Benchmarks

These are the articles published in the January/February/March 1996 issue.

These pages are meant for use as an archive for the University of North Texas publication *Benchmarks*. Many of these files are old and contain information and links to sites that no longer function. This is because, over time, many sites shutdown or change addresses thus voiding all links to them. Please keep in mind that all links may not work as they should.

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Everything You Always Wanted to Know About Computing Services But Didn't Know Where to Ask ...

By Claudia Lynch, Benchmarks Editor (lynch@unt.edu)

Continuing our November/December 1995 message of "the Web is a good thing," I've got to tell you that just about everything you want to know with regard to Computing Services at UNT can be found by accessing Support Services' University of North Texas Computer Support Web page (http://www-lan.unt.edu/HELPDESK/hdesks.htm). Chris Strauss, Support Services Coordinator, keeps this page up-to-date and chock full of useful information. It is currently divided into the areas listed below. Each item is "linked" to information found in other areas of the World Wide Web at UNT (and some outside). Take a minute to glance over the list. You may discover a source of information you didn't know existed.

1. Computing Center Support
   - Computing Center Support Services
   - Academic Computing UNIX Support
   - Computing Center Staff Listings
   - Computing Center Telephone List
   - Novell/WordPerfect & Microsoft Applications Support and Applications Training
   - Anti-Virus News from Academic Computing Services
   - Network Troubleshooting from Datacomm's Perspective
   - Network Documentation from Datacomm's Perspective
   - Premium Remote Access Service and Point-to-Point Protocol (PPP) Support Site
   - Research and Statistical Support from Academic Computing Services
   - UNT Software Site License Information (licenses administered by the Computing Center)

2. Windows 95 Support Information
   - Windows 95 Support at UNT - General Information
   - Windows 95 Support at UNT - Support for Network Managers only

3. Distributed Computer Support Groups
   - CASCS - College of Arts and Sciences Computing Support Services
   - COBA - College of Business Computing Center
   - COMM - Computer services for the School of Community Service, School of Merchandising and Hospitality Management, and College of Music

4. Network Managers
   - UNT Network Managers Contact List

5. UNT Computer User Groups
   - UNT Network Managers Group
   - UNT Macintosh Users Group

6. Micro Maintenance
   - Order Forms and Information

7. General Access Computer Labs
   - College of Arts and Sciences General Access Labs
     - GAB 330 General Access Computer Lab - GAB 330 (x2825)
     - GAB 550 General Access Computer Lab - GAB 550 (x4170)
Everything You Wanted to Know...

- Terrill Hall 220 General Access Computer Lab - Terrill Hall 220 (x4755)
- Wooten Hall 120 General Access Computer Lab - Wooten Hall 120 (x2871)
- College of Business General Access Labs - Business Administration 330 and 332 (x3139)
- College of Education General Access Labs
  - Matthews Hall 309 General Access Computer Lab - Matthews Hall 309 (x4379)
- School of Community Service Computer Labs
  - Chilton 255 General Access Computer Lab - Chilton Hall 255 (x3460)
  - Chilton 116 Adaptive Computer Lab - Chilton Hall 116 (x4750)
  - Music Bldg. 238 General Access Computer Lab - Music Building 238 (x3765)
- School of Library and Information Sciences Computer Lab [graduate students only] - ISB 205C (x2501)
- School of Visual Arts General Access Computer Lab - Art 232 (x2470)
- Willis Library 134 General Access Computer Lab [open 24 hours] - Willis Library 134 (x2375)

8. Other Hot Support Links
- Stokely Consulting's SunService Tips

As you can see, this one Web page can be a great "jumping off place" for accessing computing information all over campus.

If you know of something that you think should be added to this page, please E-mail Chris Strauss (strauss@unt.edu) and let him know. If you don't have WWW access, you can still benefit from the accumulated wisdom of the Support Services staff. They will be glad to consult with you over the phone (817-565-2324) and/or in person (ISB 119). Still, it is really worth your while to add a web-browser like Netscape to your computer if it all possible. You'll be amazed at what a great asset it is.

If you have problems or questions about this server, please contact me as soon as possible. You can send mail to the following address: www@unt.edu

About This Issue

By Claudia Lynch, Benchmarks Editor (lynch@unt.edu)

You may have noticed that this issue is "a little late." A variety of events, including the resignation of the one and only Documentation Services Assistant (Aaron Price) and the subsequent hiring of another "one and only" (Randy Milholland), conspired to cause us to combine the January-March issues this time. Next time, we will be back to our "normal" bi-monthly mode.

Speaking of Randy, besides having many computer related skills, he is also a gifted cartoonist. Make sure and check out his new cartoon series, SHIFT KEY on page 21. I hope that Randy will be gracing the pages of Benchmarks with his contributions for quite some time. This employee turnover stuff is for the birds!

If you have problems or questions about this server, please contact us as soon as possible. You can send mail to the following address: www@unt.edu
Research and Statistical Support On-line

By Karl Ho, Statistical Consultant (kho@unt.edu)

Research and Statistical Support, a division of Academic Computing Services, has been going through some major changes since this past summer. Panu Sittiwong, the long-time manager of this area, returned to his native Thailand to live and work. Phanit Laosirirat, a long-time consultant in the area, completed his Ph.D. and also returned to his native Thailand. James Yarbrough, another long-time consultant, became the manager and two part-time employees were hired, Ajay Babar and Voyko Kavcic. Voyko and Ajay have now moved on to other endeavors and we are happy to welcome Karl Ho, a Ph.D. candidate in the Political Science Department and author of this article, as our new 3/4 time statistical consultant. - Ed.

Research and Statistical Support (RSS) is a team of consultants working under the auspices of Academic Computing Services to serve the research community on campus. Our duty is to cater to the needs of all UNT researchers, faculty members and students. Services offered by RSS cover four areas: data acquisition, data analysis, application support and instructional support. Recently, we have set up our new "virtual base" on the World Wide Web. The site aims at enhancing our support services in these four areas. This article gives a brief explanation on our new "cyberservices."

http://www-lan.unt.edu/RSS/

Above is the URL for our new RSS Web page. This Web page is designed to act as an interface between RSS and our clientele with regards to research and statistical support. Primarily, it covers services in the following four areas:

1. **Data Acquisition:** Providing data resources for academic research is one of our major tasks. As a member of the Inter-university Consortium for Political and Social Research (ICPSR), our university enjoys the privilege of accessing a wealth of data collections from the consortium located in Michigan. Largest of its kind, ICPSR archives a wide variety of data sets, from economic data such as World Economic Indicators, to demographics like the US Bureau of Census Population data. Every year, ICPSR publishes a catalog displaying all available and updated data titles. Thanks to the Information Superhighway, the catalog is now on-line. In enhancing the search for data set titles, we provide the relevant links on the RSS home page for browsing data sets on the ICPSR’s archive records. These links include the ICPSR homepage at The University of Michigan and a gateway at Columbia University through which we can search for data sets of interest by keywords, titles and authors. Before long, we will have our own database ready for our clients to find data set titles from the whole ICPSR archival database.

Over the years, we have also amassed almost 600 data titles on campus ready for use. To help tap into this data source, James Yarbrough, Research and Statistical Support Manager, wrote an article, entitled "Accessing and Using ICPSR Datasets," in the September/October 1995 issue of Benchmarks (Volume 16 Number 5). The article provides detailed instructions on how to access the ICPSR data sets. Interested readers may point their web browser to:
http://www.unt.edu/UNT/departments/CC/Benchmarks/benchmarks_html/sepoct95/icpsr.htm

To order data sets, either on campus or from ICPSR, please connect to our Web page, click on the link, **How to Obtain Data sets from ICPSR**, and get to the instructions page. Prior to the search for data sets, we recommend that you get a computer User-ID on your preferred platform (CMS or UNIX). Since some of the data sets are huge in size, it is usually preferable to subset the data set on CMS or UNIX before downloading to a microcomputer system.
Having a computer User-ID also facilitates communication with us via electronic mail. Application for computer accounts can be made at the Computing Center Support Services in Room 119 of the Information Science Building.

Regarding the data set hunting, you can search the right dataset either via our on-campus listings or the ICPSR searchable database. Write down the ICPSR number and data set title, fill out and submit the on-line request form, and we will process your request on the same day.

Apart from the ICPSR data archives, data from other sources like Center for Research in Security Prices (CRSP) and Standard and Poor's (COMPSTAT) are also available upon request. For more details regarding the aforementioned data sets, please refer to another Benchmarks article by our former Research Statistical Support Manager, Dr. Panu Sittiwong, in the September/October 1994 issue (Volume 15, Number 5). The URL for this article is: http://www.unt.edu/UNT/departments/CC/Benchmarks/benchmarks_html/sepoct94/stat94.htm

In the near future, we plan to put more data links on our site in an effort to make more data sets available and accessible to UNT users.

2. **Data Analysis**: Currently, Academic Computing Services maintains a site license for SAS and SPSS. The RSS consultants provide technical programming support for both software applications. Our support services also include installation and regular annual updates, and programming support for data management and data analyses. On our web site, we provide brief manuals and sample programs to guide users to manage and analyze their data using SAS and SPSS. A list of internet links to the statistical software providers such as SPSS, SAS, S-Plus and Statistica is also available for interested users to browse.

3. **Short Courses**: Research and Statistical Support consultants regularly offer short courses on using SPSS and SAS. Interested faculty members and students are welcome to register for these free courses. On our Web site you will find the schedules and instructions for registration. In the future, we plan to put up class notes, exercises and sample programs for users to take "cyberclasses."

