Gartner Research Presentation Friday, July 21
New Statistics Server is Online and Ready for Use
Don't forget our monthly Columns!
LaTeX Short Course Added for August Summer Hours

Today's Cartoon

UNIVERSITY OF NORTH TEXAS®

Questions, comments and corrections for this site: lynch@unt.edu
Site was last updated or revised: February 12, 2007
Gartner Research Presentation Friday, July 21

By Dan Glass, Computer Systems Manager, Unix Support Services

The Computing and Information Technology Center (CITC) would like to invite UNT faculty and staff to a presentation outlining the partnership between UNT and Gartner Research on Friday, July 21, 2006 at 1:30 p.m. in the Research Park Auditorium [B155]. Gartner is sending a representative to discuss the Gartner portal and its many benefits to IT decision makers, researchers, and professionals. The UNT Gartner Research portal gives the UNT community access to Gartner's rich collection of analysis and advice. You can learn more about Gartner Research by logging into the UNT Gartner portal. The following are some of the major components of Gartner Core Research.

- **Magic Quadrants**: Understand the relative positions of all vendors in a market.
- **Hype Cycles**: Understand the relative maturity of technologies in a given domain.
- **Vendor Ratings**: Pick the right vendor based on up-to-date Gartner ratings.
- **Cool Vendors**: Introducing the newest, most innovative and intriguing vendors.
- **The Gartner Fellows**: Gartner's best and brightest. Tap into top analysts at the leading edge.
- **Gartner Blogs**: Gartner Blogs include opinions, news, ideas, commentary and Internet links by Gartner analysts and fellows.
- **Gartner Voice**: Download podcasts by Gartner analysts as they share their perspectives on the challenges facing your organization.

We look forward to seeing you there.
New Statistics Server is Online and Ready for Use

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

The new statistics server, markov.acs.unt.edu, is now online and available. Network managers should begin using MARKOV instead of the old GAUSS server which will be officially retired December 2006 (if it even lasts that long!).

The context of the statistics volume on MARKOV is as follows:

MARKOV_STATAPPS.ACS.ACAD.UNT

All rights and permissions have been migrated to MARKOV so members of the statapps_users and statapps_install groups should not have any problems accessing the new server.

The following applications are currently housed on the Markov server:

- SPSS 12 for PC and SPSS 11.5 for Macintosh
- EViews 5.1 - must be metered via NAL - currently for 30 users
- LISREL 8.5 - must be metered via NAL - currently for 15 users
- Matlab 14.3
- N6 - must be metered via NAL - currently for 5 users
- SAS 9.1.3 - non-individual installations must be metered via NAL
- Stata 6.2 - must be metered via NAL - currently for 40 users
- R 2.0.11
New Statistics Server is Online and Ready for Use

Please note that older versions of these applications are also on MARKOV as appropriate.

Additional Notes on Statistics Applications

Some notes about SPSS 14 and Splus 7 (from Patrick McLeod, February 2006):

As of version 13, SPSS for Windows implemented Macrovision's FlexLM license manager. This is a change from our previous enterprise license structure (versions 12 and before) where we had a single license code that would cover all manner of installations from network to individual workstations. FlexLM implements a node-locked model that requires a license server to manage network installations of the products for which it manages licenses.

We do not currently have a license server in place for SPSS and S-PLUS management (S-PLUS also moved to this same management model in version 7). As of right now, RSS is supporting SPSS 14 for installation on individual users' machines as long as those users meet the requirements of our license with SPSS: Full time faculty or staff (FTE 100%) may install SPSS 14 on their office machines and on any non-UNT computers they possess. Anyone less than 100% FTE may not install SPSS 14 on their office machines or any non-UNT computers. The currently supported version of SPSS for network use is still version 12.0.2.

For more information on installing SPSS 14, please refer to this RSS Matters article in Benchmarks:

http://www.unt.edu/benchmarks/archives/2006/february06/rss.htm
You can find minimum system requirements and a step-by-step series of screenshots walking an individual through installing SPSS 14.

Please note that I will be setting up the FlexLM license manager the week of July 24 and will alert the UNT community when the work is completed. In the meantime, follow McLeod's instructions above.

As always - any questions you have about obtaining the latest versions of statistics software supported by the RSS of the University and their licensing requirements, as well as any requests for new software or software upgrades should be directed to Patrick McLeod at mcleod@cc.admin.unt.edu. Any questions you have about server access to the applications and installation issues and procedures should be directed to me at ehinkle@unt.edu.

Please note that information published in Benchmarks Online is likely to degrade over time, especially links to various Websites. To make sure you have the most current information on a specific topic, it may be best to search the UNT Website - http://www.unt.edu. You can also search Benchmarks Online - http://www.unt.edu/benchmarks/archives/back.htm as well as consult the UNT Helpdesk - http://www.unt.edu/helpdesk/. Questions and comments should be directed to benchmarks@unt.edu.
LaTeX Short Course Added for August

By Claudia Lynch, Benchmarks Online Editor

An "Introduction to LaTeX" class has been added to the ACS Short Course lineup this summer. It will be held Wednesday, August 9 from 1-4 p.m. in the SLIS Computer Classroom (ISB 203). The course is described as follows:

This is an introductory course that will expose the student to the basics of the LaTeX document processing language. *Emphasis will be placed on producing a sample typeset chapter based on the UNT Graduate School style file. This course is a starting point for those who want to use LaTeX for theses, dissertations, and for preparing research papers for classes or conferences.* No prior programming knowledge is required.

LaTeX is a language! Be prepared to think in programming terms but do not be intimidated; it is very rewarding. Bring an empty 3.5" diskette so you can save your in-class work. A bootable Linux CD distribution called Knoppix will be provided as the teaching platform.

