Information Technology, Here and There

By John Hooper, Acting Vice President for Information Technology and CIO for UNT, Deputy CIO for the UNT System

Recent announcements regarding the organization of Information Technology services within the UNT system may have readers wondering about how they will continue to receive IT services as we move forward under this new arrangement. The good news is that for those at most UNT system campuses and offices services will continue to be provided in the same manner and in most cases by the same people and IT groups that have historically been providing this support. There are a few changes coming to the names of the IT organizations at both the UNT System and the UNT flagship campuses that will replace the Computing and information Technology Center (CITC) name that is familiar to many.

Read more

JAWS 13 has arrived!

By Dr. Elizabeth Hinkle-Turner, Director - Academic Computing Technical Service

Just in time for the holidays, Freedom Scientific Santa (FSS for short) has delivered JAWS 13. Particularly notable in this new version of JAWS is its "Convenient OCR" (Optical Character Recognition) which allows users to access any image on their screen that includes text. Images that contain text information include PDFs, the setup screen of an application or a DVD menu. Past versions of JAWS could not read this text that is part of the image file.

Read more

Blackboard Learn, Release 9.1 Arrives at UNT

By Jane Himmel, Associate Director, CLEAR

This fall the University of North Texas began its transition to a new learning management system platform, Blackboard Learn 9.1. This move represents the first major LMS platform change since 2003 when the campus moved from WebCT Campus Edition to WebCT Vista. All UNT campuses have used the most recent version of Blackboard (formerly WebCT) Vista since 2007.
Faculty Evaluation Processing Tips

By JoAnn Luksich, Data Manager, Academic Computing and User Services

Make sure you have the latest information when you prepare departmental evaluations for processing by Data Management. Following are some tips that will help to ensure your evaluations are processed in a timely manner.

Winter Break Hours

By Claudia Lynch, Benchmarks Online Editor

The fall semester is over, winter is upon us; time to rest, relax, catch up on things that were put aside, and generally take a break from what had become your routine these past few months. The following information should help you plan your activities if you need/want to access campus computing facilities over the break.

Today’s Cartoon

Click on the link above for an information age laugh.
Recent announcements regarding the organization of Information Technology services within the UNT system may have readers wondering about how they will continue to receive IT services as we move forward under this new arrangement. The good news is that for those at most UNT system campuses and offices services will continue to be provided in the same manner and in most cases by the same people and IT groups that have historically been providing this support. There are a few changes coming to the names of the IT organizations at both the UNT System and the UNT flagship campuses that will replace the Computing and information Technology Center (CITC) name that is familiar to many.

In the August 2011 issue of Benchmarks Online, it was announced that employees from several divisions of the CITC would be moving from employment by UNT to employment by the UNT system and that other parts of the CITC would remain as local resources. Additional information on shared and local IT services under the new scheme were documented in the September 2011 issue. The employees in the shared IT divisions began reporting to the UNT System as of September 1 and those employees were transferred to the UNT System payroll as of December 1, 2011.

Some New Names

September also saw the launch of the name Information Technology Shared Services (ITSS) for the IT divisions now under UNT System management. A fledgling website has already been established for ITSS at http://it.untsystem.edu/. More information about the management structure of ITSS will be forthcoming as this new organization continues to be defined.

The local IT services remaining associated with the UNT flagship campuses are Academic Computing and User Services (ACUS), Administrative Information Technology Services (AITS), Classroom Support Services (CSS), and Microcomputer Maintenance Services (MMS). These former divisions of the CITC will now operate under the name, University Information Technology (UIT).

The CITC name and branding will gradually be retired in favor of these new organization names. Since it may take a while to “disentangle” the elements that were formerly parts of the CITC, you may continue to see that name in documentation and be referred to parts of the CITC website until new online resources can be created. Benchmarks Online, however, will remain accessible at http://www.unt.edu/benchmarks/.

Some New Roles

As previously reported in inHouse, I will continue to serve as UNT’s vice president for Information Technology and chief information officer while taking on the position of deputy chief information officer for the UNT System. Dr. Philip Baczewski has been appointed deputy chief information officer for UNT. The UNT UIT divisions discussed above will report to Dr. Baczewski who will report directly to me. For now, Dr. Baczewski, who has been Director of Academic Computing and User Services (ACUS) since 2005, will continue to directly manage ACUS.

Katy Gallahan, previously with AITS ABN support, has accepted a position with UNT System ITSS as the director responsible for UNT System IT support services. Katy will be responsible for providing IT support services to all of the functions that have moved to the UNT System including the BSC, ITSS, the system offices, and other system units at locations on the UNT campus and elsewhere. In addition, she will be responsible for IT support services for UNT Dallas that is outsourcing their IT operations to ITSS. A few other staff members from AITS will be moving as well as a result of the transfer of their support load to the system.

Same Service Provision
In spite of the changes happening in the management of IT services at the UNT System and UNT Campuses, most people should not notice any day-to-day change in the IT service they are receiving or in who is providing that service. While technically separate organizations UIT and ITSS will continue to closely coordinate and work together to ensure a high-quality IT environment for the UNT campuses. Members of UNT academic departments will still continue to receive their desktop support from the academic IT staff. Furthermore, all members of the UNT community can still contact the UIT Help Desk if they have an IT question for which they can't find an answer.

Organization Charts

- **ITSS Organization Chart December, 2011** -- See the attached PDF file.

- **UIT Organization Chart December, 2011** -- See the attached PDF file.
JAWS 13 has arrived!