4. **Sites for Statistical resources**: Within this topic, we have garnered the links of on-line academic journals regarding Statistics and methodological issues. In the near future, we will put on some more sites of statistics departments and institutes to keep you up-to-date with the latest innovations and trends in statistical analysis.

The RSS web site is designed to enhance our support service to the research community on campus. We invite you to point your web browser to our site, make the best use of it and give us your input towards the betterment of our service. We hope the site provides a starting point for our further communication in the near future. Only with your support will we better support your research. Should you have any suggestions or comments, please feel free to send us E-mail: James Yarbrough, Research and Statistical Support Manager (james@vm.acs.unt.edu), Karl Ho, Statistical Consultant (kho@unt.edu).

**References**

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Training/Learning Opportunities on the World Wide Web

By **Claudia Lynch**, Benchmarks Editor ([lynch@unt.edu](mailto:lynch@unt.edu)) and **Randy Milholland**, Documentation Services Assistant ([randy@unt.edu](mailto:randy@unt.edu))

Have you ever wanted to learn more about a topic but just didn't feel you had the time to take a formal course in the subject? If so, the WWW may be a good resource for you. It is becoming increasingly popular for people to develop courses and/or documentation on various topics and make them available via the WWW. Sometimes there is a charge associated with such a service, but often everything is free.

The following is a list of "Educational Links" on the Web. This list reflects the WWW as of early February 1996. Things change quickly on the Web, so links will have been added/deleted/changed on a daily, even hourly, basis. The best advice is to try the listed links that you are interested in. If they don't work, use a search engine like [Yahoo!](http://www.yahoo.com) to locate other links on that topic. ($ denotes a fee for use, # denotes a tutorial)

### Software, Programming Languages

- **X Windows/MOTIF Course Documentation** (Dr. A.D. Marshall) - [http://arachnid.cs.cf.ac.uk/Dave/X_index.html](http://arachnid.cs.cf.ac.uk/Dave/X_index.html)
- **On-Line Training Materials for INGRES** (Lancaster University) - [http://wonder.lancs.ac.uk/](http://wonder.lancs.ac.uk/)
- **Intro to Microsoft Windows** (Northwest Region) - [http://www.nofc.forestry.ca80/training/windows/](http://www.nofc.forestry.ca80/training/windows/)
- **Intro to WordPerfect** (Northwest Region) - [http://www.nofc.forestry.ca:80/training/wpwin/](http://www.nofc.forestry.ca:80/training/wpwin/)
- **C Central** (Brian Brown) - [http://www.cit.ac.nz/smac/cprogram/](http://www.cit.ac.nz/smac/cprogram/)
- **Programming in C** (Cardiff University of Wales) - [http://arachnid.cs.cf.ac.uk/Dave/C/CE.html](http://arachnid.cs.cf.ac.uk/Dave/C/CE.html)
- **Learn C/C++ Today** (Vinny Carpenter) - [http://vinny.csd.mu.edu/learn.html](http://vinny.csd.mu.edu/learn.html)
- **The CC++ Programming Language** (Caltech) - [http://www.compbio.caltech.edu/CPlusplus.html](http://www.compbio.caltech.edu/CPlusplus.html)
- **C-ode Script** (Base Technology) - [http://www.s2k.com/c-ode1.htm](http://www.s2k.com/c-ode1.htm)
- **A Brief Tutorial on ATM** (Los Alamos National Laboratory) - [http://juggler.lanl.gov/lanp/atm.tutorial.html](http://juggler.lanl.gov/lanp/atm.tutorial.html)
- **#Assembly Language Tutorial** (Culture and Entertainment Web) - [http://udgftp.cencar.udg.mx/ingles/tutor/Assembler.html](http://udgftp.cencar.udg.mx/ingles/tutor/Assembler.html)
Training/Learning Opportunities on the WWW

- Prograph (Mike Powell) - http://igor.sjhs.org:8080/mikep/Prograph/welcome.html
- The Java Language Tutorial (Sun Microsystems) - http://java.sun.com/tutorial/
- Thingtone's Java Workshop (Russ Ethgington) -
  http://users.aol.com/thingtone/workshop/index.htm
- The "New" AWT Tutorial (Nelson Yu) -
  http://ugweb.cs.ualberta.ca/~nelson/java/AWT.Tutorial.html
- Michael Metcalf's Fortran 90 CNL Articles (Michael Metcalf) -
  http://wwwcn.cern.ch/asdoc/f90.html
- Steve's Basic Programming Homepage (Steven Salmon) - http://www.aladdin.co.uk/u/basic
- Abe's Demoschool (Abe Babe) - http://www.mds.mdh.se/~dat94avi/demoschool.htm
- Lovelace Ada Tutor (David A. Wheeler) -
- "Pick/BASIC: A Programmer's Guide" WWW Edition (Jonathon Sisk) -
  http://www.jes.com/pb/
- CSUWEB: RTFM, Web Style (CSU) http://csugrad.cs.vt.edu/manuals/
- Mumit's STL Newbie Guide (Mumit Khan)
  http://www.xraylith.wisc.edu/~khan/software/stl/STL
- Courseware (Central Institute of Technology) - http://www.cit.ac.nz/smac/csware.htm
- Learning PROLOG (University of Sheffield) - http://www.shef.ac.uk/uni/academic/I-M/is/studwork/prolog[starting.html
- The BETA Home Page (J_rgen Lindskov Knudsen) - http://www.daimi.aau.dk/~beta/
- The COBOL Programming Language (Mayer Goldberg) -
  http://www.cs.indiana.edu/hyplan/mayer/cobol/cobol.html
- Tower Educational Services [Eiffel Language Only] (Tower Educational Services) -
  http://www.twr.com/twrweb/Education.html
- Gnudl Prototype Tutorial (Mark Galassi) - http://nis-www.lanl.gov/~rosalia/gnudl-
doc/gnudl_toc.html
- An Introduction to Common Lisp (Marty Hall) - http://www.apl.jhu.edu/~hall/lisp.html
- A Gentle Introduction to ML (Andrew Cumming) - http://www.dcs.napier.ac.uk/course-
notes/sml/manual.html

Web Resources

- Writing HTML (Maricopa Center for Learning and Instruction) -
  http://www.mcli.dist.maricopa.edu/tut/
- World Wide Web Tutorial (Louisiana State University) -
- Beginner's Guide to HTML (Louisiana State University) -
- The Atlas Web Workshop (Patrick Crispen) - http://ualvm.ua.edu/~crispen/atlas.html
- Introduction to HTML (Case Western Research University & Eric Meyer) -
  http://www.cwru.edu/help/introHTML/toc.html
- Introduction to HTML and URLs (Ian Graham) -
  http://www.utirc.utoronto.ca/HTMLdocs/NewHTML/
- The Bare Bones Guide to HTML (Kevin Werbach) -
  http://www.access.digex.net/~werbach/barebone.html
- HTML Learning Center (Jimmy Glass) - http://wwwhome.elysian.net/~jglass/tutor/
- Exploring the Web: Learning Outcomes (University of Georgia Center for Continuing Education) -
  http://www.gactr.uga.edu/exploring/toc.html
- How to Publish on the Web (Global Institute for Interactive Multimedia) -
  http://www.thegiim.org/home.html
- The ICYouSee Home Page (Ithaca College Library Reference Dept.) -
Training/Learning Opportunities on the WWW

http://www.ithaca.edu/Library/Training/ICYouSee.html

- Composing Good HTML (James "Eric" Tilton) - http://www.cs.cmu.edu/~tilt/egh/
- How to write HTML files (Peter Flynn) - http://www.ucc.ie/info/net/htmldoc.html
- An Interactive Guide to HTML and CGI Scripts on the WWW (Mark Smith) - http://snowwhite.it.brighton.ac.uk/~mas/mas/courses/html/html.html
- Tutorial Gateway (Carlton University) - http://www.civeng.carleton.ca/~nholtz/tut/doc/doc.html
- $Mastering Cyberspace (Genesis) - http://www.cstudies.ubc.ca/genesis/courses/mastering.html

Internet & Related Tutorials

- A Beginner's Guide to Effective Email (Kaitlin Duck Sherwood) - http://www.webfoot.com/advice/email.top.html
- Ask Dr. Internet Index (Pietro Di Miceli) - http://promo.net/gut/index.cgi
- Pine Mail Program (Northwest Region) - http://www.nofc.forestry.ca:80/training/pine.html
- PMDF Mail (Northwest Region) - http://www.nofc.forestry.ca:80/training/pmdf/
- Intro to TeamLinks v2.0 - http://www.nofc.forestry.ca:80/training/teamlinks/

General, Miscellaneous

- Courseware (Central Institute of Technology) - http://www.cit.ac.nz/smac/csware.htm
- Interface Technologies On-line Training Center - http://www.iftech.com/iti/itioltc.htm
- $Internet University (CASO) - http://www.caso.com/iuhome.html
- Online Campus (America OnLine; Must be a member of AOL to use) - http://users.aol.com/onlynecpp/aol:1722:signup

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CMS XEDIT and SLFTEACH

By Cathy Hardy, Academic Database Consultant (AC55@vm.acs.unt.edu)

Are you ready to learn, or brush up on, your CMS editor skills? Feeling comfortable with the editor can increase your productivity level and really make life easier. For instance, would you rather spend your time deleting each character in a line with the delete key, or type d' in the command line and remove the entire line with a simple key stroke (lesson 3)? Have you ever deleted a line that you want back (lesson 5)? Need to learn to use multiple screens (lesson 9)? The more you understand the editor's features, the faster you can accomplish your task, and the faster you can get out the door for pizza and a movie.