Please note that information published in *Benchmarks Online* is likely to degrade over time, especially links to various Websites. To make sure you have the most current information on a specific topic, it may be best to search the UNT Website - [http://www.unt.edu](http://www.unt.edu) - as well as consult the UNT Helpdesk - [http://www.unt.edu/helpdesk/](http://www.unt.edu/helpdesk/). Questions and comments should be directed to benchmarks@unt.edu.
Summer Hours

By Claudia Lynch, Benchmarks Online Editor

The spring semester ended Friday, May 12. SUM, 3WK1, 8WK1 classes* began on Monday, May 15. Following are the hours for Computing and Information Technology Center-managed facilities this summer. The Helpdesk plans, at this point, to be open their normal hours through the remainder of the summer.

- The ACS General Access/Adaptive Lab (ISB 110):
  
  May 14 - August 11

  Sundays: 1 p.m. - 9:45 p.m.
  Monday - Thursdays: 8 a.m. - 9:45 p.m.
  Fridays: 8 a.m. - 8:45 p.m.
  Saturdays: 10 a.m. - 8:45 p.m.

Hours for Other Campus Facilities**

General Access Labs

- WILLIS:
  
  Open 24/7.

- SLIS:
  
  Monday - Thursday: 10 a.m. - 10 p.m.
  Friday - Saturday: 8 a.m. - 6 p.m.
  Sunday: Noon - 10 p.m.

- MUSIC:
  
  Monday - Thursday: 8 a.m. - 9 p.m.
  Friday: 8 a.m. - 5 p.m.
  Saturday: 10 a.m. - 5 p.m.
  Sunday: 1 p.m. - 8 p.m.

- PACS Computing Center (formerly SCS & SMHM):
  
  Monday - Thursday: 8 a.m. - 10 p.m.
  Friday - Saturday: 8 a.m. - 5 p.m.
  Sunday: 12 p.m. - 10 p.m.
Special Closings:

Semester Break: August 12 - 27

- **SOVA**:
  
  Sunday: 1 p.m. - 10 p.m.  
  Monday - Thursday: 10 a.m. - 10 p.m.  
  Friday, Saturday: 10 a.m. - 5 p.m.

Special Closings:

Semester Break: August 12 - 27

- **COE**:
  
  Monday, May 15 - Thursday, August 10: Regular hours.

  Friday, August 11: **Close** at 4 p.m.

Special Closings:

Semester Break: August 12 - 27

- **COBA**:
  
  Monday, May 15 - Thursday, August 10: Regular hours.

  **Special Closings**:

  August 11: Closing early by 4 p.m. for break

  Semester Break: August 12 - 25

- **CAS**:

  **GAB 330**:

  Closed for Renovations, Please Use GAB 550 Instead

  **GAB 550**:

  Monday, June 5 (5 Week 1 - 5W1) - Friday, August 11 (5 Week 2 - 5W2):

  Monday - Thursday: 8 a.m. - 5 p.m.

  Friday: 8 a.m. - 5 p.m.

  Saturday: **Closed**

  Sunday: **Closed**

  **Terrill 220**:

  Monday, June 5 (5 Week 1 - 5W1) - Friday, August 11 (5 Week 2 - 5W2):

  Monday - Thursday: 8 a.m. - 8 p.m.
Summer Hours

Friday: 8 a.m. - 5 p.m.
Saturday: Closed
Sunday: Closed

Special Closings:

Semester Break: August 12 - 27

Wooten 120:

Monday, June 5 (5 Week 1 - 5W1) - Friday, August 11 (5 Week 2 - 5W2):

Monday - Thursday: 8 a.m. - 10 p.m.
Friday: 8 a.m. - 5 p.m.
Saturday: Closed
Sunday: Closed

Special Closings:

Semester Break: August 12 - 27

- UNT Dallas Campus - 155A

Monday, May 15 - Friday, August 11:

Monday - Thursday: 8 a.m. - 10 p.m.
Friday: 8 a.m. - 6 p.m.
Saturday: 9 a.m. - 5 p.m.
Sunday: Closed

- Engineering General Access Lab (englab@unt.edu, Research Park, B129, 891-6733)

Monday, May 15 - Friday, August 11:

Monday - Friday: 9 a.m. - 5 p.m.
Saturday: Closed
Sunday: Closed

Fridays may become closed days or shorter hours, depending on classes/needs.

* Terminology and schedules for classes offered in the summer has changed in recent years:

- SUMmer=Entire Summer Session, 3WK1 = 3-week 1, 8WK1=8-week 1, 5WK1= 5-week 1, 10WK1=10-week, 5WK2= 5-week 2. All summer sessions end on August 11 this year.

- Summer Session 3W1: formerly May Minimester
- Summer Session 5W1: formerly Summer I
- Summer Session 5W2: formerly Summer II.
** Hours for additional areas and services are discussed in this recent *InHouse* article, "Operating hours to change for many campus services during summer".
From "Today's Cartoon by Randy Glasbergen", posted with special permission. For many more cartoons, please visit www.glasbergen.com.
By Dr. Philip Baczewski, Director of Academic Computing and User Services

It Won't Work in my Browser

It's a refrain I find myself saying frequently these days. "It won't work in my browser." Of course, I suffer the burden of being a Macintosh user who likes Safari as the default browser. Safari loads quickly and renders HTML web pages with ease. But, there's the occasional media clip, applet, or web application that just fails to work, leaving an apparent pothole in the information superhighway. Yet I doggedly cling to Safari and its ability to present text and graphics in a fast and efficient manner. Why? Because all of that other stuff wasn't supposed to be part of the World Wide Web in the first place.

To most of those who have been introduced to the Internet after 1995, the World Wide Web is synonymous to the Internet, but they are not at the same thing at all. The origins of WWW were much more humble. The idea was to combine text and graphics on a virtual page, but to include the concept of hypertext as well. The idea had been around for decades, but as happens with technology, sometimes a lot of small developments are needed for the big ones to actually work. (Leonardo da Vinci sketched designs for a helicopter-like device and a parachute, but it took centuries to develop the technology to bring those ideas to fruition.) Hypertext, in Internet form, allowed links to other online pages. This provided a way to link together information from diverse sources in a way that allowed the reader to determine how they wished to browse the information. Rather than being a book whose pages only turned consecutively and one at a time, it was now a book where pages could be randomly navigated.

