Its That Time Again!
By Dr. Paul Gandel, Senior Director of Academic Computing (gandel@unt.edu)

Welcome to a new academic year at North Texas. All of us at the Computing Center are committed to making your year as productive and enjoyable as possible.

In our continuing efforts to improve your computing environment, a number of changes have occurred over the past year. These improvements are based on our central mission: To provide computing services that meet your needs, and do so at a reasonable cost.

Here's what's new....

Campus-wide information systems. Over the past year we've continued to work on improving the tools you use for accessing information. By now, I hope most of you are familiar with our Gopher, a system that provides easy access to a wide variety of information on campus and around the world. Since its implementation in June 1993, use of Gopher has increased rapidly. This July alone, there were more than 90,000 transactions on the system.

More information is constantly being added to our Gopher system and we're always refining how it works. Last year, we added a Windows-based Gopher that

Please see Fall94 on page 3.
UNT COMPUTING CENTER ORGANIZATION AND FACILITIES

Computing Center Support Services are available in the Information Sciences Building (ISB), Room 119; phone: (817) 565-2324 (TDI 1-800-RELAY-TX). You can contact Support Services via e-mail at HELPDESK (WO), #CS1 HELPDESK (P-Mail), or HELPDESK @ UNTEDU (the Internet). Computing Center serviced divisions:

- Academic Computing Services:
  - Documention Services
  - ISB 110 General Access Lab (817) 565-3048
  - Mainframe User Services
  - Research and Statistical Support Services
  - VAX/UNIX Systems (817) 565-4161

- Mainframe Technical Services:
  - IBM Operating Systems Software Support
  - Computer Operations

- Administrative Computing:
  - Admissions Data Systems
  - Database/Center Programming Support
  - General Data Systems
  - NT/UNTHSC Fiscal Data Systems
  - NT/UNTHSC Payroll/Personnel Data Systems
  - Student Records Data Systems
  - Student Services Data Systems
  - Voice Response Applications

- Network & Microcomputer Services:
  - Data Communications
  - Microcomputer Application Support
  - Network Systems Support

CONNECTING TO UNT COMPUTERS

Phone numbers for accessing UNT computing systems:

300-2400 BAUD: (817) 565-3000
2400-14,400 BAUD: (817) 565-3998
300-9600 BAUD: (817) 565-3461 ISDN protocol ONLY
2400-14,400 BAUD: DFW METRO 792-4140

Area code 214 must dial 917 before the METRO #, see note to the right.

ACS Host Systems

<table>
<thead>
<tr>
<th>Host System</th>
<th>Local Phone Lines</th>
<th>METRO Lines (UNTMODEM prompt)</th>
<th>INTERNET (CUTCP, NCSA)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Academic Mainframe</td>
<td>565-3998</td>
<td>type: CALL VM3270</td>
<td>type: CONNECT VM3270 or VM3271, VM3272, VM3273</td>
</tr>
<tr>
<td>VAX (VMX)</td>
<td>565-3300 (# prompt)</td>
<td>type: CONNECT DEC</td>
<td>telnet vax.acs.unt.edu</td>
</tr>
<tr>
<td>Sol (UNIX)</td>
<td></td>
<td>type: CALL DEC</td>
<td>telnet sol.acs.unt.edu</td>
</tr>
<tr>
<td>Jove (UNIX)</td>
<td></td>
<td>type: CALL JIVE</td>
<td>telnet jove.acs.unt.edu</td>
</tr>
<tr>
<td>Gopher [dedicated Gopher Server]</td>
<td></td>
<td>type: CALL Gopher</td>
<td>telnet gopher.acs.unt.edu</td>
</tr>
<tr>
<td>Departmental Systems</td>
<td></td>
<td>type: CALL PONDER</td>
<td>telnet pender.acs.unt.edu</td>
</tr>
<tr>
<td>UNT Libraries' on-line catalog</td>
<td></td>
<td>type: CALL LIBRARY</td>
<td>telnet library.unt.edu</td>
</tr>
</tbody>
</table>

Note: Dialing 1 before the area code will result in a long-distance charge. Set Data Bits to 8, No Parity, Stop Bits to 1. Except on the 3300 line when CALLING VM3270, where Data Bits are set to 7, Parity to S, and Stop Bits to 1. When dialing in, the autoanswer feature requires you to hit the RETURN key repeatedly after the connection is made so that the receiving modem can determine the baud rate. When you see the prompt or the UNTMODEM (or # prompt) you can do the following to connect with the system of your choice.

To exit from the local phone lines, press <ESCAPE><RETURN>. Type DONE (at the # prompt), press <RETURN>. To exit from the metro lines, press <CTRL-SHIFT-6>, type DISCONNECT (at the UNTMODEM prompt), press <RETURN>. Exiting from telnet or TN3270 is dependent upon the package. CUTCP uses <ALT-X>.

HOURS FOR UNIVERSITY OF NORTH TEXAS COMPUTER ACCESS AREAS: Fall 1994

<table>
<thead>
<tr>
<th>Day of Week</th>
<th>Willis</th>
<th>BA</th>
<th>ISB 110</th>
<th>Chilton 253</th>
<th>Chilton 116</th>
<th>GAB 330, Wooten</th>
<th>Matthews</th>
<th>Music</th>
<th>GAB 550, Tarrant</th>
<th>ISB 205C</th>
<th>ISB 205C (130A)</th>
<th>Lab Locations</th>
</tr>
</thead>
<tbody>
<tr>
<td>Monday-Tuesday</td>
<td>Open 24 hrs.</td>
<td>8 am-10 pm</td>
<td>8 am-10 pm</td>
<td>8 am-10 pm</td>
<td>8 am-10 pm</td>
<td>8 am-10 pm</td>
<td>8 am-10 pm</td>
<td>8 am-10 pm</td>
<td>8 am-10 pm</td>
<td>10 am-10 pm</td>
<td>Open 24 hrs.</td>
<td>BA: 330, 332, 116 (Adaptive Lab), 1007, 220, 134, 120</td>
</tr>
<tr>
<td>Wednesday-Thursday</td>
<td>Open 24 hrs.</td>
<td>8 am-10 pm</td>
<td>8 am-10 pm</td>
<td>8 am-10 pm</td>
<td>8 am-10 pm</td>
<td>8 am-10 pm</td>
<td>8 am-10 pm</td>
<td>8 am-10 pm</td>
<td>8 am-10 pm</td>
<td>10 am-10 pm</td>
<td>Open 24 hrs.</td>
<td>Chilton 255, 220</td>
</tr>
<tr>
<td>Friday</td>
<td>Open 24 hrs.</td>
<td>8 am-10 pm</td>
<td>8 am-10 pm</td>
<td>8 am-10 pm</td>
<td>8 am-10 pm</td>
<td>8 am-10 pm</td>
<td>8 am-10 pm</td>
<td>8 am-10 pm</td>
<td>8 am-10 pm</td>
<td>10 am-10 pm</td>
<td>Open 24 hrs.</td>
<td>GAB: 330, 550, 110, 205C, Matthews 309, 1007, 134, 120</td>
</tr>
<tr>
<td>Saturday</td>
<td>Open 24 hrs.</td>
<td>8 am-10 pm</td>
<td>8 am-10 pm</td>
<td>10 am-10 pm</td>
<td>10 am-10 pm</td>
<td>10 am-10 pm</td>
<td>10 am-10 pm</td>
<td>10 am-10 pm</td>
<td>10 am-10 pm</td>
<td>Closed</td>
<td>Open 24 hrs.</td>
<td>Wooten 116, 120</td>
</tr>
<tr>
<td>Sunday</td>
<td>Open 24 hrs.</td>
<td>Noon-MN</td>
<td>1-10 pm</td>
<td>1-10 pm</td>
<td>Noon-MN</td>
<td>1-10 pm</td>
<td>1-10 pm</td>
<td>Noon-MN</td>
<td>Closed</td>
<td>1-8 pm</td>
<td>Noon-MN</td>
<td></td>
</tr>
</tbody>
</table>

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Two recent installations have put us well on our way to faster and more reliable connections from off-campus—a bank of new high-speed modems (14.4 bps) and the replacement of an old terminal server.

Networking. Many of our efforts over the past two years have focused on expanding our networking capabilities. With most of the major on-campus wiring projects completed, we’re now concentrating on improving access to computing resources from off-campus via telephone lines. Two recent installations have put us well on our way to faster and more reliable connections from off-campus—a bank of new high-speed modems (14.4 bps) and the replacement of an old terminal server.

We’re also working on providing point-to-point protocol (PPP) access from off-campus via telephone lines. PPP access will enable you to connect directly to the Internet from home through a high-speed modem. Essentially, this will allow your home PC to be a remote node on our Internet backbone.

UNIX Systems. To meet the constantly increasing demand for UNIX computing, we’ve added a new SUN SPARC Center 1000 to our cluster of UNIX host machines. This new machine came with two processors, but can be upgraded to 16 processors. The SUN SPARC increases our UNIX capability by 35%.

We’re also in the process of implementing an automated system for creating login IDs for users of our UNIX systems. When in place, this system will allow any student, faculty, or staff member of the University to request and generate a UNIX account from any terminal or PC connected to our campus network.
Other Projects. In addition to the improvements described above, we're working on: an automated menu system for accessing student information, an improved online problem notification system, a possible upgrade of our academic mainframe system, and a directory service that will provide a unified database for all logon IDs on all systems as well as for E-Mail.

A Challenging Future

That's an update of what's been happening in the academic computing environment. As we begin the new year, it's also important to look at the challenges ahead. The nice thing about information technology is that there never seems to be a lack of challenges to look forward to. Of course, that's also the downside of information technology—too much of a good thing.

The challenge for us this year continues to be how best to develop the technology and services that meet your evolving computing and networking needs most effectively. Our strategy is to keep the computing environment as varied and as flexible as possible so that we can take advantage of technological improvements as quickly as they arise. We realize, however, that technological improvements are only as good as your ability to get up and running with them as little hassle as possible. With this in mind, we're striving for a "seamless" computing environment where you, the user, will feel the added resource power of new technologies without having to hassle with a bunch of new operating procedures.

The idea of a seamless computing environment is not a new concept; it's a vision that has been espoused by many computing professionals for a long time. Unfortunately, it's a vision that is often misunderstood. So, what is a "seamless" computing environment anyway?

Seamless basically means that although we provide information technology services through more than one underlying system, this should be either undetectable or irrelevant to you. It means that while we don't expect one system to meet the needs of all users, we want to ensure that the boundaries between systems are not impediments to their use or the sharing of information. Of course, we realize that all our technology strategies are subordinate to our most important goal—providing quality computing and networking services that meet your needs.

Meeting your changing computing needs with new technologies that make your interactions with the academic computing environment as simple and hassle-free as possible is our continuing goal. We hope that the improvements we've made over the past year are evidence of our commitment to you. As the 1994-95 year progresses, please feel free to contact me with any ideas or concerns. My door is always open.

You can contact Dr. Gandel via E-mail at gandel@unt.edu (Internet), CC1:Gandel (WPO) or telephone at 565-3834.

What You Really, Really, Really Need to Know About Computing at UNT

By Douglas Bateman, Computing Center Support Assistant (dbateman@unt.edu) with contributions by Long Nguyen and David Wright, Computing Center Support Assistants

565-2324

Memorize it!  565-2324.
Learn it!  565-2324.
Don't leave your keyboard without it!
That's 5-6-5-2-3-2-4.

So what is it?

This is the telephone number of the UNT Computing Center Support Services, also known as the Helpdesk. Our mission is to provide support to all faculty, staff, and students at UNT who have any questions and/or problems of any sort concerning computing at UNT.

What kind of support?

- Answers.
- Solutions.
- Assistance.
- Hand-holding...well, not quite.

To give you some idea of the types of support we provide, and to answer some of the commonly asked questions we hear at the Helpdesk, I'm going to use a "question and answer" format. This format is commonly used on the Internet where it is known as a FAQ, i.e. a list of Frequently Asked Questions (with Answers).
1.0 General Questions

1.1 Q: How do I get in touch with you?
   A: Did you by any chance skip the first paragraph?!??!
   Seriously, there are several ways to contact us:
   1. Yell really loud.
   2. Call us at (817)565-2324.
   3. If you’re not having a problem using electronic mail you can send us E-Mail addressed to:
      Internet address: helpdesk@unt.edu
      Pegasus Mail: #cel1helpdesk
      WordPerfect Office Mail: helpdesk
   4. Drop by our office in the Information Science Building (ISB), Room 119. We’re open Mon-Fri, 7am-6pm. No appointment necessary.

1.2 Q: I have a question about ___________. (Or, where to look first.)
   A: First take a look at the inside cover of each issue of Benchmarks.
   There is a LOT of valuable information contained on that page, and it is virtually guaranteed to be accurate and up to date. You might want to actually read some of the articles, too. Benchmarks is a bimonthly newsletter published by the Computing Center that is available at several locations around campus, including our office. Each issue includes an order form on the back cover for a free subscription.

   While thumbing through Benchmarks, you may run across a list of Short Courses we offer. These are noncredit (and free!) courses that are conducted every semester and are designed to provide an introduction to, or an overview of, a variety of computing topics. Each course is typically offered on several different dates, to make it easier to work into your schedule, and lasts for about 2-4 hours. The Short Courses are terrific opportunities to get hands-on, personalized instruction in areas of computing that aren’t taught anywhere else. Highly recommended.

   You’ll also want to take a look through the handouts that we provide. During our business hours we keep the most popular handouts in a display case outside the Computing Center’s main entrance. I’d recommend starting with the ever-popular “Welcome to the UNT Computing Center.” If you can’t find what you are looking for, or aren’t sure what you should be looking for, feel free to come in and ask one of us. We’ve got lots more handouts inside.

   At any point in time, feel free to contact us. (See the answer to question 1.1.)

1.3 Q: What kinds of computers do you have at UNT?
   A: The smile answer is “every kind.” The accurate answer is “every kind.”

   However, in the arena of personal computers, UNT is oriented predominantly to IBM PC-compatibles. Apple Macintosh and PowerMac computers are currently rising rapidly in numbers, however. There are also some NeXT systems, Amigas, and probably others; but their numbers are too few to have a dramatic impact on campus. We also have some mainframes and super-minis, but you can read about those in our handouts.

Please see FAQ on page 7.
### General Access Computer Labs Policies

Adopted February 4, 1992 by the General Access Lab Committee, Cengiz Capan, Chair

#### Mission of General Access Labs

General Access Labs are created (1) to provide computing access to all UNT students, and (2) to establish and strengthen college-wide support structures.

#### Admission into General Access Labs

The General Access Labs are supported and maintained primarily by student computer service fees and are available for use by current UNT students in support of their academic programs. A valid UNT ID is required for admission into any General Access Lab.

Use by UNT faculty and staff will be accommodated on a space-available basis. A valid UNT ID is required for admission into any General Access Lab.

All others desiring use of General Access Labs should direct requests to the appropriate College Lab Coordinator.

#### Operating Hours

General Access Labs should be open a minimum of 85 hours a week.

Exact hours will be reflected in the current semester's General Access Labs brochure.

Hours for the upcoming semester will be determined by midterm of the current semester.

General Access Labs will be open on all days that classes are held. Early closings (such as the day before Spring Break, Thanksgiving, etc.) and holiday hours (such as during Spring Break) must be posted at least one week in advance.

#### Lab Reservations

- Reservations for orientations, workshops, hands-on demonstrations, etc.

