Dr. Maurice Leatherbury, Senior Director of Academic Computing Services, continues to provide you with updates on campus computing. This month you'll find out more about the $1.5M Telecommunications Infrastructure Fund Grant Proposal that UNT has submitted to the State.

You can now apply for Sol access from the Account Management System Web page. This article will fill you in on the details.

If you have been wanting to use GroupWise and Microsoft Outlook on the same PC, this article is for you. It also addresses some issues with Outlook and UNT Internet Services E-mail.

If you are one of those people who want to be more productive in how you conduct business, or if you wish to see what the future of business communication looks like, then Pat Evans -- Campus Wide Networks Computer Support Specialist and author of this article -- says you’ll be interested in Microsoft’s NetMeeting.
Design

Web design sins are generally the product of inexperience. Sharon Marek and Kenn Moffitt, Web Developers in UNT Central Web Support, would like to help you avoid these seven deadly mistakes, and more . . .
RSS Matters

By Rich Herrington, Research and Statistical Support Services

Introducing the SPSS CONJOINT Procedure

The Research and Statistical Support group (RSS) of Academic Computing Services (ACS) has recently acquired the "conjoint analysis" procedure from SPSS Inc. We thought it might be useful to review this procedure briefly.

Conjoint analysis is actually a collection of methods which allow one to measure and analyze consumer preferences about attributes of a product or service. Market researchers are frequently interested in finding out those characteristics of a product or service which consumers deem important. While the ideal product would be best, consumers usually make complex tradeoffs which involve price and quality features of the product. SPSS provides three procedures: CONJOINT, ORTHOPLAN, and PLANCARDS. Currently, the CONJOINT procedure is only accessible from a syntax window. ORTHOPLAN and PLANCARDS are available from the main menu bar under DATA – ORTHOGONAL DESIGN – GENERATE, or DISPLAY.

Conjoint analysis is frequently used by market researchers for aiding in the design stage of a product. Researchers can ask questions such as: What products are most and least important to the consumer? What product attributes are the least and most important to the consumer? And, What is the highest price acceptable for this product. A conjoint analysis asks the consumer to make choices regarding products by trading off qualities or features against one another. With these ratings, the conjoint analysis allows the researcher to determine the relative importance of each attribute including the most and least preferred levels. Additionally, if background demographics are available to the researcher, market segments can be identified to which tailored products can then be developed.

We will use an example to illustrate these procedures. Suppose we wish to develop a statistical package. Several considerations should go into the design of this product. One feature of a statistical package that might be important to consumers would be "ease of use". We might define a low versus high range on ease of use. If this attribute were the only consideration, the choice would be clear. However, some statistical packages which are easier to use may not be as flexible in that they do not offer a wide range of options. Likewise, a statistical package which is more flexible may be more difficult to use from a usability standpoint. From this we define a low versus high dimension on flexibility. Additionally, the cost of the statistical package should be a concern to most consumers. We may define a low versus high range on cost. Suppose our attributes are presented to the consumer as eight alternatives:

<table>
<thead>
<tr>
<th>Ease of Use</th>
<th>Flexibility</th>
<th>Price</th>
</tr>
</thead>
<tbody>
<tr>
<td>High</td>
<td>High</td>
<td>$200</td>
</tr>
</tbody>
</table>

2. High High $800
3. Low High $200
4. Low High $800
5. High Low $200
6. High Low $800
7. Low Low $200
8. Low Low $800

Given these alternatives, product 1 is probably the most preferred while product 8 is probably the least preferred. The preferences for the other products will be determined by what is important to each consumer. SPSS CONJOINT uses the "full-concept" approach for conjoint analysis. In this approach, consumers rank alternative products defined by all attributes as in the table above. For a large number of attributes this becomes too time consuming and fatiguing for the consumer. SPSS CONJOINT uses fractional factorial designs, which present an appropriate fraction of the possible alternatives. The ORTHOPLAN procedure generates orthogonal fractional factorial plans. The PLANCARDS procedure enables you to generate a physical profile which can then be sorted by the respondent to arrive at a ranking. The CONJOINT procedure uses the ordinary least-squares method to produce importance ratings of the attributes, part-worth estimates showing preferences for attribute alternatives, and correlations relating predicted rankings from the conjoint model with observed rankings.

For our example we have the following syntax to generate a 2x2x2 orthogonal design; generate the profiles for ranking; and analysis of the ranked data from 8 respondents:

*Generate Orthogonal Design.
SET SEED 10.
ORTHOPLAN
  /FACTORS=usable 'ease of use' ( 1 'Low' 2 'High') flexible 'flexibility of product' ( 1 'Low' 2 'High') price 'cost of product' ( 200 'Low' 800 'High')
  /REPLACE
  /MINIMUM 8 .
SAVE OUTFILE='c:\temp\stat.sav'.

*Generate profiles for ranking
PLANCARDS
  /FACTOR=usable flexible price
  /FORMAT BOTH
  /PAGINATE
  /TITLE 'Profile Number CARD' .

*Ranked profiles from respondents
DATA LIST FREE / ID PREF1 to PREF8.
BEGIN DATA
  1.00 3.00 5.00 4.00 1.00 2.00 7.00 8.00 6.00
  2.00 1.00 2.00 4.00 6.00 7.00 5.00 3.00 8.00
  3.00 2.00 1.00 4.00 3.00 6.00 7.00 8.00 5.00
END DATA

4.00 4.00 1.00 3.00 2.00 5.00 7.00 6.00 8.00
5.00 1.00 2.00 3.00 5.00 6.00 4.00 7.00 8.00
6.00 1.00 4.00 3.00 2.00 7.00 6.00 5.00 8.00
7.00 8.00 2.00 2.00 6.00 7.00 5.00 3.00 1.00
8.00 1.00 2.00 3.00 4.00 5.00 6.00 7.00 8.00
9.00 8.00 7.00 6.00 5.00 4.00 3.00 2.00 1.00
10.00 1.00 5.00 2.00 3.00 4.00 6.00 7.00 8.00
END DATA.

*Conjoint analysis of data
CONJOINT PLAN='c:\temp\stat.sav'
   /DATA=* 
   /SEQUENCE=PREF1 to PREF8
   /SUBJECT=ID
   /FACTORS=USABLE FLEXIBLE PRICE
   /PRINT=ALL
   /PLOT=ALL
   /UTILITY='c:\temp\statutil.sav'.
SAVE OUTFILE='statranks.sav'.

