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Data Communications supports:

- 100+ buildings on campus with
- 824 data switches that support
- 30,264 data ports

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Questions, comments and corrections for this site: lynch@unt.edu
Site was last updated or revised : September 18, 2007

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Campus Computing News

Microsoft Exchange/Outlook Migration Delayed

By [Maurice Leatherbury, Ph.D.](#)

Associate Vice President for Computing and Chief Technology Officer

UNT had planned to migrate its faculty/staff e-mail system from Novell GroupWise to Microsoft's Exchange e-mail server and Outlook client starting in the summer of 2007 and finishing early in October. However, that migration has been indefinitely postponed because of technical difficulties that the Computing and Information Technology Center has experienced in implementing Microsoft's products.

A rather aggressive and optimistic schedule had called for the Exchange and Active Directory (Microsoft's required directory service) servers to be operational by late July 2007. Although Active Directory is essentially ready for production at this time (August 20, 2007) a series of hardware and software tuning issues has prevented the CITC from completing the Exchange server rollout. Issues such as ascertaining just what performance metrics the new servers had to meet, what settings of the storage interface should be applied, and similar highly detailed yet critical issues caused each stage of the setup of Exchange to fall behind the original schedule.

Because the CITC has already announced two delays in the rollout of Exchange, we don't want to further inconvenience UNT's e-mail user community by giving another completion date of the Exchange rollout that it may not meet because of continuing technical difficulties. While the CITC is confident that it can and will get Exchange running and that the Exchange/Outlook e-mail system will be superior to GroupWise, the CITC has decided to get the new e-mail system operational and fully tested before announcing a new implementation date.

Faculty and staff will continue to use GroupWise, which remains fully operational, until the Exchange service is rolled-out.

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Bulk Mail News

By [Dr. Philip Baczewski](#), Director of Academic Computing and User Services



The Bulk Mail system has been modified to enhance communication with UNT students and to make minor improvements to the Bulk Mail submission interface. There are now two possible selections under the "Admin" Bulk Mail menu. If you are an administrator with access to Bulk Mail, you will see the Admin Menu. The two Administrative menu selections are:

- **Send an announcement or event message** - information regarding events or opportunities available to UNT students, including concerts, activities, speakers, and presentations.
- **Send an official UNT message** - limited to official communication regarding students' academic tenure at the University. Such messages might include notices regarding a student's enrollment status or financial aid package, notices about university closings, or messages of importance from the President.

Administrators should use the "announcement or event message" selection for most communications with groups of students and reserve the "official UNT message" option for message categories as described above.

Faculty are able to send messages to all students enrolled in the courses assigned to them in EIS. Messages sent via the "Professor" selection feature of Bulk Mail are sent by selecting:

- **Send a message by course enrollment:** messages intended for students in a particular course that are related to the students' activities for that course.

The new menu selection page is show below:



Bulk Mail System Main Menu

Admin Menu

New [Send an announcement or event message by classification \(e.g. Major, Class, Zip Code\)](#)

[Send an official UNT message by classification \(e.g. Major, Class, Zip Code\)](#)

Professor's Menu

[Send a message by course enrollment](#)

(If no menu items appear above, you do not currently have access to Bulk Mail - Otherwise, select the appropriate link above)

[Exit the Bulkmail System](#)

Questions or comments: baczewski@unt.edu

These changes were made to allow students to better receive and manage their communications from UNT. The UNT student Bulk Mail system now allows for three categories of message to be sent. Each of these three categories is delivered into a separate permanent mail folder in students' EagleMail accounts. Each message subject identifies the type of message. These subject identifiers are as follows:

- **UNT Official Message**
- **UNT Announcement**
- **UNT Course Info**

Students may optionally forward their EagleMail to a personal e-mail account they've established with a commercial service provider. The subject identifiers will allow students using commercial e-mail to know a message is from UNT and be able to tell what type of communication is being sent.

Bulk Mail users are urged to review the [help](#) information provided via the Bulk Mail [login page](#) as a way to familiarize themselves with some of the new features of Bulk Mail.

Extensive testing was done after the changes were made to Bulk Mail, but if you experience any problems with Bulk Mail, please report them to the CITC Helpdesk (helpdesk@unt.edu).

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Finding Your Way Around: Computing Resources at UNT

By [Claudia Lynch](#), *Benchmarks Online* Editor

Welcome, or welcome back, to UNT! If you're new, or if you've just been away for awhile, it is our hope that this article will serve as a handy starting point to get you acquainted (or re-acquainted) with the resources that are available to you here at the University. Students, faculty and/or staff members should all benefit from the information that follows.

When all else fails ...

If you have a computing question and/or problem and can't think of who to contact or where to look for a solution, just remember this: **Contact the Helpdesk**

The Computing and Information Technology Center (CITC) Helpdesk is located in room 119 of the Information Sciences Building ([ISB](#)), directly beside the Science and Technology Library. Their hours are listed on the Helpdesk website: <http://www.unt.edu/helpdesk>. Besides stopping by or searching for answers on the website, you can call the Helpdesk at 940-565-2324 or send mail to helpdesk@unt.edu.

Speaking of the Helpdesk, *Benchmarks Online*, publishes a column each month called "Helpdesk FYI." This month's article is [Activating Your EUID account](#) Following is a list of articles published this year. Perhaps one of these topics is something you've been wondering about:

- [GroupWise Spam Control Features](#)
- [Keyboard Shortcuts](#)
- [Publishing to People.unt.edu](#)
- [Accessing GroupWise off-campus](#)
- [EUID Passwords](#)
- [Remedy Web](#)
- [Egemail Filters: Using whitelists and blacklists](#)

New students are probably familiar with the *Tour of Student Computing Services at UNT*. There are lots of topics touched on that are of interest to non-students

also. Check out the website: <http://www.unt.edu/helpdesk/studenttour/>

General Access Labs

The UNT General Access Computer Lab System is a collection of 14 computer labs spread across the UNT Denton campus, with one lab in Dallas. They have been set up to provide computing to the University community. The [GAL website](#) states:

The labs are intended to meet the general academic computing needs of UNT students. These labs are supported and maintained primarily through a portion of the Technology Use Fee.

Students with a valid UNT photo ID card may use any General Access Lab except where noted.

A list of labs and their locations and operating hours is available from the [GAL website](#). The lab in ISB 110 is an *Adaptive Lab*. As the [website](#) states:

The University of North Texas Academic Computing Services General Access Lab is located in the Science and Technology Library in ISB 110. The mission of this lab is to provide general services to the UNT community with an emphasis on the special features that Academic Computing Services has to offer including helpdesk support and research assistance. Additionally the ACS lab is the designated adaptive lab on campus providing state-of-the-art adaptive equipment for those who need it. For more information about adaptive services on the UNT campus visit the Office of Disability Accommodation at <http://www.unt.edu/oda>.