In general, orientations, workshops, demonstrations, etc. held in the General Access Labs are discouraged after the first few weeks of the semester due to the high use of the labs by individual students.

Reservations will be granted at the discretion of the lab manager.

After the third week of class in any long semester, or the first week of class in any summer term, the total reservation time must not exceed 15% (for 100% of computers) of the total time the lab is open per week. For example, if a computer lab has 60 computers and is open 75 hours/week, the maximum number of hours that all 60 computers could be reserved is 11.25 hours/week. Alternatively, that same lab could allow only 30 computers to be reserved for a total of 22.5 hours/week.

Reservation requests for a General Access Lab area may be made only by faculty, TAs, and TP's of that lab's supporting college(s) and/or school(s). For example, an instructor from the College of Business Administration (COBA) may re-
quest to reserve a COBA General Access Lab, but not an Arts & Sciences General Access Lab.

The General Access Labs located in the libraries may not be reserved except by their own staff. These labs will be kept open as much as possible.

- **Individual Computer Reservations**

  The only computers which may be reserved are those which are “one-of-a-kind,” in that they are configured differently than the rest of the lab computers. For example, if there is only one computer to which a plotter is attached, that computer may be reserved.

- **Staffing of Labs**

  - **Lab Manager**

    Every General Access Lab should have a full-time position for its Lab Manager. The Lab Manager is ultimately responsible for hiring, training, scheduling, and supervising lab monitors and managing the lab network.

  - **Lab Monitors**

    Lab monitors will be on duty at all times in each General Access Lab area staffed at a level appropriate for level and demand. Job descriptions, pay scales, skills requirements, training programs, and hiring and promotion procedures will be as consistent as possible between labs. All monitors will wear picture I.D. badges when on duty.

  - **Classification**

    Most General Access Labs will employ Hourly Student Assistants, BI code 1710, for lab monitors. These positions must be recruited through Student Employment. Hourly Student Assistants may work no more than 20 hours/week.

Please see Policy on page 8.

**FAQ continued from page 5.**

1.4 Q: Where can a student go to use a computer?

A: You might think that you should come to us, the UNT Computing Center. That sounds logical, but it’s wrong. Well, not entirely wrong...we can give you a pamphlet that shows you where every one of the thirteen General Access Labs are located, their hours of operation, and some general usage rules. (See the article “Student Computing Facilities at UNT” on page 3 and Section 4.0 for more details, and see the answer to 1.2.)

1.5 Q: Can I get an Internet account? - or - Where do I go to get an E-mail address?

A: Believe it or not, the answer to the first question is “No.” There’s no such animal as an Internet account. What you can get (if you are faculty, staff, or an enrolled student) is an account on a host system (for example, Jove) that provides you with a connection to the Internet. This also automatically provides you with an E-Mail address. At the present time, UNT does not directly charge for these accounts.

Contrary to popular belief, you do not have to have a host system account in order to make use of the Internet. Virtually every machine in all of the General Access Labs has some capability for accessing Internet facilities. See Section 5.0 for information about the Internet and Section 4.0 for information about General Access Labs.

1.6 Q: How come you don’t support _______?

A: Primarily because reality imposes limitations on all of us in one form or another. (Wow, how philosophical! Stay tuned for the nitty-gritty, though.)

As human beings, we at the Computing Center have limits on the amount of knowledge we can acquire. (Of course, some of us have a higher limit than others.) UNT has budgetary limits imposed on it that limit the number of people that can be employed, the number and types of computing equipment that can be bought, and even the number and types of software that can be acquired.

What this means is that we are forced to pick and choose what we will support and to what extent we will support things. This is all spelled out in the Supported Computing Items List, a handout you can get at the Computing Center that is always outdated because of the extremely dynamic field of computing. Some items that we have we guarantee we will; always try to get the latest version, answer any and all questions about, and resolve any problems with. At the other extreme are things that we make available as a convenience to a number of people who want them, but we don’t guarantee anything about them. And there are always going to be certain things that we just can’t get, don’t want to get, and/or can’t support if you happen to have it.

All that we can do is try our best to support the vast array of software and hardware that’s out “there,” but you have to be prepared for a negative response in some cases if you have questions or problems. The Computing Center is always open to suggestions and requests, however, so never just arbitrarily give up.

1.7 Q: I've saved everything I've ever written to this diskette that is 3 years old that I carry in the bottom of my bookbag. After wiping off the cookie crumbs and removing the lint from it, I put it in the computer but I can't read any of my files. What can I do?

Benchmarks

September/October 1994
A: Plan a quick trip to Lourdes? We really aren't miracle workers, you know. Well, sometimes we can perform what seems to be miracles, but none of us are applying for sainthood just yet.

Uhh, pardon me a moment while I switch into LECTURE mode. There are 3 ways to prevent this situation from happening: (1) Back up, (2) Backup, and (3) B-A-C-K-U-P! Also, take better care of your diskettes. The rule of thumb to follow is "It's not a matter of IF you will lose data, it's a matter of WHEN."

OK, lecture mode off. Seriously, bring your diskette to us and we'll do what we can. Also bring a fresh diskette that we can use to save whatever we can recover. You might also want to cross your fingers, light a candle, say an incantation, sacrifice a chicken, or whatever you normally do in times of extreme duress. It couldn't hurt, and anything might just help. Frankly, even I get amazed at some of the files we've been able to recover.

Did I mention that it's a good idea to back up your work?

2.0 Applications (Software) Support (wordprocessor, Spreadsheet, Database, etc.)

2.1 Q: I'm writing "The Mother of All Term Papers" and I'm using a word processor from MWPITY (MyWordProcessorIsBetterThanYours), Inc. I need to _____ and I can't figure out how to do it. Can you help me?

A: Questions like this come up all the time. While we would like to know everything about every piece of software ever written, this is just not possible. Because of this, we are forced to limit our guarantee of support to software and hardware that is on our official Supported Computing Items List. (See the answer to 1.6)

But this applies only to our "guarantee" of support. In reality, we will make every attempt that we possibly can to help you, no matter how obscure or obtuse the computing topic. This level of support ranges from "Huh?" to "Oh yeah, I used to use that all the time. Here's what you do..."

2.2 Q: I do all of my writing on my home computer using _______. Can I bring my files to campus and print them here? How?

A: Currently, the predominant word processor available in the General Access Labs is WordPerfect, regardless of the platform you are using (DOS, Microsoft Windows, or Macintosh). Microsoft Word for Windows is starting to become available but just barely. Fortunately, WordPerfect will read files produced with many different applications, or provides a conversion utility that will often do the job.

The absolutely first thing to do is to try it out. Don't assume that if we don't have the program you use, that you have to go through a lot of hassles. Often it's as easy as firing up WordPerfect and telling it to load your file.

Only when that fails should you take further action. First check with the lab monitor. He or she should know their lab the best. Failing that, contact us. (See the answer to 1.1.)

2.3 Q: Someone told me that I can get a free copy of _______ from the Computing Center. Or - Someone told me that since I am a student/faculty/staff I can buy _______ from the Computing Center real cheap.

Please see FAQ on page 9.

Policy continued from page 7.

Some labs may be able to employ Hourly Student Academic Assistants, BI code 1705. These positions need not be recruited through Student Employment, but Equal Employment Opportunity policies should be observed. Academic Assistants must be supervised by a member of the faculty.

The starting wages paid to lab monitors will be reviewed by the GALC annually.

☐ Tuition Waivers

Students employed in General Access Labs are eligible for tuition waivers under the circumstances outlined in the following Personnel policy:

Students that are not titled teaching assistants or research assistants and are not verifiable on HRMIS at 50% time may be eligible for tuition waivers provided that:

1. The student is employed for the semester and will be working at least 20 hours per week.
2. The student must be employed by the 12th class day (4th in summer term).
3. The student must be employed in a job that is academically related to his or her major.
4. The student's job must be at least 51% interacting with other students, helping them academically.

Each waiver granted under this exception needs to have a statement of this pertinent information on the waiver form and must be signed by the department head. In signing this form, the department head is certifying that the student is eligible for the waiver under the above conditions, which attempt to approximate a position equivalent to teaching assistant, but which may not carry that specific title. The department head needs to be aware of the possibility that the waivers will be audited by either internal or exter-
nal auditors, and that the responsibility for certifying to the eligibility lies with the department head who signs the waiver. Therefore, if a student subsequently leaves employment, the department head should contact the Bursar’s office so that the waiver can be revoked if necessary.

Hardware and Software Platforms

In consultation with all college computing committees and the Deans, GALC will determine and recommend the basic hardware and software platforms to serve curricular needs of students.

Each lab is encouraged to employ hardware and software which is included on the UNT Supported Computing Items List and which is compatible with items found in other General Access Labs.

Sufficient documentation for available software will be accessible in each lab.

Novell NetWare will serve as the network operating system for all General Access Labs.

Efforts should be made to purchase new, or upgrade existing, equipment and software to state-of-the-art models and latest versions.

All labs will provide facilities for the utilization of different size and density diskettes.

Printing

Laser printing will be available in all General Access Labs.

Laser printing will be provided to UNT students ONLY, in support of their academic course of studies at UNT.

Laser printing will, when possible, be limited to FINAL copies of documents. Only one final copy of any document

Please see Policy on page 10.

FAQ continued from page 8.

A: I bet you just wish this were true. Actually, it is! But not to the extent that most people would hope for. For anyone affiliated in any way with UNT, we do own site licenses for some software which means you have to do is supply us with the diskettes for you to get it. We also have some freeware and shareware that we distribute in the same way. And if you are faculty or staff, there are provisions for you to obtain licensed copies of even more software...FOR USE ON UNT-OWNED COMPUTERS.

<table>
<thead>
<tr>
<th>Free Software for Students/Faculty/Staff</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Software</strong></td>
</tr>
<tr>
<td>Procomm Plus 1.1b</td>
</tr>
<tr>
<td>MS-Kermit and MacKermit</td>
</tr>
<tr>
<td>F-Prot</td>
</tr>
<tr>
<td>Disinfectant, GateKeeper</td>
</tr>
</tbody>
</table>

That’s it! Not an impressive list but very useful stuff nonetheless. The University Bookstore is the place to go in order to purchase a large variety of software at (greatly discounted) educational prices.

For faculty and staff I recommend checking with your department’s Software Manager for products that are available to you. I really don’t want to make the students jealous in this article.

3.0 Host Systems Support

3.1 Q: What are host systems and why should I care?

A: Nobody says you should care. But if you would like to have access to the Internet from a personal computer off campus, then you definitely want a host system account. (See Section 5.0 concerning the Internet.) There may also be some applications that you want to use that are only available on our host systems, e.g. SPSS on the academic mainframe.

Host systems at UNT are the mainframes and super-minicomputers on which you can apply for an account and which allow you to access your account through dial-in modems or from other host systems. Other departments may manage their own host systems (e.g. Computer Science manages the machines known as Ponder); you’ll have to contact them for information. The ones that are managed by the Computing Center are shown on the next page.
### Back to School

<table>
<thead>
<tr>
<th><strong>Common name</strong></th>
<th><strong>Primary Domain Name</strong></th>
<th><strong>Used mainly for:</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Jove</td>
<td>jove.acs.unt.edu</td>
<td>Internet access, E-mail</td>
</tr>
<tr>
<td>Sol</td>
<td>sol.acs.unt.edu</td>
<td>Special research projects</td>
</tr>
<tr>
<td>CMS</td>
<td>vm.acs.unt.edu</td>
<td>COBOL, NATURAL, ADABASE programming &amp; statistics</td>
</tr>
<tr>
<td>VAX (being phased out)</td>
<td>vaxb.acs.unt.edu</td>
<td>Internet access, E-mail</td>
</tr>
</tbody>
</table>

**Important Note:** The answers to the next two questions may not be accurate at the time you are reading this. My sincere apologies for any resulting confusion, but the procedures for students to follow in applying for accounts and receiving User-ID and password information are being revised. Don't hesitate to ask one of us at the Helpdesk if you have questions about the procedures.

3.2 **Q:** How do I apply for a host system account?

**A:** Come to our office. There is a request form that you need to complete and turn in to us. Depending on the type of account for which you are applying, you may need to have someone in the department to which you are affiliated (your major department if you are an undergraduate) sign off on the application. If you have an individual (as opposed to a class) account on one of our host systems already, or you have had one in the not-too-distant past, you will need to complete an Update/Renewal Request rather than a New Account Request.

At the present time, you will need to return to our office a few days after submitting your account request to pick up your User ID/Password slip. All requests except for account renewals generate one. (See the next question.)

3.3 **Q:** What do I do with my User ID/Password slip? What does all of the information that goes on it mean, anyway?

**A:** Keep this slip in a secure and unforgettable place; you may need to refer to it at some future date. The most important information on this slip is your User-ID, a randomly chosen password, and a list of the systems on which you have accounts. When connecting to one of our host systems, you will be asked to "Login", i.e. the system is asking for your User-ID. Next, you will be asked to enter your password.

You must change your password when you first use your account. In fact, it is a very good idea to change your password on a regular basis (like every 30-60 days) and please! treat your password as if it were the PIN code to your checking account. You don't give your friends unrestricted access to your checking account, do you? For information about selecting a good password, and the procedures you follow to change it on our various host systems, come to our office and we will give you a variety of informative handouts.

3.4 **Q:** I don't have a computer (or modem). Does this mean I can't get an Internet or E-Mail account?

**A:** For those of you (unfortunate ones) who don't have the equipment yet, all is not lost. There are a number of options open to you:

---

**Policy continued from page 9.**

...may be printed on a lab laser printer.

**Virus Protection**

The Virus Protection procedures, determined by GALAC in accordance with UNT Data Integrity and Computer Security Policies and Standards, will be followed in all General Access Labs.

**Other Standards**

The Network, Menu, and Communications Standards, determined by GALAC in accordance with UNT Data Integrity and Computer Security Policies and Standards, will be followed in all General Access Labs.

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**Accessing UNT Host Computers From Home**

By Darren Loher, Data Communications Analyst (daren@unt.edu)

This article first appeared in the September/October 1993 issue of Benchmarks (Vol. 14, No. 5, pg. 6).

Did you know that computers at UNT like the VAX, Sol, Jove, Ponder and the Library card catalog system can be used from home? You can.

There are a couple of things you need to have at your home. A computer, a modem, and some software that will let your computer talk to your modem.

**Modems**

This is the device that lets you connect your computer to a telephone line. There are many brands of modems and lots of different models. The most important feature to understand about a modem is its speed.
The slowest modem you should consider buying today runs at 2400bps (bits per second). This means the modem can transfer approximately 240 characters per second. That’s certainly faster than most people can read text, but when transferring files, scrolling text or using graphics over the phone line, it’s slow. The trade-off is price: 2400bps modems are very affordable and can be purchased for as little as $50.

The fastest modems you can buy at retail stores run at 14,400bps. Their prices can range from $175 to $300 depending on where you go and what brand you buy.

At this time, the UNT dialups do not support anything over 2400bps unless you have a US Robotics HST type modem, in which case you can achieve 9600bps. However, all high speed modems are capable of running at the slower 2400bps speed. So when UNT does upgrade its dialups, you can take advantage of the higher speeds if you buy the faster modem now.

Sixteen 14,400bps modems are now in service and can be reached at 565-3989. Although any modem can connect to these modems, please use the 565-3300 dialup if you own a 2400bps modem.

Software

The Computing Center has a license to distribute Procomm Plus for DOS free of charge. If you have a Macintosh, you can get MAC-Kermit for free from the Computing Center. Just go to the ISB building (room 119) to get the software. (You’ll need your UNT ID.)