The output includes output for each subject as well as output for the group. The output displays the utility scores for each factor level. By adding these values, the total utility of a specific combination can be calculated. For RANK and SEQUENCE data, the relationship is reversed. Low values represent high preference and generate high utilities. High values represent low preference and generate low utilities. The Pearson’s R and Kendauull’s tau statistics indicate how well the model fits the data. These represent the correlations between the observed and estimated preferences. If the model fits well, these values should be very high.
Just When You Thought it was Safe...

Just when you thought it was safe to go back onto the Internet, catastrophe strikes! The Melissa virus is unleashed upon the world creating havoc for all Internet users! No hard drive is safe! Reading mail is now a high-risk activity akin to scuba and sky diving! No E-mail box is unaffected! If you listened to some media reports, you might think the preceding to be true. While it is true that an estimated 100,000 computers were affected by the Melissa virus, if you received a copy or even know someone who did, you are probably in the minority.

You can't ignore the Melissa virus or pretend that a threat does not exist, however, a bit of perspective can be applied to truly understand its impact and measure the threat to your Internet E-mail box from similar occurrences. Once again, what was a minor Internet incident was blown up to the proportions of a major catastrophe by U.S. news media outlets. This is not to say that we must shoot the messenger, but it illustrates that listening exclusively to a computing-undereducated media can provide a false view of what might be a real problem.

Shades of Michelangelo

If you are old enough, you might remember way back in 1992, when the computing world was to come to an end as of March 6, Michelangelo's birthday. At that time, news outlets published and broadcast predictions that as many as 5 million computers would be affected. The real numbers were much smaller, around 10,000-20,000, and today the incident is a distant memory for most people (see http://www.kumite.com/myths/fas/fas-mich.htm for more information).

The current Melissa scare developed quite similarly to the Michelangelo uproar, with the exception that most of the reporting happened after the virus had acted on some computers. In the case of the Michelangelo incident, there was a deadline to which the media could point with dreadful anticipation, an anticipation that seemed to be partially orchestrated by some people who stood to gain by selling lots of copies of virus protection software. Reporting on the Melissa virus was an overreaction to an event which had quite a negative affect on a few large companies running a specific combination of software. Responsible reporting would have identified those particularly at risk, but for the most part, what was reported were sweeping and often inaccurate generalizations.

Don't Believe Everything You Hear...

Several of the generalizations heard about the Melissa virus are easily debunked. Doing so will perhaps give you a better idea of what kind of risk there really was and to what extent your computer was/is vulnerable.

1. Any computer on the Internet is automatically vulnerable.

FALSE. Only computers with the ability to store a Microsoft Word format document
and run Microsoft Word to display that document would be affected. If you don't have any of the Microsoft Office applications installed on your computer, then Melissa won't affect you.

2. Reading the E-mail will infect your computer.

FALSE. The E-mail message itself cannot do any harm to your computer. The offending virus is actually contained in an E-mail attachment, a Word-format file. Within the Word file, the virus is in the form of a Word Macro which has the ability to store itself within your Word software and infect other files you might edit with Word. But, if you don't ever open or save and edit the attachment, you won't infect your computer.

3. Accidentally infecting any computer with Melissa will automatically cause it to spread itself via E-mail to 50 other people.

FALSE. Infecting your computer with Melissa will cause it to spread to any other documents you edit in Word, however, only computers with the Microsoft Outlook E-mail program in use have the potential to spread the virus via E-mail messages. The virus does so by sending messages to the first 50 people in your Outlook global address book. If you have no names in your Outlook address book, the virus will not replicate itself in this manner.

4. The Melissa virus will erase your hard drive.

FALSE. In spite of some reports, Melissa will not erase your hard drive (I actually heard an "expert" on a radio broadcast say something like "You never know about these viruses, and it might erase your hard drive at some point....")

5. You shouldn't open any E-mail attachments.

DUMB. The point of E-mail is to easily exchange information. If you take steps to protect yourself from viruses and are reasonably suspicious of attachments from unknown sources, there is no reason to paralyze your ability to use E-mail effectively by being afraid of any attachment you might receive.

What's a Computer to Do?

If you are worried about Melissa and her kin, there are a few good pieces of advice to follow.

1. Install a current virus protection software package (UNT licenses software from Network Associates for this purpose. See http://www.unt.edu/virus/a-vtools.html).

2. Keep current on the virus information used by your virus program and available from the software vendor or from a local distribution site.

3. Turn on "Macro Protection" in your Microsoft Word software.

4. Don't use Word as the default editor for Outlook or other E-mail programs.


By now, it's almost impossible to find any stories about the Melissa virus in the popular press. Broadcast outlets have ceased talking about it as well. It was an entertaining story for
news outlets while it was fresh, but the novelty which made it such an attractive story has warn off and there has been little follow-up to see what the actual impact was. This illustrates that "The News" is not the place to find out about viruses. Being proactive about your virus protection is your best defense. By protecting your computer you can apply the proper level of concern and not be paralyzed with fear every time you are faced with opening your E-mail.

Comments, Questions? Send them to Philip Baczewski.
List of the Month

Each month we highlight one Internet, USENET Special Interest Group (SIG), or similar mailing list.

UNT Feral Cat Rescue Group

We promised you in August that this group was going to get a LISTSERV list, and now they have. According to their Web page (http://www.unt.edu/feralcat/), "The UNT Feral Cat Rescue Group is an organization dedicated to caring for the feral cat population on campus through a process of 'trap-treat-release,' with the ultimate goal of reducing the cat population through birth control and natural attrition." The group (and the cats) needs the support of the UNT community and friends.

To subscribe, send the following command in the BODY of mail to LISTSERV@UNT.EDU:

SUBSCRIBE UNT-FERALCAT-L firstname lastname

For example: SUBSCRIBE UNT-FERALCAT-L Judith Evans

List owner: Judith Evans jevans@unt.edu
By Mark Wilcox, Campus Web Administrator

XML: Comma-delimited text for the next millennium

When the World Wide Web debuted in the early part of this decade, we were introduced to a new way of presenting information via a simple markup language called the Hypertext Markup Language (HTML). HTML made it possible for us to disseminate information between multiple computers in a very simple fashion. Unfortunately, HTML was never intended to work the way we try to use it today.

For example, search engines have a horrible time trying to classify Web sites because there is not a standard way for sites to present classification information. Web pages do not easily readjust themselves to different presentation formats either. For example, a Web page that looks good on a 640 X 480 screen usually looks unusable on a Palm-Pilot and Web pages don't lend themselves to efficient printing (e.g. the page breaks are random, text is removed, etc). Finally, it's very difficult to import data from an HTML page into a different system (for example a database). *

Because of this, the major players in the Internet (e.g. Netscape, Microsoft, IBM, Sun, etc) decided it would be a really good idea to make it easier to distribute information on the Web. On a parallel track, there was another group that was working on simplifying the Standard General Markup Language (SGML), which inspired HTML, and is used by the government & publishing houses. The two groups hooked up and created a new language called the Extensible Markup Language (XML).

