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Reflections on Maurice Leatherbury's IT Career at UNT

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

The UNT News Service [article](#) states it succinctly: "Maurice Leatherbury, vice president for information technology and chief information officer at the University of North Texas, has announced he will retire Oct. 1."

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[Computing Resources at UNT - Finding Your Way Around](#)



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.

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[Life Sciences Complex Features Great Informal Wired Study Space](#)



By [Dr. Elizabeth Hinkle-Turner](#), Assistant Director - Academic Computing and User Services

In [this article featured last February](#) I took readers on a tour of terrific formal and informal wired study spaces for students around campus. With the opening of the new Life Sciences Complex, another great study area has been added to the campus: the main foyer of the Complex.

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By the Numbers

Eaglenet, UNT's wireless network (as of 9/13/10)

- Max simultaneous users logged in to Eaglenet: 1969
- Max simultaneous users logged in to UNT (802.1x): 173
- Max simultaneous users total: 2022 + 20 specialized devices
- Number of unique devices on the wireless network (since 1/4/10): 60,668
- Max simultaneous devices "seen" on the wireless network has been 2300+.
- Plans for increasing wireless coverage across campus are discussed [here](#).

Managing Your Spam



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

The idea of "managing" spam may seem ridiculous at first, but due to the tireless efforts of a number of people in the CITC over a number of years, it really has come to the point that we all need to take an active role in managing what is defined as "spam" by various systems in place here at UNT.

[Read more](#)

JAWS and MAGic 11 Updates



By [Dr. Elizabeth Hinkle-Turner](#), Assistant Director - Academic Computing and User Services

Freedom Scientific has released updates for both JAWS 11 and MAGic 11 and most areas should already have these established on their desktops where appropriate. The most important feature of these updates is that they are available for either 32-bit or 64-bit Windows 7.

[Read more](#)

A New Information Security Announcement Board



By [Glenn Thorpe III](#), GSEC, Incident Response & Forensic Analyst

Information Security has created an announcement board on UNTranet to post important security updates/alerts as an additional security resource. The site is geared mainly toward Network Managers, but other UNT faculty/staff may also want to access the information.

[Read more](#)

TODAY'S CARTOON

Click on the link above for an information age laugh.



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Reflections on Maurice Leatherbury's IT Career at UNT

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The UNT News Service [article](#) states it succinctly: "Maurice Leatherbury, vice president for information technology and chief information officer at the University of North Texas, has announced he will retire Oct. 1." Dr. Leatherbury has been in charge of IT at a crucial time for the University of North Texas and this article celebrates the many changes and accomplishments that have occurred during his leadership tenure. -- Ed.*

Down the Data Bus of Years

In 1995, Windows 95 was the hot replacement for Windows 3.1, OS 2 Warp was the latest desktop environment from IBM, Linux was in its infancy, and Mac OS 7.5.1 was a significant milestone in the pre-OS X era, incorporating some of the first built-in support for ethernet and Internet networking. At UNT, the Jove UNIX system was most people's access point for Internet e-mail, a brand new IBM mainframe had just been installed, the gopher server was a primary Internet information source, and many people were just learning about "World Wide Web Pages." It was in this IT environment that Dr. Maurice Leatherbury first joined UNT's central IT organization as the interim Director of Academic Computing.

Now, in 2010, we mark Maurice's departure from UNT upon his retirement from the CITC and celebrate the many changes and accomplishments that have occurred during his leadership tenure. That tenure includes his permanent appointment as Senior Director of Academic Computing in the Spring of 1996, as well as appointments as Senior Director of Academic Computing and [Assistant to the Associate Vice President](#) for Computing and Communications Services in 1998, [Executive Director](#) of Information Technology and Academic Computing in 2003, [Associate Vice President](#) for Computing and Chief Technology Officer in 2005, and acting [Vice President](#) for Information Technology and Chief Information Officer in 2009. In addition to a long tenure, Maurice has had some very long titles in his time at UNT.

In looking back at the last fifteen years, I see a number of developments in UNT's IT environment that were either a direct result of or greatly benefited from Maurice's leadership. I am highlighting a number of those developments here. This list is compiled from my memory and point of view, and is not in any particular order. It may not be a complete list of Maurice's accomplishments or even those that he may think are the most important, but I think these all have been significant additions to how IT supports the University mission.

Distributed Desktop Support Management

In 1996, UNT had a very distributed desktop computing support environment, and while this was beneficial in providing targeted support to specific areas as their needs required, the increasing dependence on microcomputing technology made it necessary to develop standards so that the entire campus community could exchange information and interoperate smoothly using microcomputer-based programs and data. The UNT administration provided funding to increase the number of desktop computing support staff on campus, but also requested that there be more coordination of technology and services in order to reduce duplication of effort, develop campus-wide standards when possible, and improve coordination between central and distributed IT units. In a 1996 [memo](#), Provost Blaine Brownell established the Distributed Computing Support Management Team ([DCSMT](#)) with Maurice Leatherbury as its founding chairperson.

A number of services that we take for granted are the result of the work of DCSMT under Maurice's leadership. This includes development of a [call tracking service](#) shared by central and distributed units, better coordination between the central Helpdesk and distributed support areas, coordination on desktop software standards to allow money-saving bulk or site license purchases, and coordination on desktop computer hardware standards.

Student E-mail and Internet Technologies

Student e-mail has run the gamut of technologies during Maurice's time at UNT. Technologies have [ranged](#) from the first accounts on a shared UNIX system, to the introduction of the IMAP client/server model of e-mail, to a locally-hosted web-based mail system, all the way to "the cloud" that is our [current](#) student e-mail system based on Microsoft's Exchange Labs service and remotely hosted by Microsoft. This support allowed UNT to adopt e-mail as an official means of communication with students and has made electronic communication an important tool in supporting students' progress at UNT.

In August of 1995, the Campus Wide Information System was a [gopher](#) server. ACUS had just begun to support creation of personal web pages for University staff. Throughout his career at UNT, Maurice has made development of web resources a high priority. As the World Wide Web grew to be an indispensable tool for exchanging information, Maurice ensured that UNT IT staff and technical resources grew to meet the challenges of supporting this ever expanding communications medium.

Distributed Learning Technology

UNT is one of the largest providers of online education in the State of Texas. Distributed and blended learning have become a standard part of our curricular offerings. But what we see today started as a modest effort to use multimedia computer technology to support the teaching of PHED 1000, a health and wellness class required in the mid 1990s for all undergraduate students. Under Maurice's management, not only were staff and technical resources devoted and developed to support online distributed learning, but support for content development by faculty was a key part of the strategy to increase online instructional offerings.

As Senior Director of Academic Computing, Maurice developed and managed the university's [Teaching with Technology](#) Grant Program, which distributed more than \$800,000 to faculty members over a seven year period. What began as devoting one employee's time to exploring learning technologies eventually led to the establishment of the [Center for Distributed Learning](#) or as we now know it, [CLEAR](#). Distributed learning [support](#) remains a strategic activity by the CITC, with over 36,000 students within the UNT system enrolled in online courses.

PeopleSoft EIS System

In his role as Assistant to the Associate Vice President for Computing, Maurice was one of the key individuals that supported the selection of a software system to replace the aging mainframe-based administrative information systems that were in use at the turn of the (21st) century. As Maurice [stated](#), "The new system will truly be a *UNT System*, because it will be shared by the Health Sciences Center and the Denton campus (and of course the future UNT Dallas.)" The resulting [EIS](#) project still could be considered a work in progress, since with all good IT projects there is a continual process of refinement and improvement. In his five years as CIO, Maurice has supported and guided the continued development of EIS and there can be no argument that UNT's ability to manage its business online has been tremendously enhanced by the implementation of EIS.

Computer Security

Computer and information security has been a longstanding concern for Maurice and the CITC. Academic Computing Services began distributing antivirus [software](#) as early as 1996. Later, security efforts were strengthened with the formation of a [Information Security Team](#) which remains an [integral component](#) of the CITC's efforts to secure the University's IT environment and promote the guardianship of information resources. Maurice's support and promotion of [best practices](#) in server and desktop management has been an important contribution to maintaining the integrity of UNT's computing and information technology environment.

Wide Area Network Development

Since its inception, the Internet and wide area networking have been important to the academic and research pursuits of universities. Beginning around 1995, an intense period of activity in development of Internet resources was happening at UNT and around the world. As Director of Academic Computing, Maurice recognized the importance of these developments and supported efforts to increase UNT's window on the networked world, and was continually concerned with the [bandwidth](#) that was available to UNT computers communicating via the Internet. As CIO, Maurice has provided management support for development of a highly reliable data [network](#) to connect all campuses within the UNT system and to connect those campuses to the wider Internet world.

Maurice was instrumental in efforts to connect UNT to [Internet II](#) and helped establish a north Texas "gigaPOP" to support a high-speed connection to that network. Later, when Texas institutions of higher education began to make plans to connect to the National Lambda Rail (NLR) high-speed research network, Maurice was UNT's representative. The Lonestar Educational and Research Network ([LEARN](#)) was created and Maurice served as its first executive board [Secretary](#). In December of 2009, Maurice was elected [chair](#) of the LEARN executive board. Under Maurice's guidance, UNT has become one of the more "well-connected" universities in Texas.

