word is available in its newest version (3.0). The Faculty Microcomputer Lab also has the latest versions of the Mac operating system and of MacTerminal, MacDraw, and MacProject, all by Apple.

For the IBM PC. New in programming languages are QuickBASIC 2.01 from Microsoft, Turbo C from Borland International, VP-Expert from Paperback Software (an Artificial Intelligence expert system development tool), and PC-Scheme, a Lisp dialect from Texas Instruments. The Microsoft Windows Development Kit is also available.

Word processing and typesetting programs newly available in the Lab include The Egg, the scientific word processing program from Peregrine Falcon Company; the EMACS-like Epsilon Text Editor from Lugaru; Microsoft’s Word 3.0; Dragon Fly Software’s Nova Bene version 2; Lotus’ Manuscript; WordPerfect Corporation’s WordPerfect 4.2; and Personal TEX Inc.’s PersonalTEX.

Utilities available for the PC include recent versions of the Mace and Norton disk utilities, and FastBack, a hard disk backup program from Fifth Generation Systems.

Networking software for PC’s includes TOPS (described above), PC/TCP from FTP Software, Inc. (a PC to Ethernet connection manager), and DECNET DOS from Digital Equipment Corporation. Versions of TELNET and FTP from the National Center for Supercomputer Applications may be examined at the lab.

SAS (which is being distributed free of charge), and SPSS/PC+ are also available. (For more on SAS and SPSS, please see the article on page 12.)

About the ACF’s Faculty Microcomputer Lab
The ACF’s Microcomputer Laboratory was established at the beginning of the Fall 1984 semester. It is a place where faculty and research staff can learn about different kinds of microcomputer hardware and software. The Lab is located in room 317 Warren Weaver Hall. Visits to the Lab are by appointment. Please call 998-3044 to arrange a time. Hours between noon and 8:00 p.m., Mondays through Fridays, are usually available.

Software Distributed at the ACF Faculty Microcomputer Lab
Qualified members of the NYU community may obtain the following microcomputer software packages at the Microcomputer Lab: Kermit, ProComm, SAS, and SPSS/PC+. In addition, Macintosh owners may obtain up-to-date versions of the Mac operating system (free of charge). For further information, contact Gary Chapman at 998-3044.

— Gary Chapman, with W. Biesty
Update on the ACF’s Education Building Microcomputer Facility

New Uses for the Macs, An IBM PS/2 Facility, and Do-It-Yourself File Transfers in this Instructional Facility.

This semester, the ACF’s instructional microcomputer facility on the second floor of the Education Building has expanded both in size and scope.

Micro facility now has IBM PS/2’s. The ACF has added twenty-four IBM PS/2 Model 30 personal computers to the Macintoshes that were installed in Fall 1986, when the facility was first established. They are being used in spreadsheet applications by students in selected courses given by the Graduate School of Public Administration, and for ACF workshops on PC software. The PS/2’s are networked to a Zenith AT file server, from which course assignments and shared instructional data can be retrieved by students in these courses. Hardcopy is obtained from a Hewlett-Packard Laserjet II printer. The network is a “thin” Ethernet, utilizing Ungermann-Bass interface boards and Novell’s network operating system software (Netware).

Macintoshes are being used for coursework in statistics and Pascal. This semester, the twenty-four Macintosh Plus microcomputers at the ACF’s Education Building site are being used to teach statistical techniques to masters degree students in the School of Social Work. It is the first time that students in this particular research methods course have used computers as part of their coursework. They will be using StatView 512+ by BrainPower, Inc., a program which offers fairly powerful statistical analysis and a “friendly” Macintosh interface.

As in the 1986/87 academic year, the Computer Science Department has been using the Macintosh facility for the introductory courses which it offers to non-computer science majors. This semester, approximately 260 students have been learning basic computer concepts and introductory programming in Pascal on the ACF’s Macintosh computers, using instructional software developed at Carnegie Mellon University.

Do-it-yourself microcomputer-to-mainframe/mini file transfer. A “file transfer station” has been set up at the Education Building site. It consists of a Macintosh Plus computer and a Zenith PC-clone. The two micros can be used to upload and download files between your disk and any ACF mainframe or minicomputer on which you have an account. File transfers involving the CYBER, VAX/VMS, and VAX/UNIX systems can be performed using Kermit, as can transfers to and from the VM/CMS system running on the IBM 4381. Transfers involving the IBM 4381’s WYLBUR system can be accomplished via “raw capture”, using ProComm on the Zenith PC-clone. The Zenith PC-clone takes 5 1/2-inch disks. However, an IBM PS/2 has been set up for copying between 5 1/2-inch and 3 1/2-inch IBM disks; it is available in the ACF consultants’ office at the Education Building site.

— Estelle Hochberg, with Gary Chapman

PC Versions of SPSS and SAS Now Available, Under A Site License, to Members of the NYU Community

The Academic Computing Facility has obtained a “site license” for SPSS/PC+ and the SPSS/PC+ Advanced Statistics module. This software represents the core of SPSS Inc.’s excellent IBM PC implementation of its powerful mainframe and minicomputer statistics packages.