Computer Based Training

All current faculty, staff, and students at UNT are eligible to use the computer-based training (CBT) courses purchased and administered by the CITC. The CBT homepage is: <http://www.unt.edu/cbt/> Following are some *Benchmarks Online* articles that have been published in the recent past on the topic:

- [SkillPort Training Site Update](#)
- [Free and Legal: Copyright Advice and Training Online](#)

This issue of *Benchmarks Online* has the article [Office 2007 Training Available at the SkillPort CBT Website](#).

Online Learning/UNTeCampus

For students, a good starting place is found on the [student tour](#). Faculty will want to visit the Center for Distributed Learning [website](#) and/or the Center itself. Some recent *Benchmarks Online* articles of interest to faculty are:

- [Getting WebCT Vista Help](#)
- [Web Conferencing Tool on the Horizon: Teach & Meet Live Online](#)

- [From Word to Web in a Snap](#)

Windows Vista/Office 2007

Everyone's wondering about Windows Vista and Office 2007 these days. The following *Benchmarks Online* articles have addressed various aspects of this topic:

- [Whither Windows? Windows Vista and Office 2007 - What is a poor student to do?](#)
- [Windows Vista Learning Resources](#)
- [Office 2007 Available to UNT Employees at a Reduced Price](#)
- [Get Revved Up for Office and Outlook 2007!](#)
- [Statistical Software and Windows Vista](#)
- [SPSS' Hotfix for Windows Vista](#)

As mentioned above, this issue of *Benchmarks Online* has the article [Office 2007 Training Available at the SkillPort CBT Website](#).

Other Items of Interest

- **Gartner Research** -- UNT students, faculty, and staff have access to Gartner Research at: <https://gartner.unt.edu/> CITC also sponsors direct access to Gartner researchers. For more information see [Getting Direct Access to Gartner Researchers](#).
- **Statistical and Research Support Services** -- "The mission of the Research and Statistical Support (RSS) group at the University of North Texas (UNT) is to facilitate access to current research tools and statistical methodologies and to promote these methods to the research, instructional, and administrative communities at UNT; to encourage a collaborative research environment for researchers through the development and use of innovative computing technologies; to provide training and consultation in the appropriate use of statistical methodologies and computer software; and to facilitate access to data collection and data management technologies." [From the [Research and Statistical Support website](#)]. The RSS Group publishes a monthly column in *Benchmarks Online*. This month's column is: [Equivalence Tests](#).
- **High-Performance Computing Initiative** - "Academic Computing Services supports multiple clusters of 32 and 64-bit processor systems running Linux for compute-intensive scientific research. Cluster computing provides dedicated systems for concurrent processing of jobs in a batch environment."

Information Security -- "The UNT Information Security Team's purpose is to provide support to University academic and administrative departments for the protection of UNT computing information resources from misuse, abuse, unauthorized access or unauthorized disclosure. Computing information resources include all equipment, facilities, software, data and procedures which are designed, built, operated and maintained to collect, record, process, store, retrieve, display and transmit information. The mission of the Information Security Team is to educate and assist administrators and users of the UNT computing community in assessing, implementing, and maintaining their information security needs." [From the [Information Security Website](#)]. *InHouse*, UNT's faculty/staff online newsletter, recently ran a series of articles on information security. You can review them here: [InHouse Series on Information Security](#).

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Office 2007 Training Available at the SkillPort CBT Website

By [Dr. Elizabeth Hinkle-Turner](#), Student Computing Services Manager

Extensive Office 2007 training has been made available by SkillSoft and has been loaded onto the UNT SkillPort website. The following is a listing of the new training:

- New Features for End Users in Microsoft Office 2007
- Advanced Formatting in Excel 2007
- Advanced Formatting in Word 2007
- Getting Started with Excel 2007
- Getting Started with Outlook 2007
- Getting Started with PowerPoint 2007
- Getting Started with Word 2007
- Advanced Data Manipulation Features in Word 2007
- Microsoft Office Excel, PowerPoint, and Outlook 2007
- Configuring Rules, Alerts, and Junk E-mail Settings in Outlook 2007
- Advanced Document Navigation and Document Reviews in Word 2007
- Manipulating and Formatting Data and Worksheets
- Formatting and Managing E-mail in Outlook 2007
- Working with Text and Paragraphs in Word 2007
- Advanced Document Features in Word 2007
- Microsoft Access 2007 and Microsoft Publisher 2007
- Working with SharePoint, Calendars, and Forms in Outlook 2007
- Using Tables, Charts, and Graphics in Word 2007
- Reviewing and Printing in Excel 2007
- Using the Calendar in Outlook 2007
- Structuring, Editing, Saving, and Opening Documents in Word 2007
- Sharing and Collaboration in Microsoft Office Enterprise 2007
- Excel 2007 Formulas and Functions
- Using Contacts, Tasks, Notes, and Customizing the Interface in Outlook 2007
- Printing, Help, and Automated Formatting in Word 2007
- Excel 2007 Charts, Pictures, Themes, and Styles
- Completing Searches, Printing Items, and Working with RSS Feeds in Outlook 2007
- Working with Documents in Word 2007

Below is a screen shot of where the training is located on the SkillPort website.

Search for **Category:** All **Language:** English (All)

Information

[My Assignment](#) >> [UNT Curricula](#) >> [Office 2007 Training](#) 

- [New Features for End Users in Microsoft Office 2007](#) **Path to Office 2007 CBT on Skillport**
- [Advanced Formatting in Excel 2007](#)
- [Advanced Formatting in Word 2007](#)
- [Getting Started with Excel 2007](#)
- [Getting Started with Outlook 2007](#)
- [Getting Started with PowerPoint 2007](#)
- [Getting Started with Word 2007](#)
- [Advanced Data Manipulation Features in Word 2007](#)
- [Microsoft Office Excel, PowerPoint, and Outlook 2007](#)
- [Configuring Rules, Alerts, and Junk E-mail Settings in Outlook 2007](#)
- [Advanced Document Navigation and Document Reviews in Word 2007](#)
- [Manipulating and Formatting Data and Worksheets](#)
- [Formatting and Managing E-mail in Outlook 2007](#)
- [Working with Text and Paragraphs in Word 2007](#)
- [Advanced Document Features in Word 2007](#)
- [Microsoft Access 2007 and Microsoft Publisher 2007](#)
- [Working with SharePoint, Calendars, and Forms in Outlook 2007](#)
- [Using Tables, Charts, and Graphics in Word 2007](#)
- [Reviewing and Printing in Excel 2007](#)
- [Using the Calendar in Outlook 2007](#)
- [Structuring, Editing, Saving, and Opening Documents in Word 2007](#)
- [Sharing and Collaboration in Microsoft Office Enterprise 2007](#)
- [Excel 2007 Formulas and Functions](#)
- [Using Contacts, Tasks, Notes, and Customizing the Interface in Outlook 2007](#)
- [Printing, Help, and Automated Formatting in Word 2007](#)
- [Excel 2007 Charts, Pictures, Themes, and Styles](#)
- [Completing Searches, Printing Items, and Working with RSS Feeds in Outlook 2007](#)
- [Working with Documents in Word 2007](#)

For more information about the SkillPort website and CBT see the [article](#) "SkillPort Training Site Update" in last month's *Benchmarks Online*.

