# Benchmarks Online

CITC Home | Help Desk | Training | About Us | Publications | Our Mission

## Columns

- NetworkConnection
- Link of the Month
- IRC News
- RSS Matters
- www@unt.edu
- Short Courses
- Staff Activities

*Don't forget our monthly Columns!*

## Campus Computing News

[EUID Password Resets are on the Horizon](#)

[Spring Break Hours](#)

[Eaglenet Wireless Network Update](#)

[Jaws 6.0 has arrived!](#)

**TODAY'S CARTOON**

About Benchmarks

Search Archive

[Return to top](#)

Subscribe to Benchmarks

# UNIVERSITY of NORTH TEXAS

[Network Connection](#) | [Link of the Month](#) | [IRC News](#) | [RSS Matters](#) | [www@unt.edu](#) | [Short Courses](#) | [Staff Activities](#)

[Computing and Information Technology Center Home](#) | [Help Desk](#) | [Training](#) | [About Us](#) | [Publications](#) | [Our Mission](#)

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[UNT home page](#) | [Search UNT](#) | [UNT news](#) | [UNT events](#)

# Benchmarks Online

# Campus Computing News

## EUID Password Resets are on the Horizon

**By Dr. Philip Baczewski, Director of Academic Computing and User Services**

Since it's been about 120 days since new password standards went into effect, you may find that you can't log into services which use your EUID and enterprise password. If this happens, the first site to visit is the EUID account management page, http://ams.unt.edu. Not only will this page tell you if your password is expired, it will also allow you to reset it if it is.

One element of the new password security standards put into place last fall is that passwords expire after 120 days. This may seem like an arbitrary rule, however, with such a large population of IDs as is found at UNT, it's necessary to ensure that unattended or unused accounts are not indefinitely accessible or prone to unwanted intrusion. Password expiration is currently the only practical way to ensure that this is the case.

## Password Tips*

Since you may have to reset your password soon, here are a few tips to help you. You don't have to reset your whole password. You can change one or two characters so that you'll have a different value, but can still remember it. If you get stuck trying to find a strong password in AMS, use the "Strengthen" button to get suggestions. You may not like the suggestions, but you may get some ideas to help you come up with your own strong password. And, don't forget the answer to your secret question. The secret question is there to make sure that whoever set the original password is the one trying to reset it. Without the answer, you will need assistance from the helpdesk to check your identity and clear your secret question.

## Forewarned is Forearmed

EUID Password expiration may take you by surprise. Once you reach your password expiration date, you have six grace login attempts before the password is totally disabled. Not all applications can sense the expired password condition. The my.unt.edu portal will tell you when your password is expired. The Account Management page will also tell you if your password is expired. You can regularly check on your password expiration date by logging into the Account Management System page. It's a goal to extend password expiration warnings to as many applications as possible.

Hopefully, resetting your password will become easier each time you need to do so. If not, however, you can always call on the CITC helpdesk for assistance. You can contact the helpdesk at 940-565-2324 (extension 2324 on the Denton campuses).

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* See last month's *Network Connection* for more information on "Strong Passwords."
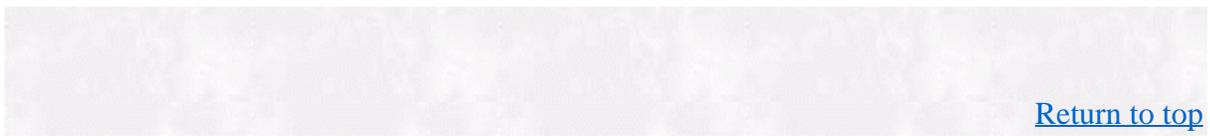
# Benchmarks Online

**Page One**

**Campus Computing News**

**Spring Break Hours**

**Eaglenet Wireless Network Update**

**Jaws 6.0 has arrived!**

**Today's Cartoon**

**RSS Matters**

**The Network Connection**

**Link of the Month**

**WWW@UNT.EDU**

**Short Courses**

**IRC News**

**Staff Activities**

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# Spring Break Hours

**By Claudia Lynch, Benchmarks Online Editor**

**F**ollowing are the hours for Computing Center-managed facilities over Spring Break. The University is officially closed March 14-18, 2005. Additionally:

- The **Helpdesk** , is planning on being **open their normal hours** during Spring Break.

- The **ACS General Access/Adaptive Lab** (ISB 110) schedule:

  **Closed** Sunday March 13
  **Open** Monday - Friday March 14 - 18, 9:00 a.m. - 7:00 p.m.
  **Closed** Saturday March 19; resume normal hours Sunday March 20.

## Hours for Other Campus Facilities

### General Access Labs

- WILLIS:

  Saturday, March 12: **Close** at 11:50 p.m.
  Sunday, March 13: **Closed**
  March 14-18: 8 a.m-7:50 p.m.
  Saturday, March 19: **Closed**
  Sunday, March 20: Open at 1 p.m. and return to normal 24 hour schedule.

- SLIS:

  **Closed** Monday, March 14 through Sunday, March 20.

- MUSIC:

  **Closed** Monday, March 14 through Sunday, March 20.

- SCS & SMHM:

  **Closed** Saturday, March 12 through Sunday, March 20.

- SOVA:

  **Closed** Saturday, March 12 through Sunday, March 20.

- COE:

  **Close** on Friday, March 11 at 5 p.m. and will reopen on Monday,

March 21 at 7 a.m.

- [COBA](#):

  **Closed** Monday, March 14 through Sunday, March 20.

- [CAS](#):

  **GAB 330:**
  **Closed** Saturday, March 12 through Saturday, March 19.

  **GAB 550:**
  **Closed** Saturday, March 12 through Sunday, March 20.

  **Terrill 220:**
  **Closed** Saturday, March 12 through Sunday, March 20.

  **Wooten 120:**
  **Closed** Saturday, March 12 through Sunday, March 20.


- **UNT Dallas Campus-  155A**

  **Closed** Monday, March 14 -- Wednesday, March 16.

  Thursday, March 17: Noon - 8:00 p.m.
  Friday, March 18: Noon - 6 p.m.
  Saturday, March 19: 10 a.m. - 4p.m.

- **Engineering General Access Lab ([englab@unt.edu](mailto:englab@unt.edu), Research Park, B129, 891-6733)**

  **Closed** over Spring Break.

[Return to top](#)

# Benchmarks Online

# Eaglenet Wireless Network Update

*This is an edited and updated version of an article that appeared in the December 2003 issue of Benchmarks Online. -- Ed.*

By **Joe Adamo, Director of Communications Services**

Use of the Eaglenet Wireless Network is becoming more and more popular here at UNT. A new feature has been added -- guest access -- which should increase its popularity even more.

## Accessing Eaglenet

Eaglenet allows students, faculty, and staff to use their current EUID's and passwords to access the Internet from a laptop or personal digital assistant (PDA) equipped with an 802.11b wireless interface. To access and use Eaglenet, simply configure your wireless device with "Eaglenet" as the SSID, turn off WEP encryption, and connect to the network (these arcane instructions are described in more detail on the Website referenced later.) Once you've established a wireless connection to Eaglenet, open a web browser and you'll be directed to the Eaglenet logon page. At this point enter your EUID and password and you're on your way to surfing the web.

If you need more help accessing Eaglenet, check out the CITC's wireless Webpage at www.UNT.edu/wireless, where you'll find information on various wireless cards that will work with Eaglenet and information on how to configure your laptop or wireless device to work with Eaglenet. Although the CITC's helpdesk staff (at 565-2324) can't work on your personal equipment, they are available to answer your questions and help you through the wireless set-up process.

## Guest Access to Eaglenet

The UNT AMS system has provisions to create a guest EUID and password that can be used to access the wireless network (useful for visiting speakers etc.). If you have a need for this feature, please send E-mail to jadamo@unt.edu with your request. You are allowed to add any number of guests to the system and they will be granted access for up to 90 days. Guest access will automatically expire after the specified period (up to 90 days) or you can re-authorize the guest, before their access expires to provide them continuous operation. Guests will be restricted to basically port 80 traffic (like the dorms).