XML is a subset of SGML and a superset of HTML. This means that XML is considered valid SGML, but it doesn't have as many "tags" as SGML. HTML is considered a valid XML language.

Now XML is not just another set of tags designed to make your Web sites look pretty. What makes it different are these items:

- Anyone can define their own XML tags
- XML documents must be well-formed
- XML documents can be validated

The key cliche for XML is "separate content from presentation". What this means is that there can now be tags that define what the content means (e.g. <name>Mark Wilcox</name>) that is separated from how it should look (E.g. bold, in 14 point New Times Roman font).

The last two points, "well-formed" and "validated" are designed to make it easier on the XML "browser" developer. In XML every tag must have a matching closing tag (e.g. <name></name>). If a tag doesn't have a natural closing tag (such as the HTML img tag), then it must end with a "/>" like this <img ... />. This is what we mean by well-formed, it forces the XML developer to pay more attention to their content creation. Probably the
driving force behind this is browser bloat. It's believed that at least 50% of all browser code is devoted to dealing with bad HTML.

Validating XML means that an XML document matches an existing XML Document Type Definition (DTD). DTD is a file that specifies what tags make up a given XML document.

**Why is XML so cool?**

One reason is that like minded sites (for example car dealerships) could agree on a standard DTD and then search engines could query the site looking for particular documents & tags (e.g. car price, models, etc) in a much more effective way than on today's Web.

When we migrate data from one database to another, we often use comma-delimited text files to distribute the data. Unfortunately comma-delimited files don't allow us to use very complex data types. With XML we can allow for very complex data representation. A middleware application can read the XML file and convert the XML into the necessary format for a given system (e.g. SQL queries, HTML, etc).

Finally, with XML we can define how we want the document to look on the Web, inside a PalmPilot or printed out, all in the same document!

**The Future is Now! .... sorta**

Both IE 5 and Netscape 5 (which is now in early development testing) will support XML. There are a growing number of development tools that point to a rapid development of XML compliant data. But until the majority of the browsers support XML, we'll still have to use HTML for data presentation on the Web.

For more information on XML see the [XML.com](http://xml.com) site.

Until next time.

*Mark*

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* The article "Maximizing Your Hits" in last month's *Benchmarks Online* for more information about search engines. This month, "Seven Deadly Sins of Web Design" provides some good tips on designing Web pages for maximum usability.

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**Want to try a new Web Searching Tool?**

UNT is the testbed for an experimental Web searching tool - INQUIRUS - being developed by NEC Research Institute (Princeton). INQUIRUS searches many Web services (e.g., EXCITE, Alta Vista) at the same time and removes duplicate sites. Many other features are provided. Students, faculty and staff are invited to participate in this exciting usability research project.

If you're looking for information on any topic for a class paper, research project or personal use, and would like to participate in the INQUIRUS usability study - please contact Dr. Amanda Spink, School of Library and Information Sciences - X2187 or spink@lis.admin.unt.edu.
Spring Short Courses started February 4. There is still time up to sign up for classes in Mapping Data Using SAS and Excel, SPSS Programming, and Creating a Homepage with FrontPage. Follow this link for course descriptions and registration.

Customized Short Courses

Faculty members can request customized short courses from ACS, geared to their class needs. Other groups can request special courses also. Contact ACS for more information (ISB 119, 565-4068, lynch@unt.edu).

Especially for Faculty and Staff Members

In addition to the ACS Short Courses, which are available to students, faculty and staff, staff and faculty members can take courses offered through the Human Resources Department, the Center for Distributed Learning, and the UNT Libraries' Multimedia Development Lab.

CBT in April

There are still a few computer based training courses being offered in the SLIS Computer Classroom (ISB 203) this month. The topics covered include Word 97, Excel 97, PowerPoint 97, Access 97, Outlook 97, FrontPage 97, and Windows 95. There will be a lab facilitator available to help you get started and answer any questions you may have. The dates and times are:

- Tuesday, April 20 -- 9 a.m.-Noon
- Thursday, April 22 -- 9 a.m.-Noon

If you would like further information about these courses or wish to register, contact Human Resources Training at 565-4246 or send mail to Tammy Coffey.

Center for Distributed Learning

The Center for Distributed Learning is offering courses especially for Faculty Members. Topics include Windows 95, PowerPoint, Video Conferencing, and a series of classes concerning putting course materials on the World Wide Web using WebCT.

UNT Libraries'

The UNT Libraries' Multimedia Development Lab is also offering free training to all University of North Texas faculty and staff in the basics of FrontPage 98 and information architecture. Training will be held on Fridays from 1-4 p.m. through May 7 in the Willis Library Learning Center. For more information
visit the Multimedia Development Lab's home page at [http://www.library.unt.edu/mmdl](http://www.library.unt.edu/mmdl).

**Technical Training**

Technical Training for campus network managers is available through the Campus-Wide Networks division of the Computing Center. Some of the seminars, such as one on disaster recovery/business continuity planning techniques, may be of interest to others on campus as well.

**Alternate Forms of Training**

The [Training](http://www.unt.edu/benchmarks/archives/1999/april99/short.htm) Web site has all sorts of information about alternate forms of training. Training tapes, Computer Based Training (CBT) and Web-based training are some of the alternatives offered. There are also handouts for computer training (Microsoft Office 97 and Windows 95) on the following topics:

- GroupWise 5.2 -- Handout for Win95/NT
- FAQ for GroupWise 5.2
- Info on GroupWise for Win3.1
- Computers - Back to the Basics
- Introduction to Windows 95
- Introduction to Word 97
- Advanced Word 97 - MailMerge It Together
- Introduction to Excel 97
- Introduction to PowerPoint 97
- Introduction to Remedy (THE Call-Tracking Program)
- Using Netscape Communicator and the UNT Home Page
March 9, 1999

The Chair and Richard Harris met with the IR Steering Committee after the last IRC meeting, the majority of the meeting being focused on intellectual property ownership, although that was not an issue brought forth from the IRC. To keep the IRC informed, the Chair reported that Mr. Rafes has that topic under advisement at the present time and soon will send the issue to the IRC in the form of a policy for ownership of electronically published materials.

Strategic Planning Committee

Richard Harris reported that the Strategic Planning Committee met with its primary agenda item being to decide how to deal with the potential receipt of funds from the Telecommunications Infrastructure Fund. There were draft guidelines presented, but not finalized. It was agreed to appoint a subcommittee headed by Maurice Leatherbury to come up with an initial wish list on which to spend the approximately 1.45 million dollars.