By Dr. Elizabeth Hinkle-Turner, Director - Academic Computing Technical Service

Just in time for the holidays, Freedom Scientific Santa (FSS for short) has delivered JAWS 13. Particularly notable in this new version of JAWS is its "Convenient OCR" (Optical Character Recognition) which allows users to access any image on their screen that includes text. Images that contain text information include PDFs, the setup screen of an application or a DVD menu. Past versions of JAWS could not read this text that is part of the image file.

Now, with a few key combinations, users can recognize such an image and activate the JAWS cursor so that the application can read the text on the image. A full list of the keystroke combinations (and other new JAWS 13 features) can be found on the JAWS 13 new features announcement webpage. Other new features include Quick Settings which allows users to adjust JAWS options for documents and keep these adjustments persistent even after a reboot and enhanced table navigation keystrokes. Finally, JAWS 13 is compatible with Citrix XenDesktop and works better with a variety of virtual machine solutions.

Network managers who receive requests to install JAWS 13 for their users will find the application on the ACUS application server in the same share as the statistics applications. In the JAWS 13 folder, both 32-bit and 64-bit versions are available as well as extensive documentation on how to install and license the product:

Network managers are reminded that UNT also has MAGic screen magnification software for use. The current version of MAGic is version 11. For further questions about JAWS and MAGic licensing and installation, please see the extensive documentation on the application server and/or contact ehinkle@unt.edu.
Blackboard Learn, Release 9.1 Arrives at UNT

By Jane Himmel, Associate Director, CLEAR

This fall the University of North Texas began its transition to a new learning management system platform, Blackboard Learn 9.1. This move represents the first major LMS platform change since 2003 when the campus moved from WebCT Campus Edition to WebCT Vista. All UNT campuses have used the most recent version of Blackboard (formerly WebCT) Vista 8 since 2007.

The UNT System’s Distributed Learning Support (DLS) unit and UNT’s Center for Learning Enhancement, Assessment, and Redesign (CLEAR) are coordinating the move to Learn 9.1 (http://learn.unt.edu). During the spring, 2011, DLS installed hardware, configured, and tested the system while CLEAR developed training. Over the summer CLEAR prepared a small group of faculty to pilot courses on the new platform during the Fall 2012 semester.

It is anticipated that approximately 2,500 course sites currently on Blackboard Vista will need to be migrated to Blackboard Learn 9.1. Using a phased transition approach, the units will support both Vista and Learn simultaneously until the end of Fall 2012 when Vista will no longer be a production system.

While the move to Learn 9.1 is necessary because Blackboard, Inc. will soon end support of Blackboard Vista, the move is also desired due to technological advances that have occurred since Vista was designed, which make it somewhat obsolete. Instructors and students are sure to be pleased with the new tools available to them in Learn 9.1, which were designed with an eye to improving both educator efficiency and student collaboration. Additionally, Blackboard Learn 9.1 has been awarded with Nonvisual Accessibility Gold Certification by the National Federation of the Blind (NFB), making it the first and only learning management system to achieve certification.

Top 10 Reasons You Will Love Blackboard Learn 9.1!

1. **BB Mobile availability** - access course content virtually anywhere!

2. **TurnItIn** - assignments can be copied to new sections so you don’t have to recreate them every semester

3. **GradeCenter** - calculated columns are easier to create and edit without long cumbersome formulas

4. **Smart Views** - allow you to quickly find data matched on a customized set of criteria

5. **Early Warning System** - helps recognize when there is a performance problem based on a test score, calculated column, missed due dates, or course access.

6. **Course entry page** - can be changed to different content areas or a course tool

7. **Built in Wiki** - tool for group sharing and collaborating

8. **Performance dashboard** - provides user information about progress and activity in the course
9. **Course tasks** - organize projects or activities for users

10. **Media** - audio, video, YouTube, and flash is easily embedded into course content pages

Those providing support to end users on Blackboard Learn 9.1 will be also pleased that there are fewer and less stringent requirements for Java, OS, and browser versions than for Blackboard Vista. (A complete list of supported browsers and operating systems for the latest release can be found here: [http://bit.ly/upENgL](http://bit.ly/upENgL).

### Migration Schedule

The plan to move to Blackboard 9.1 was first announced to current Blackboard Vista faculty users early in the fall semester. Instructors were invited to request migration for spring, summer, or fall 2012. The deadline to migrate a course to be delivered in spring 2012 has passed, but instructors planning to teach on Learn in summer or fall are encouraged to request a migration soon. All courses must be migrated by the spring 2013 semester. Vista cannot be used for course delivery after fall 2012.

To request the migration of a Vista course, please fill out the [migration request form](http://bit.ly/upENgL).

<table>
<thead>
<tr>
<th>Semester on Learn</th>
<th>Request Deadline</th>
</tr>
</thead>
<tbody>
<tr>
<td>Summer 2012</td>
<td>April 14, 2012</td>
</tr>
<tr>
<td>Fall 2012</td>
<td>August 1, 2012</td>
</tr>
<tr>
<td>Spring 2013*</td>
<td>November 27, 2012</td>
</tr>
</tbody>
</table>

### Training

Although the new system offers features and tools that users will like, it does represent a significant change in terms of its interface, navigation, and functionality. Users, particularly instructors and course designers, will face a learning curve. It is strongly recommended that faculty moving to Blackboard Learn start early and take advantage of the many workshop opportunities offered by CLEAR when planning their move to Blackboard Learn 9.1. During the spring semester CLEAR will expand its training offerings from conducting only face-to-face workshops to delivering facilitated online training courses to assist faculty with mastering Blackboard Learn. In the meantime, [Blackboard’s On Demand Learning Center](http://ondemand.blackboard.com) provides short, self-paced videos for instructors who wish to learn more about a particular tool. Instructors may also be interested in exploring highlights of some of the top features and workflows of Blackboard Learn at [Blackboard’s Feature Showcase](http://bit.ly/upENgL).