## Where is Eaglenet installed?

Eaglenet is installed in high traffic areas across campus, i.e. the Willis Library, the Union, etc., to serve the largest numbers of students, faculty and staff. The wireless web page at

[www.UNT.edu/wireless](www.UNT.edu/wireless) has a complete listing of where Eaglenet is available as well as a link to frequently asked questions (FAQs) about Eaglenet and how it operates.

[Return to top]

# Benchmarks Online

**Page One**

**Campus Computing News**

**Spring Break Hours**

**Eaglenet Wireless Network Update**

**Jaws 6.0 has arrived!**

**Today's Cartoon**

**RSS Matters**

**The Network Connection**

**Link of the Month**

**WWW@UNT.EDU**

**Short Courses**

**IRC News**

**Staff Activities**

**Subscribe to Benchmarks Online**

## Jaws 6.0 has arrived!

By **Dr. Elizabeth Hinkle-Turner**, **Student Computing Services Manager**

**J**AWS 6.0 is out and available for download from the Freedom Scientific website (www.freedomscientific.com) or on CD-ROM - available from me, Elizabeth Hinkle-Turner. The CD-ROMs also contain documentation for the application.

The JAWS 6.0 version that UNT currently has is the one that still uses the authorization diskettes, and network managers who choose to download JAWS directly from the FS website should choose the Quella version and not the ILM version. The new ILM version is the one that uses internet authorization instead of diskette authorization, and I am still arranging with Freedom Scientific to get this new authorization scheme.

Plenty of authorization diskettes are still available from me but please try to remember to put authorizations back on the floppy before removing or updating JAWS 5.x installations. A tutorial on how to effectively remove and preserve authorizations is given below. Additionally, a complete discussion of installing JAWS and preserving authorizations is given in this December 2003 article in *Benchmarks Online*. Persons interested in using the network version of JAWS should talk to the technical staff at the Willis Library as they have been using that version successfully for quite some time. Most people, however, should choose JAWS Setup when presented with the Table of Contents of the CD to install the individual desktop application.
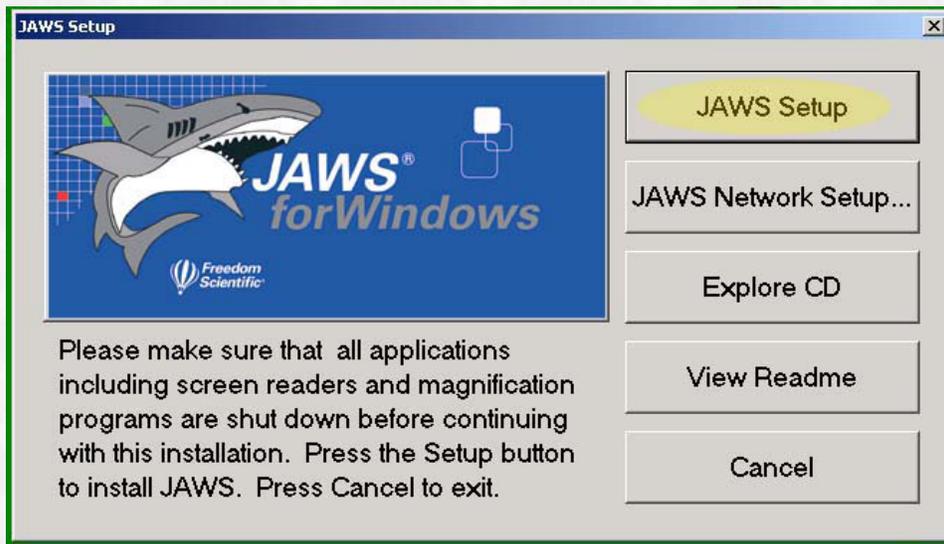
*The Table of Contents of the JAWS 6.0 CD. Most people will choose JAWS Setup*

Authorizing JAW 6 from the diskette is a little tricky - it generally doesn't work like it did in the past when you just popped the diskette in the drive and magically authorization happened. This time you need to run the executable on the floppy called **hjauth.exe**.
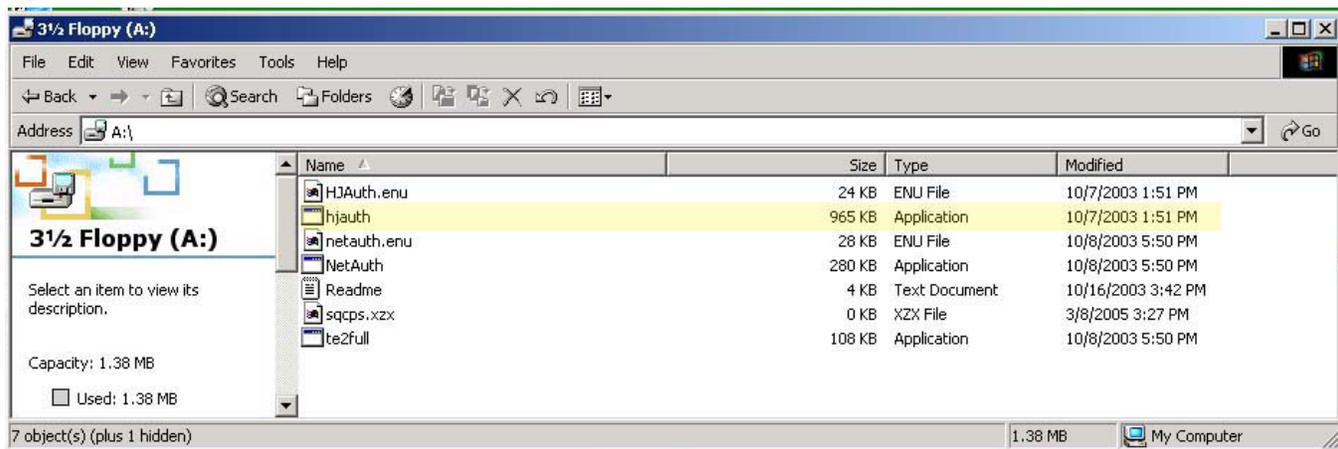
*Choose hjauth.exe for authorization of individual copies*

Choose **Install Authorization**. Please note that this is *also* how you remove authorizations and put them back onto the floppy disk for future use.
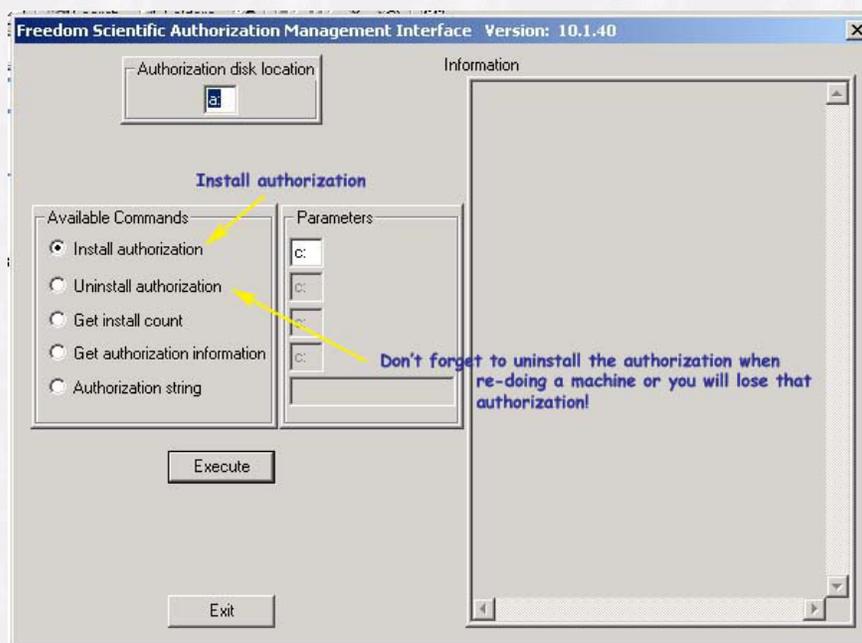


*Choose to install or remove authorizations depending on your situation*

Be sure you turn virus protection off before you do the authorization or it probably won't work. One other thing to note is that you will also have a shortcut labeled 'FSReader Demo' on the desktop once JAWS 6.0 is installed. This is a demo version of FSReader which is a new product from the company that reads documents that are in Daisy Text (Digital Accessible Information System) digital talking books format. The Freedom Scientific website further describes this product:

> Using FSReader, individuals with low vision or other print disabilities can navigate to a particular point in a book from the table of contents or the index by browsing headings, or by flipping pages. They can reopen books right to the place they left off and set multiple bookmarks. In books containing both audio recording and text, users can fast forward and rewind and even speed up the narrator. They can switch between recorded audio and text with synthesized speech or even read along with the audio using one of Freedom Scientific's refreshable Braille displays or MAGic screen magnification software.