Having obtained this site license, we can distribute copies of the SPSS/PC+ software to faculty members and graduate students at New York University. This will be done on a “one-per-customer” basis. Under the terms of our license, recipients of the software may use the software on a single computer and may not make additional copies for colleagues or friends.

To partially offset the cost of acquisition and renewal of the site license, and of possibly obtaining additional modules, the ACF is charging a modest fee for this software: $100 for the base SPSS/PC+ package, and $50 for the Advanced Statistics module. Departments may pay

Site License continues on following page.
Site License, continued from preceding page.

this fee via an interdepartmental transfer of funds to the ACF; alternatively, individuals may pay by check.

Together, the two SPSS/PC+ modules come on ten diskettes. Users must have a PC with a hard disk drive installed and approximately five megabytes of free disk space.

NYU also has a site license for distribution of the IBM PC version of the base SAS statistics package. This software, available for no fee, comes on 17 diskettes and requires approximately seven megabytes of free disk space.

Incidentally, you must bring your own diskettes. For details on this and further information, please contact Gary Chapman at 998-3044.

— Gary Chapman

Update on Gift from AT&T

The newly arrived AT&T equipment was distributed to the qualifying departments and individual members of the NYU faculty or research staff who had requested it. An update of the system software for the PC's was received in June and has also been distributed.

Over the past year or so, the computing equipment received by the University from AT&T has included fifty model 3B2 workstations and three model 3B5 minicomputers all running AT&T's UNIX System V. (The 3B5's will soon be upgraded to 3B15's.) A notice on maintenance agreements and procedures has been sent to the appropriate departments. If you need a copy of this or information on what software is available for AT&T machines, please contact Shanna Leonard by electronic mail (leonard@acf4).

We at the Academic Computing Facility wish again to thank AT&T for their gift, which will serve to increase the computing resources of NYU's physical science departments.

— Shanna Leonard & Herbert J. Bernstein

Network Connections, continued from page 9.

who live at a distance from NYU to access NYU computers by making a local telephone call. These arrangements can also be helpful to individuals who are travelling. Such an agreement exists with Rutgers University. ACF users who live or work in that area can dial a telephone number at Rutgers and, from there, connect to computers at NYU. Access to ACF computers is also available from terminals at the Rutgers computing center.

* We have world-wide connections for electronic mail. They have proved helpful in collaborating between researchers at NYU and other institutions, and have helped investigators keep their projects at NYU going, even when they are "on the road". You do need an account on an ACF computer and a legitimate research requirement — funded by the University or a grant — in order to use some of the networks. The person with whom you are exchanging mail must also have an account on some computer that is on the network. And, when sending mail outside the University, you will need to find out from your correspondent exactly what his or her network address is. Usually, your correspondent can get this information from his or her University computer center.

— Herbert J. Bernstein (figure and technical review by Bill Russell)
NOS/VE: A New, Second Operating System for the CDC CYBER at NYU

The ACF's CDC CYBER 180/830A mainframe computer is now running two operating systems, NOS and NOS/VE. This dual-state mode of operation began modestly last spring, when a new NOS/VE system was first installed to run in parallel with NOS, on an experimental basis.

NOS is the operating system with which users of the ACF’s CYBER system have been familiar for some years now. NOS/VE is Control Data’s successor operating system to NOS. Over the past months, both ACF staff and a team of personnel from Control Data Corporation have been working to tune and enhance NOS/VE for “production” use by NYU faculty and students. Thus far, there have been several upgrades of NOS/VE; a number of software application products have been added to the system; and the system itself is being tuned for better performance. Additional upgrades of both NOS and NOS/VE are expected by the mid-year interval. These promise to further improve the network capabilities and performance of both systems. (Please see the item on the forthcoming NOS upgrade on page 16.)

What’s Different About NOS/VE?

More than an extension of NOS, the new NOS/VE system brings marked changes both in capability and in appearance. VE stands for virtual environment. Virtual systems are a newer technology enabling, among other things, a more flexible allocation of central processing resources among users’ programs. One important result is that users can execute programs requiring much more memory than that which can be provided in non-virtual systems like NOS.

NOS/VE is a “friendlier” system than its predecessor, NOS. For example, it offers many more applications that have interfaces that are “PC-like”, in that they are menu-driven and prompt the user for commands and choices. There are programming environments that can simplify the process of learning and debugging in FORTRAN, Pascal, C, PROLOG, and COBOL. UNIX and VMS users can work in NOS/VE “shells” or environments which mimic those two systems. There is also a Macintosh-like interface which can be used by individuals who are accessing NOS/VE from a Macintosh personal computer. A recently enabled TCP/IP capability on NOS/VE will mean easier network connections between the CYBER and other machines at NYU and elsewhere — for mail and other kinds of file and information transfer, and for the sharing of devices like special printers. (Please see the article on page 15 for more on these.)

NOS/VE’s system command language (SCL) does differ markedly from the CCL used on NOS. Moreover, the file system is closer to that found on VMS. For example, a user can structure his catalog hierarchically, and files have “path names” which must be stated explicitly when a file is being accessed from another part of the hierarchy. A third noticeable difference for longtime users of NOS will be the full screen file editor: although similar in flavor to FSE (the comparable product on NOS) it is a different editor with different commands and conventions. While most users will choose to employ a menu-driven application or environment, some will deal directly with the system and its command language. Programmers executing complicated jobs on NOS will have to employ SCL to perform comparable tasks on NOS/VE, and will need to familiarize themselves with the file system and the file editor on NOS/VE. For these people, migrating to NOS/VE will entail some preparation and planning.

