THE OHIO STATE UNIVERSITY
INSTRUCTION AND RESEARCH COMPUTER CENTER

Memo No. 78

June 12, 1970

During Summer Quarter the Instruction and Research Computer Center (IRCC) will offer a number of non-credit workshops on topics pertinent to programming and the use of various computer systems. These workshops are open to any member of the University community (Faculty, Staff, Students), except for students enrolled in regular programming courses.

There will be no advanced registration required for attending the regularly scheduled workshops. Interested persons may simply go to the selected workshop at the appointed time and place.

In addition to the regularly scheduled workshops, the IRCC will also provide special workshops and demonstrations on a number of selected topics provided there is sufficient interest shown. Persons desiring to attend one of these special workshops or demonstrations must register in advance. If a sufficient number of people express an interest, the special workshop will be scheduled and held during the Summer Quarter. The IRCC will offer workshops on any subject concerning use of our computer systems provided there is sufficient interest. Persons interested in attending one of the special workshops should call Jim Throckmorton at 293-8814.

All text materials recommended may be purchased at the University Bookstore and are located in the science area of the Special Services Room.

REGULAR SCHEDULED WORKSHOPS (No Advanced Registration)

1. Introduction to Computer Center Facilities, Services, and Procedures
   This is a non-technical seminar designed to introduce new users to the Instruction and Research Computer Center and to assist them in beginning to use the facilities available. (4 hours)
   M-W, June 29, July 1
   Room 180 Systems Engineering Building
   Prerequisite: None. No programming or mathematical knowledge is assumed.
   Text: None
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2. **Introductory PL/I**
   
   **T-Th, June 30, July 2, 7, 9, 14, 16  3:00-5:00 p.m.**
   
   Room 180 Systems Engineering Building
   
   Prerequisite: None. No mathematical or programming knowledge is assumed. However, attendance at the workshop on Facilities, Services, and Procedures listed above is recommended.
   

3. **Introductory FORTRAN IV**
   
   **M-W-F, July 20, 22, 24, 27, 29, 31  3:00-5:00 p.m.**
   
   Room 180 Systems Engineering Building
   
   Prerequisite: None. No mathematical or programming knowledge is assumed. However, attendance at the workshop on Facilities, Services, and Procedures listed above is recommended.
   

4. **Job Control Language**
   
   **M-W-F, August 3, 5, 7, 10, 12, 14  3:00-5:00 p.m.**
   
   Room 180 Systems Engineering Building
   
   Prerequisite: 360 PL/I or FORTRAN IV programming experience.
   

5. **Introduction to Computer Center Facilities, Services, and Procedures**
   
   This is a non-technical seminar designed to introduce new users to the Instruction and Research Computer Center and assist them in beginning to use the facilities available.
   
   **T-Th, August 18, 20  3:00-5:00 p.m.**
   
   Room 180 Systems Engineering Building
   
   Prerequisite: None. No programming or mathematical knowledge is assumed.
   
   Text: None.

**SPECIAL ARRANGED DEMONSTRATIONS** (Advance Registration With Instructor Required)

1. **CPS - Conversational Programming System**
   
   **(2 hours)**
   
   CPS is a programming system utilizing keyboard terminals with which one dials directly into the 360/50 computer. This workshop includes a brief language description and a demonstration. There is no text or prerequisites; however, it is recommended that a copy of the CPS Terminal User's Manual be purchased from one of the book stores before attending the workshop. This is largely a demonstration and anyone is invited. To register for this workshop please call Jim Wagner at extension 8913.
2. **CRBE - Conversational Remote Batch Entry** (2 hours)
   CRBE is a programming system for submitting jobs from remote IBM 2741 terminals. The prime function of the system is creating and updating files which are then submitted to the operating system for batch processing. Files can be defined to be program statements, collections of data, or both. Since this instruction is best presented by means of demonstrations to small groups, interested parties should call Jim Cates at extension 8997 to arrange a demonstration. It is recommended that a CRBE manual be purchased at the University Bookstore and read prior to attending this workshop.

**SPECIAL ARRANGED WORKSHOPS** (Advanced Registration Required)

1. **Utilities** (3 hours)
   An introduction to the use of the System/360 Operating System Utility Programs covering such topics as the writing, copying, and printing of mag tapes, the creation and use of disk data sets, and other utility operations. The prerequisite is a basic knowledge of data processing concepts. The text is the IBM System/360 Utilities Manual, Form C28-6586.

2. **Use of Data Sets** (4 hours)
   An introduction to the establishment and use of card files, printer files, tape files, disk files, etc. It is assumed participants will have a basic knowledge of PL/I or FORTRAN programming. No text is used.

3. **2250 Graphics Display Programming** (8 hours)
   **Prerequisite:** FORTRAN IV programming experience.
   **Texts:**
   a. IBM 1130/1800 Basic FORTRAN IV, C26-3715
   c. IBM 1130/2250 Graphic Subroutine Package for Basic FORTRAN IV, Form C27-6934.
   Unless the attendee is familiar with 1130 FORTRAN, he should purchase text (a). Text (c) is a absolute requirement.

4. **BMD Programs and How To Use Them**
   **Text:** BMD Biomedical Program, W. J. Dixon, Editor.

5. **Intermediate PL/I** (12 hours)
   **Prerequisite:** The Introductory PL/I Workshop or some experience in the use of PL/I language.
   **Text:** PL/I (F) Language Reference Manual, Form C28-8201.
Faculty say computer education help is needed

By Gemma McLuckie

Buying the wrong computer software and hardware can cost a researcher or department thousands of dollars and many hours of wasted time.

Unfortunately, this is happening all too often at American universities as many faculty members unknowingly purchase equipment ill suited to their particular needs.

To make matters worse, many professors nationwide are finding themselves lagging behind their students' understanding of computing.

To address these concerns at Ohio State, the Instruction and Research Computer Center (IRCC) is helping to coordinate a new Universitywide computer education program for faculty.

IRCC surveyed 332 faculty from all colleges and University Libraries. Eighty-five percent of the surveys were returned. A preliminary report based on the 81 percent usable responses was released this week.

"Some universities have hurried to set up education projects based on what staff think the faculty need," Solomon says. "What they're offering in other places seems to be different from what our faculty say they want." Computer literacy and education courses often are only about languages and programming. Sherman explains, Ohio State faculty have asked for information on how to find and use software to do more practical tasks.

IRCC's greatest computing education needs in the areas of word processing and computerized research skills.

Specifically, high priorities are:

- Library research related skills: Searching national computer databases and the Library Computer System from offices and creating bibliographies that can be updated easily and changed in format. (University Libraries is offering a colloquium April 18 that will address faculty teaching and research online computer information needs. For information, call the Commerce Library at 422-2138.)
- Word processing: Checking documents for spelling and grammar, writing and editing documents such as proposals or manuscripts, indexing manuscripts and creating overhead transparencies or slides.
- Data collection.
- Standard statistical analyses.

The survey is the first step of a plan to set up a Universitywide faculty education program. Last year, the Task Force on Computers and the Future of the University recommended the program as one way to expand and improve computer use on campus, and to close the perceived generation gap between faculty and students.
Computer survey...

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A final report will be released in early June. In addition to the results of the survey, the report will include information from about 50 interviews.

In the interviews, Sherman sought to better understand faculty perceptions of their computing needs.

According to Solomon, IRCC will begin some sessions with funds appropriated in the 1985-86 budget. The center is negotiating for more new funds, he adds.

University personnel will conduct most of the sessions that will begin this summer, the time most requested by survey respondents.

Sherman says the initial focus of the program would be on quality of education rather than the number of people who complete sessions.

"From what I've seen in industry and academia, if you do a quality job of instruction in the beginning and concentrate on fewer people, your education dollars will stretch," Sherman says.

Preliminary guidelines suggest that ideally sessions should be tailored to the academic disciplines of the faculty and to the equipment they use. While other kinds of systems are to be included, the emphasis is on microcomputers, or self-contained personal computers for one person.

Faculty prefer that most hands-on sessions be limited to five to nine people who are in the same college or department whenever possible. There will need to be flexible schedules and individualized instruction, Sherman notes. Another program offering would be help after the initial sessions are completed.

Sherman makes a "strong" recommendation that resource people be available in each college or department.

"It is possible to drastically underestimate the amount of ongoing support needed," she says. "People go to a session, learn a little bit, go back to their offices and get stuck."

One recommendation is that colleges would hire graduate students to provide the extra know how.

"Graduate students often not only have the computing skills, they have the academic discipline skills," Sherman explains. "For instance, I can talk to agriculture faculty about general computing, but when they get into turf management I simply don't know the specialty."

Two other themes for how the program should be delivered that emerged from the survey are:

• Immediacy, or relating computer education directly to faculty specialties, the type of equipment they use and specific tasks; and

• Flexibility, or realizing that people have different needs at different times and that there are "huge" time constraints on faculty. National interest in the project is high. In addition to others, California's state university system and Harvard University have called Sherman to ask about the survey and program.

"If Ohio State can help faculty with this enormous dilemma (of how to help keep faculty who use computers ahead in teaching and research), it will be incredibly invaluable to the University because it will keep us on the cutting edge," says Sherman.
IRCC's computer labs offer variety of services

By Gemma McLuckie

A graduate researcher gathering data from all over the country found himself with a computerized Tower of Babel. Information he needed for his research was locked onto floppy disks. Some of the disks wouldn't fit into his personal computer. Others were the right size, but spoke computer languages his machine didn't understand.

The hapless researcher took his problem to the Instruction and Research Computer Center's Demo Lab.

It was a struggle, but "we eventually figured out how to get the information transferred off half the disks," recalls John Schar, programmer analyst and head of the demo lab staff.

Six staff members who are "borrowed" from other areas of IRCC assist in the demo lab's operation. They are specialists in personal computers (PCs), which are self-contained units that store information on disks, called floppies.

Troubleshooting for PC owners who are part of the University community is one service of the demo lab.

It also gives Ohio State personnel a place to try out the latest computers and accessories before they buy anything.

Schar estimates that about 15 people each day come to 322 Baker Systems Engineering. The tiny room contains hardware (computer terminals and printers), software (instructions that tell computers what to do), and how-to books.

Students, staff and faculty can come in and get acquainted with one of the eight types of personal computers that line the room's walls. Or they can try out a software package to see if it meets their needs. People use programs for wordprocessing, statistical analysis, accounting and other tasks.

Faculty members even can borrow some of the software packages for several days. In exchange, they evaluate how well the program fills their needs.

Another aspect of the lab is computer and software "support." In order to receive discounts from computer companies, the University agrees to help people learn to use personal computers and software and to take care of most of the glitches that arise.

For instance, in order to get discounts on the IBM PC the University agreed to provide "technical coordinators"—otherwise known as troubleshooters. When machines become comatose, students, faculty and staff direct their questions to University personnel, not IBM.

"We're the first line," says Tony Skrabak, manager of the Microcomputer Support Services Group. He and Schar are two of the IBM technical coordinators.

"The IBM Corp. doesn't want to get service calls from 50,000 people at OSU. So I tell people, 'Don't call IBM and get put on hold; call me instead or come over (to Baker Systems Engineering) and find me.'"

That applies to software, too. Ohio State has paid $5,000-$10,000 each for site licenses for programs for wordprocessing, programming computer languages, lessons in computer applications and operations, and communication among computers.

With a site license, the University can make as many copies of the programs as it needs. In return, it must provide educational and technical assistance to users.

"If the problem is with software the University supports, we'll go to any length to solve the problem," Skrabak says. "With other software, we'll give advice and try to send people to others who may know the answers."

Another category of programs also may...
JOHN SCHAR, LEFT, PROGRAMMER ANALYST at IRCC, talks with Jayne Kramic, a graduate assistant in agriculture, about computer software needs.

be copied at the demo lab. Those programs are in the public domain, which means they aren't copyrighted.

"The idea of the demo lab evolved from an evaluation lab (open only to IRCC staff members who used it to judge new equipment) in 1981," says Skrabak.

In 1983, the demo lab was opened to the public for four hours a week. Within two years, the hours were expanded to 3-5 p.m. daily and by appointment. For an appointment, employees and students can call Schar at 292-4843.

Business in computer education and support continues to boom. In response to the need, a second full-time member will be added to the demo lab staff.

"People at all levels come in here," says Schar. "We get some experts with specialized questions about their systems and some novices who are on the ground floor."
COLUMBUS, Ohio -- Too often in higher education the computer requirements of the faculty are determined by the institution's central computer staff who aren't as familiar as the faculty with the teaching and research needs.

Conversely, another problem occurs when faculty members with little computer knowledge purchase hardware and software which later prove unsuitable for the academic needs.

To solve these twin problems, Ohio State University faculty soon will have a computer education program tailored to their needs.

Ohio State is the first major university to study the computer needs of its faculty on a large scale, according to Martin Solomon, director of academic computing, and Sally Sherman, project director for the Instruction and Research Computer Center (IRCC).

"We expect this program could become a model other universities will quickly adopt," says Solomon.

IRCC surveyed 322 faculty from all of Ohio State's colleges and University Libraries. Eighty-five percent of the surveys were returned. A preliminary report based on the 81 percent usable responses was released this week.

"Some universities hurry to set up education projects based on what staff think the faculty need," Solomon says. "What

- more -
they're offering in other places is different from what our faculty say they want."

Computer literacy and education courses are often only about languages and programming, Sherman explains. Ohio State faculty have asked for information on how to find and use software to do more practical tasks.

IRCC has found that professors need most to improve their word processing and computerized research skills.

Specifically, high priorities are:

--Library research related skills: Searching national computer databases and Ohio State's own computerized library catalog from the faculty member's office and creating bibliographies that can be easily updated and changed in format.

--Word processing: Checking documents for spelling and grammar, writing and editing documents such as proposals or manuscripts, indexing manuscripts and creating overhead transparencies or slides.

--Data collection.

--Standard statistical analyses.

The survey is the first step of a plan to set up long-term university-wide education program. Last year, Ohio State's Task Force on Computers and the Future of the University recommended the program as one way to expand and improve computer use on campus. The program also would help close a "generation gap" between professors who aren't familiar with computers and students who are very computer oriented, the task force added.

A final report will be released by IRCC in early June. In addition to the results of the survey, the report will include
information from about 50 interviews.

Computer education sessions should begin sometime in June and continue during the summer, the time most requested by faculty.

Preliminary guidelines suggest that sessions be small and tailored to the academic disciplines of the faculty and to the equipment they use, mostly microcomputers.

Another program offering would be help after the initial sessions are completed.

"It is possible to drastically underestimate the amount of ongoing support needed," Sherman says. "People go to a session, learn a little bit, go back to their offices and get stuck."

It is likely each college or department would hire graduate students to provide the extra know-how.

"Graduate students not only have the computing skills, they have the academic discipline skills," Sherman explains. "For instance, I can talk to agriculture faculty about general computing, but when they get into turf management I simply don't know the specialty."

National interest in the project is high. In addition to others, the California state system and Harvard University have called Sherman to ask about the survey and program.

"If Ohio State can help faculty with this enormous dilemma (of how to keep ahead in teaching and research), it will be incredibly invaluable to the university because it will keep us on the cutting edge," says Sherman.

Contact: Sallie Sherman, (614) 292-4843.
Written by Gemma McLuckie. (Gemma/70)
Computer education

COMPASS, the new program to provide computing education and assistance for faculty, has announced courses that are available at the University and other locations.

The Instruction and Research Computer Center is offering four-hour and eight-hour short courses this summer. The sessions are primarily “hands-on,” with exercises geared toward applications that faculty are likely to encounter in their work.

Topics include: How computers can help faculty do their jobs; how to manage an IBM PC; how to use WordPerfect software to write proposals, manuscripts and newsletters; how to maintain gradebooks and records with Lotus 1-2-3; and using Lotus 1-2-3 to develop budgets and forecasts.

Sessions are scheduled through September. There is no charge for the summer short courses. However, there may be a fee for courses beginning autumn quarter.

For more information or to register, call 292-4843.

University Libraries courses describe how to use the Library Circulation System (LCS) and national bibliographic databases. For more information, call the user education office at 422-6151.

Staff from Computer-based Instruction in the Office of Learning Resources can help faculty determine how to use computers in their classrooms. For more information, call 422-9821.

The Computing Learning Center in 13 Ohio Union provides a variety of self-paced instructional materials. The materials include video-based courses, computer-assisted instruction and print tutorials.

The center is scheduled to open around Aug. 1. For more information, or to make an appointment to use the equipment, call 422-3072 after that date.

In addition to University courses, faculty can go off-campus to two businesses that give discounts to faculty for instruction. Courses are typically eight to 12 hours long and are about 80 percent "hands-on."

Mentor Technologies, 700 Ackerman Rd., provides training and education in a variety of IBM PC-based software. The business extends a 20 percent discount. For more information, call 262-9456.

MicroCenter in the Lane Avenue Shopping Center also offers a wide selection of courses and gives a 10 percent discount. For more information, call 481-8041.
Bogus fire alarm causes mainframe to halt office work

By Traci L. Cooke
Lantern staff writer

A false fire alarm at the Instruction and Research Computer Center shut down the university's main computer Wednesday for several hours, causing many offices to come to a standstill.

The mainframe computer at University Systems, 1121 Kinnear Road, broke down about noon, leaving Lincoln Tower offices, university libraries and other computer systems on campus without computer access for three hours.

J. Carroll Notestine, assistant vice president of University Systems, said the mainframe computer is protected by a system that sprays fire-extinguishing gas over the room when two smoke detectors are activated.

Although there was no fire, the alarm activated the gas, Notestine said.

The Harold D. Hard Co., which maintains the fire protection system, was examining the system Wednesday to determine the cause of its failure. Some power was restored to the system by 3 p.m.

Notestine said there was no damage to the system or to the computer room.
COMPASS begins faculty classes

The Instruction and Research Computer Center launched COMPASS, a computing assistance program for faculty, during summer quarter. Part of the program includes hands-on training through short courses and one-on-one consulting sessions.

Susan Saari, a programmer/analyst who taught word processing summer quarter, says planning COMPASS courses was different from developing lectures and demonstrations.

"We wanted to provide as much hands-on experience as possible and minimize the amount of presentations," she says.

"We ended up with a set of courses that essentially are hands-on individualized instruction with people available to answer questions."

During autumn quarter, COMPASS is offering three orientation courses. Two are about word processing using Word Perfect; and two concern budget and grade analysis using Lotus 1-2-3.

The orientation courses include topics such as "How can a computer help me?" and "Managing your personal computer." Most short courses are based on IBM personal computers, or those compatible with IBM. A new course, "Managing Your Macintosh," was added this quarter.