O.K., What Next?

At the front of this newsletter is a table that gives the phone numbers and services available for those numbers.

- The main University dialup number is 817-565-3300.
- If you have problems or if you have a US Robotics HST modem call 817-565-3461.

FAQ continued from page 10.

1. Get real friendly with someone who has a computer and modem.
2. Use the Internet access capabilities of the computers in the General Access Labs.
3. Get a host system account and access it from a General Access Lab for now.
4. Get an ACS (Academic Computing Services network server) or some other LAN (Local Area Network) account.

Note: For items 2-4, refer to Section 4.0 for information. By the way, see the answer to 1.5 for instructions on not using the phrases “Internet account” and “E-mail account.”

3.5 Q: What programs/applications can I use on the host systems?

A: Almost all of them, actually. Frankly, if you are used to using software on a personal computer and have expectations of the host systems working the same way, you are in for something akin to culture shock. Host systems typically use operating systems that are far removed from MS-DOS or Macintosh System Software. There are even some folks (politely referred to as mainframe or UNIX “jocks”) who would argue that true operating systems don’t even exist on personal computers.

If you are not already familiar with the UNIX operating system, used on Jove and Sol, and/or VM/CMS, used on the academic mainframe, you definitely need to get your hands on our “Introduction to UNIX” handouts (see question 1.2) and think about registering for one of our Short Courses (also discussed in the answer to question 1.2). For more information, contact us. (See question 1.1.)

If you are already familiar with using host systems, the best thing to do is to contact us if you can’t locate a particular application on the system on which you have an account, or you want to find out which system has a particular application so that you can apply for an account on it. (See the answer to 1.1.)

3.6 Q: I’ve forgotten my password and can’t get into my account.

A: No problem, if your account is on a system managed by the Computing Center. Just come into our office, but make certain that you bring some form of identification with you—anything official that has your picture on it. Only extremely rare exceptions are made to the requirement for you to physically appear in our office with a picture ID to obtain a password, and then only under very exceptional circumstances. This is dictated by our security policies and is for the protection of your data, as well as that of other account holders on the same system.

If your account is on a system that is not managed by the Computing Center, you will have to follow the procedures set by the office or department which manages that system. However, you can contact us to find out who you need to see or where you need to go.

3.7 Q: How long can I keep my account? Will it expire when I graduate?

A: All individual accounts expire on August 31 of each academic year. You may submit a renewal request each August to keep the account active for another year, provided you remain enrolled. Class accounts expire on the last class day of the semester in which the class is held. There currently are no provisions for former students or alumni to keep their accounts after leaving UNT.
4.0 General Access Labs and Local Area Networks Questions and Issues

4.1 Q: Which lab do I go to? - or - I'm looking for a lab that has ___

A: Take your pick. Each lab is basically its own entity with its own manager, and none of them actually fall under the auspices of the Computing Center. There is a central management board that is responsible for generating overall lab policies and procedures, but the types of equipment and software available varies from lab to lab. You can pick up a pamphlet from us or any of the labs that details the location, hours of operation, and general lab policies. For information about what specifically is available in each lab you will need to contact the lab manager or one of the lab monitors directly.

4.2 Q: Can I get a personal lab or network account?

A: Since the General Access Labs are each managed individually, you'll need to check with the lab manager or a lab monitor there. (See the answer to 4.1.) For a Local Area Network (LAN) account, you will need to talk to the manager of the network you want an account on.

Now would be a good time to highlight some important differences between host system accounts and Local Area Network or General Access Lab accounts.

1. General Access Lab networks are a special kind of Local Area Network; therefore, just about everything that applies to LANs applies to Lab networks. A major difference is that Labs offer "generic" accounts that enable any student to use the facilities of virtually any Lab without having a personal account. The primary disadvantage to this arrangement is that you cannot send or receive E-Mail since you have no local E-Mail address. (See question 4.3.)

2. Unlike host system accounts, network accounts are not generally available to students.

3. With rare exceptions, network accounts do not have dial-in capability; you must be on campus in order to connect to a network account.

4. Some of the UNT library facilities are on LANs and are therefore not accessible from off campus. Of particular interest to most people is Willis Library's CD-ROM reference collection. However, the library's on-line card catalog system is available from off campus.

4.3 Q: I want to use E-Mail from a General Access Lab. What can I do?

A: If you have a host system account, you can simply log on to your account from virtually any machine in any of the Labs and send and receive E-Mail from that account. If you do not have, or do not want, a host system account, the Computing Center offers a special type of account that is best suited for you. This is known as an ACS account because it is an account on the ACS LAN server. An ACS account is accessible from any of the General Access Labs and provides you with an E-Mail address.

4.4 Q: I don't get much help from the Lab Monitor. What can I do?

A: In defense of Lab Monitors, there are certain things that they are constrained from helping users with. This has been brought about by instructors wanting to ensure that students are truly doing their own work. Also, keep in mind that Lab Monitors are usually students just like you that are working part-time while going to school.

Please see FAQ on page 13.
FAQ continued from page 12.

Now, if you still feel that you are not getting the help you should be getting, report the situation to the Lab Manager. You can find out who this is from either the Lab Monitor or by contacting us.

4.5 Q: What can my LAN manager help me with? (This is more applicable to faculty and staff than students, since they are more likely to have an account on a LAN.)

A: The absolutely best way to find out what your LAN manager is supposed to and can do for you is to call him or her and ask. Basically, a LAN manager is responsible for:

1. Anything that has to do with your network account. Examples are: for getting your password, inability to login, inability to run software from the server, etc.

2. Getting a new computer connected to the network.

3. Configuring your computer so that it will work as a workstation on the network.

4. Answering questions or resolving problems with any of the above.

The Helpdesk staff are trained to recognize questions and problems that are best resolved by your LAN manager and can direct you to the appropriate person. If you are unsure of whom to call, you can always call us.

5.0 Internet Questions and Support

5.1 Q: What is the Internet?

A: You may have been reading lately about the Information Superhighway. Well, that's what the Internet is not! What it is, is a network of networks. (Clear as mud, right?) Put another way, it is a collection of computers around the world that are connected in such a way that they can communicate quickly and efficiently with one another. This intercommunication that takes place among all the computers connected to the Internet is what moves your E-Mail from point A to point B, transports the latest postings to a variety of discussion groups, transports and delivers information from a variety of information services that users can subscribe to, and makes available vast quantities of information in the form of files that you can "download" and documents (even entire books) that you read on-line. And it is much more.

5.2 Q: How do I learn to use the Internet?

A: You can't really "hunt" anything by just jumping in and learning by trial and error, but you will probably miss out on a lot of things that way. If you have a friend who is conversant in Internetese, have them give you some instruction. Get one of the tons of books about the Internet published in the past year. Which one is best? Whichever one works the best for you; it's your call on this one. In addition, see the answer to question 1.1 for sources of information and help.

5.3 Q: What can I get to on the Internet? - or - What can I do on the Internet?

A: Just about anything you want. My favorite expression is "If you have an interest in some particular field or area, there is most likely information about it on the Internet; the trick is finding it." The first thing you'll want to do is learn how to use the Internet. (See the previous question.) There is just so much available that it is impossible to list everything, a

Please see FAQ on page 15.

The Adaptive Computer Lab
A Lab for People With Special Needs

By LaNev Bjele and Barbara Hall, School of Community Services

This is a revised version of an article that appeared in the September/October 1993 issue of Benchmarks (Vol. 14, No. 5, pg. 6)

The Adaptive Computer Lab is equipped and staffed to meet the specific needs of UNT students with disabilities. This Adaptive Computer Laboratory, located in Chilton 116, opened in November 1991 under the auspices of the School of Community Services and General Access Computer Laboratories. The lab is not only a place where students can complete their assignments, but also a place to teach others about this kind of technology. Current equipment includes six IBM-compatible computers, two Macintosh computers, one Apple IIe computer, a Kurzweil scanner which reads printed material, a tape recorder, interface for Kurzweil, two speech synthesizers, three screen reading programs, a voice recognition system, three screen magnifying programs, three keyboard modifier programs, Perkins Braille, a Braille printer, a thermoform duplicator (Braille copier), a Braille embosser, and a laser printer. New height-adjustable furniture and large monitors also make the lab a comfortable place to work.

The computers are connected to a network which can access all other University networks and large computer systems, as well as other computer systems across the world which are connected to networks such as the Internet, BITNET, etc. Students with special adaptive equipment in their homes who have difficulty getting to campus can also access the Adaptive Lab (and hence, the world!) from their home.
computer via a telephone modem. This laboratory is a General Access Computer Lab; however, students with disabilities receive priority for the specific equipment they need.

Policies

The Adaptive Computer laboratory is a General Access Laboratory; however, students with disabilities are given priority when the laboratory is full or when a particular adaptive software/hardware is needed. Also, we maintain a library-type environment in order to enhance learning.

Equipment

- **PC/KPR (Personal Computer/Kurzweil Personal Reader)**, a document scanner — (IBM) The Kurzweil performs OCR (Optical Character Recognition). It scans printed material in any nondecorative typeface in any point size and color (except red). The scanned text is converted into electronic text which can then be saved in any of fifteen different word processor formats. PC/KPR is helpful for people with visual impairments, as well as people with learning disabilities.

- **Business Vision**, a screen reader — (IBM) Vision reads electronic text on the screen and converts it to voice. It is capable of reading a word, sentence, paragraph, or a screen at a time. The Dictalk card that Vision uses for the voice has ten different voices which are all configurable by pitch, and speed.

- **Business FOCUS**, a screen enlarger — (IBM) FOCUS enlarges on-screen electronic text up to ten times and graphics up to sixteen times. It automatically scrolls text horizontally by word, sentence, paragraph, or screen. Colors can be natural or they can be forced to some optimal combination, such as Black on White or White on Black.

- **VERTPlus (Voice Emulation in Real Time)**, a screen Reader — (IBM) VERT Performs the same job as Business Vision but it is several years older.

- **Duxbury**, Braille translation — (IBM) Duxbury converts any electronic text into Braille for printing on a Braille printer.

- **Romeo Brailler** — (IBM) The Romeo Brailler is a Braille printer. It takes a file that has been formatted for Braille printing and makes a hard copy of it. The printer will also print specially formatted graphics.

- **Access DOS** — (IBM) Access DOS is a keyboard modifier that provides:
  - StickyKeys — allows a user who is unable to press more than one key at a time to perform functions that require multiple simultaneous keystrokes (e.g. Control-Alt-Delete).
  - MouseKeys — allows a user who is unable to use a mouse to use the numeric keypad to move the cursor.
  - ToggleKeys — makes noise to indicate when the NUMLOCK, CAPSLOCK, or SCROLL LOCK key is turned on or off.
  - Keyboard Response:
    - RepeatKeys — limits the auto-repeat function of the keyboard.
    - SlowKeys — slows keyboard response time.
    - BounceKeys — restricts the computer from accepting the same key more than once in rapid succession.
  - ShowSounds — prints a musical note on the screen every time the computer makes a noise.

- **PCKey DVORAK** — converts a standard QWERTY keyboard into a DVORAK keyboard for a one-handed typist (both right-handed and left-handed typists).

- **Easy Access, Keyboard Modifier** — (Macintosh) EasyAccess provides StickyKeys, MouseKeys, and KeyboardResponse (see Access DOS above).

- **CloseView**, screen enlarger — (Macintosh) CloseView provides screen enlargement like FOCUS, but it isn’t quite as sophisticated as FOCUS.

- **outSPoken**, screen reader — (Macintosh) outSPoken provides speech synthesis for the Macintosh’s graphical user interface (GUI).

- **Hyper-ABLEDATA** — (Macintosh) Hyper-ABLEDATA is a database of products for people with disabilities. This CD-ROM provides pictures and, when possible, sound samples of a variety of products.

- **PCAnywhere, remote dial-in** — (IBM) PCAnywhere allows someone at a remote location to dial in through a modem and connect to our Local Area Network (LAN).

- **PostScript Laser Printer** — (IBM & Macintosh) The HP11Si allows us to print any document from either a Macintosh or an IBM. The PostScript option allows us to print documents in any size font. This makes it easy for someone with a visual disability to print enlarged copies of documents.

- **CCTV (Closed Circuit Television)** — Document enlarger.

- **Thermofax Duplicator** — Braille copier.

- **Perkins Brailler** — Braille typewriter.

- **4-Track Tape recorder** — recorded textbook player.

- **2-Track Tape recorder** — Regular tape recorder.

- **Recorder interface for speech synthesizers**.

- **Apple IIe**.
Research and Statistical Support From Academic Computing Services

By Dr. Panu Sittiwong, Research and Statistical Support Manager (panu@unt.edu)

A
ademic Computing Services has a team of research consultants to provide research and statistical support to faculty and students at UNT. Our consultants are capable of assisting you in the areas of research design, statistical analysis and data analysis. Our mission is to assist researchers on campus in carrying out their projects and/or assisting faculty members in teaching their classes. Our services include providing consultation on the research design, data acquisition, and analysis of the data. The extent to which services will be provided varies by individual projects. At one extreme, the consultant will help with writing the appropriate programs to carry out the analysis required. In another case, we may provide consultation and leave programming tasks to the researcher. In the area of instructional support, we can schedule a special seminar and workshops for your class in the area of statistical computing. While research consulting support will vary from one case to another, statistical analysis and data support are somewhat uniform. This article will outline these two services.

Academic Computing Services has statistical packages available for computer hardware running under various operating systems. This article will point out all of the statistical packages which are available at UNT. It will also make a recommendation as to the software and platform that will fit your needs when you’re uncertain about your choice.

Please see STAT on page 16.

FAQ continued from page 13.

5.4 Q: I have a ___ account. What is my Internet (or E-mail) address?

A: Start with your User-ID and add the following to it:

<table>
<thead>
<tr>
<th>If your account is on:</th>
<th>Add this:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Jove</td>
<td>@jove.acs.unt.edu</td>
</tr>
<tr>
<td>Sol</td>
<td>@sol.acs.unt.edu</td>
</tr>
<tr>
<td>VAX</td>
<td>@vax.acs.unt.edu</td>
</tr>
<tr>
<td>CMS</td>
<td>@vm.acs.unt.edu</td>
</tr>
<tr>
<td>ACS</td>
<td>@acs.unt.edu</td>
</tr>
</tbody>
</table>

For example, if my user ID is ZZ99 (which it isn’t), and I have a Jove account, I would tell everyone to send me E-Mail addressed to: zz99@jove.acs.unt.edu.

5.5 Q: I have a boyfriend/girlfriend/just-a-friend/significant-other that’s going to school somewhere else. Can you help me find his/her/its E-Mail address?

A: Congratulations! You have just asked the one question that is both the easiest and hardest question to answer. The easy answer is “Telephone him/her/it and ask them for the address.” The hard answer is “Good luck!” There are several approaches that can be taken, too numerous to go into here, primarily because you may need to try every one of them before you find the address, and none of them is guaranteed to be successful anyway. The best thing to do is bring this problem to us in person. We won’t necessarily do the work for you, but we will certainly show you how to go about it.

5.6 Q: I have friends who use some E-mail program on a Brainiac-5 at their school. Will they get E-Mail I send them or do I need to use the same program and type of machine?