Remember - if you have any questions about computer-based-training at UNT or need to get a CBT account, contact ehinkle@unt.edu.

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Break Hours

By [Claudia Lynch](#), *Benchmarks Online* Editor

The fall semester begins August 27, but there are a few days left before the labs, etc. begin their "normal hours." Following are the hours for Computing and Information Technology Center-managed facilities during the remaining break period. The [Helpdesk](#) plans, at this point, to be open their normal hours.

Following are the hours for Computing and Information Technology Center-managed facilities during the break. See [Summer hours now in effect for many campus services](#) for information about altered hours for other campus facilities.

The ACS General Access/Adaptive Lab ([ISB 110](#)):

Monday - Friday, August 20 - 24: 9:00 a.m. - 5:30 p.m.
 Saturday, August 25: 10:00 a.m. - 5:30 p.m.
 Sunday, August 26: 1:00 p.m. - 10:00 p.m.
 Monday, August 27: Resume Normal Hours

Hours for Other Campus Facilities

General Access Labs

[WILLIS](#):

Monday, August 20: 8 a.m.-8 p.m. *Special registration Hours from 6 p.m.-8 p.m.
 Tuesday, August 21-Thursday August 23: 8 a.m. -5:50 p.m.
 Friday, August 24- Saturday, August 25: **Closed**
 Sunday, August 26: Open at 1 p.m. and return to 24 Hour schedule

[SLIS](#):

Monday, August 20 - Friday, August 24: Noon - 8 p.m.
 Saturday, August 25: **Closed**
 Sunday, August 26: **Closed**
 Monday, August 27: Open regular Fall Semester hours

[MUSIC](#):

Friday, August 10 - Sunday, August 26: **Closed**
Monday, August 27: Open 7:30 a.m., resume normal hours

[PACS Computing Center](#) (formerly SCS & SMHM):

Closed

SOVA:

Closed

[COE:](#)

Closed

[COBA:](#)

Friday, August 10 - Friday, August 24: **Closed**
Saturday, August 25: Open 8 a.m., resume normal hours

[CAS:](#)

GAB 330: Closed

GAB 550: Closed

Terrill Hall 220: Closed

Wooten Hall 120: Closed

UNT [Dallas Campus](#) - 155A

Monday, August 20 -Friday, August 24: 7 a.m. - 6 p.m.
Saturday, August 25: 8 a.m. - 5 p.m.
Sunday, August 26: **Closed**
Monday, August 27: Resume normal hours

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

Friday, August 10 - Sunday, August 26: **Closed**
Monday, August 27: Resume normal hours

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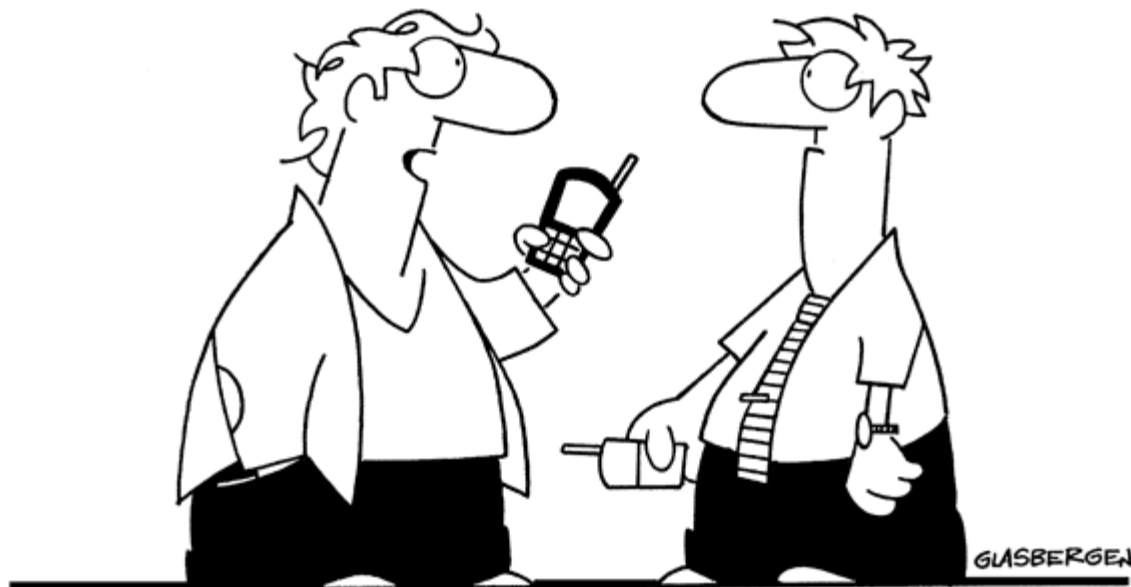
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TODAY'S CARTOON

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"I'm still discovering cool stuff I can do with my smartphone. Today I sent a photo to my mom, bought some music, trimmed my sideburns, blended a smoothie, and neutered my cat!"

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

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Don't Forget Our Monthly Columns!

By [Claudia Lynch](#), *Benchmarks Online* Editor

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:

- [By the Numbers](#) - Not really a column, but a new feature, giving you a glimpse behind the scenes of the volumes of data, spam, etc. processed, managed, and otherwise handled here at UNT.
- [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. Mike Clark discusses "Equivalence Tests."**
- [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 takes you back in time to computing events that were happening around the time the new crop of freshman were born. Click on the Network Connection link above to take "A Look Back . . . or is it Forward?"

- [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 link is "Howdy Week." Click on the link above and check it out.**
- [Helpdesk FYI](#) - A new monthly feature from the CITC Helpdesk. Each month they will tackle a topic that has been of particular interest to callers/visitors to the Helpdesk. **This month Richard Sanzone tells you all about "Activating Your EUID Account." Read all about it!**
- [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.

Short courses are over for the summer. If you have a group that needs a specific class before the fall semester begins, it may be possible to arrange a special class. Click on the link

above for more information.

- [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 for June 19, 2007 and July 17, 2007 are available 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.

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By [Dr. Philip Baczewski](#), Director of Academic Computing and User Services

A Look Back . . . or is it Forward?