A program to introduce new faculty to the University's computing resources also began this quarter. For those who want to learn on their own, self-paced learning modules are provided through the Computing Learning Center, 13 Ohio Union.

COMPASS is a campuswide effort that includes the offices of Computer-Based Instruction, Continuing Education, IRCC, University Libraries and the College of Medicine's Division of Computing Services. It is coordinated by IRCC and is funded by the Office of Academic Affairs.

The COMPASS coordinator, Arnie Skurow, can help faculty who are interested in additional training programs. Continuing Education provides workshops and seminars about many microcomputer applications. Additionally, Mentor Technologies and Micro Center, two private businesses in Columbus, offer faculty discounts on computing courses.

An announcement about the program for winter quarter will be mailed to faculty. Registration is done by mail.

For more information, call Skurow at 292-4843.
New computing structure to help enhance planning

A new administrative structure for computing at Ohio State will provide a more integrated approach to planning, especially at upper administrative levels, says Myles Brand, vice president for academic affairs and provost.

Specifics of the new structure are to be worked out, but the general outline has been established, Brand says.

One change is to create a position of director of academic research computing.

The director would be one of three members of the Council of Directors. The other members will be Carroll J. Notestine and Martin Solomon. Notestine is assistant vice president for business and administration and director of University Systems.

Solomon is director of the Instruction and Research Computer Center, which now supports teaching and research computer needs. Upon the selection of a director of academic research computing, Solomon will become the director of academic computing.

“The new position of director for academic research was created to enable a more equitable distribution of the responsibilities now held by the director of IRCC,” Brand says.

“Because of expansion of computing on campus today and in the future, it is no longer feasible for one person to administer both instruction- and research-related computing.”

The separation of responsibilities is “strictly for administrative purposes,” Brand adds. “Philosophically, teaching and research cannot be separated.”

The three directors will coordinate computing policies among their areas of responsibility. Each will have an advisory committee made up of at least seven faculty and staff.

“The committees may be expanded if it is determined that more technical support is needed,” Brand says. The groups probably will begin meeting in 1987-88.

The Council of Directors will report to another new administrative body, the Council of Vice Presidents. Its members are Richard D. Jackson, vice president for business and administration; Weldon E. Ihrig, vice president for finance; Jack Hollander, vice president for research and graduate studies; and Brand.

The vice presidents council also will have an advisory committee. Its nine members will be representatives from the three directors’ council groups.

No date has been set for the effective implementation of the new administrative structure, Brand says. He will announce developments as they occur.
Bender to head supercomputer center in Ohio

The governing board of the Ohio Supercomputer Center has named Charles F. Bender of the University of Georgia as director of the statewide facility.

Upon approval by Ohio State's Board of Trustees, Bender also will hold a concurrent appointment as the University's director of research computing.

At Georgia, Bender is acting associate vice president for research and director of the advanced computational methods center. He is an internationally known scientist in atomic and molecular physics.

Bender is expected to begin directing the day-to-day administration of the supercomputer center by April 1. More than 200 researchers from 20 colleges and universities use the facility, which the Ohio Board of Regents, Gov. Richard

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Supercomputer . . .

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Celeste and the Ohio General Assembly established last year.

"Charles Bender blends a thorough knowledge of supercomputing with proven management skills," says Charles J. Ping, chairman of the Ohio Supercomputer Center governing board and president of Ohio University. "He has built a successful statewide supercomputer network at the Georgia center and I am confident he will effectively lead the Ohio center into national prominence."

At Ohio State, Bender will join Martin Solomon, director of instructional computing and the Instruction and Research Computer Center, and J. Carroll Nostetine, assistant vice president for University Systems, as one of three directors of computing.

nounced spring quarter 1987. Each director will have an advisory committee.

The Instructional Computing Advisory Committee has already been formed, and the membership of the Research Computing Advisory Committee and the University Systems Advisory Committee will be announced shortly.

"I am most gratified that we have managed to attract a scientist of the caliber of Charles Bender," says Myles Brand, vice president of academic affairs and provost.

Bender's arrival will provide Ohio State with the opportunity to focus not only on research computing as a special priority, but also to place greater emphasis on the use of computers in instruction, Brand notes.

"The growing demands for quality and comprehensiveness of instruction in the University make it very clear that we will have to rely more and more on technology in the future as an aid to the educational process," he says.

"One outcome of the organizational structure that we have put into place will be that the director of instructional computing will be able to direct more of his attention to this critical area."

The role of IRCC is expected to remain substantially unchanged in the realignment of functions will be considered as the University community begins to work with the new structure, Brand says.

Users will continue to gain access to mainframe computing and microcomputer support, consulting services and workshops, software and facilities management through IRCC.

In his role as director of research computing, Bender will have responsibility for planning and coordination of major hardware and software commitments, for developing relationships at the level of the University with vendors who serve the research community, and for promoting the breadth and extent of scientific computation at Ohio State.

With the other directors, he will work with senior administration to identify campuswide issues concerning computing, and to recommend policy where appropriate.

Bender joined the University of Georgia in 1985 as professor of chemistry and director of the Advanced Computational Methods Center, which supports basic research and development, education and training involving large-scale computing systems. He was named acting associate vice president in 1987.

Previously, he was head of the Chemistry and Materials Science Department at Lawrence Livermore Laboratory from 1975-85. He joined the lab as a chemist in 1971, and in 1975 became head of the theoretical atomic and molecular physics area.

Prior to his work at the laboratory, Bender was assistant director for chemical applications at the University Computer Co., Palo Alto, Calif.

Bender has a bachelor's degree in chemistry and a master's degree in physics from the University of the Pacific. He earned a doctorate in physical chemistry from the University of Washington in 1968. That same year he held a postdoctoral position in theoretical chemistry at Battelle Memorial Institute in Columbus.

He is the author or co-author of more than 100 articles.
Computer jargon made easy through non-credit courses

By Pat Hagen
Lantern staff writer

If formatting floppy disks and creating spreadsheets sounds like a lot of computer jargon, Ohio State offers two non-credit programs to help you translate.

One of the programs, sponsored by the Continuing Professional Development Program, now in its third year, offers 36 classes on computers, management and communication.

Most classes begin the week of April 25.

The grandfather of computer information workshops at Ohio State is the Instruction and Research Computer Center at Baker Systems Engineering Building. The computer center has been offering courses since the early 1950s to faculty, staff and students, said Jerry Martin, a manager within the computer center.

Ten years ago the computer center had 10 courses and now it offers approximately 40 to 50 each quarter, Martin said.

The second program is more for professional development, although they are open to the public, said Gigi Kent, program coordinator of the Continuing Professional Development Program.

The professional development program courses range from the fundamentals of advertising, to learning advanced word processing procedures.

Between 1,500 and 2,000 people take the classes every year, Kent said. The instructors can also go to companies and present a course for their employees, she said.

Norma Davis, a loan-closing coordinator with a Worthington mortgage company, said she enrolled in the professional development program’s introductory IBM PC course because she wanted to get her company’s computer online with a Federal Housing Authority computer. No one had been able to do that at her office for a year and she did it in a matter of three weeks, Davis said.

“I remember taking my print-out from work to the class,” she said. “My teacher was so excited.”

Graduate students comprise about 40 percent of the enrollees at the Baker Systems computer center, Martin said. Graduate students need to learn some of the statistical analysis for their dissertations and the only route they have is through these workshops, he said.

“They have no other alternatives for training except to do it themselves,” Martin said. “The courses that we offer are not duplicated in the credit courses.”

The professional development program and the computer center are not in competition with each other, Kent said. Both groups are collaborating with three other OSU offices to offer staff computer-training classes in micro computers.

All of the computer center’s workshops are free except for the staff collaboration classes. For more computer center information call Arnie Skurow at 292-4843. To find out about the professional development program call 292-4230.
Spanish placement test computerized

By Rebecca Helsel
Lantern staff writer

The Instruction and Research Computer Center will be conducting a new type of Spanish placement test during Summer Quarter orientation.

The computerized and computer-aided test, to be administered by Donna Long, an assistant professor in Romance Languages, was originally developed at Brigham Young University. The test is being taken by students enrolled in Spanish classes this quarter to set the placement levels for Fall Quarter.

"Students have reacted very favorably to the new test, no one seems intimidated by the computers," Long said.

In the fall, the Foreign Language Department will require all students who have taken a foreign language in high school to take the language placement test during orientation.

Students who wish to continue in a language will no longer be allowed to just enroll in beginning level courses if they can place higher, said Gerard Ervin, director of the Foreign Language Center.

In the past, students have been encouraged to take the test but were not required to do so, Ervin said.

"Students take the beginning language classes because they think they can get an A, but they don't study because they think the class is going to be easy," Ervin said.

"It is not fair to the students who are truly beginners in 101, and it is not smart on the behalf of students because they pay for every quarter they are here. By giving students the options to do this we were in a sense encouraging them to spend longer in school than they need to," Ervin said.

"Like English and math, we should require placement tests and encourage students to register for the course they place into," Ervin said.

Ervin said students will receive credit for the courses that they test out of.

A French computerized test is also being prepared at Brigham Young, and should be ready by Autumn Quarter, Long said.
More computers offered
250 available during autumn to test student use

By Pat Hagen
Lantern staff writer

About 250 computers will be made available to students throughout the campus Fall Quarter in a new experiment to test how often students use the computers.

Martin B. Solomon Jr., director of academic computing for Ohio State’s Instruction and Research Computer Center, said the computers will become available to the students after $30,000 to $40,000 is allocated to staff the computer labs with student employees.

Unused machines from other areas of the university will be moved, and labs that are not open because of insufficient staffing will now be available to the students, Solomon said.

“The computers were locked up when they weren’t used,” Solomon said. “It’s really a crime.”

“The machines didn’t open because there was a belief that they weren’t needed. Now we’re going to test that belief,” he said.

If students use the computers more frequently in the fall, Solomon said the university may allocate more funding and continue to staff the computer labs.

Currently there are 134 IBM or IBM compatible machines and 106 Macintosh computers available for student use.

Solomon said the computers are being made available to students so they can learn to use the machines.

“We would like all students to start right out on computers as they go through their college careers,” he said.

“The more people are able to use computers, the better they’ll write and

The computers were locked up when they weren’t used. It’s really a crime.

— Martin B. Solomon Jr.

and writing resumes.

Kim Kinnel, a freshman from Bedford, said she needed someone to accompany her the first time she went to the Baker Systems Engineering lab. “And I even have a computer at home,” Kinnel said.

Software tutorials and a video to explain how the personal computers are used are available at the Ohio Union, Weiland said.

A valid Ohio State ID is all that’s necessary to use computers at the following locations:

Baker Residence Hall.
Baker Systems Engineering.
Business Library — Page Hall, 2nd Floor.
Civil & Aeronautical Engineering — Room 111.
Fine Arts Library — Sullivant Hall, Room 066.
Home Economics Library — Campbell Hall, Room 325.
Main Library — Room 105.
Morrill Tower — Room 437.
Ohio Union — Room 218.
Page Hall — Room 18 — 20.
Physics Library — Smith Laboratory, Room 1011.
Royer Student Center — Room S-1.
Undergraduate Library — Sullivant Hall, Room 266B.
OSU hooks up to world networking

By Sally Hritz

Electronic networks have arrived in force at Ohio State. Last year, the University laid the groundwork in Columbus by connecting campus computer systems via the SONNET network. Early in 1988, SONNET was connected to the national NSFNET network. NSFNET, in turn, serves as the University’s portal to the Internet, a vast hookup of national and international networks.

These connections give computer users at Ohio State access to an array of computer systems worldwide.

In addition, Ohio State for many years has been a member and a major access point for BITNET, a network used primarily by universities.

The networks are “like having a free WATS line, but only to other universities,” says Martin Solomon, director of the Instruction and Research Computer Center.

He envisions a working and studying environment in which frequent “conversations” take place among students, faculty and staff all over the country.

The major advantage of networks, Solomon says, is the “huge storehouse of information available in machine-readable form around the country in hundreds of databases. Quick and easy access to this information can allow people to become much better informed or to solve problems requiring new information faster than before.”

Telecommunications are another aspect of the new technology, he adds.

“Eventually, we will be able to view talks and lectures at other campuses and participate in discussions as if they were being held in Columbus. We are planning an experimental link with Indiana University for the summer of 1989.”

SONNET and NSFNET “make it possible to integrate computers of all types and purposes — administrative, office, research, instruction and personal,” says Robert Dixon, deputy director of IRCC.

Faculty and staff can communicate with colleagues on the other side of the world or just down the hall through electronic mail messages sent to their computers. Or they can transmit educational, research and business files among mainframes and personal computers, or access discussion lists and special interest groups that share information and experiences.

The opportunities are no farther than a keyboard.

The advantages of the additional networks are: increased handling capacity (NSFNET has 150 times BITNET’s capacity); connections to different networks; and NSFNET’s remote sign-on capability, called Telnet.

Telnet enables a person to open a session on another computer system while logged in to his or her own system. In a kind of piggyback procedure, additional remote log-ins can be accomplished from one system to the next, if needed.

NSFNET comes automatically with the SONNET lookup, and is available at no charge to individual users. The only cost involved is a one-time fee ranging from $500-$3,000 to extend fiber optic cables to each campus building for connection to SONNET, and a monthly cost of $195 per building. Additional expense might be incurred if a Local Area Network (LAN) is installed to connect the computers within the building.

For more information, call 292-4843.
OSU examines computing operations

By Earle Holland

By the end of spring quarter, University faculty should have more of a say than ever before in the direction campus-wide computing will take.

The new process could wed certain parts of the current Instruction and Research Computing Center operations with those of University Systems in an effort to reduce costs and streamline operations.

And at the same time, decisions on where academic computer resources should be concentrated will reside with two independent faculty committees. Another committee will advise about administrative computing.

It's all part of a plan developing out of a re-examination of computer operations, needs and resources at Ohio State. It has grown from faculty concerns voiced over how those resources were allocated and which computer needs were greatest within the institution.

Last June, Myles Brand, vice president for academic affairs and provost, offered a two-part proposal to move decisions about computing on campus to two newly formed University committees. Those groups, the Instructional Computing Advisory Committee and the Research Computing Advisory Committee, were asked to react to the plans.

"Part of the proposal was to place some distance between the actual running of the computer facilities and the control of the direction of computing on campus," Brand says. Currently, the IRCC has its own budget and controls its own programs.

"We want to make it (IRCC) more responsive to faculty needs," Brand says, by separating out the funding control from the operations, as University Systems now operates.

One likely outcome is that each of the two committees would have a half-time faculty member serving as a liaison between the group and the University administration. Together, the committee and the liaison would make decisions about how computer allocations are divided, in terms of how much goes to colleges or departments and how much to individual research projects.

"This actually puts more control in the hands of the faculty. In fact, they (faculty) would make the recommendations and the faculty liaison would perform daily oversight on this," Brand says.

The other part of the proposal called for a search for redundancies within IRCC and University Systems. Since both operations include people in very similar jobs, Brand says, it might be pos---

Continued on page 8.
Continued from page 1.

sible to share positions between the two units.

What redundancies exist probably lie in operator, maintenance and support roles and not in the customer services or networking operations, he says. Some of these jobs might be combined.

"We won't be letting people go, however," Brand points out. "We'll accomplish such changes, if needed, by normal attrition. We'll streamline the operations that way.

"The response from the faculty on the redundancy question was not to go too far with this idea, to keep a good part of the operations separate," he says.

What seems to be emerging from the discussions is a hybrid of Brand's original proposal, one aimed at retaining both University Systems and IRCC but eliminating the overlap between them.

Slightly more than $7 million is expended each year by IRCC for these computer operations. Most of that is locked into maintenance contracts on equipment and personnel costs. Only about $1 million would be available for redirection.

Nine members serve on the instructional advisory committee, headed by Robert Redmond, associate dean of the College of Engineering, and 14 members on the research advisory committee. Chemistry professor C. William McCurdy chairs that committee.

Larry Buell, newly appointed assistant vice president for University Systems, is expected to appoint a third group, the Administrative Computing Advisory Committee, within 30 days.

Representatives from the three groups would form a "supercommittee," Brand says, that would offer recommendations to the planning council on institution-wide efforts, such as a major new change in library automation, for example.

"The plan developing now is based largely on faculty feedback to the original proposals," Brand says, adding that a complete plan should be finished sometime between Jan. 1 and June 1.

"We'd like to end the process sooner but we're not going to rush it. We're still in the early stages."
MEMO

To: Faculty at The Ohio State University
From: Charles F. Bender, Director
Re: Associate Director for Instructional Computing
Date: August 23, 1989

The Office of Academic Computing requests applications for the position of Associate Director for Instructional Computing. The position has been designed for a full-time tenured faculty member with a computing background:

- COLLEGE OR OFFICE: Academic Affairs
- DEPARTMENT: Academic Computing
- SUPERVISOR’S TITLE: Director of Academic Computing
- SPECIFIC DUTIES: Work with Director to develop priorities for instructional computing:
  1) Attend meetings of the Instructional Computing Advisory Committee (ICAC).
  2) Coordinate support for the ICAC.
  3) Develop proposals for new initiatives in instructional computing.
  4) Participate in instructional computing policy making.
- CONTACTS: University faculty, staff and students
- MINIMUM QUALIFICATIONS: Full time tenured faculty with a computing background, active involvement in instructionally oriented computing preferred
- OTHER: AD for Instructional Computing will receive 50% release time from teaching duties and full summer support. The term of this position will be one year renewable for a second.

The University has committed to curriculum reform leading to increased requirements in general computing/data analysis for all students entering during or after Fall Quarter 1990. The strategic planning of computer acquisition, laboratory space, etc., related to this reform represents a challenging task needing coordination. This will be the Associate Director’s first priority.

Applications and CVs may be submitted to Holly Hirst, Assistant Director, Academic Computing, 1224 Kinnear Road, Columbus, Ohio 43212. Please provide three references by name and phone number. The deadline for applications is September 10, 1989. For further information call Dr. Hirst at 292-1302.
SONNET takes you places

In the fall of 1987, the SONNET campus network went into operation. At the time, only a small portion of the University—mainly the scientific and technical communities—realized the implications of the event.

A historical perspective

Only time will tell if those early excursions on SONNET will become as noteworthy as that moment more than a century ago when Alexander Graham Bell summoned Mr. Watson over the first telegraph. Bell may or may not have considered the global ramifications of his invention. However, today’s networking specialists sense how the process meshes with present and future communications technology. SONNET has the potential to link campus computer users to virtually any other computer on the planet.

On the following pages, articles explain some of the new features and introduce a few satisfied campus network users. Come along and see how SONNET can take you places.