Maurice explained that the Telecommunications Infrastructure Fund is a state legislative appropriation that has been in effect for about three years; although funds have been allocated for only two years. This is a fund that is generated from taxes on your phone bills and cell phone bills, amounting to about $150 million per year which is given to public education (K-12), not-for-profit health care institutions, public libraries, and higher education in the state. This is the first opportunity UNT has had to receive a portion of this $150 million. As of February 24, they announced the request for proposals for the public and private four-year institutions in the state for a total of $29 million. UNT’s portion of the allotment will be $1,459,093. TIF has a long-range plan and the first round of grants that have already been awarded in Texas, to date, have been granted to provide basic connectivity of institutions to the internet and provide them with data communications...
infrastructure within the institutions. A big emphasis has been on getting the libraries connected and to provide information services to the clientele of the institution as well as to the state. Funding is based on the number of student contact hours, and is severely restricted to particular uses, based on the goals of the Telecommunications Infrastructure Fund. First, and foremost, is Library Connectivity; second is data-communications connectivity, within buildings as well as to buy some backbone hardware; and the third is distance education. With those restrictions in mind, and with the knowledge that it will probably be at least two years before additional money is granted to four-year institutions, and the fact that the money has to be spent before June 30, 2000, the subcommittee members compiled a list of items needed to make improvements in the designated areas of the infrastructure. Maurice distributed copies of the proposed list of items, as well as a copies of the TIF Request for Proposal and Application packet. The subcommittee members are Bill Buntain (Data Communications), Don Grose, Arne Almquist and Robert Pierce (Libraries), Phil Turner, Patrick Pluscht, and Jenny Jopling (Distributed Learning), and Mark Wilcox (Webmaster).

There was some discussion about the proposed list of items. Jon Nelson expressed concern that an excess amount of the funds is allocated for video conferencing equipment when, in his opinion, the future of education appears to be moving more toward web-based courses. During the discussion, it was explained that 10% of matching funds has to be added to the TIF allotment; these funds will most likely come from the various departments involved. The point was made that since the entire amount of the TIF funding could be used to pay for wiring of the UNT dorms, it is important that the IRC take a position on the use of these funds. Maurice explained that the deadline for submission of UNT’s proposal is April 19th.

Jim Poirot commented that prior year TIF funds have gone to school districts and for the most part, they are setting up facilities to receive two-way audio-video; however there are not enough places equipped to send video to them. By using this funding to improve our video-conferencing capabilities we will be positioning ourselves so that in the next round, we will be prepared to meet some of the collaborative needs seen the schools. Poirot suggested that there was not enough funding budgeted for the video-conferencing equipment. He strongly recommended that the IRC let its position be known that these funds should not be used for dorm wiring.

Dan Mauldin suggested that electronic white boards be added to the wish list. Kathy Swigger added that the dial-up and premium remote access facilities should be upgraded before adding anything new. She also commented that most classrooms on campus are in need of good overhead projectors and feels that these basic needs should be met before funds are spent on video-conferencing equipment. It was pointed out that TIF funds cannot be spent on overhead projectors, but can be spent on data communications technology. Maurice reiterated that the money has to be spent in accordance with TIF’s goals, with connectivity for the Library being the highest priority.

A motion was passed recommending the use of the TIF funds for Library connectivity; Videoconferencing, and Data Communications improvements rather than for the wiring of dormitories. Maurice clarified that a list of items UNT intends to buy must be submitted at the time the proposal is submitted for the TIF funds. The proposal can be amended twice a year, however. Maurice said he would revise the current proposal, taking into consideration the suggestions made in today’s discussion, and present the proposal to the Strategic Planning Committee.

**Distributed Computing Support Management Team**

Maurice Leatherbury reported that the Distributed Computing Support Management Team is still working on the Microsoft Campus Agreement. There will be a meeting tomorrow with...
Purchasing to work out the purchasing details. Maurice said the committee is also working with Human Resources to revise the job requirements for the various computer support positions at UNT. The concern is that some student hourly employees are getting a great deal of training while working in the support areas, but when they apply for the full-time jobs they do not meet the current requirements for those positions.

**Y2K**

Coy Hoggard reported that, regarding Y2K, administrative users are continuing to do integrated systems testing of the revised code and the testing is going well. They are working diligently to move a suite of platform software into production in time to test it over Spring Break. They have successfully moved to the Y2K-ready version of COM-PLETE with only a few small glitches. They have a critical problem with a Software AG product, which if not resolved may delay the work planned for Spring Break. They will proceed with the planned schedule, in hopes of getting this latest problem resolved.

Robert Pierce reported that the Communications Program Group has not met. He announced that Paul Schlieve is the new chair of that Program Group.

Joneel Harris reported for the Administrative Program Group that Coy Hoggard’s Y2K report really covered what the APG has been focused on.

**Research Program Group**

Mark Rorvig reported that there are two new members of the Research Program Group: Dr. Miguel Acevedo, Director of Environmental Science Laboratory, and Dr. Armin Mikler, from Computer Science.

**Standards & Cooperation Program Group**

Elizabeth Hinkle-Turner reported that the Standards & Cooperation Program Group will meet Thursday, March 11th. Susan Pierce will attend and assist the committee in revisiting some unresolved issues.

**Distributed Learning Team**

Patrick Pluscht reported for the Distributed Learning Team that a number of requests for new courses have been submitted and are being processed through the new approval process. They are trying to move the requests through the approval process prior to April 1, for courses to be offered in the Summer and Fall terms. For those interested in learning more about the approval process, Patrick suggested looking at the Distributed Learning Center Website at [www.unt.edu/cdl](http://www.unt.edu/cdl) and clicking on the Approval Procedure link. Patrick also stated that the awards of Teaching with Technology Grants will be announced after Spring Break.

**IRC Meeting Schedule**

The IRC generally meets on the third Tuesday of each month, from 2-4 p.m., in the Administration Building Board Room. An exception to that schedule occurred in March of 1999 when it meet on the second Tuesday to accommodate the Spring Break schedule.
All meetings of the IRC, its program groups, and other committees, are open to all faculty, staff, and students.
Transitions

The following are new employees:

- **Duane Gustavus** is back on the staff of Academic Computing Services. Duane was the Jove system manager for several years before leaving ACS for a similar position in the Computer Sciences department. This time around, Duane will provide technical support and consultation for faculty and student researchers, with an emphasis on UNIX technologies. We are quite excited to have Duane back with us on staff.