Technical personnel with customers who may be in need of a Daisy Text reader are encouraged to try out this new product and provide feedback to both the Office of Disability Accomodation and Academic Computing Services so it can be determined whether we might want to purchase FSReader in the future.

The CITC is continuing its Software Maintenance Agreement with Freedom Scientific so we get our JAWS updates as quickly as possible. It should also be noted that Freedom Scientific and Novell Netware cooperate in a plug-in and script exchange in an effort to make the GroupWise email software as compatible with JAWS as possible. JAWS 7.0 is scheduled for release in August 2005. For more information about JAWS and to get copies of the installation media email me, Elizabeth Hinkle-Turner, at ehinkle@unt.edu.

[Return to top](#)

Today's Cartoon

# Benchmarks Online

## TODAY'S CARTOON

Copyright 2002 by Randy Glasbergen.
www.glasbergen.com

CLICK

GLASBERGEN

"This home-improvement software is like working
with a real contractor. It cost me three times more
than I expected and half the time it doesn't show up!"

**From "Today's Cartoon by Randy Glasbergen", posted with special permission. For many more cartoons, please visit www.glasbergen.com.**

Return to top

# Benchmarks Online

# Network Connection

By **Dr. Philip Baczewski**, Director of  Academic Computing and User Services

## I See You

**T**he idea of video conferencing has been around for a long time. We've been promised videophones since the 1960's and, so far, they as well as flying cars have yet to show up. Still, with the advent of the Internet, peer-to-peer video conferencing was reborn in the early 1990's with a program called "CU-See-Me" but we still didn't have flying cars. Maybe the third time is the charm and we'll really see some useful tools.

For a year or so, Apple has been selling an Internet camera they call the "iSight". It attaches to the Firewire data connection and can achieve as much as 30 frames per second (at least as good as TV). iSight works with Apple's iChat software to allow virtually instant video conferencing without any of the fuss or muss. Making video conferencing easier is important for its general adoption. Apple specializes in making things easy, but iSight's downfall is that it only works between Apple computers.

Other Internet video conference tools are popping up. A company called inSors supports a video conferencing solution which works from peer to peer or in a large conference room setting. Their solution uses a server to route the video traffic from place to place, but with the Internet and some relatively accessible hardware, you can achieve what was usually only possible with thousands of dollars of special equipment. InSors uses grid software technology to help make the connection to the end user. This innovative approach has the prospect of bringing the cost of video conferencing down and making video collaboration over the Internet a much easier task.

I have a feeling this is just the tip of the video conferencing iceberg. As we've seen in the past, simply inexpensive video does not seem useful. Video which is of fine enough quality to support communication with others may yet catch on. So, maybe inexpensive, but useful Internet video conferencing for all is just around the corner. Will it change the way we work or socialize? Only time will tell. In the mean time, let's talk about those flying cars.

Return to top

# Benchmarks Online

# Link of the Month

*Each month we highlight an Internet, USENET Special Interest Group (SIG), or similar mailing list(s) or website(s).*



## College of Music Events Calendar

The College of Music Events Calendar, http://www.music.unt.edu/events/index.shtml, is chock full of great opportunities for a variety of musical experiences. Many of the events are free, but some cost money. You can now purchase tickets online for Murchison Performing Arts Center (PAC) events here. Enjoy!

Return to top

# Benchmarks Online

# IRC News

**Minutes provided by Sue Ellen Richey, Recording Secretary***

## February 15, 2005

**VOTING MEMBERS PRESENT:**   PHILIP TURNER, ELIZABETH HINKLE-TURNER, JONEEL HARRIS, MARGARET AMBUEHL, SCOTT JOYCE (for CHUCK FULLER), PATRICK PLUSCHT, JUDITH ADKISON, JON NELSON, CENGIZ CAPAN, WIL CLARK (for JOHN PRICE), RAMU MUTHIAH, JIM CURRY, LOU ANN BRADLEY, CRAIG BERRY (for MAX KAZEMZADEH), GUILLERMO OYARCE **NON-VOTING MEMBERS PRESENT:**  JOE ADAMO, PHILIP BACZEWSKI, SUE ELLEN RICHEY  (Recording Secretary) **MEMBERS ABSENT:**  COY HOGGARD, MAURICE LEATHERBURY, KENN MOFFITT,  DON GROSE,  KATHY SWIGGER, ROBERT NIMOCKS, BRUCE HUNTER, SANDRA TERRELL, ABRAHAM JOHN, CHRISTY CRUTSINGER, DOUG MAINS, BOBBY CARTER **GUESTS:**  CHARLOTTE RUSSELL

### IR Steering Committee

The Chair reported that the IR Steering Committee had met and approved the Email Retention Policy, but that the committee had asked Dr. Leatherbury and Mr. Rafes to revise the Retention Procedure document.

### Distributed Computing Support Management Team**

Philip Baczewski reported for the Distributed Computing Support Management Team that they met on February 4th at which time they had a follow-up discussion on PDA/GroupWise synchronizing products. They have identified several possibilities to support that, including one product from Novell. They hope to have a product to recommend soon. They plan to begin an initiative to develop a common interface to student id card pictures which would aid the Check-in system as well as WebCT, for the purpose of student identification. Cengiz Capan added that COBA uses a product that allows faculty to click on a student's ID on an Excel roster and get a picture. They also have the capability to produce a seating chart with students' pictures shown. Philip said that DCSMT's goal is to have a common interface that can be used by all departments, so that individual departments don't have to go out and develop or find their own. Dr. Turner added that WebCT Vista was supposed to have the capability of showing a picture of a student, but that hasn't been developed yet.  DCSMT meets again on Feb. 18th.

### Learning Enhancement Planning Group

Patrick Pluscht reported for the Learning Enhancement Planning Group that UNT eCampus had 8,000 hits in January,  over 7,000 of which were from unique IP addresses. Their goal is to have 80% of the information on Summer and Fall courses available by the time of early registration, around April 4th. Patrick reported that he wrote an article for *Benchmarks* about

Turn It In.com.  Patrick announced that they have initiated an Excellence in On-line Course Development & Teaching award of $500.00. April 15$^{th}$ is the deadline for nominations. Additional non-monetary awards will be given for course design. The Center for Distributed Learning is gathering completion and success  data on the web courses now offered, explaining that completion means that of those students registered on the 12$^{th}$ class day the number who get a letter grade of some kind, and that success means all those registered who get an A, B or C if undergraduate or A or B or Pass if a graduate student.  They are going to do a comparison between on-campus courses versus online courses in the rate of completion and success. They will share their findings with the IRC.

### Communications Planning Group

Lou Ann Bradley reported for the Communications Planning Group that they have met but they still do not have a current charge. Their meetings consist of information sharing. She asked for input regarding issues they could address. The Chair asked Lou Ann to send their original charge in writing to the Recording Secretary who would then share that with the entire membership.