Network in a nutshell

To reduce the concept to its simplest terms, SONNET enables computer users to sit in their own labs or offices and move files and data quickly from one computer to another and to access distant computers.

Already SONNET has connected more than 2,000 computers in 53 buildings on the Columbus campus. SONNET is also connected to a network outside the University called NSFNET. NSFNET, in turn, is connected to a set of interconnected networks collectively called the Internet, enabling computer users at Ohio State to communicate with any computers or computer users worldwide that also are joined to a network.

Basic services

Some basic services are now available on SONNET: sending and receiving electronic mail (e-mail); forwarding and receiving entire files in original format (FTP); and logging in, with the appropriate authority, from one computer to another (TELNET).

Many campus users already depend on these services to simplify and speed up their daily communications. The operations are easy to do; with just a few simple commands a computer user can send messages and files anywhere without the hassle of long distance charges, postage or long waits.

E-mail, FTP and TELNET are just for starters.

Via SONNET, campus users also can send print jobs to laser printers in other buildings; store files on a central storage disk; access University databases; use equipment in different areas of campus, including the IRCC Graphics Lab and Biomedical Communications; exchange e-mail with CompuServe Inc. customers; and access thousands of special interest groups worldwide.

New connections

The Lima campus has joined the network. And SONNET is becoming a link to the world for some of Columbus’s prestigious research and academic institutions: Battelle Memorial Institute, Chemical Abstracts Inc., and OCLC Inc.

Future uses for SONNET

IRCC and other interested units on campus are exploring new ways to use SONNET’s remarkable communications capabilities. Projects under way or proposed include:

• Accessing stored information databases on CD-ROMs maintained by the Instruction and Research Computer Center and University Libraries, as well as libraries at other institutions. (A CD-ROM is a storage disk that can hold an extremely large amount of information—the contents of an encyclopedia, for instance.)

• Using SONNET to send fax documents.

• Creating a campuswide electronic mail delivery system that provides delivery of electronic mail messages by fax or campus mail if the recipient does not have a computer with a mail system program.

• Sending files by encrypted transmissions to add another measure of security to confidential files.

To ensure the integrity and reliability of these services, IRCC established a network monitoring service that uses monitoring software written in-house.

Although SONNET has been designed with self-healing capabilities and uninterruptible power, a team of IRCC technicians keep round-the-clock watch on the networks. They are assisted by the custom-made software that pinpoints problem areas so that breakdowns or disruptions on the SONNET and OARNET networks and the University’s connections to the BITNET network can be remedied quickly.

Best of all, SONNET has plenty of room for expansion. Statistics indicate that SONNET is merely “idling”—running at 5 percent of its traffic capacity.
SONNET network grows

The number of network connections is growing rapidly. Fifty-three sites in Columbus and the Lima Campus have been connected to the SONNET network and five installations are under way.

Getting a building connected to SONNET is just a matter of authorizing completion of the physical link at a one-time fee of $500 to $3,000. A fixed $195 monthly building charge covers all the computers in the building.

For more information on SONNET connections, call Robert Dixon, director of the Instruction and Research Computer Center, at 292-4843.

- Agricultural Administration
- Agricultural Engineering
- Allied Medical Professions Bldg.*
  - Animal Science
  - Argo Hall
  - Baker Systems
  - Battelle Institute
  - Bevis Hall
  - Bolt Hall (CAB)
  - Boyd Laboratory
  - Bricker Hall
  - Brown Hall
  - Caldwell Laboratory
  - Chemical Abstracts*
  - Cocklies Hall
  - Curt Hall
  - Dakan Hall
  - Derby Hall
  - Doan Hall
  - Dodd Hall
  - Dreese Laboratory
  - Electronscience Lab
  - Evans Laboratory
  - Fenuna Laboratory
  - Goss Laboratory
  - Graves Hall
  - Hagerty Hall
  - Hamilton Hall
  - Health Science Library
  - Hitchcock Hall
  - Hewlett Hall
  - Koffler Laboratory
  - Keating Hall
  - KRC, Building C
  - Luersby Hall
  - Lima Campus
  - Lincoln Tower
  - MacEgle Laboratory
  - Main Library
  - Massfield Campus*
  - McPherson Laboratory
  - Mount Hall
  - New Chemistry Building
  - Newton Hall
  - OCLC Inc.
  - Ohio Union
  - Parks Hall
  - Plum Hall
  - Pressey Hall
  - Printing Facility
  - Robinson Laboratory
  - Scott Hall*
  - Sixex Hall
  - Smith Laboratory
  - Upham Hall
  - Veterinary Hospital
  - Waite Hall
  - Welding Engineering
  - *Being installed

Institutions, Lima campus join net

Central Ohio is home to a stellar array of research institutions and computing services, with Ohio State well situated in the middle of them. Common sense dictated that the University extend a SONNET handshake to Battelle Memorial Institute, Chemical Abstracts Service and OCLC Inc., and so it has. Other links are being planned.

The mutual benefits of such connections cannot be overstated. SONNET will enhance the communications logistics of joint projects between Ohio State faculty and staff and colleagues at Battelle, Chemical Abstracts and OCLC. Not only that, SONNET can provide these organizations access to all the universities, research facilities and government agencies on the Internet.

The new connections include one provision academic networks such as SONNET and the Internet prohibit commercial use; they may be used only for the normal exchange of scholarly information.

Both OCLC and Chemical Abstracts offer commercial services via their own networks, but those commercial services are not available over SONNET at the present time. That does not preclude the possibility that such usage might be negotiated in the future, if mutually beneficial.

A network link to CompuServe also was recently established which is limited to the exchange of electronic mail. (See story on page 65.) SONNET users can now reach CompuServe customers, and CompuServe customers can exchange e-mail with anyone on SONNET and the Internet.

Until recently, the formidable costs of renting high-speed communications lines prevented the extension of SONNET to the regional campuses. But in a recent breakthrough IRCSC and University Systems agreed to subsidize most of the costs of these connections, so the regional campuses will be able to enjoy the same benefits of SONNET as the Columbus campus.

As a result, the Lima campus recently was connected. Eventually, all of the regional campuses will be part of the SONNET network.
Libraries’ project uses net technology

John Salter, senior programmer analyst and project leader, believes that SONNET could play a key role in University Libraries’ Gateway Research Project. The three-year project is in its second year.

The endeavor, a project of the libraries’ user education office aimed at the undergraduate population, is being designed to make multiple information sources accessible to students at single-step terminals called workstations.

The libraries want to put at students’ fingertips information about: the libraries’ operations; instructional materials for using the libraries; direct access to the LCS system; and informational databases stored on CD-ROMs.

CD-ROMs are the same compact laser discs that came in the more familiar form for music and videos, except the libraries’ discs hold informational databases and are used with a computer.

Originally, Salter had planned to transmit data over a system of local area networks and gateways connected to computers where information is stored. This is the model for the present LCS system. When he saw the recent advances toward making LCS available over SONNET, the lightbulb turned on.

Salter now is investigating a SONNET conversion and says, “SONNET is the key to making multiple information sources available from a single workstation at a reasonable cost. I think SONNET is going to be great for our project and the libraries.”

Before SONNET became a possibility for the whole project, Salter was looking into its potential for one component involving CD-ROMs. IRCC got involved by supplying the libraries’ project with free connections to SONNET and the technical assistance and consultation of its networking team as development continued.

Usually a CD-ROM machine is attached to a single microcomputer, but Salter and his team are writing software to connect multiple workstations to a computer, called a server, dedicated to CD-ROM usage. When this multiplex-hookup (or local area network) is put into operation, many students at separate locations will be able to access the information stored on CD-ROMs simultaneously.

The Gateway project team in Information and Research Computing Center networking specialists are developing and testing a method to connect the Libraries’ CD-ROM servers to SONNET. Once accomplished, any user with access to SONNET, or even anyone on the National Internet, can seek out the abundance of information on CD-ROMs held by University Libraries.

The most remarkable feature of a CD-ROM is its storage capacity. A single disc can hold as much as 800 megabytes of information (800 million characters), or the equivalent of an entire set of encyclopedias. Some CD-ROMs do contain the contents of encyclopedias, but they also store government statistics, census information, periodical indexes with abstracts—facts and figures on many subjects.

The first two CD-ROMs acquired for the Gateway research project are the Academic American Encyclopedia, containing general information and the Microsoft Bookshelf, which contains many references including dictionaries, thesauruses, The Chicago Manual of Style, spelling checker and others.

The data on a CD-ROM can be searched, read, downloaded and printed with a user-friendly program on a computer. Libraries are finding CD-ROMs a suitable alternative to the more traditional print and offline resources and online searching.

Still in the research stage, and perhaps still months away from being realized, the CD-ROM component of the Gateway research project will be a vast resource for students, researchers and scientists.

PC files made secure with a little care

The Instruction and Research Computing Center wants to reassure anyone who worries about network security. Inquiries across the country, IRC has not been able to find any instances where files were breached, corrupted or stored as the result of connecting to a network.

Concern about the security of personal computers attached to a network usually takes two forms:

* Can users elsewhere on the network gain access to a personal computer, read the files or corrupt the hard disk?

* Can files and messages sent from a personal computer across a network be read or changed by others on the network?

Personal computers and their hard disk files are insulated from corruption unless the user makes the computer and files available on the network.

Many deliberate steps would have to be taken: turning on the microcomputer with local network software stored on the hard disk, connecting to the network, and putting the microcomputer in a server mode that allows others to connect to it. Merely connecting network hardware and wiring to a microcomputer does not make it more accessible.

A user can build password protection into software, especially if granting others access to a personal computer, or when it is in a server mode for transferring files or remote login. Networks should not be stored or written down. Nor should they be easy to guess, like names of children, initials, etc.

The second issue deals with sending files and messages over a network. Network lines carry messages and files just as telephone lines carry phone conversations. Technically, it is possible to intercept the information that is sent to a telephone line and listen to phone calls.

The network, however, sends files by breaking them up into small data packets and discarding them with data packets from other users. The sheer amount of traffic on a network reduces the chances of anyone seeing another user’s individual message or file.

There are other hardware and software precautions to ensure the security of information sent across a network. Bridges add an extra layer of insulation from the outside. They are hardware connections for individual personal computers that connect them to a local area network rather than directly to a large network such as SONNET.

Encryption programs can put files into code which is uninterligible except to the recipients. A variety of proprietary and shareware products are available.

In summary, information sent over a network or stored in a personal computer connected to a network is no more vulnerable than before. Computers are more vulnerable to a trojan horse on the premises than one on a network. This is true for microcomputers on SONNET or any network.
The users: People who find networking helps.

Carolyn Merry
merry@mapxva.cfm.ohio-state.edu

Carolyn Merry, assistant professor of civil engineering, is familiar with the notion of beaming information to and from great distances. Her specialty is remote sensing, a way of studying the earth's surface using satellite photographs taken at different wavelengths of light.

It is no surprise, then, that she relies on SONNET to work at remote computers and to transport the data. In her research, Merry integrates the satellite data into engineering applications.

She's working on four projects. Two projects funded by the Center for Mapping involve correlating and verifying water temperatures on Lake Erie and mapping snowlines in the Cascade Mountains.

For another project through the Byrd Polar Research Center, she studies glacial features in Antarctica using French SPOT satellite images. Her fourth project, funded by the Research Foundation, uses data from the U.S. government satellite, Landsat.

From a Macintosh computer on her desk, Merry uses the SONNET TELNET service to log on to large computers at the Center for Mapping and the Department of Geodetic Science and Surveying. Using the appropriate software, she manipulates spatial information on soils, elevation, land use, snow cover and other factors to create maps to use in engineering models. Employing the file transfer service on SONNET, she can move large files to the Cray Y-MP8/864 at the Ohio Supercomputer Center.

Merry's work requires specialized software, so she belongs to a users' group that shares information on the product. The group's coordinator communicates with members and sends out updates and bulletins via electronic mail on SONNET.

E-mail also comes in handy when Merry corresponds with colleagues in New Hampshire and Michigan, not to mention her local connections. "SONNET has been great for me. It's easy to go from one computer to another and it's been a real time saver."

Jatinder Sandhu
sandhu@mapxva.cfm.ohio-state.edu

For Jatinder Sandhu, a graduate student in the Department of Geography, SONNET has become an indispensable tool for his research and dissertation, and for keeping in touch with colleagues.

Sandhu's specialty is geographic information systems. For his dissertation, he's working on a computer program for visualization that enables a researcher to browse through complex space-time databases and search for patterns.

For his department, he is developing a program called OSU MAP-for-the-PC that runs on a microcomputer and teaches students introductory courses about geographic information systems. The program is already in use in several courses at Ohio State and at other universities.

This software also measures distances on maps by taking multiple factors, such as terrain, into account. He expects the application to have many uses, for instance, by a fire department that needs to find the shortest route to an emergency.

Working on these projects from an IBM PS/2 and a Sun workstation in his office, Sandhu uses the TELNET function on SONNET to log on to three mainframe computers on campus, including the Cray Y-MP8/864 at the Ohio Supercomputer Center. And of course, sending electronic mail over SONNET has long been a given for him. But what he really likes about SONNET is the ability to send files over the networks, a function called FTP.

"I use FTP to other campuses in other cities and it's quite wonderful. It's even faster than Federal Express."

Sandhu's electronic reach almost circles the globe. Via SONNET and other networks, he is able to send geographic information systems databases to a former colleague who is now at the University of Hawaii in Hilo. A lecturer, she is involved in research similar to Sandhu's.

Just a couple of months ago, he met a Ph.D. student from Denmark who was attending a conference at Ohio State. Her student agreed to test parts of Sandhu's program, and thanks to SONNET, Sandhu has no problem moving the files to her new Scandinavian connection.
Jill Pfister

Jill Pfister, college secretary for the College of Agriculture, has been using SONNET only since late August when many of the buildings on the agricultural campus were connected. She helped coordinate the effort and is optimistic about networking possibilities for faculty and staff members, although she notes that “SONNET can only work if others get connected to it.”

As college secretary, Pfister makes academic decisions and handles the administrative matters “from orientation to graduation” that affect every student who passes through the College of Agriculture.

She spends her time on the network using the University Systems computer on which administrative databases are stored. The college buys access and she uses the SONNET TELNET function to log in to the computer to adjust records, which can include changing schedules, posting academic actions, verifying seniors for graduation, and many other details.

Her job also entails keeping faculty updated on changes in curriculum and University policies, and meeting regularly with other college secretaries. Chances are good that Pfister will find additional ways that SONNET can assist her with these tasks, even though at the moment she feels “a little overwhelmed” by all that SONNET can do.
Steve Gordon

tg0788@ohstvmra.ircr.ohio-state.edu

Personal computers may be able to handle myriad applications in the academic world, but they still can't outdistance mainframe computers when it comes to handling huge files.

Large-volume data storage is one of the reasons Steve Gordon, professor of city and regional planning, uses SONNET. Gordon likes to use the Instruction and Research Computer Center's IBM 3081 mainframe computer, which can double as a SONNET file and print server for anyone on campus connected to the network. Once he moves the files to the mainframe over SONNET, he can store and/or print them.

Consider the data collection logistics involved for just one of his projects: the Big Darby Creek Basin water pollution study. The project covers 580 square miles, which has subdivided into 40-acre plots, or roughly 12,000 plots in all. The data is broken down into 19 data sets, but he also has about 10 versions of each. So, the Big Darby project alone represents close to 200 data sets. Gordon formerly stored and backed up the extensive files on floppy diskettes, a costly and time-consuming process. SONNET enables him to move the files quickly and effortlessly using a simple file transfer program.

Once the files are on the mainframe, he issues a few commands from an archiving program called ASM2, and his files are routinely stored on tape and backed up.

Gordon also takes advantage of the high-speed printers attached to the mainframe to print the results of environmental modeling projects he compiles on a microcomputer.

His graduate students in City and Regional Planning 835 do the same. Instead of losing valuable course time learning how to write programming on the mainframe so they can execute assignments, the students do the modeling on microcomputers and send the image files over SONNET for printing.

The process, Gordon says, "has helped a lot in the teaching part of the class because students get immediate output. A number of faculty here do similar things [over SONNET] and it's been a major benefit to them."

Gordon also regularly uses the remote log-in feature on SONNET to read electronic mail that comes to his account on the IBM mainframe. He also travels the SONNET path to get to the VAX computer at the Center for Mapping.
Art Krumsee

krumsee-a@osu-20 irrcc ohio-state.edu

"I've been kind of tickled by SONNET's capacity for interdepartmental communication on campus. I didn't know anything about SONNET two or three months ago," says Art Krumsee, director of management information systems for the Office of Continuing Education. He now can catalog a growing list of tasks that SONNET has made easier.

As the computer support person for continuing education, he is eager to acquaint the rest of the staff with SONNET possibilities. The office has a local area network tying together 80 users on their own workstations.

For them, as well as himself, Krumsee keeps a watchful eye on developments, ready to introduce new network services. Many of the staff, for example, enthusiastically await the SONNET connection to University Libraries' LCS system.

Counselors in the Department of Credit Programs access the University's student database extensively. In addition, they use a special application that merges departmental information on students with data transferred from the student database via modem.

Krumsee plans to replace the modem with SONNET as soon as the appropriate software is available. The current two-hour download will be reduced to a matter of minutes.

Although SONNET carries Krumsee's electronic mail directly to his local area network computer using his electronic mail address, he keeps mainframe accounts on which he gets some electronic mail. To access those, he uses the TELNET function on SONNET to log on from the microcomputer in his office.

As president of the campus IBM PC Users' Group, Krumsee relies on SONNET to communicate with the group's librarian and to transfer membership file updates. He also has begun posting an electronic copy of the group's newsletter to a DEC-20 bulletin board via SONNET.

But that's not all. The Department of Conferences and Institutes routinely creates brochures that are produced at the Print Facility. Krumsee expects to be sending the print jobs directly to the Print Facility over SONNET.

This possibility along with the links to University Systems, LCS, OCLC and Battelle have convinced Krumsee that "SONNET's long-term potential for administrative computing on campus is generally underestimated and genuinely exciting."

[Editor's note: On Oct. 30, Krumsee assumed the position of assistant director for local area network support for IRCC.]
In seconds, words travel the earth

The speed and ease of networking has instilled a sense of wonder even in a network specialist, who has laid claim to the world's fastest academic TELNET session.

Hans Eriksson is a scientist at the Swedish Institute of Computer Science in Stockholm, Sweden. For the past year, he's been on leave at the Commonwealth Scientific and Industrial Research Organisation in Melbourne, Australia. In June, Eriksson decided to try TELNET (a remote login) back to the computer at his Stockholm workplace after an Australia-to-Hawaii link on the Internet went up.