Computationally Intensive Research

In 1999, ACS was just starting to explore the possibilities of the relatively new idea of [cluster computing](#) using commodity PC hardware. With a modest start using just 8 nodes in 2001, by 2005, we'd managed to support 250,000 hours (almost 3 years) of [computation](#) time on the systems we had gradually developed over those five years. High-performance computing at UNT took a quantum leap with the acquisition of the [Talon](#) HPC system in 2009. We now support over three times the 2005 annual total of computation time in one month on Talon (the equivalent of 101 years of computing time in August of 2010.) Maurice's budgetary support for the acquisition of HPC hardware and support for expansion of the HPC support staff enabled these dramatic results that are reaping benefits for UNT researchers, and promoting UNT's strategic goal of increasing funded research.

A Personal Note

On a personal note, Maurice has been the only manager for whom I have worked over the past 15 years. There have been many tumultuous events in the history UNT and IT within that time period, and those events haven't always made this an easy job for either of us. Over the years, however, I have grown to respect and admire the consistent leadership, creative approach, and dedicated support that Maurice has brought to his various positions in UNT's IT management. Whatever IT future is in store for UNT, it can be built upon the solid foundation that Maurice has helped to establish.

*The University is hosting a [Retirement Reception](#) for Dr. Leatherbury on Friday, September 24.



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Computing Resources at UNT - Finding Your Way Around

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://helpdesk.unt.edu/>. 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 [Using Mailhost as your Outgoing Mail Server \(SMTP\)](#). Following is a selection of articles published within the past year. Perhaps one of these topics is something you've been wondering about:

- [Using Android E-mail for Work](#)
- [Connecting to EagleConnect using Thunderbird](#)
- [Connecting to UNT Email Services with the Motorola Cliq](#)
- [Viewing Shared Outlook Calendars Via the Web](#)
- [Checking UNT Exchange Mail using Entourage](#)
- [Instructions for connecting to Exchange on the iPhone](#)
- [Checking your work Email via Exchange on Android](#)
- [EUID Passwords](#)

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 Computer Lab System

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 [GACL 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 [GACL website](#). The lab in ISB 104 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 104. 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

Rising costs of training, shrinking budgets and changing technology have contributed to changes in computer-based training offerings at UNT over the last several years. The Computer-Based Training [website](#) has a list of training resources currently available to the UNT community.

Online Learning/UNTEcampus

For students, a good starting place is found on the [student tour](#). Faculty will want to visit the Center for Learning Enhancement, Assessment, and Redesign (CLEAR) [website](#) and/or the Center itself. The *Benchmarks Online* article, [How Green is Our Learning?](#), about, in part, Blackboard Vista (our centrally-supported learning management system), may be of interest to faculty members. **iTunes U at UNT** is an offering that has lots of people excited. Read all about it [here](#).

Other Items of Interest

- **Online Student Health Portal (OSH)** -- OSH is a web-based portal connecting students to the Student Health and Wellness Center (SHWC) 24 hours a day, 7 days a week. See the *Benchmarks Online* [article](#) "Just in time for the fall semester: an Online Student Health Portal" for further information.
- **Videoconferencing** -- Videoconference Technology allows you to meet with your colleagues on campus, at the Dallas and Ft. Worth campuses, or almost anywhere in the world. See the *Benchmarks Online* [article](#) "Save Time, Money, and Avoid Parking Frustrations Using Videoconference Technology" for further information.
- **Ask Us** - The UNT Libraries' virtual/online help services; they're available from your computer 24/7.
- **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 [Gartner Research Services](#).
- **Campus Subscription to Higher Education Newsletters**-- UNT has negotiated a group online subscription allowing campus members free access to the *Online Classroom* & *The Teaching Professor* higher education newsletters produced by Magna Publications. Click [here](#) for more information.
- **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*.
- **LISTSERV.UNT.EDU** -- Listserv web interface makes it much easier to manage your listserv lists. See this past *Benchmarks Online* [article](#) for more information.
- **[CITC Data Management Services](#) - Services include:**

1. **Exam Grading/Analysis:** NCS ©Forms 4521 & NCS ©Form 106173, and (New!) SCANTRON © Form 882-E. Exams can be processed within 15 minutes while you wait, or you can drop off and have results e-mailed for your convenience. Analyses' include Detailed Item Analysis, Frequency Distribution, and General Test Analysis.

2. **Research Projects:** Key-Entry of survey or research projects (grad student dissertation research allowed!) into a custom data file, ready for analysis.
3. **Scannable Form Design:** Customized scannable survey forms created using any current form, or just a new idea! Our service includes scanning the completed forms into a data file, ready for analysis, quick and easy!
4. **Faculty Evaluation Processing:** Scan, edit and process UNT departmental faculty evaluations. Standardized reports provided: Department Overall, By Instructor-Course-Section, and By Instructor. An Excel data file will be provided to run any customized reports desired.

Location: ISB (Information Science Bldg.), north entrance, Room 140.

For more information contact: Joann.Luksich@unt.edu 940.369.7416

- **High-Performance Computing Initiative** - The High-Performance Computing Initiative is available for use by UNT researchers whose research or scholarship requires use of computationally-intensive applications. See this *Benchmarks Online* [article](#) for further information. The HPC [website](#) states: "The Academic Computing and User Services division of the CITC supports multiple clusters of 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 Information Security Team helps protect UNT Information Technology assets from misuse, abuse, and unauthorized access. The mission of the Information Security Team is to assist and collaborate with UNT administrative, academic, and student communities to help assess, implement, and maintain information security needs." [From the [Information Security Website](#)]. **UNT Faculty, Staff, and Students are required to read the Security Handbook.** Links and further information can be found on the Information Security [homepage](#).

Information Security has recently created an announcement board on UNTRANET to post important security updates/alerts as an additional security resource. An [article](#) in this issue of *Benchmarks Online* provides further information on the announcement board.

- **Managing Spam** -- Actively manage e-mail that is sent to your campus e-mail address. See the [article](#) in this issue of *Benchmarks Online* for more information.
- **Campus VPN** -- The Campus VPN is an interface that will allow you to connect remotely to on-campus resources. For more information click [here](#).
- **Free or cheap software**
 - **McAfee VirusScan** -- [Free download](#) or \$3 purchase.
 - **Free Office Live Applications** -- Microsoft now includes Office Live applications in EagleConnect. Office Live applications are web-based (cloud) versions of **MS Word, Excel, Powerpoint**, and **OneNote** which provide the full functionality of their Office Suite installed counterparts. Further information can be found [here](#).
 - **Microsoft Campus Agreement** -- UNT has had an agreement with Microsoft for a number of years that allows us to distribute various Microsoft products to employees of the University. According to the agreement, you can "use the software for school-related purposes on a personally-owned computer or an institution-owned computer designated for your exclusive use" and you must remove the software from your home machine if you leave UNT. **This agreement does not cover students unless those students are also UNT employees. UNT Health Science Center employees CAN purchase their software on the HSC campus via the [ITS Helpdesk](#).**

Employees wishing to install these products on University-owned computers should contact their [Network Manager](#) for further instructions. Contact the UNT Bookstore at 940-565-3185 for additional information about the Microsoft products available to faculty and staff and/or visit

www.unt.bkstr.com.

- **The Microsoft Home Use Program** -- Reduced price software for faculty/staff [home use](#).
- **Student discounts in the UNT Bookstore** - As described on the [StudentTour](#).
- **DreamSpark** -- UNT students can take advantage of DreamSpark, Microsoft's program that provides free development software to students. Click [here](#) for more information.
- **Free/Open Source software** -- Two articles on that topic from the RSS staff:
 1. [Free I = Cheap](#): Open Source and/or Free Alternatives in Statistical Analysis.
 2. [Free your research](#): Open source and other alternatives to cut your costs and improve productivity as a graduate student.
- **Photoshop Express** - [Free Online 'Photoshop' is a pretty good deal](#).

**Various versions of this article are published each semester. -- Ed.*



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Life Sciences Complex Features Great Informal Wired Study Space

By [Dr. Elizabeth Hinkle-Turner](#), Assistant Director - Academic Computing and User Services

In [this article featured last February](#) I took readers on a tour of terrific formal and informal wired study spaces for students around campus. With the opening of the new Life Sciences Complex, another great study area has been added to the campus: the main foyer of the Complex.



The foyer of the Life Sciences Complex is wired for student laptop use

Because it is a new construction, power and network wiring for the increased needs of 21st century students could be planned and built as an integral part of the structure. Thus, concrete support columns in the foyer have power and data access provided right next to comfy couches and tables making this the perfect spot for both digital and traditional work.



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Network Connection

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

Just Off the Wire

According to the Associated Press, the FCC is [considering](#) making available a greater amount of the broadcast spectrum for use in consumer-grade wireless devices. In particular, they are planning rules for use of the gaps between the [frequencies](#) at which television stations broadcast. The unused frequencies, which vary from location to location, could make it possible for easier transmission through walls, and could minimize interference from other devices.

In case you didn't realize it, much of the radio and TV broadcast spectrum is [regulated](#) by the FCC. A license is required for use of broadcast frequencies at power levels that allow transmission over moderate to long distances. Regulation of broadcast frequencies can be traced back to [1912](#) or earlier in the United States. The FCC was established by the [Communications Act of 1934](#) to regulate use of the radio and TV spectra as well as other interstate communication such as that over wire, cable, or via satellite.

