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Feature Articles

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Charity Beck gives you the scoop on UNT's new search engine.

[Going, Going, Gone . . .](#)

Don't forget that a number of long-time services are being terminated, one is already gone. Details inside.

[Summer Hours](#)

The known hours for Computing and Information Technology Center-managed facilities for the summer are listed here.

TODAY'S CARTOON

Click on the title above for an information age laugh.

Don't forget to check out our monthly columns. This month's topics:

- [RSS Matters](#) - Dr. Rich Herrington is back with an article on "R for the Windows Platform: Installation and Configuration." Also on this page is some breaking RSS News.
- [The Network Connection](#) -- "End of the

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Browser Wars?" Dr. Baczewski takes a philosophical look at what is in store for us now that Microsoft and AOL Time Warner have settled the lawsuit filed by AOL's Netscape division.

- [Link of the Month](#) -- "Get the Facts" from the UNT Fact Book.
- [WWW@UNT.EDU](#) -- "Resource Management on a Budget: Part IIIa - Bringing up a Router."
- [Short Courses](#) -- Summer Short Courses are still available but filling up fast.
- [IRC News](#) -- Minutes of the Information Resources Council are printed here when they are available. The April 15 and May 20 minutes are included this time.
- [Staff Activities](#) -- New employees, people who are no longer employed at the Computing and Information Technology Center, awards and recognitions and other items of interest featured here.

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Research and Statistical Support

University of North Texas

RSS Matters

Link to the last RSS article here: [Speaking of Stata - Ed.](#)

R for the Windows Platform: Installation and Configuration

By [Dr. Rich Herrington](#), Research and Statistical Support Services Manager

This month we demonstrate how to download and install the GNU S statistical system "R", for the Microsoft Windows platform. The following is an excerpt from the R website <http://www.r-project.org> - "*R is a language and environment for statistical computing and graphics. It is a GNU project which is similar to the S language and environment which was developed at Bell Laboratories (formerly AT&T, now Lucent Technologies) by John Chambers and colleagues. R can be considered as a different implementation of S. There are some important differences, but much code written for S runs unaltered under R. R provides a wide variety of statistical (linear and nonlinear modeling, classical statistical tests, time-series analysis, classification, clustering, ...) and graphical techniques, and is highly extensible. The S language is often the vehicle of choice for research in statistical methodology, and R provides an Open Source route to participation in that activity. One of R's strengths is the ease with which well-designed publication-quality plots can be produced, including mathematical symbols and formulae where needed. Great care has been taken over the defaults for the minor design choices in graphics, but the user retains full control. R is available as Free Software under the terms of the [Free Software Foundation's GNU General Public License](#) in source code form. It compiles and runs out of the box on a wide variety of UNIX platforms and similar systems (including FreeBSD and Linux). It also compiles and runs on Windows 9x/NT/2000 and MacOS" (from Introduction).*

Downloading and Installing R

R can be downloaded from the main org website <http://www.cran.r-project.org>



The Comprehensive R Archive Network

Frequently used pages

- CRAN
- [Mirrors](#)
- [What's new?](#)
- [Search](#)
- About R
- [R Homepage](#)
- Software
- [R Sources](#)
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Precompiled Binary Distributions

Base system and contributed packages. **Windows and Mac** users most likely want these versions of R.

- [Linux](#)
- [MacOS \(System 8.6 to 9.1 and MacOS X\)](#)
- [MacOS X \(Darwin/X11\)](#)
- [Windows \(95 and later\)](#)

Source Code for all Platforms

Windows and Mac users most likely want the precompiled binaries listed in the upper box, not the source code. The sources have to be compiled before you can use them. If you do not know what this means, you probably do not want to do it!

- **Source code** of the latest release (2003-06-16): [R-1.7.1.tgz](#) (read what's [new](#) in the latest version).
- **Source code** of [contributed packages](#)
- Current patch set (daily snapshot): [R-release.diff.gz](#).

Under **Precompiled Binary Distributions**, the **Windows (95 and later)** bullet is the hypertext link for downloading the binary version of R. The base subdirectory has the main R self-extracting executable file in it:

Subdirectories:

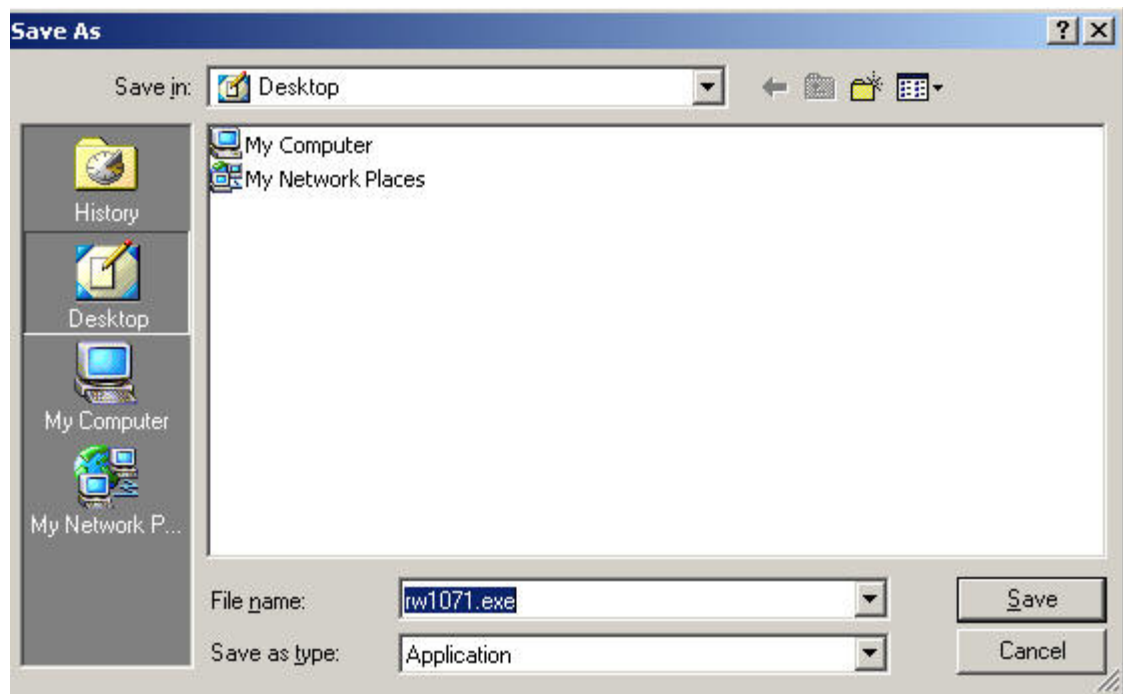
- [base](#) Binaries for base distribution (managed by Duncan Murdoch)
- [contrib](#) Binaries of contributed packages (managed by Uwe Ligges)
- [unsupported](#) Unsupported or obsolete packages

Clicking **base** hypertext link gives the screen:

In this directory:

README.rw1071	Installation and other instructions.
CHANGES	New features of this version.
rw1071.exe	Setup program (about 20 megabytes). Please download this from a mirror near you . This corresponds to the file named SetupR.exe in pre-1.6.0 releases.
mini	Collection of diskette-sized files. Again, please download from a mirror .
old	The previous release.
md5sum.txt	md5sum output for the setup program. A Windows GUI version of md5sum is available at http://www.md5summer.org/ ; a Windows command line version is available at http://www. etree.org/md5com.html .

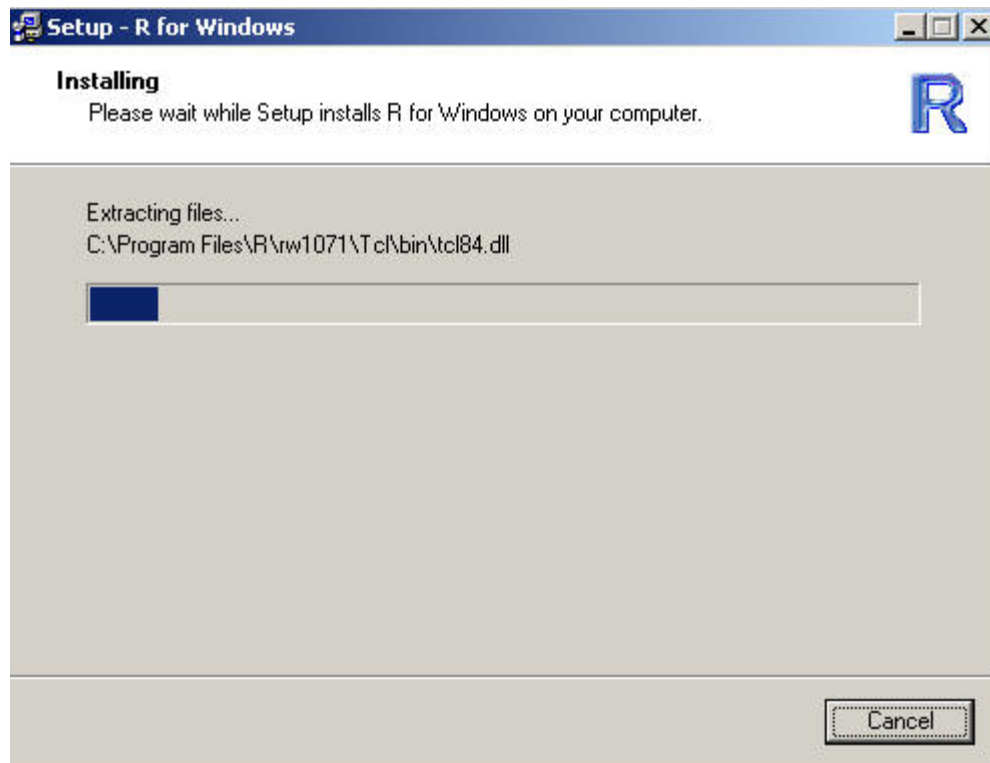
The rw1071.exe file can be save to your local desktop by a "right mouse-click" on the **rw1071.exe** hypertext link. Select "Save Target As.."; browse the file system to find the Desktop and then "Save".