### “Pardon Our Construction”

Because both Blackboard Vista and Blackboard Learn will be used for delivering courses over the next twelve months, it is vital that the transition be as transparent as possible for students. Based on fall 2011 data, 36,730 students were enrolled in classes that used Blackboard Vista for online, blended, or web-enhanced courses. Course sections will continue to be created in Blackboard Vista through the migration project. Students enrolled in courses that are delivered in Blackboard Learn will find a link on their Vista course site that opens their section in Learn. A Blackboard-developed tutorial on the new platform as well as help from the [On-Demand Learning Center](http://ondemand.blackboard.com) will help students learn how to submit assignments and use the various tools in Learn 9.1.

Basic information and the timeline for the Learn 9.1 migration can be found on the [Bb Learn Upgrade](http://bit.ly/upENgL) tab at [http://ecampus.unt.edu](http://ecampus.unt.edu). For questions about UNT’s move to Blackboard Learn 9.1, please email the CLEAR Faculty Helpdesk at [clearhelp@unt.edu](mailto:clearhelp@unt.edu).
IQ Test

In case you missed it, there was recently a major disturbance rippling through the cellular force. To put that in non-geek terms, there was recently a controversy regarding cell phones and the potential for those devices to be used to spy on their users. It all revolved around a company and software called Carrier IQ. The software is installed on many popular cell phones supposedly to allow cell phone carriers to monitor the service quality being received by their customers. However, one recent online report showed that the software could potentially gather much more detailed information than general measures of service quality.

A systems administrator named Trevor Eckhart recently published a report that detailed the kinds of information that Carrier IQ was logging on his HTC Android phone. His observation showed that location information, SMS message content, secure web content, and individual key presses were being monitored by the Carrier IQ software and could potentially be gathered by cell phone carriers or be exploited by nefarious software loaded on a phone. Other reports have disputed some of the claims, but confirmed others and recommended that consumers be able to opt out of this or any sort of data collection.

Should I be worried?

How serious are these claims? Serious enough for some to question if the Carrier IQ software violates wiretap laws. Carrier IQ has also apparently had some explaining to do to the Federal Trade Commission (FTC) and the Federal Communications Commission (FCC). And, Senator Al Franken has made detailed inquiries to cell phone carriers and manufacturers in regard to how they use the data generated from the Carrier IQ software.

So now what are we supposed to do? Just as we are becoming totally dependent upon Siri to run every aspect of our lives, we find that there may be a spy looking over her shoulder at our every cellular move. Perhaps this is a bit of an exaggeration, but it's not comforting that Carrier IQ, in a recent document responding to the concerns about their software stated, "The source of personal information in Android log files shown by Trevor Eckhart in his video is a result of debug settings remaining in production devices and should be classified as vulnerability." In other words, whether intentionally or unintentionally, their software can be exploited to reveal information that normally would be private. That's not exactly comforting.

Perhaps you are thinking, "I have nothing to hide that you could see on my cell phone." Daniel J. Solove takes on that argument in a recent article in the Chronicle of Higher Education with the questions, "So do you have curtains" and "Can I see your credit-card bills for the last year?" The fact is we all have things to hide and are right to do so. We hide our bank account access from those who would steal our money. We hide our online passwords from those who would misuse our online accounts. Many in the world must hide their views from governments who would oppress them for what they think. And as we use our cell phones more and more for the commerce of our daily lives, we must have the confidence that those transaction are secure from ones who would use the information to rob or suppress us.

What do we know now about Carrier IQ software and the folks that bring us our phones and the networks they run on? They didn't tell us it was installed. They didn't allow us to opt out. They've as much admitted that the Carrier IQ software can be exploited via a security vulnerability. To their credit, Sprint has announced that they will order manufacturers to remove the Carrier IQ software from the phones they supply to Sprint. We'll see if the rest of the industry follows suit. In the mean time, I don't think this is the last we'll hear of Carrier IQ.

Thank a Geek
Do you trust the technology you use? Should you? Perhaps it may seem to some that he overreacted, but I think Trevor Eckhart should be lauded for bringing this to the public’s attention. No one is criticizing the cell phone carriers for wanting to improve their service quality, but oftentimes there are unintended consequences if activities don’t have checks and balances to ensure that all interests are being equally or at least fairly served. Carrier IQ software had the potential to do a tremendous disservice to the cell phone using public in the same way that computer viruses used to and in some cases still easily exploit vulnerabilities in computer operating systems. So, if you do feel secure in your technology use, thank those like Trevor Eckhart who have the understanding and initiative to bring these kinds of issue to our attention. Maybe the next time you see them, you should thank your local technology geek.
Link of the Month

Business Service Center

The Business Service Center, according to their homepage, "was officially established September 1, 2011 to offer selected business services to member institutions in an effort to realize process efficiencies and cost-effectiveness in how these services are delivered." Member institutions include UNT, the UNT Health Science Center, UNTD, and the UNT System Administration. The BSC service areas are Client Services, General Accounting, Historically Underutilized Business Administration, Human Resources, Information Services, Payments, Payroll, and Purchasing.

There are some "Quick Links" on the homepage including a link for the Solution Source Newsletter. The Solution Source features announcements that are related to the faculty and staff community of the UNT System Institutions. You can sign up to subscribe and have the newsletter sent to you via e-mail each time it is published.

Another item on the BSC website that will be of interest to those who purchase software for their departments is the Click Wrap Approval page. Click wrap agreements, as stated on the page, are used in internet purchases where the person making the purchase is required to click "I Agree" to the vendors terms and conditions. Departments are responsible for reading and understanding the full terms and conditions associated with any purchase made with University dollars, as well as for complying with the policies regarding PCard usage. The list of approved vendors includes those terms and conditions identified as being particularly important for departments to understand prior to moving forward with a purchase.