Some of the radio spectrum is set aside for [unlicensed](#) use. If you want to operate your own radio station, you must apply to the FCC for a license. But if you want to operate a [Wi-Fi](#) base station in your house in order to access the Internet from your laptop or smart phone, then all you need to do is purchase the appropriate device. A Wi-Fi base station operates at a predetermined frequency that has been set aside for such use, does not provide a guaranty against interference, but also does not require you to make special arrangements with some regulatory agency.

Many devices, such as Wi-Fi routers, cordless phones, and Bluetooth headsets operate at a frequency of 2.4 Gigahertz. As it turns out, microwave ovens also operate at a similar frequency. According to [Gizmodo](#) this is by design. The fact that microwaves were very popular and already operating on this unlicensed frequency made it a good choice for other consumer devices, since in general microwave "broadcasts" are shielded from escaping from their metal enclosures. However, microwaves are thought to sometimes interfere with Wi-Fi reception and other devices.

Making additional frequencies available for unlicensed use may help free us from microwave oven Internet interference, but may also expand the possible uses of wireless technology. As one with long-standing experience wrestling with nests of wire cable behind electronic and computing devices, I say that the wireless revolution can't come soon enough. I'd love my TV, amplifier, speakers, media players, and other devices to wirelessly communicate without interference. And if I can get additional or better services similar to [Wimax](#) but faster, then that's even better.

First, however, we await action by the FCC. Then we hope that the marketplace for wireless products and ideas catches up. I'm hoping things move fast, since I am more than eager to wean my electronics devices off their wires.



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Link of the Month







Division of Student Affairs

The Division of Student Development has become the **Division of Student Affairs**. Along with a new name the division has a new Vice President, Elizabeth With, who had served as interim vice president for Student Development since January 2010. An [InHouse article](#) about the name change notes that The **Division of Student Affairs** oversees these departments:

- Career Center 
- Counseling and Testing Services
- Dining Services
- Greek Life  
- Housing and Residence Life
- Recreational Sports  

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- University Union  
- Veterans Center  
- Center for Student Rights and Responsibilities
- Center for Leadership and Service 
- Student Legal Services

Check out their website:
<http://vpsd.unt.edu/>

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- Dean of Students 
- Transfer Center 
- Parent Programs
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Helpdesk FYI

By [Jonathan "Mac" Edwards](#), Assistant Manager of the CITC Helpdesk

Using Mailhost as your Outgoing Mail Server (SMTP)

*

Lately, as more users bring notebooks and smartphones onto campus, we are seeing an upsurge in the number of people trying to connect to their mail accounts using imap or pop3 over EagleNet. While you should have no issues receiving your mail using the IMAP or POP3 server recommended by your email provider, there could potentially be issues with using the recommended SMTP server. After testing, we have found that the EagleConnect SMTP server (pod51000.outlook.com) will allow you to send over wireless, but neither Google's or Yahoo's SMTP server can be accessed. If you are unable to send mail using the SMTP server recommended by your email provider, we recommend you try using the UNT provided SMTP server mailhost.unt.edu for your outgoing mail. To set up Mailhost you will need to log into your mail-client, and go to your account settings.

- To access this in *Outlook 2007: Go to Tools > Accounts and open the account you wish to Edit. You will want to find your Outgoing Mail Server (SMTP). Make sure the name of this server is mailhost.unt.edu.
- The next thing that needs to be changed is your log-in information. Mailhost uses your EUID and Password for authentication. Often you can find this area under more settings, or advanced settings. Look for something similar to "Outgoing Server Settings." Once you find this be sure to input your correct EUID & Password.
- To access this in *Outlook 2007: Choose "More Settings" and click on the "Outgoing Server" tab.
- Finally, you will want to make sure you have the correct security settings. Mailhost requires SSL/TLS encryption. If both options exist, choose TLS. When asked to specify a port, choose 587. To access this section in Outlook 2007: Choose the Advance Tab after following the previous two *Outlook steps. For your convenience you should be able to leave mailhost.unt.edu as your Outgoing server when off campus. Some clients, such as the iPhone, allow for setting up multiple SMTP servers.

*This is a modification of [a column](#) originally published in 2009 and is information that is re-published periodically.



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IRC News

Minutes provided by Susan Richroath Recording Secretary*

The IRC -- unofficially now known as the INFORMATION TECHNOLOGY COUNCIL (ITC) -- is currently undergoing a reorganization, see the May 20, 2008 [minutes](#) for more information.**

No IRC/ITC minutes were available for publication this month.

*For a list of IRC Regular and Ex-officio Members click [here](#) (last updated 12/12/08). Warren Burggren is now the Chair.

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



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RSS Matters

Research and Statistical Support

University of North Texas

Structural Equation Modeling without one of the commercial modeling software packages - or, how you can use free software to your committee and/or colleagues.

Link to the last RSS article here: [Using the Bootstrap with Small Data Sets: The Smoothed Bootstrap](#) -- Ed.

By [Dr. Jon Starkweather](#), Research and Statistical Support Consultant

Structural Equation Modeling (SEM) has become quite popular among the social science set over the last several years. However, unless one was a SAS user and aware of the PROC CALIS function in SAS; conducting SEM typically involved becoming proficient with one of the commercially available, modeling specific, software packages (e.g. EQS, Lisrel, AMOS, Mplus, etc.). That is no longer the case due to the growing popularity and functionality of the R programming language ([Muenchen, 2010](#); [Vance, 2009](#)). Multiple libraries are available for conducting SEM (and other modeling techniques) in R. Two of those libraries will be discussed here.

The purpose of this month's article was to provide a demonstration of the basic functions for using R to conduct SEM. It was not our goal to *teach* SEM as that would require a great deal more time and space than is allocated here. However, we do cover some basic tenants of SEM below, such as sample size, number of manifest variables, and their relationship to overidentification, as well as the two stage approach. Suffice to say, SEM is a powerful data analysis tool for researchers and has gained popularity because it offers the ability to model measurement error, it accepts a variety of types of variables, and it can model a variety of different relationships between variables. These last two points can be summed up to say, SEM is extremely flexible in terms of the types of models which can be specified.

The general approach we tend to follow here at RSS when conducting SEM is the two stage approach advocated by [Anderson and Gerbing \(1988\)](#). The two stage approach consists of stage 1, verifying the measurement model and stage 2, testing the structural model. The measurement model is simply a confirmatory factor analysis to ensure you are measuring what you believe you are measuring. The structural model involves testing the theoretical causal relationships between *primarily* latent variables.

The fictional (simulated) data we will be using is available here: [SEMData.sav](#). Once saved to your machine, the data can be imported into R, named `exsem`, and attached using the following code with slight changes to show the file path to where you saved the data on your machine:

```
library(foreign)

exsem <- read.spss("C:/Documents and Settings/username/Desktop/SEMData.sav",

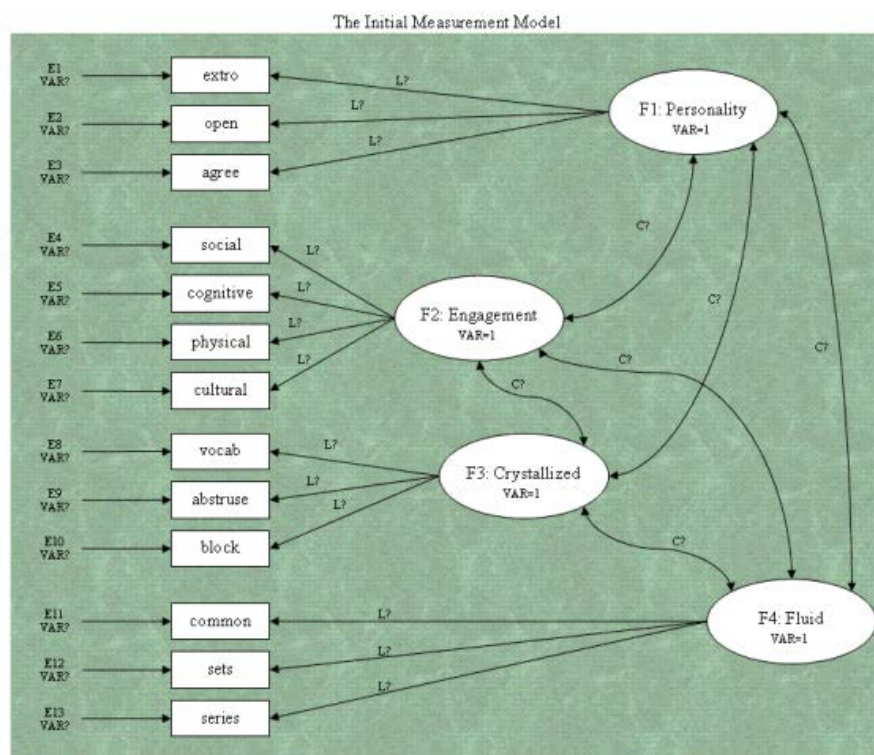
use.value.labels=TRUE, max.value.labels=Inf, to.data.frame=TRUE)
```

attach(exsem)

The data contains 750 observations on 13 variables: Extroversion (extro), Openness to Experience (open), Agreeableness (agree), Social Engagement (social), Cognitive Engagement (cognitive), Physical Engagement (physical), Cultural Engagement (cultural), Vocabulary (vocab), Abstruse Analogies (abstruse), Block Design (block), Common Analogies (common), Letter Sets (sets), and Letter Series (series). The data is used here to represent a fictional longitudinal model of cognitive functioning in later life. Please note the liberal use of the word fictional in the preceding statements. This data was simulated for the use of demonstrating functions in R; it should not be relied upon as actual research data, it was simulated.