There should be an icon on your Desktop. Double clicking this icon should give the following installation screen.



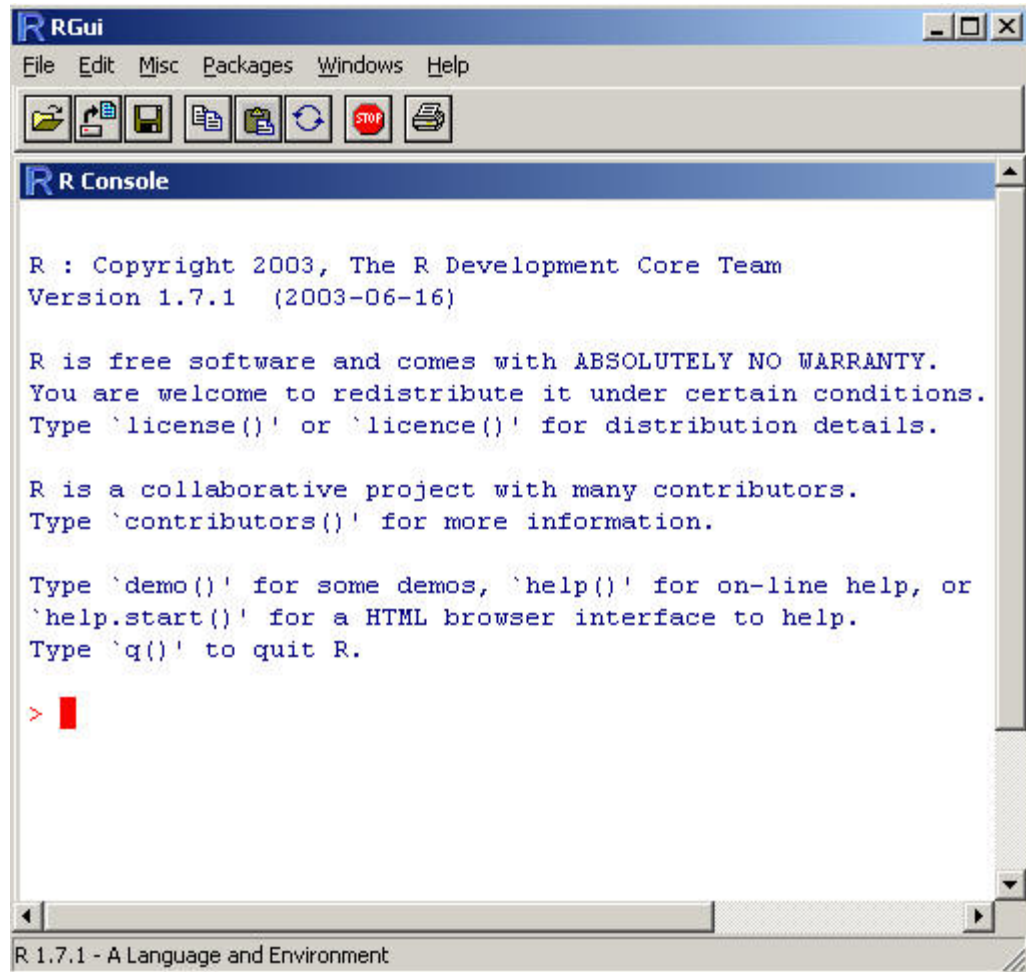
Select the **Next** button. After reading the GNU licensing agreement, if you agree, continue to choose the default selections in the installation window. If installation is proceeding properly, you will see the following installation screen. Once installation is finished, an R icon will be placed on the Desktop.



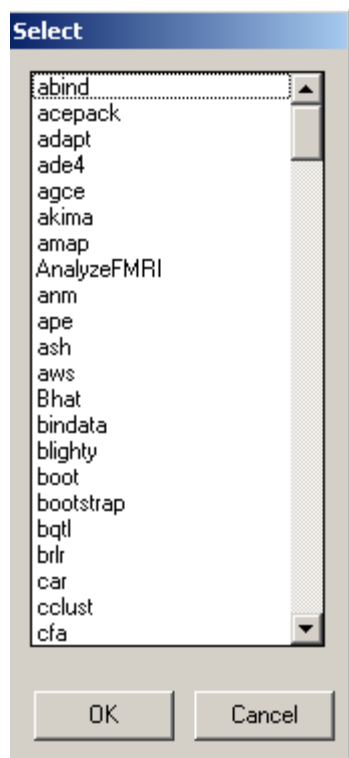
As of version 1.7.0, the R installation file installs the Tcl/Tk system. The Tcl/Tk system allows programmers to build general GUIs for entry level R users. A discussion of the potential uses of this interface in R can be found at:

Installing Libraries in R

After downloading and installing R, we will want to download and install libraries that are available on R CRAN website. Double click the R icon on your desktop and you should see the following screen:



You will need a fast internet connection to download these libraries. Select the **Packages** option on the main menu bar, then select **Install package(s) from CRAN**. The following screen should appear:



Using the "ctrl" key (the control key), one can multiply select those libraries that are to be installed. To install the **Rcmdr** library, scroll down the window and select "Rcmdr". Delete the downloaded archive files by responding "yes" at the question prompt. R then configures the html help pages.

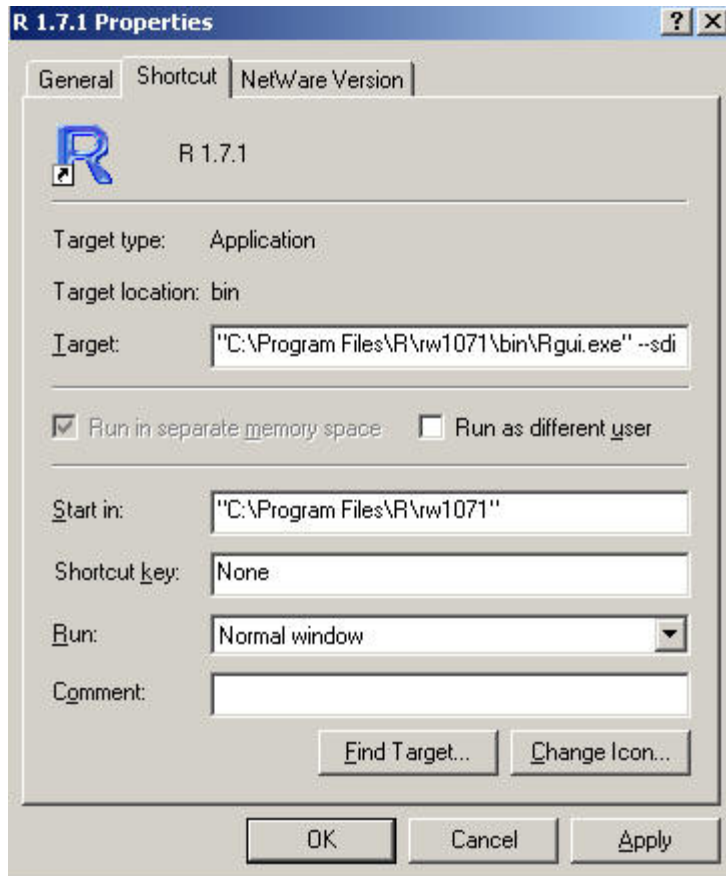
```
Delete downloaded files (y/N)? y
updating HTML package descriptions
> █
```

The Rcmdr or "R Commander" library is a simple menu system based on Tcl/Tk. The following excerpt are taken from the author's webpage at: <http://www.socsci.mcmaster.ca/jfox/Misc/Rcmdr/index.html>. *"The R-Commander GUI consists of a window containing several menus, buttons, and information fields. In addition, the Commander window contains a log/script box. The R-Commander menus are easily configurable through a text file. The menus lead to simple dialog boxes, the general contents of which are more or less obvious from the names of the menu items. These boxes have a common structure, including a help button leading to the help page for a relevant function. Commands generated via the dialog are posted to the R session window, along with printed output, and to the log window. Lines in the log window may be edited and (re)submitted for execution. Commands access a current or active data set (data frame). When a new data set is read (from an attached package or imported), it becomes the active data set. The user can also select an active data set from among data frames currently in memory. In addition to standard packages, the Commander uses some functions in my car package.(The scatterplot and scatterplot.matrix functions in the car package, prior to version 1.0-5 of car, generate warning messages in R 1.7.0 and above. This is not a problem specific to the Commander and will go away if you update car.). My object in designing and implementing this GUI was to cover the content of a basic-statistics course. The target text was Moore's *The Basic Practice of Statistics, Second Edition* (Freeman, 2000), which is the text that I currently use for a two-semester introduction to statistics for undergraduate sociology majors. The R Commander implements the content of this text plus*