- **Marilyn Banks**, Data Entry Operator III.

- **Colin Allen**, ACS Lab monitor (part-time).

- **Michael Bradshaw**, ACS Lab monitor (part-time).

- **Jamie Courville**, ACS Lab consultant (part-time).

- **Ho-Chang (Michael) Chae**, ACS Lab monitor (part-time).

- **Keiko Miyamori**, ACS Lab monitor (part-time).

- **Charina Tolentin**, ACS Lab monitor (part-time).

The following people no longer work in the Computing Center:

- **Praveen Kumbham**, I/O consultant (part-time).

- **Earl Jackson**, SIMS Year 2000 Project Programmer Analyst retired in March.

- **Amy Boyd**, ACS Lab monitor (part-time).

- **Chein-Hsaing Huang**, ACS Lab monitor (part-time).

- **Amy Moreland**, ACS Lab monitor (part-time).

- **Patrick Tolentin**, ACS Lab monitor (part-time).

Awards

- **Steve Rowell**, Data Communications Analyst, was honored as an Outstanding Employee for November 23, 1998 at a recent Chancellor's Staff Lunch.

Publications, Presentations

**Mark Wilcox**, Campus Web Administrator, has a new book out. *Implementing*
LDAP is published by Wrox Press. It gives a practical look at installing and using the Lightweight Directory Access Protocol, which is an Internet standard for storing/retrieving email address books, userids & passwords, and other computer information. Mark's book is only the third book on LDAP to reach market.

HELP WANTED

COMPUTER SUPPORT SPECIALIST III (College of Business Computing Center) $2,920 per month. Bachelor's degree with coursework in computing or information systems; two years related computing work experience; or any equivalent combination of experience, education or training. Ability to assist in the areas of data processing and end-user computing including systems development, programming, software installation, desktop management, local area network installations and operations highly preferred. Primary duties relate to student computer labs and course-related software. Desktop O/S supported include Windows 95/98/NT; network O/S supported include Netware 4.11 and Windows NT.
Shift Key

By Randal Milholland, Documentation Assistant

Statistically, of course, children have learned less and less since you were their age.

So when you said you wanted to raise my allowance but couldn’t afford to, I hacked into your boss’s computer and gave you a raise, AND put you on the payroll at Microsoft as a consultant.
Campus Computing News

By Dr. Maurice Leatherbury, Senior Director of Academic Computing

$1.5M Telecommunications Infrastructure Fund Grant Proposal Submitted

UNT has sent in its proposal for a Texas Telecommunications Infrastructure Fund grant, with library services, data communications infrastructure, and distance education being the foci of our proposal. The non-competitive grant process allows us to apply for up to $1,459,093 from the state, although we have to match 10% of the amount we request. The Information Resources Steering Committee approved the outlines of the proposal that was submitted, and UNT's match will come from university-wide funds.

Library Services

Our proposal calls for a large number of improvements to the hardware supporting various Library services. The Library will upgrade its integrated online library system (the online catalog) with faster processors and larger storage. It will also install a "Z39.50" software package that will allow users from off campus to use standard library search clients to query our database, and also allow our library to query other libraries using the standard interface. The Library will also upgrade almost all of the servers that it uses to deliver such important information services as the CD-ROM databases, the GPO gateway (the only such Government Publishing Office gateway in the state), the CBTSystems computer based training server, and various other behinds-the-scene servers.

Ethernet switches

We also proposed that TIF funds be applied to assist with purchasing some of the Ethernet switches that will upgrade the campus to 100 megabit speeds to all desktops and dorm rooms. The bulk of funding from that project will come from bond sale proceeds, but the TIF grant is a welcome supplement to that large and expensive project.

Videoconferencing Network

TIF funds will also be used to significantly expand our two-way interactive videoconferencing network. As many as three additional videoconferencing classrooms will be funded from the grant, as will a "multipoint control unit" that will allow us to hold videoconferences with more than four sites participating simultaneously.

Internet-based Course Delivery Related Items

Of particular interest to faculty members who are getting into Internet-based course delivery are several other items in the proposal. First, the Center for
Distributed Learning will obtain some very capable hardware for creating and editing multimedia files, including audio and video. CDL's services are available to anyone who is developing a distributed learning course (one in which more than half of the course content is delivered at times or locations different from the standard classroom.) In addition, a number of powerful multimedia production workstations are being purchased for use by faculty in their colleges or schools. Those workstations are intended primarily to support the creation of streaming video and/or streaming audio for distance education courseware, and come with digital video cameras. Academic Computing Services will be installing a streaming media server, funded from the TIF grant, from which to deliver the content being developed on campus. Departments therefore won't have to contract with outside services to get their streaming video and audio published on the Internet.

Funds from the TIF grant should be available on July 1, 1999, so many of the exciting developments listed above should be appearing in the summer. Contact Maurice Leatherbury if you have any questions about the grant or the uses of the grant funds.
You can now apply for Sol access from the Account Management System page (http://people.unt.edu/manage). To request an account on Sol, you will need to choose the option "Login to the UNT Internet Account Management System" on the Account Management System page. Once you have logged in, you will see (towards the bottom of the menu) a link to Sol (Research UNIX System) Account Requests.

Since Sol is our Research UNIX system, not everyone is eligible to use it. If you are a student, you will need to submit the E-mail address of a faculty member who can be contacted to provide endorsement of the application. That person will then get E-mail from ACSUNIX (solrequests@unt.edu) which tells him/her that we need a reply to the request, please.

All requestors will be required to submit a short description of what activities s/he will be involved with on Sol. Once the requested information is supplied, access should be granted within 3-5 business days of the receipt of the ENDORSEMENT from the faculty member (faculty or staff members who apply don't need the endorsement of another faculty member, so the turnaround time would be 3-5 days from the date of the application.)
GroupWise 5.2 and Outlook 98

By Pat Evans, Campus Wide Networks Computer Support Specialist

In last month’s Benchmarks article, we discussed the various ways you could use GroupWise to access your work mail from just about any location you could dream of. If you were comfortable with the easy accessibility of GroupWise Web, you could access your work mail through your favorite Web browser. If however, you preferred the look and feel and functionality of the GroupWise client, we discussed how you could acquire a copy to install on your home computer.

For most people, installing the GroupWise client presented no problems. But for some, you may have experienced a number of issues; ranging from an otherwise successful installation without a GroupWise Address Book, to multiple error messages regarding Windows Messaging, or other components not being installed.

While we cannot possibly address every installation error that may occur, let’s look at the most common culprit…Microsoft Outlook. (If you currently do not have Microsoft Outlook 97 or Microsoft Outlook 98 installed on your computer, but you anticipate installing it at a later date, please read the next two sections. Otherwise, feel free to jump down to the section on Outlook Express and GWIA).