A: Thankfully, yes they will get your E-Mail, and no you don’t have to be using the same software or type of machine. A set of standard “languages” was developed some years ago that allows computers on the Internet to communicate with one another. At each end of a connection, the local computer is responsible for translating from the “language” it understands to one of the standard “languages” and vice versa. The real term for these “languages” is protocols. Your local system chooses to translate its protocol to the appropriate Internet protocol depending on what functions are being used. For example, E-Mail uses one protocol, news uses another, ftp still another, etc.
Back to School

**Bottom Line:** As long as you are using the Internet, mail is mail the world around.

**And finally, the most important question of all!**

Q: What can I do to make your job of supporting me easier?
A: Uhhhh, money can do wonders for support.

Seriously, there are some things that you can do that may seem rather insignificant to you but could go a long way towards making our jobs easier and us happier (and a happy consultant is a helpful consultant!):

1. Demonstrate at least a *little* effort in learning the terminology. We don’t expect anyone to become the techno-geeks that we are, but it sure helps when we don’t have to search for different ways to refer to things that we are familiar with.
2. Please try to be patient with us. We’re only human (really, we are!) and we have our bad days and trying moments just like everyone else. However, I would be willing to match our service and support attitudes to any other campus office, even on our worst days. We try that hard to be helpful, understanding, and friendly.
3. Demonstrate appreciation for our efforts. We lap this kind of stuff up! Even a brief smile and a quick (but sincere) “Thanks” goes a long way with us.
4. Remember your User ID. Know at least the name of the system you have an account on. Protect your password. And please, keep backups of your important files.

Have fun this year! Work hard, but certainly enjoy your time here, and Happy Computing. ...]

**STAT continued from page 15.**

**Host System Statistical Packages**

Academic host system computers consist of an IBM 3081 mainframe compatible computer and a Solbourne minicomputer. Currently, there are two major operating systems available to academic users on the IBM mainframe: VM/CMS/XA and OS/MVS. The Solbourne computer is running on the UNIX operating system. The following table shows statistical packages available on the three platforms.

<table>
<thead>
<tr>
<th>Software</th>
<th>UNIX</th>
<th>VM/CMS</th>
<th>OS/MVS</th>
</tr>
</thead>
<tbody>
<tr>
<td>SAS Version 6.07¹</td>
<td>All</td>
<td>Base, Stat, ETS, OR, IML</td>
<td>Base, Stat</td>
</tr>
<tr>
<td>SAS Version 5.18</td>
<td>N/A</td>
<td>Base, Stat</td>
<td>Base, Stat</td>
</tr>
<tr>
<td>SPSS Version 4.1</td>
<td>N/A</td>
<td>Basic, Stat, Lisrel 7</td>
<td>Basic, Stat, Lisrel 7</td>
</tr>
<tr>
<td>Shazam Version 7</td>
<td>N/A</td>
<td>All</td>
<td>N/A</td>
</tr>
<tr>
<td>BMDP 90</td>
<td>N/A</td>
<td>N/A</td>
<td>All</td>
</tr>
<tr>
<td>IMSL Sub-routine</td>
<td>All</td>
<td>N/A</td>
<td>Math, Stat</td>
</tr>
<tr>
<td>RATS</td>
<td>N/A</td>
<td>N/A</td>
<td>All Modules</td>
</tr>
</tbody>
</table>

**Microcomputer Statistical Packages**

There are a large number of microcomputer packages available at UNT. In fact, every department has adopted particular packages which are appropriate for their needs and disciplines. For example, the College of Business adopted Minitab PC for instructional use. The College of Arts and Sciences, on the other hand, has a site license for RATS PC to be used in their classes.

Academic Computing Services maintains a site license for SAS and SPSS products. Currently, SAS/PC version 6.04, SAS/WINDOWS version 6.08, and SAS/OS2 version 6.08 are available. These products include all of the SAS statistical modules. We also distribute SPSS/PC+ version 5.0; SPSS for Windows version 6.0; and SPSS for Macintosh version 4.0. All product packages are available free of charge to all full-time faculty and staff at UNT, or they can be installed on any Novell Network on campus. Teaching Fellows, Teaching Assistants, and Research Assistants may request to have the software installed on any PC that belongs to the university. SAS/PC and SPSS/PC are also available to students in all of the General Access Microcomputer Labs on campus. The Windows-based products will be available as soon as those labs are equipped with PCs with Windows software.

If you need to have any of the above packages installed on your microcomputer, you may contact one of the Academic Computing Services statistical consultants at (817) 565-2324, or you can mail your request to either PANU on the CC1 file server (CC1: PANU for Word Perfect Office Mail or PANU@cc1.unt.edu on Pegasus mail) or PANU@untm1 on VM/CMS mail. The software will take a minimum of 20M to a maximum of 100M of hard disk depending on the software you requested and the statistical procedure you want. You need to check your hard disk space to verify that you have...
enough space for the software since our installer will not be allowed to remove any file from your hard disk.

While SAS and SPSS under microcomputer platforms are fully supported by the Research and Statistical Support team, this is not the case for other microcomputer based packages. Our staff will try their best to provide support for those packages. Microcomputer-based statistical packages, however, are so numerous that it makes it impossible for our staff to know them all.

A Platform for Your Statistical Computing

Most of the time, the platform on which you run your statistical package is selected based on previous experience. This rationale, in some cases, however, is contrary to the changes and development of computers systems. For example, MUSIC/SP will be deinstalled from the ACAD mainframe. This change will require all previous MUSIC/SP users to convert their mainframe work to run on either VM/CMS, UNIX, or microcomputers. This section will present some of the advantages and disadvantages of all of the statistical package platforms which are currently available or will be available at UNT in the near future.

Mainframe, Mini, and Micro

SAS users at UNT have advantages over some other statistical packages since SAS is available on all three platforms. (See Table 1 on page 16.) SPSS users can select between SPSS on CMS, SPSS on OS/MVS, SPSS/PC+, SPSS for Windows, or SPSS for Macintosh.

General Guidelines for Choosing a Mainframe or Microcomputer:

- Microcomputer Platforms: There are several options available to you when you select to use a microcomputer for your statistical computing. You may choose to run the software directly under the MS-DOS operating system, or you may want to invest in MS-Windows, or you may decide to use a Macintosh.
- Both SAS and SPSS for microcomputers provide several advantages, these include:
  1. Both SPSS and SAS on the microcomputer platform provides a Menu system which you can use to compose your programs. This helps to minimize syntax errors. It is possible that a novice user could compose a program without opening the manual.
  2. Both SAS and SPSS provide excellent on-line help systems. All commands and syntax can be acquired from the help command.
  3. Both systems have procedures that will allow users to incorporate the output into some other microcomputer program. For example, the Table Procedure in SPSS/PC+ or PROC Tabulate in SAS/PC are capable of producing a customized table for your data. The output can be directly included in a word processing program.
  4. Graphic output from both packages can be directly incorporated into WordPerfect or DrawPerfect.

Both SAS and SPSS for Windows and for the PC platform currently take advantage of the Extended Memory System (EMS) and they are capable of using up to 16M of memory. This helps to eliminate some of the previous shortfalls of the microcomputer-based statistical packages, and makes both have the same capabilities as their mainframe counterparts but with the Graphical User Interface (GUI). Hence, if you have a PC which is based on the 8086 microprocessor or above, the Windows-based software provides an excellent platform for you. If you plan to upgrade your microcomputer to take advantage of the statistical packages under Windows, you will need to keep the following recommendations in mind:

- Plan to install a minimum of 6M of memory on your microcomputer. Both SAS and SPSS will run with less memory but with a performance degradation.
- Plan to install the math coprocessor (80x87) chip on your PC.
- If you plan to have the software installed on your hard disk, you will need at least a 120M Hard disk for SPSS for Windows, and a 200M Hard disk if you need a full version of SAS for Windows.
- Plan to have an EGA (or above) Display.
- Plan to have a mouse installed on your PC.

One shortfall of the microcomputer-based statistical software is printing, especially if you plan to generate a large output on a dot matrix printer.

Mainframe Platform: Obviously, the main advantage of running mainframe statistical software is the ability to utilize a large database in
your research. Secondly, if you don’t have a 286 or above microcomputer, the mainframe will provide a more powerful platform for your needs.

As mentioned before, statistical software is available either under OS/MVS or VM/CMS, or both. In some cases, you may not have any choice but to run your statistical analysis on the mainframe under one operating system. Where choices are available, we recommend that you run your analysis under the VM/CMS operating system.

There are several advantages to running the statistical software on VM/CMS. These advantages include:

- All of the above software can be run interactively on VM/CMS. In this environment, you will have a software interface similar to some of the microcomputers.
- Since the CMS operating system is interactive, all jobs submitted will be executed immediately.
- With the implementation of TCP/IP on VM/CMS, users have the ability to move data between the PC and the mainframe quickly. Therefore, a broader range of options can be selected.

I didn’t discuss the UNIX platform since there is a limited amount of software available on the Solbourne. It is a good platform if you are using SAS or IML subroutine jobs which are numerically computation intensive.

Data Services at UNT

The UNT Computing Center has volumes of machine readable data available to all students and faculty members. These data are acquired from several sources including the Inter-university Consortium for Political and Social Research (ICPSR), Department of Labor, Center for Research in Security Prices (CRSP), Standard and Poor’s (COMPSTAT), etc.

- CRSP Data: Once a year, UNT will receive data from the Center for Research in Security Prices. The data include:
  - Monthly NYSE and AMEX Returns and Master file;
  - Daily NYSE and AMEX Returns file;
  - Daily NASDAQ Returns and Master file;
  - Daily, Monthly, Quarterly, and Annual Markets Indices file;

- COMPSTAT II Data: Similar to CRSP data, UNT will receive, once a year, updates of COMPSTAT II data from Standard and Poor’s. The current holdings include:
  - Primary, Supplementary, and Tertiary (Industrial and Research) file;
  - Over the Counter file;
  - Bank file; and
  - Price, Dividends and Earnings file.

The data are available both quarterly and annually.

Academic Computing Services produces a handbook on how to access and use the CRSP and COMPSTAT data sets. These documents are available at the Computing Center main office (ISB-119).

- ICPSR Data: Data from ICPSR constitute the majority of the data archives at UNT. Currently, there are more than 200 data titles available locally at UNT. As a member of the Consortium, UNT students and faculty members can request any data made available from the ICPSR. Data available from ICPSR covers a wide range of subjects and disciplines including Public Opinion surveys, Election studies for the US and foreign countries, the Congressional Roll Call, the General Social Survey, the Health Interview Survey, the Consumer Expenditure Survey, the Government Finance, World Economic Indicators, the Population Survey, Census information for the US and foreign countries, EURO-BAROMETER, etc.

Our staff are currently working with the UNT library to include all of the titles of the ICPSR data in the library catalog system. After the process is done, you will be able to locate the data using the UNT library on-line card catalog system.

If you would like to find out more about the ICPSR data archives, you can stop by and talk to one of our Statistical Consultants or call the Computing Center at (817) 563-2324. We will help you identify the data that are suitable for your needs. If the data are available locally, then we will need to set up a computer program to access the data. If we need to order data from ICPSR, it may take up to four weeks before you can use the data.

- Data from Other Sources: In addition to those public data sources, you can acquire data by yourself. We can handle data on various mediums. If you plan to acquire a secondary data source by yourself, you may want to consult with Academic Computing Services concerning the method and medium to store data.

Conclusion

In conclusion, Academic Computing Services’ main charter is to provide services in support of the instructional and research activities of the University. In order to achieve this goal, we provide a variety of services and software to our user community. This article was written in order to provide you with information so that you can select and use the software in support of your research.
FAVORS
Financial Aid Voice Response System
By Jana Crews, Programmer Student Services Data Systems Team

The Financial Aid Office has a voice response application (FAVORS) which is available from 7:00 a.m. through 7:00 p.m. Monday through Friday by dialing 565-2016. FAVORS can be used by students, faculty/staff as well as outside institutions needing information related to Financial Aid services. Of course, it is targeted to service the increasing number of financial aid applicants at UNT. For the award year 1993-94, 14,921 students applied for aid of which 9,419 received approximately 40 million dollars.

Financial Aid has a diverse population that it serves including the financial aid applicant, financial aid recipients - new and continuing, other universities, financial institutions and other educational institutions such as the Dept. of Education. FAVORS is designed to be user-friendly for both the occasional and the frequent caller. The system has logically structured menus for the inexperienced caller as well as the ability to enter codes (bypassing menus) for knowledgeable callers. The coded portion of the system was designed to be similar to the teleregistration system with which students are already familiar.

The FAVORS Menu

The menu portion of the system is illustrated in the figure on page 21. It is divided into four main groups. STATUS addresses the questions and problems of current financial aid applicants and recipients. TRANSCRIPTS is the section used by students or institutions with questions concerning either the receipt or the transmittal of financial aid transcripts. The INFORMATION selection is useful for first time borrowers of financial aid by giving details on requirements and types of loans. OTHERS is a section of miscellaneous information which is further subdivided into questions from students and nonstudents.

• The STATUS category handles the majority of financial aid callers. It is accessed by entering the student’s Social Security number, birth date, and the semester code. It can be used to list complete or incomplete documents. Completed documents will inform the student which forms or transcripts have been received and processed. Incomplete documents will list forms and transcripts which are still outstanding due to errors or missing information and those which have not been received. STATUS can be used by applicants or recipients to determine the next step in processing their application/award. Callers will be told depending on their records whether they have been awarded aid, whether documents are outstanding, or whether they have been denied aid. In addition, they might hear a message with a date asking them to check back after a process has been completed. In other cases the caller may even be transferred to an individual in a specific area for more detailed information. Another feature within STATUS is the ability of first time loan borrowers to complete their Loan Management Counseling entrance interviews using the telephone versus attending a half-hour video presentation. STATUS will allow recipients to hear information on the awards they have been given and students denied aid will hear the reasons for denial. Awarded students may select an option to hear payment information as well. The latest feature added to STATUS is the ability of students who have been awarded to accept or reject their awards. This option is described in detail on the student’s eligibility notice which informs the student of all his/her awards.

• The Financial Aid TRANSCRIPTS menu option allows callers to request transcripts be sent to other schools as well as check to be sure the transcripts were sent. Additionally they can check to see if transcripts have been received from other colleges or universities. Callers can also ask that blank transcripts be sent to them.

• For the first time borrower or person wishing to apply for financial aid, the INFORMATION menu item would be helpful as far as answering questions about different types of loans/grants. This section will also give them information concerning minimum academic requirements and verification requirements.

• The OTHERS category consists of answers to frequently asked questions by students and nonstudents which don’t fall into any of the previous areas. Some of the selections will transfer the caller to an individual knowledgeable in the related area. Finally, if callers can’t find an answer to a question within FAVORS, they may call the direct telephone line to the Financial Aid Administrative staff which is 565-2302.

For the continuing Financial Aid recipient or a student familiar with teleregistration, the following scenarios on page 20 might be helpful in becoming adept at using the action request codes to maneuver quickly through FAVORS.
FAVORS Sample Scenarios

☐ An enrolled student that has applied or received Financial Aid would probably want to check the status of their loan/check.

| Dial FAVORS | 2 0 1 6 |
| Select touchtone | 1 |
| Select STATUS | 1 |
| Enter Semester (Spring) | 2 |
| Enter SSN | 9 9 9 9 9 9 9 9 9 |
| Enter Birthdate | 9 9 9 9 9 9 9 |
| Next Step in Processing | 1 3 |
| List Awards | 2 1 |
| End Call | * * *

☐ An enrolled student that has applied for Financial Aid would probably want to check the status of their application.

| Dial FAVORS | 2 0 1 6 |
| Select touchtone | 1 |
| Select STATUS | 1 |
| Enter Semester (Spring) | 2 |
| Enter SSN | 9 9 9 9 9 9 9 9 9 |
| Enter Birthdate | 9 9 9 9 9 9 |
| Next Step in Processing | 1 3 |
| Incomplete Documents | 1 2 |
| End Call | * * *

The Financial Aid Office and staff are always looking for ways to improve the services provided. Suggestions for future enhancements or comments may be submitted through the Suggestion Box in the Financial Aid Office in the Union Building.