Visit the BSC website below and discover what else they have to offer:

http://bsc.untsystem.edu/
Helpdesk FYI

By Jonathan "Mac" Edwards, CITC Helpdesk Manager

How to tell if your account is locked

The first sign that your account is locked is that you are suddenly unable to log into multiple UNT websites using the correct password.

To verify that your account is locked, you will need to visit the Account Management System at ams.unt.edu.

- Once there, log in using your current EUID & password.
- If you are unable to log in, you will need to reset your password.
- If you are able to log in, you will need to verify that your account is locked.

What Systems will deny access to a locked account?

A locked account will prevent use of

- UNT eCampus (Blackboard Vista)
- MyUNT
- EIS
- EagleNet or "UNT" Wi-Fi networks
- Remedy
- UNT web sites, including library electronic resources
- Internet kiosks

All of these systems use the same password system.

Unlocking a locked account

After logging into AMS, you will see your account information. If your account is locked, you should see a red dialog box with the following error message, "Your account automatically locked out due to excessive login failures. Do not change your password. View lockout details to see more information."

To fix this look for the Account Lockout item and click details, or click lockout details from inside the error message.

On the Account Lockout Status page, you will see information on the status of your account. You will also see the Clear Lockout Now button. Please be sure to read all instructions to avoid relocking your account. Once you have read the instructions and followed them, click Clear Lockout Now. Failure to follow instructions for removing an old password, will cause account to become locked again.

You will now be directed back to the Account Lockout Status page, where you should see that "Your account is not locked." You should no be able to log into UNT websites again.
Why is my account locked?

Your account can become locked due to too many failed log-in attempts at UNT websites. Most often this is caused due to not changing a stored password in an application that is automatically trying to reconnect to a UNT service.

From the AMS website:

Mobile electronic devices that remember your Wi-Fi password are by far the most common cause of account lockouts. Did you change your password recently? Did you forget to update your mobile device with your new password? Mobile devices will automatically attempt to connect to the "UNT" Wi-Fi network with your old password that is saved in the device.

If your account is locked, check the Wi-Fi settings for any devices you have with you on campus today. Such devices include:

- Apple iOS mobile devices (iPhone, iPad, iPod touch)
- Android phones and tablets with Wi-Fi
- laptops with Wi-Fi
- any device with Wi-Fi capability

You need to make your device forget the settings for the "UNT" Wi-Fi network. Doing so will force the device to ask for your password again.

I have followed these instructions, but my account continues to be locked.

If you have followed all of the above instructions, and your account is relocking after unlocking it please contact the CITC Helpdesk.

Certain UNT systems are unaffected by account locks

EagleConnect (student/alumni) mailboxes use another password system. If you are unable to access your EagleConnect mailbox, please contact the UNT CITC Helpdesk.

Employee mailboxes on Microsoft Exchange (accessible via Outlook or https://webmail.unt.edu) and Microsoft Windows workstations use another password system. If you are unable to login to Windows or unable to access your employee mailbox, please contact the network admin for your department.
This month’s article was motivated by an interaction with a student who reported being "stuck" on their dissertation and not knowing what to do next. A dissertation, or thesis for that matter, is not an immovable object; nor is graduation an unattainable goal. The author of this article was reminded that some students spend a year or more between the completion of research methods and/or statistics courses and the beginning of work on their dissertation. Recognition of the phenomena known as being stuck and the often lengthy time between methods/statistics courses and dissertation work motivated the writing of this article. The article is meant to provide a very general framework, or guide, to the process of conducting empirical research (specifically a dissertation or thesis). Keep in mind, if this process were extremely easy (and free), everyone would have an advanced degree. A meaningful and successful study takes a great deal of effort, time, and resources (e.g., caffeine, money, etc.).

**Before Data Collection**

There are several key ingredients which must be present in order for a meaningful study to be completed. The first, of course, is *thought*. A necessary step in conducting a study is careful, critical, and repeated thought about what will be accomplished, why it is meaningful to accomplish it, and how it will be accomplished.

Choosing a research topic is also a critical decision in the process and should not be taken lightly. If one chooses a topic in which one has no personal interest (i.e. intrinsic motivation), then one is unlikely to be able to muster the self-discipline to work on the research when distractions are present. Equally important is choosing the scale or scope of the research. Passion is a great asset because it motivates work, but passion can also lead to an overly ambitious study (i.e. one which cannot possibly be completed in the allotted time frame). When choosing a research topic, make sure it meets the approval of any and all collaborators (e.g. a dissertation advisor). Peers and advisors are invaluable resources during the entirety of the research process; they can often point out advantages and disadvantages for you. Do not be afraid to ask others the question: "Am I making sense?" The answer can only improve your project or increase your confidence.

Once a general area of interest, or topic, is decided upon; a thorough review of the literature should be conducted. Generally, the word ‘literature’ in this context refers to peer reviewed academic journal articles; with specific emphasis on empirical studies. Where should you look to find this literature, who could you consult? If you are working on a dissertation, your advisor should be familiar with the resources you will need to turn to (e.g. what...
journals, electronic databases, societies/associations are likely to be oriented toward your topic). Also, remember library professionals (e.g. reference librarians) are experts you can contact to learning how and where to search for information. Becoming familiar with the literature will acquaint you with the concepts, terms, measures/instruments, methods, and results related to your chosen topic. Becoming familiar with the research which has been completed on, or around, the topic will also allow you to transition from an area of interest to a research question. The research question should be just that; a question, stated in lay terms (i.e. even people not associated with your topic, or even your field, should be able to understand the question). The research question should be constructed in such a way that the research you conduct should answer that question. For example, do animals raised in zoos suffer negative health effects due to lack of exercise or predation?