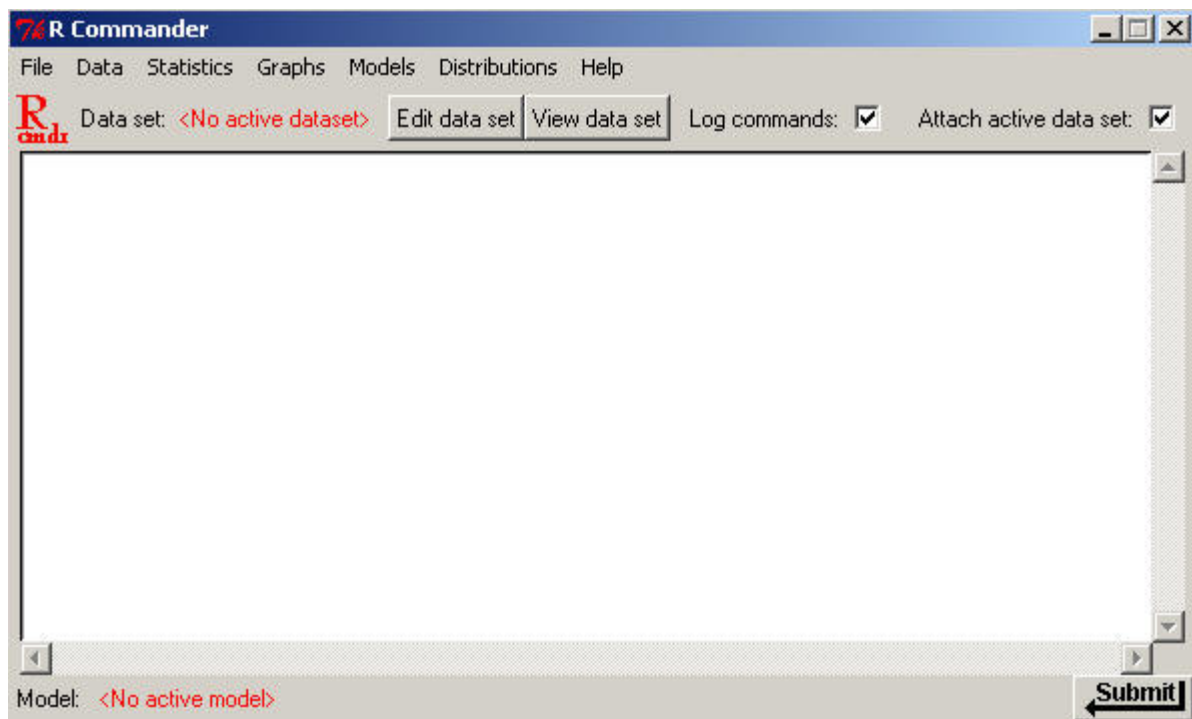
some additional material (e.g., linear and generalized linear models). As a result of several suggestions that I have received, the coverage is now larger than originally envisaged (quoted from John Fox's Rcmdr webpage).

Loading a Library in R

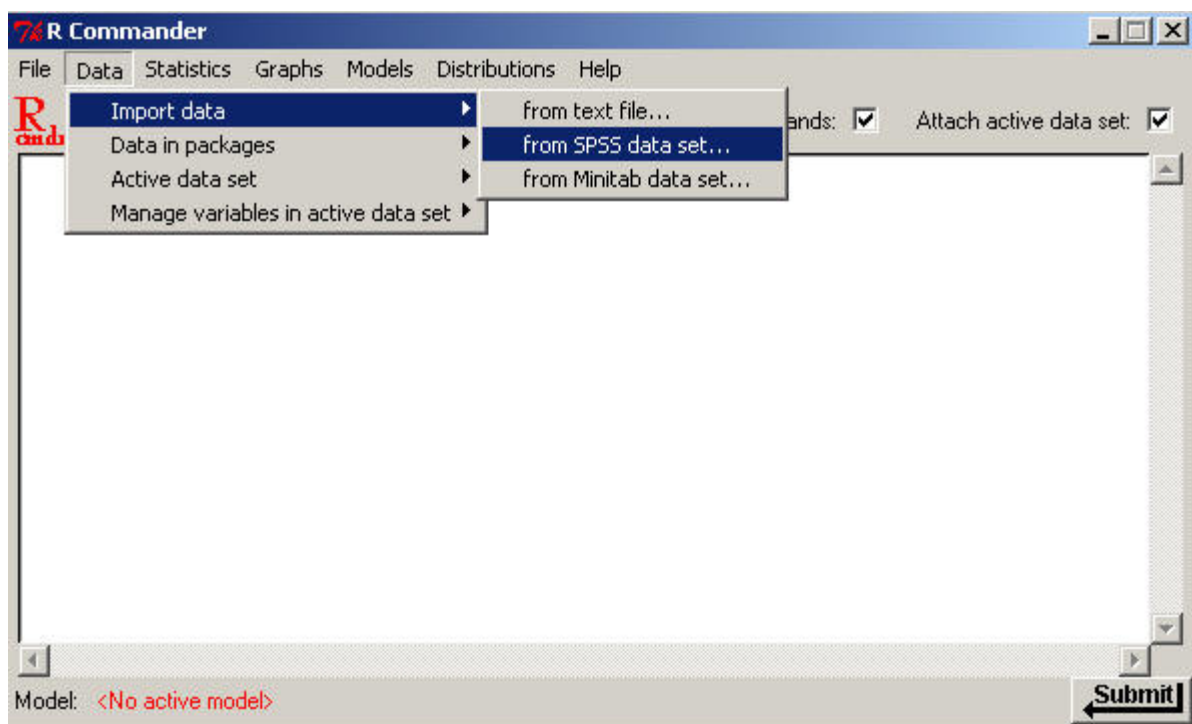
To use the Rcmdr library, we will want to configure the R system window to have a "single document interace" mode. Right mouse click the R icon on your desktop and select **properties**. Add " --sdi " to the Target field after the Rgui.exe statement (see below). Click **apply**, then **ok**. Double click the R icon on your desktop to start the R system.



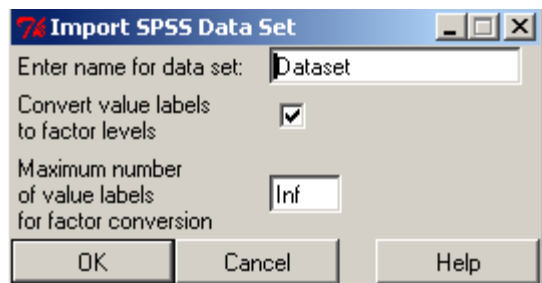
To load a library in R, select **Packages** from the main menu bar and select **Load Package**. Select the Rcmdr library in the package selection window. The following menu system will appear:



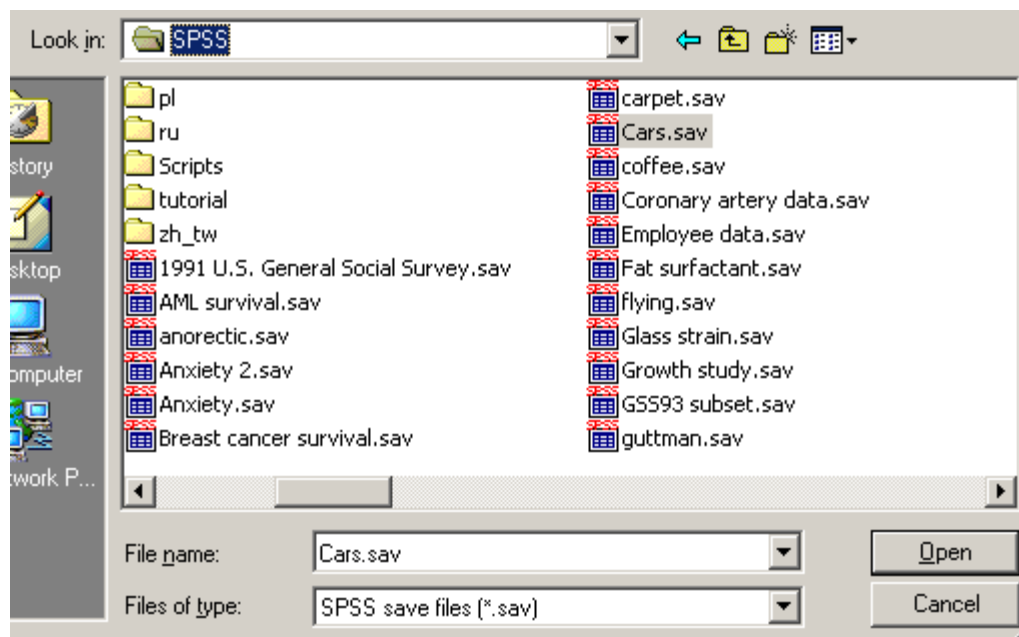
To import an SPSS data set:



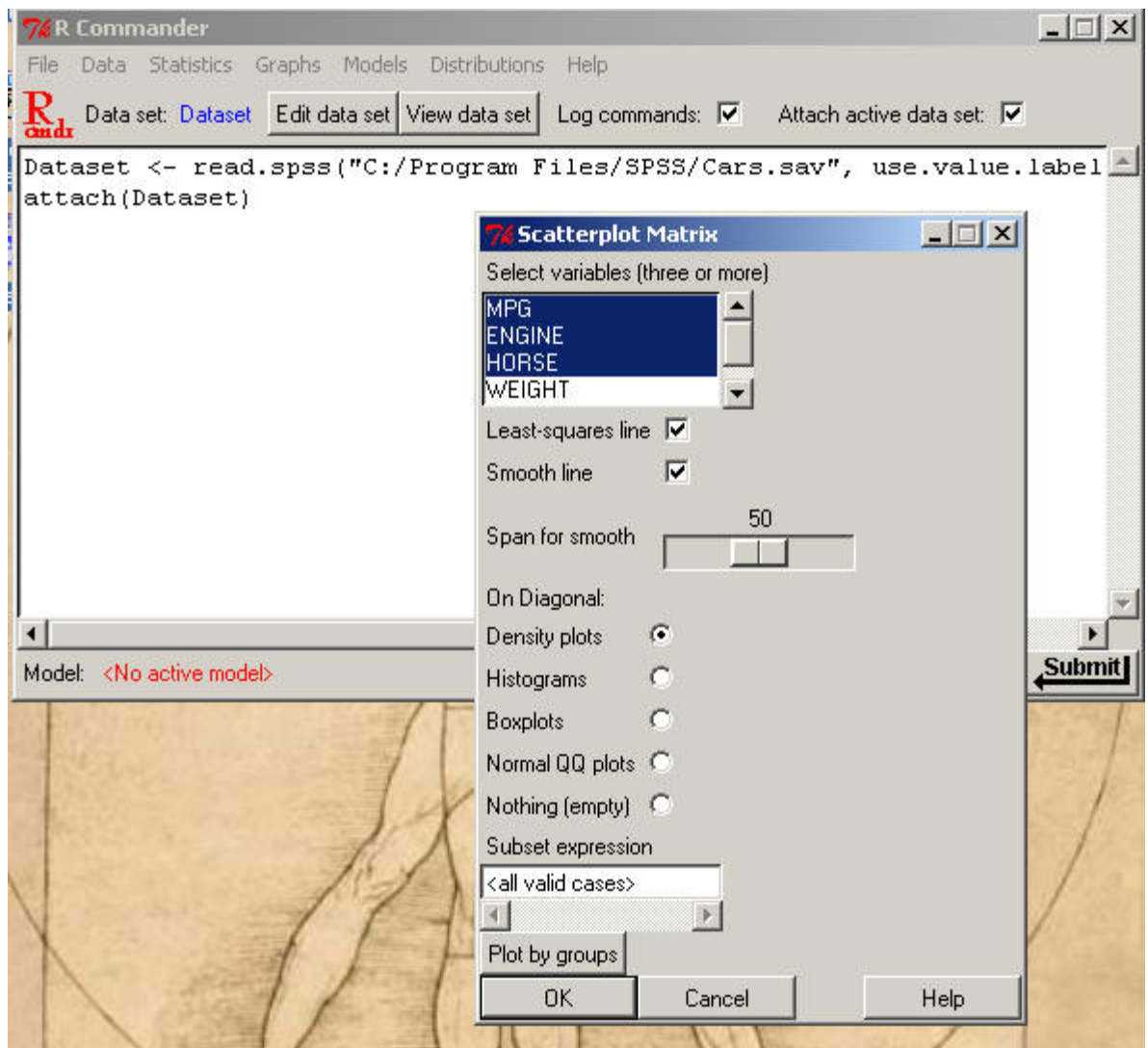
Give the imported data set a working session name, then browse the file system to select your SPSS data set.



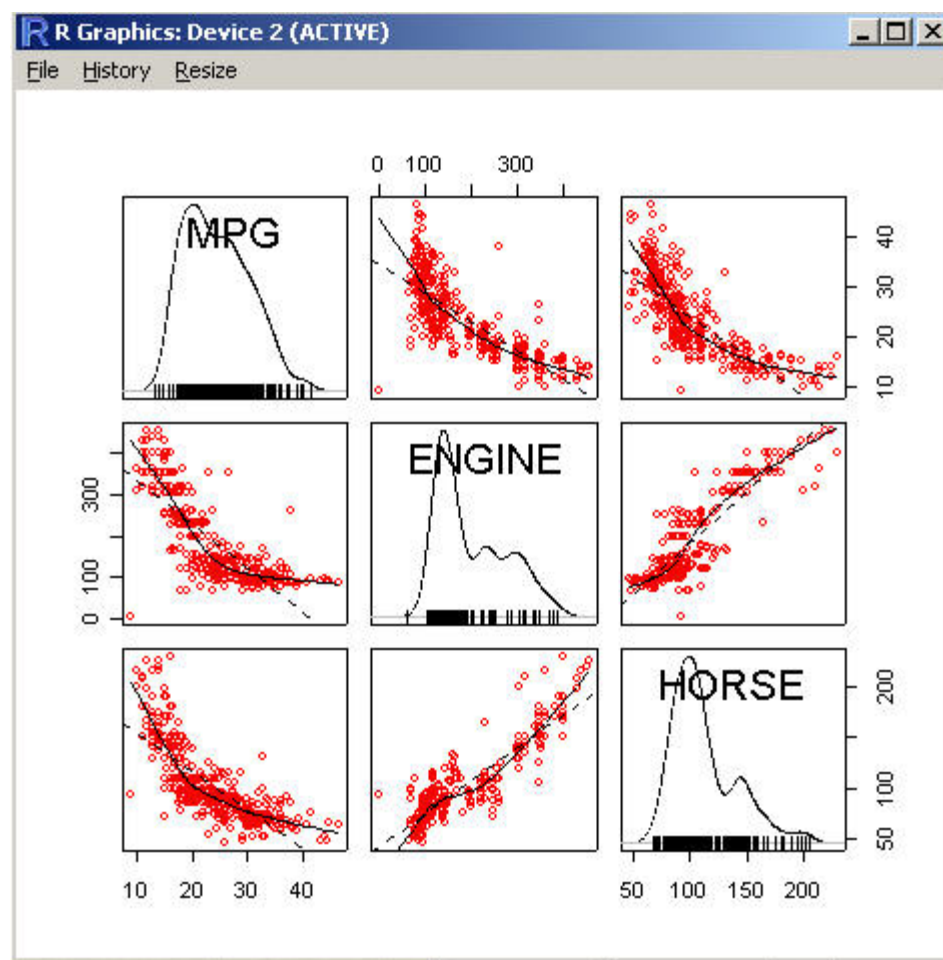
In the main SPSS directory there should be a data set called "Cars" (this dataset ships with SPSS).



Select the data file. Next, go to Graphs and select Scatterplot Matrix. Select MPG, ENGINE, and HORSE. Next, select OK.



You should see the following:



Selecting **History** on the plot window will keep a history of previous plots. You can access previous plots by using the "page up" and "page down" key.

Next Time

Next time we will explore in more detail the Rcmdr library for windows.

References

Dalgaard, Peter (2002). *Introductory Statistics with R*. Springer: New York.

Fox, John (2003). The R Commander: A Basic-Statistics GUI for R.

<http://www.socsci.mcmaster.ca/jfox/Misc/Rcmdr/index.html>

RSS News

Research consulting duties change hands

We have a new face in the RSS office! [Mike Clark](#) has replaced Garvii Thomas as a research consultant in the RSS office. Mike comes to us with quite a bit of research experience developed during his tenure as a graduate student working on his PhD in Experimental Psychology. Mike graduated with a double undergraduate degree in psychology and philosophy. Mike continued his education, becoming a graduate student here at UNT. He has taught undergraduate statistics and graduate statistics labs as part of

his graduate student experience, and continues to consult with graduate students on research projects. Let us all give Mike a warm welcome, and bring the research on!

"SAS Corner" combined with "RSS Matters"

We have decided to combine these two columns. "RSS Matters" will cover SAS topics as well as other research and statistical topics.

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Network Connection

By [Dr. Philip Baczewski](#), Associate Director of Academic Computing

End of the Browser Wars?

On Friday, May 30, it was announced that Microsoft and AOL Time Warner had settled the lawsuit filed by AOL's Netscape division. That lawsuit had claimed anticompetitive practices on the part of Microsoft (I know I'm shocked). According to the Mercury [News](#), "AOL had a relatively strong case, legal analysts said. But it also faced anywhere from three to five years of litigation and appeals. At the same time, AOL has been searching for ways to pay down its massive debt left from its blockbuster acquisition of Time Warner in 2000."