Migrating to NOS/VE

Although some NOS users have already begun to transfer their work to NOS/VE, production use of NOS/VE is expected to begin this spring. For a few applications, “migration” from NOS to NOS/VE will not be possible until a comparable third-party software product is released for use on NOS/VE. Thus, researchers who are currently using the database management system SIR on the NOS side of the CYBER are awaiting the release — expected in early 1988 — of a NOS/VE version of that product.

A CDC publication, Migration from NOS to NOS/VE (CDC Pub. No. 60489503) provides an introduction to NOS/VE for experienced users of NOS, and assistance in converting jobs and procedures for use on NOS/VE. Reference copies are available in Rooms 313 Warren Weaver Hall and LC-8 Tisch Hall. In addition, ACF consultants Eleanor Kolchin and Erika Epstein, and CDC analyst Eric Pressey, are available to help faculty and research staff to plan and implement the transition. They are all based in Room 307 Warren Weaver Hall, and can be reached at 998-3021.

— Estelle Hochberg, with Bill Russell
New Features Offered by NOS/VE

[Editor’s Note: The CDC CYBER is now running two operating systems in parallel, NOS and NOS/VE. NOS/VE was first installed locally last spring, and is being tooled and enhanced for production use at NYU probably this spring. Eric Pressey is a CDC analyst who has been based at NYU during the installation, testing and tuning period. (Please see the item on page 14 for more about NOS/VE.) We asked Mr. Pressey to tell us about some of the enhancements brought by a recently installed, updated version of NOS/VE.)

For me, the installation of NOS/VE 1.2.3 makes the ACF CYBER friendlier than ever. Several products and product features have been implemented which improve performance and pave the way for a transparent computing environment. A true transparent computing environment will enable users to implement data processing solutions with multi-vendor products without needing to know anything about where the processing is done. The user’s interface to the system will be one which is familiar to him/her, and which will be the same regardless of the end solution platform used. So, while the improvements discussed here make using the CYBER easier now, it should be noted that they are also part of a broad plan to provide a more fully transparent computing environment for users in the future.

Macintosh interface. If you are a Macintosh user, you will be interested in Desktop/VE. Desktop/VE lets Apple Macintosh users log into NOS/VE automatically, browse through catalogs, edit files, access Mail/VE, execute applications, and transfer files using the familiar Macintosh conventions like icons, windows, pulldown menus, dialog boxes, and the desktop mouse. Users can install Desktop/VE on a Macintosh Plus, Macintosh 512K Enhanced, Macintosh SE and Macintosh II configuration that runs System 3.2 with Finder 5.3 or System 4.1 with Finder 5.5. An unchanging interface, (or seamless interface) between end users and the underlying operating systems and applications of a computing network will be a hallmark of transparent computing environments. Upcoming versions of NOS/VE will bring more seamless interfaces to the CYBER, including one for the IBM PC.

Networking. NOS/VE 1.2.3 supports TCP/IP TELNET, which will allow terminals and workstations connected to the CYBER through CDCNET to interactively access the other ACF mainframes that support TCP/IP. Conversely, users whose terminals or workstations are connected to other ACF hosts will be able to interactively access the CYBER. The current version of NOS/VE supports file transfer with FTP. Future releases support the mail (SMTP) capabilities that work with TCP/IP. TCP/IP enables the kind of communication among mainframes necessary for transparent computing environments.

UNIX environment. NOS/VE 1.2.3 has enhanced VX/VE in several ways. The C compiler now supports low, medium, and debug levels of optimization, and programs compiled at high-level optimization execute faster than ever. Overall security has been improved due to implementation of System 5.2 Advisory Record Locking and System 5.2 mail. Because UNIX is available on so many machines, it will play an important part in providing a common, low-level software interface throughout a network. Transparent computing environments will require such cohesive software architectures that ease the migration of applications across a network’s various processors.

Performance improvements. Users will receive indirect benefits from the new scheduling algorithm and improved fault tolerance of NOS/VE 1.2.3. ACF staff can now tune the CYBER to improve interactive response time without hampering batch throughput. System critical files that used to reside on all disk volumes have been isolated, which will allow NOS/VE to withstand hits on some of its disks. Finally, improvements to the backup and restore procedures have increased the security of the permanent file base.

Potential users should note that special consulting help for NOS/VE is available on Wednesdays in Room 307 Warren Weaver Hall. Persons interested in working with NOS/VE can see Anna Moore in Room 305 Warren Weaver Hall for an account.

— Eric Pressey, Control Data Corporation
Upgrade of NOS Will Bring CDCnet and Other Changes for CYBER Users

An upgrade of NOS to Version 2.5.3 (PSR level 688) is planned for early February. NOS is one of two operating systems currently running on the ACF’s CDC CYBER 180/830A mainframe. The upgrade will mean a number of performance improvements. However, the most marked changes for our users will result from the fact that they will be accessing NOS via CDCnet.