Eriksson accomplished his mission via a network relay from Melbourne to Hawaii to Mainland U.S. (probably the Bay Area to Princeton) to Stockholm. He was able to log on to the home machine and read his electronic mail. Afterwards, he posted his claim to the World's Fastest Academic TELNET, and no one disputed it.

In retrospect, Eriksson says, "even for me, [and I have] been networking for years, it sure gave me a sense of wonder to reach back home as easily as I did. Now I log in every day and often have a 'talk session' with my pals back home, where we type at keyboards more than 20,000 kilometers apart but we see almost momentarily our typing on our screens."

— Hans Eriksson

The world's fastest TELNET session on an international computer newsgroup bulletin board. When some military and commercial users reported they had accomplished faster TELNETs, Eriksson reduced his claim to the World's Fastest Academic TELNET, and no one disputed it.

In retrospect, Eriksson says, "even for me, [and I have] been networking for years, it sure gave me a sense of wonder to reach back home as easily as I did. Now I log in every day and often have a 'talk session' with my pals back home, where we type at keyboards more than 20,000 kilometers apart but we see almost momentarily (less than 2 seconds) our typing on our screens."

Not content with his title, Eriksson is working on getting accounts on computers in Perth in West Australia and in Finland so he can "add some extra mileage to the record." (Guinness, where are you?)

And how, readers might wonder, did the writers get Eriksson's firsthand comments? They conducted an interview via electronic mail between Columbus and Melbourne.

Link to CompuServe now available

The University community and customers of CompuServe Inc. now have a direct computer network link over SONNET. The new arrangement also means that electronic mail can be exchanged between CompuServe customers and users at the thousands of educational, commercial and military facilities worldwide that are linked to the Internet.

A specialist in the Department of Computer and Information Science developed the software, which depends on the SONNET connection to the Internet (via CICNet, the regional network of the Big Ten universities). The Instruction and Research Computer Center has maintained the connection to the Internet network for almost two years. The CIS department also provides the computer for the connection.

Robert Dixon, director of IRCG, is pleased with the CompuServe link because it gives researchers and engineers around the world an opportunity to communicate quickly and with very little expense.

"Just imagine," Dixon says, "I can sit at my computer at Ohio State and communicate with colleagues around the world either on CompuServe or the Internet."

University computer users can originate an e-mail message to CompuServe customers by constructing addresses in this form: ?xxxxxyy@compuserve.com. CompuServe customers can send e-mail to anyone on the Internet, including customers at Ohio State, with an address in this form:

Internetuser@host.domain.
The creation of the Network Operations Center (NOC) reflects Ohio State's serious approach toward networking and its place in the future of communications.

NOC is a service of the Information and Research Computer Center. IRCC staffs the center around the clock, 365 days a year, to ensure that breakdowns or troubles on three major networks are remedied quickly. The three networks are SONNET, OARnet and the portion of BITNET directly connected to the IRCC.

- SONNET, of course, is the University network that links more than 2,000 computers on the Columbus campus.
- OARnet, the Ohio Academic Resources Network, originated two years ago to provide access to the CRAY supercomputer at the Ohio Supercomputer Center (OSC). The center is adjacent to the Columbus campus. OARnet continues as a main artery for the OSC, but it has also emerged as a regional network for 22 Ohio universities and colleges.
- BITNET is an international network made up mainly of academic institutions. Ohio State has served as a primary traffic node for BITNET for many years.

Tom Easteday, NOC manager, and his technical team keep watch on interuniversity links and connections to national networks. Several Sun workstations run original software that monitors the networks. When a problem occurs, an alarm draws a technician's attention to the screen where full-color diagrams and flashing lights pinpoint trouble spots. Macintoshes and personal computers are supplementary software to support the Sun. As a result, the NOC team knows almost instantly where to dispatch a troubleshooter to mend a problem.

The three customized monitoring systems in use in the NOC were written by IRCC staff. Senior computer specialist Doug Kurl, left, and John G. Peterson and Mike Tippett monitor three major networks to make sure problems are corrected quickly.

Encryption software can be used on networks

Encryption software developed by staff members at the Instruction and Research Computer Center will provide the tools necessary to send encoded files between completely different types of computers. The product, OSU-InterCrypt™, has great implications for users who want to ensure the confidentiality of data and messages sent over networks.

Software encryption tools for computers of the same make and model are already available. OSU-InterCrypt™ is unique because it enables the exchange of encrypted data between different makes and models of computers with entirely different operating systems.

The data encryption project is coordinated by Clifford Collitus, assistant director of special projects for IRCC. He says the software works by encrypting data on the originating computer and decrypting it on a recipient computer. "When you encrypt data, the information is encoded in such a way that it cannot be read," says Collins. "Randomly generated letters and numbers are used instead of actual words. The person decrypting the data uses a program and a secret password called a key that changes the encoded letters and numbers back into their original forms."

The computer is the perfect tool to encrypt and decrypt messages since an algorithm is used to accomplish the task. "The exact same algorithm has not been used on different operating systems until now," Collins says. "This has made it difficult to encrypt messages on one computer and then decrypt them on another computer using a different operating system."

Prior to the development of the OSU-InterCrypt™, each operating system used a slightly different implementation. The algorithm of the OSU-InterCrypt™ uses a slightly different implementation of the algorithm.

"The software could have great importance to people here on campus who need to encrypt data on a Macintosh and decrypt the material on an MS/DOS computer," Collins says. Members of IRCC's encryption team have developed a base of interoperable implementations of the

Look to the right to see the message below in its encrypted form.

Members of The Ohio State University staff have developed a base of interoperable implementations of the Data Encryption Algorithm using the

DEA code developed by Phil Karn and others.

OSU-InterCrypt™
Big Ten libraries turn to fax via the networks

When Robert Dixon attended a meeting of Big Ten library representatives in Chicago last spring, he picked up a question thrown by the librarians: help us find a faster, inexpensive way to share materials between universities.

Dixon, director of the Instruction and Research Computer Center, responded after listening to the librarians discuss rising costs and budget cuts while they fretted over dwindling resources.

Some libraries maintain agreements so that they can acquire non-duplicative holdings and share the materials. The arrangement carries a heavy load: it is labor-intensive and slow, relying on photocopying and U.S. mail.

Dixon learned that some libraries have introduced faxing, a method that transmits copies of documents over phone lines. It's quicker, of course, but the cost is long distance phone bills is prohibitive.

The librarians asked him if faxing could be done over computer networks better, faster and cheaper.

"Of course I accepted this as a challenge," Dixon says.

He says the basic tools already existed, even though they had not been integrated into an easy-to-use system. Nobody sells equipment, for example, to attach fax machines to a computer network.

As a result of this meeting, IRCC and the University have set out to make the dream a reality for the Big Ten libraries through the regional network called CICNet.

Dixon came back to Columbus and turned a team of networking specialists loose on the project. They already have found that it can work, and inexpensively, although a considerable amount of software must be written to create a foolproof, flexible system that is user friendly for librarians. To help the project along, Dixon has applied for and received funding from CICNet.

On Oct. 2, Dixon and company demonstrated a prototype in Chicago. The librarians loved what they saw, he reports.

Rob DeBuys, who helped design and demonstrate the software, says it was obvious the fax project is a system the librarians are anxious to adopt.

"The library people had the right general idea," Dixon says, "that computer networks could help them solve their interlibrary loan problems. Now it's up to us to take care of the technical development to make it really practical."

It is thought that when the project is realized, perhaps in a year, it will be the first application of its kind. As far as IRCC staff can tell, no one else is attempting a fax network interface.

It also probably is safe to say that once the project is completed, interest will extend far beyond the circle of Big Ten librarians who conceptualized it.

Encryption...

Continued from page 7.

Data Encryption Algorithm using the DES code developed by Phil Koop and others. The group has developed software that enables encryption among the following computer and operating systems:

- BBN/VM, VAX/Linux, Macintosh/NeXT, UNIX/Linux, Pyramid/Linux, HP/UX, VAX/VMS, and Sun/Solaris

The encryption team is working to include software for IBM/V/VM, RISC/Unix, Macintosh/AU/X and Xenix systems.

Collins reports that the software will be made available at no charge to other non-commercial institutions in the United States. The software cannot be exported or provided to foreign nations under current federal regulations.

For more information about OSU-InterCrypt® software, contact Clifford Collins at 292-4943 or send electronic mail to collins@nbcaf.ohio-state.edu.
MEMO

To: Faculty at The Ohio State University
From: Charles F. Bender, Director
Re: Associate Director for Research Computing
Date: April 3, 1990

The Office of Academic Computing requests applications for the position of Associate Director for Research Computing. The position has been designed for a full-time tenured faculty member with a computing background:

COLLEGE OR OFFICE: Academic Affairs
DEPARTMENT: Academic Computing
SUPERVISOR'S TITLE: Director of Academic Computing
SPECIFIC DUTIES: Work with Director to develop priorities for research computing
   1) Attend meetings of the Research Computing Advisory Committee (RCAC).
   2) Coordinate support for the RCAC
   3) Develop proposals for new initiatives in research computing
   4) Participate in research computing policy making
CONTACTS: University faculty, staff and students
MINIMUM QUALIFICATIONS: Full time tenured faculty with a computing background, active involvement in research oriented computing preferred.
OTHER: AD for Research Computing will receive 50% release time from teaching duties and full summer support. The term of this position will be one year renewable for a second.

The Office of Academic Computing is in the process of developing a 5 year plan for academic computing at Ohio State. The strategic planning of computer acquisition, laboratory space, etc., related to this plan represents a challenging task needing coordination. This will be the Associate Director's first priority.

Applications and CVs may be submitted to Holly Hirst, Assistant Director, Academic Computing, 1224 Kinnear Road, Columbus, Ohio 43212. Please provide three references by name and phone number. The deadline for applications is May 6, 1990. For further information call Dr. Hirst at 292-1302.
MEMO

To: Deans, Chairs and Faculty
From: Charles Bender, Director
Re: IRCC Redirection
Date: April 9, 1990

I would like to apprise you of recent recommendations made to the Provost regarding the future of academic computing on our campus. As with other units in the University community, we are challenged to meet increased needs with diminishing economic resources. The rising cost of support of computing make it imperative that the Instruction and Research Computer Center (IRCC) redirect some of its resources to maintaining its most important services at the current level of support. In an effort to ensure that the majority of the university community will be best served by the changes, two faculty committees, the Instructional Computing Advisory Committee (ICAC) and the Research Computing Advisory Committee (RCAC), have been reviewing the status of academic computing in relation to existing needs and the new computing needs created by the curriculum reform.

It is clear that as the curriculum reform is implemented several thousand additional personal computer seats will be needed to provide Ohio State students with access to computers. IRCC currently has 36 personal computer sites with approximately 800 seats. The faculty committees have made recommendations for incremental growth in the next several years.

Many researchers are using workstations, and IRCC has begun providing consultation and site licensed software to departments to support their workstations. Many offices throughout the university are networking their academic computers, and IRCC is providing assistance for local area networks. As these needs grow the faculty committees are planning for additional support from IRCC.

The campus-wide network called SONNET now provides connections for over 60 buildings and several hundred departments including over 2,000 computers that are linked to national and international networks. IRCC has been tasked with providing connections to additional buildings on campus and providing an information network such as their new on-line directory of all students, faculty, and staff at Ohio State.

The use of mainframe computers continues to grow at Ohio State. Instructors are using many new statistical packages for their research and classes. To meet the increasing need for a hardware platform that will provide growth and economy in the
future, the faculty committees evaluated all of the IRCC owned computers including the IBM 3081 (MVS/TSO/WYLBUR), IBM 4381 (VM/CMS), DEC-20, and Hewlett-Packard (UNIX). The faculty committees have recommended that the IBM 3081 be retained as the computational engine for IRCC as it now supports the largest user base, provides printing, tape drives, and has powerful calculating packages. The IBM 4381 (VM/CMS), DEC-20, and Hewlett-Packard (UNIX) mainframe computers will be consolidated and replaced by a new large UNIX facility. This consolidation will result in greater efficiency and cost savings which can be redirected to provide better service to IRCC users.

IRCC continues to provide new avenues of computing and recently made electronic mail available to the entire campus at the recommendation of the faculty committees. From personal consultation to on-hand workshops, IRCC provides a wide breadth of services, hardware, and software to the academic campus under the guidance of the ICAC and the RCAC.

In order to obtain maximum cost savings, these recommendations will be implemented within the next six months. The IRCC will provide any assistance necessary to students, faculty, and staff. For more information regarding the new directions for IRCC, please read the May 15th issue of the IRCC newsletter.
IRCC turns three operations into one

By Gemma McLuckie

The Instruction and Research Computing Center is replacing three of its mainframe systems with a bigger single UNIX facility.

The change comes as a result of recommendations from two faculty committees and a joint task force, notes Robert Dixon, acting director of IRCC. "It is important to understand that it is the faculty who are driving the direction of computing at the University, and that's the way it should be."

Included in the consolidation are the CMS service, the DEC-20 and the HP-9000 UNIX system. CMS service provides electronic communication, known as e-mail. It also provides light-duty computing services such as programming languages, text processing and interactive connections between computers. The DEC-20 and UNIX provide computing, e-mail and bulletin boards.

A larger UNIX system will be phased in during summer 1990. It will have e-mail and bulletin board features.

Approximately 500 faculty, staff and students who regularly use the CMS service, the DEC-20 and the HP-9000 will be asked to move to the new UNIX system or to TSO on the IBM 3080. During the transition, IRCC staff will help users move their mail to the system of their choice, notes William Miller, leader of marketing and customer services at IRCC.

Approximately 1,500-2,000 students who were assigned CMS service class accounts each quarter will be issued computer accounts on other IRCC mainframe computers that provide the same service, he adds. Again, IRCC staff will help instructors establish files on the alternate systems.

CMS service users can switch most easily to the TSO service, which is maintained on the IBM 3081 MVS/XA mainframe for computational purposes, Dixon says. However, the IBM 4381, which did support CMS service, will continue as the BITNET computer network gateway for Ohio State.

"We want to assure users that we aren't going to change overnight," Miller says.

Those affected users who have not been contacted by IRCC should call the Information Center, 292-4843, and make an appointment to talk to a consultant. IRCC consultants are specializing in helping users make the transition to TSO or the new UNIX system.

Handouts with step-by-step instructions are available at the Customer Services desk, 508 Baker Systems Engineering. And each quarter, training will be offered on the basic UNIX system, how to use e-mail on UNIX, and how to use e-mail on TSO. Classes are listed in a brochure sent to employees and students each quarter.

"The changes reflect the wishes of faculty regarding their computing needs," says Charles Bender, director of academic computing. In addition to the new UNIX facility, needs include increased mainframe and workstation support, and more public microcomputer sites.

The Office of Academic Computing worked with the Research Computing Advisory Committee (RCAC) and the Instructional Computing Advisory Committee (ICAC) to make budget recommendations for 1990-91, he explains. RCAC is headed by C. William McCurdy, professor of chemistry. ICAC is led by Robert Redmond, associate dean of engineering and professor of mechanical engineering.

The committees and IRCC staff formed the task force, which represented the center's customer base.

"The task force's recommendations made in March also take into account reduced budget allocations for the coming fiscal year," Bender says.

IRCC provides a range of services to faculty, students and staff. In the last two years, IRCC has begun many services for networks, local area networks, courseware support, external support, graphics support, UNIX systems support and workstation support. Its public microcomputer sites project has significantly increased.

Task force members looked at how much is spent on what services, and shifted the budget to meet the needs of the largest numbers of users.

"Items targeted for increased allocations are the public microcomputing sites and the UNIX facility," Bender says.

Consolidating the old HP-9000 UNIX, the DEC-20 and CMS service will free about $400,000 yearly. The new UNIX system will operate on about $260,000. Money for the machine itself comes from a special fund to purchase equipment, not from operating dollars, Miller notes.

Public computing sites will receive $775,000, an increase of $100,000 a year. However, IRCC projections show that $655,000 more annually is needed to update and maintain laboratories on an ongoing basis.

An additional $100,000 will be reallocated to IRCC administration to purchase staff computing equipment and to hire clerical and secretarial help, for a total budget of $827,000.

In 1990-91, IRCC will maintain the amount it allocates for workstation support while seeking additional new funds from central administration.

In reallocating the budget, reductions will be made by:

- Reducing ties to projects that benefit a limited clientele. By the 1991-92 fiscal year, IRCC will no longer provide staff for the College of Engineering's Workstation Grant Laboratories and the Department of Biomedical Engineering's computer laboratory; or for the CAD/CAM laboratory operated with the engineering college.
- Cutting back funding for network services. SONNET will continue to expand, but more slowly.
- Reducing the number of hours consultants serve customers.
- Limiting funding for education and training.
- Streamlining user accounting services.

Copies of the report released by the Joint Budget Advisory Task Force are available from Dixon, 292-4843.
Public sites show potential for teaching

By Tawnya Burkey

The Instruction and Research Computing Center (IRCC) has made computers accessible to students and faculty through its public computing sites. And faculty throughout the University are becoming increasingly aware of their potential in classroom instruction.

Students use 850 machines at 18 public computing sites to complete general and class assignments. Also, faculty conduct classes in approximately one-third of the labs.

The numbers of classes taught at the labs could be higher, note IRCC officials.

"Faculty are not using the computing sites as much as we would like to see, but it is up to them to decide if the sites meet their instructional needs," says John Schar, senior computer specialist.

Attempts are being made to encourage more use of computers in instruction, adds Sal Abate, leader of courseware support. An example is the IRCC's Courseware Support Service, which assists faculty in identifying and using readily available software.

Also, Instructional Enhancement Grants sponsored annually by the Center for Teaching Excellence can be used to develop computer-taught classes. In the past, for example, grants have funded interactive programs for large-group lectures, and computer enhancement of chemical engineering lectures.

Academic departments now reserve 13,000 hours of computer time per year from IRCC public sites. The need will increase. For example, the College of the Arts and Sciences is incorporating a statistics course as part of the new curriculum. The required course will be taught on microcomputers.

According to Schar, this means approximately 3,000 more students per year will require access to microcomputers, and the University will have to provide another 150-200 computers to meet that need.

Except for computer science, no particular discipline uses the sites more than another. For example, the College of Agriculture reserves a lab for an agricultural economics class. The English department uses the site to teach composition, using the computer as a writing tool; and the School of Architecture and the Department of Art Education reserve them for graphics instruction.

Two art education courses, which were previously offered as a pilot project, are going to be offered regularly. Introduction to Computers in Visual Arts and Fundamental Techniques of 3-Dimensional Computer Art recently were approved to fulfill arts and humanities requirements.