Self-Teach

For first-time (or rusty) users, try the on-line tutorial package, SELF-TEACH. SELF-TEACH has 15 lessons that you can use in any order, at any time. These lessons cover such things as XEDIT commands, XEDIT PROFILE, and a brief look at macros with REXX and EXEC 2. A list of the lesson topics is included in the SELF-TEACH introduction (on screen 2). Just type SLFTEACH at the CMS *Ready prompt. (Just s-l-f-t-e-a-c-h, don't put the e' in self.) You'll see this SELF-TEACH/IBM logo screen at the beginning of the introduction and at the beginning of each of the 15 lessons. The bottom line of the logo screen prompts you to press < PF8 > to continue.

The screens for the lessons and introduction are generally set up with the title of the module on the first line (i.e.: Introduction to Self-Teach, Tailoring Your Screen, Moving Through a File, etc.) and your location in that module in the top right corner. For instance:

Introduction to Self-Teach
Intro
1 of 7

The above heads the first page' of the introduction module showing you that you are on screen 1 and there are 7 screens in the introduction. Most screens are set up in this manner. The exercise screens are exceptions to this. They look like ordinary XEDIT sessions with no lesson title and no screen numbering in the upper right corner.

Each lesson module will have its objectives clearly stated on one of the early (usually the second or third) screens, as well as the approximate length of time needed to complete the lesson. For example, the first lesson (Tailoring Your Screen) has these objectives and time estimate:

- introduces you to the XEDIT editor and the basics of its commands
- explains the forms of the commands accepted by XEDIT
- explains the purpose of the profile used in XEDIT
- provides exercises to give you experience using the screen tailoring commands
- provides a list of IBM manuals that support XEDIT

This lesson should take approximately 25 to 40 minutes to complete.

By paging to the lesson's objective screen, you can determine if the lesson covers areas which interest
you and decide if you have the time to really use the exercises as they were intended. These lessons are self-paced and can be as fast or slow as you need. You can, of course, leave a lesson at any time by using the key to exit.

To begin lesson one, at the CMS Ready prompt, type: **SLFTEACH LESSON1**

**XEDIT Help**

Already familiar with the editor? Want a quick check on a command? At the Ready prompt, type **HELP XEDIT MENU** for a list of XEDIT help topics. These include XEDIT commands, but not the hints and how-to's you'll find with Self-Teach. Self-Teach tells you how to use a forward slash in the prefix area (lesson 2) and you have to know to look in the *PREFIX topic for a /' to know that this will set the new current line in XEDIT.

HELP is a good tool to use when you have at least a nodding acquaintance with XEDIT, but need some clarification on a particular command or subcommand.

If you have problems or questions about this server, please contact me as soon as possible. You can send mail to the following address: **www@unt.edu**
The Network Connection

By Dr. Philip Baczewski, Assistant Director, Academic Computing Services (baczewski@unt.edu)

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

So you want to be a Web Page Author...

If you have access to a World Wide Web Browser, by now you've seen a lot of Web pages. You may have thought about creating your own Web page but perhaps didn't know how to go about it. To make your Web page available on the Internet, you'll need to be able to have it included on a Web server. This is getting easier, since most commercial Internet providers and some on-line information services, like America Online, are making Web servers part of their basic services. (UNT has several methods you can use to make your Web page available if you are an enrolled student or faculty/staff member. See A Homepage of One's Own in the November/December 1995 issue of Benchmarks: http://www.unt.edu/UNT/departments/CC/Benchmarks/benchmarks_html/novdec95/homepag.htm.)

So, perhaps you have the capability of making a home page available, but you don't think that you have the knowledge necessary to do so. The good news is that there are software tools available which help you create a Web page with little or almost no specialized knowledge. Even the most popular word processors are now becoming very capable Web page editors.

On the Road to HTML

The cheapest, but hardest way to create a Web page is to learn all the HTML codes and manually format a document in the closest available text editor. If you don't have much time or inclination to become an HTML expert, you still may need to provide yourself with a basic understanding of HTML concepts. In either case, A Beginner's Guide to HTML offered by the NCSA folks will be a valuable reference. You can find it at: http://www.ncsa.uiuc.edu/General/Internet/WWW/HTMLPrimer.html.


For creating your documents your choices of software range from somewhat capable and free, to very capable and commercial. Some text editors, like BBEdit for the Macintosh, are shareware programs which support extensions to help create HTML formats. There are a number of programs which are intended solely as HTML editors. What follows is an overview of several of these programs and some extensions to a couple of commercially available word processors.

- HoTMetaL HoTMetaL, version 2.0 is a freely available program for both Macintosh and MS Windows. You can read about it or download a copy at the following URL: http://www.sq.com/. You may have noticed that the letters HTML are prominently displayed in the name of this software. HoTMetaL is exclusively an HTML editor. It displays your text along with stylized representations of the HTML markup codes. It has the ability to call up a Web browser for you to preview your documents, but it does not itself show you how your

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document and its hyperertext links works once formatted. Adding HTML formatting to a
document is as easy as highlighting a word or phrase and clicking on a button from a tool
menu. If, for example, you want to create a hyperertext link to another URL, you would click on
the Anchor button. HoTMetaL is somewhat intelligent in that it knows the HTML rules and
will automatically create formats depending on how your go about inserting HTML codes.
This will save you from having conflicting format codes in your HTML document.

- **HTML Web Weaver** World Wide Web Weaver is a shareware program for the Macintosh.
  You can read about it and even download a demo copy at: [http://www.northnet.
  org/best/Web.Weaver/WWW.html](http://www.northnet.org/best/Web.Weaver/WWW.html). It is similar in operation to HotMeTaL, but written
  exclusively for the Macintosh. It has a button collection across the top of the screen as well as
  several floating tool menus. Creating HTML formats is similar to the process described for
  HoTMetaL.

- **WordPerfect 3.5 for Macintosh** WordPerfect 3.5 for the Macintosh includes tools to create
  HTML documents. There is an HTML tool set as well as a tool set for creating and managing
  bookmarks. These appear as buttons at the top of the WordPerfect window. You can define an
  HTML header by highlighting the text and then selecting the header level from a pick list. To
  create a hyperertext link to a URL, you would highlight the link text, click on the bookmark
  button, and select "Internet Address" from the pick list menu in the bookmark box, and then
  type in the URL in the box provided. Images included in your WordPerfect document can
  automatically be included in your HTML version. Once you have formatted your document
  you can preview it via WordPerfect ability to call up a Web browser. Once the document is
  done, all you have to do is save it as HTML format and WordPerfect automatically does the
  conversion. You can read more about WordPerfect 3.5 for Macintosh at the URL:

- **WordPerfect 6.1 for Windows with Internet Publisher** WordPerfect 6.1 for Windows does
  not come with the HTML editing functionality, however, WordPerfect does make available a
  free add-on which provides a similar capability. This add-on is called Internet Publisher and it is
  free of charge to WordPerfect 6.1 owners. You can read about it or download it at:
  archive. Once you have downloaded it, you can execute the archive file to expand its contents
  and then run the Setup program to add its capabilities to your WP 6.1 installation.

  Once you have Internet Publisher installed, starting an HTML document is as easy as creating a
  new WordPerfect document. Just select "New" from the "File" menu and click on "HTML
  Document" in the "Select Template" text box. Then Click on "OK." Once the blank document
  is open, you will see a series of icons on your tool bar which represent various HTML
  formatting functions. These include the ability to create a list of elements, define headers,
  apply font characteristics, create HTML links, set document bookmarks, insert images, and
  draw lines. You can also save your document in HTML format, define preferences, and call up
  the Netscape Web browser from the button icons.

- **Microsoft Word with Internet Assistant (MS Windows)** Microsoft Word for Windows
  supports an add-on package called Internet Assistant. It is free of charge to owners of Word
  version 6. There is a Beta version 2 of Internet Assistant that works with Word 95. Currently,
  there is no similar package for Macintosh users of MS Word. You can get a copy of Internet

  Internet Assistant adds an HTML style sheet and associated tools to Microsoft Word. You can
  create an HTML document by selecting "New" from the "File" menu and selecting HTML as
  the style template. A number of tools appear at the top of your Window. Buttons are available
to create itemized lists, hyperertext links, and text formatting. Header types are selected via the
usual Word pull-down style menu. Internet Assistant turns Word into a Web browser, so you don't have to call an external program to preview your document. It's operation as a Web browser seems quite slow, however, and it might not be the best choice for the majority of your Web activity. Once documents are completed, they can be saved in HTML format and made available via a Web server.

Adobe PageMill (Macintosh) PageMill is a relatively new offering in the Web development arena. Retailing for around $100, it is one of the first self-contained HTML editors with extensive formatting capability and with built-in HTML intelligence. You can read more about it at http://www.adobe.com/Apps/PageMill/, however, a quote from the PageMill Web page provides a nice overview of the product:

Adobe PageMill Web page authoring software was specifically designed to address the needs of non-technical people who want to create and maintain content on the Web. Adobe PageMill is easy to use, fast, and includes, in one well-integrated package, everything you need to create Web pages. You write your pages in what looks and feels like a normal word processor only this one knows about the Web. Your pages show up exactly as they would in a Web browser. You can apply styles, place and resize images, and drag and drop parts of your document in other locations. But you will not make mistakes. Adobe PageMill reads your existing Web pages even corrects errors in them and produces output that works with any Web server and any Web browser. Creating links is easy, and Adobe PageMill ensures that the links remain correct as you copy and paste them throughout your Web pages. The built-in Preview Browse mode even lets you test your pages without leaving the program.

PageMill is a good program to have if you will be creating and maintaining multiple Web pages.