CDCnet

Access via CDCnet is possible with NOS systems at Version 2.5.3 and above. CDCnet will mean faster system response and less time-till-connection for our NOS users, but it will also bring some changes in how one makes a connection to NOS, and in how one controls input and output to and from a terminal.

Faster system response, less waiting to connect.

CDCnet is the means by which users have been connecting to NOS/VE, a new second operating system running on the CYBER, in parallel to NOS. (See page 15 for more on NOS/VE.) The two operating systems share many resources. Putting NOS on CDCnet will make possible the dynamic, automatic, on-the-fly reallocation of terminal-connection ports shared by NOS and NOS/VE. This will mean better response times for users of both NOS and NOS/VE, and less waiting for a connection to either system during times of heavy usage.

Changes in the connection and log-on procedure.

With CDCnet, users will have to follow a different procedure for accessing the CYBER and NOS. As we go to press, some minor details have not been completely decided upon, but it will be very much like the following. You will start out, as before, by connecting to the NYU Computer System Selector. The appropriate response to the prompt, SELECTION?, however, will now be CDC (typing CYBER will continue to work for a while), followed by two carriage returns. CDCnet will then ask you which “service” you wish to connect to. To access NOS, you will type CREC NOS, and press the RETURN key once. (CREC stands for “CREATE_CONNECTION”.) After a pause, you will receive the familiar NOS log-on prompts for Family, Username, Password, Charge, Project, and Application.

New control characters and escape sequences.

CDCnet will also mean a change to many of the key sequences with which NOS users currently control output at their terminal. For example, an Interrupt (a “User Break 1”) will be accomplished by entering a %1 (i.e., by striking the “%” key, followed by the key marked with the number “1”, and then the RETURN key); previously, one entered a CTRL-P. Entering a %2 will now terminate the execution of a command (i.e., it will cause a “User Break 2”), where previously one entered a CTRL-T. On the other hand, you will still be able to use CTRL-X to cancel your current line of input.

A minor temporary “bug.”

In the rare event that the CYBER or NOS go down while you are trying to log on or during your terminal session, it could take as long as a few minutes before CDCnet notifies you. Notification could arrive in seconds, but you should be aware that a longer delay is possible. This is due to a temporary bug in the processing of “host unavailability” information, and will likely be fixed in the next version of NOS.

Other Changes

The upgrade to Version 2.5.3 of NOS will also bring an improvement to the performance of the system’s full screen editor. FSE will now repaint the screen more quickly on any terminal which has the ability to erase to end of line — or on any personal computer which can emulate a terminal with that capability. This includes all terminals in the ACF’s user work areas, and most microcomputers. A second improvement of interest to our users concerns Cyber Control Language. CCL will now allow the manipulation of strings through such new functions as LEN and STR. Further information will be available in the document NOS253 around January 15. Printed copies will be available from the ACF’s Documentation Office (Room 306 Warren Weaver), and from the consultants at the Tisch Hall, Warren Weaver Hall, and 14 Washington Place sites. ♦

– Estelle Hochberg, with Bill Russell
Update On the UNIX Systems at NYU

Most of the ACF UNIX™ machines now run software that supports the Network File System (NFS)™ protocol. This allows file partitions and systems to be shared among machines — which, in turn, can reduce the duplication of files, while providing for a more homogeneous environment.

A common example of this kind of sharing is provided by the SUN minicomputers. SUN workstations are built upon a model of a client-server interface, and in fact SUN developed NFS. To illustrate one application, news and manual pages which actually reside on ACF3 are being shared with ACF2 and ACF11. This saves, among other things, a great deal of disk space. As time goes on, it will be possible to share many more file systems.

X-Windows, the popular windowing system developed by (among others) MIT, DEC, and IBM, is available. We are running Version XV10R4 with enhancements, as Version XV11R1 is very new and much slower than XV10R4, and contains bugs. Bug-fixes are constantly arriving, and we expect to install XV11R1 locally in the near future.

Currently, the only popular devices supported are QVS100's graphics terminals, SUN-2/X and -3/X workstations, IBM PC's and Macintosh microcomputers. We are currently testing XV10R4 on a GraphOn GO-235 terminal.

Disk Quotas

As most of you already know, the ACF has instituted disk quotas on most of the UNIX machines. Initially, the limit is set to 500K per user per class. This corresponds to the policy followed on our VMS/VAX machines. By making users more aware of their files, quotas help keep a file system clear of temporary or "junk" files, as well as of files that are old or outdated. Not only does this help alleviate shortages of disk space, but it can also improve system performance. When machines are busy, data access — and therefore "throughput" — is faster on partitions containing fewer files. And our machines are often very busy. (Throughput is a measure of general system performance. It is a common observation that throughput goes down 50% as a file system becomes 90% full or more.)

Users who require more disk space should send mail to the username "root".

Important Notes and Quick Tips

1. WISCVM no longer exists (domain-style name WISCVM.WISC.EDU). Those of you who wish to send BITNET mail should simply address it to <username>@place.BITNET; our local mailers know the best route. Since these routes change, users are encouraged not to address the message explicitly (i.e., by specifying a route in the address).