World Wide Web Server Up at UNT

By Mark Thacker, CWIS Coordinator (thacker@unt.edu)

I am proud to announce that we finally have a real World Wide Web server here at UNT that we can begin to use to build a (hopefully) elaborate system of campus information. The previous issues of Benchmarks have several good articles about the Web and my "News from the Gopher/CWIS Hole" column will also begin to carry several Web pointers as well. To connect to the top level of our Web server enter the following address as a Uniform Resource Locator (URL) that you want to connect to: http://www.unt.edu/.

What the Web Will Be Used For At UNT

It should be noted now that the World Wide Web server will not replace the Gopher server that we already have such success with. Rather, it will act to supplement information wherever possible. That is, if you need to make some documents or graphics available that do not need to be highly integrated, or that do not need to have hypertext links associated with them, Gopher might still be the best choice. All supported Web clients have simple Gopher clients built in to them, and thus can access the less-advanced features of Gopher.

Capabilities

The World Wide Web has some very unique capabilities. If you are using a graphical client (essentially anything other than Lynx for UNIX or DOS-Lynx for MS-DOS), you can view graphics images that are integrated into a display page. Maps can take on a life of their own with 'hot spots' embedded within them (i.e. click on a building in a campus map and go to a Web page describing that building and the departments housed within it). Sounds, movies and large graphic images are still downloaded and still require an external viewing application (such as JPEG View for the Mac or View for MS-Windows), but these items can be represented with relative ease within a page. Text itself appears to be formatted and is not limited to the 80 column ASCII text files that we are used to. Electronic forms handling is much more advanced and generally is more capable than that of Gopher.

Easier Information Adding

Utilizing Univel's UNIXWare product, we will be providing extremely easy methods for people to put information into the Web environment. Essentially, we will dedicate a PC to running UNIXWare and attaching to various file servers across campus. If you wish to provide information, you would simply format your document in the Web's Hypertext Markup Language (HTML) format and put it in a "www" directory on your file server. The UNIXWare machine would be able to serve this to the rest of the world. See "How to Add Information to The Web" in this issue of Benchmarks for additional information.

Future Uses

I see the Web being used to provide information in a new light and in new

Please see Web on page 22.
Learning Opportunities

In addition to the normal Internet classes offered through Academic Computing Services, I will be offering some classes on how to write HTML or ASCII documents and how to use the multi-media capabilities of the Web clients to your best advantage. If you plan on providing information to either Gopher or World Wide Web, I highly encourage you to plan on attending one of these classes. Look for schedules in future additions of Benchmarks as well as on the Web server itself. You might want to look in the back of this issue for Academic Computing Short Courses information.

Supported Clients

Also, as of this writing, I am supporting the following World Wide Web clients:

- NCSA Mosaic for Windows v 2.0a6
- NCSA Mosaic for Macintosh v 2.0a6
- NCSA Mosaic for X-Windows v 2.4
- ElNet MacWeb for Macintosh v 2.0a2.2
- Lynx for UNIX

In the future, I anticipate also supporting DOS-Lynx for MS-DOS and ElNet WinWeb for Windows as well as other Web clients that are applicable.

How to Get a Web Client

Many people ask me about how they can get Mosaic. Well, Mosaic is simply one of many World Wide Web clients. All of the supported Web clients are available on the TRAINING file server in the directory /LOGIN/PUB/INTERNET. Mosaic for Windows is located in the MOSAIC directory. If you have a Macintosh, look in the UNT Computing Center zone in the Chooser for the AppleShare device "Network Install Mac" for MacWeb and Mosaic for the Macintosh. Contact your Local Area Network Manager for help getting to these services.

News From the CWIS/Gopher Hole

By Mark Thacker, CWIS Coordinator
(thacker@uni.edu)

This column covers features and resources available through the University’s Gopher Campus-wide Information System (CWIS). Gopher is available on various UNT host computers including the VAX, Sol, and Jove. It is also available in the General Access Labs and on various Novell file servers around campus.

The World Wide Web

This issue of my column will focus on the World Wide Web set of resources. Specifically, there will be a new section on our World Wide Web under “Remote Information & Resources on the Internet” called “Web Links In This Issue of Benchmarks.” What follows is a summary of some of the Web links I have collected over the past few months. Remember to set a reference to these sites in your Web client’s Hotlist because I will replace them every two months. These references are roughly in reverse date order based on when I read about them. Apologies for not alphabetizing them.

  From: awooldri@silver.ucs.indiana.edu (Andrew Wooldridge) Date: Fri, 19 Aug 1994 02:57:59 GMT
  It’s been up for a little while, but now it’s more presentable. If you enjoy Pierse Anthony’s world of Xanth, then you will like this Web page. The title graphic looks best when you use a browser that supports transparent gifs. Please feel free to E-Mail me if you have any comments, or possible additions.
  I am looking for original or fan artwork and fiction to include on this page (as long as it has something to do with Xanth). My home page has lots of fantasy and sci-fi related stuff. http://www.cs.indiana.edu/hyplan/awooldri.html
Random URLs – URoLette:
http://kahu.cc.ukans.edu/cwis/organizations/kucia/urolette/urolette.html

From: abrams@falcon.cc.ukans.edu (Matthew Thomas Abrams)
Date: 18 Aug 94 20:10:36 CDT

Announcing the world's first random URL generator: A World Wide Web page called URoLette has been created by some of the developers of the Kansas University Campus Internet Association. URoLette is better left unexplained — you should see it for yourself. We think it is pretty nifty, you may not, but at least take a few minutes to take a look.

Description: You can use your favorite WWW browser to click on an image and be taken to a random URL. We don't know where you'll end up and you won't either.

Created by: Matthew J. Angell and Matthew T. Abrams at the University of Kansas.

The Well Connected Mac World Wide Web: http://rever.nmsu.edu/~elharo/faq/Macintosh.html

From: elharold@corona.sunspot.noaec.edu (Elliot Harold) Date: 16 Aug 1994 21:07:47 -0500

The Well Connected Mac World Wide Web site at: http://rever.nmsu.edu/~elharo/faq/Macintosh.html now includes a directory of vendors doing business in the Macintosh market. The directory includes phone numbers, E-mail addresses, street addresses, ftp sites, Web pages and other useful information about each company. See http://rever.nmsu.edu/~elharo/faq/vendor.html

There are separate sections for software and hardware manufacturers, Apple authorized dealers, VARs, book and magazine publishers, repair shops, and a few others.

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1994 Fall Short Courses

Academic Computing Services
University of North Texas
Computing Center

- Registration — Academic Computing Services is offering the following short courses for the 1994 fall semester. Please preregister to attend. You may either fill out the form attached to this document or register on-line via Gopher. If registering via Gopher, the form can be found in the path: UNT Departments, Schools, and Colleges/Computing Center/Short Courses. (Call 565-2324 if you have questions about Gopher.)

- Eligibility and Class Size — Faculty and students have first priority to register for these classes. A maximum of 10 people will be admitted to each of the courses held in ISB 110 and ISB 235. A maximum of 15 people will be admitted to each of the courses held in Chilton 255 and ISB 201. Academic Computing Services reserves the right to cancel any course that has 5 or fewer people registered 3 days before the course is scheduled.

- Hands-on Classes — All persons registering for hands-on (ISB 110, Chilton 255) HDS and/or UNIX courses should have current User-IDs for the system to which the course applies. Applications for User-IDs are available in the Computing Center main office (ISB 119). It takes several working days for a User-ID to be activated.

HDS, VAX, and UNIX Courses

- Introduction to CMS — CMS is an interactive operating system employed by academic users to access the Academic HDS/8083 IBM-compatible mainframe computer at UNT. CMS users have access to a variety of programming languages, a sophisticated text editing system, and several statistical analysis packages. CMS users can also submit batch jobs to the OS/MVS system. You must have a current CMS User-ID to take this class.

Two two-hour sessions, to be held in the Chilton General Access Lab (Chilton 255):

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<tr>
<th>Date</th>
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<th>Instructor</th>
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<tbody>
<tr>
<td>Tuesday, September 13</td>
<td>2-4 p.m.</td>
<td>James Yarbrough</td>
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<tr>
<td>Wednesday, October 5</td>
<td>2-4 p.m.</td>
<td>Philip Baczewski</td>
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Please see CWIS on page 24.
Introduction to IBM MVS Job Control Language (JCL) – This course provides an overview of IBM JCL for users who wish to further their knowledge in this area. It is useful for individuals who plan to run MVS batch jobs (e.g., SAS, SPSS-X) on the HDS IBM-compatible mainframe computer.

A two-hour session held in the Academic Computing Conference Room (ISB 235):

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<tr>
<td>Monday, September 12</td>
<td>2-4 p.m.</td>
<td>George Morrow</td>
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Introduction to UNIX on Jove and Sol – This course starts with a short discussion of the history and evolution of UNIX, covering both the “Berkeley Software Distribution” and “AT&T System V” variants of UNIX. Topics covered will be the basic necessities for using UNIX and use of some of the various utilities available in UNIX. You must have a current Sol or Jove User-ID to take this class.

Two two-hour sessions, held in the Chilton General Access Lab (Chilton 255):

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<td>1-3 p.m.</td>
<td>Staff</td>
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<tr>
<td>Monday, October 10</td>
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<td>Staff</td>
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Intermediate UNIX on Sol and Jove – This course is recommended for individuals who are familiar with UNIX and want to learn more about using it on Sol and Jove. You must have a current Sol or Jove User-ID to take this class.

A two-hour session to be held in the Chilton General Access Lab (Chilton 255):

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<td>Wednesday, October 26</td>
<td>2-4 p.m.</td>
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Statistical Package Courses

Introduction to SAS – This course is recommended for individuals who plan to incorporate statistical analyses into their research. The basic concepts of the SAS system are covered in this course. This course or prior knowledge of SAS is a prerequisite for all other SAS courses.

Two two-hour sessions, held in the Science Library (ACS General Access Lab, ISB 110):

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<tr>
<td>Monday, September 19</td>
<td>2-4 p.m.</td>
<td>Panu Sitiwong</td>
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<tr>
<td>Thursday, October 6</td>
<td>2-4 p.m.</td>
<td>Phanit Laosirat</td>
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There are also separate lists of vendor ftp sites and WWW pages. In the future I hope to produce other topical lists such as 800 numbers and AOL addresses. The capability to do this exists now. What is lacking is the data.

If you would like to add your company to this directory please point your favorite forms: capable World-wide-Web browser (such as Mosaic 2.0 or lynx) at: http://revex.nmsu.edu/~chaur/fact/forms/vendorinfoform.html and fill out the form you find there.

While information submitted via E-mail will eventually make its way into my database, the process will be a lot quicker if you use the form since the back end will automatically handle all the necessary HTML formatting.


From: ccat@netcom.com (Chris Beaumont) Date: Mon, 18 Jul 1994 16:34:52 GMT

As part of a job I've been working on, I put together a fairly comprehensive list of pointers to info sources on the WWW for those wanting to learn how to put their data onto the Net. If people are interested, I'd appreciate it if they could take a look and offer feedback, additions, etc.

My page is not as large as some, but I'm trying to provide a clear, simple and useful set of resources both for those starting out, as well as experts in the field.

Please send feedback to cbeaumont@nas.nasa.gov Thanks! -Chris Beaumont

Psychology Graduate Student WWW site available: gopher://pandal1.uottawa.ca:4010/
Courses continued from page 24.

0 Introduction to SAS for CMS, DOS & UNIX – This course is recommended for individuals who plan to use SAS on the academic HDS IBM-compatible mainframe, DOS or OS/2. Topics covered include creating SAS programs, reading data into SAS programs, saving SAS data sets, importing/exporting SAS datasets to and from other SAS systems, and preparing and submitting SAS jobs to OS/MVS. SAS is used interactively in this course. Prior knowledge of the SAS command language or attendance in the Intro. to SAS course is required.

A two-hour session to be held in the Chilton General Access Lab (Chilton 255):

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<tr>
<td>Tuesday, September 27</td>
<td>2-4 p.m.</td>
<td>Panu Sittiwong</td>
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0 Introduction to SAS on Windows, OS/2, and X Window – This course is recommended for individuals who plan to use SAS on a GUI interface. Topics covered include creating SAS programs, reading data into SAS programs, saving SAS datasets, and importing/exporting SAS datasets to and from other SAS systems. This class will also utilize the SAS menus under the X Window System. Prior knowledge of the SAS command language or attendance in the Intro. to SAS course is required.

A two-hour session to be held in the Chilton General Access Lab (Chilton 255):

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<tr>
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<td>2-4 p.m.</td>
<td>Panu Sittiwong</td>
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</table>

0 Introduction to SPSS – This course is recommended for individuals who plan to incorporate statistical analyses into their research and want to use SPSS on the academic HDS IBM-compatible mainframe. It emphasizes using SPSS from the CMS operating system. Topics covered include creating SPSS programs, reading data into SPSS programs, saving SPSS datasets on a minidisk, importing/exporting SPSS datasets to and from other SPSS systems, and preparing and submitting SPSS jobs to OS/MVS. SPSS is used interactively in this course. You must have a current CMS User-ID to take this class.

Two three-hour sessions to be held in the Science Library (ACS General Access Lab, ISB 110):

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<td>James Yarbrough</td>
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<tr>
<td>Wednesday, October 19</td>
<td>1-4 p.m.</td>
<td>James Yarbrough</td>
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0 Introduction to SPSS PC+ – This course covers the basics of using SPSS PC+, Version 4.0.1, for IBM and compatible PCs. Topics covered include using the menu and help interfaces in REVIEW, loading files, selecting variables and running statistical analyses. Emphasis will be placed on building files for execution interactively.

A two-hour session, held in the Science Library (ACS General Access Lab, ISB 110):
Introduction to SPSS on Windows – This course is recommended for individuals who plan to use SPSS on a PC using Windows.
A two-hour session, held in the Science Library (ACS General Access Lab, ISB 110):

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<tbody>
<tr>
<td>Monday, October 3</td>
<td>2-4 p.m.</td>
<td>James Yarbrough</td>
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Wide Area Network & Information Systems Courses

Introduction to Electronic Mail and Discussion Groups on CMS – This course will cover the basics of using CMS MAIL to send and receive electronic mail to both the Internet and BITNET. The use of electronic mailing lists including BITNET LISTSERV will also be discussed. Prior knowledge of CMS is required.
A two-hour session held in the ISB 201, an SLIS classroom:

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<tbody>
<tr>
<td>Tuesday, November 1</td>
<td>2-4 p.m.</td>
<td>Panu Sittiwong</td>
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Introduction to Electronic Mail and Discussion Groups on UNIX - This course will cover the basics of using elm or pine to send and receive electronic mail to both the Internet and BITNET. The use of electronic mailing lists, including BITNET LISTSERV will be discussed. Using USENET newsgroups via the nn News program on UNIX will also be explored. Prior knowledge of UNIX is required.
A two-hour session, to be held in the Science Library (ACS General Access Lab, ISB 110):

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<th>Instructor</th>
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<tr>
<td>Friday, September 30</td>
<td>2-4 p.m.</td>
<td>Philip Baczewski</td>
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</table>

Introduction to Internet Tools and Techniques - The Internet is a collection of related computer networks that link almost a million computers throughout the world. This course will cover file transfer, remote login, use of on-line library catalogs at other universities, Archie, Gopher, and many other Internet topics except electronic mail and USENET News. Prior knowledge of at least one of the following interactive operating systems is required: CMS, UNIX, MS-DOS.
Two one and one half-hour sessions, the first to be held in the Science Library (ACS General Access Lab, ISB 110) and the second in the Chilton General Access Lab (Chilton 255):

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<tr>
<th>Date</th>
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<tr>
<td>Thursday, September 29</td>
<td>2-4 p.m.</td>
<td>Staff</td>
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Please see Courses on page 27.