This is quite a turnaround considering that in January of 2002, Microsoft denounced AOL as a company that would rather litigate than innovate. It was billed as a clash of the Titans: AOL, the company that could fill your mailbox with free diskettes and CDs, and Microsoft, the company that could shove their inferior 1980s technology (oh, pardon me, I meant "innovation") down your throat because they could blackmail their OEM dealers into selling nothing else. On the face of it, however, it was a battle of the network browsers. The longtime-dominant Netscape versus the scrappy challenger backed by the unlimited bankroll, Internet Explorer.

The bigger stakes were online services. If Microsoft could make you use its browser, they could snare you onto their online service before you learned there were alternatives. If you had a choice of browser, then you could have a choice of service providers and AOL was in the best position to get you to install their virus, uh, I mean "software." He who controlled the network controlled the content and that was enough to lock the horns of these two mammoth companies. (As it turned out, most people were smarter than MS thought and the Microsoft Network butterfly has remained just another MS bug.)

Reason prevails?

It seems that reason has now prevailed. All it took was a friendly call from Bill Gates of Microsoft to Dick Parsons of AOL Time Warner in which Bill poured enough money (\$750M) through the phone line to make a settlement seem like a reasonable course of action. You have to feel a bit sorry for Bill, considering that that only leaves Microsoft sitting on about \$46 Billion or so. But, he also sweetened the deal by providing a free 7-year license to Microsoft Internet Explorer and an option to license Microsoft's media and security software when it becomes available.

Wait a minute here. I thought the whole problem was that Microsoft was using its monopolistic position to get people to use Internet Explorer and now part of the settlement is that AOL uses Internet Explorer? Isn't that like suing your doctor for amputating the wrong leg and then settling by letting him cut off your good arm too? Is AOL Time Warner just trying to innovate, or has something else changed over the past year and a half?

Yes, the correct answer is, something has changed. AOLTW is sitting on \$24 Billion of debt

as a result of its mergers and acquisitions. It seemed like such a good idea at the time -- you take AOL, the leading online service provider and shove it together with Time Warner, the leading content and media provider and, voila! -- instant market channel. Its just too bad that no one at AOL was smart enough to figure out how to make everyone's computer shout, "you've got movie!"

So, AOLTW needs cash, Steve Case is out of the picture, and Microsoft benevolently steps in with a gracious offer to settle the lawsuit. This "kick-them-with-your-gold-toed-boot-while-they're-down" strategy has worked before for Microsoft. Remember Apple's "look and feel" lawsuit against Microsoft claiming that Windows was just an expensive imitation of Mac OS? Well, that was in the days when Apple was having a bit of a cash flow problem itself. Microsoft graciously settled and Apple got \$150M and a Mac version of Internet Explorer as well as a Mac version of Microsoft Office written programmers who actually knew the Mac operating system (the funny thing is, in my experience, the Mac OS version works better than the Windows version).

Now AOL Time Warner can go back the business of delivering content ("You've got Magazines!") and not have to worry about having to innovate, but where does that leave Netscape? Should you download version 7 and put it up on your knick-knack shelf next to the final 100 AOL diskettes you received in the mail? I doubt that Netscape will fade too soon, which is a good thing because it would be difficult to dust up there.

The Browser Business

Technology and technology companies have a way of hanging on and reinventing themselves when the environment changes around them. IBM still makes a ton of money licensing mainframe software, but their TV ads portray them as web service integrators. Sun is still selling its proprietary hardware as the market embraces open software standards to go with an open hardware standard that's been around for years. ("Hey Scott! If the network is the computer, why are you still selling computers?")

The other interesting development is that there seems to be more browser software from which to choose. You've got Netscape's open source counterpart, [Mozilla](#). There's the [Konqueror](#) browser which is an outgrowth of the KDE open source desktop environment. Konqueror also serves as the basis of Apples Safari, an OS X native [browser](#) which is currently under development and released as beta-test software. Interestingly enough, Microsoft has [announced](#) it will stop developing new versions of Internet Explorer citing Safari as competition it can't overcome.

It seems that the marketplace is now free for Microsoft's "innovation" of the beat-them-down, pay-them-off variety. The marketplace has also decided that it likes a standard Internet which can be accessed by a number of browsers. So, get yourself an HTML rendering engine, slap on some Java and you too can be in the browser business. That is, until someone decides that it's time to "innovate."

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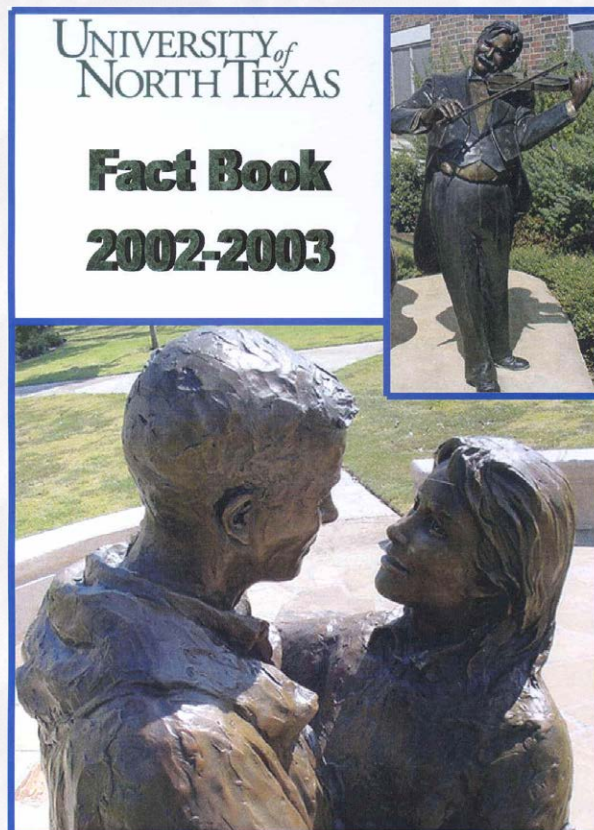
Link of the Month

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

Get the Facts

Did you know that all sorts of information about UNT is just a mouse-click away? Here is a sample of what is in the "Fact Sheet Fall 2002" entry:

- Section A - Fall Enrollment
- Section B - Fall Student Admissions
- Section C - Fall Semester Credit Hours
- Section D - Spring and Summer Enrollment and Semester Credit Hours
- Section E - Degrees Conferred (Includes December, May and August Graduations)
- Section F - Faculty
- Section G - Financial Information
- Section H - Library, Staff, and Facilities
- Section I - Academic Degree Program Inventory
- Section J - Enrollment By Admit Status
- Section SC-University System Center



If any of this looks interesting to you, point your browser to http://www.unt.edu/planning/Fact_Book/Fact_Book_2003/table_of_contents.htm and get the facts.

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Resource Management on a Budget: Part IIIa*

Bringing up a Router

By [Shannon Eric Peevey](#), UNT Central Web Support

In this month's article, I want to discuss a simple way for bringing up a router with very little cost. As you may know, we are using a group of old Compaq Deskpros to bring up a web hosting environment that is both scalable and inexpensive. The operating system of choice on these machines is Debian GNU/Linux, chosen for stability and size requirements, and the routing software that we are going to use is called IpTables, which is the built-in firewall/router/gateway/masquerading functionality in the linux 2.4 kernel.

But first...

We need to install Debian GNU/Linux on our machine. Remember, that these machines do not have a CD-ROM, so we will have to start the initial installation from a set of six floppy disks. These are the Rescue disk, Root disk, and four module disks, (which contain device drivers, firewalling modules, etc.) Since we are going to be using IpTables for our firewall, it is important to choose the appropriate images from the Debian documentation located at: <http://www.debian.org/releases/stable/installmanual> (Make sure that you choose the correct manual for the architecture that you using. For this example, we are going to be using the Intel x86 installation manual.)

The links to the floppy images are:

Rescue Image (used to boot the machine):

<http://http.us.debian.org/debian/dists/woody/main/disks-i386/current/images-1.44/bf2.4/rescue.bin>

Root Image (used as the default kernel to start installation):

<http://http.us.debian.org/debian/dists/woody/main/disks-i386/current/images-1.44/bf2.4/root.bin>

Driver Disk 1: <http://http.us.debian.org/debian/dists/woody/main/disks-i386/current/images-1.44/driver-1.bin>

Driver Disk 2: <http://http.us.debian.org/debian/dists/woody/main/disks-i386/current/images-1.44/driver-2.bin>

Driver Disk 3: <http://http.us.debian.org/debian/dists/woody/main/disks-i386/current/images-1.44/driver-3.bin>

[i386/current/images-1.44/driver-3.bin](http://http.us.debian.org/debian/dists/woody/main/disks-i386/current/images-1.44/driver-3.bin)

Driver Disk 4: <http://http.us.debian.org/debian/dists/woody/main/disks-i386/current/images-1.44/driver-4.bin>

These images will only work with 1.44 meg floppies, if you need images to work with different media, check out: <http://www.debian.org/releases/stable/i386/ch-install-methods.en.html#s-kernel-choice>

The link under “driver images or tarball” will lead you to the Driver Disk downloads.