### EIS Planning Group

Joneel Harris reported for the EIS Planning Group that they continue to work on getting data and reports out of the system. Cengiz Capan has volunteered to be the focal point for the academic units in piloting a data warehousing project, which will be very helpful. For the student module, they are testing a single session term concept for Summer 2005. Ginny Anderson and Jean Bush are working on EPM and Budget. The Oracle takeover of PeopleSoft continues to present issues for UNT and all other PeopleSoft users. UNT no longer has an executive sponsor. Joneel said there will be several UNT staff attending the Higher Education Users' Group meeting in March where they hope to get more information regarding the effects of the merger. Oracle says they are planning a migration path from the current product to what we expect to be some combination of PeopleSoft and Oracle products, and they also say they will support the PeopleSoft product until 2013, but there are questions about what "support" means. Cengiz stated that College of Business had gotten permission to teach the PeopleSoft HR module in their classes but they don't know where that stands now.

### Student Computing Planning Group

Elizabeth Hinkle Turner reported for the Student Computing Planning Group that General Access Lab Managers are working in cooperation with the Student Senate to provide easy access to SGA elections. She also reported that Lab Managers have concluded research on PCounter, (which has been used in Willis Library lab for about six weeks), which serves print cues for all the printers, but it allows printing policies to be entered in detail, and that will allow print settings to be uniform across all of the labs. For example, if a student tries to print a document more than once, it will stop the printer and send a message back to the user. It will also direct documents to the best printer for that job. In addition, Elizabeth announced that Jaws, V. 6 is out; they haven't received media yet, however.  There is a 30-day version available for downloading from the web at this time.  She noted that there is evidently some kind of problem with Jaws 5 with WebCT.

Joneel Harris asked about giving students who are enrolled in cooperative programs through other colleges being given rights to use the general access labs, even if charged a guest-rate fee. Elizabeth stated that technically that is easily done; however, GALC would have to decide if it can be done, and consider charging a fee or not. Cengiz Capan stated that if they

pay a fee, there would be no problem, and could even be granted use as an "exception" since there aren't too many. There was further discussion about the use of TexShare cards that are available to anyone attending Texas colleges, and questions about the continued funding of this service.

Dr. Turner reported that many resources are being spent by UNT on replicating various problems with WebCT. On a weekly basis, volunteer student groups and a testing group are dealing with the issues and problems, replicating problems, and essentially trying to break it. They had to re-set a node yesterday and are trying to figure out why it went down. Also, the load balancers that CITC ordered have arrived. Dr. Turner asked that people let him know if they experience any problems using Vista.

**Learning Enhancement Planning Group**

Cengiz Capan suggested two items for the Learning Enhancement Planning Group to consider. COBA has been looking at two products for use in electronic instruction, one is called Key Instruction, which involves a  radio frequency with remote control, for use in registration or taking tests. A local company says they will put this product in all classrooms and just sell the remote control units to students at the bookstore for $8-10. The other is a technology that would deliver video-web on the internet, called M68. It is not streaming video, it uses very low bandwidth, and there are no front-end costs. They have servers in north Dallas; they capture your video, then charge students to watch it. According to Cengiz, these would be very useful tools.

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\* For a list of IRC Regular and Ex-officio Members click [here](#).

\*\*DCSMT Minutes can be found [here](#).

## IRC Meeting Schedule

**T**he [IRC](#) generally meets on the third Tuesday of each month, from 2-4 p.m., in the Administration Building Board Room. From time to time there are planned exceptions to this schedule. All meetings of the IRC, its program groups, and other committees, are open to all faculty, staff, and students.

[Return to top](#)

# Benchmarks Online

## Research and Statistical Support
### University of North Texas

# RSS Matters

*Link to the last RSS article here:* *Equivalence Tests* - *Ed.*

## Using Statistical Software in Classroom Instruction:  S-Plus/R, An Accessible, Low Cost Alternative

By **Dr. Rich Herrington**, **Research and Statistical Support Services Manager**

The choice of which statistical package to use in an introductory statistics or advanced statistics course can be determined by a number of considerations:

1. Which statistics package is the instructor most comfortable with?

2. Popularity of the statistics package

3. Goals of the intended student user - will the student be doing more involved research and development, or will they be engaging in intermittent cursory usage?

4. Ease of use - are there drop down menus?  How easy is the syntax/language to learn?,

5. Flexibility

6. Cost for the student

7. Will the student be using modern, advanced statistical technologies, or will they be relying mostly on well known classical methods?

8. How important is high quality, publication ready graphics (both exploratory and classical)?

9. Availability of the software during course work, and after the student leaves the academic institution

10. Is there an active, supportive community of users?

11. How available are documentation, tutorials, and books?

12. Are there statistics textbooks that cover software usage along with theory?

These are only a few of the considerations involved in selecting a statistics package for a statistics course.  In this article, we bring two data analysis/statistical systems to the attention of educators: "S-Plus" (the commercial version of the "S" language) and the public domain "R" (free version of the "S" language).  We discuss the cost and availability of S-Plus and R to the community of UNT researchers, instructors, and students.

## S-Plus

S-Plus incorporates the object-oriented language S, developed at AT&T Bell Labs statistics research group (Lucent Technologies).  Marketed by Insightful Corp., S-Plus fits statistical models as "objects", making data analysis much more flexible than the older, procedural language approach (e.g. SPSS, SAS). S-Plus incorporates a highly useable graphical user interface (see this online tutorial for examples), along with the capability of script based processing.  Additionally, S-Plus allows the user to "interact" with data and graphics through a command line interface.  The figure below provides an example of the S-Plus GUI interface:
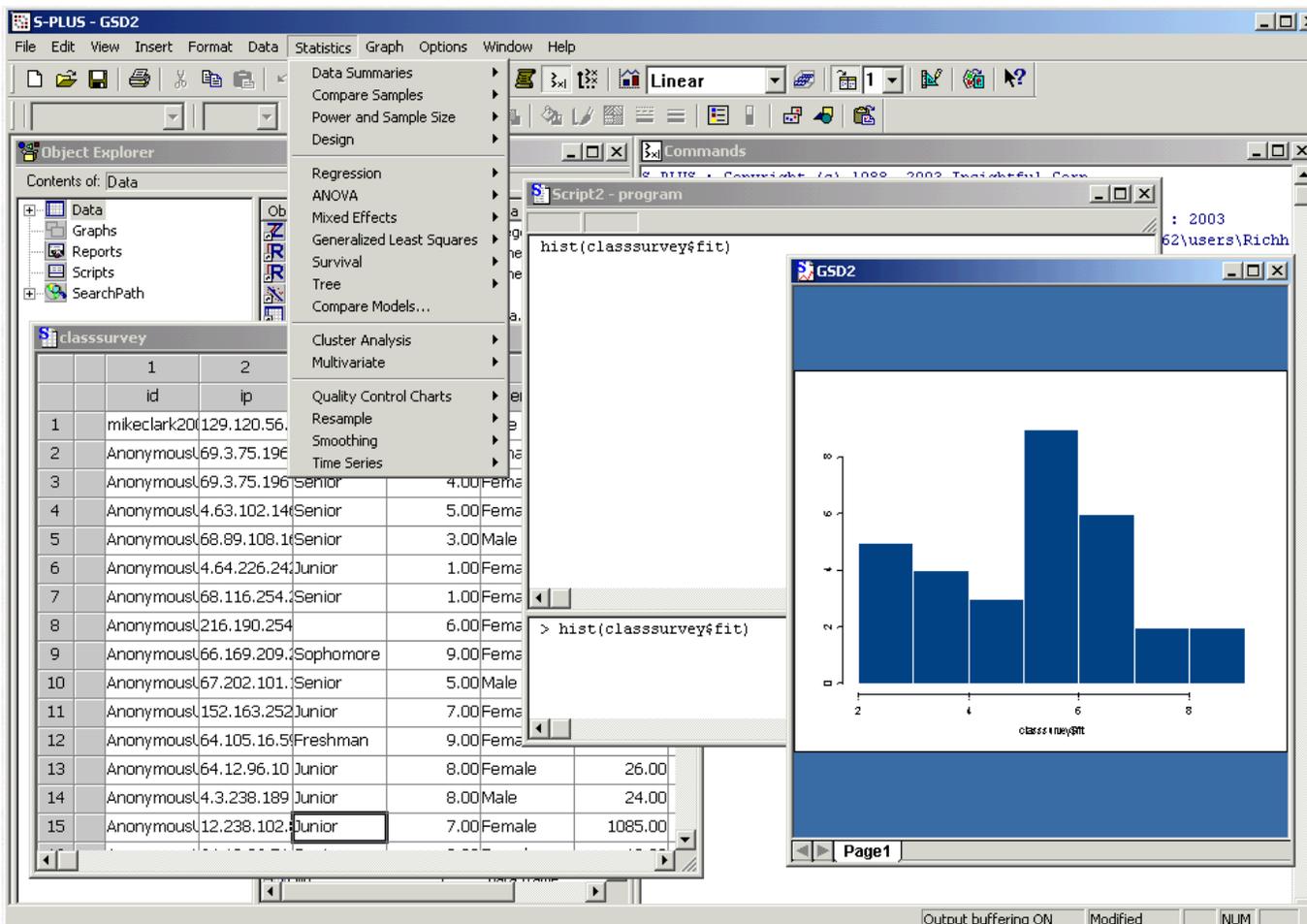
S-Plus has an active world-wide user community - S-NEWS.  Additionally, Insightful Corp. provides online versions of all S-Plus documentation (this documentation is also installed locally upon software installation).  Students, instructors and researchers will be glad to know that many books and tutorials have been published on the S-Plus system.  Advanced researchers should be excited about the continuing expansion of the S-Plus system with the newest statistical technologies available.  **Insightful Corp. provides numerous "experimental" research libraries at no-charge for download.**  Currently, these libraries include:  S+CorrelatedData (mixed effects generalized linear models), S+Best (B-Spline methods), S+Resample (bootstrap library), S+Bayes (bayesian analysis), S+FDA (functional data analysis).  Many of the libraries utilize both a "drop-down" GUI menu system and a command line interface approach.  One particular library that could be particularly useful to introductory statistics instructors is the S+Resample library.  A current trend in statistics education is to use resampling methods (e.g. bootstrap & permutation methods) to illustrate empirical sampling distributions and non-parametric confidence intervals based on the empirical sampling distribution. One notable example:  Tim Hesterberg and co-authors have teamed up with the authors of the highly acclaimed *"Introduction to the Practice of Statistics, Fifth Edition"* by David Moore and George McCabe, to produce a book chapter that integrates the bootstrap into the statistics curriculum at an elementary level.  This book chapter utilizes the S+Resample library to provide easy accessibility to resampling methods at an introductory statistics level.  Tim Hesterberg has also written about using resampling and simulation  methods in teaching statistics.  Researchers who are interested in "data-mining" methodologies can use S-Plus in conjunction with Insightful Corp.'s "Insightful Miner" product to explore undetected patterns in massive datasets. A quick search on Google search engine demonstrates that S-Plus is a popular system for research and instruction (e.g. a search on "S-Plus" returned 482,000 hits).