Microsoft/Vermeer Frontpage Microsoft recently acquired a company called Vermeer which produces a program called Frontpage. According to a press release dated January 16, 1996 (http://www.microsoft.com/msoffice/frontpage/pressrelease.htm):

Vermeer's flagship software application, FrontPage(TM), is a critically acclaimed tool for easily creating and managing rich Web documents without programming. FrontPage will become a key component of Microsoft's strategy to provide a full range of tools that put the power of Web publishing, for both the Internet and intranets, in the hands of the broadest range of computer users.

Microsoft is positioning Frontpage as a mid-range HTML editing tool. It is a self-contained editor, much like PageMill, which provides capabilities beyond that of Internet Assistant with MS Word.

Microsoft INTERNET STUDIO INTERNET STUDIO is a program that Microsoft refers to as a Visual Publishing System. According to Microsoft, it will be available early in 1996. After acquiring Frontpage from Vermeer, Microsoft seemed to reposition Internet Studio as their high-end Web page development product. Information which was previously available on Microsoft's Web Page suddenly disappeared and instead there is a notation which just indicates more information will be available at a later date. You can watch for more information at: http://www.microsoft.com/intdev/AUTOOLS.HTM.

According to Microsoft, you'll like this product "If you're a professional Web publisher interested in creating interactive Web pages that incorporate stylized hypertext documents, rich graphics, real-time sound, and animation without any programming." Since FrontPage also provides such a capability, it remains to be seen whether this promise will be fulfilled.
If you have problems or questions about this server, please contact us as soon as possible. You can send mail to the following address: www@unt.edu
List of the Month

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

HTML Page Creation Assistance List

HTML-L on LISTSERV@VM.EGE.EDU.TR or LISTSERV@TREARN.BITNET

Owner: Turgut Kalfaoglu turgut@vm.ege.edu.tr

The HTML-L list is for assistance with questions on the creation of WWW (World Wide Web) pages, including CGI scripts, home pages, etc.

To subscribe: send the SUB HTML-L yourfirstnameyourlastname command in the body of E-mail to LISTSERV@VM.EGE.EDU.TR

For example: SUB HTML-L Pat Link

If you have problems or questions about this server, please contact me as soon as possible. You can send mail to the following address:

www@unt.edu
Cobwebs

By Doug Bateman, CWIS Coordinator also known as your Webmaster (dbateman@unt.edu)

This column covers features and resources available through the University's Campus Wide Information System (CWIS). It was formerly named "News from the CWIS/Gopher Hole." UNT's Home Page on the World Wide Web can be found at http://www.unt.edu.

Web-Authoring Guidelines

I'm departing from my usual format for this issue - did I just hear a resounding "Hoorah"?

Instead, I am going to share with you a Web page I am preparing to publish. My intent is to use this forum as another means of disseminating information old technology still has its uses and to elicit your comments, suggestions, etc. Send me your comments via E-mail to dbateman@unt.edu, and to really get my attention use a subject line of "Comment on Web-Authoring Guidelines".

Web publishers at UNT are responsible for the content of the documents they publish, and are expected to abide by the highest standards of quality and responsibility. Additionally, all publishers should comply with established publishing policies.

These guidelines are written for the novice or casual user to follow when designing and creating Web documents to be published on the World Wide Web. This is not a reference guide to HTML. The intent of these guidelines is to help you design Web pages that are functional, can be viewed using a variety of Web browsers, and that are easy to read and maintain.

Basics

- **Use index.html or index.htm as the name of your primary document.** If you follow this guide then the filename will not need to be specified in the URL and, as an added bonus, you effectively block a Web browser from being able to display the contents of your directory. For example, both of the following URLs are correct, but the second requires less typing and prevents a Web browser from displaying a listing of the contents of the directory /myhome/:
  
  **Okay:** http://www.unt.edu/myhome/mypage.html
  
  **Better:** http://www.unt.edu/myhome/ (mypage.html renamed to index.html)

- **Organize your files using directories/folders.** Many organizational strategies exist, but the
most common method is to group files according to their subject matter. The actual strategy used is largely a matter of personal preference, but doing so can make managing your Web pages much easier.

- **Sign your work.** It is important to say who is responsible for the content, including any copyright information. Include author(s), status of the work (in progress, Internet draft, final draft) and date. In some cases you may want to reference both the author of the original document and the person who is responsible for the electronic version.

- **Date the page.** This is especially important when the content of the document is time-sensitive, but it is a considerate thing to do for all your readers in any document. There are several preferred ways to format the date (See Formatting below). Choose one and be consistent.

## Formatting

- **Don't use tricks** to force page formatting. There are clever ways to do indentation, spacing, centering, etc., that will work on a particular browser but won't have the desired effect on all browsers. Your work will be more effective in the long run if you learn and accept the limitations of HTML and work within its constraints.

- **Use complete phone numbers** (with area code).

- **Format for dates.** While the US uses mo/da/yr, much of the rest of the world uses da/mo/yr. The form *day Month year* (for example, 30 August 1995) is unambiguous and allows for the turn of the century. This format could also be used to automatically check for out-dated information.

- **Preview your pages.** Before you publish your web pages for the entire Internet audience to view, view them yourself locally. Also, unless you explicitly state that your web pages should be viewed with *Brand X's* web browser, you should preview your pages using as many different web browsers as possible.

- **Make your document printable** or provide a link to a printable document. You might also provide a link to a version of the document without graphics.

## Graphics

- **Avoid the use of gratuitous graphics.** Inline graphics cannot be viewed by all browsers and they slow download time on most browsers. Keep the size and number of inline graphics down. With a dial-in connection at 14.4kbps, an image of over 35,000 bytes would be noticeably slow to display.

  Although the use of images in place of browser-supplied bullets is popular, keep in mind that each image must be individually downloaded from the web server. On a slow connection, many small images may actually take more time to download than one large one.

- **Identify images for the benefit of all your readers.** When using graphics, use the ALT="[description of picture] " parameter to inform the user of a text-only browser (or a user of a graphical browser on a slow connection who has disabled loading images) what the image is of or about.

- **Use a color palette of 256 or fewer colors** when creating your image. Not only will this significantly decrease the size of the file, but it will also be beneficial to the environment in which the user's browser is running.

## Content Issues

- **Know your audience** and keep them in mind when composing HTML pages. It is tempting to include all the latest "bells and whistles" (i.e extensions to the HTML standard), but you
should consider that such "enhancements" will not be viewable by some segment of your audience. At UNT, the Netscape Navigator accounts for 80% of the browsers being used to access our Web pages. However, there is a wide variety of versions of Netscape that are being used, and each new version includes extensions that are not backward compatible. Additionally, 20% of 50,000 (the number of unique hosts that accessed UNT Web pages in Jan 1996) is 10,000 quite a large number of persons who probably could not view your "enhanced" Web pages! Caveat utilitor.

- **Know the medium.** People have different expectations of information viewed on a computer monitor than they do of printed information. If the content warrants it, you may want to conduct usability tests as you design your documents.

- **Keep the content level high.** Create web documents that are more than just a repository of links to other documents. There are situations that do justify this type of document, but they should be used sparingly. The most valuable contribution you can make to your readers is to publish original work. Collections of links to the work of others, while a service that can be valuable, is not a substitute for publishing your own original material.

- **Take advantage of the work of others.** While this may at first appear to contradict the previous guideline, reducing redundancy lets you concentrate on original offerings. Rather than duplicating the work of others, take advantage of it. Incorporate links to the work of others into your own pages, when appropriate. Be sure to properly credit the work of others, also.

- **Order of items within lists.** Use chronological order for lists of journals, periodicals, etc., with the most recent as the first. Use alphabetic order for others, unless there is a reason to do something different.

### Using Links

- **Provide navigational links where possible.** Use links to provide a menu at the bottom of the page for easy navigation. If your documents are best viewed in a certain order, each page should have a link to the next page, a link to the previous page, a link to the first page, and possibly a link to the top of the current page. *Keep in mind, however, that "page order" is virtually meaningless within the WWW.*

- **Create a table of contents** like that at the beginning of this document for organizing long or multi-page documents.

- **Use meaningful text as a link.** It improves the readability of the document. Avoid phrases such as "click here" this is the HTML equivalent of poor grammar. Avoid using "here" as an anchor there are generally more descriptive and meaningful words or phrases that would be more suitable.

- **Link to context.** If part of a document may be cited from outside, permit the user to know its relevance to the whole document. For example, explain an acronym the first time it's used after a link even though it may have been defined earlier.

### Using Uniform Resource Locators (URLs)

- **Use relative URLs with caution.** A relative URL does not fully specify the location of the resource it identifies. Relative URLs are concise and facilitate moving documents, as long as entire directories and subdirectories are moved as a whole. However, relative addressing may not work the same way under all browsers.
Use fully qualified domain names when specifying URLs. Within a particular domain (e.g. .unt.edu), a reference to http://www/somedoc.html may work. However, machines outside this domain will not be able to find it. Use the fully qualified domain name (in this case, http://www.unt.edu/somedoc.html) and any host can find it from anywhere on the Internet.

Device Independence

- Create browser, computer, and bandwidth independent pages. Make your work accessible to all by designing web documents that do not rely upon a particular web-browser, a specific platform, or an assumption of a high-speed Internet connection. It is important to test your work using as many variations of the aforementioned as you can, including viewing the work with a text-mode browser.

- Avoid excessively long pages to minimize download time and ease scrolling difficulties. Large resources especially digitized images, video, and audio files should have an indication of the file size next to the link so end-users can decide if it's feasible or desirable to access this resource.