So what happened in 1995 that changed the WWW world?

What happened? NSFNet returned to being a research-only network. Netscape stock went public. Commercial dial-up online services began providing Internet access. And, the Internet was unleashed on the capitalist economy. Commercialization of the Internet changed the nature of the World Wide Web. The Web, as it's known now, was not a product, but rather a set of standards and protocols implemented in client and server software. Those protocols set certain frameworks for how information was to be organized, but not for how it was to be ultimately displayed. For example, this article has a title and some text. How these elements are displayed is determined by the browser (the client software). Generally, a title is in a larger font with some emphasis applied (usually bolded text). But there is no specification to how large or what font. Those specifications are configurable in most browsers. Yet, with commercialization came a quest for control. My observation of marketing leads me to believe that it requires not only control of what you see and when you see it, but how you see it as well.

Commercialization of the Internet gravitated to the application which offered the most...
malleable information presentation interface and a certain level of adaptability as well. The early Internet days saw many different and sometimes competing protocols with special client and server implementations to accomplish the task for which they were designed. Many of these still survive, e-mail protocols being the most prominent example. But it's hard to accomplish commerce if you have to keep switching programs during commercial transactions. It would be like going to one store to place an order, another to pay, and yet another to pick up the goods. The development of the idea of the Common Gateway Interface (CGI) meant that interactions could be generated within the Web arena by creating web pages programmatically based upon input received from prior pages. Any time you type any information into a web page field or select a radio button you are interacting with a CGI or one of its descendents.

And then came Microsoft ...

World Wide Web development could have proceeded in the same manner as previously. New ideas would be proposed and implemented, mostly in the public domain and freely available for implementation by anyone with the technical skills and inclination to do so. The best ideas would get generally adopted, and the less useful ones would eventually fall into disuse, like a gopher slinking back into its hole. This anarchic, but effective, development process had served the Internet well, yielding the strongest surviving ideas not culled by software evolution. But, something else happened in 1995: Microsoft released Internet Explorer.

It's quite inviting, if not easy, to blame most of the ills of the Internet or the world on Microsoft. However, during the late 1990s and early 2000s, Microsoft was doing what any determined capitalist does. They were using whatever means possible to ensure that their software was used for Internet access and to sell more products than their competitors. This strategy worked for IBM for years, until their development of the IBM PC opened the door to technology that ultimately lead to the demise of their most profitable product (I love the Irony Age.) Microsoft was quite successful in their quest, with Internet Explorer quickly becoming the most used browser in the early 2000s. But, as a web search on the words "Microsoft" and "Antitrust" will quickly confirm, judges in the U.S. and Europe have been convinced that Microsoft may have broken a few laws to get to where the are today. But, this still resulted in Netscape, the hottest stock in 1995, turning into "what's Netscape?" by 2005.

The bigger impact of Microsoft's quest for world Internet domination has been a rift in the development process for Internet software technology. By achieving an over 90 percent market share for browser software, and by sticking to a strategy where they control software and ideas and you can't compete, a certain amount of stagnation has set into the Internet software arena. Not all of this is due to Internet Explorer. New software has developed, but the necessity to mediate everything through HTML and deliver in a browser has inhibited the possibility of the better idea that's bound to come along and absorb and replace the World Wide Web. The evolutionary path has been stifled (a sure path to extinction.)

So why won't it work in my browser?

The reason that stuff doesn't work in my browser is that open protocols and unrestricted development environments have been replaced by proprietary software implementations and software patents. The Web's main reason for being is no longer for open information, but for commercial applications. And the biggest cause is the confusion of market share with global standard. The best way to lose my interest is to tell me that your web page works best (or only) in Internet Explorer or any other specific browser implementation. Plain old HTML always works in my browser.
Link of the Month

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

Information Security

The Information Security folks have another new page on a very hot topic, "Identity theft/Fraud."
Read all about it here: http://www.unt.edu/security/idtheft.pdf

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June 20, 2006

VOTING MEMBERS PRESENT: MAURICE LEATHERBURY (for PHILIP TURNER), JUDITH ADKISON, PATRICK PLUSCHT, TIM CHRISTIAN, LOU ANN BRADLEY, JIM CURRY, JONEEL HARRIS, MARGARET AMBUEHL, ELIZABETH HINKLE-TURNER, CHRISTY CRUTSINGER, UWE ROSSBACH, RAMU MUTHIAH, SCOTT JOYCE (for CHUCK FULLER), BEN BIGBY (for JON NELSON) NON-VOTING MEMBERS PRESENT: JAMES STRAWN, KEN SEDGLEY (for JOE ADAMO), JOHN HOOPER, SUE ELLEN RICHEY (Recording Secretary) MEMBERS ABSENT: SARA WILSON MCKAY, DON GROSE, BRUCE HUNTER, RAY BANKS, ROBERT NIMOCKS, JOHN PRICE, TOBYE RAE NELSON, GUILLERMO OYARCE, ABRAHAM JOHN, DOUG MAINS, BOBBY CARTER, PHILIP BACZEWSKI

The minutes of the May 16, 2006 meeting of the IRC were approved as distributed.

Distributed Computing Support Management Team**

Elizabeth Hinkle-Turner reported for the Distributed Computing Support Management Team that they met on June 2 when Bill Niederstat from Dell made a presentation about the newly available line of Dell printers and Dell’s upcoming release of their open manager program to monitor printers and their usage. Judy Hunter at the Willis Library General Access Lab is getting a Dell 5310 to test. On June 19 Jeff Stuart and Craig Robichaux from Microsoft demonstrated Microsoft Vista and Office 2007.