CWIS continued from page 25.

World Wide Web and Mosaic:
From: schlenoff@cme.nist.gov (Craig Schlenoff) Date: 28 Jun 94 19:49:23 GMT
Hello all. I have just published a "paper" entitled "World Wide Web and Mosaic: User's Guide." It is written in HTML and intended to be primarily disseminated in electronic format. I've tried to include as many useful links as possible while still giving a brief overview of the major topics in the actual document. You can access it two ways:
2. Going into our division's (Factory Automation Systems Division) homepage, clicking on staff, clicking on my name (Craig Schlenoff), and clicking on the publication. The URL for our division's homepage is: http://elib.cme.nist.gov/fasd/home.html
I hope you enjoy the document and am anxious to hear any feedback.
Happy reading, Craig Schlenoff

From: ian@jarthur.cs.lmc.edu (Spiff) Date: 23 Jun 1994 18:22:10 GMT
A list of commercial sites on the net. Included in there is a number of sites that sell "things" on the Net. There is one that seems sort of interesting called the Internet Shopping Network http://www.resarch.digital.com/SRC/virtual-tourist/CaliforniaYP.html/centers
This is The California yellow pages in the Online Shopping Centers section.

11th World Festival of Animated Films - Awards: http://Animafest.hr/awards.html
Courses continued from page 26.

<table>
<thead>
<tr>
<th>Date</th>
<th>Time</th>
<th>Instructor</th>
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<tbody>
<tr>
<td>Tuesday, October 11</td>
<td>2:30-4 p.m.</td>
<td>Staff</td>
</tr>
<tr>
<td>Monday, November 7</td>
<td>1:30-3 p.m.</td>
<td>Staff</td>
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</table>

**Introduction to Internet Services: Gopher, WWW (Mosaic), NEWS and Others** - This course covers the use of various campus and Internet-wide browsing tools including Gopher, the World Wide Web and USENET NEWS. Emphasis is on searching for information, proper use of these tools and tips on making your own information available to others on the Internet. This class will not concentrate on specific clients as much as concepts. The “Introduction to Internet Tools and Techniques” courses are recommended for specific computing platform information.

Two two-hour sessions held in ISB 201, an SLIS classroom:

<table>
<thead>
<tr>
<th>Date</th>
<th>Time</th>
<th>Instructor</th>
</tr>
</thead>
<tbody>
<tr>
<td>Friday, September 23</td>
<td>2-4 p.m.</td>
<td>Mark Thacker</td>
</tr>
<tr>
<td>Friday, October 14</td>
<td>2-4 p.m.</td>
<td>Mark Thacker</td>
</tr>
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</table>

**Introduction to PC E-Mail and Discussion Groups** - This course covers the basics of using electronic mail facilities on the PC to communicate with others on the Internet and BITNET. Accessing USENET Newsgroups via Trumpet will also be covered. Prior experience using Pegasus Mail is required.

A two and one-half-hour session, held in the ISB 201, an SLIS classroom:

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<tr>
<th>Date</th>
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<tbody>
<tr>
<td>Friday, October 7</td>
<td>1:30-4 p.m.</td>
<td>Eriq Neale</td>
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</table>

**Introduction to Internet Tools and Techniques on the Mac** - This course covers Internet tools and techniques that are unique to the Macintosh environment. Prior experience using a Macintosh is required.

A one and one-half-hour session, held in the Science Library (ACS General Access Lab, ISB 110):

<table>
<thead>
<tr>
<th>Date</th>
<th>Time</th>
<th>Instructor</th>
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</thead>
<tbody>
<tr>
<td>Thursday, October 27</td>
<td>2:30-4 p.m.</td>
<td>Sean McMains</td>
</tr>
</tbody>
</table>

Microcomputer Courses

**Introduction to Macintosh for Students** - This course is recommended for students who want to learn about Apple Macintosh computers.

A three-hour session, held in the Science Library (ACS General Access Lab, ISB 110):

<table>
<thead>
<tr>
<th>Date</th>
<th>Time</th>
<th>Instructor</th>
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</thead>
<tbody>
<tr>
<td>Thursday, September 22</td>
<td>1-4 p.m.</td>
<td>Sean McMains</td>
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</tbody>
</table>
Introduction to Microcomputers & DOS - This class covers the hardware components of a personal computer (PC), the equipment used on campus, and different types of software. The final part of the class will deal with simple DOS commands needed when operating a PC (FORMAT, COPY, DIR, RENAME, DEL, ERASE, TYPE, CHKDSK, VER). You need to bring a 3 1/2" or 5 1/4" high-density diskette to be formatted.

A three-hour session, held in the Chilton General Access Lab (Chilton 255):

<table>
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<tr>
<th>Date</th>
<th>Time</th>
<th>Instructor</th>
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</thead>
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<tr>
<td>Thursday, September 8</td>
<td>2-5 p.m.</td>
<td>Sean McMains</td>
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</tbody>
</table>

Introduction to WordPerfect 5.1 + (DOS) - This is an introduction to the basics of WordPerfect. It will include printing, cursor movement keys, delete and insert functions, Spellcheck and Thesaurus, basic formatting needs (i.e., changing margins, turn page numbering on, change to double space, centering, flush right, automatic system date, etc.). You will also learn how to block and move paragraphs of information from one location to another. Prior knowledge of basic DOS commands is required. Bring a 3 1/2" or 5 1/4" formatted high-density diskette.

Two three-hour sessions, held in the Chilton General Access Lab (Chilton 255):

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<tr>
<th>Date</th>
<th>Time</th>
<th>Instructor</th>
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</thead>
<tbody>
<tr>
<td>Wednesday, September 28</td>
<td>2-5 p.m.</td>
<td>Sean McMains</td>
</tr>
<tr>
<td>Wednesday, November 2</td>
<td>2-5 p.m.</td>
<td>Sean McMains</td>
</tr>
</tbody>
</table>

Transition from WordPerfect 5.1 to 6.0 (DOS) - This course is for those individuals familiar with WP 5.1, and who are transitioning to WP 6.0 DOS. It will cover the differences between the two programs, and go over the alternatives available with the new version.

A three-hour session, held in the Chilton General Access Lab (Chilton 255):

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<tr>
<th>Date</th>
<th>Time</th>
<th>Instructor</th>
</tr>
</thead>
<tbody>
<tr>
<td>Friday, November 4</td>
<td>9 a.m.-Noon</td>
<td>Sandy Burke</td>
</tr>
</tbody>
</table>

Transition from WordPerfect 5.1 to 6.0 (Windows) - This course is for those individuals familiar with WP 5.1, and who are transitioning to WP 6.0 Windows. Time will be spent on using the Windows version, going through the menu alternatives.

Two three-hour sessions, held in the Chilton General Access Lab (Chilton 255):

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<th>Time</th>
<th>Instructor</th>
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</thead>
<tbody>
<tr>
<td>Thursday, September 22</td>
<td>2-5 p.m.</td>
<td>Sandy Burke</td>
</tr>
<tr>
<td>Thursday, November 17</td>
<td>2-5 p.m.</td>
<td>Sandy Burke</td>
</tr>
</tbody>
</table>

Please see Courses on page 30.
VR and WorldWideWeb Mailing List: http://www.wired.com/vrml/  
From: Brian Behlendorf brian@wired.com  
Date: Thu, 9 Jun 1994 00:47:33 +0200

Announcing the Virtual Reality Markup Language (VRML) Mailing List!

What is VRML? — Virtual Reality Markup Language or VRML is an evolving specification for a platform-independent definition of 3-dimensional spaces within the WorldWideWeb. It is designed to combine the best features of virtual reality, networked visualization, and the global hypermedia environment of the WorldWideWeb.

Why is there a VRML mailing list? — Due to the intense interest expressed within the WorldWideWeb community during WWW '94 in Geneva, we have begun an open forum discussion for the design and implementation of a platform-independent language for virtual reality object design/scence design/linkage to the Web.

Is there a WorldWideWeb site for VRML? — Yes. The folks at WIRED have very kindly given us some of their bandwidth and disk space. The URL for the VRML Forum is: http://www.wired.com/vrml/

We hope that this site will grow into a major resource for individuals and groups developing VRML viewers/authoring tools/etc. There are a number of links from this site to other works, including two papers from WWW '94 which outline, in some detail, the requirements for VRML.

How do I subscribe to the VRML mailing list? — To subscribe to the list send mail to: major-domo@wired.com No subject field, message body: subscribe www-vrml. Within a few minutes you should get a reply from the server at wired.com.

Best of the Web '94!!: http://wings.buffalo.edu/contest/  
From: plewe@acsu.buffalo.edu  
(Brandon S Plewe)  
Date: Fri, 27 May 1994 20:58:37 GMT

After many months of work and voting by several hundred people, The Best of the Web '94 Awards were presented Thursday at the WWW Conference in Geneva.

The award recipients and other nominees are on permanent display at: http://wings.buffalo.edu/contest/ (please make any pointers to the awards go to this URL, not the subpages)

Here is a brief rundown of the Winners. Congratulations are due them!

Hall of Fame
• Marc Andreessen
• Tim Berners-Lee
• Eric Bina
• Rob Hartill
• Kevin Hughes
• Lou Montulli
• Best Overall Site: NCSA
• Best Campus-Wide Information System: Globewide Network Academy (without a real campus even!)
• Best Commercial Site: O'Reilly and Associates
• Best Educational Service: Introduction to Object-Oriented Programming with C++
• Best Entertainment Site: Sports Information Service
• Best Professional Service: OncoLink
• Best Navigational Aid: World Wide Web Worm
• Most Important Service Concept: What's New on the WWW

We hope to see you there! Mark Pesce (mpesce@netcom.com)  
Brian Behlendorf (brian@wired.com)

Best Document Design: Travels With Samantha
Best Use of Interaction: Xerox Map Server
Best Use of Multiple Media: Le Louvre
Most Technical Merit: Xerox Map Server

From: pgrince@nic.cerf.net (Robert Young)  
Date: 24 May 1994 01:10:08 GMT

Come explore and become a part of WebWorld, the first virtual world you can travel in, build in, and visually link to other parts of the World Wide Web. WebWorld is at: http://sailfish.peregrine.com/WebWorld/welcome.html

You can build a home, office, or even a city that is linked to other parts of the World Wide Web. Prime real estate is available now for those who build first in WebWorld.

WebWorld is a new way to look at information-space. A visual metaphor for the World Wide Web, come check it out. Ron Britvich, ronb@peregrine.com

Periodic Table of Elements on WWW: http://www.cchem.berkeley.edu/Table/index.html  
From: Richard Lee Holbert@CSCVAX.SFASU.EDU  
Date: Fri, 15 Apr 1994 08:25:41 +1000

For those Chemistry people out there or people who would pass this along to their Chemistry friends, the Periodic Table of Elements is now available on the WWW. It gives 105 elements and when you highlight an element, it gives you a 3 pages of info. on the element, including General Information, Radii /pm, Valence, Electronegativities, Temperatures, and Isotopic Abundances to name a few. Good for students who want to learn the table.
Courses continued from page 28.

- Introduction to WordPerfect 6.0 (Windows) - An introductory course for those migrating to WordPerfect 6.0 for Windows from WP 5.1 for DOS. Items covered will include the Windows environment, using the Power Bar, Button Bar, and Ruler Bar; on-line help and coaches; using Tables including calculations; using Templates and Styles; working with Graphics; and document management.

  Two three-hour sessions, held in the Chilton General Access Lab (Chilton 255):

<table>
<thead>
<tr>
<th>Date</th>
<th>Time</th>
<th>Instructor</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wednesday, September 21</td>
<td>2-5 p.m.</td>
<td>Sean McMains</td>
</tr>
<tr>
<td>Wednesday, November 16</td>
<td>2-5 p.m.</td>
<td>Sean McMains</td>
</tr>
</tbody>
</table>

- Introduction to Windows 3.1 - This course provides an introduction to the Windows 3.1 operating environment. Emphasis will be placed on using the mouse, control panel, and file manager.

  A three-hour session, held in the Chilton General Access Lab (Chilton 255):

<table>
<thead>
<tr>
<th>Date</th>
<th>Time</th>
<th>Instructor</th>
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<tbody>
<tr>
<td>Wednesday, September 14</td>
<td>2-5 p.m.</td>
<td>Sean McMains</td>
</tr>
<tr>
<td>Wednesday, November 9</td>
<td>2-5 p.m.</td>
<td>Sean McMains</td>
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</tbody>
</table>

- Introduction to Pegasus Mail - This course is recommended for people, especially faculty and staff, who want to learn about using Pegasus Mail (Pmail) to communicate with others on campus and via the Internet.

  Two three-hour sessions, held in the Chilton General Access Lab (Chilton 255):

<table>
<thead>
<tr>
<th>Date</th>
<th>Time</th>
<th>Instructor</th>
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</thead>
<tbody>
<tr>
<td>Thursday, September 1</td>
<td>2-5 p.m.</td>
<td>Sandy Burke</td>
</tr>
<tr>
<td>Wednesday, November 16</td>
<td>9 a.m.-Noon</td>
<td>Sandy Burke</td>
</tr>
</tbody>
</table>

- Don’t Get Stoned: Computer Viruses and You - This course is recommended for anyone who uses a microcomputer and wants to protect their software and data against viral infections.

  A two-hour session, held in ISB 201, an SLIS classroom:

<table>
<thead>
<tr>
<th>Date</th>
<th>Time</th>
<th>Instructor</th>
</tr>
</thead>
<tbody>
<tr>
<td>Friday, October 21</td>
<td>2-4 p.m.</td>
<td>Erik Neale</td>
</tr>
</tbody>
</table>

- Introduction to WordPerfect 2.0 Presentations Overheads (DOS) - An introduction to the WordPerfect DOS Presentations Product, formerly DrawPerfect. We will create overheads such as bullet charts, organization charts, and data charts.

  A three-hour session, held in the Chilton General Access Lab (Chilton 255):

<table>
<thead>
<tr>
<th>Date</th>
<th>Time</th>
<th>Instructor</th>
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</thead>
<tbody>
<tr>
<td>Wednesday, September 7</td>
<td>9 a.m.-Noon</td>
<td>Sandy Burke</td>
</tr>
</tbody>
</table>

Computing Courses Offered Through the Personnel Office

The schedule for faculty/staff computing courses offered through the Personnel Office is listed below. Anyone wishing to take a course should contact Personnel at 565-4246 or go to Marquis 128 to pick up a registration form. Registration forms will also be in the back of the monthly Personnel Newsletter. All courses will be taught in the Chilton 255 computer lab.