# Pricing and Availability of S-Plus at the University of North Texas

Students can purchase an "Academic" version of S-Plus at the UNT University Bookstore for $25.  This is a specially licensed copy of S-Plus (for UNT campus) that expires one year after installation (MicroSoft Windows version).  This academic version has all the features of S-Plus "Professional", except that it expires one year after installation.  **Insightful Corp. also provides a "Student" version of S-Plus that is freely available** at  http://elms03.e-academy.com/splus/  This version of S-Plus is free, and has full statistical functionality of the academic version, but: 1) Has a 20,000 cell or 1,000 row limitation;  2) Is only for educational use; 3) Expires after one year; 4) Has a large download (more than 100 meg).  Students register at the website, download the software, and are given a license code that enables the software. The "Student" version of S-Plus is an attractive alternative to the "Academic" version of S-Plus for those instructors teaching a "long distance" learning course where students are incapable of purchasing S-Plus from the bookstore.  For full-time faculty, S-Plus can be obtained at no cost from the Research and Statistical Support Office (RSS) at UNT. S-Plus is gaining in popularity (it is already a favorite amongst professional statisticians); S-Plus excels in incorporating modern statistical methodology while maintaining a large inventory of

classical statistical methodologies;  There are many tutorials, advanced methodology books,  and introductory statistics textbooks that incorporate S-Plus.  S-Plus compares favorably on the all software-choice considerations enumerated above.  That is, S-Plus can accommodate both novice users and heavily research oriented practitioners of statistics.

# R

R is an open-source initiative whose aim is to create and distribute the same high quality, "cutting-edge" statistical technology that S-Plus is known for (see the R homepage).  Quoting from the R homepage:

> *R is a language and environment for statistical computing and graphics. It is a GNU project which is similar to the S language and environment which was developed at Bell Laboratories (formerly AT&T, now Lucent Technologies) by John Chambers and colleagues. R can be considered as a different implementation of S. There are some important differences, but much code written for S runs unaltered under R.*

> *R provides a wide variety of statistical (linear and nonlinear modeling, classical statistical tests, time-series analysis, classification, clustering, ...) and graphical techniques, and is highly extensible. The S language is often the vehicle of choice for research in statistical methodology, and R provides an Open Source route to participation in that activity.*

> *One of R's strengths is the ease with which well-designed publication-quality plots can be produced, including mathematical symbols and formulae where needed. Great care has been taken over the defaults for the minor design choices in graphics, but the user retains full control.*

> *R is available as Free Software under the terms of the Free Software Foundation's GNU General Public License in source code form. It compiles and runs on a wide variety of UNIX platforms and similar systems (including FreeBSD and Linux), Windows and MacOS.*
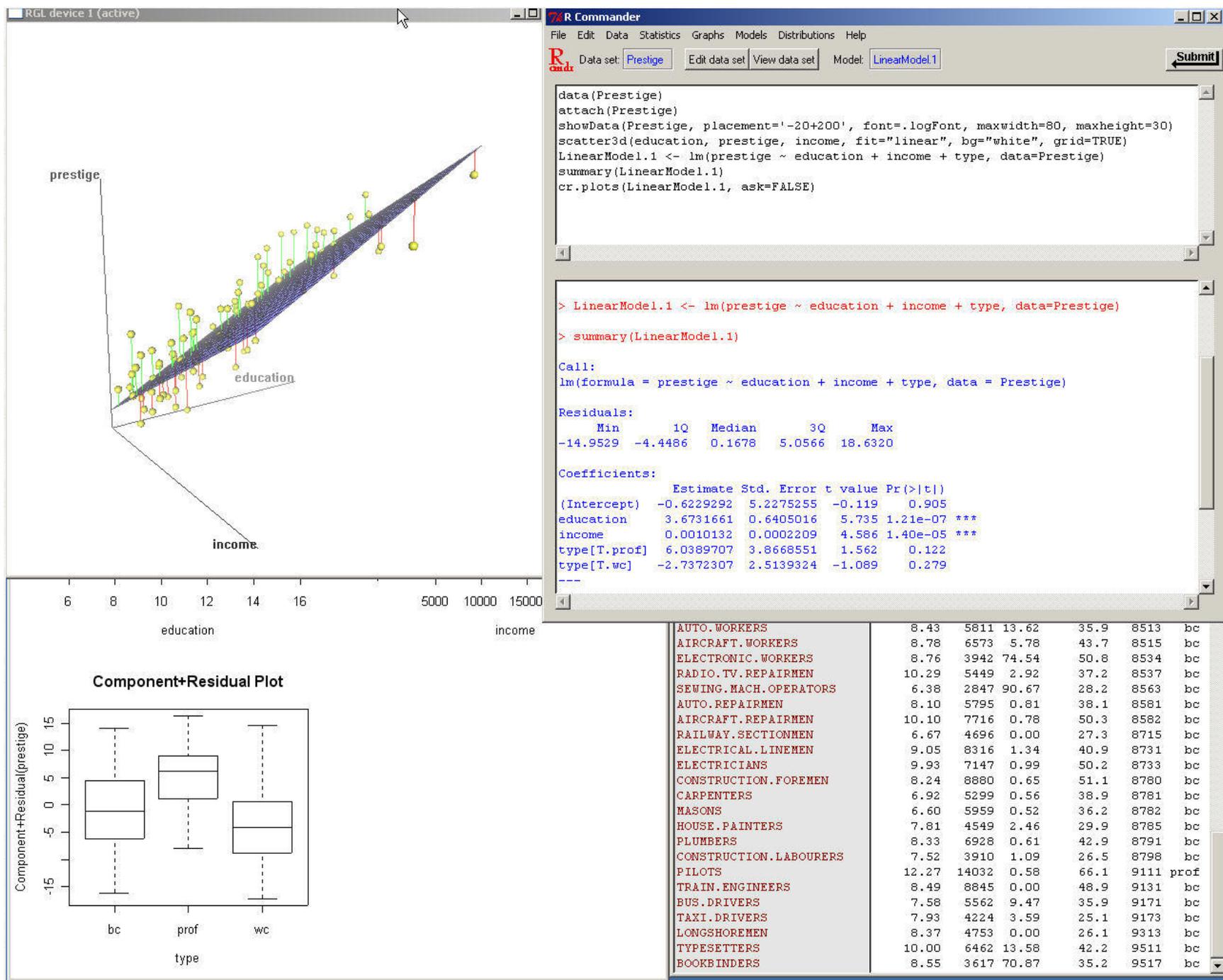
As a free alternative to S-Plus, R cannot be beat.  Available to the R system are hundreds of user contributed libraries that cover large areas of both classical and modern statistics (see UNT's R server help page on installed packages).  While S-Plus excels at providing advanced functionality through a menu system, R excels in providing breadth in statistical functionality (e.g. our own RSS R Server has 587 libraries installed).  Much of this statistical functionality is not duplicated for the S-Plus environment. Partly, this is a result of the R system being an open-source project.  Since the R source code is available to developers of statistical technology, much integration of R with existing statistical tools, databases, and operating systems has occurred.  The "Omegahat" project being the prime example of such efforts.  From the Omegahat website:

> *Omega is a joint project with the goal of providing a variety of open-source software for statistical applications. The Omega project began in July, 1998, with discussions among designers responsible for three current statistical languages (S, R, and Lisp-Stat), with the idea of working together on new directions with special emphasis on web-based software, Java, the Java virtual machine, and distributed computing. We encourage participation by anyone wanting to extend computing capabilities in one of the existing languages, to those interested in distributed or web-based statistical software, and to those interested in the design of new statistical languages.*

R's integration with web servers should be of particular interest to instructors who are interested in web-based statistics courses.   For a number of years now, I have been using a modified version of Rcgi to create online, interactive tutorials for *Benchmarks* articles and introductory statistics courses.  Our *RSS Matters* column has a number of examples of using R to create interactive tutorials: robust statistics, kernel density estimation, false detection rate, robust correlation, bootstrap, too name a few.  If, as an instructor, you are concerned about the lack of a default drop-down menu system for R, some efforts have gone toward developing a GUI system for the R system.  The most notable of these efforts is John Fox's *R Commander* (see our past Benchmarks articles on this GUI - Article1; Article 2; Article 3 - these articles are somewhat dated).  See the main R Commander website for the most recent updates.  R Commander uses both a drop down menu system and a script window.  Similar to other statistical packages, R Commander pastes syntax into a syntax editor whenever the contents of a menu system window have been submitted.  This allows easy access to default syntax (via a GUI) , but allows the user to see the syntax, change the syntax, and save the syntax, for later submission.  This facilitates learning to program in the "S" language. A couple of examples of R Commander's interface is presented below:

```
R Commander                                                    _ □ ×

File  Edit  Data  Statistics  Graphs  Models  Distributions      Help

R       Data set:  │    Summaries           ►    Active data set         <No active model>      Submit
cmdr                     Contingency tables  ►    Numerical summaries...
                         Means               ►    Frequency distribution...
        attach(car             Proportions         ►    Table of statistics...
        summary(ca             Variances           ►    Correlation matrix...
                         Nonparametric tests ►
                         Dimensional analysis ►
                         Fit models          ►




> attach(cars)
> summary(cars)
      speed           dist
 Min.   : 4.0    Min.   :  2.00
 1st Qu.:12.0    1st Qu.: 26.00
 Median :15.0    Median : 36.00
 Mean   :15.4    Mean   : 42.98
 3rd Qu.:19.0    3rd Qu.: 56.00
 Max.   :25.0    Max.   :120.00
```

**RGL device 1 (active)**

**R Commander**

File  Edit  Data  Statistics  Graphs  Models  Distributions  Help

Data set: Prestige    Edit data set  View data set    Model: LinearModel.1    Submit

```
data(Prestige)
attach(Prestige)
showData(Prestige, placement='-20+200', font=.logFont, maxwidth=80, maxheight=30)
scatter3d(education, prestige, income, fit="linear", bg="white", grid=TRUE)
LinearModel.1 <- lm(prestige ~ education + income + type, data=Prestige)
summary(LinearModel.1)
cr.plots(LinearModel.1, ask=FALSE)
```

```
> LinearModel.1 <- lm(prestige ~ education + income + type, data=Prestige)

> summary(LinearModel.1)

Call:
lm(formula = prestige ~ education + income + type, data = Prestige)

Residuals:
     Min       1Q   Median       3Q      Max
-14.9529  -4.4486   0.1678   5.0566  18.6320

Coefficients:
              Estimate Std. Error t value Pr(>|t|)
(Intercept) -0.6229292  5.2275255  -0.119    0.905
education    3.6731661  0.6405016   5.735 1.21e-07 ***
income       0.0010132  0.0002209   4.586 1.40e-05 ***
type[T.prof] 6.0389707  3.8668551   1.562    0.122
type[T.wc]  -2.7372307  2.5139324  -1.089    0.279
---
```

**prestige**

**education**

**income**

6    8    10    12    14    16        5000  10000  15000

education                               income

**Component+Residual Plot**

Component+Residual(prestige)

15
10
5
0
-5
-15

bc    prof    wc

type

| | | | | | |
|---|---|---|---|---|---|
| AUTO.WORKERS | 8.43 | 5811 | 13.62 | 35.9 | 8513 | bc |
| AIRCRAFT.WORKERS | 8.78 | 6573 | 5.78 | 43.7 | 8515 | bc |
| ELECTRONIC.WORKERS | 8.76 | 3942 | 74.54 | 50.8 | 8534 | bc |
| RADIO.TV.REPAIRMEN | 10.29 | 5449 | 2.92 | 37.2 | 8537 | bc |
| SEWING.MACH.OPERATORS | 6.38 | 2847 | 90.67 | 28.2 | 8563 | bc |
| AUTO.REPAIRMEN | 8.10 | 5795 | 0.81 | 38.1 | 8581 | bc |
| AIRCRAFT.REPAIRMEN | 10.10 | 7716 | 0.78 | 50.3 | 8582 | bc |
| RAILWAY.SECTIONMEN | 6.67 | 4696 | 0.00 | 27.3 | 8715 | bc |
| ELECTRICAL.LINEMEN | 9.05 | 8316 | 1.34 | 40.9 | 8731 | bc |
| ELECTRICIANS | 9.93 | 7147 | 0.99 | 50.2 | 8733 | bc |
| CONSTRUCTION.FOREMEN | 8.24 | 8880 | 0.65 | 51.1 | 8780 | bc |
| CARPENTERS | 6.92 | 5299 | 0.56 | 38.9 | 8781 | bc |
| MASONS | 6.60 | 5959 | 0.52 | 36.2 | 8782 | bc |
| HOUSE.PAINTERS | 7.81 | 4549 | 2.46 | 29.9 | 8785 | bc |
| PLUMBERS | 8.33 | 6928 | 0.61 | 42.9 | 8791 | bc |
| CONSTRUCTION.LABOURERS | 7.52 | 3910 | 1.09 | 26.5 | 8798 | bc |
| PILOTS | 12.27 | 14032 | 0.58 | 66.1 | 9111 | prof |
| TRAIN.ENGINEERS | 8.49 | 8845 | 0.00 | 48.9 | 9131 | bc |
| BUS.DRIVERS | 7.58 | 5562 | 9.47 | 35.9 | 9171 | bc |
| TAXI.DRIVERS | 7.93 | 4224 | 3.59 | 25.1 | 9173 | bc |
| LONGSHOREMEN | 8.37 | 4753 | 0.00 | 26.1 | 9313 | bc |
| TYPESETTERS | 10.00 | 6462 | 13.58 | 42.2 | 9511 | bc |
| BOOKBINDERS | 8.55 | 3617 | 70.87 | 35.2 | 9517 | bc |