The instructions for creating the floppies can be found at:

<http://www.debian.org/releases/stable/i386/ch-install-methods.en.html#s-create-floppy>

(NOTE: Be aware that you cannot just copy the .bin files to the floppies. They are “disk images”, which will need to be applied to the floppy using special programs, (rawrite, etc. on win32 platforms, and dd on UNIX platforms). Links to the win32 programs can be found here: <http://www.minix-vmd.org/pub/Minix-vmd/dosutil/>)

Don't Forget...

We will need an extra NIC card for this machine to be a router. That is because the router will act as the “gateway”, or tunnel, between the “outside” world, and the “private” world, or network, that we are setting up behind the router. Therefore, the network packets will come to one of the network cards which is pointed to the “outside” world, if deemed appropriate, then the packets will be passed to the network card that is pointed to the internal network, and on to the machine to which it is addressed. The router can be an extremely low-end machine because almost all of the work is done by the network cards.

Now That We Have...

The installation media and the second NIC are installed on the machine, we can begin installing Debian GNU/Linux on our machine.

1. Insert the Rescue Disk into the floppy drive of the machine and start the machine.
2. After the machine runs Post, it will bring up a welcome screen that says “Welcome to Debian GNU/Linux 3.0!”. Read the screen, and then press <ENTER> to begin booting the installation program. (This will take some time, as the image is on a floppy disk.)

A penguin will appear, and some text will scroll by as the rescue disk finds various hardware components on your machine, after which it will prompt, “VFS: Insert root floppy disk to be loaded into RAM disk and press <ENTER>”.

3. When thus prompted, extract the rescue disk from the floppy drive, and insert your “Root b2.4” floppy into the drive and press <ENTER>.

After this image is loaded into RAM, we will begin to set our configurations for Debian GNU/Linux. After this point, it is important to note that if you are re-partitioning your system, you will most likely lose data. Therefore, it is important to back up your data to an external device, such as a CD-ROM, or tape backup, before proceeding.

General and Specific Configuration...

Options for Debian are very straight-forward. (Check out: <http://www.debian.org/releases/stable/i386/ch-preparing.en.html#s-install-overview> for a good overview of pre-installation preparation, and items you will need to know before configuring your machine to run GNU/Linux.) A short list of items you will need to know about are your:

3.3.2 Finding Sources of Hardware Information

3.3.3 Hardware Compatibility

3.3.4 Network Settings

Which can all be found at:

<http://www.debian.org/releases/stable/i386/ch-preparing.en.html#s-needed-info>

Now to Configure...

1. Choose The Language – This is the first configuration screen that will appear after the kernel is loaded into RAM. This screen allows you to choose the language that will be used during, and after, installation as your default language. You can choose from German (de), English (en), Spanish (es), French (fr), Japanese (jp), and Portugese (pt). (If your preferred language is not found on this list, I imagine that there is probably a download site to be found in your country that does have a language that you would prefer. It just so happens that the US mirror that I am using only has these six languages.) I am choosing “en” for English, my native language. (Unfortunately, I will continue on with the configuration in English. If you would like to send in configuration in your language, I would be happy to add those to this document, as well.)
2. Choose Language Variant – For the English language, we are given a choice of three variations of English: English (United States), English (United Kingdom), and English (Ireland). I am choosing English (United States).
3. Release Notes – This is a short explanation page of the installation program, who created it, and where to go for installation help. Hit <ENTER> to continue to the next page.

Debian GNU/Linux Installation Main Menu

After the Release Notes, we now enter the “Debian GNU/Linux Installation Main Menu”. This menu will take us step-by-step through the configuration process, and is flexible enough to allow you to skip a step, or return anywhere in the configuration process. The menu is setup in two parts. The first, are the three options at the top of the menu. These three options are the recommended steps through which you step to configure your machine properly. They are:

1. Next – If chosen, this will take you to the recommended step in the configuration process. If you follow the menu using these steps from start to finish, you will

configure every part of your installation, (possibly correctly), the first time.

2. Alternate – If you know what you are doing, or if you have already configured a step, you may choose the Alternate. (Don't forget, you may miss a step if you choose an Alternate.)
3. Alternate1 – Same as two.

(NOTE: After you will have completed a step, you will see another option named, “Previous”. If you select this option, you will be taken back to the step that you just completed.)

The second half of the menu is a twenty-four item menu of the whole configuration process. You may scroll up-and-down, (using the arrow keys, paging keys, and I am sure some other ways), to choose from either the Next-Alternate options, or choose from individual places on the menu at the bottom. It is your choice.

Next...!!!

I tend to make mistakes if I pick-and-choose from a list in a haphazard fashion, so I will choose “Next” every time I return to the main menu.

1. Configure your Keyboard – Choose from a list of keyboard mappings that will be most comfortable for you. I will choose “qwerty/us : U.S. English (QWERTY)”
2. You are returned to the main menu. Choose “Next”.
3. Partition a Hard Disk – This will allow you to cut up a physical hard-drive into smaller slices called partitions. (Check out this discussion on partitioning for a good understanding of partitioning on a GNU/Linux system:

<http://kmsself.home.netcom.com/Linux/FAQs/partition.html>

For ease of this exercise, I will only be using three partitions: root (/), boot (/boot), and swap partitions. The /boot partition will be the location of our Master Boot Record, or MBR, and LiLO Boot Loader. This needs to be the first partition on our hard-drive so that the MBR will be found and the system will be able to boot up. It is recommended that you set aside around 21 megs of space for most GNU/Linux distributions, but Debian seems to only need 5-10 megs. I usually use the Ext2 filesystem, as it has the most usage, and seems to be the most stable at this point in time. (Stability is important for the /boot partition, because any errors in this partition could render your machine unbootable, without a rescue disk.) I also don't like the journaling filesystems for this partition, because the journaling aspect of the filesystem, which is much like a transaction log in database systems, takes up space. (There isn't much in a 5-10 meg partition...) The swap partition, is a special partition that was created in Unix systems back in the late 1970's, to allow the operating system to use the filesystem as a quasi-RAM disk. Though slower than RAM, the operating system can through pages of loaded programs out to the filesystem if it begins to run out of memory. Though not as critical in this age of low RAM prices, it will still help your operating system to run at optimal performance. It is recommended to make the swap partition equal to twice of the amount of RAM in your machine. (In the case of these Compaqs, that will equal 64 megs.) The swap partition is not set to a filesystem type. We will activate it later in the “Initialize and Activate a Swap Partition” step. Finally, the root partition is the place where

most of your configuration and compiled binaries will reside. (In our example, it will hold everything. See the above mentioned link as to why that is not a good setup decision.) This can be any file system, but I still prefer Ext2. There are some issues with Ext2, such as 2 gig file size limitations, and no transaction features, but it has served very well, and is known to be completely stable, (most of the time ;)).

1. Choosing the “Partition a Hard Disk” link will bring to the “Select Disk Drive” page. If you only have one disk, as I do, you will only see one option: /dev/hda. The next two pages will give a brief description on LiLO Limitations, and the ReiserFS Journaling filesystem. Read these thoroughly, as the creator of the installation system has gone through great pains to give you pertinent information about the process. After reading these pages, we will enter the dreaded partitioning screen... ;)

2. Welcome to the cfdisk 2.11n!!! This unassuming program has the power to destroy all of the information on your harddrive. (Therefore, if you have not backed up all of the information on your harddrive, do so now!) The upper half of the screen shows the partitions, size and type, (should not have anything but “Free Space” underneath the headings. If not, highlight the partitions that you want to delete, and then <TAB> across the bottom menu to [DELETE] and hit <ENTER>. Repeat this process to delete existing partitions. If you do not have any partitions, <TAB> the bottom menu to highlight [NEW] and hit <ENTER>. Choose either Primary or Logical partition, hit <ENTER>, then enter the size of the partition in megabytes, hit <ENTER>. (For a quick synopsis on Primary and Logical partitions, check out: <http://www.lysator.liu.se/~forsberg/linux/harddisks.html>.) Also, don't forget that the /boot partition needs to be located at the beginning of the disk. This means that you want that partition to be at the top of the list in the cfdisk program. One other thing, after you have entered the size of the /boot partition and hit <ENTER>, you will be returned to the cfdisk main page. Before continuing, you will need to make the /boot partition bootable. Do this by <TAB>ing over to highlight bootable on the bottom menu, and hitting <ENTER>. Repeat process, except choose [TYPE] instead of [BOOTABLE] on the next time around. This will allow you to choose the type of filesystem that you will have on your partition. My convention is to create the swap partition second, so I will choose [NEW], hit <ENTER>, [PRIMARY], hit <ENTER>, 64 megs, hit <ENTER>, choose [TYPE], hit <ENTER>, type 82, for Linux Swap, hit <ENTER>. There you have it, your swap partition is configured. Now, create your root partition with the rest of the space on the harddrive. When choosing your filesystem type, you may choose any on the list, but I recommend “Linux”, number 83. It is the Ext2 filesystem. Finally, after you have configured all of your partitions to your liking, <TAB> over to the [WRITE] menu item, ;), and hit <ENTER>. You will be prompted if you want to write the configuration to the disk, type “yes” or “no”, hit <ENTER>, then [QUIT] the cfdisk program. You will be returned to the main menu...