The research question should then flow naturally into formal statement of hypotheses. Again, concerted effort (i.e. thought) should be expended on developing the hypotheses. Often collaboration is involved in the development of hypotheses. Hypotheses should focus on the strength and direction of expected effects. Keep in mind; formal hypotheses should not to be confused with null and alternative hypotheses. Formal hypotheses should be concise sentences which convey expected findings; for example, one might hypothesize that animals raised in zoos have on average significantly greater body weight than similarly aged animals of the same species which were raised in the wild. Generally, a meaningful research project will have multiple formal hypotheses. Often they are structured hierarchically; meaning a central thesis is conveyed in a main effects hypothesis and subordinate hypotheses are used for more narrow or lower level effects of interest.

Once formal hypotheses have been constructed, the research design can be attacked. Research design includes determining how variables will be measured, what instruments (if any are necessary) will be used, will you develop your own instruments or use existing ones, will random sampling (and/or random assignment) be employed, what procedures will be followed (pretest – posttest; experimental manipulation, etc.), how will internal and external validity be achieved, etc. in order to gather the data necessary to test the hypotheses. In this context, the word ‘necessary’ refers to both the amount of data and the appropriateness of the data. The ‘amount’ of data determines the power of the study and is commonly constrained by practical concerns such as time and funding. However, many applications are available (e.g. G*Power3) for determining a priori sample size for a given design, desired power, and desired effect size. The ‘appropriateness’ of the data has two meanings. First, obviously you need to collect data which will be meaningful for answering your hypotheses; for example you are not going to measure animals’ weight with a thermometer. Second, ‘appropriateness’ refers to whether or not the data will adhere to the assumptions of a given analysis. For instance, a simple independent t-test (which is typically used to evaluate mean differences) requires a categorical (i.e. factor) variable (e.g. animal sex; male or female) and a continuous or nearly continuous (i.e. numeric) variable (e.g. adult weight; kilograms). As another example, consider studying the effects of chemotherapy on hair loss.

Here, you would find it beneficial to collect hair loss data by measuring the number of hairs per square inch of scalp, rather than simply rating hair loss as extreme, moderate, or slight (i.e. scale of measurement is important). Clearly, there is a relationship between formal hypotheses, research design, and types of analysis. However, keep in mind; the data may not conform to expectations, which means the initial analysis chosen may not be the analysis most appropriate once the data has been collected. Therefore, again, careful thought and collaboration should be exercised during the consideration of design and choice of primary analysis, secondary analysis, and possibly alternative analytic techniques in case the data does not conform to assumptions (e.g. linearity). It is often the case that a particular hypothesis and data combination can be addressed with more than one, and often several, statistical analyses. Therefore, it is important to consider the strengths and weaknesses of alternative or competing research designs and statistical analyses.

Many questions will have to be addressed as you (and your advisor or collaborators) develop the design of the study. The following represent some likely questions to consider during this phase of the process. Will you be attempting to identify mean/median differences and/or the strength and direction of relationships? Will you be modeling latent variables, manifest variables, or both? Will you be using a covariance decomposition technique, a variance or components based technique, a qualitative technique or a…? Will you be taking a Frequentist or Bayesian approach to data analysis? Will you be conducting a pilot study? Will you be doing simulations prior to data collection? Will you need Institutional Review Board (IRB) approval? Will you need approval from other institutions (e.g. hospitals, schools, zoos, other universities)? Will your study be funded (e.g. grants)? Will you be handling sensitive information (e.g. health records)? Will you be collecting data from a sensitive information (e.g. health records)? Will you be collecting data from a

Side Note 2: New Data vs. Archival Data.

New data in this context is defined as data you collect. Archival data is defined as existing data which someone else collected. There are benefits and costs associated with each. Generally, the main benefit of using archival data is that of time. The time associated with collecting archival data is drastically lower than the time associated with collecting new data. The primary benefit of collecting new data is control; meaning, you will have control over what is collected (i.e. how variables are measured and what the measurements represent). It is the opinion of this author that students conducting a dissertation should collect their own data and not rely upon archival data. Often, archival data is like the carrion of the
vulnerable population (e.g. children)? How will you safeguard the data and ensure it is kept confidential? Will you need to develop an Informed Consent form? Will your study involve any level of deception? If gathering data from human participants, will they be compensated (e.g. paid money, given extra credit, etc.)? Will your participants (humans) or subjects (non-humans) be treated safely, ethically, and respectfully? Of course they will, but you will still need to think about how they will be treated (e.g. will they benefit emotionally, physically, intellectually, and/or financially from participation in your study?).

Once the topic has been chosen, the literature review completed, formal hypotheses formulated, research design and proposed analyses decided (by you and your collaborators/advisor); you should prepare to propose the study in written and oral form. The proposal stage involves writing a formal proposal manuscript and presenting the proposed research, including all of the above information (often the bulk of the manuscript is the literature review). For students, oral presentation of the written proposal will be conducted as a method of gaining approval from a dissertation committee to proceed with the study. Students can find assistance with the process of writing by contacting the Writing Lab. Once the committee has approved the study, very few deviations should be made from what was approved. If collecting new data, generally the next step would be IRB approval. Then, of course, data collection can proceed.