Microsoft Outlook and UNT Internet Services E-mail

Microsoft Outlook is a collaborative mail program not unlike GroupWise. Microsoft Outlook 97 and Outlook 98 are much like GroupWise in offering mail, contact, calendaring, and task management to your mail client, but they create the most frustrations when wanting to use GroupWise on the same machine.

Outlook 98 (usually by default) will install itself the first time in an "Internet Mail Only" configuration. This configuration allows the user to choose which type of mail account (POP3 or IMAP) they wish to access. To access your UNT Internet Services (Jove) E-mail, you must specify IMAP to be your mail protocol, with imap.unt.edu as the incoming mail server.

But this is where it becomes a little sticky. In order to work correctly with GroupWise on the same computer, Outlook 97 or Outlook 98 must be installed in the "Corporate or Workgroup Support" configuration. (To know which configuration you are currently running, you can click within Outlook on the Help menu, then click About Microsoft Outlook. In About Microsoft Outlook you will see "Internet Mail Only" if you have the Internet Mail Only option
installed.) To change from "Internet Mail Only" to "Corporate or Workgroup Support", you can simply go to Control Panel, Add/Remove Programs, and Remove Outlook 98 from the installed applications. Outlook will ask you what you would like to do, and simply choose to reinstall Outlook in the "Corporate or Workgroup Support" configuration.

If you are with an Internet Service Provider (ISP) that uses POP3 to handle mail accounts, this isn’t an issue, but if you try to access your UNT Internet Services E-mail account, it will fail with the following error: "Outlook with Corporate or Workgroup Support does not support IMAP accounts. Please select a POP3 account to import instead."

To use Outlook 98 to access your UNT Internet E-mail requires one configuration, "Internet Mail Only", but to have it be compatible with GroupWise, it must be in a configuration that doesn't work with UNT Internet Services E-mail, "Corporate or Workgroup Support".

**Microsoft Outlook and GroupWise**

If you’ve decided to keep Microsoft Outlook and GroupWise on the same computer, there remains one other issue to resolve — which profile to use. Because GroupWise and Outlook 98 both use similar addressing profiles, the absence of the GroupWise Address Book is generally the first sign of an installation failure. Fortunately there is a solution.

If Outlook is already installed and errors have been experienced, the following is recommended:

1. Go to the control panel in the OS (Win95/98 or WinNT) and click on "Mail and Fax" (or "Mail").
2. Highlight the Novell default profile and delete it.
3. Exit the Windows Messaging screen.
4. Go to the Add/Remove Programs. Click on the Window's Setup tab (Window's NT Setup in NT) and uncheck the windows messaging option.
5. Click on OK. Windows Messaging will be uninstalled.
7. Reboot the machine.
8. Once rebooted, go back into Add/Remove Programs and click on the Window’s Setup tab.
9. Recheck windows messaging. After it has reinstalled windows messaging, reboot the machine.
10. Reinstall Outlook in "Corporate or Workgroup Support" configuration.
11. Reinstall GroupWise (see Note 2).

The above mentioned solution is the only complete solution.

*Note 2: Before installing GroupWise, select the Outlook option to "Prompt for a profile to be used."

Selecting the Option to Prompt for a Profile:

1. On the Tools menu click, Options
2. On the General tab click to select, "Prompt for a profile to be used" and then click OK.
After installing GroupWise, check the user profiles to make sure a separate profile was created for GroupWise; if it was not, manually create a separate profile. Since GroupWise does not have the option to prompt for a profile, the default profile must be set to start GroupWise.

*The above steps are for reference only and this author assumes no liability. If you do not feel comfortable in following these steps, the author strongly recommends you contact your network administrator or other computer support professional.*

**Outlook Express and GWIA**

What if after reading the steps to configure the GroupWise client and Outlook to work together, you decide you don’t want either, yet you still want to access your work mail from home. Can it be done? Yes.

If you are using Internet Explorer 4.0x or higher, you are provided Outlook Express as a mail client. One nice thing about Outlook Express is its ability to handle both IMAP and POP3 protocols at the same time, thus you can create multiple mail accounts, adding a second account to access your work mail just as easily as you did when you set up your UNT Internet Services account. Handled by the GroupWise Internet Agent (GWIA), you can set up a second Mail account that gives you basic mail and cabinet service to your GroupWise account at work. (Netscape users can also create a second mail account to access GWIA.)

To create a second account within Outlook Express, with Outlook Express open:

1. Click on Tools, then choose Accounts.
2. Click on Add, and choose Mail.
3. Follow the Internet Connection Wizard. When prompted for an email address, enter your GroupWise E-mail address. (If you are unsure what it is, please contact your Network Administrator for assistance).
4. Choose mail server type: IMAP.
5. For the E-mail server name, enter **gwia.unt.edu** for incoming and **mailhost.unt.edu** for outgoing mail.
6. When prompted for account name and password, enter your account name (usually your login name) and GroupWise password. (Again, if you are unsure what your account name is, or you have not set a separate GroupWise password, please contact your Network Administrator for assistance).
7. Click Next to Finish.

A couple of things you should be aware of when using Outlook Express and GWIA…

1. If you’ve already upgraded to Internet Explorer 5, you may wish to consider rolling back from Outlook Express 5 to Outlook Express 4. Currently there is a bug in Outlook Express 5 that doesn’t handle cabinet services well when POP3 is the selected mail server. Outlook Express 4 does handle both mail and cabinet services very well when IMAP is selected for type of mail server.
2. GWIA doesn’t provide a GroupWise Address Book.
3. You can use GWIA in "Internet Mail Only" configuration of Outlook 98.

Other Resources

Novell and Microsoft both provide further explanation and resolution. You can access specific articles at:

- **Novell Support Connection** ([http://support.novell.com](http://support.novell.com)) -- search the knowledgebase for Novell technical information document **2944289**

- **Microsoft Personal Support Center** ([http://support.microsoft.com/support/search/c.asp?FR=0](http://support.microsoft.com/support/search/c.asp?FR=0)) -- search by specific article **Q181980**

If you'd like to learn more about GroupWise and the many features it provides, please visit the following URL’s:

- **GroupWise End User and Web Access FAQ’s**: [www.unt.edu/cwn](http://www.unt.edu/cwn)

- **Cool Solutions Magazine**: [www.gwmag.com](http://www.gwmag.com)

and please take advantage of the GroupWise Guides provided under the Help Menu.
Remember in "2001: A Space Odyssey" when Dr. Floyd called his daughter from a Bell Systems videophone while in earth orbit? Once upon a time the concept was far-fetched and fascinating, but reality has a far more interesting habit of making fantasy come true. And today, the modern equivalent can be found as close to you as your Windows 95/98 or Windows NT4.0 PC.