3. Initialize and Activate a Swap Partition – This will delete all of the information in the swap partition, and will initialize it. This means that your machine will now be able to swap memory between the harddrive and RAM. You will be asked to “Scan for Bad Blocks?”, which will scan your harddrive for errors, and double-check with you as to whether you want to initialize the swap partition. (Remember to read all of the text prompts!)

4. Initialize a Linux Partition – Much like the previous step, this step will format your Linux partitions. The first step is to choose which type of filesystem you would like. (Options are Ext2, Ext3, and ReiserFS.) Check out this link to help you decide: <http://www.tldp.org/HOWTO/Filesystems-HOWTO-6.html>
5. I will choose Ext2 for personal reasons mentioned before. It is important to note that you will need to initialize the root partition, or /, first. Therefore, choose the second partition on the list, which will probably be /dev/hda5 or /dev/hda3. Then, as with the swap partition, you will be asked to check for bad blocks, etc. After the partition is formatted, which may take some time depending on the amount of storage space on your machine, you will then be asked if you would like this partition to be initialized as root, or /. Choose “yes”. Repeat this process for the /boot partition, except you will be given a list of pre-defined partition names to choose from. (Choose /boot... ;))
6. Install Kernel and Driver Modules – Now we are going to install the kernel and the drivers modules from our floppies. At the “Select Installation Medium” screen, choose “/dev/fd0 : First Floppy Drive”. You will then be asked to insert the Rescue Disk, which is the floppy that we booted the machine off of initially. After the Rescue Disk is installed on the harddrive, the installation will prompt you to insert the Driver Disks that you have made. (You labeled them, didn't you...? ;)) Just follow the prompts...
7. Configure Device Driver Modules – To add the necessary drivers and modules into our Linux kernel, we are given the opportunity to browse from the list of modules that were installed on the harddrive in the previous step. These are browsable in a rather oblique fashion on the “Select Category” menu. These modules are listed by location on the left, (kernel/drivers/foo), and a short description of the contents of that directory on the right. For our purposes, we only need to concern ourselves with two directories on this page: kernel/drivers/net and kernel/net/ipv4/netfilter. The first directory lists the modules for many network cards, including the “tlan” module that is found in the Compaq Deskpros that we are using. (NOTE: if your machine has a 3c905 NIC, you will need to install the “3c59x” module.) You may scroll up and down the menu with the arrow keys, and the page up/down keys. Highlight the appropriate NIC driver for your machine, and press enter. The program will prompt if you are sure if you want to install the module into the kernel, “yes” or “no”. If you choose “yes”, you will be able to enter command-line arguments for that NIC, (not necessary for the “tlan”, “3c509”, “3c905” or “eepro*” cards. (From personal experience.)). Hit <ENTER>, and the program will try to install the module into the kernel. One of the nice features of this config program is that it will probe your system for the required hardware, and if it is not located on your machine, the installation of the module will fail, and you will have to try another module. (Perhaps you wrote the wrong number down during the pre-installation.) Instead of having to stop the installation and crack the box, you can use trial-and-error to install the appropriate modules. (A nuisance, but possible.) If the install succeeds or fails, you will be asked to press <ENTER> to continue. (By hitting “EXIT” at the top of the directory, you will be dropped back to the previous menu.) The next directory that we will need to enter is kernel/net/ipv4/netfilter. This holds the modules for our IpTables firewall that will be used to route packets.

In this directory, we will need to install, at a minimum, the “ip_tables” module, and you may install more of the ipt_* modules from that directory that you may find useful, such as “ipt_masquerade”, “ipt_redirect”, and “ipt_reject”. (More information about these individual modules may be found at: <http://www.netfilter.org/>). I am only going to install the “ip_tables” module. Follow the same process as we did when installing the NIC module. (One final note: If the “ip_tables” module fails to load, it is likely that you chose the wrong kernel to create the Rescue and Root Disks. If this is the case, you can either restart the installation and create the correct Rescue and Root Disks, or you can install the “ip_chains” module, which works with the 2.2 kernel. Unfortunately, this tutorial will not cover IpChains configuration, but there are many out on the internet that will be able to help you.)

8. Configure the Hostname – This will allow you to set the hostname of the machine. The hostname is the unique name for this machine on your network. If you already have one on the external network, then enter that name on this line, and press <ENTER>. (NOTE: the hostname is not the Fully-Qualified Domain Name, but only the unique name at the beginning of the FQDN. (ie If the FQDN is web2.unt.edu., the hostname is web2.) If you do not have a FQDN, you will need to either buy one through a company that sells domain names. If you have one, but do not know what it is, contact your network manager, or your ISP.)

9. Configure the Network – We will now configure the network card. I have never actually been able to configure two cards, so I do not know if it is possible to do so with this program. If not, I will show you how to configure the second NIC at a later time. If it does work for you, let us know... First of all, the installation asks if you want to use DHCP or Bootp to configure the NIC on boot-up. Obviously, this is the easiest option, but, again, I have never used this option. I like to hardcode the IP Address. To do that, we will need to know our: external ip address, external gateway address, and the name of some dns servers. (The subnet mask can be configured from the external ip address.) For example:


```
external:
ip address = 129.120.56.23
subnet mask = 255.255.255.0
gateway address = 129.120.56.250
dns server = 129.120.26.254
```

10. The broadcast address will always be . (You will be creating the internal ip addresses, etc. yourself, later.) Enter these values into the correct spaces. (For more information on DNS and Ip Addresses, check out: <http://www.howstuffworks.com/dns1.htm>)

11. Install the Base System – Now for the fun part :) We are going to install the applications that we need onto our Debian GNU/Linux machine. Since the Compaqs do not have a CD-ROM, I have decided to install the base system from an FTP server. (Addresses of which are located at: <http://www.debian.org/mirror/list>). Basically, you will only need to enter the URL and directory of the ftp/http server as listed on the debian mirror list. If you have a proxy server, give the FQDN and port number for that server. Hit <OK> and the install will

automatically install the base system to your machine.

12. Make System Bootable – Do you want to install LiLO on the Master Boot Record? I usually do. You can boot to any number of operating systems using LiLO, and therefore, I don't see a need to use any other boot loader. (Even GRUB, the RedHat boot loader.) Make sure you install it on the /boot partition, probably /dev/hda1. (For more information on LiLO, check out: <http://en.tldp.org/HOWTO/mini/LILO.html>) The only other option is to install LiLO on a floppy, and then boot from the floppy every time. (Slower, but also works very well.)

13. Make a Boot Floppy – I would recommend this. You never know when you will come in and the MBR will corrupted... What do you do? Well, the Boot Floppy will hold the necessary information to boot your system in case of MBR failure. All you will need will be a blank 1.44 floppy.

14. Reboot the System – This will restart your machine. (Don't forget to remove all floppies/media from your machine. When the machine reboots, you will be asked a few configuration questions, which are covered very thoroughly in: <http://www.debian.org/releases/stable/i386/ch-init-config.en.html>

Finally,

You have installed Debian GNU/Linux on your machine. Begin playing around with the system, and next month, we will explore the APT tool, configure the second NIC, and configure our firewall. Until then, Take care!!

* You can read Part I [here](#) and part II [here](#) .

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Short Courses

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

The Summer Short Courses are filling up fast. Please consult the [Short Courses](#) page to see the to see the course schedules and to register for the classes of your choice.

Customized Short Courses

Faculty members can request customized short courses from ACS, geared to their class needs. Other groups can request special courses also. Contact ACS for more information (ISB 119, 565-4068, lynch@unt.edu).

Especially for Faculty and Staff Members

In addition to the [ACS Short Courses](#), which are available to students, faculty and staff, staff and faculty members can take courses offered through the [Human Resources](#) Department, the [Center for Distributed Learning](#), and the UNT Libraries' [Multimedia Development Lab](#). Additionally, the [Center](#) for Continuing Education and Conference Management offers a variety of courses to both UNT and the general community, usually for a small fee.

GroupWise Training

GroupWise 6 classes are over for the semester. Check here to see if new ones have been announced: <http://ncs.unt.edu/> .

If would like to have a Basic GroupWise seminar for your area, please contact Jason Gutierrez, Campus Wide Networks, jasong@unt.edu .

Center for Distributed Learning

The Center for Distributed Learning offers courses especially for Faculty Members. A list of topics and further information can be found at http://www.unt.edu/cdl/training_events/index.htm The center also offers a "Brown Bag" series which meets for lunch the first Thursday of each month at Noon in ISB 204. The purpose of this group is to bring faculty members together to share their experiences with distributed learning. One demonstration will be made at each meeting by a faculty member with experience in distributed learning. More information on these activities can be found at the [Center for Distributed Learning](#) Website.