"The computer-taught graphics classes have been very well received by both faculty and students. Students have been closed out and on waiting lists for the classes each time they've been offered," says Kevin Reaghi, associate director for undergraduate development of the Advanced Computing Center for the Arts and Design (ACCAD).

Twenty more pieces of equipment are needed to meet the current demand for these classes, says Reaghi. "The College of the Arts has endorsed a proposal to IRCC for the upgrade of the existing resources for the 1990-91 academic year and for an expansion of the facility the following year."

For the 53,000 students on the Columbus campus, about 1.2 million personal computing hours are available. That works out to about one hour per week per student, which is about average in the Big Ten. The University of Michigan has a better ratio, but charges a computer fee to students as part of its tuition.

Schar predicts the increasing need for sites reserved by colleges for specific classes to continue for the next few years. However, he says, demand for general access may decrease as more students buy their own computers.

When the University surveyed students in August 1988, about 20 percent owned machines.

Faculty who wish to explore the use of computers in the classroom may want to apply for Instructional Enhancement Grants from the Center for Teaching Excellence, 292-4316; or contact the Courseware Support Service, 292-4843.

Tawnya Burkey was an onCampus student intern winter quarter.

Courseware Support finds software to use in classes

The new Courseware Support Service helps faculty find and use software for classroom instruction.

Courseware Support Service staff of the Instruction and Research Computing Center work with teachers. They show how faculty can use productivity tools for students and authoring systems for themselves.

Productivity tools are instructional software, such as word processing packages, spreadsheets, databases and statistical programs. Students use the programs to work on assignments and solve problems.

For faculty, authoring systems enable them to develop their own instructional software, including color graphics, animation, digitized sound and videodiscs.

A number of faculty are using one system to create interactive tutorials, notes Sal Abate, courseware support coordinator. For example, the College of Biological Sciences is collaborating with the Center for Teaching Excellence to develop 26 units for Biology 101.

And, David Robinson, acting chairperson of Slavic and East European languages and literatures, has created modules for drill on Russian vocabulary and grammar.

The three authoring systems available from the Instruction and Research Computer Center can reduce development time and effort by 70 percent, according to Abate.

Courseware Support Service staff provide introductory instruction for authoring systems.

For more information, contact Abate at 292-4843, or via electronic mail at abate-s@osu-20.ircc.ohio-state.edu.
Dixon named director of computer center

By Kristi Mohrfield
Lantern staff writer

Robert Dixon, noted expert and researcher in the search for extraterrestrial intelligence and managing director of the "Big Ear" Radio Observatory, has been named director of all academic computing resources at Ohio State.

Dixon joined the Research Computer Center in 1972 as a mathematical analyst, and two years later became special assistant to the director. He also served as director of Facilities Management and special projects, and as deputy director.

Following the departure of former director Martin B. Solomon in 1988, Dixon was named the center's acting director. During his tenure as acting director, the center added several service support areas, most notably local area networks and courseware.

Since 1988, the center also has put new emphasis on distributed contributing support and added five more public microcomputing labs on campus, said Bill Miller, leader of marketing and customer services.

Dixon is a well-known pioneer of computer networking on campus, Miller said.

Under Dixon's guidance, the SONNET campus network debuted in 1987, and Ohio State continues to serve as a leader in networking technology. He has encouraged the development of innovative capabilities, such as faxing over networks and connecting to database resources stored on compact discs, Miller said.

Miller said during the last two years, Dixon has welcomed and encouraged faculty input on the center's future directions.
Computers are the minds of the '90s, but finding the OSU Instruction and Research Computer Center may take a little thinking of your own.

The center is changing its name to the Academic Computing Services after OSU President E. Gordon Gee approved the change last week.

This change is being made to more accurately portray what the center does for the OSU community, said computing services director Robert Dixon.

Dixon said the words “computer” and “center” are not true of the service today.

In the past, a “computer center” was the only place where computers could be used, he said. Today, computers are available at 33 different locations.

Dixon said IRCC provides not just computers, but many related services. He said “computing” is a more accurate term.

Bill Miller, the leader of marketing for the center, said the IRCC provides computer services and responds to the needs of the academic part of the university, including students, faculty, researchers, graduate students and staff members.

“We weren’t being well-represented,” Miller said. “We are now a hub for networking instead of a single center.”

The name change will be phased in over the next year, and either name will be valid during that time, Dixon said.

He said the first step in trying to respond to the needs of the people who use the computers is providing enough seats in the computer labs.

Right now there are 800 to 1000 seats, but Miller said they will purchase more as the demand increases.

Dixon said 26 sites are already being utilized for classroom activity, and this will increase because of a new curriculum requiring all students to use computers.

In addition, Miller said that once students have interaction with computers, they don’t want to go back to typing.

“If someone needs help, I’ll help them,” said Anthony Jerig, a senior from Zanesville majoring in computer information science. Jerig is also a lab supervisor.

Also, since this is the information age and computers are used for more than just typing papers, Miller said the service will have a Campus-wide Information System available next fall.

Miller said the library catalogue will be online for all to share, and students will be able to check on the availability of a book across the country.

Dixon said stored files and messages will be accessible on terminals, rather than paper, and services such as electronic file storage, printing, faxing and mail forwarding will be offered centrally.

Currently the computing center has electronic mail service and a campus directory called Whois.
Racial slurs tolerated on computer network

By Carmen M. Banner
Lantern staff writer

Slanderous remarks, such as: "Vote Jackson in '92. He'll give us a reason to hate niggers," which was written into Internet, an international computer communications network, are tolerated but not always appreciated.

Mitch Dysart, a systems programmer for the Information and Research Computing Center Facility Management, said Internet provides a way for researchers, groups and individuals to communicate from institution to institution on what are called news groups.

Dysart said news groups are collections of articles on different topics.

Last month, Dysart said, a user attacked a number of news groups, writing slanderous remarks about Jesse Jackson, a black presidential candidate in 1988. Dysart said he thought the slanderous remarks originated from a computer in California.

Douglas Kerr, an assistant professor for the Computer Information Science Department and chairperson for the CIS computer committee, said there are probably about 1,000 different news groups with information about any subject available to everyone.

Kerr said because the network offers communication about all kinds of information from all over the world, it is not uncommon to find that people are using news groups to say bad things.

Kerr said remarks that are considered slanderous, like those made in reference to Jackson, or remarks not considered to be in good taste, are often responded to negatively by other users. Offended users will often inform the originator of the remarks that what he or she wrote is not worth reading, Kerr said.

Sandra B. Jones, a senior from Hattiesburg, Miss., majoring in Computer Information Science, said there should be some kind of standards set for using the system.

Internet allows people to express academic and intellectual ideas and exchange them all over the world. There is no value in misusing the network to communicate personal prejudices, he said.

However, Jones said he believes in the freedom of speech and if he had to choose between racist remarks such as "Vote for Jackson in '92. He'll give us a reason to hate niggers," and government censorship, he would have to choose freedom of speech.
Students to critique proposal to advance computer facilities

By Effie Dracopoulos
Lantern staff writer

Students now have the opportunity to review and critique a plan to promote advanced computer usage for instruction and research at Ohio State, said Steven Gordon, associate director for instructional computing.

Academic Computing Services has designed a plan to implement the computer advances necessary for increasing student, faculty and staff needs, Gordon said. The plan proposes the evaluation of the computing needs and outlines the university's need to acquire new equipment.

"50 percent of the microcomputers on campus are five years old or older and computing hardware has changed dramatically in the past few years," Gordon said.

If the plan is accepted, the computer equipment would be replaced every five years to keep up with technological advances, he said.

Students will be able to view the plan on-line at OSU computer labs that receive electronic mail. Printed copies of the plan will be available from Academic Computing Services, Gordon said.

Faculty members in physics and math have proposals for computer usage, including simulated experiments in the physical sciences that could be dangerous without computers, said James Kygier, assistant to the dean of mathematical and physical sciences.

"The more we can provide in computing, the better prepared our students will be," he said.

The College of Engineering is administering a survey to determine student opinions of computing needs, but results are not yet available, said Jim Davis, associate professor of chemical engineering.

Ohio State ranks eighth in the Big Ten in computer seats available for student usage, according to information compiled by Academic Computing Services.

Better computer equipment could facilitate faculty recruitment and encourage research grants because there is a correlation between computer usage, science and engineering research, Gordon said.

Methods of funding will be considered once the plan has been approved by the university, Gordon said. Current computing costs are met with state grants, alumni donations, and other forms of one-time funding.
Correction

The Feb. 28 story, "Students to critique proposal to advance computer facilities," should have referred to the computing office as the Office of Academic Computing.

The headline "Karate brings kick to winter workouts," which ran Feb. 25, should have referred to the martial art as tae kwon do.
Academic computing plan: Ohio State must meet the needs of the 21st century

By Gemma McLuckie

By 2001, each faculty and staff member who needs computing support should have a machine on his or her desk, reports Charles Bender.

The "Plan for Academic Computing: 1992-2001," in the final stages of being developed, includes this and other provisions to meet the needs of the University into the 21st century, said Bender in a recent presentation to the University Senate.

The director of the Office of Academic Computing also outlined possible future resources such as a computer for every four graduate students and public microcomputer labs with one seat for every six undergraduates.

It is estimated that implementing such an upgrade would cost about $800 million over nine years, Bender said. The total includes $107 million in one-time funds for lab construction, equipment and networking.

Estimated annual costs include $25.4 million for hardware, software and staff; $40.4 million to support student computing labs and lab staff; and $12.9 million additional for the Academic Computing Center budget to provide central support and computing services.

Even at that price, Bender said, the academic computing plan he outlined would "provide a good — not the best, but very competitive — computing environment."

Funding could come from several sources, and steps such as encouraging students to buy their own personal computers — could reduce the costs, he said.

As conceived by academic computing planners, colleges would receive "base-level" funding from a new fund to meet the minimum computing requirements of faculty, staff and graduate students. Additional matching funds would be set aside by the central administration for other college needs related to computing.

The new curriculum will generate addi-

‘Faculty, staff and students are taking advantage of the computer not only as an engine for numerical computation but also as a text processing tool and a gateway to information.’

— Charles Bender

students. The University of Michigan provides one computer for every six students, while Ohio State has a 1:55 ratio.

Also, he noted, about 70 percent of the faculty and large numbers of staff use desktop computers that were purchased with one-time funds.

The machines are aging quickly, and there are no provisions to replace them. "Most of the equipment is over five years old, and some machines are over eight," Bender said.
Computer labs offer extended hours for break

By Amy Hofter
Lantern staff writer

OSU Academic Computing Services has reallocated funds from a shrunken budget to keep computer labs open and accessible to OSU students during winter break, said the director of marketing and customer services for ACS.

The computer labs in Baker Systems, Hagerty Hall, Health Science Library, Main Library and Page Hall will be open every day over the break except for Christmas Eve, Christmas Day and New Year’s Day, said director Bill Miller.

The labs in Campbell Hall, Page Hall and Smith Lab will be open to students during library hours, Miller said.

These labs will also remain open during finals week for student use, he added.

“We feel it’s very important to keep the labs open over the break for foreign students who don’t leave the area and for the many students who live within the community who choose to complete assignments over break time,” Miller said.

“Over breaks, grad students needing to use computers come out of the walls because they don’t have to compete with the undergrads for computer time,” said Lee Page, manager of public computing sites.

Figures on levels of use from previous years are not available, but the labs are always in high demand over quarter breaks, Miller said.

“Although the number of seats available in the labs continues to grow despite a 6 percent budget decrease from last year,” Miller said.

“One way to accommodate such changes was by reducing administrative overhead and consolidating administrative services and allocating those funds to microcomputing areas,” he said.

“The largest single use of all Ohio State computers is word processing,” Miller said. “In redistribution of hours and labs, we kept that in mind.”
Students face fees for computer use

By Chris J. Davey
Lantern staff writer

OSU students may be asked to pay a general computing fee as early as Autumn Quarter 1992, according to the "Plan for Academic Computing" and administrators involved in the formation and implementation of that plan.

The fee would be used to help defray the cost of maintaining and improving student computing facilities, according to the plan.

The plan, which was released by the Office of Academic Computing last August, is a comprehensive plan for meeting the needs of academic computing at OSU through the year 2001, said Bill Miller, assistant director and systems analyst for Academic Computing Services.

The plan has been endorsed — in concept — by OSU President E. Gordon Gee, Provost Frederick E. Hutchinson and the Dean's Caucus.

"Of course, the major problem with putting this plan into action is the necessary money," said Greg Baker, professor of mathematics and chairman of the task force.

Chuck Morrow-Jones, OAC assistant director, said that the funding for the plan should be a "three-legged model," that includes student contributions, reallocation of funds and "new money" — preferably from the state legislature.

"The last thing we have in mind is that students will carry the burden of this (plan)," he said. "That would be unfair, and it would ultimately doom the plan to failure."

However, Morrow-Jones indicated that he felt there is a "high likelihood" of a student fee being implemented in the upcoming academic year.

Baker said that the University of Michigan should be examined as a model for the implementation of any possible computing fee at Ohio State.

The University of Michigan charges its students $100 per semester for general computing services and additional fees for computer-intensive fields such as engineering.

The plan is "a bold move into the information age that will enable Ohio State to exercise leadership in a most critical aspect of higher education," Gee said in a press release.

A Plan Implementation Task Force was appointed by Hutchinson last week and meets today to begin deliberations on how the plan should be implemented. The task force is expected to discuss every facet of the plan aimed at increasing the availability of computers to students, faculty and staff.

The task force also is expected to talk about the feasibility of a student computing fee.

Two student representatives were selected to serve on the task force. The group is scheduled to present its final recommendations before March 1.

Baker said that when OSU is compared to other Big Ten universities, "there is a sense that we are behind (in academic computing).

Morrow-Jones said that while Ohio State is comparable with other Ohio colleges and universities in the area of student computing, it doesn't stack up against other Big Ten universities — a main incentive for the plan.

Businesses including Huntington banks and the Marysville Honda plant said they didn't see any significant differences between OSU grads and other Ohio-area university graduates, Baker said.
Computer fee debated

By Chris J. Davey
Lantern staff writer

A task force reporting to OSU President E. Gordon Gee on Friday recommended that students pay a general computing fee of $70 per quarter beginning Autumn 1992, the chairman of the task force said.

Greg Baker, professor of mathematics and chairman of the Plan Implementation Task Force, said the $70 is an estimated recommendation, and the president must now decide whether a fee will be implemented.

The Plan Implementation Task Force was formed by Provost Frederick E. Hutchinson in January to decide how the Plan for Academic Computing should be implemented. The Plan for Academic Computing is a comprehensive document that outlines the future goals for academic computing at Ohio State. The document was written by the Office of Academic Computing and was released in August 1991.

"The underlying premise of the plan is that students should have base level support for their computing needs," Baker said.

Baker said the $70 figure was determined by taking the estimated cost for maintaining and upgrading student computing labs in the coming academic year, $8.4 million, and dividing that figure by the total number of undergraduate students at Ohio State.

The university will have to come up with $9.7 million by reallocating funds from other sources in order for the plan to be implemented, Baker said.

"If the administration cannot come up with its share, there is no more talk about a student fee," he said.

"Our philosophy has been that if there is a fee, students should see some tangible effects from it from day one," said Randy Jackson, associate director for academic computing and a member of the task force. "We don't want the students to begin paying a fee in Autumn, and see no effects until spring," he said.

The student representatives on the task force did not agree to either the fee requirement, or the specific amount of $70, a student representative said.

"That a student computing fee was recommended to the president was not made clear to us, and we did not agree to that figure," said Tarunjit Singh Butalia, a member of the Graduate Student Council and a student representative on the task force.

"If computing is a priority at Ohio State, then there should be more money from the administration before students should be asked to pay a fee," said Butalia. "We don't want to see the students take the burden of the

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Computing service announces changes

By Kevin Corvo
Lantern staff writer

In an effort to address new challenges and problems which face Academic Computing Services, Bob Dixon, director of ACS, announced yesterday numerous changes to be made by July 1.

ACS provides computer service to all OSU students for instruction and research.

ACS found it necessary to implement changes based on an in-depth study by the Office of Management Studies and input from the Office of Academic Computing.

"Based upon their study, we have developed a new management structure to remain as efficient as possible while experiencing greater demand for our resources, and during the financial difficulty the entire university is experiencing," said Bill Miller, director of customer service in ACS.

Among the changes announced Thursday by Dixon at an ACS staff meeting were:

* In order to meet the undergraduate student demand, consulting and training functions will be combined with public labs under the management of Alan Albertus, director of the newly created Distributed Education department.
* ACS's two large central computers, Mail and Global User System and Ohio State Multi-virtual System A, which were formerly managed by different divisions, will be assimilated to create Central Computing headed by Patricia Ratz, who will have MAGNUS and OHSTMVSA leaders.
* A deputy director position, to be held by Art Krumsee, will be created for stronger staff support. It will be the responsibility of the deputy director to coordinate numerous efforts within ACS departments and report to the director.
* The Customer Service Division will continue under the supervision of Bill Miller, but will now include publications activities.
* In an effort to be ready to face expanding computer resources in numerous university departments, ACS has created a "Tiger Team" of division directors to collectively pursue this activity.
* Distributed Computing will continue under the leadership of Bob Kalal. This department is responsible for supplying computing service, information resources and coordinating training for faculty and staff on work stations.
* Networking and Communications, responsible for providing the academic computing network for the university, will also assume responsibility for the Bitnet. Claudia Jordan continues to direct the division.
* Chuck Sechler will join Cliff Collins in a special project aimed at expanding ACS's efforts in tracking, evaluating and implementing new computing technology.
OSU KarlBridge software offers computer net security at low cost

By Sally Hritz

An Academic Computing Service staff member has developed software that adds another level of security to computers connected to networks.

OSU KarlBridge, software introduced by Doug Karl, senior computer specialist, keeps network traffic localized to defined areas such as a room, a building or a campus network.

By restricting public lab traffic to within the University, the software reduces opportunities for access to computers outside Ohio State.

At Ohio State the software is installed in public computer labs where microcomputers are connected to the SONNET campus network. SONNET connects Ohio State to the global Internet network and to Ohio's OARnet, which joins public and private universities and some businesses.

OSU KarlBridge filters network traffic. According to OARnet regulations and by Internet guidelines, the University is required to prohibit access from public labs, explains Karl.

"OSU KarlBridge offers security and functionality," says Claudia Jordan, associate director for network computing.