If you are one of those people who want to be more productive in how you conduct business, or if you wish to see what the future of business communication looks like, then you’ll be interested in Microsoft’s NetMeeting.

What is NetMeeting?

NetMeeting is a complete Internet conferencing solution that offers standards-based audio, data, and video conferencing functionality. Even without video or audio communication, data exchange can occur "now", in real time over any IP network using industry standards for Internet telephony. Data can be conveyed via White Board, Chat, Email or through joint collaboration and editing of any Windows based application document you can imagine. Some of the key components of NetMeeting are:

- **Multipoint Data Conferencing.** While ideally suited for information exchange between two parties, NetMeeting users can also share and collaborate on ideas between conference participants in real-time. This ability to share applications on their computers allows participants to see and use the same information at the same time, facilitating the free exchange of ideas and promoting group review, editing and presentation.

- **Video Conferencing.** With no more than a video card and camera, users can send and receive video images of participants face-to-face.

- **Internet telephony.** Using just a sound card, microphone and speakers, users of NetMeeting can talk to associates over the Internet or over an IP based local area network (LAN). When combined with the additional features of data and video conferencing, your phone discussions take on a whole new level of communication.

What can I do with NetMeeting?

While the number of possible uses is really up to the user, three stand out as beneficial to UNT users. Each of these scenarios would allow a department or school to increase the productivity of their users — in part by saving time and money, but also by creating new business processes and problem solving techniques.

- **Telecommuting.** Pushing beyond plain telephone communication, and combining it with e-mail and file sharing, you can effectively stay in
touch or collaborate in real-time on the latest project with a simple connection to NetMeeting. Why fight traffic and spend two or three hours on a commute for a fifteen-minute meeting, when you can accomplish the same results from your PC?

- **Virtual Meetings.** Extending the telecommuting use to a broader level, virtual meetings could occur all within the Internet. Multiple users from different locations could conduct meetings and share information just as if they were in the same room. Enhancing the true application sharing capability with audio and video, no longer would researchers have to feel isolated from the university when issues of funding or new data arises in the field.

- **Distance Learning.** Using NetMeeting, instructors could easily disseminate class material or lectures to many people over the Internet or over LAN, while maintaining a real time virtual classroom where interaction can occur. Project development and presentations can also be distributed in real time to key administrators at various locations.

### How much will it cost?

While nothing in life is free, NetMeeting comes pretty close. NetMeeting comes bundled with your Windows 98 operating system, and is free to download from Microsoft. (See download location at bottom of article.) This basic application will allow you to use file sharing and collaboration, chat, and whiteboard immediately.

If you wish to add Internet telephony, buying a microphone (assuming you have a sound card and speakers already installed) would be your next step. Currently low-end microphones cost approximately $9.00-$10.00.

And if you want the whole NetMeeting experience, a camera is next. Current prices on cameras range from $59.99 on up depending on model and from whom you purchase it. (Currently, one of the best cameras available, Logitech’s QuickCam VC, retails at $79.95. QuickCam comes in USB and Parallel Port models, and provides clean, crisp images in color. Sale pricing have been seen to drop prices to below $30.00 per camera.)

### Who else is using NetMeeting?

Microsoft provides several case studies on information driven companies who are actively using NetMeeting. Here are just a few:

- **Dow Chemical** is taking advantage of the collaborative capabilities in Microsoft NetMeeting conferencing software to support virtual teams.

- **Ford Motor Company** takes advantage of NetMeeting’s powerful tools for effective communication over their corporate Intranet.

- **Northrup-Grumman** has improved the quality of communications and collaboration among geographically dispersed team members while savings travel costs and time.
San Diego State University uses NetMeeting to provide two-way audio and video conferencing to simulate a traditional classroom setting, with its shared white board, shared applications, and chat window supporting real-time Web-based instruction.

And literally thousands of people every day, all day, from around the world, are conducting business and personal matters via NetMeeting.

What we’ve been running.

In our testing, we’ve run very successful video and video telephonic conversations using NetMeeting with the following configurations on campus:

- Micro-Maintenance built PII 266MHz PC with 64MB of RAM and Windows 98.
- Micro-Maintenance built PII 400MHz PC with 128MB of RAM and Windows 98.
- Dell Latitude CPI 266XT Notebook PC with 64MB of RAM and Windows 98.

While off-campus, we’ve utilized:

- AST Advantage 9414 200MHz MMX PC with 64MB of RAM, 56K modem and Windows 95.
- Other various PC’s of friends who’ve assisted in our testing.

On campus, we utilized Logitech QuickCam VC cameras. Off-campus, we used several different cameras ranging from Kodak USB color cams to S-video Intel Video Cams.

The future.

The future of collaborative point-to-point Internet conferencing looks very bright indeed. While some current hardware and structural limitations exist, the technology behind NetMeeting and similar products (White Pine’s CU-SeeMe, for example) is proven. The application of NetMeeting further extends your ability to reach far beyond the desktop, and allows you to participate in the "here-and-now" with people ranging from across campus to across the globe.

And the call from earth orbit isn’t really that far-fetched. Just ask some lucky elementary school kids who’ve talked with astronauts on the space shuttle!

Where to go to get more information.

If you would like to learn more about NetMeeting and how it may benefit you, please feel free to email either Pat Evans (pevans@cc.admin.unt.edu) or John Bradley (bradley@unt.edu) in the Computing Center.

To get additional information and to download the latest version, please visit the NetMeeting Home Page at:

http://www.microsoft.com/netmeeting
Seven Deadly Sins of Web Design

By Sharon Marek and Kenn Moffitt, Web Developers UNT Central Web Support

Web design sins are generally the product of inexperience. And as experienced sinners, we'd like to help you avoid these deadly mistakes - some that we've made, and others that we see every day.

Pride

Here's a Web design secret - not everyone on the Web will be viewing your Web pages with your cool computer system. The Web is composed of a diverse group of people, all of whom have different combinations of computer, operating system, platform and Web browser. The sin of pride in Web design is failing to consider how your design choices will affect your audience.

- Netscape and Internet Explorer (IE) display Web pages differently (depending on the features that you have added to your page). It is important that you check your Web pages on both Netscape and IE for inconsistencies.

- Web pages can be interpreted differently by different versions of the same browser. Netscape 4.0 has some features that won't work at all in Netscape 3.0. So it is good practice to check your Web pages in as many versions and browsers as possible.