Student Computing Planning Group

Reporting for the Student Computing Planning Group, Elizabeth stated that she has been busy giving new student orientation presentations and distributing a lot of materials to the over 6,000 freshmen that are coming in. There have been three full orientations; the first transfer student orientation is June 23rd, and there will be a fourth one the next week. She has been showing the security films that CITC’s David Wood made and those have been very popular.

IR Steering Committee

Maurice announced that there is no IR Steering Committee anymore, so there will be no agenda item for a report from them on future IRC agendas. The Web Publishing Policy has been submitted for approval through the regular channels for UNT policies.
Patrick Pluscht reported for the Learning Enhancement Planning Group that a couple of initiatives (iTunes and Voice Tools) have been delayed due to agreements undergoing legal review by the University attorney. CDL and DLS will be working on a plan to evaluate other learning management systems besides WebCT Vista, not necessarily with an eye towards changing products any time soon, but just to find out what UNT’s options are for the future. Also, in response to a question by Cengiz Capan at a recent IRC meeting regarding the status of a decision to adopt a clicker technology, they have decided, after meeting with a number of faculty and finding a variety of needs, that a needs analysis should be conducted before any decision could be made to choose one particular clicker technology. Uwe Rosbach asked if there were plans to offer help to faculty to take full advantage of iTunes once it is in place. Patrick responded that there definitely will be, and that they are even now working with faculty to help them to plan ahead for the use of iTunes in the specific ways that would be advantageous for them.

Communications Planning Group

Lou Ann Bradley reported for the Communications Planning Group that at their June meeting they received information about the firewall, and about what wiring projects are going on. They discussed the new Communications Assistance for Law Enforcement Act, and were updated on the MLR and Internet2. They also took a tour of the CITC facilities at the Research Park.

EIS Planning Group

John Hooper reported for the EIS Planning Group that they are working on a plan for the upgrade of the EIS Learning Solutions and Campus Solutions, which includes HR/Payroll, Student Administration, and Contributor Relations, and at this time they are aiming at November of 2007 for this upgrade. They have selected Don Butler as the project manager for the upgrade, to coordinate and oversee the whole project. Another project they are working on is the Kronos timekeeping system that a few departments are now using in a pilot. This time-clock system feeds in data to the EIS Time & Labor system. The departments who are using it in the pilot have provided positive feedback. Joneel Harris added that there is an RFP in process to obtain professional help for the implementation of Constituent Relationship Management (CRM) software modules that the UNT System already owns.

Standards & Policy Planning Group

Tim Christian reported for the Standards & Policy Planning Group that he had made the requested revisions in the Web Publishing Policy and forwarded on the final document for approval and inclusion in the UNT Policy Manual.

WebCT Vista

Patrick Pluscht reported that as of June 1, all students are out of the campus edition and in Vista, and all courses going forward will be in WebCT Vista. Faculty who are not teaching a course in Summer or Fall have until the end of Fall semester to migrate their courses for offering in the spring. The Vista product has been stable and reliable over this past migration. They visited with the WebCT representative regarding how things are going as well as the merger of WebCT and Blackboard and what it may mean for UNT. WebCT intends to continue to innovate the independent products of WebCT and Blackboard and schedule revisions that will be available to users. They believe they are at least 4 or 5 years away from a fused product. It is expected that at the July WebCT conference more details
Maurice Leatherbury added that CITC has received five additional servers to support Vista which they plan to have installed by the Fall term.

**Desktop Computing Issues**

Tim Christian mentioned that the Provost called a meeting with Jim Curry, Maurice Leatherbury, Bruce Pollock, Cengiz Capan, Philip Baczewski, Donna Asher, Joneel Harris, Scott Jackson, Abraham John and himself to discuss desktop computing on campus. He asked them to develop a plan or vision of where the UNT campus is going with that. The group submitted their report last Wednesday and basically recommended that the administration embrace desktop computing as critical to the function of the university and should consider delegating the responsibility of planning to either the IRC or some other entity. They recommended looking at a standardized means of evaluating the cost of desktop computing on campus, and look at how desktop machines are being purchased and budgeted for in departments. Maurice Leatherbury mentioned that he believes that desktop machines can be purchased more economically from outside sources, so a group of people evaluated both Dell and H-P machines and decided that Administrative Affairs, Finance & Business Affairs, and CITC will purchase Dell machines. There is no directive to anyone else to do the same.

**NLR and Internet2**

Maurice Leatherbury added that negotiations between the NLR and Internet2 for the merger of those two groups have broken off. The statewide LEARN organization is currently looking at its options and the consensus is that they don’t want to get off Internet2. Internet2 is, however, very expensive; it has a huge infrastructure, a huge staff which many feel is not justified, plus LEARN has a commitment to NLR at least for next few years. LEARN does not see the value of maintaining two national high-speed networks.

* For a list of IRC Regular and Ex-officio Members click here.

**DCSMT Minutes can be found here.**

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**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. From time to time there are planned exceptions to this schedule. The schedule can be found here. All meetings of the IRC, its program groups, and other committees, are open to all faculty, staff, and students.
Open Source Technology in the Classroom

Part I: Creating Web Based Documents that Give Access to the R Statistical Environment: Examples Using the "Through the Web" HTML Editor - Kupu Editor

By Dr Rich Herrington, ACS Research and Statistical Support Services Consultant

In last month's (June 2006) RSS column, we discussed using the open-source - client-side - WYSIWYG - HTML based Kupu Editor to create/edit HTML web pages (Kupu is installed on a Zope web server). Other RSS articles have discussed using the GNU licensed R and the proprietary licensed S-Plus (both implementations of the S language) in the classroom setting as a low cost alternative to SPSS and SAS. More relevant to our purposes here, past RSS articles have demonstrated how R and web server technology can be used in conjunction to create web based tutorials that support statistical software instruction in classrooms that are Internet enabled (e.g. Kernel Density Estimation, Robust Statistics, Two Interfaces to R).