After Data Collection

Once the data has been collected, the first step will commonly be to convert the data into a stable electronic format. It is generally recommended that the data be preserved in the most basic format possible; because, versions of software and operating systems change over time and it may be the case that future versions are not capable of opening a particular file format. Next to binary code form, the basic text format (filename.txt) is the obvious choice; using one of the common delimiters (e.g. comma delimited, space delimited, tab delimited, etc.). If one is using a traditional paper and pencil based survey, one can utilize the services of Data Management to have the paper surveys (or ScanTrons) digitized. If one is using a software program to enter the data (e.g. Microsoft Office Excel), then it is strongly recommended that the data be converted into text (.txt) files to be preserved. The second benefit of preserving data in text file format is that all popular statistical computing software is capable of opening text data files (for a comparison of statistical software, see here). This can be extremely important when multiple collaborators use different software (e.g. one collaborator using Open Office Calc and SAS on a Mac, and one collaborator using Microsoft Office Excel and IBM SPSS on a Windows PC).

Next, the data will likely be imported into one of the common statistical software packages for analysis (of course, RSS staff strongly recommends using R). However, prior to conducting the primary and secondary analysis; one should do thorough initial data analysis. Initial data analysis refers to a wide variety of procedures which allow the researcher to become intimately familiar with the data (i.e. variable distributions, relationships, etc.). Initial data analysis ranges from rather mundane tasks such as recoding/reverse coding variables, reviewing histograms and bar charts for every variable; to more complex tasks like evaluating multivariate outliers and missing data. Whole books have been written on the subject of missing values (e.g. Little & Rubin, 2002), because, missing values are an important issue for virtually every dataset collected. Initial data analysis should also include an evaluation of the relationships between each pair of variables, with correlation matrices and scatterplot matrices commonly used. Testing the assumptions of planned parametric analyses should also be rigorously investigated (i.e. linearity, homoscedasticity, etc.). It should be noted that in this discussion of initial data analysis, the use of graphs is repeatedly mentioned. Graphs are important because they can convey information more clearly than simple numeric output; for example consider a five variable correlation matrix augmented with the same five variable relationships displayed in a scatterplot matrix:

For those interested, these two screen captures can be replicated using this script.

Side Note 3: RSS Can Help.

Of course, RSS can help with choices of research design and statistical analysis. However, it is important to remember that RSS staff will recommend and suggest; but it is ultimately the responsibility of the researcher to make decisions concerning what will be done. RSS has available literally walls full of books and articles related to research design and statistical analysis as well as the experience to be able to communicate the strengths and weaknesses of various choices. Please review our entire website (particularly the FAQ page), as well as last month’s article which dealt directly with statistical resources, prior to contacting us for a consultation.

Initial data analysis may also employ parametric statistics, nonparametric statistics, transformations, optimal scaling techniques, variable selection techniques, matching, propensity score analysis, model comparison, etc. The point being made here is that initial data analysis is a necessary step, and one which requires critical thought, as well as time and effort – like all data analysis, it requires the tenacity and curiosity of a very good detective.

Primary, and secondary, analyses can commence once the initial data analysis is completed – although one may need to return to initial data analysis periodically during the course of alternative analyses (i.e. if proposed primary analyses are replaced). Due to the extremely wide array of analyses one might employ, specific techniques will not be covered here.

However, there are three key concepts which should be kept in mind while conducting primary analyses. First, virtually all inferential statistics are model based and with models comes the possibility of model specification error. One could say there are two types of model specification error; errors of form and variable selection errors. Errors of form include specifying the wrong type of model, such as imposing a linear model when an exponential model or quadratic model might be more appropriate. Variable selection errors are errors of inclusion and errors of omission (e.g. meaningless variables in the model and meaningful variables left out of the model). Second, virtually all inferential statistics are based on some form of measurement and with measurement comes the possibility of measurement error. Measurement error is more prevalent among the so-called soft sciences, as opposed to the hard sciences such as physics, biology, chemistry, etc.; however, measurement error should be investigated and modeled or acknowledged when discovered. Third, inferential statistics are, by their very name and nature, used to make inferences from a sample to a population. In other words, unless you are working with the entire population of interest, you are going to be computing or calculating sample statistics rather than population parameters. Therefore, sampling bias and/or non-response should be investigated and reported.

Given the rapid expansion of sophisticated modern methods, the data analyst should be open to using such robust techniques as booting (i.e. bootstrap resampling), bagging (i.e. bootstrapped aggregation), and boosting (i.e. using multiple models) to increase the precision and decrease the bias of statistical estimates. There are also modern sophisticated techniques to allow for statistical control of so-called nuisance variables or confounding variables; techniques such as nearest neighbor matching, balancing, random stratification and propensity score analysis. It should also be noted that there has been an expansion of optimization techniques in recent years, such that maximum likelihood, which is rather commonly known, has been joined by ant-colony optimization and genetic optimization algorithms. Both of which can be applied to certain situations with amazing speed and produce optimal results (i.e. optimize on the most probable estimate of a parameter). Also, for particularly large datasets and associated complex computation, UNT’s High Performance Computing (HPC) center is available for

jobs which require serious computing power.

Of course, once the data has been analyzed and interpreted, it is time to write up the results and prepare the final presentation. Again, students can get assistance from the Writing Lab if they are having difficulty with the writing process. Students should turn to their dissertation advisor for advice on formatting the manuscript. For example, some departments use the Modern Language Association (MLA) style, some use the Chicago style, some use the American Psychological Association (APA) style, and still others use a style of their own creation or an amalgamation of several styles. Students may also, at some point, want to contact the Graduate Reader in order to prepare their completed dissertation (or thesis) for submission to the Toulouse Graduate School. Another thing to consider, when writing up an empirical research manuscript, is the journal in which one wishes to publish the results. It is often the case that journals have their own formatting idiosyncrasies and therefore, it is often a good idea to consult their web site to review their submission guidelines long in advance of actually submitting a manuscript for review.