- Introduction to Micros & DOS — November 23, 9 a.m.-Noon.
- Introduction to Windows 3.1 — October 12, 2-5 p.m.; November 30, 2-5 p.m.
- Transition from WordPerfect 5.1 to 6.0/Windows — October 20, 2-5 p.m.
- Introduction to WordPerfect 6.0/Windows — October 19, 2-5 p.m.
- WordPerfect 6.0/Windows — Merge — October 27, 2-5 p.m.; October 28, 2-5 p.m.
- Presentations 2.0/Windows — Draw, Chart — October 27, 2-5 p.m.; October 28, 2-5 p.m.
- WordPerfect 6.0/Windows — Slides — October 26, 9 a.m.-Noon.
- Novell User Commands — September 29, 2-4 p.m.; November 3, 2-4 p.m.; December 1, 2-4 p.m.

Customized Short Courses Available

Faculty members can request "customized" short courses for their classes. Contact ACS to request a course. (565-2324, ISB 119). [ ]
How to Add Information to The Web

By Mark Thacker, CWIS Coordinator (thacker@unt.edu)

We in the Computing Center are planning on implementing the World Wide Web servers in a variety of manners which will hopefully make adding your personal or departmental information easier. Traditionally, I have encouraged people to store their Gopher information on the central Gopher server because the microcomputer clients were not really all that useful and the Gopher server hardware is very reliable. With the World Wide Web, the attitude will be more distributed. People will be encouraged to store files on their own file servers while leaving the mundane day-to-day issues of running the Web server up to people like me.

What Can Be Provided?

Essentially, all World Wide Web sites are collections of documents written in a special format known as HyperText Markup Language, or HTML. This language is one that allows a normally boring ASCII text file to become full of hypertext links to other documents or to graphics, movies, sound or other items residing on Web servers locally, or around the world. Graphics, sounds, movies or any other binary file (PC executable, Macintosh application, compressed files, etc.) are all referenced (but not physically included) by your HTML documents.

It is worth noting that file names are not really used at all that much by the end-user in WWW. When someone views a page and picks a hypertext link from that page, most of them won't know or won't care what the filename is that they are referring to. For example, the phrase "University of North Texas Documents" could refer to a file that is really named "UNTDOC.HTM" because it is the HTML document that presents the friendly name to the user - not the file name itself.

You will have to convert your documents into HTML format. There are several HTML editors as well as Rich Text Format (RTF) to HTML converters. Almost all word processors can save in RTF form, so the jump to HTML may not be terribly difficult. In addition, graphic images that you want to include in-line should be small and in the Graphics Image Format (GIF) made popular by CompuServe. Details on how to manage this document conversion will be covered in the short courses I am teaching soon. Future issues of Benchmarks will contain additional information about these courses.

What Servers are Best?

The following sections will help you determine which is the best method for making your information available to the World Wide Web. There are many options available, but all should present themselves in a comprehensive manner. The program name of "HTTPD" is a reference to the HyperText Transfer Protocol Daemon program used by the UNIX machines running Web servers.

- MS-DOS files on a Netware File Server — Here, your files are on a Novell file server and are in MS-DOS format. This also assumes that you don't have any Macintosh computers handy.
- Choice #1: MS-Windows HTTPD Server — There is a server written as a port of the NCSA HTTPD UNIX server that will run under MS-Windows. The good part is that it can access your files on your file server without having to rename them. You can also have this machine log in to your file serv-

er as a normal Novell user, complete with all security settings and the like. The bad part is, well, it's based on MS-Windows! Microsoft has even openly stated that MS-Windows 3.1 was not designed for networking (check Microsoft's official Chicago Reviewer's Guide for more information). Our experience with this product is a buggy one at best. You will need to dedicate a machine to be the server for performance reasons.

- Choice #2: Univel UNIXWare HTTPD Server — UNIXWare is a version of UNIX designed to run on PCs. It is a true version of UNIX, but it is written by Univel, Novell's UNIX subsidiary and therefore has the unique ability to log in to a Netware file server just like a normal DOS/Windows machine would. Running a server here has all of the advantages of the MS-Windows server, plus the added benefit of a robust UNIX multitasking operating system as its basis. Since it is UNIX, scripting, automation, electronic forms and a plethora of other tools exist to assist in managing the system.

The Computing Center will manage one such Univel machine and will gladly make connections to any Netware file server that wants to provide information to the Web. This machine will be on a UPS soon and will be backed up using our existing UNIX backup/recovery tape drives and such.

- Macintosh Files With or Without Netware File Server — Macintosh users do have the advantage of using a product known as MacHTTP. It is a background running application that serves up documents on the local machine and on other machines the Mac is connected to. It has a
surprising amount of flexibility in that it supports image maps, electronic forms and other events through something known as AppleScript. You would need to learn how to program AppleScript if you wanted to do any advanced functions, but for basic operations, this server is great. You will need to dedicate a machine to be the server for performance reasons. (Note: A PowerMacintosh version will be released soon.)

Why is it better than the MS-Windows based server? Primarily because it understands Macintosh file names – DOS's file names are simply a subset of a Mac file name. It can access items on a Novell server, but does not have quite the same set of support tools that the UNIX server does.

- No File Server or Account on Host Machine (Jove, Sol, Ponder) — Here the best solution is to provide the files that you want to post directly to the primary UNIX machine running the UNIX HTTPD program. This can be done through any Internet mailing program or by putting the files into a special subdirectory on your host-based account. If you choose to post through E-mail, the files will be placed into the mail Web data tree on the dedicated UNIX machine running the Web server. Keep in mind that HTML files are printable ASCII, so they will be sent through the mail correctly. Otherwise, you may create a "www" subdirectory in your host-account's home directory and put HTML files there.

This method of course has all the benefits in that the data are backed up on a regular basis and that the machine is already on a UPS. This is the same machine that is used to serve Gopher users currently, and has quite a few good tools available for maintenance.

- When to Expect These Services — Hopefully, by the time that you read this, all of these services will be available. Look at the top of the UNT Web (http://www.unt.edu) for links or a pointer to how to add your information. Also watch the Web and future editions of Benchmarks for information about classes concerning the use of the Web at UNT and how to add your information to it.

If you have any questions, or would like to contact me about adding information, please do so by sending mail to: WWW@unt.edu or giving me a call at 817-565-2568.

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Graduate and Undergraduate Catalogs On-Line in Gopher

By Mark Thacker, CWIS Coordinator (thacker@unt.edu)

Thanks to the hard work of Skip Krueger and others in the Public Affairs and Information Services, the Graduate and Undergraduate Catalogs are available for searching and viewing on the UNT Gopher server. The catalogs are organized in a fashion similar to the printed ones, but include a search function that allows you to search for the occurrence of phrases anywhere in the catalog! Search for "political and science" to return all sections containing both words.

A new information request electronic form is available for someone wanting more information. This form is available from any Gopher+ client (HGopher for Windows, TurboGopher for Mac, UNIX and VAX Gopher), but is generally not reliable under PCGopher for MS-DOS. Anyone on the Internet can now browse our catalogs and even request additional information if they like.

The catalogs are located under the following menus: UNT Information & Resources Graduate & Undergraduate Catalogs or for those wanting a URL to it: gopher://gopher.unt.edu:70/11/UNT/catalogs

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VMS to be Phased Out This Year

Marc St-Gil, VAX/UNIX Administrator (mstagil@unt.edu)

By May 1995, our VAX 6000-310 system which runs the VMS operating system will be phased out in favor of newer, cheaper, faster, and more versatile UNIX based systems. This will allow the Computing Center to leverage our resources by reducing the number of operating systems and hardware platforms we support. As a result we will be able to give you better service and support more applications while not increasing our costs.

Currently, 95% of all VAX system use is primarily for connectivity with the Internet—to “telnet,” to send electronic mail to either BITNET or Internet sites, read USENET News with the ANU News program, and/or download files from Internet sites to their office or home computer systems. Every one of these needs can be more effectively met using our UNIX system, Jove.

For those few persons who are using the VAX for specialized applications, such as Gaussian, MOPAC, AMPAC, ARC/INFO, ERDAS, we want to assure you that all these packages will be moved to our UNIX platforms. In the coming months, a member of Academic Computing Services will be contacting each of our VAX users and will work with you to make the transition over to UNIX. Once this transition has been completed, we are confident that you will find that your new environment will far exceed your VAX environment in meeting your computing needs.

As we proceed with our transition from VAX to UNIX, we will continue to update you. If in the meantime, you have any questions or concerns, please don’t hesitate to contact me.
A New Relationship Between Sol and Jove

By Marc St.-Gil, VAX/UNIX Administrator (msgil@unt.edu)

The current relationship between Sol and Jove is about to change for the better. There are several changes being made this semester that should dramatically improve the way you interact with these systems described below.

New User-ID management system installed for Jove!

The way you go about getting an account on Jove has changed dramatically. This is in part both cause and effect of our new “purpose” for Jove. (See below.) As of this semester, those persons who are affiliated with UNT in such a way as to have been issued a UNT ID card are eligible for accounts on Jove.

To get one, all you have to do is sit down at a terminal, connect to UNT’s Gopher or WWW server, find the Computing Center section on the hosts managed by Academic Computing Services and you will find a form there that you can fill out and file electronically to request an account. No more running around trying to get various departmental authorities to sign your form and provide budget codes! No approval, other than your own, is required to acquire an account! Once you fill your request, your account will be ready in less than 2 working days. In most cases, you will be able to pick up your account information in ISB 119 within an hour or two. Eventually, this will be almost immediate. In any case you will still be required to appear in person with a valid picture ID in ISB 119 to get your account information slip which will have your User-ID and password on it.

“New” purpose for Jove!

As of this semester, Jove has been given a new purpose — to host accounts for a new “Student E-Mail System.” To facilitate this, we have tried to make getting an account as easy as possible. (See above.) Jove was originally constructed from a windfall of leftover parts from a Sol upgrade and a very few new components (primarily the chassis). As such, Jove had very little official direction. Amos Gnaux, Jove’s System Administrator, has been instrumental in providing a direction for the growth of Jove and the types and quality of software it supports. With the call for a system to provide a central resource for student E-Mail that can be accessed both from the local campus backbone as well as over UNT’s dialup lines and via the Internet, the answer turned out to be “Hey, we’ve already got that on Jove! All we have to do is expand it.” A new system has been ordered to replace the current Solbourne 5E/702 and is expected to arrive in Sept.-Oct. We will start out with a Sun SPARCserver 1000 with 250MHz SuperSPARC CPU’s and 128MB RAM, and a very large disk array (possibly 2.32GB RAID Arrays) for mail spooling and home directories. We expect to be able to provide an average of 1MB of disk storage and 1MB of E-Mail spool area per user for a total of about 32,000 users when we reach capacity. We hope to have it on-line and ready to support the E-Mail software within a few weeks and ready to replace the current 5E/702 completely by Thanksgiving or Christmas. We also plan to expand it with 2 more CPU’s and 128MB RAM during this fiscal year. Before you ask, the old system is slated to provide a more powerful platform for many of our other campus services such as our Gopher and WWW servers, USENet News server, E-Mail router, etc. which are currently running on desktop class systems which are running out of steam.

Refining Sol’s “raison d’etre”

As we transition account holders from the VAX to Jove and Sol and increase Jove’s ability to handle more introductory users, we plan to also move those persons using Sol as an Internet home base over to Jove. E-Mail forwarding will be provided so that E-Mail to Sol will be forwarded to Jove automatically. The only difference that users will likely notice is that they will be connecting to “Jove” instead of “Sol” on a menu somewhere and that the name of their home directory has changed. Other than those two highly cosmetic differences everything will be identical. Keep an eye on the messages presented when you log in for details of exactly when this transition will occur.

In the past, we have restricted accounts to one on either Sol or Jove, but not both in 99% of the cases. This is about to change. All Sol account holders will be automatically given Jove accounts. During this semester, accounts will be gradually moved from Sol to Jove for those people not needing access to specific software available only on Sol. For those persons needing access to those software packages, their “home base” will be moved to Jove, but access and file storage space local to Sol will be retained.

In the future, getting a Sol account will be just like getting a Jove account with the exception that the request must be approved by the Computing Center and the primary basis for granting or denying access will be the purpose you state in your application for access. For example, if you are doing some sort of project where you need access to a high-speed, high-capacity statistics program you will probably want to use the SAS software package on Sol. You would state this in your request and we would base our decision on that statement. As always, there are exceptions to every rule and if you feel you have been denied access unjustly, a personal appearance or phone call to the Com-
puting Center is certain to clear up any misunderstanding on our part.

Summing Up

As in the past, please keep in mind that Jove and Sol are organized in such a way that if you have an account with access to both systems, it is just exactly that. "A single account with access to both systems." This means that your home directory is the exact same piece of disk drive on Jove regardless of the system to which you are logged in. If you have access to Sol as well as Jove, you will also be given an area local to Sol in which to store your data and programs to be used on Sol. Even if Jove is down, although you will not have access to your home directory, you will be able to log in and access this "other home" and do work. You will receive all E-mail on Jove regardless of the system to which it was addressed. You will not be notified of new E-mail that arrives on Jove if you are only logged in to Sol, thus you should log in to Jove and do your general Internet work from there and just use Sol to do those things that can only be done there. As mentioned above, all this will happen gradually, and you will be notified in advance before any significant changes are made to your accounts.

WP User's Group 1994 Fall Schedule

The WordPerfect User's Group is open to any interested student, faculty, or staff member who wishes to share information or address questions about WordPerfect products supported by the Computing Center.

All meetings are held from 11 a.m. - Noon in Chilton 255.
- Friday, September 16
- Friday, October 21
- Friday, November 18

New E-mail Addressing Option for Jove and Sol Systems

By Marc St.-Gil, VAX/UNIX Administrator (mstagil@unt.edu)

You can now send E-mail to Jove users from Sol by simply specifying their User-ID and vice versa on Jove. In the past it was necessary to specify the User-ID and host as userID@jove.acs.unt.edu to send E-mail to a Jove user from a Sol account. The same was true of userID@sol.acs.unt.edu for Jove users sending E-mail to Sol. We now have a system in place that will automatically forward E-mail for a user to the correct host for that User-ID regardless of whether you send it from Jove or Sol. Please note that this only applies to mail being sent to Jove or Sol from Jove or Sol. In other words, you still have to specify userID@ponder.cs.unt.edu to send E-mail to a user on the Computer Science system Ponder and Ponder users will still have to specify userID@jove.acs.unt.edu to send E-mail to Jove users. One side effect of this is that you don't have to remember which system a user has his/her account on, you can just send E-mail to userID@jove.acs.unt.edu from other Internet systems and Jove will forward the E-mail to Sol if necessary. I specify Jove in the above example because that is where all of our Jove and Sol users will soon be receiving their E-mail, and until then, auto-forwarding to Sol users is ready and working.

The Network Connection

By Dr. Philip Baczewski, Assistant Director, Academic Computing Services, and BITNET INFORMER (ac12@unt.edu)

This column is a continuing feature of Benchmarks intended to present news and information on various aspects of wide area networks.

Controlling Your E-mail

If you are an active user of electronic mail, you may have found yourself wishing for a way to organize your incoming messages, without having to sort through them one by one. Wouldn't it be nice if mail from mailing lists ended up grouped together? Don't you wish that messages with subjects of subscribe or unsubscribe got deleted without your ever having to see them? On some E-mail systems, these sentiments are more than just idle wishes. The incorporation of rules-based message management into E-mail systems makes automated organization of your E-mail not just a wish, but a definite possibility.