A number of web server interfaces exist for R; currently RSS supports a few of these interfaces which are based on CGI web programming practices (see Rinterface.htm on the RSS homepage - e.g. Regi). I have used these R web interfaces in many of my R based RSS articles and in courses that I teach, but I have never discussed the more specific details of the HTML forms that were used. I think a detailed discussion, concerning how this was achieved, would be useful to interested instructors who wish to use R in their internet equipped classrooms or distance education based courses that utilize virtual classrooms. My goal in this article is to demonstrate how instructors can create web based documents for their internet based classroom instruction, so that the R statistical environment is available through a web browser. Moreover, newer web based HTML editors, based on Ajax programming constructs (i.e. Kupu), can facilitate the utilization of server side based entry-
From the perspective of the instructor, all that is needed are appropriate lines of HTML (and/or JavaScript) to define the forms, since RSS maintains the R web servers. RSS currently maintains several web servers that support both teaching and research functions, one of which is to give instructors and researchers remote access to R for purposes of creating web based tutorials, demonstrations, and classroom instruction (for examples of these web based R interfaces, see: rss.acs.unt.edu (1, 2, 3) and kryton.cc.unt.edu (1, 2, 3). Minimally, all the instructor would need to do is create the necessary HTML forms that can access R on the web servers that RSS currently maintains (i.e. rss.acs.unt.edu & kryton.cc.unt.edu). These HTML forms can then be embedded or blended into course content that is web based (e.g. these HTML forms could be hosted on UNT Vista). It is also worth noting that RSS also maintains web2survey.unt.edu, which provides the capability for online survey/evaluation collection and reporting - the important point here being that web2survey.unt.edu can also be used for instructional support for new and emerging web technologies (e.g. training courses for on-line survey creation, survey methodology, web-programming, etc.). Integrating these new technologies together in a e-learning environment looks promising. Note that web2survey does not provide a web interface to R itself, but HTML forms maintained on this server (or any other server) can make HTTP calls to the rss and kryton web servers to access R.

There are some obvious conveniences (at least in educational settings) in having a public-domain, open-source statistical language, that can be accessed from an HTML web form (this list is not exhaustive and is not in any particular order): a) this allows remote script processing and user interactivity through nothing more complicated than a simple web browser; b) the need to install statistical software on the client's local storage media can be reduced (e.g. how often do complications arise for students who are attempting to install SAS on their home PCs? RSS's experience is that this is an all too frequent occurrence); c) as statistical software updates and bug fixes become rapidly available (via a decentralized group of open-source developers), these updates can then be rapidly applied for all concerned, due to the centralized nature of the server hosting the statistical software (see The Cathedral and the Bazaar for a more in depth discussion of these points); d) due to the non-proprietary nature of the software, there are cost-savings attributed to lowered statistical software expenses for organizations to whom every dollar counts (e.g. public/state institutions: libraries, colleges, universities, non-profit organizations, small businesses, etc.); e) even though there are many web based demos, tutorials, and data manipulation routines for statistics/research instruction (e.g. Java applets): usually these applets are created for a particular purpose, and are not part of a larger environment for statistical analysis and/or data manipulation. In contrast, R provides functionality for classroom demonstrations/tutorials while giving students access to a larger, extensible, integrated environment for data analysis (see Teaching-with-R.pdf).

More specifically, what does this larger, extensible, integrated statistical environment look like? And, just as important, why should we be motivated to use R in our classrooms?

A Brief Introduction to the R Statistical Environment

The educational computing society known as the Association for Computing Machinery (ACM) presented their prestigious Software System Award to John Chambers, a researcher with Bell Labs, the research and development arm of Lucent Technologies. The presentation of the ACM Software System Award to John Chambers marks the first time in the 17-year history of this award, that it has been awarded for data-analysis software and the first time it has been given to a statistician. John Chambers is the creator of the S System for statistical computing, which the ACM said, "forever altered how people analyze, visualize and manipulate data" (see John Chambers Gets ACM 1998 Software System Award for Creating 'S System', for the complete story). The S System has been continually evolving since 1976, and is currently available in commercial product S-Plus, and the GNU licensed R. The implementation of S that we will concern ourselves with is the GNU version of S - R. RSS has devoted numerous columns to the maintenance and utilization of the R statistical
environment in an educational setting. Considerable documentation exists for R, most of which is available under some form of public-domain licensing. In addition to base R documentation, extensive documentation exists for supporting user contributed packages. The cross-platform R project is increasingly evolving into a system that is closely integrated with the underlying operating system environments on which R is maintained. This places R somewhere on a continuum between a full-fledged language for operating system scripting, and a powerful environment/language for statistical and graphical data analysis that rivals legacy statistical systems such as SAS or SPSS. Certainly, R presents a wonderful opportunity for educators, researchers and IT professionals, who wish to bring the cutting-edge work that is being done at the interface between statistical science and computing technology, to bear on their respective activities. In the remainder of this current column, we will look at demonstrating, in some small way, web/internet programming practices that can make R available to educational and research audiences - all at little or no cost to the organizations utilizing these technologies.