Just in time for the new Fall 2007 semester, I decided to take a look at what this column was discussing around the time that the new crop of freshman were born. That takes us back 18 years to the July/August 1989 issue of *Benchmarks*. This is so long ago that I had to go to my bookshelf and pull down an old binder to flip through the pages of the then paper-based publication. Inside the cover page, emblazoned with a symbol of high technology -- the 5 1/4 inch floppy disk -- and a bit of #2 pencil point for good measure, I found my quarry on page 7, sandwiched between an article on AppleSEED (Apple Computer Inc.'s Society to Exchange Exciting Discoveries - long since passed from existence) and "Connecting your Microcomputer to the Mainframe System at UNT via Telephone."

This column originated as *The BITNET Connection*, a reference to the predominant college and university wide-area network of the day. It would be two more years before the name change to *The Network Connection*, during which time the ArpaNet was decommissioned in favor of the NFSNet, which represented the very beginnings of the Internet as we know it today. Even so, some form of the Internet has existed for the entire life of today's incoming college freshmen.

The topic of 18 years ago was BITNET RELAY. That's the progenitor of Internet Relay Chat (IRC) as well as SMS cell phone messaging. That's right -- eighteen years ago, a different generation was talking in incomprehensible shorthand code and prattling inanely on line. Of course, back then you needed an IBM mainframe or equivalent and a terminal connection (we had dial up) to do so. Still, the only operational difference between those mainframe days and these cell phone days is that the computer now fits in your hand, and we had a much better keyboard to work with back then. OMG! Texting is not new -- it's just a transferred paradigm with an inferior input device.

Waiting for something truly new on the Internet is a bit like waiting for the [flying car](#). Here we are, years later, and the paradigms remain the same. The highways are bigger, but more congested. The vehicles are faster, but not much more functional. There's more traffic and it sometimes is difficult to reach your destination. Where's that flying car that will take us soaring above the mundane commutes and congestion. Oh yeah, and we still don't have the ubiquitous [video phone](#).

So where's the new paradigm? Is it Facebook or MySpace? I view those as personal web pages for the technically inept (sorry, I'm feeling cynical today.) Social networking is not new, we just used to do it on LISTSERV. YouTube? [America's Funniest Home Videos](#) on steroids. Blogs? [Usenet](#) without the fun and freedom of alt. What about [Second Life](#)? I know there were [MUDs](#) long ago, and [DOOM](#), and [WoW](#), and [Halo](#), more recently, but most of

those virtual worlds are to support games whose primary goals involve splatters of red all over your screen.

Second Life is intriguing because it is a virtual world for the sake of a virtual world. It's a world with a geography, physics, and economy unique to itself. Inhabitants are encouraged to create things (structures, items, services, etc.) within the virtual world and plug themselves into the virtual economy. They claim almost 9 million residents, with tens of thousands on line at a time, and they're all thin, muscular or shapely, and uniquely dressed, just like real life, or more likely, like real life as you wish it might be.

Second Life is an alternate place to be (in the most philosophical sense.) It now has political campaign [headquarters](#), university [classes](#), and even a symphony [orchestra](#). Second Life for XBOX or Wii would add an interesting dimension, since there are [reportedly](#) over 20 million of those Internet-ready game boxes in households world wide. Those devices are built to create virtual worlds (Wii tennis is almost as good as the real thing.) Those devices also extend technology to a level usable by an 8-year old (not that I'd recommend Second Life for anyone much under 18.)

The fascination with Second Life or whatever might develop from or follow it, is the idea that if you have a parallel virtual life, you can do things that you can't do in the physical world. This includes flying, bodily, across the landscape to a remote site and interacting with others within a simulated environment without leaving your house (imagine going to the staff meeting in your bathrobe and letting your avatar wear the tie.)

The idea of virtual meeting places or interactive environments on the Internet is not new. However, attempts along those lines have been single purpose. Second Life offers the environment and invites you to utilize it for whatever purpose you can create. That's an interesting idea, and perhaps something new on the Internet. I'll let you know in 18 years.

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Link of the Month

Each month we highlight an online mailing list or website. Frequently the link is associated with UNT.

Howdy Week

Sunday August 26th - Saturday September 1st

The beginning of the fall semester means, among many other things, Howdy Week! Check out all the events, activities, and back-to-school deals available during this period: <http://www.dos.unt.edu/sao/howdyweek.cfm>

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Helpdesk FYI

By [Richard Sanzone](#), CITC Helpdesk Manager

Activating Your EUID account

EUID (Enterprise User Identification) accounts are used to login to most UNT systems, including the MyUNT online registration system. Every student and employee has an EUID account.

To activate your EUID account:

- Go to the Account Management System website at <http://ams.unt.edu>
- Click the "Activate Account" link on the left side of the page.
- Enter the requested biographical information to confirm your identity.
- If you are a student you will be prompted for a PIN (Personal Identification Number). This is a one-time use number that was mailed to you by the Admissions office. If you do not know your PIN, please contact the UNT Helpdesk at 940-565-2324. The Helpdesk will need to speak to the student to retrieve the account PIN.
- You will be prompted to create a Secret Question and Answer. This question and answer combination is saved in your EUID account for additional security. The correct answer will need to be provided to reset the EUID password so please remember the answer you create. Also, do not create a question and answer combination that someone can easily guess.
- You will then be prompted to create your password. The system will not accept passwords that do not meet the strength requirements (see <http://www.unt.edu/security/password.html> for details). If your password is not accepted because it is weak, you will be given the option to run a password wizard that will create a list of modified passwords that you can choose from. Please remember that this password will expire after 120 days, at which point you will need to create a new password.

The activation process is complete! Please wait 10 minutes for your activation to be fully processed.

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IRC News



Minutes provided by Sue Ellen Richey,
Recording Secretary*

June 19, 2007

VOTING MEMBERS PRESENT: PHILIP TURNER, CHAIR, PATRICK PLUSCHT, TIM CHRISTIAN, ELIZABETH HINKLE-TURNER, STEVEN MCKAY (for JOHN HOOPER), LOU ANN BRADLEY, PAUL HONS (for JUDITH ADKISON), BRUCE HUNTER, BILL JONES (for ROBERT NIMOCKS), SCOTT WINDHAM, RAMU MUTHIAH, MARGARET AMBUEHL, CHRISTY CRUTSINGER, CENGIZ CAPAN, GUILLERMO OYARCE, GINNY ANDERSON, BEN BIGBY (for JON NELSON) **NON-VOTING MEMBERS PRESENT:** MAURICE LEATHERBURY, CHARLES ANDREWS, PHILIP BACZEWSKI, SUE ELLEN RICHEY (Recording Secretary) **MEMBERS ABSENT:** DON GROSE, UWE ROSSBACH, SARA WILSON MCKAY, JOHN PRICE, STEVEN KING, RAY BANKS, BOBBY CARTER, ABRAHAM JOHN **GUESTS PRESENT:** JIM BYFORD, CHARLOTTE RUSSELL

Distributed Computing Support Management Team**

Philip Baczewski reported for the Distributed Computing Support Management Team that they met on May 18. At that meeting, Philip Baczewski gave a report on the Microsoft Migration project. Discussion ensued regarding the possible implementation of a new DNS system on the campus network in order to support the Active Directory implementation. DCSMT members requested a meeting with Datacomm staff to receive an overview of the DNS project. This request was satisfied by a general meeting on this topic held on May 25. Also at the May 18 meeting, Uwe Rossbach announced a meeting of the Outlook rollout working group to continue the planning for making the Outlook mail client available on desktop systems.