Like the S-Plus user community, the R user community is highly active as well -  R-HELP.  In addition, the R developers publish a high quality, edited newsletter that covers software development news, R package development and usage, as well as the usual tips and hints about using R.  The user community is also quite generous in providing free tutorials, books, and documents on R.  R's documentation is very high quality as well.  The basic R language is well documented with examples that can be executed as is, then modified as the user needs.  For example, fitting a regression, ANOVA, or ANCOVA model can be fit with the "lm" function.  The help function for *lm* gives the user an example that can be executed by pasting the text into the R console, then altered as needed.  The "foreign" package gives users the ability to import other file formats:  SAS, SPSS, Stata, Minitab, SYSTAT, to mention some of the more common formats available. R's base language

is mostly compatible with the S-Plus base language (greater than 95%?).  That is, most code written with the base R language will run unaltered in S-Plus and vice-versa.  It is not inconceivable that a student or researcher would use both R and S-Plus in conjunction with one another.

## Conclusion

In summary, R compares favorably with S-Plus (and is arguably superior in some ways).   In regards to some of the statistical-software choices enumerated at the beginning of this article:  1) Both S-Plus and R are readily available and inexpensive to the student and instructor; 2) Both S-Plus and R are readily available to instructor and student;  3) Both S-Plus and R are inexpensive alternatives to more popular statistical packages (e.g. SAS, SPSS, Stata);  4) Both S-Plus and R excel at providing a broad range of classical and modern statistical methodologies; 5) S-Plus utilizes an advanced menu system that is more accessible to students, however, R is gaining some ground on that issue;  6) Both S-Plus and R can accommodate a range of users from novice to advanced, that is, both cursory users and researchers;  7) Both S-Plus and R have high quality documentation and textbook usage;  8) The user communities of both S-Plus and R are highly active and accessible to both student and researcher;  9)  S-Plus and R are already favorites amongst theoretical and applied statisticians, and both of these systems are becoming increasingly important in the environmental, biological, medical, and social sciences, as evidenced by the increase in classes being taught utilizing these environments and the increase in statistical texts being published; **10) And most importantly - THE PRICE IS RIGHT!**

## Resources

Everitt, Brian S. (2005). An R and S-Plus Companion to Multivariate Analysis, Springer.

Faraway, Julian (2005). Linear Models with R, CRC Press.

Good, Phillip (2005).  Introduction to Statistics Through Resampling Methods R/S-Plus, Wiley.

Heiberger, R.M. & Holland, Burt (2004). Statistical Analysis and Data Display: An intermediate Course with Examples in S-Plus, R and SAS, Springer.

Verzani, John (2005).  Using R for Introductory Statistics, CRC Press.

Crawley, Michael (2002).  Statistical Computing: An Introduction to Data Analysis Using S-Plus, Springer.

Dalgaard, Peter (2002). Introductory Statistics with R, Springer.

Kraus, A & Olson, M. (2002).  The Basics of S-Plus, Third Edition, Springer.

Venables, W.N. & Ripley, B.D. (2002).  Modern Applied Statistics with S, Fourth Edition, Springer.

Pinheiro, J.C. & Bates, D.M. (2000).  Mixed-Effects Models in S-Plus, Springer.

Return to top

# Benchmarks Online

# WWW@UNT.EDU

## Accessing Variables in Safe Mode PHP

**By J.P. Williams, Central Web Support**

**A**s of February 1$^{st}$ we turned off register globals for web2.unt.edu. When register globals is turned off the PHP module of the apache server does not automatically make variables globally accessible to the script that you are either posting to, or using the get method and passing variables on the command-line ie: (http://web2.unt.edu/myscript.php?first=JP&last=Williams). The variables and values are stored in the server variable $_GET or $_POST depending on which method you are using. What that means for those of you that use PHP on Web2 is that when using POST or GET methods on forms using PHP as the scripting language you will have to extract the variables and values from the corresponding server variable. To extract the values for the variables first and last in the above example you will have to access them as $_GET['first'] and $_GET['last']; or if they are posted from a form to the script myscript.php the variable would be $_POST['first'] and $_POST['last']. The following code snippet will fix the problem so that you will be able to access the variables with just $first and $last.

```
$ArrayList = array("_GET", "_POST", "_COOKIE", "_SERVER");

foreach($ArrayList as $gblArray){

      $keys = array_keys($$gblArray);

      foreach($keys as $key){

          $$key = trim(${$gblArray}[$key]);

      }

}
```

What this little piece of code does is cycle through the server variables and extract the variable names and values. You can either insert this piece of code at the top of your script or create a php file that contains just this code and do an include in your script at the top before you try to access the value of the variables that you passed in. To include a file in PHP you would use the following syntax assuming that you have a file named globalinc.php that has the above code in it:

```
<?
 //
 Include code for accessing passed variables
```

```
require("./globalinc.php");

//
Start accessing or processing passed variables
print "Hello " . $first;
print ", how is the " . $last . " family?";

?>
```

[Return to top](#)

# Benchmarks Online

# Short Courses

**By Claudia Lynch**, *Benchmarks Online* Editor

The spring Short Courses have been announced and are under way. Surf over to the Short Courses page to see the classes offered and to get registration information. The following courses are still available this semester: Intermediate Stata (rescheduled to March 24), EViews, New Technologies for Survey Research, R & S-Plus Programming and Getting Started with DreamWeaver MIX.

## 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. Additionally, the Center for Continuing Education and Conference Management offers a variety of courses to both UNT and the general community, usually for a small fee.

### Mandatory Training on EEO and Sexual Harassment Law

State law requires that all new State employees attend training on equal employment opportunity and sexual harassment law. ***The law also mandates that employees receive supplemental training every two years.***

• This spring, all regular UNT Faculty and Staff are required to complete this supplemental training. E**mployees who were hired more recently than two years ago will still need to complete the refresher training. Human Resources does not track individual dates of completion, but asks that all employees complete the training every other spring.**

• Employees may attend one of the classroom training sessions listed below, or they may complete the training on-line.

• Managers are responsible for allowing employees work time to attend/complete this training and for ensuring that all faculty and staff who report to them have complied before April 29, 2005.

OPTION ONE: On-line training instructions

1. Go to [www.unt.edu/hr/training/](www.unt.edu/hr/training/)
2. Scroll down to Equal Employment Opportunity (EEO) Compliance Training
3. Click on Flash Presentation
4. Review applicable policies
5. Click on EEO Training Flash Presentation
6. Follow steps to complete program
7. Complete acknowledgement form and press submit

OPTION TWO: Register for Instructor-led training Wednesday, March 30 or Wednesday, April 13 To register: e-mail Melanie Betterson at [mbetterson@unt.edu](mailto:mbetterson@unt.edu)

Classes in English (all classes located in Marquis Hall, room 118):

9:00-10:00 a.m.
10:30-11:30 a.m.
1:30-2:30 p.m.
3:00-4:00 p.m.

Classes in Spanish (all classes located in Facilities, Custodial Services Training Room):

7:00-8:00 a.m.
3:00-4:00 p.m.

If you have questions, please call Human Resources at extension 4246.

## EIS Training

### Student Records Level I Training

The Registrar's Office will continue to offer EIS Student Records Level I Training throughout the Spring 2005 semester. Please review the training schedule below for available times and dates.