2. Now that domain-style nameservers are being used, network access to hosts has become slightly more complicated. When sending mail, you must use an address such as (for example) rosenblg@garif.sg.nyu.edu, instead of rosenblg@garif. This is true of all Internet nodes, with the exception of UUCP hosts. If you do not know how to get "there" from "here", send a message to the username "comment" asking how to access the host in question.

3. To check on your quota, type "quota -v".

4. To see a list of manual pages on a certain topic, type "apropos <subject>".

5. The command "uptime" shows the average load on the machine in 5, 10, and 15 minute intervals.

6. To keep up with current events concerning the ACF, please read the news groups "nyu.general" and "general" (via notes, i.e., 'notes nyu.general.general' or your favorite news reader).

7. A scratch area has been created on ACF9. It is called "/scratch". Its main use is for temporary storage of users' large metafiles. It is cleared periodically and upon rebooting.

— Gary Rosenblum
CMS Now Available on the ACF's IBM 4381

VM/SP-CMS became available at NYU on an experimental basis during the Spring 1987 semester. It runs on the ACF's IBM 4381 mainframe, where users can also access MVS, the operating system under which WYLBUR has been used at NYU since the 1970's. As of this semester, the ACF is issuing two kinds of IBM accounts, those for users of VM/SP-CMS and those for VM/SP-CMS users.

VM/SP-CMS is an IBM operating system and family of products. VM/SP ("VM" for short) stands for Virtual Machine/System Product. Under VM/SP, each user obtains a "virtual machine" upon logging on to the system. (MVS runs as the operating system of a "virtual machine" within VM/SP.)

CMS (or Conversational Monitor System) is the part of the VM system which provides the tools for using the system product. CMS offers such features as screen-oriented menus, programmable function keys, full-screen mode, and the ability to issue commands to the operating system from within full-screen applications.

What's available on VM at NYU. Utilities on the system include a full screen file editor, an online help facility, and a mailer. Electronic mail can be exchanged with most of the mainframes and minicomputers at NYU, and with computers at other universities that are reachable through BItnet. (The exceptions at NYU are the CDC CYBER and the IBM WYLBUR systems. Electronic mail between VM and these systems is not yet possible.) In addition, limited file transfer between CMS and MVS/WYLBUR is possible.

Statistical applications that are currently offered on the system include SAS (Statistical Analysis System), and SPSS-X (Statistical Package for the Social Sciences, Version 2.2) with SPSS/LISREL (Analysis of Linear Structural Relationships). Also available are the text processing and formatting program SCRIPT, the database management system SPIRES, and the communications program and file transfer protocol Kermit (in line by line mode only).

Getting started. Applications for individual accounts on the system can be made through the ACF Accounts Office (Room 306 Warren Weaver Hall), by filing form ACFSTG. A draft edition of the ACF document Introduction to CMS at NYU is available from the ACF's Documentation Office (Room 306 Warren Weaver Hall). That document will help get you started on the system, and will point you to such further sources of information as IBM's CMS Primer, which can be purchased at the NYU BookCenter. Individuals who have used CMS at other universities should be sure to refer to the ACF's Introduction to CMS at NYU for information on NYU-specific characteristics of the system — for example, the locations of function keys on the types of terminals prevalent at NYU; logon and account initialization procedures; and procedures for printing files on NYU printers. Additional help on the use of CMS is available from the ACF consultants in Room LC-7 Tisch Hall.

— W. Biesty, E. Hochberg

As we go to press...

For IBM WYLBUR Users,

Some Recent Changes on IBM/MVS

- A Tape Management System has been implemented to provide greater security and ease for tape users. Permanent library tapes will be supplied by the ACF and will be of uniform format (standard label, 6250 BPI). Users' data will be transferred from current tapes to these permanent TMS tapes. Owners of tapes currently in the library are being contacted about this change.
- RACF file protection is being implemented for all MVS disk files. Users will be able to read only files belonging to their own WYLBUR group or to certain specified 'public' USERIDs such as WYL.PB.PUB and WYL.US.PRD. Users can make their own files "world readable" by specifying the data set name as WYL.gg.usu.PUB.filename. Users will be able to write only to disk files associated with their own USERID.
- The file retention policy on the SCR301 disk pack has been modified. Henceforth files will be retained for six days from the time they were created (rather than until Sunday as heretofore), and then they will be retained if they are used again within each three day period. If the pack becomes overly full, files may get erased on an "as needed" basis, so storage on SCR301 should NOT be regarded as secure and permanent.

Another disk pack, ACFSTG, has been made available, primarily to serve as a staging space for moving files from MVS to VM. Retention policy for this pack is currently being formulated and may be similar to that for SCR301.

— Bert Holland
Update on Applications Software on the ACF's Mainframes and Minicomputers

A number of application software products on the ACF computers were updated or newly installed in recent months. The following list, divided by computer and operating system, gives most of them.

**CDC Cyber (NOS/VE System).** SPSS-X Version 2.2 and SPSS-X TABLES (Statistical Package for the Social Sciences); BMDP (Biomedical Computer Programs); IMSL, Version 10 (International Mathematical and Statistical Library).