Stage 1: Verifying the Measurement Model.

Below you'll find a diagram which represents our measurement model. Notice we are unconcerned with the relationships between latent factors; those paths are free to vary (estimating the correlations or covariances) without specifying hypothetical causal relationships between them. Also notice, the variances of the factors are fixed at 1. Remember, the latent factors are unobserved and therefore we do not have an idea of their variance, nor their scale. Another thing to notice is that each observed score (i.e. manifest variable) is caused by a latent factor which we believe we are measuring indirectly, *and* measurement error. These error terms are shown in the diagram with arrows pointing toward the manifest variables as classical test theory suggests (i.e. observed score = true score + measurement error). This bears mentioning because, as stated above, it is one of the reasons SEM is so popular; it allows us to model measurement error.



One of the key requirements of SEM is overidentification. A model is said to be overidentified if it contains more unique inputs (sometimes called informations) than the number of parameters being estimated. In our example, we have 13 manifest variables. We can apply the following formula to calculate the number of unique inputs:

$$(1) \quad \text{number of unique inputs} = (p(p + 1)) / 2$$

where p = the number of manifest variables. Given this formula and our 13 manifest variables; we calculate 91 unique inputs or informations which is greater than the number of parameters we are estimating. Looking at the diagram, we see 6 covariances (C?), 13 loadings (L?), and 13 error variances (VAR?). Adding these up, we get 32 parameters to be estimated. You'll notice that for our measurement model, we have specified the variance of the latent factors to be 1 (VAR=1). This is done to allow estimation of all the factor loadings. Remember too that SEM requires large sample sizes. Several general rules have been put forth as lowest reasonable sample size estimates; at least 200 cases at a minimum, at least 5 cases per manifest or measured variable, at least 400 cases, at least 25 cases per measured variable, 5 observations or cases per parameter to be estimated, 10 observations or cases per parameter to be estimated...etc. The bottom line is this; SEM is powerful when done with adequately large samples - the larger the better. Another issue related to sample size, is the recommendation of having at least 3 manifest variables for each latent factor; with the suggestion of having 4 or more manifest variables for each latent factor ([Anderson & Gerbing, 1988](#)). Having 4 allows you the flexibility of deleting one if you find it does not contribute meaningfully to a latent factor or the model in general (e.g. it loads on more than one factor to a meaningful extent).

Another consideration is that of remaining realistic when setting out to study particular phenomena with SEM in mind as the analysis. It is often easy to develop some very complex models containing a great number of manifest variables. However, complex models containing more than 20 manifest variables can lead to confusion in interpretation and a lack of fit, as well as convergence difficulty. [Bentler and Chou \(1987\)](#) recommend a limit of 20 manifest variables.

Through out the rest of this article, we will be using two libraries to run the SEM on our example data. The [sem](#) library contributed by John Fox and the [lavaan](#) library contributed by Yves Rosseel. The sem library has existed for a few years now and offers “functions for fitting general linear structural equation models (with observed and unobserved variables) by the method of maximum likelihood using the RAM approach, and for fitting structural equations in observed-variable models by two-stage least squares” ([Fox, 2010](#)). The lavaan library is a relatively new package (May, 2010) which was created to make it easier for new R users to conduct latent variable modeling (e.g. confirmatory factor analysis, SEM, & latent growth curve models). The primary benefit of the lavaan library is the intuitive way in which models are specified. As you will see in the code below, the RAM approach used in the sem library tends to necessitate many more lines of code than is necessary to conduct the same model in lavaan. As an example of lavaan’s economy of code, consider the examples given in the lavaan users manual ([Rosseel, 2010](#)) for each type of linear specification.

```
# Regression or path equations

y ~ F1 + F2 + x1 + x2

F1 ~ F2 + F3

F2 ~ F3 + x1 + x2

# Latent variable definitions

F1 =~ y1 + y2 + y3

F2 =~ y4 + y5 + y6

F3 =~ y7 + y8 + y9 + y10

# Variances and covariances

y1 ~~ y1

y1 ~~ y2

F1 ~~ F2

# Intercepts

y1 ~ 1

F1 ~ 1
```

Again, you will see below how economical the lavaan library is when compared with the sem library; but, either can be used and the sem library offers a few more diagnostic functions than the lavaan library.

Using the sem library

Using the sem library to verify the measurement model on our example sem data (exsem), we first need to load the library, then create an object of the covariance matrix.

```
library(sem)

cov.sem <- cov(exsem)
```

Next, we need to specify the measurement model. Here, you will see the familiar RAM style specification which requires many lines.

```
measurement.model.1 <- specify.model()

personality -> extro, load11, NA

personality -> open, load12, NA
```


personality -> agree, load13, NA
engagement -> social, load14, NA
engagement -> cognitive, load21, NA
engagement -> physical, load22, NA
engagement -> cultural, load23, NA
crystallized -> vocab, load31, NA
crystallized -> abstruse, load32, NA
crystallized -> block, load33, NA
fluid -> common, load41, NA
fluid -> sets, load42, NA
fluid -> series, load43, NA
extro <-> extro, evar1, NA
open <-> open, evar2, NA
agree <-> agree, evar3, NA
social <-> social, evar4, NA
cognitive <-> cognitive, evar5, NA
physical <-> physical, evar6, NA
cultural <-> cultural, evar7, NA
vocab <-> vocab, evar8, NA
abstruse <-> abstruse, evar9, NA
block <-> block, evar10, NA
common <-> common, evar11, NA
sets <-> sets, evar12, NA
series <-> series, evar13, NA
personality <-> engagement, cov1, NA
personality <-> crystallized, cov2, NA
personality <-> fluid, cov3, NA
engagement <-> crystallized, cov4, NA
engagement <-> fluid, cov5, NA
crystallized <-> fluid, cov6, NA
personality <-> personality, NA, 1
engagement <-> engagement, NA, 1
crystallized <-> crystallized, NA, 1
fluid <-> fluid, NA, 1

Next, we can run the sem and assign the measurement model to an sem object (here called `m.model.1`). Then, we can get a summary of that object with 95% confidence intervals, as well as extracting the standardized coefficients from that sem object.

```
m.model.1 <- sem(measurement.model.1, cov.sem, 750, maxiter = 10000)

summary(m.model.1, conf.level=0.95)

standardized.coefficients(m.model.1)
```

We can also use that sem object to get a summary of the residuals and plot a histogram of those residuals.

```
summary(residuals(m.model.1))

hist(residuals(m.model.1))
```

Using the lavaan library

First, we need to detach the sem library, then we can load the lavaan library (this is necessary because both have an 'sem' function).

```
detach("package:sem")

library(lavaan)
```

Next, we need to specify the measurement model, but we do not need to use the RAM format and instead use a more linear-equation-like format.

```
measurement.model.2 <- '

Personality =~ extro + open + agree

Engagement  =~ social + cognitive + physical + cultural

Crystallized =~ vocab + abstruse + block

Fluid       =~ common + sets + series

'
```

Next, we can fit the measurement model (i.e. confirmatory factor analysis) while assigning it to an object (here called `m.model.2`). The `'std.lv = TRUE'` command sets the variance of all the latent variables to 1. The second line below provides a summary of the model. The `'fit.measures = TRUE'` command provides additional fit indices; by default only the chi-square is given. The `'standardize = TRUE'` command provides standardized coefficients/loadings.

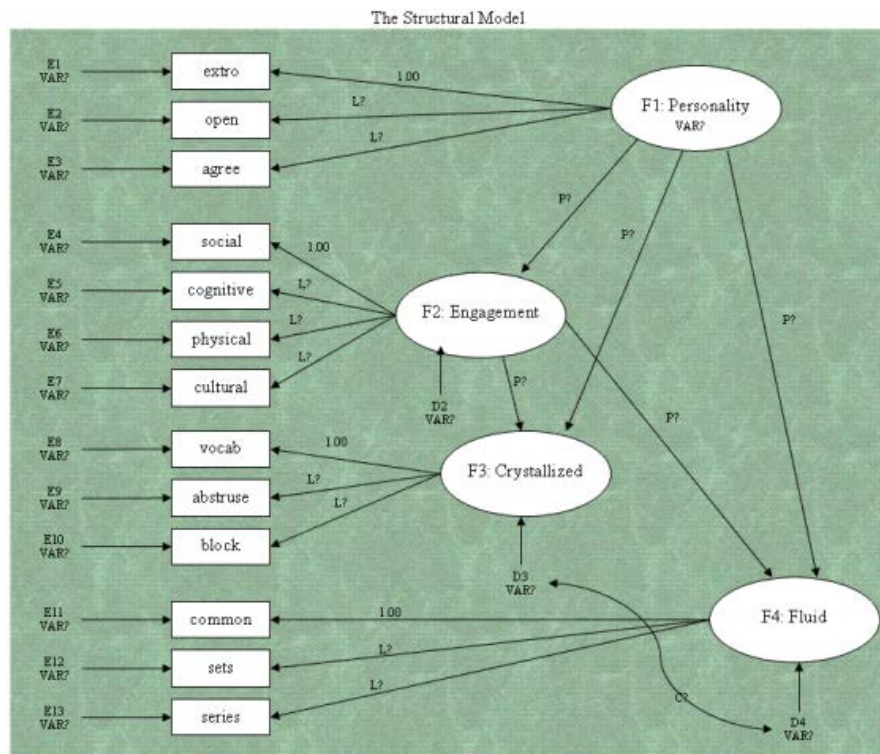
```
m.model.2 <- cfa(measurement.model.2, data = exsem, std.lv = TRUE)

summary(m.model.2, fit.measures = TRUE, standardize = TRUE)
```

Notice the coefficients are all the same when comparing the sem library output to the lavaan library output.