The program is flexible because different sites may configure it to perform specialized functions. For example, one department has configured the program for its research lab so that its machines can use only the Cray supercomputer and electronic mail. The department's research contracts require such security.

Karl has placed the software in the public domain so it is free to anyone.

OSU KarlBridge has saved the University tens of thousands of dollars, Karl says.

It is installed on an IBM AT-compatible computer placed between a LAN and SONNET. The setup costs about $1,000, yet it performs a function similar to equipment that costs at least $5,000 per installation.

"For its price and mixture of features and flexibility, I think it's an exciting and revolutionary product," he says.

For information on obtaining the software, call Karl at 292-4843.

Editor Sally Hritz wrote this article for the April ACS Newsletter.
New computer lab opened in Hopkins Hall

By Robert Neifach
Lantern staff writer

OSU President E. Gordon Gee cut the ribbon at a ceremony Monday morning for the opening of a new computer lab in Hopkins Hall.

Academic Computing Services has added 26 Amiga 3000 microcomputers, upgraded 18 Amiga 2000 computers, added graphics software for the Amigas including DPaint 4, Imagine, and Amiga Vision, three-dimensional and interactive authoring software.

A laser disk player, video equipment, and a color laser printer have also been added to the lab.

"All the upgrading that is being done will much improve the colors and the designs of the projects," said Bongjong Bac, lab instructor.

"Many more students will be served with the addition of all the new equipment," said Marsha McDevitt, supervisor of the art education courses. "This is a very popular course even for students outside of the art education department."

The amount of students available to take the Art Education 252 course, featuring paint and animation software programs, has been increased from 70 students per quarter to 108 students per quarter.

"The addition of the computers will allow students to work on projects during other class sessions," McDevitt said. "Students will be able to listen to other instructors classes, while they work on their project."

"Students will also be given more individual help from the instructors," McDevitt said.

Before the improvements the only time students could work on their projects were at night or on the weekends.

"The labs now are all open labs," Bac said. "Before all the labs were closed, preventing any students from working on labs during other class periods."

"With all the improvements we had to move to the classroom next door," McDevitt said. "We are now located in 354 Hopkins Hall, almost double the size of our other room."

"The art education courses, primarily in graphics, have become very popular courses," McDevitt said. "Students have been giving these courses high evaluations. They find out about the courses through word of mouth."

These courses pertain to students in industrial design, art education, and fulfills a General Education Curriculum requirement.

The $190,000 needed for the project was funded through Academic Affairs.

The proposal was originally submitted to academic computing two years ago. It was finally approved this past spring.

"There are dozens of proposals submitted to us for new labs," said Steve Gordon, associate director for Instructional Computing. "At this time, the university simply can't afford it. This proposal needed to be done. There have been many requests for this new computer lab."

"A student monitor will be keeping an eye on the project," said Alan Albertus, assistant director of Academic Computing Services. "The monitor will keep in touch with Sue Koval, the public site manager, reporting on any problems involving the new equipment. If there are any serious problems, I will then be informed."
Plan for computing will cost university millions to complete

By Douglas Wu
Lantern staff writer

It will cost the university millions of dollars to implement an OSU Managing for the Future Task Force recommendation to improve its computer information systems and services.

The Office of Academic Computing estimated it would cost an additional $18.1 million annually to upgrade and maintain the university's computer information systems.

The Plan for Academic Computing, released in August 1991, estimated Ohio State spends $32.9 million annually on academic computing hardware, software, labs and services.

The proposed enhancements would push computer charges to $50 million annually.

Other Big Ten schools' computer expenses, like the University of Michigan, are $132 million annually on the same computer services, the plan stated.

"Many faculty members don't have computers, some don't even have telephones. The bottom line is that funding for the plan just isn't there," said Bill Miller, assistant director of Academic Computing Services. "It's an expensive plan, but this is what the college deans say they need."

Greg Baker, chair of the Plan Implementation Task Force, said "I don't think, frankly, the university can avoid not having an academic computing plan in the long term."

He said faculty and students are not pleased with the present computer systems because they do not meet the university's needs.

OSU President E. Gordon Gee said he supports the plan.

William Shkurti, vice president for Finance, said he expects state support for higher education will increase next year. If there is an increase in support, Shkurti said the university would like to move forward with the plan.

Last spring, the committee recommended that undergraduate students pay a $70 computer fee to help defray the cost of the plan.

Baker said the fee, which was not approved, would have raised $8.4 million annually, and the university was to have reallocated $9.7 million or petition the state for additional funds.

"There should be a sharing of costs by all groups involved in the activity," Baker said. "I never felt the students should be seen as bearing the brunt of the costs."

Baker said the additional money is needed to provide students with more computer labs and to help the university's faculty and graduate students with their computing needs.

Ohio State is behind in academic computing because it does not have a central academic computing plan. Furthermore, each college has had to meet its own computer needs by purchasing its own equipment, and too few public computing sites have been constructed, the plan stated.

Many colleges have purchased computer hardware, software and localized computer networks that do not fit the computing needs of their faculty, graduate students and undergraduates alike.

"With a well coordinated plan, each group will benefit," Baker said.

He said the university could get a good deal on computer hardware, software licenses and maintenance agreements if they placed large orders with the manufacturers.

The Office of Academic Computing has been handling most of the university's large computer hardware and software orders, Baker mentioned.

The plan estimated it will take at least 10 years from the time of implementation to completely upgrade the university's computer information and services.
Extra help offered by OSU computer services

By Chris Blackburn
Lantern staff writer

Need a place to write a paper? OSU's Academic Computing Services can probably help.

Academic Computing Services runs 33 computer labs across campus. ACS can also help you connect your own computer to OSU's computer network.

There are 1,100 computers under the jurisdiction of ACS, Associate Director Alan Albertus said. Access might be limited at some of the sites, because classes might be scheduled in the labs.

There is a 2-1 ratio of Macintosh computers to IBM and IBM-compatible computers available in the labs, he said.

The best places to find open computers are at the Ohio Union and the Main Library, Albertus said. The sites have both Macintosh and MS-DOS based IBM and IBM-compatible computers, he said.

The General Biology Annex isn't heavily used either, he said. Only Macintosh computers are available there.

With a modem, you can connect your own computer to OSU's MAGNUS network, Albertus said. All you need to do is take a blank disk to 508 Baker Systems Engineering Building and they will give you the necessary software.

Macintosh computers use Red Ryder software and MS-DOS based computers use ProComm, Albertus said. On-line you can access the OSU library catalogue or send electronic mail to anyone using the MAGNUS network, he said.

Lee Becker, professor of journalism, said he thinks there is great potential for students who use computers.

"Computers empower students in a way typewriters don't," Becker said. A student's abilities are greatly improved through the use of computers.

"The trick is to try to get them to treat the computer as something more than a typewriter," Becker said.

Becker said he likes his students to use computers to take notes and access more than one file at a time.

Both MS-DOS and Macintosh laser printers are available at computer sites campuswide. The cost of laser printing is eight cents per page. Users must purchase a Vend-a-Card at the computing site to use the laser printers and present an OSU ID.
Central Ohio residents will be able to dial into a network linking an estimated 10 million computer users around the world if plans to establish the Columbus Free-Net succeed.

Computer users in Cleveland, Cincinnati, Youngstown, Medina and Lorain already are able to tap into local Free-Nets, and an Ohio State University group wants to set one up here.

Steven I. Gordon, associate director of Academic Computing at OSU, said his group hopes to have a starter system in operation within three months.

The Heart of Ohio Free-Net would offer a variety of community services as well as give area residents access to the Internet, a gigantic network of computers in 45 countries and Antarctica that is partially funded by the federal government.

Local services might include such things as recreation department softball schedules, library catalogs, human services referral information and electronic connection to local government offices.

Internet access would enable users to send free electronic mail (e-mail) to any other user anywhere in the world and to log onto computers housing such diverse things as national weather data and U.S. Supreme Court decisions. All that would be needed are a computer, a modem and a phone line. Area residents without computers could log onto the system at public terminals in such places as libraries, Gordon said.

Gordon said he needs about $30,000 to begin Columbus Free-Net. He said OSU would house the operation, provide phone lines and give initial technical support.
HomeNet

From the Spring Two 1993 issue of offLINE:

For the past several months, Academic Computing Services has been testing a new service called HomeNet, and you’re likely to hear the name a lot in the weeks and months to come.

HomeNet service, intended for use by OSU faculty, staff, and students from their dorms or offcampus residences, provides a network-like connection from a computer/modem setup to the SONNET campus network. What this means is that HomeNet enables you to connect directly from home to computers around the world without going through an OSU computer such as MAGNUS.

With HomeNet software, you can use popular network programs such as POPmail for electronic mail, gopher for access to databases and other information resources, telnet for remote logins, ftp for file transfers, TN3270 for fullscreen login to mainframes such as OHSTMVSA, and PH/Finger for e-mail address searches on Whois.

HomeNet has additional advantages. You do not need to use VT100 screen tools because you can move accessed files to your home computer for editing, reading, and saving. For example, you can use the point and click features of our mouse and the cut and paste features of your desktop computer while editing e-mail messages. Doing these tasks on your computer reduces connection time to SONNET, thereby reducing network traffic, and cuts down on long distance charges if you are connectioning from outside the Columbus area. HomeNet also enables file transfers using the ftp protocol rather than one such as Kermit and enables multiple remote logins from home.

HomeNet service is intended only for home use by faculty, staff, and students because buildings on campus can be connected directly to SONNET.

For further information about HomeNet, a copy of the entire article is available in 101d Main Library or by calling Pat Greene (2-6151).
OSU receives new mainframe computer as a gift from IBM

By J. Allen Morris
Lantern staff writer

The gift of a new IBM mainframe computer to be installed at the Kinnear Road Center in June, will save Ohio State about $30,000 annually, enable it to run the latest software and explore new technology for the Columbus Info Port, said Academic Computing Services Director Robert S. Dixon.

The $3.2 million IBM 3090-600J mainframe computer, donated to the university in February by IBM, represents the largest grant ever to the university by a computer company. The computer will be used to replace two existing, older mainframes used by Academic Computing Services and University Systems.

Consolidating the hardware for ACS and University Systems will initially save the university $30,000 by eliminating the duplication of software licensing fees Ohio State now pays, said Larry L. Buell, assistant vice president for University Systems.

Increased operating costs will slightly decrease that savings in the future, he said.

The IBM gift will produce additional savings in time, energy and other expenses by eliminating the need to undertake an 18-month search for the best buy on a replacement computer, said Charles F. Bender, director of Academic Computing Services.

IBM donated the mainframe to Ohio State because of its partnership with the university and a desire to be an active force in helping advance the interests of central Ohio, said Curtis Tearte, general manager for IBM Columbus.

As part of the grant agreement, Ohio State will conduct a two-year joint study that will be engaged in business possibilities and trading techniques around the world.

"Looking for software solutions on how to facilitate the implementation for the Info Port," Buell said.

The United Nations Trade Point Center, part of the U.N. Trade Efficiency Initiative commonly known as "Info Port," is an international computer service that will help increase international trade by reducing costs, paperwork, increasing the communication of "It will allow us to run current IBM operating system software which our current hardware cannot."

- Patricia O. Ratz

"It will allow us to run current IBM operating system software which our current hardware cannot," Ratz said.

The new mainframe will have a Vector numerical processor that incorporates six central processing units and has the capability of doing parallel processing, she said.

This parallel processing capability will allow one user to do perhaps up to six things at one time," Ratz said.

The existing ACS mainframe does not have this capability, she said.

"This design will allow us to run several operating systems concurrently," Ratz said, and it will also allow us to have round-the-clock availability of our production system, which we do not have right now."

The present ACS mainframe must be shut down at the beginning of every day so a test operating system can be run, Ratz said.

"That will be one of the best advantages," Ratz said. "People who have long-running tasks and processes will not have to be interrupted everyday; they can keep them going."

The increased capacity of the mainframe will also allow for growth, Ratz said.

"As researchers do things that are more complex, they need more power to do them with," she said.

Users who now have access to ACS and University Systems computer services will continue to have access on the new mainframe, Ratz said.

Announcements about the exact scheduling of the installation will soon be available on MAGNUS and other online computer access campus news services, Ratz said.
Colleges competing for students through computer linkups

By Alan D. Miller
Dispatch Higher Education Reporter

Universities around the country are racing to provide amenities that will help them edge out other schools in the competition for students. Luxes are fancy recreation centers, comfortable dorm rooms and good wiring.

Good wiring?

Especially to the growing number of students who show up at college with computers, direct wiring or some type of telephone link to a computer network is high on the list.

"Some students won't come to a university that doesn't have Internet — a worldwide computer network — available to undergraduates," said Joseph L. Fleming, director of computing services at Denison University in Granville, Ohio.

Today's high school graduates reach college with computers in hand and a head full of knowledge about how to operate them. They use the machines to quickly get information that would have taken previous generations of students days or weeks to find.

Today's students also use computers to communicate with professors long after class has ended, or with friends on other campuses.

So colleges are installing computer cables to dorm rooms and creating software to link students to massive, worldwide fonts of knowledge known as databases.

"There are about 900 copies of the software in the field now, and we're giving out about 100 a day," said Robert Dixon, OSU director.

About 200 of Ohio University's 18,000 students are part of a pilot network this year. Rooms in 12 residence halls were wired during the summer. Three hundred students entered the lottery for the rooms. OU provides software, cable hookups and instruction.

Case Western Reserve University has one of the best computer networks in the Midwest, said CAUSE, a Colorado-based national association for the management of information technology in higher education.

The Cleveland school has spent $15 million since 1989 — and expects to spend another $3 million — on a fiber-optic network linking all of its dormitory rooms and offices in a campuswide network.

Ohio State University officials would like to do the same, if they could scrape together the money, said Robert Dixon, director of academic computing services.

Even if OSU had money to throw around, Dixon isn't sure a lot of wiring would be the best investment for the university because so many students live off-campus.

"Only about 10 percent of the 50,000 students at OSU live in dormitories. So do we spend a lot of money on a small number of students or try to serve more in another way?" Dixon said.

OSU will begin trying another way this quarter, offering a software package that will link students with a campus network via telephone lines. The software, developed by OSU, is free to students, faculty and staff.

"There are about 900 copies of the software in the field now, and we're giving out about 100 a day," Dixon said.

For the first time, all incoming students are being assigned an "electronic post office box" so they can receive electronic messages from anyone who has a computer, a link to the network and the student's address. Any other OSU student, professor or staff member who wants an electronic address will get one, and Dixon expects all 52,000 students to have them within a year.

"When it's universal, we can save a few trees by sending memos and other information electronically, rather than on paper," Dixon said.
OSU future holds electronic mail for all

By Chris Nelson
Lantern staff writer

Academic Computing Services is installing a new computer in Ohio State's MAGNUS computer group that will allow every student, faculty and staff member to have an electronic mailbox on the Internet, said Bill Miller, assistant director of ACS.

The Internet, the computer network that is the basis for the information superhighway proposed by the Clinton Administration, allows users to send and receive electronic mail and access thousands of services and information provided by corporations and academic institutions worldwide.

Academic Computing Services will be operational on Sunday evening, Miller said. Currently MAGNUS and MAGNUS Undergraduate serve about 15,000 people. The new computer will have enough power to provide mailboxes for the entire OSU community on one system.

“Every new student who entered the university last fall was automatically given an electronic mail address,” Miller said. Other students can get free access to the network by registering it in Baker Systems 508.

Once everyone at Ohio State has an electronic address, many changes in teaching methods and administration will probably follow, said Charles Dyer, systems analyst for ACS. Teachers and professors will be able to distribute course materials electronically to each student's mailbox, Dyer said.

Eventually teaching materials like slides, overheads and movies will be created in a digital database, Dyer said. Instructors will simply download them to machines in classrooms. In larger courses with one instructor might even meet in two rooms at a time, once network services are advanced enough to allow inexpensive and efficient video conferences, he added.

Many of the changes are right around the corner, Robert S. Dixon, director of ACS said. The master schedule of classes is already available via MAGNUS. Within a few quarters it is possible that grades and information will be distributed electronically rather than through the post office. It is much less expensive to use electronic systems than it is to mail materials, Dixon added.

The amount of funding for technological improvements will determine the pace of the changes, Dyer said. If Ohio State provides the money to keep improving the systems and adding hardware, then many of these new services will be available within the next two years, he said.

Also available free to students, faculty and staff is a new service called Homenet that allows users to connect their computers directly to the Internet as well as the OSU networks, Dixon said.

“The information superhighway will be a larger and all-pervasive version of the Internet,” Dixon said.

Homenet allows users to connect directly to the Internet from their homes or offices through Ohio State, and run worldwide searches for information and services,” Dixon said.

Dyer and Dixon agree that easy to use software, like Homenet, will expand services, such as movies that are digitally stored and transmitted, and will provide the basis for the information superhighway.

Increasingly, movies, books, shopping, information, television programs, musical pieces, magazines and newspapers are being stored and transmitted digitally everyday, Dyer said. This growth in "multimedia" products and hardware that can use them makes it possible to provide quick access through personal computers connected to the Internet.

Computer software that will allow personal computers to play movies or music is available, although it is new and not yet perfected, Dyer said. Because computers communicate over the phone lines, as well as the other important factor in the growth of the superhighway, according to a Time Magazine article, copper phone cables cannot carry digital signals efficiently. Since fiber optic cables are necessary to accommodate the amount of "traffic" on the network, the article said. Currently the major phone companies are forced to use fiber optic cable to every neighborhood and eventually to every house, the article said.

Right now fiber optic cables run to every building on campus,” Dixon said. The Time article also reported that the superhighway is growing incredibly fast with the increase in fiber optic use.

Once each household is linked, it will be possible for someone working on a personal computer at home to do school work, watch a movie, listen to music, shop, talk on a video phone, bank, do research and subscribe to magazines electronically in their own home, according to an article in the Economist.

Personal computers will be able to run the television, phone and stereo and store enough information that users will be able to get almost anything at the touch of a button, the article said.

"In the future the Internet will continue to grow and it will become standard practice for everyone,” Dixon said. "And with better radio and cellular telecommunications, services will be available to people at home or on the street,” he added.

ACS is working on creating radio transmitting services for Ohio State computer networks, according to Dixon. This will mean that anyone with a portable computer could use OSU services and the Internet from places like park benches on the Oval, he said.

Ohio State is at the forefront of computer networking in the United States, said Charles Bender, director of the Office of Academic Computing.

"We have one of the most robust university networks in the country, and we are definitely known in the networking world," Bender said.

SONNET, the university's network, currently connects about 13,000 computers at Ohio State including MAGNUS and the personal computers in the computer labs, Bender said.
New system will bring computers to students

By Chris Nelson
Lantern staff writer

Academic Computing Services has developed inexpensive software instead of buying costly equipment in order to increase services to students, faculty and staff.