**IBM 4381 (MVS/WYLBUR system).** IMSL Version 10 (International Mathematical and Statistical Library); LISREL VI (Linear Structural Relations); LISCOMP (Linear Structural Equations with a Comprehensive Measurement Mode); TESTFACT (a test scoring and item factor analysis program); SPSS-X Version 2.2, and soon Version 3.0; SAS Version 5.16 (Statistical Analysis System), including SAS/ETS (Statistical Analysis System/Econometrics and Times Series Analysis), SAS/GRAPH, and SAS/IML (Statistical Analysis System/Interactive Matrix Language).

**IBM 4381 (CMS system).** SPIRES (Stanford Public Information Retrieval System); BMDP (Biomedical Computer Programs), within the coming months; SPSS-X Version 2.2, and soon Version 3.0 (Statistical Package for Social Sciences).

The ACF cluster of VAX/VMS systems. SAS Version 5.16 (Statistical Analysis System), including BASE SAS, SAS/ETS (Statistical Analysis Systems/ Econometrics and Times Series Analysis), and SAS/GRAPH. Version 5.16 is now the only supported version of SAS on VMS; SPSS-X Version 2.2+, the default and only version on VMS; SPSS-X TABLES; SPSS GRAPHICS Version 1.1, Level 2; LISREL VI (Linear Structural Relations coupled with SPSS-X as a procedure); Graphic Outlook, Version 4.5 (a full-screen spreadsheet with graphics); DATAPLOT (interactive graphics, fitting, data analysis, and mathematics); GLIM Version 3.77 (Generalized Linear Interactive Modeling System); CHEM-X October 1987 Version, includes CHEM CORE, CHEM MODEL, CHEM MOVIE and CHEM GUIDE; TeX and related macros, including \LaTeX.

The ACF's VAX/UNIX systems. NAG Fortran Subroutine Library Mark 12 (Numerical Algorithms Group); MONGO Graphics Package; NCAR-GKS Fortran Subroutine Graphics Library (National Center for Atmospheric Research/Graphics Kernel System); TeX and related macros, including \LaTeX. •

– Ed Friedman

Stephen Rittersporn used MacDraw by Apple Computer, Inc. to free-hand this illustration. It was then "imported" into this Newsletter page by means of PageMaker (Aldus Corp.).
ACF Talks, Tutorials, and Workshops:
A Tentative Schedule for Spring 1988

Each semester, the ACF offers talks, tutorials and workshops on a wide range of topics and for users at varying levels of expertise. As we go to press, a few fall semester talks and workshops remain (please see box). The following is the tentative schedule of ACF talks, tutorials and workshops for the Spring 1988 semester. A confirmed and extended schedule will be posted in early February.

ACF Tutorials, Spring 1988

The ACF offers “walk-in” tutorials, as well as tutorials by special arrangement. The ACF’s walk-in tutorials are scheduled tutorials for which students or faculty may sign up about one hour in advance. Sign up sheets are available at the Operator’s desk. Tutorials scheduled for the spring semester include the following. (Unless otherwise noted, tutorials take place at the ACF’s 14 Washington Place site.)

UNIX Introductory Tutorials
Monday, Feb. 8, 6:00 p.m.
Tuesday, Feb. 9, 3:00 p.m.
Thursday, Feb. 11, 4:00 p.m.
Tuesday, Feb. 16, 6:00 p.m.
Thursday, Feb. 18, 11:00 a.m.
Monday, Feb. 22, 11:00 a.m.
Tuesday, Feb. 23, 4:00 p.m.
Thursday, Feb. 25, 6:00 p.m.

VMS Introductory Tutorials
Monday, Feb. 8, 4:00 p.m.
Tuesday, Feb. 9, 6:00 p.m.
Thursday, Feb. 11, 11:00 a.m.
Tuesday, Feb. 16, 3:00 p.m.
Thursday, Feb. 18, 6:00 p.m.
Monday, Feb. 22, 6:00 p.m.
Tuesday, Feb. 23, 11:00 a.m.
Thursday, Feb. 25, 3:00 p.m.

Cyber NOS Introductory Tutorials
Monday, Feb. 8, 11:00 a.m.
Tuesday, Feb. 9, 4:00 p.m.
Thursday, Feb. 11, 6:00 p.m.
Tuesday, Feb. 16, 4:00 p.m.
Thursday, Feb. 18, 4:00 p.m.
Monday, Feb. 22, 3:00 p.m.
Tuesday, Feb. 23, 6:00 p.m.
Thursday, Feb. 25, 11:00 a.m.

IBM WYLBUR Introductory Tutorials
(Room LC - 8, Tisch Hall)
Thursday, Feb. 11, 5:30p.m. & 6:30p.m.
Thursday, Feb. 18, 5:30p.m. & 6:30p.m.
Monday, Feb. 22, 5:30p.m. & 6:30p.m.
Thursday, Feb. 25, 5:30p.m. & 6:30p.m.
Monday, Feb. 29, 5:30p.m. & 6:30p.m.
Thursday, Mar. 3, 5:30p.m. & 6:30p.m.

IBM CMS tutorials: (by appointment; call 998-3406)
Karel tutorials: to be announced

More About Workshops on page 22. The schedule of spring semester talks, seminars and workshops is on facing page.

As we go to press, these Fall Semester Talks and Workshops remain.