Stage 2: Testing the Structural Model.

Below you'll find a diagram which represents our structural model. Notice we are now concerned with the theoretical causal relationships between latent factors, those paths will be estimated. Also notice, the variances of the factors are no longer fixed at 1.00. This time, we must fix one of loadings from each of the factors to 1 in order to set the scale of the factors and estimate their variances (and disturbance terms). Often the first or the largest loading gets fixed to 1.00. Disturbance terms (D2, D3, D4) are new here and represent the error associated with each factor which can be thought of as any causal influence for that factor which was not included in the model. Also notice there is no disturbance term specified for our one exogenous factor (Personality); exogenous meaning, all of its causal influences lie *outside* the specified model. Disturbance terms are only specified for endogenous factors.



The structural model has the same number of unique informations and the same number of parameters as did the measurement model and is therefore, overidentified. That may not always be the case so it is often a good idea to create a diagram (or even simply a drawing) to identify the informations and parameters to be estimated and ensure overidentification.

Using the sem library

Using the sem library to test the structural model is very similar to what was done with the measurement model. The RAM specification has only a few changes to incorporate the estimation of the factor variances and factor paths. But first, we need to detach the lavaan library and attach or load the sem library.

```
detach("package:lavaan")
```

```
library(sem)
```

Next, we can specify the structural model.

```
structural.model.1 <- specify.model()
```

```
personality -> extro, NA, 1
```

```
personality -> open, load12, NA
```

```
personality -> agree, load13, NA
```

```
engagement -> social, NA, 1
```

```
engagement -> cognitive, load22, NA
```

```
engagement -> physical, load23, NA
```

```
engagement -> cultural, load24, NA
```

```
crystallized -> vocab, NA, 1
```

```
crystallized -> abstruse, load32, NA
```

```
crystallized -> block, load33, NA
```

```
fluid -> common, NA, 1
```

```

fluid -> sets, load42, NA

fluid -> series, load43, NA

extro <-> extro, evar1, NA

open <-> open, evar2, NA

agree <-> agree, evar3, NA

social <-> social, evar4, NA

cognitive <-> cognitive, evar5, NA

physical <-> physical, evar6, NA

cultural <-> cultural, evar7, NA

vocab <-> vocab, evar8, NA

abstruse <-> abstruse, evar9, NA

block <-> block, evar10, NA

common <-> common, evar11, NA

sets <-> sets, evar12, NA

series <-> series, evar13, NA

personality -> engagement, path1, NA

personality -> crystallized, path2, NA

personality -> fluid, path3, NA

engagement -> crystallized, path4, NA

engagement -> fluid, path5, NA

crystallized <-> fluid, cov1, NA

personality <-> personality, fvar1, NA

engagement <-> engagement, dist1, NA

crystallized <-> crystallized, dist2, NA

fluid <-> fluid, dist3, NA

```

Next, we can test the structural model by passing the covariance matrix from the beginning, and the structural model from just above, to the sem function and assigning it to an sem object (here named s.model.1). Then, we can get a summary of that object with 95% confidence intervals, as well as extracting the standardized coefficients from that sem object as was done previously with the measurement model.

```

s.model.1 <- sem(structural.model.1, cov.sem, 750, maxiter = 10000)

summary(s.model.1, conf.level=0.95)

standardized.coefficients(s.model.1)

```

Then, we can also evaluate the residuals as was done previously with the measurement model.

```

summary(residuals(s.model.1))

hist(residuals(s.model.1))

```

Using the lavaan library

First, we need to detach the sem library, then we can load the lavaan library.

```
detach("package:sem")
```

```
library(lavaan)
```

Next, we need to specify the measurement model. Keep in mind that by default, the lavaan library cfa and sem functions constrain the first loading to 1.00.

```
structural.model.2 <- '
Personality =~ extro + open + agree
Engagement  =~ social + cognitive + physical + cultural
Crystallized =~ vocab + abstruse + block
Fluid       =~ common + sets + series
Engagement  ~ Personality
Crystallized ~ Engagement + Personality
Fluid       ~ Engagement + Personality
Crystallized ~~ Fluid
'
```

Next, we can fit the structural model. Since we are testing the structural model and because of the default constraints, we do not need the extra command (`std.lv = TRUE`) which constrains all latent variable variances to 1.00 – because, by default the first loading of each latent variable is automatically constrained to 1.00 with the lavaan library functions.

```
s.model.2 <- sem(structural.model.2, data = exsem)
summary(s.model.2, fit.measures = TRUE, standardize = TRUE)
```

Notice the coefficients are all the same when comparing the sem library output to the lavaan library output; in fact, they are virtually identical with only rounding differences present.

Until next time, *I'll let you be in [my dreams](#) if I can be [in yours](#).*

References & Resources

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Short Courses

Plans are underway to resume teaching some instructor-led courses this semester, but a final schedule has not been set. **A MAJOR change has taken place WRT SPSS and SAS courses; they are now offered [online only](#).** RSS staff will be still be available for consultation on those topics, however. Another class available online is ***Introduction to R***. The RSS Instructional Services page was the *Benchmarks Online* "[Link of the Month](#)" in July.

Surf over to the [Short Courses](#) page to see instructions for accessing the SPSS and SAS online learning and other training that is available to you. You can also see the sorts instructor led courses that are likely to be held in the fall.

Special classes can always be arranged with the RSS staff. See "Customized Short Courses" below for further information. Also, you can ***always*** contact the RSS staff for one-on-one [consultation](#). **Please read the [FAQ](#) before requesting an appointment though.**

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](#) (they have a new comprehensive training curriculum), and the [Center for Learning Enhancement, Assessment, and Redesign](#). Additionally, the [Center for Achievement and Lifelong Learning](#) offers a variety of courses, usually for a small fee.

EIS training is [available](#). Questions or comments relating to EIS training should be sent to EISTCA@unt.edu.

Microsoft E-Learning

Microsoft E-Learning courses are now available for **faculty and staff** via our UNT-Microsoft Campus Agreement and some new Microsoft Office 2010 courses were recently added. Please contact Claudia Lynch at lynch@unt.edu for instructions on accessing this training.

Microsoft Outlook Tutorials and much more

The Messaging Systems Group has all sorts of useful information on their [website](#), including tutorials and FAQs. The home page displays a list of their newest tutorials with tutorial topic pages displaying the most accessed pages. You can search the site for whatever you're interested via a Search Box on the left-hand side of the page.

Central Web Support

Consult Central Web Support for assistance in acquiring "Internet services and support." As described on their [website](#):

CWS provides Internet services and support to UNT faculty, staff and students. Services include allocating and assisting departments, campus organizations and faculty with web space and associated applications. Additionally, CWS assists web developers with databases and associated web applications, troubleshooting problems, support and service.

CLEAR (was Center for Distributed Learning)

[CLEAR](#) 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 [CLEAR Website](#).

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/>

Information Security Awareness

The UNT Information Security team has been offering Information Security Awareness [courses](#) to all UNT faculty and staff. Topics to be covered will include workstation security, sensitive data handling, copyright infringement issues, identity theft, email security, and more.

For more information, or if you would like to request a customized course to be taught for your department, contact Gabe Marshall at x4062, or at security@unt.edu.

Also, Information Security Training is [now available](#) through Blackboard Vista (formerly known as WebCT).

Alternate Forms of Training

Many of the General Access Labs around campus have tutorials installed on their computers.

See <http://www.gal.unt.edu/> for a list of labs and their locations. The Willis Library, for example, has a [list of Tutorials and Software Support](#). The Library Instructional Unit also offers workshops and training, including "tech skills" training. Visit their websites for more information: <http://www.library.unt.edu/library-instruction>

The [Training Website](#) has all sorts of information about alternate forms of training. Computer Based Training (CBT) and Web-based training are some of the alternatives offered, although due to the rising costs of training, shrinking budgets and changing technology, computer-based training at UNT is in a state of transition. For up-to-date information on CBT at UNT, see the CBT [website](#).

Gartner Research Services

Way back in 2006 we announced [Gartner Core Research Services Now Available to the UNT Community](#). Our subscription for Gartner services has always included **all** UNT faculty, students, and staff. All you need to do to access the subscription is to log into the UNT Gartner portal page at <https://gartner.unt.edu/>. Gartner is now offering "Webinar Wednesdays." To view all the offerings see: http://my.gartner.com/portal/server_pt?tbb=webinarcalendar You can also listen to Gartner podcasts here: http://www.gartner.com/it/products/podcasting/asset_137461_2616.jsp.