A rules or filter facility can perform a number of functions on incoming E-mail based upon the content of the subject, the to or from fields, or the message body. The functions can include deleting the message, forwarding the message, filing the message, or even generating an automatic reply. Not all E-mail systems have this capability, but it is more and more frequently being built into new releases of E-mail software.

The Pegasus Mail Rules Facility

Pegasus mail allows you to invoke rules to organize your incoming mail through the preferences menu in the DOS version (the MacIntosh and Windows versions do not
yet support a rules feature). To define a rule you can select “Preferences” from the main menu and select “New mail filtering Rules” from the preferences menu. At this point, you can configure four items which make up the rule. The items are: the field to scan, the string to find, the action to take if the string is found, and a parameter associated with the desired action. The following example may help illustrate this facility:

If this field: From, Cc, To
Contains: netman-
Then do this: Move
(Using) Network Managers List

In the above example, if the mail From, Cc, or To field contains the string “netman-”, then the message will be moved to the “Network Managers List” Pegasus mail folder. Pegasus will also scan the Subject and Reply-To fields as well. The actions available are as follows:

- Copy
- Delete
- eXtract
- Print
- send Binary file
- Remove from list
- Move
- Forward
- Append
- Send text file
- add user to List
- Run a program

The “Using” item is only invoked when the action selected requires additional information. For example, if you move or copy a message, you will need to indicate a destination folder. If the action is “Forward,” you will need to specify a forwarding address, etc. Other actions, like “delete,” require no additional information to be performed.

With the above set of functions, you can get quite creative in having Pegasus mail automatically manage your incoming mail. You can have messages from different mailing lists filed in different folders, and you can delete messages which you know will not interest you (like subscribe requests to mailing lists). You can allow people to automatically retrieve information from you by using the “Send text file” or “Send Binary file” actions. These could be based on finding a string like “sendme file” in the subject of a message.

Pegasus mail processes your rules each time you invoke the “check for New mail” option. One tip is to not get too complicated with your rules, or it may take a while for Pegasus mail to execute all the specified functions and open your “in” box. On the other hand, this feature of Pegasus mail is one which should not be overlooked as a timesaving utility.

Using Filter on UNIX Systems

On UNIX systems where the E-mail package ELM is installed (including Sol and Jove), there is usually a program named “filter” available as well. Filter is an E-mail filter program which allows you to implement simple rules for manipulating incoming messages. To use filter, you must create a file named filter-rules in your .elm directory. The rules are constructed with the syntax, “if (condition) then action.” They can be as simple as: if (subject contains “subscribe”) then delete

Other elements that can be specified in a condition expression are from, subject, to, lines, and sender. A usual condition expression is in the form, field-relation-value, so you could also construct a rule as follows: if (sender = “bob”) then save bobfolder

This rule would save all messages from the mythical “Bob” into a specific folder.

For more information about filter, see the filter man page on UNIX. You can also refer to the ELM Filter User’s Guide, which on Sol and Jove can be found as /pkg/sol/elm-1/src/doc/Filterguide. You can view this file by using the command, nms/pkg/sol/elm-1/src/doc/doc/Filterguide.

Procmail, a More Powerful Alternative to Filter

Another program available to automatically manage your incoming electronic mail is named Procmail. This program runs on computers running UNIX, and is installed at UNT on Sol and Jove. Procmail has the ability to scan a message’s body as well as the header. This feature, along with some additional functionality make Procmail a bit more powerful than Filter. Since Procmail is installed on Sol and Jove as a primary mail delivery agent, using Procmail only requires that you create a .procmailrc file to hold your rules, or in Procmail terminology, “recipes.”

You can put comments in this file by beginning the line with a pound sign (#).

A line starting with a colon (:) begins all Procmail recipes. The colon is followed by a number which indicates how many conditions are to be checked within that recipe. One or more optional flags, which indicate how a recipe will be processed, follow the number. The last item on a recipe’s first line is a colon. The subsequent lines of a Procmail recipe, are the conditions to be checked, with each condition occupying its own line. An action line follows any of the condition lines.

The flags available are as follows:

- H Search the header of the message (the default)
- B Search the body of the message
- D Distinguish between case (ignore case is the default)
- A Recipe depends on the completion of the preceding recipe
  - a Recipe depends on the successful completion of the preceding recipe
  - h Process (i.e. forward, save, etc.) the header (default)
  - b Process the body (default)
f  Consider the processing to be a filter

c  Continue processing other recipes even if this recipe matches

w  Wait for processing to finish and check a return code

W  Wait for processing to finish, check the return code, but suppress any failure message

i  Ignore any write errors for this recipe

Conditions for Procmail are written as regular expressions. The value ^TO starting regular expression will be replaced with the expression ^TO\r\nApprently-TO:.*. The caret (^) indicates that the text following it should occur at the beginning of a line. The following is an example condition that would match any message sent to the SAS mailing list: ^TO\r\r\n
The following would match the string “subscribe” in the subject field:
\r\n^Subject:.*subscribe

Actions can be as simple as specifying a folder name into which a message will be filed. Mail can be forwarded in an action by putting an exclamation point (!) immediately followed by an E-mail address. An action can also be performed by using a pipe (!) followed by a command.

The following example would save any message from the SAS-L list in the saslist folder:

:w:
^TOSas-L
saslist

As is always the case when dealing with E-mail, you need to be careful when writing your rules. (System administrators do not look kindly on processes that end up creating E-mail “loops” - i.e. a forward to A causes a forward to B which forwards to A, etc.) If you are interested in using Procmail, see man procmail, man procmailx, and man procmailex on SOL or Jove.

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List of the Month

Each month we will highlight one BITNET, Internet, or USENET Special Interest Group (SIG) mailing list. This month’s list...

ORFEO on listproc@unicorn.acs.ttu.edu
Owner: Ted McWay  mted@ttacs.ttu.edu

What better way to start the new academic year than to highlight wide-area network use at its most scholarly. This mailing list is not just about poetry — it’s not just about Renaissance and Baroque Poetry — it’s for discussing renaissance and Baroque Hispanic Poetry. (S)pecialization has come to the Internet. If you happen to be a Renaissance/Baroque-Hispanic poetry scholar, then this list’s for you!

ORFEO is a bulletin board and discussion list for Renaissance and Baroque Hispanic poetry. Subscription is open, but you must subscribe in order to post messages.

To subscribe send E-mail to listproc@unicorn.acs.ttu.edu leaving the subject blank, and in the BODY type: subscribe orfeo your name
E.g. subscribe orfeo Ted McWay

You should receive a welcome message from Texas Tech saying that your subscription has been accepted. For more information about ORFEO, contact the owner.

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Information Resources Council News

Minutes provided by Sue Harrison, Recording Secretary

IRC Regular Voting Members: Ray von Dren, Library and Information Sciences (Chair); Cengiz Capan, College of Business; Carolyn Cunningham, Student Affairs; Paul Dewar, College of Music; Brian Forsman, UNT-HIS Information Resources Council; Chuck Fuller, Fiscal Affairs; Larry Gleeson, School of Visual Arts; Don Grose, Libraries; David Hartman, School of Community Services and School of Merchandising and Hospitality Management; Monica Holm, Graduate Student Council; Sam Magill, UNT-HIS Director of Information Technology Services; Steve Miller, Administrative Affairs; Tam Newell, Telecommunications (Ex-officio); Don Palermo, Academic Administration; Jean Schakke, College of Arts and Sciences; Paul Schlische, College of Education; John Todd, Faculty Senate; Virginia Wheelis, Associate Vice President and Director, University Planning and Institutional Research; Steve Williams, Undergraduate Student Association. IRC Ex-officio Nonvoting Members: Bill Buntain, Computing Center; Jim Curry, Microcomputer Maintenance Shop; Paul Gandel, Computing Center; Richard Harris, Computing Center; Coy Hoggard, Computing Center.
July 20, 1994

IRC Program Groups

Paul Gandel reported that the Instruction Program Group had met jointly with the Instruction Technology Committee. Those present were in favor of merging the two groups and naming it the Instruction Technology Program Group. The ITC is working on getting data from the Registrar's office so that a survey of classrooms can be done this summer. Information gathered in the survey, such as what equipment is in rooms, lighting, etc., will be entered in the room reservation system to be used in scheduling classes.

Susan Pierce reported that the Standards and Cooperation Program Group had met, and had discussed procedure improvements for more timely notification of system outages, software upgrades, etc.

Coy Hoggard reported that the Administrative Program Group had met and discussed things that they can do with regard to the security policy, especially as it affects administrative computing.

E-mail Task Force

Paul Schlieve reported that the E-mail Task Force has been working on independent projects to demonstrate the viability of multiple mail solutions. The Task Force has not been successful in finding one mail package that would meet all requirements. The Library has been using CCMail, the College of Education has been using WordPerfect Office 4.0, Arts & Sciences has been developing a directory service for Pegasus Mail, and the Computing Center has been exploring IMAP Client Server Technology. The Task Force has scheduled an Open House in Matthews Hall, Room 322 on Friday, July 22, 1994, from 11:00 a.m. to 3:00 p.m., at which vendor representatives will be present to answer questions, and where real demonstrations of the systems actually working on campus can be observed communicating with each other. Schlieve stated that after receiving input from those attending the Open House, the Task Force will make a final report and recommendation to the IRC at its next meeting.

In the discussion that followed, Paul Schlieve reiterated that the Task Force has not been able to agree on one mail package, since there are irreconcilable differences between the various packages. It was mentioned that there had not been a survey of users to determine what their needs were regarding E-mail; therefore, it would not be possible for the IRC to make a determination as to the acceptability of the Task Force's multiple-package solution.

In response to a question from the floor, Paul Schlieve estimated that it would cost $4.71 per user plus $2000.00 for a computer in each area that would serve as an E-mail server, plus $75,000 for a hub system. The cost of upgrading to CCMail would be a little higher than that because the price per user is around $12.00.

A motion was passed asking the E-mail Task Force to survey users to find out what they consider to be the most important requirements for E-mail, keeping track of the responses according to whether the respondent is faculty, staff or administration. An amendment to the motion added that the IRC ask technical people, such as Bill Buntain, to speak at the next IRC meeting regarding the advantages and disadvantages of each of the E-mail systems, as well as tell the council what the short-term and long-term costs will be.

Other Business

Richard Harris reported that in response to the charge from the IRC to address the security issues that were presented to the IRC at its June meeting, the Strategic Planning Committee had met and discussed them. One item was the Login banner which the Security Coordinator had reviewed with the University Attorney. Following the discussion, the Strategic Planning Committee was asked to look into the issue further at its August meeting.

It was reported that Phil Turner, a distance learning consultant who spoke at the Distance Learning Forum, endorsed the Campus Videoconferencing Task Force's recommendations for implementing a videoconferencing system linking UNT with UNT Health Science Center in Fort Worth. Von Dran explained that the system is already 75% paid for and even though the system will initially be set up for video conferencing, the Academic community can access it for distance learning purposes. A motion was passed to approve the Task Force's recommendations.

IRC Meeting Schedule

The IRC generally meets on the third Tuesday of each month, from 2-4 p.m., in the Administration Building Board Room. All meetings of the IRC, its program groups, and other committees, are open to all faculty, staff, and students.
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# Computing Center Short Course Registration Form

Please complete this form and return it **AS SOON AS POSSIBLE** if you wish to attend any of the short courses listed below. You may also register on-line via Gopher or over the phone by calling (817) 565-2324.

**NAME:** ____________________________  **FACULTY___ STAFF___ STUDENT___

**DEPT:** ____________________________  **UNDERGRADUATE___ GRADUATE___

**PHONE:** ____________________________  **MAILING ADDRESS:** ____________________________

**SSN:** ____________________________  **USER-ID:** ____________________________

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<td>Thursday, September 1</td>
<td>2-5 p.m.</td>
<td>Chilton 255</td>
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<td>Introduction to Pegasus Mail</td>
<td>Wednesday, November 16</td>
<td>9 a.m.-Noon</td>
<td>Chilton 255</td>
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<td>Wednesday, September 7</td>
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<td>Monday, September 12</td>
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<td>Introduction to CMS</td>
<td>Tuesday, September 13</td>
<td>2-4 p.m.</td>
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<td>Introduction to CMS</td>
<td>Wednesday, October 5</td>
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<td>Introduction to Windows 3.1</td>
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<td>Introduction to Windows 3.1</td>
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<tr>
<td>Introduction to UNIX on Jove and Sol</td>
<td>Monday, September 19</td>
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<td>Introduction to UNIX on Jove and Sol</td>
<td>Monday, October 10</td>
<td>1-3 p.m.</td>
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<td>Introduction to SAS</td>
<td>Monday, September 19</td>
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<td>ISB 110</td>
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<td>Introduction to SAS</td>
<td>Thursday, October 6</td>
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<tr>
<td>Introduction to Internet Services: Gopher, WWW, NEWS</td>
<td>Friday, September 23</td>
<td>2-4 p.m.</td>
<td>ISB 201</td>
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<tr>
<td>Introduction to Internet Services: Gopher, WWW, NEWS</td>
<td>Friday, October 14</td>
<td>2-4 p.m.</td>
<td>ISB 201</td>
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<tr>
<td>Introduction to SPSS</td>
<td>Wednesday, September 21</td>
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<td>Introduction to SPSS</td>
<td>Wednesday, October 19</td>
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<td>Introduction to WordPerfect 6.0 for Windows</td>
<td>Wednesday, September 21</td>
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<td>Introduction to WordPerfect 6.0 for Windows</td>
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<td>Introduction to Macintosh for Students</td>
<td>Thursday, September 22</td>
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<td>Transition WordPerfect 5.1 to 6.0 for Windows</td>
<td>Thursday, September 22</td>
<td>2-5 p.m.</td>
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<td>Transition WordPerfect 5.1 to 6.0 for Windows</td>
<td>Thursday, November 17</td>
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<tr>
<td>Introduction to E-Mail &amp; Discussion Groups on CMS</td>
<td>Friday, September 30</td>
<td>2-4 p.m.</td>
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<td>Introduction to SAS: CMS, DOS &amp; UNIX</td>
<td>Tuesday, September 27</td>
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<td>Introduction to WP 5.1 + (DOS)</td>
<td>Wednesday, September 28</td>
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<td>Introduction to SPSS PC+</td>
<td>Monday, October 3</td>
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<td>Introduction to SAS: Windows, OS/2 &amp; X-Window</td>
<td>Tuesday, October 4</td>
<td>2-4 p.m.</td>
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<td>Introduction to Internet Tools &amp; Techniques</td>
<td>Tuesday, October 11</td>
<td>2:30-4 p.m.</td>
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<td>Introduction to Internet Tools &amp; Techniques</td>
<td>Monday, November 7</td>
<td>1:30-3 p.m.</td>
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<td>Don’t Get Stoned: Computer Viruses and You</td>
<td>Friday, October 21</td>
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<td>Intermediate UNIX on Jove and Sol</td>
<td>Wednesday, October 26</td>
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<td>Introduction to Internet Tools &amp; Techniques on the Mac</td>
<td>Thursday, October 27</td>
<td>2:30-4 p.m.</td>
<td>ISB 110</td>
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<td>Introduction to SPSS on Windows</td>
<td>Tuesday, November 1</td>
<td>2-4 p.m.</td>
<td>ISB 110</td>
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<td>Transition WordPerfect 5.1 to 6.0 for DOS</td>
<td>Friday, November 4</td>
<td>9 a.m.-Noon</td>
<td>Chilton 255</td>
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</table>

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