Maintenance Issues

- Only publish what you have time to maintain. Always consider that information ages and will only be useful for a limited time unless updated. Within the WWW stale, out-dated information reflects poorly upon the publisher.

- Periodically check links to external sources. The dynamic state of the Internet requires this. What may be a valid link today could change in some fashion and be gone tomorrow.

- Use aliases in lieu of real server names when possible. For example, at UNT www.unt.edu is an alias to a specific machine being used as a WWW server. At any time, the web server could be moved to a completely different machine but www.unt.edu will always refer to the correct machine.

- Use HTML comment tags liberally. Comment tags provide a highly useful means of internally documenting your work. They are not displayed when the document is viewed by a web browser, but do keep in mind that most browsers do have an option that allows end-users to view the HTML source for the document. In other words, do not place confidential or potentially embarrassing statements in comments.

- Use your computer wisely to ease maintenance chores. Create a logical, organized directory/file structure. Use meaningful file names. Create a single top-level directory for common elements such as images.

Links to Information About Style and HTML

- From NCSA - http://www.ncsa.uiuc.edu/demoweb/html-primer.html
- From CERN - http://www.w3.org/hypertext/WWW/Provider/Style/Overview.html
Much credit is due to Judy Hallman, webmaster at, (http://www.unc.edu/) and her staff, and to (http://www.utexas.edu/teamweb) at the University of Texas at Austin, for providing the foundation for this document.
Can't Connect From Home?

If you had Premium Access you Could...

Subscribe to the Premium Remote Access Service Plan and you will have high-speed analog modem access to UNT and Internet computing resources. Subscribers are guaranteed the user/line ration will not exceed 7 to 1.

For more information about this service see the article "Premium Remote Access Subscription Service" in the November/December 1995 issue of Benchmarks, consult the Web page http://www-lan.unt.edu/HELPDESK/ppp/premium.htm or contact Support Services at 565-2324 (ISB 119).

If you have problems or questions about this server, please contact me as soon as possible. You can send mail to the following address: www@unt.edu
Building Your Own Anti-virus Toolkit

By Eriq Neale, ACS Lab Manager and Virus Guru (neale@unt.edu)

A few weeks ago, I had an interesting experience trying to install a deadbolt in one of the doors of our house. Mind you, I'm not a master carpenter, but I did do quite a bit of woodworking with my grandfather and stepfather while I was growing up. But what should have taken less than an hour turned into a relative fiasco, all because I was trying to make a 7/8" drill bit do the job of a 1" drill bit. In short, I just didn't have the right tools for the job.

Having the right tools

We take for granted the number of daily tasks we perform using tools we have been given or have learned. To drive a car, you need several tools: a license, a car, keys, driver's education, and insurance. Preparing meals daily requires many different types of tools and utensils (or a credit card if you're lazy like me). Computer use is no different, yet many of us don't have the necessary tools to use our computers effectively.

While there are many important computer tools we need to be productive, two specific tools should be required of everyone. The most important is a backup tool. Whether this is as simple as a floppy diskette with your important data replicated on it or a high-end tape backup system, you need some way of making backup copies of the important pieces of your computer's operating environment. In my daily job, I frequently consult with students who are having computer difficulties. I'm amazed at how many times students have brought me the only copy of their theses on the one floppy diskette they've used for years. Generally, I see these students only after that diskette has failed, and I have the sad job of telling them their work is lost.

The other tool that should be required of everyone who touches a computer is the virus prevention tool. This tool is essentially education, though there are other components to it as well. In my experience I've found that those who are more aware of the threat of the computer virus are less likely to be victims of the virus. Individuals can begin their virus education by constructing and understanding the use of the anti-virus toolkit described below. The toolkit is a simple, yet effective, way to help protect yourself against the virus onslaught, and it will help you get back on your feet quicker if you've become a virus victim.

Many of the tips outlined in the rest of this article are specifically for the PC architecture. Macintosh owners can adapt these suggestions for their own use.
Building Your Own Anti-Virus Toolkit

Here's a basic recipe for constructing your own personal anti-virus kit. First you need a clean, write-protected, bootable diskette for your operating system. A bootable diskette is a diskette that has the basic pieces on it that are needed to load DOS on your PC. It can be constructed using the `format /s` command. You will need to copy the following DOS files to the diskette: FORMAT.COM, FDISK.EXE, SYS.COM, and XCOPY.EXE. You may want to make several of these diskettes and keep them in different locations so you'll have easy access to them when you need them. Bootable diskettes are useful for many different situations, so this is something you really should put together.

To ensure that the boot disks are clean, take them to a computer that is known to be clean and scan them there. It does no good to boot your computer from a diskette that is infected with a virus! Once you are certain that your boot disks are clean, write protect them. There is no program that can write to a write-protected floppy disk. This will keep the diskette clean even if used on an infected PC.

Next, you'll need a set of diskettes with your favorite anti-virus package. Since UNT is licensed for F-Prot, I'll be referring to it specifically. On a high-density diskette, you can fit both the boot diskette pieces listed above and the basic pieces of F-Prot. Alternately, you can put the F-Prot installation on a separate, write-protected diskette.

Next, you need to document your computer's default configuration information. Write down the CMOS settings, paying special attention to the hard disk type and size. Run FDISK and write down the partition information for your hard disk. Print the contents of your AUTOEXEC.BAT and CONFIG.SYS, as well as any other critical setup/configuration files on your computer such as WIN.INI and SYSTEM.INI if you are running Windows. You may also want to include the contents of this article.

Finally, the last pieces of the toolkit you will need are time and patience. Removing a virus infection from your computer can be a lengthy process at times, and having the patience to work through the entire cleaning process will help ensure that you will not have to repeat the process soon.

Understanding and Using the Tools in Your Anti-Virus Kit

Now that you have your toolkit ready, sit back and wait for the virus attack. Hopefully, since you have F-Prot already installed on your system, this won't happen to you. But, if it does, here's how to begin your recovery. Let me say up front that these steps are simplifications of a much more involved process. Following these steps will get you back online in the least amount of time possible, but they do not take into account any attempt to salvage data in the process. If you are unfamiliar with any of the steps involved below, do not attempt the process by yourself. If at all possible, enlist the aid of someone who is more familiar with DOS and the makeup of your computer. If nothing else, you can take your computer to someone who specializes in removing virus infections. As a standard disclaimer, the University of North Texas, the UNT Computing Center, Academic Computing Services, and I cannot accept any responsibility for the results of the actions described below. These steps work if followed to the letter, but misinterpretation can lead to loss of data. If you have any questions or doubts, do not proceed on your own. Now, on to the recovery process.

If you suspect you have a virus, or F-Prot has told you that you do, get your toolkit and boot from your boot diskette. Then run F-Prot from the protected diskette and follow the instructions it gives you. For the more common viruses, this is all you'll need to do to eradicate the infection and return to business as usual. As a follow-up step, you'll need to scan every diskette you've used in your computer to identify and remove the source of the original infection. If you choose to skip this step, you can probably expect to be infected again within a few weeks.
That was the simple process. Unfortunately, F-Prot, as well as all other anti-virus programs, can not clean or remove every virus. Any package that tells you it can fix every virus problem is lying. The good news is, again, that for most common types of viruses, you don't need to use an anti-virus package to remove the virus. Depending on the type of virus that is infecting your computer, you can take two approaches to cleaning your system.

If you are infected with a file-infector virus, a virus that replicates itself within an executable program, the easiest and safest method of cleaning is to delete the programs that you suspect may be infected. To be completely safe, you should remove every executable program on your computer to eliminate the possibility that you overlooked anything. This is where backups come into play. If you have good backups, you can recover the files you delete from your backup, rather than reinstalling the program from its original diskette. You will need to be aware, however, of the programs in your backup. If the files on your backup are infected, restoring from backup will do you no good.

If you are infected with a boot sector infector, a virus that replicates itself by writing itself to the boot sector of disks and diskettes, you have many options for eradicating the virus. If you have a floppy diskette that is infected and is not a bootable diskette, you may copy the files off the diskette to another disk, reformat the diskette, then copy the files back to the diskette. This, of course, assumes that the computer you are using is clean. If you have a floppy diskette that is a regular boot disk (i.e., not one that is used to install an operating system or run a game or something like that), you can overwrite the boot sector by reinstalling the operating system. This is done with the SYS command. Put your diskette in a clean computer (drive A: for this example) and execute the command SYS A: from the hard disk. This will overwrite the boot sector of the floppy and reinstall the DOS pieces. The same can be done for a hard disk boot sector that is infected. Boot from your clean floppy diskette, then execute the command SYS C: from the floppy diskette.

If you are infected with a virus that infects the partition table of your hard disk, like the Da'Boys virus, you are in for quite a bit of work. Once the Da'Boys virus has infected your computer, it moves the partition table of your hard disk to a different location. One side-effect of this is that you will not be able to see the hard disk if you boot from a floppy diskette. The only guaranteed way to recover from an infection of this kind is to rebuild your hard disk from scratch. Again, good backups are a necessity here, because you will not be able to recover any data from your computer once you begin the disinfection process. Boot your computer from the clean floppy diskette and run FDISK. Delete any partition that appears on your boot drive. Then recreate the partition table based on the data you collected for your toolkit. You will have to reboot your computer once the new partition is created. When rebooted, you can format and install DOS back on the hard disk by executing the command FORMAT C: /S from the floppy diskette. Then you will want to install your anti-virus software on the hard disk. After that, you can reboot from the hard disk and begin reinstalling your software.