- Web pages can look different on different computer platforms. For example, Macs show fonts two point sizes smaller than PCs with the same point size specified.

Also keep in mind that not everyone viewing your pages has the same physical advantages. Visually impaired individuals may be browsing your site with a text to speech reader. (A text to speech reader will read only the text on your page.) If you use mainly graphics on a page, the text to speech reader has no text to read. Make sure that you represent all important images with an alternative text attribute. (You can generally configure alternative text in the image properties.) Alternative text makes your Web site more accessible not only to the visually impaired, but also to people with slow connections or older video cards.

Envy

There is a lot to envy on the Web - sites that have brand new interactive components, flashy visual technologies, incredible internal structure - envy is understandable. But using the new thing without understanding it is a very bad idea. It takes time and experience - expertise - to make new technologies effective and older technologies innovative.

Finding information about new technologies on the Web is relatively easy. And
step-by-step instructions for the most innovative use of older technologies are readily available. But there is a great difference between knowing what to do with a technology and knowing how to do it.

Understand before you implement. Read about the new thing before you try to use it - and ask a lot of questions. Is there a standard? Will it work in all browsers? If not (and it's probably not) which ones will it work in? Are those the browsers that hit UNT most often? Is there a way to convey the information differently for older browsers? And please, don't forget the most important question: will it add value to my site?

Find sites that use the innovative technique badly, and avoid their mistakes. Find sites that use the new technology well, and build on their success.

Gluttony

Graphic overindulgence on the Web is very common. The relative ease of use combined with the frequent lack of a design background in novice Web workers creates some interesting forms of self-expression. Graphic design is indeed important to the Web. The Web as we know didn't "take off" in popularity until images were added. But there are a few rules to keep in mind when you are creating your page:

- **Images add download time to a page.** Use graphics wisely. This includes learning how to make images that download very quickly. You can check out builder.com for hints on [tweaking your images for speed](http://www.builder.com).  

- **Animated .gifs are the plastic pink flamingos of the Web world -- decorations of questionable value.** An animated .gif does add motion to a page -- but is a rotating, flaming email icon really enhancing a page when the visitor has to sit through a longer download? How impressed is the reader seeing your whirling, pulsating "New" icon for the fifteenth time?

- **Background and text colors can be changed on a page, but should not be changed without a good reason.** The most legible combinations of text and background are high contrast - dark text on a light background or light text on a dark background. Red text on a green background is bad - the low contrast between the colors will make that page very difficult to read. Black text on a white background is optimum.

- **Although the default link colors can be customized, remember that a good portion of the Web audience is new.** Novice Web users understand that the blue underlined word is a link. Be very careful that your color changes don't confuse your Web site's navigation. Link colors must contrast strongly with the background color but should NEVER be the same color as the regular body text.

- **Finally, a brief word about background images.** The purpose of your site is to present information to your audience in an effective manner. Make sure that your background image doesn't make your text difficult to read. As [Creating Killer Web Sites](http://www.amazon.com/Creating-Killer-Web-Sites-Design/dp/0071393005) (by David Seigel) says, "gift wrapping paper makes bad stationary".
Lust

Every day brings a new toy or technique to the Web. And everyone wants to be on the cutting edge of design -- to show the world just how tech savvy they are. However, you must avoid the temptation of adding these new technologies for the sake of the technology alone. Techno-lust has been known to lead good Web designers astray.

For example, there is no need to use a scrolling Java applet to present a list of subjects on your site. People with browsers that don't support Java can't see the list. People with browsers that do support Java won't necessarily see it, either. Java and other technologies such as Flash, DHTML, and RealAudio have limitations and do not work consistently for all browsers across the Web.

These technologies were created to address specific needs -- to serve some specific purpose. A trendy new technology's existence doesn't make it appropriate for the task at hand. Always strive for a solution that will benefit the widest possible audience.

Your content should drive the technology that you use -- not the other way around.

Anger

Would you like to drive your readers to the sin of anger? Then be sure to:

- **Link to pages that don't exist** -- those animated under construction .gifs are a fine substitute for the missing information!

  (Not Really! Avoid making your readers angry, and debut new pages or areas of your Web site when - not before - they exist. Draw attention to your new material, not the lack of it.)

- **Ignore screen resolution issues!** If you've got a 19\" monitor running 1024 x 768, then design for that, because everyone else has one, too!

  (If you are unfamiliar with these terms, you can learn all about the [perils of screen resolution](http://www.unt.edu/benchmarks/archives/1999/april99/sins.htm) at Andy's Art Attack, a particularly good source of image information.)

- **Don't provide any email contact information on your Web site.** What could your readers possibly have to say to you?

  (You'll avoid compliments and complaints by not providing contact information. You'll also miss out on opportunities to help current and prospective students find the information they need. Read UNT's Web Publishing Guidelines for more information.)

Greed

You'll see marvelous images on Web sites -- wonderful sound and animations -- and brilliant content. You'll want it all for your site. We understand this greedy impulse. But copyright is as real on the Web as it is in print. And while it is easy to take graphics, sound, text and more from Web sites, it isn't right or legal...
There are hundreds of Web sites that allow the use of their images in exchange for a link back to their site. If you use their images, follow through on your part of the deal, and link back to them. If you find an image that you can't live without, and are unsure of who owns the copyright for that image, send the site owner email. Ask permission to use the image, and keep the email that gives you permission. Realize that permission for a cartoon, a science fiction character or your favorite song is very hard to come by, and generally costs money.

If you really like what someone else has said or shown on their site, provide a link to that site! That gives the original artist credit, and keeps you out of the copyright business. If someone challenges your use of content that you did not create, apologize and remove the challenged content. (Read about why on Law and the Web at builder.com.)

**Sloth**

It's been said that Web site creation and procreation have something in common -- that the act of creation is much more exciting than the care and feeding that inevitably follows. And while a Web site is less demanding than a child, failure to maintain a Web site is the deadliest of Web design sins - sloth.

UNT's Web Publishing Guidelines clearly state that you should only put on the Web what you can maintain. Inaccurate and out of date information reflect badly on the university as well as the individual responsible for the Web site.

**A few other hints:**

- **Run a spell check on your Web site.** If spell check is not available, invest in a dictionary. Incorrect spelling is particularly inappropriate on a university Web site.

- **Check your links on a regular basis.** Web sites move or reorganize frequently, and they're not likely to notify you of the change.

- **Indicate the date each page was updated last.** This freshness dating lets your readers know how often the page is updated while encouraging you to keep your Web site current.

- **Read all about this in UNT's Web Publishing Guidelines!**