"Instead of building more computer labs for students, ACS developed computer software called HomeNet, which takes computing to the students' homes, said Bill Miller, spokesman for Academic Computing Services.

HomeNet is computer software that links a student's home computer with the university network and the Internet through a modem, said Robert Dixon, director of ACS.

HomeNet provides students with the ability to use electronic mail services and do research from their homes, Dixon said. The services are easy for students to use, he said.

"They can use their mouse, point and click, cut and paste, and use the tools familiar to them," he said.

The new software gives users easy access to many databases on campus and worldwide, Dixon said. With HomeNet, users can get information from networks at other universities, worldwide news services like Lexis/Nexis and computer bulletin boards.

Academic Computing Services has developed inexpensive software instead of buying costly equipment in order to increase services to students, faculty and staff.

"Many undergraduates are doing research on Lexis/Nexis. Others find that the access to libraries worldwide assists them in building bibliographies and finding appropriate resources. The complete White House papers are now available and being used by some OSU students," Dixon said.

Other Big Ten schools have invested large amounts of money to build public computing labs rather than invest in software like HomeNet, he said.

Because so many OSU students live off campus, Academic Computing Services decided to provide access to services through students' home computers, he said.

"HomeNet puts OSU ahead of many other universities that only provide terminal-like connections for their students. E-mail is ubiquitous at OSU, and that is unique in the Big Ten," he said.

Poll results show 35 percent of undergraduates and 75 percent of graduate students own home computers, said Steve Gordon, associate director of the Office of Academic Computing.

More than 2,200 people, the majority of those students owning a home computer, have tried HomeNet, he said.

HomeNet is possible because computer technology has changed since 1991, and more students own their own computers, Gordon said.

Academic Computing's goal is to provide access to basic services such as network information, databases and software that enhances productivity such as word processing and spreadsheets, Gordon said. HomeNet helps extend access to those types of services.

The original strategic plan for Academic Computing, completed in 1991, called for large increases in funding in order to build new computer labs.

The plan called for Ohio State to provide fewer public computers per student than almost every other school in the Big Ten.

With cuts in state funding, however, Provost Richard Sisson charged Academic Computing with revising the strategic plan in order to save money, Gordon said.

"There's no way we can be as optimistic as we were when we wrote the plan," Gordon said.

"You can't plan long-term when you're dealing with computers, so you wing it," said David Greenberger, chair of the Instructional Computing Advisory Committee.

Even though money is tight, computing is one of five "budget themes and priorities" at Ohio State, according to the Current Funds Budget for 1993 and 1994.

"We are very committed to putting additional resources toward Academic Computing," said Ed Ray, senior vice provost in the Office of Academic Affairs. "We're going to look very hard at Academic Computing before we make any cuts."

Academic Affairs will provide more money for Academic Computing this year than it did last year, Ray said.

Other options for improving computing quality and cutting costs include leasing computers for use on campus, Greenberger said.

Leasing would not save money, but the university would be more able to provide state-of-the-art equipment, Greenberger said.

The committee is also looking into the possibility of students leasing equipment, although there are legal questions involved, he said.

The important issues involved with planning for the future of computing on campus include: where funding will come from, who will control purchasing of equipment and software, how quickly to replace equipment, which machines to connect to the networks, and the faculty's abilities with multimedia applications, Greenberger said.

Money to pay for equipment can come from student fees, Ohio State's operating budget, grants, Academic Affairs, and individual department budgets, he said.
Computer link puts zip into OSU research

By Doug McInnis
Dispatch Staff Reporter

The pace of scientific discovery is controlled by information, and the flow of information used to be very, very slow.

For instance, researchers once got genetic research data from scholarly journals.

"You had to wait for the journal to be published," said Chuck Hines, animal science professor at Ohio State University. "And if you didn't get that journal, you'd have to go somewhere to get it."

Then came the Internet, a network of computers in 45 countries and Antarctica that is funded in part by the federal government. It's the so-called information highway.

Hines now dialogues with researchers in Japan and Australia, and can access the National Institutes of Health. He can even study genetic data on human, other animals and plants, and Internet delivers it to Ohio State almost instantly.

He also trades genetic information with the University of California at Davis. The data are used to settle questions of lineage in bovine breeding programs. In other words, is an animal's parentage what the owner said it is? The same type of information in humans is used to settle paternity issues.

Of course, the old way of spreading information had some advantages. Scientific findings are carefully screened for errors before many journals will accept them. The idea is to filter faulty science before it can reach a wide audience.

But the turnaround of information is very slow.

"When you read an article in a journal, the information is (often) 2 years old," said William Mitsch, professor of natural resources and environmental science at OSU and editor of the journal Ecological Engineering. "If you find something very exciting, a journal can turn it around in six months."

In its place, Internet delivers with speed, which can be a double-edged sword.

"It's causing them to come faster," Hines said.

Mitsch, for example, fires off electronic letters by way of Internet. Often he gets a same-day response. Round trip by postal office can run days, or a week or more, especially for overseas correspondence.

Excited by the rapid turnaround of information, researchers at OSU and elsewhere have been hooking up to Internet in droves.

"It's been important here for maybe half a dozen years," said Steven Gordon, the university's associate director for academic computing. "But in the last few years it has become a way of doing business for everybody, from the sciences to the humanities to the arts."

Internet speeds research in many ways, including replacing the common letter. With electronic mail there's no hunt for an envelope or fumbling with a stamp.

But Internet offers much more, including a flow of data from research sites around the world. "If I wanted to find out the properties of a mineral, I can log into a computer and access Cal Tech through a NASA network on the Internet," said Patrick Osmer, chairman of OSU's astronomy department.

"With Internet, we can get data from somewhere else almost instantly and do the work here," he said.

Information exchange from distant points was once quite limited.

"You'd have to go there to do the work," said Osmer, former director of the federally funded Cerro-Totolco Inter-American Observatory in Chile.

The Internet often replaces the phone as well as the mail. "The amount of communication we do would be hundreds of dollars worth of phone (calls) a week," said Darren DePuy, assistant professor of astronomy.

"Today I've talked (via Internet) to one person who's observing in Chile. I talked to another person in Texas about the status of a supernova I worked on several years ago."
FREE-NET WILL OFFER ELECTRONIC ACCESS TO COLUMBUS AND THE WORLD

COLUMBUS -- Sponsors plan to launch the Greater Columbus Free-net in May, opening a new world of electronic mail, electronic discussion groups, and access to computer databases for thousands of people in central Ohio at no charge.

The free-net is a community electronic information service with free access from computer terminals at libraries and schools. People with home computers will dial into the free-net over local telephone lines.

The first free-net was organized in Cleveland in 1986. Its success led to creation of similar services in many major cities across the country, including all of the major cities in Ohio.

Professor Steven I. Gordon, associate director of academic computing at The Ohio State University, has represented Ohio State as the lead organizer of the free-net.

He says the effort has received $65,000 in cash and donated services to purchase the computer hardware and software and telecommunications equipment. He estimates $100,000 annually will be needed to operate the free-net.

Ohio State's Office of Academic Computing and Academic Computing Services will house the free-net equipment and will train community volunteers to operate the system.

E. Gordon Gee, president of Ohio State, is pleased with the progress made toward establishing the Greater Columbus Free-net. "This effort demonstrates the ability of Ohio State and the Columbus community to work together for the benefit of central Ohio," he says. "University faculty and staff have applied their know-how to develop this service as a new community resource that will be supported by and, eventually, operated by the community."

Financial support for the free-net has come from Ameritech, B and B Computer Inc., City of Columbus, The Columbus Dispatch, Columbus Metropolitan Libraries, Franklin County Commissioners, Ohio Department of Development, Ohio State University Hospitals, Ohio Supercomputer Center, PINNACLE Data Systems, Warner Cable Inc., Westerville Public Library and Worthington Public Library.

Steven Gordon expects that many community groups, local
agencies and individuals will contribute information that will be available on the free-net. For example, Ohio State University Hospitals will place public health information on the free-net, while CALLVAC Services will post information about local services to people in need.

Other agencies which will contribute information include all seven public library systems in Franklin County, all the public school districts in Franklin County, Franklin County and Columbus city governments, Metropolitan Human Services Commission, Ohio Historical Society, local chambers of commerce, the WOSU stations and The Columbus Dispatch.

Additional information providers are expected to join as the system develops.

Gordon plans to open the free-net to the public in May. Information on the free-net and registration for electronic mail accounts will be available at the public libraries by May.

Through the free-net, people in Columbus will be able to send and receive electronic mail across the nation and around the world via Internet, a network of government and university computers. Electronic mail also will be exchanged with people subscribing to private computer networks, such as CompuServe.

In addition, access to Internet will permit users to read news, weather, government documents and other information from across the nation and to read information posted by universities and other agencies around the world.

"The Greater Columbus Free-net will expose the people of central Ohio to the kinds of information that will be available on the 'national information superhighway' that President Clinton has proposed," Gordon says.

He notes that school superintendents in Franklin County have each appointed staff members to help organize school participation in the free-net.

"While the free-net will have many educational uses, it also will permit folks to check weather forecasts for travel destinations, to read and exchange information with groups of people sharing the same interests, and to keep up-to-date on what's happening around Columbus. In other words, it will be fun, too."

Those interested in contributing to the free-net or volunteering may contact Gordon at the Office of Academic Computing, 1224 Kinnear Road, Columbus, Ohio 43212; or call 292-4132; or by electronic mail at sgordon+@osu.edu

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Contact: Steven I. Gordon, (614) 292-4132.
ACS extends electronic mail to entire campus

Academic Computing Services (ACS) upgraded its public computing services to provide network access for the entire campus. As a result, all faculty, staff, graduate and undergraduate students have access to electronic mail services and information resources available over SONNET, the campus computer network.

The ability to accommodate everyone on campus is made possible through new computers, added to the group known as MAGNUS, that do not require login accounts. These server computers now offer a total of 10 gigabytes of disk space: Postbox for moving e-mail messages, Gopher for providing access to worldwide electronic information resources, and News-stand for maintaining some 2,500 newsgroups.

Easy-to-use software, called client/server programs, enable campus users to move data from the main machines to their desktop computers for further processing such as reading, editing, replying, or saving files. Client/server provides the environment for relaying data between the user and the rest of the world.

To begin using these electronic services, users can install client programs on their microcomputers in homes and offices or use them in ACS public computer sites. ACS Customer Services in 508 Baker Systems distributes the software. In addition, users need to get their SONNET/Postbox user names, which are easily obtainable on-line in ACS public computing sites, and create a password for their network access. Site assistants and ACS documents are available to help users through the process.

Improvements also were made to the interactive portion of the MAGNUS cluster, so that response times during peak user hours are improved for login account users.

For more information call ACS Customer Service at 292-2444.
More area businesses turning to Free-net

■ Access to Internet, business data drawing customers to free community electronic information service.

By Jim Crowley
For The Dispatch

A free local link to the worldwide computer network is beginning to catch on as a way to move business data.

One idea would even use it to publish proposed state legislation.

It might also help you avoid traffic in the real world. Columbus is posting construction updates on-line.

Everything from state job listings to how to start a small business is available via the Greater Columbus Free-net. The Free-net is a community electronic information service.

It also can connect to Internet, the network of computers connected globally by uniform "addresses."

The Free-net is available by getting a form at any local public library. Subscribers need only a computer with a modem. Free-net offers information from the city, county, state and local libraries, CALLVAC Services and some portions of The Dispatch.

The Free-net appeals to teachers and school students for its no-cost link into Internet and education databases.

But business usage has soared recently because of its worldwide E-mail system as well as other systems and federal databases.

Administrator Steven L. Gordon says the 3,500 users the service has amassed in fewer than two months include a large number of small businesses.

“They are individual accounts, but I know from the return addresses that they are for use by computer stores, corporations, real estate companies and all kinds of small businesses,” said Gordon, associate director of academic computing at Ohio State University. Ohio State oversees the Free-net from its computer center, 1224 Kinnear Rd.

OSU amassed 856,000 in corporate sponsorships and started the Free-net last month.

Free-net someday might be used at the Statehouse to post bills, resolutions, status sheets or procedures. Rep. William Schack, R-Columbus, is talking with Gordon and officials from state departments to see if such a plan would work. "Then it would be up to the computer guys” as to whether the information would be on Free-net or Internet, Schack said.

Free-net is available by dialing 298-7501. Modems can be set at speeds up to 14.4 kbps with eight data bits, one stop bits, no parity.

There also is a "guest" login, with no password, that already has been used more than 9,500 times, according to phone records.

"I've only talked to a few business people directly at this point,” Gordon said. "Most of them have said it's a very valuable service. They have actually made contributions."

Gordon said the Free-net offers a cheap way of sending E-mail and passing information between laptop computers without paying to install a network.

"There are guides to running a small business out on the Internet that you can get to through us,” Gordon said, adding the system provides access to job listings, among other things.

Seven L. Gordon oversees the Free-net at Ohio State University's computer center.

There are also areas where federal government contracts and announcements are posted, he added.

"They can get to some information that was impossible for them to get before," Gordon said.

Jim Crowley may be reached on Free-net by sending e-mail to jcrowley@free.net.columbus.oh.us
Computer merger designed to eliminate cost confusion

By Hui-chung Shee
Lantern staff writer

Computing support services at Ohio State will be merged as a part of university wide restructuring.

Starting July 1st, University Systems and Academic Technology Services will be combined and placed under the Office of Academic Affairs, a university news release said.

University Systems performs university budgeting, purchasing, student enrollment, and personnel record keeping functions. ATS, formerly Academic Computing Services, provides computing support for teaching and research, the release said.

After the consolidation, both University Systems and ATS will report to the senior vice provost and OSU chief information officer Edward J. Ray.

The main purpose of consolidation is to clarify cost confusion between the University Systems policies and ATS policies.

Customers working with both University System and ATS staff are using the same computer, but University Systems has to charge for its services, while ATS provides free computing time to academic researchers, Ray said.

Janet G. Pichette, vice president for business and administration, said each service that people in the university use should be separately priced.

"It would make sense to have one organization that has clearly defined rules of the game the customers have to address or deal with whenever they want to buy computing services." Ray said.

Merging the two units put the strength of the two together and also helped uncover their weaknesses, Pichette said.

A committee of customers who have used both offices, as well as people with expertise in pricing services, will be assembled to work with University Systems and ATS, Ray said.

An outside consultant might also be brought in to rationalize pricing, he said.

The committee is expected to draft a set of guidelines within six to nine months, and make suggestions about boundaries that should be put on the division of hardware and software, Ray said.

These activities will be funded largely from the University Systems and ATS budgets, Ray said.

Later this year, a separate committee chaired by Pichette will review the entire OSU telecommunications network, and come up with recommendations about whether UNITS, SONNET and other telecommunications services should report to the Office of Academic Affairs.

"The integrated telecommunications system owned by the university, UNITS, will continue to report to Business and Administration during this transition year," Pichette said.

Ray said that ultimately all information system operations should be part of one system.

"It's clear that telephone, video, and data transmission are all becoming part of the single comprehensive information delivery system," Ray said.

This change will evolve over many years, but the management structure will be decided in the next year, Pichette said.

"We may need to maintain the current systems (for) three to five years until we can get the new system in place," Pichette said.
Merged ACS, CIR and OAC focuses on support of campus technologies

by Sally Hritz

Welcome to Academic Technology Services, a newly formed service of the former units Academic Computing Services (ACS) and the Center for Instructional Resources (CIR) recently merged into a single organization under Charlie Bender, the director of Academic Computing. The Office of Academic Computing (OMC), which Bender headed since its inception, has been absorbed in the restructuring. (Bender is also an appointee as director of the Ohio Supercomputer Center.)

The former CIR offered academic oriented services: classroom technology support; design and production of print, audio, video and instructional software applications; and consultation on technical and teaching-related services.

The former ACS provided wide-ranging computing support in the service of campus instruction and research. OMC played a liaison role in serving the needs of faculty and student users, primarily in implementing and enhancing ACS services.

It is the goal of the new ATS to continue delivering these services in a more integrated and effective manner, and with a renewed emphasis on customer support.

Last fall Bender announced his plan to combine the three units. A consulting firm was called in and subsequently, a new management team was designated, made up of two senior associate directors and five associate directors. The overall number of directors was reduced from 15 to eight.

Bender says he's set a goal to "connect the campus. I want every administrative unit to have a SONNET connection. It's priority one." He feels that Sonnet, which ACS introduced last year to provide network connections away from campus, and OfficeNet, which is now being phased in for campus office use, will have a profound impact on the new organization's ability to serve more people efficiently.

If he could turn up the goals of the new organization in one phrase, he said it would be to "empower the user." He added that "we can't do it on a one-on-one basis, because there are thousands of end-users on campus. But we have to be customer oriented, not resource oriented."

Both Art Kramees and Chuck Moon-Jones, the new senior associate directors, agree. Specifically, they want Academic Technology Services to provide an even stronger and more integrated technology infrastructure, to improve customer service, to more adequately support the design and development of needed applications, and to put new emphasis on evaluating and recommending emerging technologies.

Kramees says that one of the missions of the new organization is to be more productive and responsive to faculty, staff, and students by delivering quality service. "We want to be more customer oriented," states Moon-Jones. "With two senior associate directors, each can be more involved in operations that involve customer contact. If the customer..."

Introducing the new team

Alan Allenhurst, Customer Support Services

The new division consists of customer services, site licensing, education and training, consultation, and computing support for ATS staff. Our mission is to provide computing support to faculty, staff, and students to help them identify and implement new systems and technologies. We provide this support through customer service hotlines, comprehensive computer support, site license negotiating, and training programs. We monitor and assess the needs of the campus on an ongoing basis to continue to provide timely and appropriate assistance to the campus community.

Kathleen Davie, Media Applications Development

The new division was formed through the merger of the instructional technology unit, the courseware support and multimedia lab, and the publications group to provide professional multimedia production services. Video and television services and support for teleconferences, design, development, and production of multimedia presentations, interactive coursework, and instructional and informational uses of the Internet are now a part of the new division.

Doug Kariel, Networking and Communications

This division encompasses networking and is responsible for maintaining and updating the SONNET campus computer network and its dial-in modem banks, researching and developing new network applications, managing and developing the HomeNet and OfficeNet projects, and formulating a network security strategy.

Pat Ratz, Information and Computing Systems Support

This division encompasses information systems, large-scale computing, database services, and campuswide customer information and data services. The services are currently offered on the MAGNUS and MVS systems. The staff provides technical support for electronic information exchange, storage, and retrieval services, large-scale computing and related services and database and other software services for querying, managing, and reporting technology resources and customer information.