CGI Based Approaches:

Creating an HTML Form with Kupu Editor on the Web2survey Zope Server

This section assumes that readers have read the RSS article Editing HTML with the KupuEditor on the Web2Survey Zope Server. However, any valid HTML editor that produces HTML source code can be used (e.g. NVU). Nevertheless, here our purposes are twofold: a) a further demonstration of the Kupu Editor; and b) a demonstration of the HTML/JavaScript necessary to use CGI scripts on R's R web servers. In this section, we will be picking up at the point where the folder kupu and the Zope Page Template (ZPT) kupu_edit have been created (see June 2006 Benchmarks Online). Now, we want to create a DTML method web page so that we can insert the necessary HTML markup tags that will contain our R script (i.e. an HTML form which contains R scripts). To do this, we start by using the object-drop-down-list on the Zope management interface (ZMI). We see the following when we select the list drop down menu:

From the drop down form window, we want to create a DTML method object and fill in the HTML form information: set the form field Id to a value of tutorial_1 (remember - no spaces or special characters other than underscore) and set the form field Title a string value of: My R Script (spaces are allowed here). When we are finished applying these changes, we see the following in our web browser:
Now, we can begin editing the web page with Kupu editor by accessing the URL:

```
https://web2survey.unt.edu/users/richt/tutorial_1/kupu_edit
```

We see the following in our web browser:

Richard Herrington My R script

This is the tutorial_1 Document in the Richard Herrington (Kupu) Folder.

Click the Edit button to enter into the HTML source view; this is essentially the HTML markup language (without the formatting tags reflecting the WYSIWYG view). After editing the source HTML, click the button to take the browser window back to the Preview or WYSIWYG mode. Changes can be saved to the server by clicking the Save Document to Server button:
I have set up four different R web template forms on web2survey.unt.edu to reflect four different possible uses of the R CGI scripts. Any of these scripts can be modified to reflect: different button labels; different initial R script lines; and which R web server that is accessed. An overview of these template HTML forms is presented below with a link to a text file that is useful for cutting and pasting into your HTML editor (e.g. Kupu, NVU, Microsoft FrontPage):

**HTML template A:**
[https://web2survey.unt.edu/Utilities/Rweb_template1.txt](https://web2survey.unt.edu/Utilities/Rweb_template1.txt)  (note: this is for cut and paste purposes)

This form uses a CGI script based on Jeff Bainfield's Rweb code base. The HTML form presented below is a small part of a larger system of Bainfield's HTML and JavaScript pages that make up Rweb ([http://rss.acs.unt.edu/Rweb/](http://rss.acs.unt.edu/Rweb/)). These more extensive Rweb pages can be used to automate (with HTML forms) to give a more guided view of the statistical analysis of data. The form template presented below has a default R script placed in the HTML form (which can be modified as needed). This R script produces a histogram of 10 random normal deviates. This form does NOT allow data upload; does NOT use JavaScript; and necessitates understanding the R language. The HTTP address can be changed to utilize other R servers (e.g. the kryton.cc.unt.edu server - make sure to use the same subdirectory names in the URL path).

```html
<body>
<form action="http://rss.acs.unt.edu/cgi-bin/Rweb/Rweb.cgi" enctype="multipart/form-data" method="post">
<p><textarea name="Rcode" rows="20" cols="45">
hist(rnorm(10))
</textarea> </p>
<p><input type="submit" value="Submit">
<input type="reset" value="Erase"></p>
</form>
</body>
```

**HTML template B:**
[https://web2survey.unt.edu/Utilities/Rweb_template2.txt](https://web2survey.unt.edu/Utilities/Rweb_template2.txt)  (note: this is for cut and paste purposes)

This form template is similar to HTML template A except that it utilizes JavaScript and allows a tab-delimited data file to be uploaded to the server. For details on how this works, see: [http://www.unt.edu/rss/Rinterface.htm#Upload](http://www.unt.edu/rss/Rinterface.htm#Upload)
The CGI script that is used in this R web interface is based on M.J. Ray's Regi code base. The HTML form presented allows the script contents to be edited submitted/resubmitted. Additionally, an HTML table is presented with links to help for packages and functions, and tutorials on using R for graphical and statistical analysis of data. R script listings and text output appear in the browser window along with the R script in the HTML form window. The script HTML form window has two buttons: one button creates a postscript view of any graphics that have been generated (a postscript viewer must be installed the client's local operating system - e.g. ghostview); the other button creates a .GIF view of graphics (no viewer is necessary) that is displayed in a separate browser window (for a full view of this web interface for R, see: http://rss.acs.unt.edu/cgi-bin/Rprog)
Now, we'll use the Kupu Editor on Zope (web2survey.unt.edu) to create a form that uses a CGI script hosted on rss.acs.unt.edu (or alternatively, kryton.cc.unt.edu). One can use other HTML editors for creating these HTML forms rather than using the Kupu Editor.

We'll work with **form template A**: Copy and paste the text from form A (https://web2survey.unt.edu/Utilities/Rweb_template1.txt) into HTML source view of the Kupu editor:

```html
<form action="http://kryton.cc.unt.edu/cgi-bin/R/Rprog" method="post">
<input name="INPUT" value="hist(rnorm(10))" type="hidden">
<p><input value="R Script" type="submit"></p>
</form>
```

Click the **Edit button** to access the Preview/WYSIWYG mode. We want to add the **H1** level heading title: "This is my example R Script". To do this, we: 1) type the text above the HTML form; 2) highlight the text with the mouse; 3) modify the highlighted font by choosing a H1 level for the title - do this by accessing the drop down list on the menu bar (choose **Heading 1**):
Finally, 4) Click the **Save Document To Server** button to save the current document changes to the server. We see the following in the web browser:
This is my example R Script

\[\text{hist(rnorm(10))}\]

Now, click the Edit button again to enter the HTML source view mode once again:

\[
\text{<h1>This is my example R Script</h1>}
\text{<form action="http://rss.acs.unt.edu/cgi-bin/Rweb/Rweb.cgi"}
\text{enctype="multipart/form-data" method="post">}
\text{<p><textarea name="Rcode" rows="20" cols="45">hist(rnorm(10))</textarea>}</p>
\text{<p><input value="Submit" type="submit"></p>}
\text{<input value="Erase" type="reset"></p>}
\text{</form>}