DCSMT did not meet on the scheduled June 1 meeting date and next met on June 15. Tom McElwee introduced the Micro Maintenance Shop staff that now report to him and provided an overview of ongoing MMS services. Tom asked that DCSMT form an ad hoc committee to recommend standard configurations for the Dell and Apple computers that will be supported by MMS. Also at that meeting, Philip Baczewski provided an update from the Microsoft e-mail migration task force and related updates regarding the pending DNS upgrade, the project schedule, and the updated project calendar. Rich Anderson announced that the CITC Security team will be reopening the security survey they recently conducted and urged additional participation in that survey. Chris Strauss reported that current IT asset data is now available in the production Remedy call tracking system thanks to assistance from EIS programming staff. DCSMT is next scheduled to meet on July 6, 2007.

Cengiz Capan asked if there is anything going on with security and establishment of a DMZ, related to the upcoming migration. Baczewski said that the Communications Planning Group is working on the campus firewall, and there will be multiple levels of security. To the extent of the recommendations made thus far, regarding security, they will continue to work

on a more global implementation. Maurice Leatherbury stated that the Security Team is satisfied that UNT is secure enough now to roll out the Microsoft Exchange product.

Learning Enhancement Planning Group

Patrick Pluscht reported that the Learning Enhancement Planning Group met on June 7 and used Live Classroom to facilitate the discussion. The Faculty Senate has requested more information regarding the selection process for a new Learning Management System so the project coordinator provided a briefing document; Dr. Turner met with the Faculty Senate Executive Committee; and there is a meeting to update the entire Faculty Senate tomorrow. Patrick will share the briefing document with IRC members, as well. The Vista 3.0 to 4.0 migration utility has been released by Blackboard; it has been beta tested and is now on the market. A new version of Sakai is available and will be tested by their committee. Four major institutions are moving from Vista 3.0 to Vista 4.2 in the Fall semester and it is hoped that useful information will be gathered from their conversions. Dr. Turner announced that if IRC members have faculty contacts, they are urged to get the word out. The committee is looking for faculty representation on the evaluation teams, which are divided into seven teams, as follows: cost; end-user usability and accessibility including testing; integration; product feature criteria; product support services; systems; and user technical requirements. Each team has a leader and at least two members, but more participating members are needed. There was some discussion about the revision to the timeline to take into consideration the times during the summer when faculty members might be absent from campus. A final report will be made by each of the teams at the end of July. Testing will take place during early Fall 2007 and a recommendation will be made by late Fall semester 2007. There was discussion about the possibility of starting from scratch with an entirely new product, and an informal vote showed that there was an even split at this time between folks who preferred to start with a totally new product versus those who preferred migrating to the new Vista version.

The next meeting of the Learning Enhancement Planning Group will be June 21, 1:00 pm. The group is working on putting together a public site in an effort to let folks know what is going on with the LMS evaluation.

Communications Planning Group

Lou Ann Bradley reported for the Communications Planning Group that the group met last week and discussed VPN. They have made arrangements for three vendors to come in and make presentations. The group would like to receive input from members on how the VPN will be used and how many users need to be provided for. Maurice Leatherbury added that Joe Adamo sent an inquiry to one large university who has had VPN in place for years. Initial use of the VPN is to provide administrative access to Windows servers on campus. CITC is considering the needs of the campus versus the cost of the system.

EIS Planning Group

Steven McKay reported for the EIS Planning Group that the upgrade of the Learning Solutions module is going very well, and they are working on the refresh of equipment.

Standards & Policy Planning Committee

Tim Christian reported for the Standards & Policy Planning Committee that they are still working on the revisions to the Computer Use Policy.

Student Computing Planning Committee

Elizabeth Hinkle-Turner reported for the Student Computing Planning Committee has been working with Freshman Orientation to help establish a Student Tour of UNT website. They have ordered lanyards for all students with the website printed on them. E-campus will be a link on that website. She announced that people can view the Student Tour at www.helpdesk.unt.edu/studenttour.

July 17, 2007

VOTING MEMBERS PRESENT: PHILIP TURNER, CHAIR, PATRICK PLUSCHT, TIM CHRISTIAN, ELIZABETH HINKLE-TURNER, JOHN HOOPER, LOU ANN BRADLEY, JUDITH ADKISON, ROBERT NIMOCKS, SCOTT WINDHAM, RAMU MUTHIAH, MARGARET AMBUEHL, CHRISTY CRUTSINGER, GUILLERMO OYARCE, JON NELSON, UWE ROSSBACH **NON-VOTING MEMBERS PRESENT:** MAURICE LEATHERBURY, PHILIP BACZEWSKI, SUE ELLEN RICHEY (Recording Secretary) **MEMBERS ABSENT:** CHARLES ANDREWS, GINNY ANDERSON, CENGIZ CAPAN, BRUCE HUNTER, DON GROSE, SARA WILSON MCKAY, JOHN PRICE, STEVEN KING, RAY BANKS, BOBBY CARTER, ABRAHAM JOHN **GUESTS PRESENT:** JIM BYFORD, CHARLOTTE RUSSELL, TROY JOHNSON

The minutes of the June 19, 2007 meeting were approved with the following correction: Page 3, paragraph 3, last sentence should read:

“She announced that people can view the Student Tour at helpdesk.unt.edu/studenttour.”

Distributed Computing Support Management Team**

Philip Baczewski reported for the Distributed Computing Support Management Team that the committee met on July 6 and was chaired by Elizabeth Hinkle-Turner. Jeff Stewart, Craig Robicheaux and Kevin Sullivan of Microsoft, Inc. provided a demonstration of Microsoft System Center Operations Manager 2007, a suite of products which allows management and monitoring of Microsoft servers and workstations. The

GroupWise to Exchange Migration project was discussed and it was mentioned that representatives from Compellent, the Storage Area Network (SAN) supplier would be on site to help configure their device for support of Exchange. There was a brief discussion regarding how departments would support faculty orders of Dell desktop computers and whether faculty would be encouraged to configure their own machines or if configurations would be set by the distributed support areas. The next DCSMT meeting is scheduled for July 20, 2007.