**Final Thoughts**

As I said earlier, the most important piece to any computer work is maintaining good backups. Sometimes, only backups will help you recover from a catastrophic event. Also, be sure to scan every floppy diskette you use in your computer on a regular basis, especially after cleaning a virus infection. Boot sector viruses only transfer by booting, even accidentally, from an infected floppy diskette. But with this toolkit, you will have the essential elements to arm yourself against virus attacks and begin the road to recovery quickly. As with all tools, some training or practice is necessary, so become familiar with each piece of the puzzle. Read about how the programs work, and spend some time becoming familiar with your virus scanner. And do not hesitate to ask questions of someone who may be able to help you. When dealing with viruses, there are no dumb questions.
1 XCOPY is a personal preference. You may choose to use DOS COPY instead.

2 The notion comes from personal experience as well as the experience of others.

3 You should also write-protect your software installation diskettes before you use them in your computer. While some original diskettes can be infected at the manufacturing plant, the most common source of infection of original diskettes is running the installation programs on an infected computer. Many companies are now shipping software on diskettes that are already write-protected.

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Use of TIA, SLirP Prohibited on Jove

By Marc St.-Gil, UNIX Systems Manager

Now that we have a working set of PPP dial-ins on both the "free" and "premium services," the use of "dial-up adapters" like TIA and SLirP are prohibited on Jove.

We have overlooked this practice in the past, but now that PPP is available here at UNT, we need to end this serious waste of system resources.

People caught running a network proxy agent (like TIA and SLirP) in their Jove accounts will have the process killed and be notified that they are in violation of Computing Center Policy. If this happens again, they will have their account turned off.

If you have problems or questions about this server, please contact us as soon as possible. You can send mail to the following address: www@unt.edu
Is There a Mac in My Future?

By Jason Myre, Computer Support Specialist (myre@unt.edu)

In the last few weeks, many Macintosh computer users have approached me with concerns for Apple Computer Inc. Let me just start by saying, the computer you can expect to see sitting on my desk in the future is a Macintosh. That's right, the Macintosh computer is still alive and breathing despite what the press wants you to believe.

A Healthy Apple?

I admit that there is a question as to the current health of Apple. They reported a $69 million loss for the winter quarter. In response, the company is restructuring to a point that no job is sacred, including CEO. Due to the restructuring costs, Apple predicts an even greater loss in the current quarter. Definitely, not all is well. But let's just keep this all in perspective.

Much of the blame is falling on the shoulders of, until just recently, CEO of Apple, Michael Spindler. Mr. Spindler threw the dice and lost when predicting that consumers would purchase mostly computers in the $1000-$1500 range for the holidays. When the machines closer to $2000 were in demand, Apple could not supply, and in turn, lost a bunch of money.

Shortly after Apple announced their loss, the Wall Street Journal reported that Apple was on the brink of being bought out by Sun Microsystems Inc. The WSJ later printed a correction saying their sources were incorrect and that the two companies never agreed on a price. Meanwhile, Apple's already sliding stock was pushed even further when Standard & Poor's downgraded Apple's debt to junk bond status.

The article "Apple of Sun's Eye" in the February 5 edition of TIME Magazine, recommended those buying Apple products rethink their decision as if Apple had already gone under. Just because Apple had a bad quarter does not mean that it is the end of the world for them. The very same quarter that has the media predicting the end of Apple is the same quarter that they shipped 1.3 million units and generated $3.1 billion in revenues, their largest in history.

Ousting Michael Spindler and appointing Gilbert Amelio CEO might suggest Apple is trying to get through this one without any outside help. If there is anyone who can get Apple back on track, it's probably Amelio. To become CEO and chairman of Apple, he resigned from his position as chairman, CEO and president of National Semiconductor. In the February 5 edition of MacWeek, the article "Amelio at Apple helm; Spindler pulls rip cord," an anonymous source quoted said "When [Amelio] came to National he set down rules and imposed them without emotion. He said, If you can't do the job to the metrics, I'll find someone else." During the four years Amelio was there, National increased their revenue from $1.7 billion to $2.3 billion. Before working for National, he achieved similar results as president of the Communications Systems Group at Rockwell International Corporation.

A Lot of Hope

There is still hope for Apple, lot's of hope. Even if there are some problems with management, the technology speaks for itself. According to information from Apple Computer:

- Apple leads the industry in overall customer satisfaction for desktop personal computers, according to the J.D. Power and Associates 1995 Desktop Personal Computer End-User Satisfaction Study. Apple scored the highest in the industry for vendor reputation,
upgradability, connectivity, set-up/documentation and display.

- An October 1995 study of technical support costs in business environments by Gartner Group Consulting Services indicates there is no cost penalty for maintaining dual personal computer platform environments. Moreover, the study indicates that the higher the percentage of Macintosh in a given Mac/Windows environment, the lower the overall support costs. Support costs for Macintosh are approximately 25% lower than those for Windows.

- Apple is the brand of choice in higher education institutions. 19.4% of PCs purchased by higher education institutions in 1994 were Apple computers, according to Computer Intelligence InfoCorp.

- Based on Apple and third-party data, Apple has an estimated 47% share of U.S. commercial publishing customers, 26% share of U.S. corporate publishing customers, and 50% share of U.S. chemical, pharmaceutical, biotechnology, scientific, and engineering customers. 63% of all multimedia applications development was done on Macintosh in 1994 per Dataquest.

- Apple continues to lead the way in technological innovation. According to the 1/29/96 issue of Information Week, Apple Computer was awarded 53 U.S. software patents in 1995, more than any other vendor.

- The Apple Power Macintosh 7500 and 8500 received BYTE Magazine's 1995 Editors' Choice Awards of Excellence.

- There are thousands of Mac applications on the market today, including approximately 1200 native Power Macintosh applications, and 500 Mac-only applications.

Despite reports from the media, Apple still continues to produce superior desktop computers in addition other hot technologies. As long as this is the case, you can expect Apple Computer to be around for a long time.

**More information**

More information can be found on the following web sites:

- [www.apple.com](http://www.apple.com)
- [www.always.apple.com](http://www.always.apple.com)
- [www.zdnet.com/macweek/](http://www.zdnet.com/macweek/)
- [www.macworld.com](http://www.macworld.com)
- [www.zdnet.com/macuser/](http://www.zdnet.com/macuser/)

Also, check out Guy Kawasaki's Mac mailing-list, "The EvangeList." For more information, send E-mail to cway-request@solutions.apple.com for an automatic reply. Evangelist archives are available at: [http://wais.sensei.com.au/searchform.html](http://wais.sensei.com.au/searchform.html)

If you have problems or questions about this server, please contact mr as soon as possible. You can
Broadband Possibilities

By Bob Saringer, Computer Support Specialist (saringer@cc.admin.unt.edu)

Those of you that have been with the University for any length of time may have heard the words broadband local area network before. This network was once, and for some, still is a way for computer users to communicate with the Academic and Administrative mainframes, UNIX hosts and departmental Novell servers.

Did you know that if you attached a television to one of the over 1,000 broadband local area network outlets you would find television programming? Some of it might even be useful to you. Denton's local cable TV provider, along with the Computing Center, provides this programming as a service to the University free of charge. The Weather Channel, C-Span, CNN Headline News and NOAA Weather Radar are all available for viewing.

Did you also know that if you attached a video camera to one of these outlets and pointed it at yourself your best friend on the other side of campus, if they tuned their TV to the correct channel, could see how hard you're working? I guess this could be a good thing or a bad thing.

Let's take this one step further. Your best friend on the other side of campus could do the same thing. Of course each of you would have to have a camera and a television to transmit and receive signals but you could actually watch each other and converse in real time. Gee, what do we have here, video teleconferencing? Who would've thought that could happen on such an archaic broadband local area network? That old thing? Why it's already bought and paid for and over 10 years old! I thought we got rid of that piece of junk years ago! Please don't tell anyone especially one of our sister universities, we might be the laughing stock of the community!

Some Questions, Some Answers ...

Could something like this actually be a useful tool to the university? That depends.

Would you like to attend a training class, conference, attend a sack lunch or convocation without having to walk across campus or leave your office? Do you have information to share with others that just doesn't work in E-Mail form?

Would you like to monitor high security or high risk areas such as where money is exchanged?

Would you like to know more about the broadband local area network, it's capabilities or technical information? You can, by sending E-mail to me at saringer@cc.admin.unt.edu

If you have problems or questions about this server, please contact us as soon as possible. You can send mail to the following address: www@unt.edu
The Digital Ombudsman

From TIME Daily (http://www.timeinc.com/time)

TIME Digital, a supplement of TIME Magazine, is offering a "free service of advice and mediation" for anyone who is having a dispute with a company over a faulty piece of software or electronic equipment. Dispute with your Internet or online service provider would also qualify for the mediation of the Digital Ombudsman.

If you would like to use the services of the Digital Ombudsman, and have already tried to work things out yourself, send E-mail to ombudsman@time.timeinc.com. You should include a detailed account of your story and agree that your submission may be edited and published in TIME Digital or any electronic medium.

If you have problems or questions about this server, please contact me as soon as possible. You can send mail to the following address: www@unt.edu
On The (Digital) Road Again

By Aaron Price, (price@jeannie.ultranet.com)

Aaron was the Documentation Services Assistant in Academic Computing Services for the past year. He is currently living and working in Massachussetts. - Ed.