Talks
Microcomputer Overview
Tues., Jan. 5 at 2:30 p.m., Room 1302

Complex Tables with SAS and SPSSX
Wed., Jan. 6 at 2:30 p.m., Room 613

Film Showing (computer-generated animations)
Tues., Jan. 12 at 2:30 p.m., Room 1302

Workshops
(For information on registration and locations, please see page 22.)

WordPerfect - January 8 and 22 (Fridays)
Lotus 1-2-3 - January 15 (Friday)
ACF Talks, Seminars and Workshops, Spring 1988 (Tentative Schedule)

Except where otherwise noted, all talks take place in Room 1302 Warren Weaver Hall at 2:30 p.m.; all speakers are ACF staff; there is no fee, and reservations are not necessary. (Exceptions are indicated by *, †, or **)  

Introduction to WordPerfect (Henry Mullish) .............................................. Fri., Feb. 5†  
Techniques for Data Research and Retrieval (Session 1) (George Sharrard, Melanie Dodson) .............................................. Fri., Feb. 9†  
NOS/VE: Introduction and New Features (Eric Pressley, Control Data Corp) .............................................. Wed., Feb. 10  
Introduction to IBM WYLBUR (John Lee) (6:30 p.m., Room 102 Warren Weaver Hall) .............................................. Fri., Feb. 12  
Introduction to WordPerfect (Henry Mullish) .............................................. Fri., Feb. 12†  
Techniques for Data Research and Retrieval (Session 2) (George Sharrard, Melanie Dodson) .............................................. Fri., Feb. 19  
Using Electronic Mail at NYU (Jeffrey Barry) .............................................. Wed., Feb. 17  
Introduction to IBM WYLBUR (John Lee) (6:30 p.m., Room 102 Warren Weaver Hall) .............................................. Fri., Feb. 19  
Advanced Topics in WordPerfect (Henry Mullish) .............................................. Fri., Feb. 19†  
Techniques for Data Research and Retrieval (Session 3) (George Sharrard, Melanie Dodson) .............................................. Fri., Feb. 26†  
Introduction to Lotus 1-2-3 (Henry Mullish) .............................................. Fri., Feb. 26†  
Techniques for Data Research and Retrieval (Session 4) (George Sharrard, Melanie Dodson) .............................................. Fri., Feb. 26†  
Using the UNIX Systems (Intermediate, Part II) (Gary Rosenblum) .............................................. Mon., Feb. 29  
Introduction to WordPerfect (Henry Mullish) .............................................. Fri., Mar. 4†  
Techniques for Data Research and Retrieval (Session 5) (George Sharrard, Melanie Dodson) .............................................. Fri., Mar. 4†  
Topics in the Use of VMS (Intermediate, Part I) (Stephen Tihor) .............................................. Mon., Mar. 7  
Topics in the Use of VMS (Intermediate, Part II) (Stephen Tihor) .............................................. Tues., Mar. 8  
Topics in the Use of VMS (Intermediate, Part III) (Stephen Tihor) .............................................. Wed., Mar. 9  
Using the File Transfer Program, Kermit: A Practical (Gary Chapman) .............................................. Wed., Mar. 16  
Introduction to dBase III (Henry Mullish) .............................................. Fri., Mar. 11†  
Introduction to WordPerfect (Henry Mullish) .............................................. Fri., Mar. 18†  
SPSS-Ⅹ .............................................. Mon., Mar. 21†  
SAS and SAS/GRAPH .............................................. Tues., Mar. 22  
Using Large Data Files (George Sharrard) .............................................. Wed., Mar. 23**  
Interactive Statistical Packages: Minitab, Statview, SPSS/PC+ .............................................. Thur., Mar. 24*  
Database Management Systems: SPSS/INGRES .............................................. Fri., Mar. 25**  
Introduction to WordPerfect (Henry Mullish) .............................................. Fri., Mar. 25†  
Introduction to Typesetting With LaTeX (Henry Mullish) .............................................. Wed., Apr. 6  
Introduction to Lotus 1-2-3 (Henry Mullish) .............................................. Fri., Apr. 8†  
Microcomputer Overview (Gary Chapman) .............................................. Wed., Apr. 13  
Introduction to WordPerfect (Henry Mullish) .............................................. Fri., Apr. 15†  
Internetworking (Bill Russell) .............................................. Wed., Apr. 20  
Advanced Topics in WordPerfect (Henry Mullish) .............................................. Fri., Apr. 22†  
Kermit Practical (repeated) (Gary Chapman) .............................................. Wed., Apr. 27  
Introduction to dBase III (Henry Mullish) .............................................. Fri., Apr. 29†  
Graphics at NYU: Film Showing (Jeffrey Barry) .............................................. Wed., May 4  
Introduction to WordPerfect (Henry Mullish) .............................................. Fri., May 6†  
Graphics at NYU: Selected Packages (Jeffrey Barry and Ed Friedman) .............................................. Wed., May 11  
Introduction to Lotus 1-2-3 (Henry Mullish) .............................................. Fri., May 26†  
Introduction to WordPerfect (Henry Mullish) .............................................. Fri., May 27†  
Advanced Topics in WordPerfect (Henry Mullish) .............................................. Fri., June 10†  
Introduction to dBase III (Henry Mullish) .............................................. Fri., June 17†  
Introduction to WordPerfect (Henry Mullish) .............................................. Fri., July 1†  
Introduction to WordPerfect (Henry Mullish) .............................................. Fri., July 8†  