State of Texas Department of Information Resources

Another possible source of training for staff and, perhaps, faculty members is the Texas Department of Information Resources. A look at their Education and Training [website](#) reveals some interesting possibilities.



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Transitions

New Employees:

- **Kyle Fincher**, MMS Tech, Microcomputer Maintenance Shop (part-time).
- **Travis Rogers**, MMS Tech, Microcomputer Maintenance Shop (part-time).
- **Venkata Yarlagadda**, AIS Training- Web Developer (part-time).
- **Aravind Vadde**, ACUS Lab monitor (part-time).
- **Rashad Robinson**, IT Technician, Computer Operations (Formerly Computer Operations assistant part-time).
- **Arthur Pichon**, Computer Operations assistant (part-time).
- **Simone Kendle**, Computer Operations assistant (part-time).
- **Matthew Randall**, Helpdesk Microcomputer Consultant (part-time).
- **Jegede Oladayo**, ACUS Lab monitor (part-time).
- **Adam Johnson**, ACS Lab monitor (part-time).
- **Gwen Rene Arcand**, IT Programmer Analyst, Finance & Admin. Systems (AIS).

No longer working in the Computing and Information Technology Center:

- **Keith Bicsak**, MMS Tech, Microcomputer Maintenance Shop (part-time).
- **Kavya Chunduri**, AIS Training- Web Developer (part-time).
- **Jegede Oladayo**, ACUS Lab monitor (part-time).
- **Lynne Sinclair**, IT Programmer Analyst, EIS Application Infrastructure Management (AIS).
- **Wesley MacKay**, Computer Operations assistant (part-time).
- **Nancy Fisher**, IT Manager, CITC Infrastructure & Technical Services, *Retired* after 22 years of service.
- **Abhinav Shrivastava**, ACUS Lab monitor (part-time).
- **Sree Peri**, ACUS Lab monitor (part-time).
- **Travis Fraser**, Student Assistant Data Communications (part-time).
- **Emmanuel Ogunsona**, Technician, Classroom Support Services (part-time).
- **Christopher Mlynski**, CSS Tech, Classroom Support Services (part-time).

- **Antho**n McCoy, CSS Tech, Classroom Support Services (part-time).
- **Aaron McAdams**, CSS Tech, Classroom Support Services (part-time).
- **Matt Conner**, MMS Tech, Microcomputer Maintenance Shop (part-time).
- **Daphne Glasgow**, CSS Tech, Classroom Support Services (part-time).
- **Stephen Lane Davis**, CSS Tech, Classroom Support Services (part-time).

Changes, Awards, Recognition, Publications, etc.

Personnel Changes

- **Maurice Leatherbury**, long-time Senior Director, CIO, etc. of CITC will be retiring at the end of the month (As this month's [Campus Computing News](#) article states "In addition to a long tenure, Maurice has had some very long titles in his time at UNT" :). President Rawlins recently met with the CITC senior managers and [announced](#) that **John Hooper** has been named **Acting Vice President for Information Technology & Chief Information Officer**, effective on the day of Dr. Leatherbury's retirement. The University is hosting a [Retirement Reception](#) for Dr. Leatherbury on Friday, September 24.
- **Tom McElwee**, Director Enterprise Systems Technical Services has announced that **Craig Terrell** (Directory Services & Virtualization) has been selected to manage the Infrastructure Technical Services (ITS) team, taking over after Nancy Fisher's retirement. *VM Services* will become part of ITS and also be under Craig's leadership. *Directory Services* will move to Messaging Services Group under the leadership of **Jason Myre**.

Service to UNT

InHouse [recently recognized](#) **Catherine "Cathy" Gonzalez**, EIS Training/Computing Administration Manager (AIS) for her **15 years** of service to UNT. Also recognized, for **10 years** of service, were **Kenneth "Ken" Sedgley**, Manager Telecommunications, and **Tracy Hansen**, Imaging Services Manager. **Kevin Cox**, IT Programmer Analyst, 5 years of service. Congratulations one and all!

Soaring Eagles

Congratulations to **Kevin Cox**, IT Programmer Analyst, EIS Application Infrastructure Management (AIS), **Bruce Pollock**, IT Manager, Administrative Info. Tech. Services, and **Richelle Ray**, Computer Support Specialist, Administrative Info. Tech. Services who were recognized as *Soaring Eagles* in the September/October 2010 HR Connections [Newsletter](#).

Fun Fact Winners

Continuing the CITC tradition, we have some more *InHouse* prize winners. Congratulations to:

- **Lip-Yew Sim**, Programmer Analyst, Student Financials Systems Development (AIS). was a winner in August 25 *InHouse* [prize giveaway](#).
- **Angela Moore**, Administrative Assistant, was a winner in a September 1 *InHouse* [prize giveaway](#).
- **Robert Blake**, Programmer Analyst, Application Infrastructure Mgmt (EIS). was a winner in September 8 *InHouse* [prize giveaway](#).



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Managing Your Spam

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

The idea of "managing" spam may seem ridiculous at first, but due to the tireless efforts of a number of people in the CITC over a number of years, it really has come to the point that we all need to take an active role in managing what is defined as "spam" by various systems in place here at UNT.

Spam, an overview

Before we get into the nitty-gritty of managing spam, lets talk about what, exactly, spam is. Spam, for the purposes of this article, is defined as "unsolicited or undesired electronic messages." The [wikipedia entry](#) where that definition came from states that there are many types of electronic spam, including:

- [E-mail spam](#) -- unsolicited e-mail.
- [Instant Messaging spam](#) ("SPIM") -- use of instant messenger services for advertisement or even extortion.
- [Newsgroup spam](#) -- advertisement and forgery on newsgroups.
- [Forum spam](#) -- posting advertisements or useless posts on a forum.
- [Mobile phone spam](#) -- unsolicited text messages.
- Online game messaging -- usually applies to all forms of message flooding, violating the terms of service contract for the website.
- [Spamdexing](#), manipulating a search engine to create the illusion of popularity for webpages.
- [Spam in blogs, wiki, and guestbook](#) -- posting random comments or promoting commercial services to blogs, wikis, guestbooks.
- Spam targeting video sharing sites - Video sharing sites, such as YouTube, are now being frequently targeted by spammers.
- Noncommercial forms -- People with a "message," frequently religious or political.

We're only concerned with E-mail spam in this article*.

How can I manage my spam?

First of all make it a habit to check your spam, or junk mail folders every few days. You might be surprised what gets put in there. You also need to check messages quarantined by the UNT anti-spam/anti-virus system, IronPort.

Outlook

If you click on **Help** at the top of the Outlook screen and then search on **Junk** topics like the following will come up:

- Update **junk** e-mail filters in Outlook
- Change the level of protection in the **Junk** E-mail Filter

- Overview of the **Junk** E-mail Filter
- Empty the **Junk** E-mail Folder
- Review messages moved to the **Junk** E-mail folder
- Lots, and lots more ...

UNT Spam Quarantine

You should make a habit of checking for messages that have been quarantined by the UNT mail host system at least once every two weeks. This is because of the anti-spam/anti-virus software system, IronPort, that was installed back in 2007. To view your quarantined messages, go to <http://spam.unt.edu> and log in with your EUID and password. If a legitimate e-mail message was quarantined, check the box next to the message and then indicate that the message should be released for delivery by choosing an action - options include Release, Release and add to Safe List, or Delete - from the "Select Action" area and then clicking the Submit button.

If you receive a spam message in your regular inbox, forward it, **as an attachment**, to spam@access.ironport.com and IronPort will tweak their spam detecting rules to block that kind of message in the future.

More information about using UNT Spam Quarantine can be found by clicking on the word **Help** in the top left-hand corner of the spam.unt.edu screen and then choosing **Online Help** after you log-in to spam.unt.edu.

If you want to read up on UNT Spam Quarantine without logging-in, you can visit: https://spam.unt.edu/help/enduser_help.

If you need further information with regard to the UNT E-mail gateway, please contact Bahram Paiani at postmaster@unt.edu.

This is an updated version of an article that was originally published in February of 2008.

*By the way, did you know that spam is not new? In fact, spam delivered via the Internet or other electronic means celebrated its [30th birthday](#) in 2008. Really. Oh, and the term spam comes from the Monty Python [Spam sketch](#) which was first televised in 1970. See [Brad Templeton's](#) article [Origin of the term "spam" to mean net abuse](#) for further details.