It was just a couple of minutes past midnight eastern standard time on Christmas morning. A light dusting of snow had begun to fall and the Interstate was completely empty save a sole Corolla with a U-Haul trailer tagging along behind it. Inside that car sat I, driving through West Virginia and the Appalachians listening to WBAP 820 AM. . . I could not believe my ears. The only station I could listen to between the peaks and valleys that was not preaching the airwaves blue was WBAP. It made me think of home and how I got into this fine mess in the first place. People who say the Internet is addictive are not kidding. Here I was about a thousand miles from my home of 20 years and about a thousand miles away from my future home for (hopefully) the next 20 years. From Texas to Massachusetts the shortest distance is not a straight line, but a fiber-optic one.

The Internet changed my life, it can change yours too . . .

So are you sick of life and looking for a change? Don't take refuge in your computer but rather find new refuge with it. Follow my story and you'll see how you can swing your life 180 degrees in under a month.

Begin with finding a new job. Hop on the World Wide Web and surf some of the many career sites on the web. Try CareerPath (http://www.careerpath.com/) or Monster (http://www.careerpath.com/index.html) for example. They will show resumes and job listings geographically or by subject.

I did it backwards. I decided where I wanted to live (Boston), then looked for businesses in the area. I searched the ISPs in particular and found 5 with job openings I was interested in. You can also hit the news groups. glanced through ne.jobs daily looking for just the right hitch.

After you have found the job that was made just for you, shoot off a nice brand spanking new resume through E-mail. It is best to send a cover letter and then attach two copies of your resume. One should be in ascii text and the other in WordPerfect. I found that both are the industry standards for E-mail resumes.

Now getting the job is up to you. Remember the old standards of follow-up-up calling and professionalism. I was lucky and my father donated frequent flyer miles to fly me to Boston for interviews with two companies.

After you get the job comes the hard part. You need to find a new home! This is where I was shocked at the fantastic support on the net. First make a beeline for Apartments For Rent (http://www.aptsforrent.com/). They rent many apartments over the WWW! You can get pictures of complexes, floor plans, prices, info on accessories (AC, dishwasher, pool, etc.), deposit info, etc. Some even have scanned map directions to the complexes!

This place is classy even if you do not rent from them. Personally, I used them to determine where I wanted to live. By scoping out the apartment prices for various areas of Massachusetts I could determine where I could afford! So I grabbed a paper of that region (Marlborough, 30 minutes west of Boston if you must know.) when I was interviewing for the job. That's where I found a good place.
While you are doing this hit the newsgroups again. This is where you will get the confidence to actually make the move. Post a message on a newsgroup pertaining to the area you are moving to. I joined ne.general and basically announced where I was moving to and from. Within days I was inundated with E-mail from people offering me tips from driving in snow to the best Chinese food place on Harvard square. This is the stuff that makes moving easier. I also got recommendations on banks, automobile mechanics, prices of heating oil, regional vernacular, and even which weatherman to watch on TV!

Don't forget to switch your attention back to the WWW. Check out Lycos (http://www.lycos.com/) or AltaVista (http://www.altavista.digital.com/) and search for a home page for your town or city. Almost all have one these days. They are great sources for civic info. Going to BostonOnline I found commuter rail maps, traffic info, tax information (They don't call it "Tax"achusetts for nothing!), and other tidbits that helped me settle in.

Now for the trip. Back in the newsgroups I found the best driving route to Massachusetts from Denton (2048 miles in two days!). I picked up tips on where to rest and where to avoid. I found out that West Virginia outlaws radar detectors (mine was broken anyhow), the Adirondacks are notorious for freak snowstorms, and that there are left lane exits in the New York suburbs.

So now it's the last day. Your eyes are full of tears as you wave good-bye to the loved ones and your heart is excited that you are finally moving on. Be sure to check out Purdue's Weather Processor (http://thunder.atms.purdue.edu/) to get the latest satellite images for the trip and hit Intellicast (http://www.intellicast.com) for some NexRad radar shots.

Once you've hit the road you have to leave the computer be. WBAP will be your guide for most of the way as that station seems to own the nighttime AM airwaves.

**A Happy Ending**

That's how the Internet has changed my life. I found a job, a home, and a safe trip through it. And all for the price of about ten "Dole For President" yard signs.

The only thing that disappointed me is that on the way I counted only six Stuckeys. I could have sworn I’d break twenty.
SHIFT KEY

By Randal Milholland

I'm a state-of-the-art, $1,800 terminal, yet this slob just uses me to sample "The Simpsons" - 13 hours a day! No wonder he can't get a date!

LIFE AFTER ARTIFICIAL INTELLIGENCE

The Generic Talk Show

ALT: AMAZON-WOMEN ADMIRERS

Oh, the hours he spends on that newsgroup - when he should be working - and you should see the pictures.

I'm sorry, Bill, but I've been seeing another user.

(C)opyright 1996 randy@unt.edu OYAJON WITH JACINTA

Previous Article  Next Article
Exploding heads attracted Secret Service agents to Daniel Burford, according to USA Today (FlashByte 2/3/96, http://www.shore.net/~redun/index.html). The 22-year-old computer artist attracted attention recently when he began "exploding" celebrity heads on his World Wide Web page. Not really, of course, but as he puts it: "Chop out the parts of the head you want to explode, paint in some fake blood and there you go!"

Recent explosion victims include Rush Limbaugh, Boris Yeltsin and Bob Dole. It was Dole who attracted the attention of the Secret Service. Recently, two agents dropped by to discuss Mr. Burford's artistry. "They asked me if I'd ever owned a gun, how I felt about Bob Dole, if I'd ever been in a mental hospital," Burford said. "I guess they decided I wasn't a security threat."

Wonder what the fuss is all about? See http://www.vv.com/~gilmore/head/

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Information
Resources Council
News

Minutes provided by Sue Ellen Richey, Recording Secretary

IRC Regular Voting Members: David Shrader, College of Music (Chair); Douglas Allen, Student Association; Walter Bowen, Academic Administration; Bill Buntain, Communications Program Group; Cengiz Capan, College of Business; Carolyn Cunningham, Student Affairs; Paul Dworak, College of Music; Brian Forsman, UNT Health Science Center; Chuck Fuller, Fiscal Affairs; Don Grose, Libraries; Joneel Harris, Administrative Program Group; David Hartman, School of Community Services; Jenny Jopling, Instruction Program Group; Sam Magill, UNTHSC Director of Information Technology Services; Sharon Marek, Graduate Student Council; Steve Miller, Human Resources; Dennis Mueller, Research Program Group; Russ Pensyl, School of Visual Arts; Paul Schlieve, College of Education; Kathleen Swigger, College of Arts and Sciences; John Todd, Faculty Senate; Virginia Wheeless, Chancellor; IRC Ex-officio Nonvoting Members: Jim Curry, Microcomputer Maintenance Shop; Richard Harris, Computing Center; Coy Hoggard, Computing Center; Maurice Leatherbury, Computing Center.

December 19, 1995

GroupWise Implementation Report

Paul Dworak reported on the progress of E-Mail implementation, stating that there have been six hours of meetings over three days since the last IRC meeting. On December 4th he met with Computing Center staff, project managers and technical support staff to set the agenda for future meetings. One major item will be to deal with communication between the Computing Center and end users to solve problems and difficulties. On December 6th he met with network managers and went over the questions they had brought to the last IRC meeting. The issue of scalability of the GroupWise product was discussed and Paul asked the network managers to take ownership of that issue and define scalability. They also set up a design for representing their needs to Novell. It was agreed that departmental hardware needs should be funneled through Maurice Leatherbury, Director of Academic Computing. Many other issues were also discussed; among them was the question of who will decide what happens next in the implementation plan, and the issue of communication between groups. A significant result of this meeting was the specification of teams needed for the E-mail project. Paul believes the meeting with network managers was a good interchange, a good opportunity for everyone to say what they thought. He stressed the importance of everyone working together in order to make this a successful project.

Paul reported that the implementation of GroupWise in the College of Business had gone smoothly; and that access to the Library CD rom has been a problem which will be fixed. He also reported that the next server to be included in the project will be ABN and that will be done with the help of the network managers. It will also be decided which group will be brought in next and the people involved with that server will observe the ABN conversion in order to be better prepared for theirs. Paul stated that the groups involved in this project will write some general guidelines on E-mail use...
that will allow the system to function optimally, including guidelines for E-mail storage, and for establishing resource naming standards.

Discussion followed. Virginia Wheeless asked if Paul felt that the issues raised by the network managers had been resolved. He replied that the main concern had been the scheduling and that had been worked out. He stated that his perception at the end of the meeting with the network managers was that everyone wanted to proceed and to work together to get the project completed. Cathy Cobb commented that the network managers feel that there is now a mechanism for getting questions answered but that there are still unanswered questions. Their main concern is still that since there is no definite timeline for completion of the "pilot" project, they cannot be certain when or if it will be deemed successful or not. They hoped to have the IRC tell them if this is still a "pilot" project or if it has been decided to fully implement GroupWise.

Paul Dworak responded that a definite timeline is difficult to establish because of the small number of staff who can devote their time to the project. Blaine Brownell stated that the Computing Center has responsibility for implementing the project and that the IRC has the responsibility to determine if the project works. He reported that the IRC Steering Committee has heard all of the issues and the proposed course of action and has agreed to continue on with the project.

**Innovative Projects Proposal**

Dennis Mueller made a presentation on the Innovative Projects Proposal pointing out that this might be a way to meet planned IRC strategies. He noted that this proposal has been approved by the IRC but not funded. He moved that the Provost find a way to provide $250,000 this year and $500,000 next year to fund this proposal. Discussion followed during which Dr. Brownell explained how most of his discretionary funds have already been earmarked for various high priority projects such as the desktop platform upgrades, purchase of Steinway pianos for MUSIC, development of the e-mail infrastructure, with others on awaiting list. Brownell stated that it might be possible to get additional funds for critical needs from the Chancellor's discretionary HEAF account, noting that one-half of all HEAF is set aside for construction and renovation already. He admitted that there are tough decisions which will have to be made. Mueller's motion was seconded and passed to commit $250,000 this year and $500,000 next year and in future years to this project.