Learning Enhancement Planning Group

Patrick Pluscht reported for the Learning Enhancement Planning Group that they had come to a consensus to recommend to the Provost that a pilot group be set up to test Vista 4.2 in the Fall. If the upgraded product does not perform well, it will help them in their decision-making process. Likewise, if it does perform well, that will help, also. In either case, testing of alternatives will continue. At the present time it appears that College of Education and the Department of Applied Technology Training and Development will be in the pilot group. Patrick stressed that this does not mean that they have decided to continue with Vista; they continue to look at Desire to Learn, Angel and Sakai. In response to a question by Robert Nimocks, Patrick stated that the group has not considered Moodle in the products they've chosen to review. Dr. Turner asked how it was going with the courses they've put into Vista 4.2 thus far. Patrick replied that so far everything has remained intact. If there are any problems, they will see them in the pilot groups in the Fall. Patrick commented that if

another group wants to be part of the Vista 4.2 pilot group they should let him know.

Patrick also announced that he attended a Blackboard Users' Group meeting last week where he learned about the built-in plagiarism prevention feature called Safe Assign that was released for the Blackboard product as well as the Vista product. Given the current LMS evaluation underway, there are no plans for UNT to move away from TurnItIn for plagiarism prevention at this point.

Patrick stated that his production staff had alerted him to the fact that the impending release of Real Player 11 (currently available in beta), allows a person to use a single click to download most video files (including streaming video and flash video). For a long time, Real had the market cornered on the protection of video without DRM via its streaming technology; but now one can watch and record something and make a copy of it locally, which presents a challenge to UNT in its attempt to protect its assets and those it licenses.

Communications Planning Group

Lou Ann Bradley reported for the Communications Planning Group that there had not been a meeting, nor would there be until September.

EIS Planning Group

John Hooper reported for the EIS Planning Group that most of the work for the upgrade of the Student/HR and Contributor Relations modules of PeopleSoft to V. 8.9 has been completed. They are in the process of refreshing the EIS hardware and will complete that, along with doing some load testing, before going live with the upgrade.

Standards & Policy Planning Group

Tim Christian stated that he had no report for the Standards & Policy Planning Group.

Student Computing Planning Group

Elizabeth Hinkle-Turner reported for the Student Computing Planning Group that they have been conducting Freshman Orientation, where they distributed new lanyards with the new student tour helpdesk website printed on them. Elizabeth said the orientation sessions were going well. She gave one of the lanyards to each IRC member.

Microsoft Conversion

Maurice Leatherbury reported that CITC is preparing for the Microsoft conversion, and dealing with the issue of hardware compatibility with the SAN. Before the campus-wide conversion is actually done, they are going to make sure that everything is stable, and working well before they convert a few pilot groups (like CITC). It was noted that there is a *Benchmarks* article telling about the training that is available. There is a course called "Getting Started with Outlook 2007, at www.unt.edu/cbt. To access this cbt course one must contact Elizabeth Hinkle-Turner to have her set up an account first.

There will not be an IRC meeting in August. The next meeting will be on Tuesday, September 18, 2007.

*

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

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

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.

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Research and Statistical Support University of North Texas

RSS Matters

This article originally appeared in the February 2005 [issue](#) of Benchmarks Online and it is still a timely topic two years later. You can link to the last RSS article here: [How Long Should My Data Analysis Take?](#) - Ed.

Equivalence Tests

By [Dr. Mike Clark](#), Research and Statistical Support Services Consultant

A common use of statistical analysis entails a comparison of groups to one another. The familiar Student's t-test is used to distinguish whether two groups are significantly different from one another. Starting with a null hypothesis that states there is no difference between the two samples (e.g. $\mu_1 - \mu_2 = 0$), one proceeds to determine the probability with finding the difference seen in the data if that hypothesis were true. If the probability of the result is low (typically $p < .05$), then one rejects the null hypothesis that claims no difference, and concludes the groups are statistically different from one another. Alternatively, one may set up a design to minimize Type I error rate (α), and conclude rejection of the null hypothesis if the observed t-statistic is at or beyond the t-critical value (t_{cv}) associated with a chosen error rate and sample size.

Take for example, an examination of the effectiveness of a particular teaching strategy for high school math students. Some students are randomly assigned either to classes in which the method will be implemented in their courses, or those which will receive no special treatment and can thus serve as a control group. After the semester is over they are given a math proficiency exam, which resulted in the following data:

$$\begin{aligned}\bar{X}_{\text{exh}} &= 75 & s &= 3 & n &= 20 \\ \bar{X}_{\text{cont}} &= 71 & s &= 5 & n &= 20\end{aligned}$$

As mentioned, our null hypothesis would be that there is no difference between the groups outside of sampling error. As the basics of the t-test are well-known, I will not rehash the details of the procedure here, but one can review them in introductory statistical texts. The

data above would give us a t-statistic of 3.07, which would allow us to reject the null hypothesis ($\alpha = .05$, two-tailed test, $df = 38$) and claim the teaching strategy results in higher math scores.

Equivalence

What would we have done had we not reached our specified significance criterion? Common practice is to assume the two groups are equivalent, and such a conclusion seems hardly far-fetched. However there are several problems with doing so. First, a small sample size can make it very hard to find statistical significance, so if it was our goal to establish equivalence we could just have a small sample. Secondly, the procedure establishes evidence against the null hypothesis only, not for it^[1]. Furthermore, problems with the data itself (e.g. outliers), may hamper our ability to find a result at the specified significance level, and so again could come to a conclusion of equivalence just because we had messy data.

One may be left wondering what to do to determine equivalence between two groups. A statistical analysis that is just now coming into wider acceptance among the social sciences is *equivalence testing*. Often used in biomedical studies to examine different treatments' relative effectiveness, it provides a method for establishing whether two samples of data are functionally equivalent with regard to some statistic of interest.

The first step involves establishing a range of acceptable values such that any observed difference less than a certain amount may be shown to imply equivalence among the groups. As sampling error could result in our difference falling into that range, one performs inferential analysis to determine statistical equivalence.

Two one-sided tests

Return to the previous example. Say that based on those results we began teaching our math classes using the new method. Someone comes along later and says they have an alternative method of teaching the courses that could be even more effective. The principal is hesitant to alter the existing setup because changing the system before was very costly in terms of training and materials, and doesn't want to go through another overhaul unless there is substantial improvement to be had. Based on her knowledge of the proficiency test and other practical considerations, she states that if there is no more than a 5 point improvement she will maintain the current situation. The resulting data at the end of the semester is as follows.

$$\begin{aligned}\bar{X}_{\text{new}} &= 78.5 & s &= 4 & n &= 20 \\ \bar{X}_{\text{old}} &= 76.0 & s &= 5 & n &= 20\end{aligned}$$

Although we do not reach the established criterion of interest in raw form, the presence of

sampling error still does not allow us to determine statistical equivalence right off. One method requires testing the following joint null hypothesis:

$$H_{01} : \mu_1 - \mu_2 \geq \Delta$$

$$H_{02} : \mu_1 - \mu_2 \leq -\Delta$$

where Δ refers to our specified maximum difference allowed to still profess equivalence, in this case, 5 as determined by the principal of the school. Rejection of H_{01} implies $\mu_1 - \mu_2 \leq 5$. Rejection of H_{02} implies that $\mu_1 - \mu_2 \geq -5$. Rejection of both suggests our difference falls in the range of -5 to 5 and so we could include they are equivalent. In order to do so we perform two one-sided t-tests.