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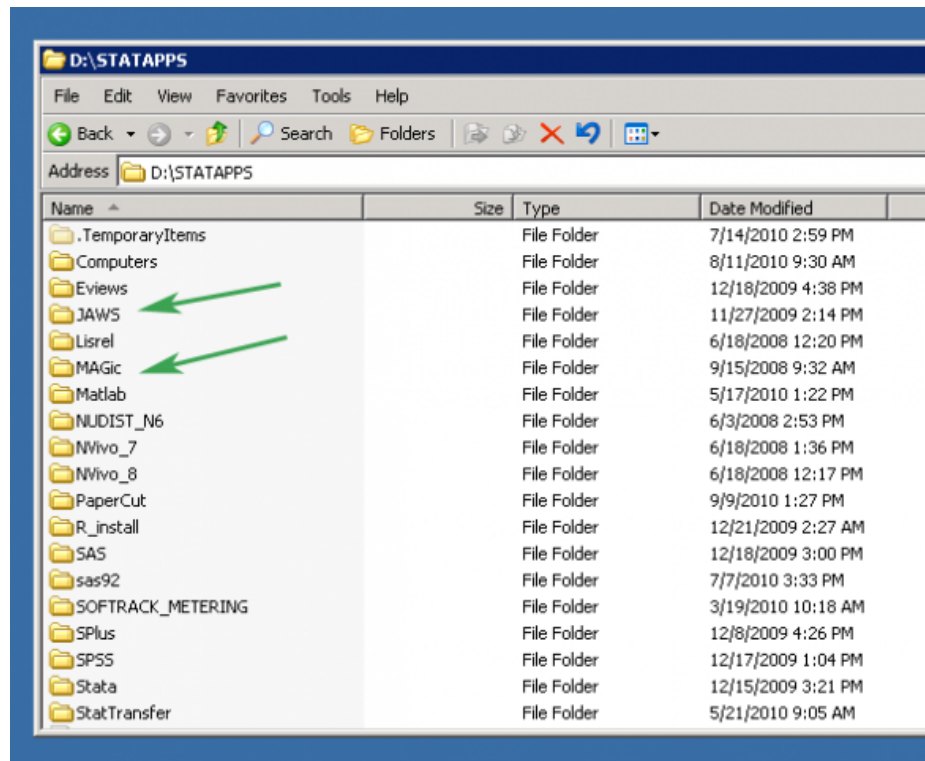
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JAWS and MAGic 11 Updates

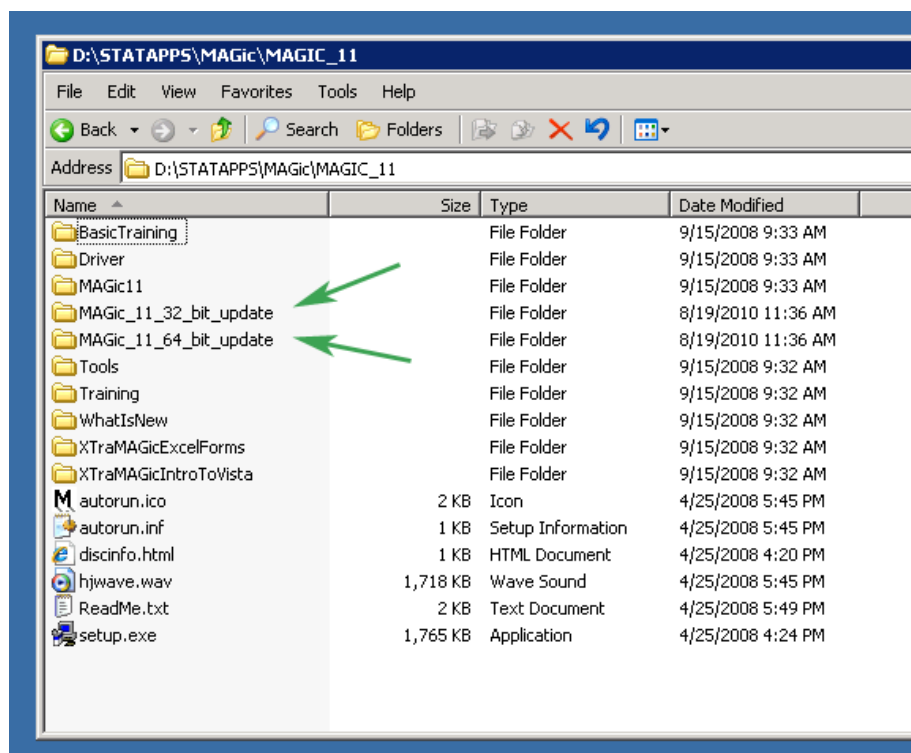
By [Dr. Elizabeth Hinkle-Turner](#), Assistant Director - Academic Computing and User Services

Freedom Scientific has released updates for both JAWS 11 and MAGic 11 and most areas should already have these established on their desktops where appropriate. The most important feature of these updates is that they are available for either 32-bit or 64-bit Windows 7. Many departments at UNT are beginning to deploy 64-bit Windows 7 with 32-bit Office 2010. The 64-bit versions of JAWS and MAGic have been thoroughly tested with this configuration by CITC ACUS personnel and managers should install the version that matches their Windows 7 choice.

Installation and licensing configuration for these applications has not changed and I can be contacted for license server info as needed. To access the updates first go to `acsllicense2.acs.unt.edu\statapps`:



Be sure that you select the correct update; the folders are clearly marked as "32-bit" or "64-bit" update. Run the **setup.exe** that is located *inside* those folders:



In addition to their 64-bit availability, these new versions of JAWS and MAGic also support multiple monitors - a first for these products. They also specifically support Office 2010 and Internet Explorer 8. Other enhancements are detailed [on this page for MAGic](#) and [on this page for JAWS](#).

Any further questions about these products should be directed to [Elizabeth Hinkle-Turner](#).



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A New Information Security Announcement Board

By [Glenn Thorpe III](#), GSEC, Incident Response & Forensic Analyst

Information Security has created an announcement board on UNTranet to post important security updates/alerts as an additional security resource. The site is geared mainly toward Network Managers, but other UNT faculty/staff may also want to access the information. The site has been set up in such a way that you can choose how you receive the information; you can receive email alerts (instantly, daily, or weekly), you can put it in RSS, or you can sync it to Outlook.

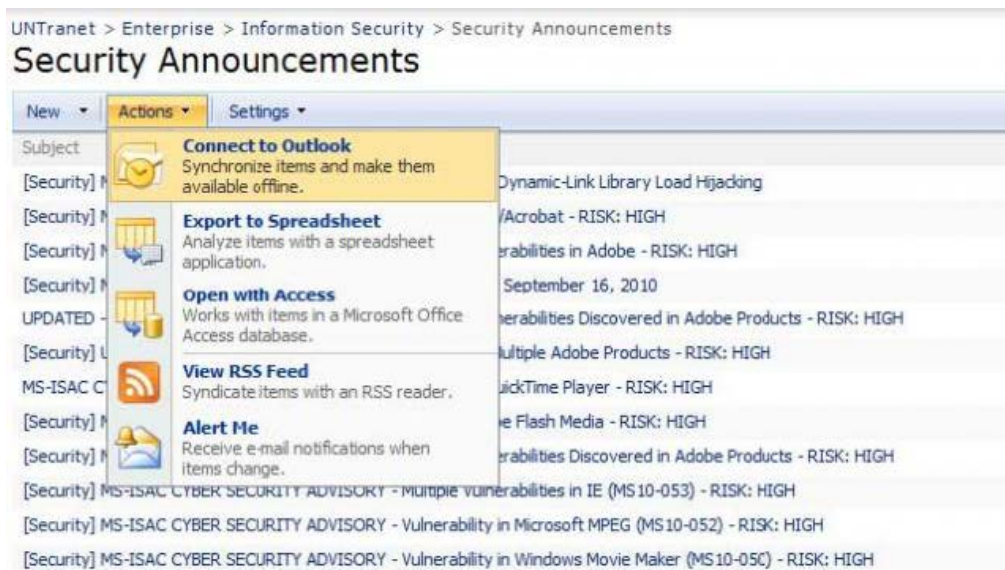
The following screenshots show you various ways to access the latest Information Assurance Announcements:

Discussion Board

Information Assurance Announcements are now accessible through:

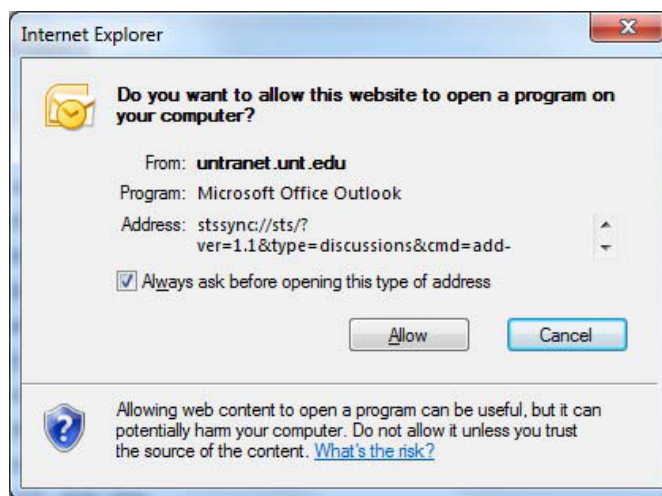
<https://untranet.unt.edu/enterprise/security/Lists/Security%20Announcements/AllItems.aspx>

The actions tab allows you to retrieve the information from Outlook, via RSS, and email alerts.