Mike Veres, Classroom Support and Public Computing Sites

By reconfiguring the public computing sites and the classroom support sites into a new division, we are able to strengthen the support of teaching and learning in these areas providing, maintaining, and enhancing classroom and computing facilities, providing guidance in the effective use of technology in the instructional process, and assessing the needs of faculty and students for these services and using the information to design and operate an accessible and responsive division.

ATS in a new package

For those of you familiar with the ACS off-ice newsletter and to new readers, welcome to ATS Update, a report of news and activities at Academic Technology Services. ATS will be publishing Update quarterly on campus with the intention of providing a more cost-effective method of communicating with faculty and staff.

Have any concerns, they can contact either of us or any of the management team.

To improve general customer support, they intend to revamp the customer interface. One idea is to create a single point of contact such as a help desk, which will become more important as technologies become more complex and services cover many areas of expertise. However, the management team doesn't plan to change current methods of contact without giving plenty of notice to customers.

They also want the new organization to start building a knowledge base so that problems and their solutions are kept online. Moon-Jones notes that "as the database grows, the power of our experts is increased, because other consultants have access to the experts' knowledge." Problem tracking and resolution are also important additions to the services of the new organization, ensuring that there's always a staff person accountable for solving a problem.

How do they view the new organization's role in technology assessment? Moon-Jones notes that both administration and faculty have shown increasing interest in technology assessment, but that the decentralization of computing and related technologies means that someone needs to be evaluating and creating standards. "We're working on ways to provide technology assessment that is useful to all campus offices," he says, "including that of the Chief Information Officer." We are a service organization," adds Kramees, "but we also want to play a leadership role in helping the university to focus on the most pertinent topics and to change and grow. The Chief Information Officer will be identifying the needs of the campus, but it should be a two-way street. We can offer suggestions to the campus. When the campus decides, we can help implement it."

"Overall, we shouldn't try to take on too many projects so that quality begins to suffer," Kramees says. "It's critical that we listen to campus and ask the right kind of questions before adding new services or eliminating old ones. We have let technology drive us, not catching our attention like a shiny new toy. Priorities need to be set in a clear way; for example, Script on MVS may not be an option to support any longer. We need to decide that every service is going to be the most efficient it can be, and commit to it, or choose a new one that's more appropriate.

ACS, CIR, and OAC have taken the first steps toward these goals by combining their expertise, resources, and energies. Academic Technology Services welcomes your input in helping us to provide better, more integrated service to the university community in all the areas outlined above.

ATS Update is a quarterly publication of Academic Technology Services at The Ohio State University. Please send questions or comments to Sally Hritz, editor, at britz@medula or call 292-1984.

Design by Cindy Gray and Mango Garcia-Hunter.
HomeNet for Windows, OfficeNet released

by Sally Hertz

At the start of fall quarter, ATS began distributing OfficeNet for DOS and Macintosh, and on October 1, it will introduce the long-awaited HomeNet for Windows. OfficeNet for Windows is expected soon. HomeNet and OfficeNet include client programs that make it easy to e-mail, read newsgroups, log in to computers, and do a variety of other tasks.

HomeNet enables you to connect to the SONNET campus network and to the Internet with a modem. The advanced software allows you to use a standard modem for transferring files and running remote programs.

OfficeNet provides a service for campus offices with direct connections to SONNET.

ATS news briefs

Classroom Support and Public Computing Sites

- 111 Cols Hall has been upgraded with 20 Macintosh Powerbooks.
- Six new PowerMacintosh models 7100s have been installed in 110 Health Science.
- All Windows-capable machines in labs have been upgraded to the Windows-based communications programs included in HomeNet and OfficeNet. Formerly they ran DOS-based programs.
- Two auditorium classrooms, rooms 100 Botany and Zoology and 100 Happeny Hall, now have permanent large screen video display projection and supporting computer and video equipment. (You can get more information about these and other video displays from Classroom Support, 1113 LeConte Hall, phone 292-1111.)

Customer Support Services

- The staff has been working on the expected demand for e-mail and Internet news services available through HomeNet and OfficeNet, as well as the new Windows-based communications programs. In addition, we are increasing phone consultation (292-1111) from 8 a.m. to 9 p.m. Monday through Thursday and 8 a.m. to 6 p.m. Friday, effective October 1.
- Walk-in consultations at 111 Baker Systems is still 10 a.m. to 6 p.m., Monday through Friday.
- The ATS Computing Library was moved to 513 Baker Systems recently. The move places it next door to other public access services such as the ATM and customer service. The library provides a variety of computing documentation and publications for campus computer users.

Information and Computing Systems Support

- All new MAGNUS accounts issued to OSU faculty, staff, and students are now e-mail capable. In addition, student staff to help handle HomeNet/OfficeNet questions. We are also increasing phone consultation (292-1111) from 8 a.m. to 9 p.m. Monday through Thursday and 8 a.m. to 6 p.m. Friday, effective October 1.
- Walk-in consultations at 111 Baker Systems is still 10 a.m. to 6 p.m., Monday through Friday. The ATS Computing Library was moved to 513 Baker Systems recently. The move places it next door to other public access services such as the ATM and customer service. The library provides a variety of computing documentation and publications for campus computer users.

Media Applications Development

The "hands-on" Multimedia Graphics Lab, previously located in 512 Baker Systems, has been moved to 506 LeConte Hall and integrated with the professional media and computer services development. The facility offers students, staff, and users with access to a complete range of multimedia capabilities, including digital video, graphics, audio, video, and multimedia production equipment. Lab hours are 10 a.m. to 7 p.m., Monday through Thursday and 10 a.m. to 5 p.m. on Fridays. Call 292-0312 to receive the time on the microphone, or 292-9690 if it would rather have these materials designed and printed for you.

Networking and Communications

The modem pool for HomeNet will be increased to 256 modems, the same current 160, thanks to support from the Office of Academic Affairs. As an added bonus, the new modems will be equipped to handle 28,800 bps in contrast to the current top speed of 14,400 bps. This speed improvement will mean better performance for those updating large files (like running special applications that generate subnetwork traffic).

Converting MVS and MAGNUS mail to NUPop and Eudora

by Cindy Zimmermann

If you presently are using TSO Mail on the MVS system or one of the e-mail programs on MAGNUS and want to begin using a standard e-mail program on your own personal computer, you can easily make the change. TSO Mail has devised a simple conversion program, described below, to help move your e-mail message files and any personal files you may have on your personal computer without fear of losing them.

TSO Mail. If you are a TSO Mail user and decide to convert to a client program, you must get a user name on Unix, which is where your e-mail will be sent, and you need to request that the Customer Services Division updates your Unix e-mail forwarding address to show your new mail server. If you have a MAGNUS user name, then you don't need one for Unix, but you still have to update your forwarding address. You can find your TSO Mail address and name your own old Unix forwarding address from the on-line program on MAGNUS (choose OSU Colleges and Department/ Academic Technology Services/Help Desk). To update your forwarding address, please ask for an ATSCS Document 4111-12, TSO to Unix E-mail Conversion Guide, available from the ATSCS Computing Library (512 Baker Systems 292-6548) and online at OASIS via Gopher.

MAGNUS Mail. For mail programs on MAGNUS such as Elm, Pico, Mail Manager (Unix), or Berkeley mail, the conversion procedure is called CONVMAIL. It changes your aliases (nicknames) file so that it can be downloaded for use with NUPop or Eudora. You do not need to do anything to your message files; you can transfer them directly to your desktop computer and then import them from within your client program. Please refer to ATSCS Document 4021-02, MAGNUS to E-mail Conversion Guide.
ATS offers sites, services, classes

Academic Technology Services (ATS) maintains numerous computing sites around the Columbus campus, and most can be reserved by faculty for classroom instruction.

The computing labs are equipped with IBM PCs and compatibles and Macintoshes; popular word processing, spreadsheet and database software; and network access to other computers. For more information or to reserve a computing lab, call Sue Koval at 292-0608.

A special tutorial loan service is available to administrators who are responsible for providing computing assistance to faculty and staff within their colleges or departments. This service enables administrators to borrow videotapes, audiotapes and disk-based tutorials by special request, and to circulate the tutorial training throughout their departments. Administrators with proper identification may call ATS at 292-7209 and make arrangements to use tutorials.

ATS is offering a variety of computing courses winter quarter, from novice classes, multimedia applications and statistical tools to learning about the Cray supercomputer. For information, call 292-7209.
Improved computing tools: a new ball game

by Sally Hertz

What is it people really want from their computers? Simple tasks to get their jobs done, "believes Art Kram, senior associate director of Academic Technology Services. "Those of us who work in computing sometimes forget that for most people, computers are just an aid in an end unto itself. It is merely an tooled appliance to reach some other goal." The Software Toolkit, Software for word processing, spreadsheets, and the like play a critical role in improving the productivity and efficiency of classroom, research, and office tasks. These tools enable faculty, staff, and students to create research papers, class assignments, homework, dissertations, reports, letters, and memos. Most people know how to use the software they need to complete these tasks.

On the other hand, communications tools on computer networks are a mystery to many. Every day you hear more about the Internet, that global web of linked computer networks of which SUNNET, our campus network, is part. The Internet, we hear, offers a wide array of information waiting to be discovered along its byways and backroads. And it's free.

Computer networking is here to stay and resources in your office can ease the daily tasks, especially in a university setting where new tools, collaboration and personal communication are vital to instructors, researchers, staff, and students. And yet until recently, the software tools for tapping these network resources have been rudimentary and painfully secure. Nothing had changed for 20 years. To connect to the network, you had to log into a host computer and use its primitive interface. It didn't matter whether you were using a Windows PC, a Macintosh, or a Silicon Graphics workstation. Suddenly your desktop system has been transformed into a simple terminal, the mouse didn't exist and you had just one font: "terminal." You had no memorization of single-letter commands; you were locked in connecting to the network and finding the information you wanted, retrieving it only moved the information to your host computer. You still had the oft-dreaded task of transferring it to your desktop system.

A bit of jargon: A new genre of software called "client/server" addresses these problems. You don't need to know what that phrase means, just that this new generation of communication tools eliminates the "middleman." At last your PC or Mac can communicate directly with remote services without first pretending it is a terminal and connecting to a host system. With client/server software, your mouse works as it should, familiar pull-down menus replace alias single-letter commands, and text is displayed fully formatted. And when you retrieve information from the Internet, it is really on your desktop system where it can be copied, cut, and pasted into your word processor, spreadsheet or database. Client/server tools make Internet access a whole new ball game with tools for all the common communication tasks sending electronic mail, participating in discussion groups, and accessing information systems like OASIS.

What can client/server do for you? Let's get specific. Imagine typing a quick message using a client e-mail program on your PC or Mac and, with the click of a mouse, sending it to the other side of the world in a matter of seconds. Imagine before you send that message, clicking in a single stored word processing document, perhaps your latest grant proposal. That document is sent along with your message. Your colleague receives that document in its original form, complete with multiple fonts, tables and images.

In addition to sending e-mail, perhaps you'd like to contribute to the latest on-line discussion in your field of expertise or scan the news of the day or read announcements passed by other staff. Just use a "news-reader" client to scroll through a list of discussion topics and read messages delivered to your screen. If you would like to print a message, use the print option on the menu. Or paste the message into a database of similar messages you maintain.

Perhaps you want to retrieve and save an on-line journal article that's available on a computer somewhere on the Internet. Open a "surfing" client program and point and click. Other goes where you send it in the Internet is bringing the file back. If you are not sure where the journal is located, you can do a keyword search on its name.

So far we've talked primarily about text information. But the Internet is moving forward into areas where the old host system had never ventured. New client tools can provide you with access to fully formatted documents with graphics, sound and moving images. These developers of these resources call this Internet service the "World Wide Web" (WWW). Special client tools such as Mosaic and Netscape access pages through your desktop computer. "I think its spectacular," says Kram, "that you can double-click with your mouse and retrieve a document in its original form with all the graphics and layout intact.

In effect, client/server tools have democratized the Internet, and all of us can be equal players. Thousands of sites, including colleges, universities, government offices, corporations, and research and nonprofit institutions, reverse the Internet flows. More and more, these organizations are turning to client/server tools to ease communication and improve productivity. OSU is moving quickly to this model as well. More than half the accounts OASIS provides today are for client/server.

The economic factor: It looks like client/server tools offer dramatic benefits to users, but there are economic concerns as well. OSU must service the computing needs of thousands of potential users on one of the largest campuses in the country. Many students arrive at college with computers, and most faculty and staff use desktop computers in campus offices. "Client/server software takes advantage of the computing power on users' desktops and reduces demand on central processing units," says Kram, "and is able to meet the demands of OASIS's massive scale. It is simply foolish to have a huge system keeping track of the cursor on the screens of hundreds of users when their desktop systems are capable of doing that on their own. It would be difficult and perhaps impossible to try to meet OASIS's ever-increasing computing demands by increasing the disk space and power of central computers. When you look at the options, client/server is the only realistic way to provide better computing tools to the university."

How to get it? AT has packaged a set of client software tools in easy-to-install and use packages called HomeNet and OfficeNet. The only difference between them is that HomeNet is designed for you to dial into the Internet from home. You need a microcomputer and external modem to use it. OfficeNet is for campus use, so you have to have your desktop computer directly linked to SUNNET. HomeNet and OfficeNet are for sale at both locations of the University Bookstore for $4 per package. If you have questions or need assistance, please call AT Consultation Services at 292-3444.

New e-mail policy

Academic Technology Services recently revised the electronic mail policy for users of mail service. This policy applies to anyone who uses e-mail client programs such as Eudora, and NUPuf and those who log in to MAGNUM and use mail commands such as eft, pipe, and mail. The faculty advisory committee on research and instructional computing has reviewed and approved the policy, which is aimed at ensuring equitable service to everyone.

The terms of the new policy are listed below. Everyone using Eudora, NUPuf or other client mail programs are encouraged to save messages on their own computers rather than on the server; thus, pipe, send, and other mail users should save their messages as files on MAGNUM or download them to their computers.

People away from campus during summer quarter or for any other extended period of time are encouraged to unsubscribe from automated mailing lists during their absence. Failure to do so has left some users with collections of electronic mail that are too large for any of the mailing-list programs to handle.

The complete text of the new mail policy is available on OASIS under OSU Colleges and Departments/Academic Technology Services/ATS Policies/Mail Use Policy.

New E-mail Policy

- Electronic mail only for messages less than 2000 characters.
- All mail will be deleted from users' incoming mail areas.
- Users will not exceed 8000 lines of incoming mail.
- The system will automatically reduce mail files that exceed user's mail file limit of one megabyte of disk space by removing previously received mail in the order of oldest first.
- If necessary, mail fewer than 60 days old may be removed to keep each user's space under the limit.
- No unread mail will be removed until it is more than 60 days old.
- Mail removal processing will be suspended during summer quarter and restarted after the second Friday of the following fall quarter.

ATS Update is a quarterly publication of Academic Technology Services at The Ohio State University. Please send questions or comments to Sally Hertz, editor, at hertz@osu.edu or call 292-5904.
Choose modes wisely

Internal modems a problem for HomeNet

by Sally Hiltz and Jerry Martin

Internal modems for DOS-based computers are cheaper than the external models but not as easy to use as the external models. However, the HomeNet modems are compatible with DOS and Windows computers. What is important is that these modems are compatible with the HomeNet modem.

Modems are available through different manufacturers, and you can find a modem that meets your needs.

Other Problems

Modems and modems are not as easy to use as external modems. However, they are compatible with DOS and Windows computers.

Getting Help

If you have a problem with your modem, you can contact the manufacturer for help.

Films and videos aid instruction

The Classroom Support group at the University of Pennsylvania is developing video instruction for students. They have developed videos for use in the classroom and for use at home.

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Buckeye Access: cooperative project for database access

Buckeye Access is a cooperative project for database access at The Ohio State University. It is being developed by a team of computer scientists and engineers who are working on a new system called Buckeye Access. The system is designed to provide users with secure and convenient access to university databases.

The Buckeye Access team is working closely with the Ohio State University Libraries to develop a system that will allow users to search and access a wide range of databases. The system is designed to be user-friendly and will provide users with real-time access to the latest information.

The Buckeye Access system is currently being tested and will be rolled out to the university community in the near future. Users will be able to access the system through a web interface, and will be able to search and retrieve information from a variety of databases.

The Buckeye Access team is committed to providing a high-quality service and will continue to work with the university community to improve the system and meet the needs of its users.

OSU calendar on OASIS

OASIS (Ohio State University's information system) is a powerful tool for managing appointments, events, and other important information. The system is easy to use and allows users to schedule and manage their calendars with ease.

Here are some tips for using OASIS:

1. To view your calendar, log in to OASIS and click on the "Calendar" link. You can then view your appointments and events.
2. To create a new appointment or event, click on the "New" button and enter the details of the event.
3. To edit an existing appointment or event, click on the "Edit" button and make any necessary changes.
4. To delete an appointment or event, click on the "Delete" button and confirm the deletion.
5. To send an email to another user, click on the "Send" button and enter the recipient's email address.
6. To export your calendar to another program, click on the "Export" button and select the format you want to use.

OASIS is used by students, faculty, and staff throughout the university to manage their schedules and stay organized. It is an essential tool for anyone who needs to keep track of important events and appointments.
WWW and home pages

For OSU departments, colleges, and student organizations

1. Creating a departmental home page
You create a home page using HTML (hypertext markup language), a programming language more akin to a scripting language than a programming one. HTML is executed by a browser, which renders the HTML content using a set of rules outlined in a style sheet, such as a CSS file.

For example, the OSU home page title in HTML code looks like this:

```html
<title>Welcome to OSU Home Page</title>
```

2. Making the home page accessible
Accessibility at OSU is a priority. To ensure your home page is accessible, use ARIA (Accessible Rich Internet Applications) to make content more accessible for users with disabilities. ARIA is a set of HTML attributes that describe the semantics of a page beyond the basic structure.

3. The URL
Once you have a home page and a server to put it on, you need to tell people where to find it. To make this happen, register your domain name and configure your server to support the DNS (domain name system) protocol.

Network applications for e-mail, groupware, newsgroups, voice, and video are all based on the same underlying protocols and network services. Updated software includes Netscape for browsing on the World Wide Web, Acrobat Reader for viewing and printing other documents, and other utilities for managing your e-mail and newsgroup subscriptions. Updated software includes Netscape for browsing on the World Wide Web, Acrobat Reader for viewing and printing other documents, and other utilities for managing your e-mail and newsgroup subscriptions.