Notice that HTML code has been added to the source view - this reflects the addition of the \texttt{<h1>} heading tags. Using this approach, we can insert POST references to CGI scripts on remote servers. The POST methods in the HTML form allow immediate server processing of the R script, with the subsequent output being returned to the web browser for display. Now, let's access the form in a non-editing mode. To do this, back space in the browser URL field until you have the following URL:
Press the "Enter" key or click the "Go" icon on the web browser to load the web page named tutorial_1
We see the following in the web browser:

This is my example R Script

```r
hist(rnorm(10))
```

Next, edit the contents of the form to reflect the R script presented below. Save the document changes to the server and click the Submit button at the bottom of the HTML form to submit the R script to the server for processing (clicking the Erase button will reset the contents of the form window without submitting the form):
This is my example R Script

```r
x <- rnorm(10)
x
par(mfrow=c(2,2))
hist(x)
plot(density(x))
qqplot(x)
```

Upon submission, we see the following in our web browser:
Results from Rweb

You are using Rweb 1.03 on the server at rss.acs.unt.edu

R : Copyright 2005, The R Foundation for Statistical Com
Version 2.3.1 (2006-06-01)
ISBN 3-900051-07-0

R is free software and comes with ABSOLUTELY NO WARRANTY
You are welcome to redistribute it under certain conditi
Type 'license()' or 'licence()' for distribution details

R is a collaborative project with many contributors.
Type 'contributors()' for more information and
'citation()' on how to cite R or R packages in publicati

Type 'demo()' for some demos, 'help()' for on-line help,
'help.start()' for an HTML browser interface to help.
Type 'q()' to quit R.

Rweb:> postscript(file = "~/tmp/Rout.13731.ps")
Rweb:>
Rweb:> x<-rnorm(10)
Rweb:> x
[1] 0.006955375 -1.255901650 -0.146972690 -0.389436260
[6] 0.716074271 0.645183168 0.890775501 -0.206327364
Rweb:> par(mfrow=c(2,2))
Rweb:> hist(x)
Rweb:> plot(density(x))

Explanation of the R script: The data object "x" (in this case a vector) is assigned 10 pseudo-random numbers from a Gaussian distribution with location zero and scale one: "x<-rnorm(10)". The next line displays the contents of the vector "x". Next, the "par(mfrow=c(2,2))" line sets up a grid of four plot regions (two by two - however only 2 out of 4 are used). After the plot regions are set up, the following commands produce a plot region with a histogram and a plot region with a nonparametric kernel density estimate plot. Graphical output appear further down in the Rweb output page, after the R script listing and the R script output are displayed:

Images
Where we are going from here

We close this article, by giving some indication of the topics that we'll be exploring in the coming months as part of the multipart series: *Open Source Technologies in the Classroom*.

**R packages:**

R supports a number of packages that facilitate CGI and HTML scripting (both server-side and client-side). For example: [CGIwithR](#), [R2HTML](#), [xtable](#), [XML](#), [Rpad](#), [RMySQL](#), [Rdbi](#), [httpRequest](#), [RApache](#), [RPython](#), [RSPerl](#), etc. These are only a small fraction of the libraries that can support web/internet programming with R. We hope to sample these packages and provide our readers with usable examples of how R can be integrated into internet equipped classrooms and be useful for applications in research:

**Zope/Plone:**

Zope 3: [Zope 3 applications](#)
Content Management Systems: [Plone](#); [Silva](#); [Kupu Editor](#)
E-learning Environment: [DLCMS](#)
Collaboration Tools: [CoreBLOG](#); [ZiddleyWiki](#) (for example, see [RSS-Wiki](#) - this site is in development)

**Web/Internet Programming:**

Programming: [Python](#); [Rpy](#)
Remote scripting: [xmlHttpRequest](#); [JSON on Zope](#); [SOAP on Zope](#); [Ajax for Zope](#) - also see [ZopePrototype](#); [TurboGears](#)

This is not an exhaustive list by any means, but these are the "core" technologies that I would like to explore in the coming month's - If you have any interesting applications of these in an educational or research settings and care collaborate/share, feel free to email me at richherr@cc.admin.unt.edu.

Also, if you are interested in applying the technologies to survey research, register with [RSS-Surveys](#). From all of us here at [RSS](#) (Rich, Patrick, Mike, Jon) - good luck in your technology explorations and may the power of open source be with you!

**Related Websites**

- [Kupu Editor](#)
- [Kupu Documentation](#)
- [Lenya Kupu Documentation](#)
- [O'Reilly Article: Rich Web Text Editing with Kupu](#)
- [Kupu Zope Project](#)
- [Zope Org](#)
- [UCLA R Portal](#)

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Questions and comments should be directed to benchmarks@unt.edu

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Adobe ColdFusion and Apache: Limitations with Global Jrun Settings

By Shannon Eric Peevey, UNT Central Web Support

Background:

During the last month, we found an issue with setting the Adobe ColdFusion mod_jrun20 config container in the server config, or global, section of Apache2.

Many people have probably run into the problem with using webDAV publishing in conjunction with a dynamic content engine, (ie PHP, ColdFusion, etc). If you attempt to edit the file with a web publishing tool, (ie Dreamweaver), a GET is sent to the web server, which in turn sends the requested file through the PHP or ColdFusion engine, finally, returning the rendered HTML to the end-user. To deal with this problem, we have always run a vhost on port 8080 for publishing, with “ForceType plain/text” set.

In most instances, this would tell the web server to bypass the dynamic language engine and send the source code of the remote file to the web publishing tool instead.

Not today…

The Story:

We have just moved some ColdFusion developers over to the new servers, and they were having problems with their code being rendered whenever they were moving files back to their desktop. This was odd, as none of our PHP developers were seeing this same issue.

After trying to fix this issue in an elegant manner, (continuing to load the mod_jrun20 config at the server config level), we decided to duct tape it by placing the config in a new directory off of the apache root:

/home/apache/ColdFusion/cfm.conf

And, including this file in each of the port 80 and port 443 vhost config files…

Now, why would this be happening…? My obvious assumption is that the hook to mod_jrun20 is called before mod_mime, and, therefore, runs the file through the ColdFusion server before hitting “ForceType mime/text”… Is this a feature, or a bug?