**Communication Program Group**

Bill Buntain reported that the Communication Program group is dealing with the issue of future enhancement and use of the CATV broadband system, deciding what role it plays in the future of the campus communication infrastructure. They are also looking at the further implementation of the fiber optic backbone project in terms of the buildings that remain to be wired, and hope to have a commendation to bring to the IRC by the January meeting.

**Standards & Cooperation Program Group**

Paul Dworak reported for the Standards & Cooperation Program Group that the committee is dealing with management models for computer support; as well as putting together a master plan, asking people from all over the university explain their successes in these processes. The group will also begin to collect data on what distributed computing support already exists, in terms of hardware, staff, etc.

Paul presented the World Wide Web policy, which was distributed at the November meeting, for discussion. He explained that PAIS was instrumental in writing this policy, and stated that the gist of the policy is that there is a hierarchical structure for approval of information which works with the existing publications policy. Paul pointed out that the policy does not address personal and unofficial
information, such as home pages; this policy only deals with official information. It was noted that if people need help with linking to official information they can contact Doug Bateman in the Computing Center. A vote was taken and the policy was accepted with the addition of a cross-reference to the university publications policy.

**NCHEMS Report**

Blaine Brownell distributed copies of the final NCHEMS report which he said validates the way things are at UNT. He noted that the report points out that UNT is understaffed and also endorses this council and the input its members provide. Brownell expressed his appreciation for the IRC's efforts in dealing with difficult issues.

**January 16, 1996**

The Chair announced that Tom Newell is going to work for TWU, and thanked him for his contributions to this committee and to UNT.

**Software Audits**

Ray Hale, of the Internal Audit office, spoke to the group about the software audits his office has been conducting across campus. They began the audit in Fall of 1994 in order to perform an analysis on the file servers to determine the risk of unauthorized access. The areas covered in the audit were: logical access controls, physical security, environment controls administrators' and managers' responsibilities, disaster recovery and software licensing. They worked with LAN managers in each area to find out who the users were, what they were accessing and whether or not they needed access. They determined which servers were at the greatest risk and worked with those first. The auditor stressed, during that audit, that they were not trying to point out problems with any individual or single server, but rather looking for possible risks to the university. The findings were reported to the Board of Regents in a general format.

**GroupWise Implementation**

Paul Dworak reported on the progress of E-Mail implementation, stating that in a meeting of the Project Managers, Cengiz Capan reported that the GroupWise implementation in the College of Business is running quite smoothly. The Managers discussed standardized resource naming and E-mail retention guidelines. Most of the meeting was spent discussing the ABN upgrade and the various possible scenarios to consider in planning that upgrade. A workstation re-configuration survey has been done to estimate staffing and user needs for that work so that it will be carried out in a method which will allow all of the users to do their jobs effectively. The target date for the beginning of the conversion is now set for February 19th.

**Registration**

Joneel Harris reported that the adjustments to mainframe operations that were made going into this current registration period did help things go better than they did last Fall.

**Communications Program Group**

Bill Buntain reported that the Communications Program Group had met and discussed the future of the broadband system and strategic planning issues. They agreed to extend the fiber optics backbone, which was driven by the construction of the new Music Performance Center and the need to extend the backbone and conduit system to that building; then there are 5 other buildings that currently use
ethernet broadband technologies. The total needed for completion of the project is $250,000. The proposal outlines the benefits of completion of the fiber optics project. The Chair accepted the proposal and stated that the IRC will vote on it at its February meeting.

**Premium Remote Access Subscriptions**

Bill Buntain also reported that sales of remote access subscriptions were slow during the Fall semester because of the timing of when they became available. Sales are very high right now. Remote e-mail access is not yet available in the subscription package, which might slow down the sales somewhat. He and his staff are still evaluating products for student e-mail and will add that to the package as soon as it is available. He confirmed that students will not be asked to pay any increase in their fees to support the remote access service. It was pointed out that departments will have to pay for staff subscriptions for the service.

If you have problems or questions about this server, please contact us as soon as possible. You can send mail to the following address: [www@unt.edu](mailto:www@unt.edu)
GroupWise Project Report

By Bill Buntain, Director of Network and Microcomputer Systems (buntain@unt.edu)

Following is a list of things that are in the works with regard to GroupWise implementation on campus.

- The Administration Building network is due to convert to GroupWise on March 11.

- We are working towards setting up a schedule for migrating the remainder of the campus to GroupWise. It appears that Human Resources will be the next office after the Administration Building to move and will be scheduled for some time in April.

- We are also working on bringing up an Asynchronous Gateway which provides dial-up access to GroupWise mail. This gateway will be separate from our existing dial-up facility (i.e., it will use different telephone numbers). Novell is planning to provide remote access via PPP in the next three to six months. We anticipate moving to that to unify our dial-ups when that platform is proved functional and stable.

- We are working with a Listserv product for GroupWise which could enable us to protect users from everyone mail, yet still provide a way to broadcast official announcements.

The GroupWise project will continue to be reported on at the monthly IRC Meetings. If you are interested in the direction this project is taking, you might want to make it a point to attend some of the meetings. They generally meet 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. - ED.

If you have problems or questions about this server, please contact me as soon as possible. You can send mail to the following address: www@unt.edu
Staff Activities

Soaring Eagle

- **Dan Strange**, UNT/HSC Fiscal Data Systems ProgrammerAnalyst, was recognized in the December/January Human Resources Newsletter (Vol. 19, No. 4) for his valuable work on automating the students' payment process and the cashier's work of posting payments to accounts for the Bursar's department.

In the News

- **Eriq Neale**'s Virus Page ([http://lipsmac.acs.unt.edu/Virus/virinfo.html](http://lipsmac.acs.unt.edu/Virus/virinfo.html)) was cited in the January 22, 1996 issue of *MACWEEK* in the Solutions section.

  Eriq works in Academic Computing Services as the General Access Lab Manager for ISB 110 and Virus Guru.

- **Doug Bateman**, also an Academic Computing Services Employee, was interviewed for the February 26, 1996 issue of *PCWEEK ON LINE* ([http://www.zdnet.com/pcweek/news/0226/tcalder.html](http://www.zdnet.com/pcweek/news/0226/tcalder.html)). Doug, who is our Campus Wide Information Systems Coordinator (Webmaster), was asked about his impressions of Caldera, an Internet and intranet networked desktop and server environment based on Linux.

  Doug is also quoted about his impressions of Caldera in Caldera News, a publication of Caldera Inc. UNT is a test site for the product.

Milestones

- **Bill Buntain**, Director of Network and Microcomputer Systems, celebrated his 10 anniversary with the University in December.

- **Rebecca McFadden**, Data Entry Operator, and **Marc St.-Gil**, Academic Computing Services UNIX System Manager both celebrated 5 year anniversaries with the University in December.

Transitions

- **New Employees**

  The following people have started working at the Computing Center since September 1, 1995. Some of these people may have been mentioned here before or in other areas of *Benchmarks*.

  - **Academic Computing Services**
    - Maurice Leatherbury, Interim Director
    - Sharon Merek, Assistant to CWIS Manager
    - Jeannie Lee, Receptionist
    - Rachel Sanchez, Receptionist
    - Randal Milholland, Documentation Services Assistant
    - Karl Ho, Statistical Consultant
    - Duane Gustavus, UNIX Programmer
Administrative Computing Services
- Lek Thanavibulpol, Programmer on the Personnel/Payroll Team
- Jake Posey, Programmer on the Fiscal Systems Team

Computer Operations
- Bridget Ford, I/O Assistant
- Chin Uei Ong, I/O Assistant
- Krishna Sarasana, I/O Assistant
- Jennifer Westerlund, I/O Assistant
- Yew Hoong Wong, I/O Assistant
- Eric Martin, I/O Assistant

General Access Lab (ISB 110)
- Steven Reeves, Lab Monitor
- James Henry, Lab Monitor
- Edward Barnes, Lab Monitor
- Mohammad Chowdhury, Lab Monitor
- Weirong Xu, Lab Monitor

Network and Microcomputer Support
- Roy Zumwalt, E-mail Analyst
- Brenda Rivoire, LAN Manager
- Ginger Boone, LAN Manager for Library Science

Production Services
- Susan Bryant, Data Entry Operator
- Jess Peterson-Mendoza, Report Distribution Clerk
- Kimberly Richardson, Data Entry Operator
- Joann Luksich, Data Entry Operator
- Trish New, Data Entry Operator
- Mazen Barakat, Report Distribution Assistant

Support Services
- Brennon Rankin, Consultant
- Kenneth Moad, Consultant
- John Bradley, Assistant
- Elliot Williams, Consultant
- Lea Anna Foote, Consultant

Resignations
The following employees have resigned from the Computing Center since September 1, 1995.

Academic Computing Services
- Amous Gouaux, UNIX Programmer
- Melissa Graves, Receptionist
- Aaron Price, Documentation Services Assistant
- Ajay Babar, Statistical Consultant
- Voyko Kavcic, Statistical Consultant

Administrative Services
- Kathleen Mitchell, Receptionist

Administrative Computing
- Services Richard McNeil, Programmer

Production Services
- Betty Grise, Manager (retired)
- Sarah Chandler, Data Entry Operator
- Angela Mahle, Data Entry Operator
- Kimberly Richardson, Data Entry Operator
- Rebecca McFadden, Data Entry Operator
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