Conclusions

It is important to note that this article represents a very general guide to the conduct of empirical research and it is aimed more toward students conducting a dissertation than that of the professional researcher. For students, it is important to note that your dissertation (or thesis) advisor should be able to offer you suggestions and guide your progress. However, not all questions have easy or readily available answers; students should be proactive in seeking out information through any or all available sources. Do not expect your advisor (or anyone else) to do your work for you. Completing a dissertation is hard work and should be a learning process. Remember, a meaningful study is one that contributes to a better understanding of the phenomena under investigation. Lastly, a couple of sound-bytes of wisdom: Do not be afraid of your own ignorance; Albert Einstein once quipped something to the effect of: "if we already knew the answers, it would not be called re-search.” Do not be afraid of non-significant results; as Thomas Edison once said, "I have not failed; I’ve just found 10,000 ways that won’t work!”

References, resources, and perhaps useful links.


ICN News

According to the Information Technology Council (ITC) website, "As of June 5th, 2008, the IRC (Information Resources Council) became the ITC (Information Technology Council)."*

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

*For a list of IRC Regular and Ex-officio Members click here. Tim Christian is currently the chair.

**DCSMT Minutes can be found here.

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Training

By Claudia Lynch, Benchmarks Online Editor

This monthly column has a new title! As stated in Benchmarks Online Column Topic Changes, "Training" is a more descriptive title now that short courses are not offered on a regular basis. -- Ed.

Instructor-led courses are currently offered only by special request. Please contact an RSS member or Claudia Lynch if you are interested in taking such a class or wish to have someone offer a class for your students. SPSS and SAS courses 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. Make sure and check out the RSS Matters article Statistical Resources in the November 2011 issue of Benchmarks Online.

Special classes can always be arranged with the RSS staff. 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 online statistical 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 (CLEAR). Additionally, the Center for Achievement and Lifelong Learning (CALL) offers a variety of courses, usually for a small fee.

EIS training is available and expanding. Please see the article EIS Training Available Online for New Faculty & Staff in the August issue of Benchmarks Online for further information.

Microsoft E-Learning

Microsoft E-Learning courses are now available for faculty and staff via our UNT-Microsoft Campus Agreement. Please contact Claudia Lynch at lynch@unt.edu for instructions on accessing this training. If you haven’t accessed the training since last year you will need to get a new access code. UNT, UNTHSC and UNTSYSTEM e-mail addresses are now able to access Microsoft E-Learning.

Microsoft Outlook Tutorials and much more

The Enterprise Messaging and Directory Services 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

CLEAR offers courses especially for Faculty Members. A list of topics and further information can be found here.

"Brown Bag Seminars" are back! Faculty meet for lunch once a month during the Fall and Spring sessions in Chilton 245 from Noon-1 p.m. 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.

Ed2go

Ed2go are courses that are offered, for a fee, to UNT faculty, staff and students as well as the general public. According to the CALL website:

CALL has partnered up to provide online learning on a variety of topics. From standardized test preparation to database programming to training for libraries and their staff, there's a variety of areas from which to choose in online learning.

The online minicourses, provided in conjunction with Ed2go, are standardized 12-lesson modules released over a six week period. (Courses are active for eight weeks to provide some flexibility). Each module features a quiz. Lessons are instructor-led and course participants and instructor communicate through a course discussion board. Lessons can be downloaded and saved. At the end of the course there is a final quiz. A passing grade opens a window that allows students to print out a course completion certificate.

All courses are $89, and UNT faculty, staff and students may receive a $10 discount.

For additional information surf over to http://www.ed2go.com/unt/

Information Security Awareness

The UNT Information Security team offers 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.

It is a policy requirement that ALL staff take an information security course at least once a year.

Please contact Allan Anderson in CITC Information Security if you have any questions, or would like more information about the online training. Either attending a live class or going through the online training will count towards your training requirement. You can also request a customized course to be taught for your department.

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

UNT has offered Gartner Core Research Services to all UNT faculty, students, and staff since 2006. All you need to do to access the subscription is to log into the UNT Gartner portal page at https://gartner.unt.edu/. Once you have logged in, you can view upcoming webinars: http://www.gartner.com/webinars/ and listen to Gartner podcasts here: http://www.gartner.com/it/products/podcasting/asset_137461_2616.jsp. For more information about Gartner Research Services, see the article Gartner Core Research Services Available to the UNT Community in the August issue of Benchmarks Online.
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.

New Horizons Computer Learning Centers

New Horizons is a DIR vendor, which means that state agencies, like UNT, get special pricing for their services negotiated at the State level (click here for more information about DIR vendors). New Horizons offers courses at their own facilities in Dallas and Fort Worth, but will arrange for onsite training as well.
Staff Activities

Transitions

New Employees:


No longer working in the Computing and Information Technology Center:


Changes, Awards, Recognition, Publications, etc.

ITSS and UIT

The "Campus Computing News" article in this issue of Benchmarks Online discusses the continuing transformation of the way computing services are offered on campus and across the UNT System. Two new names you will be seeing are Information Technology Shared Services (ITSS) and University Information Technology (UIT).

UIT

As stated in the "Campus Computing News" article referenced above, "Dr. Philip Baczewski has been appointed deputy chief information officer for UNT. The UNT UIT divisions discussed above will report to Baczewski who will report directly to Hooper. For now, Dr. Baczewski, who has been Director of Academic Computing and User Services since 2005, will continue to directly manage ACUS."

ITSS

John Hooper, Acting Vice President for Information Technology and CIO for UNT, Deputy CIO for the UNT System, made the following announcement on December 2: Katy Gallahan has accepted a position with UNT System Information Technology Shared Services (ITSS) as the director responsible for UNT System IT support services. Katy will be responsible for providing IT support services to all of the functions that have moved to the UNT System including the BSC, ITSS, the system offices, and other system units at locations on the UNT campus and elsewhere. In addition, she will be responsible for IT support services for UNT Dallas which is outsourcing their IT operations to ITSS. A few other staff members from AITS, the group to which she currently belongs, will be moving as well as a result of the transfer of their support load to the system.