STUDENT RECORDS LEVEL I TRAINING: Level I Student Records Training is a hands-on training session that concentrates on basic view access in EIS. In addition to discussions on basic EIS academic structure the users will view student personal information, FERPA status, residency status, registration eligibility, study lists (schedules), grades, enrollment requests, programs/plans, service indicators (blocks) and print unofficial transcripts. Users will also learn how to search for classes and rooms, view class rosters and look up instructor schedules and view the my.unt.edu student portal.

TO REGISTER:  Email Sara Akers at [sara@acad.admin.unt.edu](mailto:sara@acad.admin.unt.edu) with your preferred training time. Please include your EUID, full email address and position at UNT. If you do not know your EUID please go to: [https://ams.unt.edu/whatsmyeuid.php](https://ams.unt.edu/whatsmyeuid.php)

Dates for Level I training in ESSC 152 lab:

- March 29, 2005: 8:30 a.m. -1:00 p.m.
- April 14, 2005: 1:30-3:00 p.m.
- May 4, 2005: 8:30-11:00 a.m.

**Electronic Procurement (ePro) Training**

As many of you are aware, the electronic procurement (ePro) module of EIS has been implemented. We have discontinued the use of paper requisition forms as of September 1, 2004.

ePro requires training for both the ePro Coordinator (individual performing entry/creation/tracking of the purchasing requisition) and the DeptID and/or the Project Holder (Approver). Computer security will not be established until individuals have completed the required training.

At this time, classes will be conducted at the Research Park, EIS Training Room. Directions given at time of registration. Please note: We reserve the right to cancel or change the training location for class attendance under 3.

Next classes are scheduled for Tuesday 03/22/05, note the times below:

Approvers:
2:00 PM to 3:00 PM,
3:00 PM to 4:00 PM,
4:00 PM to 5:00 PM

Coordinators
8:00 AM to 12:00 Noon

Please e-mail Tina Koenig, [tinak@unt.edu](mailto:tinak@unt.edu), indicating the time you plan to attend and for which class.

If you have not submitted an ePro DeptID Holder Information Form or an ePro Coordinators Information Form, please fill the form out on-line and attach it to your email requesting registration. This is necessary in order to establish security for your use of the system.

## GroupWise Training

Information about GroupWise training can be found at the GroupWise course site.

### Basic GroupWise Class 2

This class will be held  from 10-11:50 a.m. March 23rd and 24th in ESSC Room 152. The same material is offered on both days, please only plan to come to one class (not both). Seating and materials are available to the first 20 people who arrive, so please plan on getting there early.

If you missed the class, the handout for the GroupWise 6.5 JunkMail Class is online at
http://basicgroupwise.unt.edu/downloads/PDF/Dealing_with_SPAM.pdf.

If would like to have a Basic GroupWise seminar for your area, please contact

Jason Gutierrez, Network Computing Services, jasong@unt.edu.

## Center for Distributed Learning

The Center for Distributed Learning offers courses especially for Faculty Members. A list of topics and further information can be found at http://www.unt.edu/cdl/training_events/index.htm

The center also offers a "Brown Bag" series which meets for lunch the first Thursday of each month at Noon in Chilton 245. The purpose of this group is to bring faculty members together to share their experiences with distributed learning. One demonstration will be made at each meeting by a faculty member with experience in distributed learning. More information on these activities can be found at the Center for Distributed Learning Website.

## Technical Training

Technical Training for campus network managers is available, from time to time, through the Network Computing Services (NCS) division of the Computing and Information Technology Center. Check the NCS site to see if and when they are offering any training.

# UNT Mini-Courses

There are a variety of courses offered, for a fee, to UNT faculty, staff and students as well as the general public. For additional information surf over to http://www.pware.com/index.cfm?clientid=2694a

# Alternate Forms of Training

Many of the General Access Labs around campus have tutorials installed on their computers. The Training Web site has all sorts of information about alternate forms of training. Computer Based Training (CBT) is one of the alternatives offered.

For further information on CBT at UNT, see the article *New and Improved Microsoft Elearning Titles Available to Faculty and Staff* in the February issue of *Benchmarks Online* and *Computer-based Training Curriculum Update* in the January, 2005 issue.

Return to top

# Benchmarks Online

**Page One**

**Campus Computing News**

**Spring Break Hours**

**Eaglenet Wireless Network Update**

**Jaws 6.0 has arrived!**

**Today's Cartoon**

**RSS Matters**

**The Network Connection**

**Link of the Month**

**WWW@UNT.EDU**

**Short Courses**

**IRC News**

**Staff Activities**

**Subscribe to Benchmarks Online**

# Staff Activities

## Transitions

**No longer working in the Computing and Information Technology Center:**

- **Chris Cofer,** UNIX System Administrator.

# Awards, Recognition, Publications, etc.

### Outstanding Department

The Computing and Information Technology Center Help Desk was recognized as an Outstanding Department at the President's Staff Sack Lunch February 23. See the March 11 , 2005 *InHouse* [article](#) for more information and pictures.

### Harris Profiled in SIM News

The online newsletter for the Society for Information Management (SIM) featured Richard Harris, retiring Associate Vice President for Computing and Chief Technology Officer, in its January/February 2005 online newsletter:

[Profile in Education and Excellence: Harris Led University IT Program to Leadership Role in Providing Online Education](#)

[Return to top](#)

# Benchmarks online

**Page One**

**Campus Computing News**

**Spring Break Hours**

**Eaglenet Wireless Network Update**

**Jaws 6.0 has arrived!**

**Today's Cartoon**

**RSS Matters**

**The Network Connection**

**Link of the Month**

**WWW@UNT.EDU**

**Short Courses**

**IRC News**

**Staff Activities**

**Subscribe to Benchmarks Online**

# Don't Forget Our Monthly Columns!

**By Claudia Lynch,** *Benchmarks Online* **Editor**

**I**n addition to our feature articles, *Benchmarks Online* publishes monthly columns that are focused on specific aspects of computing here at UNT (and beyond, in some cases). Check out what is waiting for you this month:

- **RSS Matters** - "RSS Matters" is the monthly column written by the Research and Statistical Support Group in Academic Computing Services. Their articles focus on topics of a statistical and/or research methods nature. **This month, Dr. Rich Herrington discusses "Using Statistical Software in Classroom Instruction: S-Plus/R, An Accessible, Low Cost Alternative ."**

- **The Network Connection** - "The Network Connection" may well be the longest running column in computer publishing history. Certainly in University of North Texas computer publishing history.

  **This month, find out why Dr. Baczewski says "I See You."**

- **Link of the Month** - As it says on the top of the "Link of the Month" page, "each month we highlight an Internet, USENET Special Interest Group (SIG), or similar mailing list(s) or Website(s)." Lately we have been confining ourselves to featuring UNT specific sites. **This month's feature is the College of Music Events Calendar.**

- **WWW@UNT.EDU** - "WWW@UNT.EDU" is a monthly column written by the Central Web Support Group in Academic Computing Services. The topics usually focus, in some way, on World-Wide-Web-related issues. **This month, we hear from J.P. Williams for the first time. He writes about "Accessing Variables in Safe Mode PHP."**

- **Short Courses** - Every semester, Academic Computing Services (ACS) offers short courses on computer-related topics, many of them having to do with statistical research. This column keeps you up-to-date on what is being offered and when as well as other training opportunities. **Spring Short Courses continue. There is also an item about "Mandatory Training on EEO and Sexual Harassment Law." State law requires that all new State employees attend training on equal employment opportunity and sexual harassment law.** *The law also mandates that employees receive supplemental training every two years.*

- **IRC News** - As their Webpage says, "the IRC is an advisory and oversight body created to foster communication and cooperation between and among UNT information resources providers and users." We publish the

minutes of the IRC meetings each month, when they are available. **The February 15, 2005 minutes are published this month.**

- **Staff Activities** - This column focuses on new employees, people who are no longer employed at the Computing and Information Technology Center, awards and recognitions and other items of interest featured here.

Return to top