* This five-session, free, non-credit course takes place in Bobst's Avery Fisher Center. Limited seating, reservations required. Please see box on page 5 for details. Presented in conjunction with Bobst Library, of whose staff Ms. Dodson is a member.  
† All-day hands-on microcomputer workshop. Takes place at the ACP's Education Building site. Registration is required, and there is a $20 fee to cover course materials. Please see box on following page for details.  
"All-day talk and workshop. Part of a week-long series on Useful Packages for Statistical Analysis and Data Management. Takes place at the ACP's 14 Washington Place site. Registration required. Please see box on following page for details.
Using Microcomputers:

ACF Workshops for NYU faculty and graduate students in all academic disciplines

This semester's workshops in personal computing will include sessions on the popular word processing program WordPerfect, the spreadsheet program Lotus 1-2-3, and the database management system dBASE III. These non-credit, one-day workshops are open to all NYU faculty and graduate students. IBM Personal Computers will be available for use by participants during each session. There will be a fee of $20 for each workshop to cover course materials. (The fee may be charged to a University account.)

The Microcomputer Workshops will be held at the ACF's Education Building site, 35 West 4th Street, 2nd floor. All workshops will take place on Fridays, and will last the entire day with a break for lunch (9 a.m. to 12 noon and 1 to 3 p.m.). To accommodate as many registrants as possible, it may be necessary to share computers. Each workshop will be repeated.

<table>
<thead>
<tr>
<th>WordPerfect</th>
<th>Advanced Topics</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>in WordPerfect</td>
</tr>
<tr>
<td>February 5, 12</td>
<td>February 19</td>
</tr>
<tr>
<td>March 4, 18, 25</td>
<td>April 15</td>
</tr>
<tr>
<td>April 15</td>
<td>April 22</td>
</tr>
<tr>
<td>May 6, 20, 27</td>
<td>June 10</td>
</tr>
<tr>
<td>June 24</td>
<td></td>
</tr>
<tr>
<td>July 8</td>
<td></td>
</tr>
<tr>
<td>Lotus 1-2-3</td>
<td>dBASE III</td>
</tr>
<tr>
<td>February 26</td>
<td>March 11</td>
</tr>
<tr>
<td>April 8</td>
<td>April 29</td>
</tr>
<tr>
<td>May 13</td>
<td>June 17</td>
</tr>
<tr>
<td>July 1</td>
<td></td>
</tr>
</tbody>
</table>

To register, please contact Henry Mullish at 998-3039 during the week of the workshop. If an answering machine responds, please leave your name, telephone number and department, and state your preference of workshop and date.

New special series of ACF Talks & Workshops on

Useful Packages for Statistical Analysis and Data Management

In the spring semester, for the first time, the ACF will offer a full week of free, non-credit, day-long talks and workshops on the use of packages for statistical analysis and data management. Morning sessions (10 to 12:30) will consist of a seminar conducted by an ACF staff member. The afternoons (1:30 to 4:00) will consist of hands-on workshops. All sessions will take place at the ACF's 14 Washington Place site. The program is as follows:

<table>
<thead>
<tr>
<th>Package</th>
<th>Dates</th>
</tr>
</thead>
<tbody>
<tr>
<td>SPSS-X</td>
<td>Mon., Mar. 21</td>
</tr>
<tr>
<td>SAS and SAS/Graph</td>
<td>Tues., Mar. 22</td>
</tr>
<tr>
<td>Using Large Data Files</td>
<td>Wed., Mar. 23</td>
</tr>
<tr>
<td>Interactive Statistical Packages:</td>
<td>Thur., Mar. 24</td>
</tr>
<tr>
<td>MiniTab, StatView, SPSS/PC+</td>
<td>Fri., Mar. 25</td>
</tr>
<tr>
<td>Database Management Systems:</td>
<td></td>
</tr>
<tr>
<td>SPIRES, INGRES</td>
<td></td>
</tr>
</tbody>
</table>

All of these packages -- with the exception of StatView and SPSS/PC++ -- are available on one or more of the ACF's mainframes or minicomputers. StatView is a package which runs on Macintosh computers. SPSS/PC+ runs on IBM PC's and PC clones; copies are available under a site license from the ACF. (Please see the related articles on page 12.)

Registration required. To register, please call Frank LoPresti, at 998-3398.

Please see page 5 for "Covering the Bases", a five-session, free, non-credit course, which is being offered in the Spring '88 semester.
Faces at the ACF (clockwise from top right): ACF Systems Group member Bill Russell, who is responsible for network management at the ACF. ACF consultant Ivor Smith, who also coordinates the lectures and tutorials for IBM WYLBUR users. Gary Chapman heads the ACF's Faculty Microcomputer Laboratory. (Photos by Manuel Laqui.)
Featuring in this issue:

Graphics at the ACF, page 3.
The ACF's Data Archive, page 4.
NYU's Local Area Network, page 6.
The Spring '88 schedule of ACF Talks, Tutorials, and Workshops, page 20.

(A complete table of contents appears on the front cover.)