Although she will move into the position immediately, there will be a transition period. Abraham John, leader of AITS, and Katy are already working on transition plans to be sure there is no impact on service. They are both very committed to this transition being transparent to the groups Katy currently supports. Katy leaves an outstanding staff in place. Please join me in thanking Katy for her outstanding service to UNT and welcoming her to ITSS.
Service to UNT

Congratulations to Bruce Berg, IT Specialist, Business Services Support/Student Development for his **15 years of service** to UNT. He was recently recognized in *InHouse*.

InHouse Prize Winner

We have another *InHouse* prize winner! **Matthew Trammell**, IT specialist, Business Services Support/Student Development, was a winner in the November *InHouse* prize giveaway.

Soaring Eagles

The following people were recognized as Soaring Eagles in the December 2011/January 2012 issue of *HR Connections*, the Human Resources Newsletter.

Jenny Brooks
Lee Crane
Karen Dowdy
Renee Hebert
Tammy Sprabary
Chris Horiates
Kathy McDuffie
Janice Patterson
Cristin Peacock
Matt Trammell
Faculty Evaluation Processing Tips

By JoAnn Luksich, Data Manager, Academic Computing and User Services

Make sure you have the latest information when you prepare departmental evaluations for processing by Data Management. Following are some tips that will help to ensure your evaluations are processed in a timely manner.

1. Complete an ITSM Data Management Evaluation ticket at http://itsm.unt.edu. Be sure to include a contact person and phone number as well as the correct semester and year at the top of the form.

2. Use ONLY NCS Scantron #4521 for evaluations.

3. Indicate whether you wish for the professors' names to be included on the report, or whether you wish for codes only to appear on the reports.

4. Important: If you are requesting the instructors' names to be included, please provide us with a list of professors and codes assigned to them.

5. MOST IMPORTANTLY - Each group of scantrons must be separated (paper clips, rubber bands, envelopes, etc.) at each point the instructor OR course OR section changes. Also, please be sure that scantrons are all face up, with the "cut" corner aligned.

6. The FIRST SCANTRON of each group must have the Instructor number, Course number and Section number written and bubbled in the Identification Code field. The following scantrons of that group do not necessarily need to be coded.

Evaluations are processed by Data Management -- in Sycamore Hall 140 -- in the order they are received. Please feel free to contact us: joann.luksich@unt.edu or 940-369-7416.
Winter Break Hours

By Claudia Lynch, Benchmarks Online Editor

The fall semester is over, winter is upon us; time to rest, relax, catch up on things that were put aside, and generally take a break from what had become your routine these past few months. The following information should help you plan your activities if you need/want to access campus computing facilities over the break.

Following are the hours for Computing and Information Technology Center-managed facilities during the Winter break. The University is closing at noon on Friday, December 23 and is officially closed December 26 though December 30. The University is also closed on January 16, 2012 in honor of MLK Day. The Spring Semester begins on January 17, 2012.

- The Helpdesk will be completely closed on December 24 and 25, with normal hours for telephone and e-mail consultation on December 31. It will be open for telephone and e-mail consultation from 1–6 p.m. on January 1, 2012. The lobby will be closed for walk-in traffic at noon on December 23 and will remain closed until January 2, 2012.

- Data Management Services will be closed when the University is closed -- Friday, December 23 at noon, resume normal hours at 8 a.m. Monday, January 2, 2012.

- The ACS General Access/Adaptive Lab (SYMR 104) will be open during the break with limited hours.
  December 18-23: Open from 9 a.m. to 6 p.m.
  December 24 - January 1: Closed
  January 2-7: Open from 9 a.m. - 6 p.m.
  Resume normal hours on January 8.

- General Access Labs
  Willis

  December 19-23: 7:30 a.m.-5:50 p.m.
  December 24-January 1: Closed

According to their website, Regular UNT Shuttle service was suspended at the end of service, December 16. It will resume January 17. The Discovery Park route will operate on a limited schedule from December 19th - 23rd and January 2nd - 13th. The Eagle Point route will operate on a limited schedule January 12th and 13th. Check the website for changes/further information.
January 2-6: 7:30 a.m.-5:50 p.m.
January 7-16: Closed
January 17: Open at 7:30 am. and return to a 24hr schedule.

- **College of Information General Access Computer Lab (CI-GACLab) (B205): Closed** December 17 - January 16.

- **MUSIC:** Closed December 17 - January 16.

- **PACS Computing Center** (College of Public Affairs and Community Service, Chilton Hall): Closed December 18 - January 16.

- **CVAD:** Closed December 17 - January 16. Reopen at 7:30 a.m. on January 17.

- **COE:** Closed December 17 - January 16.

- **COB:** COB Labs (BLB 185 and 190): Closed December 17 - January 16.

- **CAS:** All four CAS labs (GAB 330, GAB 550, TH 220, WH 120) closed at 5:00 pm on Friday December 16. They will reopen for the Spring 2012 semester at 8:00 am. on Tuesday, January 17.

- **Engineering General Access Lab (CENGAL, englab@unt.edu, Discovery Park, B129, 891-6733): Closed through Winter Break.** They will reopen on January 17 at 9 a.m. for the Spring 2012 Semester.

Remember:

Get your alerts fast in case of inclement weather

Visit the Emergency Management website

City of Denton Residents, sign up for the CodeRED Emergency Notification System
Today's Cartoon

“Lose some weight, quit smoking, move around more and eat the carrot.”

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