Examples:

mod_jrun20 config:
<p># JRun Settings

<IfModule mod_jrun20.c>

JRunConfig Verbose false
JRunConfig Apialloc false
JRunConfig Ssl false
JRunConfig Ignoresuffixmap false
JRunConfig Serverstore /opt/jrun4/lib/wsconfig/1/jrunserver.store
JRunConfig Bootstrap 192.168.1.21:51020

#JRunConfig Errorurl <optionally redirect to this URL on errors>

AddHandler jrun-handler .cfm .cfml .cfc .jsp .jws
AddType application/x-httpd-cfm .cfm .cfml .cfc

</IfModule>

Links:

- “Loading Adobe ColdFusion globally in Apache and webDAV”
  http://speeves.unt.edu/newindex/?p=67

- “Apache Module mod_mime” http://httpd.apache.org/docs/2.0/mod/mod_mime.html

- “JRun 4: Manually Configuring External Web Server Connectors”
  http://www.adobe.com/cfusion/knowledgebase/index.cfm?id=tn_18724
Short Courses

By Claudia Lynch, Benchmarks Online Editor

Surf over to the Short Courses page for a list of courses that are being offered this summer. Classes still available are: New Technologies for Survey Research I, and New Technologies for Survey Research II plus a new one, Introduction to \LaTeX. This course should be of particular interest to graduate students as noted in the course description:

*Emphasis will be placed on producing a sample typeset chapter based on the UNT Graduate School style file. This course is a starting point for those who want to use \LaTeX for theses, dissertations, and for preparing research papers for classes or conferences.*

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.

EIS Training

Questions or comments relating to EIS training should be sent to the EISTRN GroupWise account. Upcoming EIS training events may be found at:

- Learning to Use EIS:  
  http://www.unt.edu/eis/WebHelp/EIS_Training/Training_Start.htm
- EIS Timekeeper Training Schedule:  
  http://www.unt.edu/hr/eis/timetrain.htm
- EIS ePro Training Calendar:  
  http://www.unt.edu/pps/trainingcalendar.htm
Ongoing training is available on WebCT at: http://web2.unt.edu/eis/Training/signup_form.php

GroupWise Training

Information about GroupWise training can be found at the GroupWise Support site. A list of GroupWise 6.5 "Tutorial Topics" can be found here: http://ncs.unt.edu/gw/howto/index.htm A GroupWise 6.5 Training CD-ROM is also available. See "Installing and Using GroupWise 6.5 CD-ROM Training from Thomson NETg" in the June issue of Benchmarks Online for more information.

GroupWise 6.5 Seminars

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 CBT website. Note also, two articles in the November issue of Benchmarks Online, "Using the Adobe
Education Website - Revised November 2005" and "SkillPort and Thomson NETg Offer Easy-to-use Browser Compatibility Testing for Online Learning."

The recently published article "Project Management Courses Added to the SkillPort CBT Website" may also be of interest.

The article Tracking Progress in New KnowledgeNet Courses in the January issue of Benchmarks Online gives instructions on how to set up tracking for each course. The article SkillSoft Site Re-organized With New Course Offerings in the April issue of Benchmarks Online should also be noted. This information is also available on the CBT website.

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Staff Activities

Transitions

New Employees:


No longer working in the Computing and Information Technology Center:

- **Chris Nelson**, Data Communications Assistant (part-time).

Awards, Recognition, Publications, etc.

**Dr. Rich Herrington**, ACS Research and Statistical Support Services Consultant, co-authored an article with J. Kyle Roberts, Baylor College of Medicine, that appeared in the *Journal of Applied Measurement*, 2005;6(3):255-72. The title of the article is "Demonstration of Software Programs for Estimating Multilevel Measurement Model Parameters."

**Born on the 4th of July . . .**

- **Krysta Kaye**, Communications Analyst, Data Communications, and her husband Craig Berry (School of Visual Arts), on the birth of their son Kylen Warner Berry on 07/04/06.

Soaring Eagles

- **Lynne Sinclair**, Programmer/ Analyst, EIS Infrastructure Services, was recognized as a Soaring Eagle in the May/June issue of the *Human Resources Newsletter*. She received her award at the May 10 President's Staff Lunch.

- The following people will be recognized at the President's Staff Lunch on October 24. Their names appeared in the July *Human Resources Newsletter*:
  - **Don Butler**, Application Team Manager, UNT Student/Contributor Services.
- **Philip Buhler**, Programmer Analyst, Student Records Data Systems.
- **Mike Murdock**, Programmer/Analyst, Oracle Database Administration.
- **Blair Copeland**, Communication Systems Manager, Data Communications.
- **Mike Maner**, Manager Data Communications.
- **Rory Rivoire**, Communication Systems Manager, Data Communications.
- **Scott Windham**, Communications Analyst, Data Communications.
By Claudia Lynch, Benchmarks Online Editor

Don't Forget Our Monthly Columns!

In 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 begins a new series called "Open Source Technology in the Classroom." There are also some announcements about RSS Blogs and RSS Surveys. Check it out!

- **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, Dr. Baczewski laments that "It Won't Work in my Browser." Click on the Network Connection link to find out what would cause him to say this.

- **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. The "Link of the Month" is brought to you again by the Information Security folks. This month read all about "Identity theft/Fraud."

- **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 Shannon Peevey fills you in on "Adobe ColdFusion and Apache: Limitations with Global Jrun Settings."

- **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. **Summer Short Courses are currently in progress and a new one has just been added. "Introduction to LaTeX" should be of particular interest to graduate students. Read all about it!**

- **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 minutes published this month are for June 20, 2006.**

- **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.

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