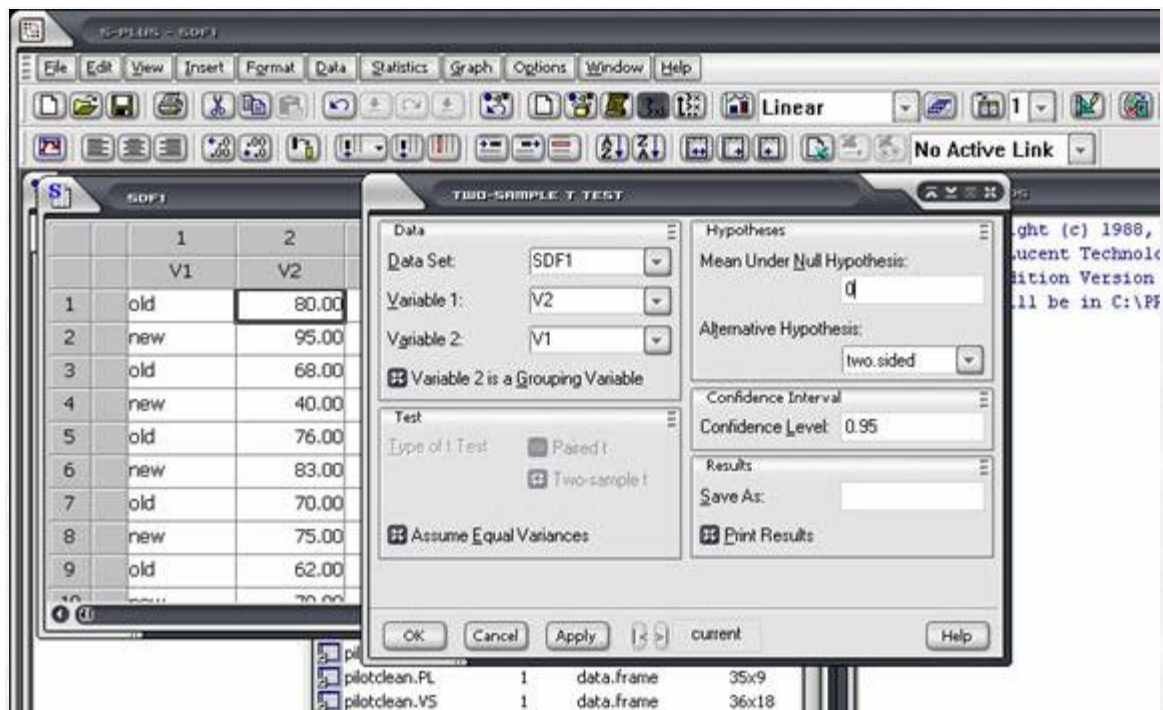
$$t_1 = \frac{(\bar{X}_1 - \bar{X}_2) - \Delta}{s_{x_1 - x_2}}$$

$$t_2 = \frac{(\bar{X}_1 - \bar{X}_2) - (-\Delta)}{s_{x_1 - x_2}}$$

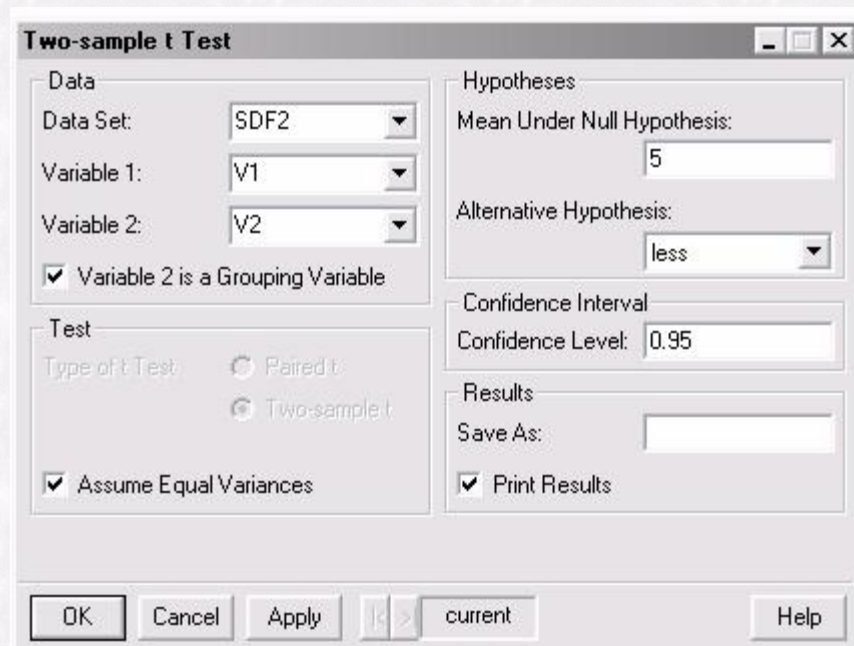
If t_1 is less than the negative t_{cv} we reject H_{01} , and if t_2 is greater than the positive t_{cv} we reject H_{02} .

We do this because starting off we don't know how the means could have turned out relative to one another (new greater than old or vice versa) and so could have a positive or negative difference. However, another perhaps more simple way to look at it would be that we are testing whether our absolute difference is significantly less than that specified for non-equivalence, or that our null hypothesis would be $H_0 : |\mu_1 - \mu_2| \geq \Delta$. By rejecting the null hypothesis, we conclude that the difference observed qualifies for practical equivalence.

Such a test can be performed in a statistical package such as S-Plus. From the Statistics menu, go to Compare samples/Two samples/t-test



Choose your variables under consideration and select whether one is a grouping variable. The only thing that remains is to change the “Mean Under Null Hypothesis” (MUNH) and select our alternative hypothesis^[iii]. Let us begin with the first part of the joint null hypothesis. Enter in a value of 5 for MUNH and select as our Alternative Hypothesis “less”, which is to say that the alternative hypothesis in competition with the null hypothesis suggests that our result is significantly less than 5. See below.



To test the other in this situation we simply change (MUNH) to -5 and our competing alternative hypothesis to “greater”. If the t-statistics obtained exceed our critical values in the above mentioned fashion, as they do here ($t_{cv} = \pm 1.68$), we can reject the joint null and

claim statistical equivalence.