Connect to Announcements with Microsoft Outlook

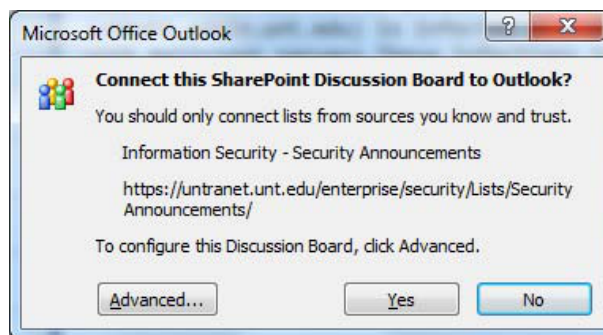
If you prefer to use Outlook, click 'Connect with Microsoft Outlook' under the Actions tab and you will be presented with a series of prompts.



Confirm that UNTRANET is allowed to access executables.

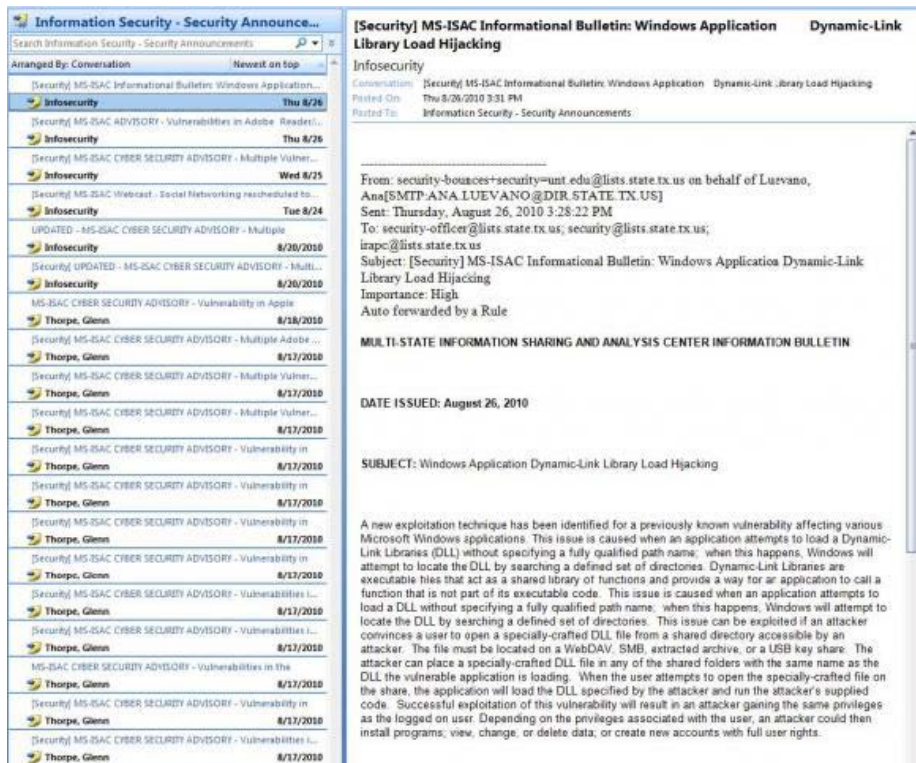


Confirm that UNTRANET is allowed to access Outlook.



Click Yes to allow the connection.

In Outlook, click on 'Sharepoint Lists,' once expanded, Information Security – Security Announcements can be read from Outlook.

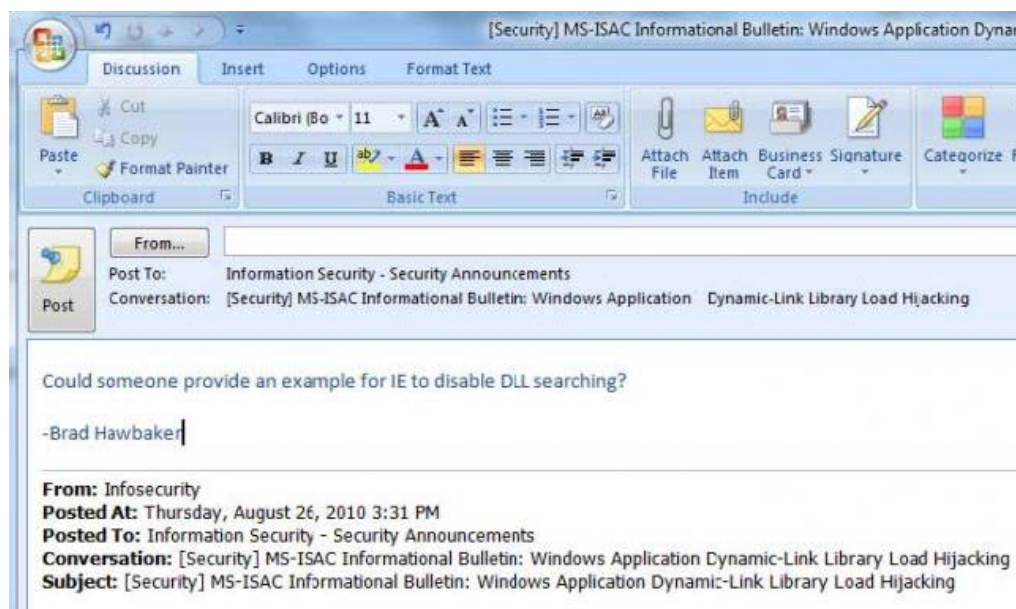


When the discussion board is synced in this way, you can make replies to the current post within Outlook. "Post Reply" will reply to the message board, whereas "Reply" will send an email to the author.

Replying to a Discussion within Outlook



Here is a reply being posted to the Discussion Board.



The reply can be found within Outlook and online.



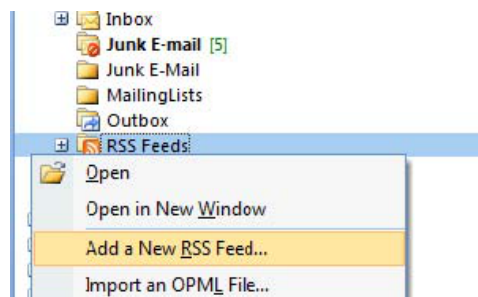
RSS (Really Simple Syndication) Feeds

RSS feed: Click Actions > RSS Feed or the manual url is

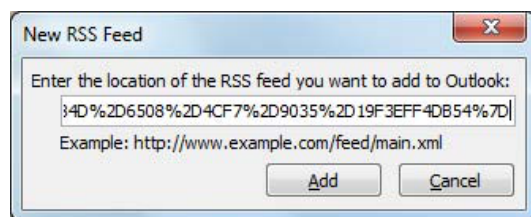
<https://untranet.unt.edu/enterprise/security/layouts/listfeed.aspx?List={2B6DB5E0-34AE-403F-91D9-2B75AF4D8721}>

RSS feeds can be managed with a number of applications, including Outlook, Internet Explorer, Google Reader, Liferea, and RSS Runner. An RSS feed can be added to Outlook by right-clicking on the RSS feeds container, selecting Add a New RSS Feed, and adding the above link.

RSS in Outlook



Copy and paste the link into the prompt.

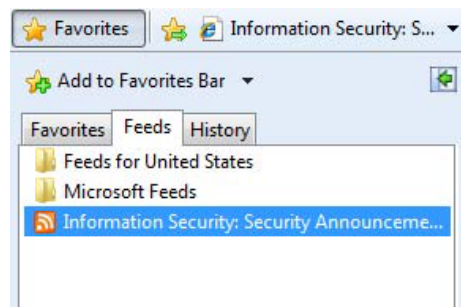


RSS in Web Browsers

If you follow the above link directly to the web page, you can make the RSS feed accessible through most web browsers. Click on Subscribe to this Feed to add it. [Optionally you can have it added to the Favorites Bar for quick access.]



Then click on Favorites, and the feed should be displayed there.



User Alerts

You can have the discussions topics sent to an email account at specified times by choosing Actions > Alert Me from the Security Announcements Discussion Board web page.

UNTranet > Enterprise > Information Security > Security Announcements > New Alert

New Alert

Use this page to create an e-mail alert notifying you when there are changes to the specified item, document, list, or library.

View my existing alerts on the site.

OK Cancel

Alert Title Enter the title for this alert. This is included in the subject of the e-mail notification sent for this alert.	<input type="text" value="Security Announcements"/>
Send Alerts To You can enter user names or e-mail addresses. Separate them with semicolons.	Users: <input type="text" value="Hewbaker, Bradford"/>
Change Type Specify the type of changes that you want to be alerted to.	Only send me alerts when: <input checked="" type="radio"/> All changes <input type="radio"/> New items are added <input type="radio"/> Existing items are modified <input type="radio"/> Items are deleted
Send Alerts for These Changes Specify whether to filter alerts based on specific criteria. You may also restrict your alerts to only include items that show in a particular view.	Send me an alert when: <input checked="" type="radio"/> Anything changes <input type="radio"/> Someone else changes a post <input type="radio"/> Someone else changes a post created by me <input type="radio"/> Someone else changes a post last modified by me
When to Send Alerts Specify how frequently you want to be alerted.	<input checked="" type="radio"/> Send e-mail immediately <input type="radio"/> Send a daily summary <input type="radio"/> Send a weekly summary Time: Monday = 11:00 AM

OK Cancel

You can specify which account you would like to have it sent to, what types of events would trigger an alert, and how often alerts should be sent.



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Today's Cartoon

© Randy Glasbergen / glasbergen.com



**“In lieu of a raise or promotion,
I will agree to friend you on Facebook.”**

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