The Confidence Interval Approach

Another way in which to test for equivalence calls for the construction of a confidence interval (CI) about the difference between means observed. Having initially specified our Δ boundaries, we then see if e.g. the 95% CI for the difference between means falls *entirely* within that range. To obtain the interval for the above example: $(\bar{X}_1 - \bar{X}_2) \pm t_{\alpha}(s_{\bar{X}_1 - \bar{X}_2})$. If we want this approach to provide the same results as the two one-sided tests performed above, we construct a CI at the $100(1-2\alpha)\%$ level used in the previous approach. Going the other way, if our decision was to provide a CI at the 95% confidence level for the difference, we would perform the two one-sided tests above at $\alpha = .025$.

Inferential Confidence Intervals

An alternative confidence interval method comes from Tryon (2001). His approach involves what he refers to as *inferential* confidence intervals (ICI). These are different from ordinary confidence intervals in that they use they use a reduced critical value such that non-overlap of the two group's ICIs for their respective means suggests statistical difference at the specified alpha level for a significant difference. To test equivalence, one takes the lower bound of the lesser mean's ICI and the upper bound of the greater mean's ICI to establish a range of the difference between them ($R_g = \text{Upper bound} - \text{Lower bound}$). If this R_g is less than that established for non-equivalence (the above Δ), we conclude equivalency among the groups. Tryon's method may be preferable in that it contains within it a means of testing both equivalence and difference. Furthermore, it provides a third possible outcome, indeterminacy, where neither equivalence nor difference can be established statistically.

Summary

The social sciences are overdue for a much wider implementation of tests of equivalence. It is often the case that researchers claim evidence of a particular hypothesis through non-rejection of the null hypothesis of no difference. However, it is incorrect to conclude equivalent groups just because we do not have enough evidence against the null, as Fisher pointed out decades ago. Methods are readily available to determine whether two groups are statistically equivalent, and should be used accordingly.

Some Resources

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Rogers, J.L., Howard, K.I., & Vessey, J.T. (1993). Using Significance Tests to Evaluate

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[i] In fact, our result doesn't speak to any hypothesis in a particular, only the probability of some outcome, which we then use to make a decision regarding the null hypothesis.

[ii] This procedure already differs from most t-tests done in social sciences as despite repeated pleas from quantitative types typically we test a 'null' hypothesis of no difference.

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Short Courses

By [Claudia Lynch](#), *Benchmarks Online Editor*

Short courses are over for the summer. Surf over to the [Short Courses](#) page to see the sorts of courses that will probably be offered this fall. If you have a group that needs a specific class this summer, it may be possible to arrange a special class. See "Customized Short Courses" below for further information.

Due to staff changes, courses offered in the past under the "Wide Area Network & Information Systems Courses" subheading such as "Getting Started with Dreamweaver" and "Moving from FrontPage to Dreamweaver" will not be taught – at this point – this summer. We hope to be able to offer courses like these soon. In the meantime, please consult the new computer based training website to see what offerings are available: <http://www.unt.edu/cbt/>

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, and the [Center for Distributed Learning](#). 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 the links below:

- [Learning to Use EIS](#)
- [EIS Timekeeper Training Schedule:](#)
- [EIS ePro Training Calendar](#)
- [Ongoing training is available on WebCT](#)

Moving from GroupWise to Microsoft Outlook Training

Although the project has been [delayed](#), the article "E-Mail Migration Project Update" in the April issue of *Benchmarks Online* is still a useful source for finding [resources](#) for preparing the campus community for this transition.

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 [here](#).

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.

Center for Teaching, Learning, and Assessment

The [Center for Teaching, Learning and Assessment](#) describes itself as offering "a range of services to faculty and Teaching Fellows and Assistants to facilitate teaching and the measurement of learning at the class, department, and college level."

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.unt.edu/minicourses/>

Alternate Forms of Training

Many of the [General Access Labs](#) around campus have tutorials installed on their computers. The Library has a [Computer Training Resources](#) webpage with lots of resources listed. The [Training](#) website also 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, the articles in the July issue of *Benchmarks Online*, "[Get Revved Up for Office and Outlook 2007!](#)" and "[SkillPort Training Site Update](#)." See also, "[Free and Legal: Copyright Advice and Training Online](#)" and the article "[Office 2007 Training Available at the SkillPort CBT Website](#)" in this issue of *Benchmarks Online*.

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Staff Activities

Transitions

New Employees:

- **Ramnath Nageshwaran**, Computer Operations Student Assistant (part-time).
- **Alan Parcel**, Computer Systems Manager, Unix Support Services.

No longer working in the Computing and Information Technology Center:

- **Steven McKay**, Assistant Director of EIS.

Changes, Awards, Recognition, Publications, etc.

Our Thai Connection

The *InHouse* headline reads "UNT signs agreement to provide doctoral training to faculty at Thai Rajabhat Universities" and the [article](#) goes on to quote Dr. Bataille stating "I am grateful to **Dr. Panu Sittiwong**, who is deputy president for international affairs at Uttaradit Rajabhat University and a proud UNT alumnus, for driving the effort to connect UNT with Thailand in this way."

Longtime members of the UNT community will remember Dr. Sittiwong from his days here as an ACS statistical consultant (1984-1988) and then Manager of Research and Statistical Support (1988-1995). **Dr. Philip Baczewski**, Director of Academic Computing and User Services, helped arrange initial visits between Uttaradit Rajabhat University administrators and UNT administrators.

Benchmarks Online* Award Noted in *InHouse

The following [item](#) appeared in a recent issue of *InHouse*, UNT's faculty/staff online newsletter:

The Association for Communications Technology Professionals in Higher Education has recognized UNT's [Benchmarks Online](#) as a particularly effective online newsletter, communicating technical information in a timely, accessible manner.

"The school's site was selected based on the criteria of content delivery, timeliness, ease of use, accessibility, and graphic appeal," says Beth Chancellor, chair of the ACUTA Web Site Recognition Task Force.

Benchmarks Online is edited by **Claudia Lynch**, documentation services manager in academic computing and user services, computing and information technology center.

The page is featured on the [ACUTA home page](#) and it has been recognized in the July issue of ACUTA e-News. The newsletter will also be recognized at ACUTA's annual conference in Florida July 29 – Aug. 2.

ACUTA serves nearly 800 institutions of higher education and 2,000 communications technology professionals in the U.S., Canada, Australia and New Zealand. ACUTA provides education and networking.

Posted: Jul 17, 2007

Also [noted](#) in *InHouse*:

Congratulations to **Kok Chuan Ko**, programmer III, in the Computing and Information Technology Center, who will receive a free UNT T-shirt pack after responding to last week's Fun Fact about Facilities Maintenance.

Soaring Eagles

Congratulations to **Dorothy Flores**, Programmer Analyst, Fiscal Data Systems (AIS) and **Bahram Paiani**, Messaging Host, Network Computing Services, who were recognized as Soaring Eagles in the August issue of the *Human Resources Newsletter*.

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