Technical Training

Technical Training for campus network managers is available, from time to time, through the [Campus-Wide Networks](#) division of the Computing Center.

Check the CWN site to see if and when they are offering any training.

UNT Mini-Courses

These 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.ed2go.com/unt/courses.html> .

Alternate Forms of Training

Many of the [General Access Labs](#) around campus have tutorials installed on their computers. For example, the College of Education recently acquired some Macromedia Tutorials for Dreamweaver 4.0, Flash 5.0 and Fireworks 4.0.

The [Training](#) Web site has all sorts of information about alternate forms of training. Computer Based Training (CBT) is one of the alternatives offered. Of particular interest are courses available via SkillSoft/SmartForce. See <http://www.unt.edu/smartforce/> for more information.

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IRC News



Minutes provided by Sue Ellen Richey,
Recording Secretary

IRC Regular and Ex-officio Voting Members: Judith Adkison, College of Education; Donna Asher, Administrative Affairs; Craig Berry, School of Visual Arts; Lou Ann Bradley, Communications Planning Group; Cengiz Capan, College of Business and GALC; Bobby Carter, UNT Health Science Center; Matt Creel, Student Government Association; Christy Crutsinger, Faculty Senate; Jim Curry, Academic Administration; Don Grose, Libraries and University Planning Council; Joneel Harris, EIS Planning Group; Elizabeth Hinkle-Turner, Student Computing Planning Group; Tom Jacob, College of Arts and Sciences; Abraham John, Student Development; Jenny Jopling, Instruction Planning Group; Armin Mikler, Research Planning Group; Kenn Moffitt, Standards and Cooperation Program Group; Ramu Muthiah, School of Community Services; Jon Nelson, College of Music; Robert Nimocks, Director, Information Technology, UNTHSC; John Price, UNT System Center; Philip Turner, School of Library and Information Science and University Planning Council (Chair, IRC); VACANT, Graduate Student Council; VACANT, Staff Council; VACANT, University Planning Council; Virginia Wheelless, Chancellor, for Planning; Carolyn Whitlock, Finance and Business Affairs; **IRC Ex-officio Nonvoting Members:** Jim Curry, Microcomputer Maintenance and Classroom Support Services; Richard Harris, Computing Center and University Planning Council; Coy Hoggard, Computing Center/Administrative; Judy Hunter, GALMAC; Maurice Leatherbury, Computing Center/Academic; Doug Mains, UNT Health Science Center; Patrick Pluscht, Center for Distributed Learning; Sue Ellen Richey, Computing Center (Recording Secretary); Ken Sedgley, Telecommunications.

Tuesday, April 15, 2003

VOTING MEMBERS PRESENT: PHILIP TURNER, Chair, JUDITH ADKISON, CAROLYN WHITLOCK, ELIZABETH HINKLE-TURNER, RAMU MUTHIAH, KENN MOFFITT, JONEEL HARRIS, VIRGINIA WHEELLESS, JENNY JOPLING, PAM HIGHT (for DON GROSE), CRAIG BERRY, JON NELSON, WIL CLARK (for JOHN PRICE), ROBERT NIMOCKS **NON-VOTING MEMBERS PRESENT:** RICHARD HARRIS, JUDY HUNTER, JOE ADAMO, MAURICE LEATHERBURY, SUE ELLEN RICHEY (Recording Secretary) **MEMBERS ABSENT:** PATRICK PLUSCHT, DONNA ASHER, DUNCAN ENGLER, LOU ANN BRADLEY, COY HOGGARD, CENGIZ CAPAN, JIM CURRY, DOUG MAINS, CHRISTY CRUTSINGER, TOM JACOB, ARMIN MIKLER, BOBBY CARTER, ABRAHAM JOHN, DUNCAN ENGLER **GUESTS:** JENNIFER LAFLEUR, TIM CHRISTIAN

The minutes of the February 18, 2003, and the minutes of the Tuesday, March 11, 2003 meetings were approved as distributed.

IR Steering Committee

The Chair announced that there has not been an IR Steering Committee meeting since the last IRC meeting, but there may possibly be one on Wednesday, April 24th, at which time they expect to discuss the Web Accessibility Policy.

Distributed Computing Support Management Team

Maurice Leatherbury reported for the Distributed Computing Support Management Team that at their last meeting they talked about Microsoft dropping support for Windows 98 and agreed to encourage people in their departments to stop using old operating systems. The group also discussed a desktop back-up software package but since the cost was prohibitive,

they decided to explore other alternatives.

Maurice also announced that notification of the discontinuance of Premium and free dial-up services has been sent out to the UNT campus community by several methods, including a press release, through Benchmarks, and through various electronic mail resources. His staff is looking for other free or low-cost services to suggest to users as alternatives to what UNT has been providing.

Instruction Planning Group

Jenny Jopling reported that since the Instruction Planning Group does not currently have a charge, they have not been meeting.

Communications Planning Group

Maurice Leatherbury reported for the Communications Planning Group that they will meet on Thursday, April 24, 2003 to work on revising a Connections Policy that was previously approved by the IRC but never forwarded to the Vice Presidents.

EIS Planning Group

Joneel Harris reported for the EIS Planning Group that the project is progressing satisfactorily. An internal audit of the EIS project is nearly completed, and they are about to begin a quality assurance audit by Ciber. In addition, the Project Management Group has reorganized to provide more time for John Hooper to coordinate the technical side of the project. Bob Woelfel from the Health Science Center will take a more active role in coordinating the work of the family product groups. They are, of course, concerned about the budget cuts and hiring freezes and their impact on the project. The Health Science Center has already had to make cuts in their personnel and expect to have to make more. Of greatest concern is in the area of Contributor Relations, where HSC has already lost 4 out of their 8 positions.

Research Planning Group

Maurice Leatherbury reported for the Research Planning Group that they have met to discuss research projects that could potentially be funded by money that the Computing Center had set aside in support of research. The group seemed to want to focus on infrastructure projects, such as storage area networks. The group's next meeting is Thursday, April 24th at 4pm.

Standards & Policy Planning Group

Kenn Moffitt reported for the Standards & Policy Planning Group that they have not met since the last IRC meeting, but have a meeting scheduled to work on a GroupWise Policy that they plan to bring to the IRC.

Student Computing Planning Group

Elizabeth Hinkle-Turner reported for the Student Computing Planning Group that they will meet Monday, April 21st at 2pm to work on a draft of the Student Computing Services survey.

Distance Learning Team

Jenny Jopling reported for the Distance Learning Team that they are scheduled to meet on Thursday, April 24th, but have not met since the last IRC meeting. She stated that new verbiage has been proposed for announcing weather-related university closings, which gives additional information related to on-line courses, which are not necessarily delayed or canceled due to weather conditions. Dr. Turner added that a plan is being formulated that would provide a auto switch-over to a back-up server in the event the WebCT server should go down as a result of inclement weather conditions or under any other circumstances.

Tuesday, May 20, 2003

VOTING MEMBERS PRESENT: PHILIP TURNER, Chair, JUDITH ADKISON, PHILIP BACZEWSKI (for ELIZABETH HINKLE-TURNER), COY HOGGARD (for JONEEL HARRIS), PAM HIGHT (for DON GROSE), JON NELSON, WIL CLARK (for JOHN PRICE), ROBERT NIMOCKS, PATRICK PLUSCHT, MICHELLE AMORUSO (for DONNA ASHER), LOU ANN BRADLEY, JIM CURRY, CHRISTY CRUTSINGER **NON-VOTING MEMBERS PRESENT:** RICHARD HARRIS, JOE ADAMO, MAURICE LEATHERBURY, SUE ELLEN RICHEY (Recording Secretary) **MEMBERS ABSENT:** JUDY HUNTER, CRAIG BERRY, VIRGINIA WHEELLESS, JENNY JOPLING, KENN MOFFITT, CAROLYN WHITLOCK, DUNCAN ENGLER, CENGIZ CAPAN, DOUG MAINS, TOM JACOB, ARMIN MIKLER, BOBBY CARTER, ABRAHAM JOHN, RAMU MUTHIAH

Lou Ann Bradley moved for approval of the minutes of the April 15, 2003 meeting; Jon Nelson seconded and the minutes were approved as distributed.

IR Steering Committee

The Chair reported that the IR Steering Committee approved the Web Accessibility Policy at their recent meeting, and he commended Kenn Moffitt for his presentation at that meeting.

Distributed Computing Support Management Team

Maurice Leatherbury reported for the Distributed Computing Support Management Team that at their recent meeting they continued their discussion of desktop back-up alternatives. The committee also discussed the development of a retention schedule for electronic records, including GroupWise email. In addition, Maurice reported that Dell is making every effort to be competitive with Hewlett-Packard in providing UNT with servers, and although H-P has a new program which will give UNT even deeper discounts, Dell is planning to make a new pricing proposal to try and beat that.

News from the Chair

The Chair noted that Dell has a workstation deal on their Website for faculty and students in which they offer a 10% discount plus commercial level support.

The Chair announced that a new UNT committee called Electronic Thesis and Dissertation Policy Committee has requested that a member of the Information Resources Council be elected to serve on it. Philip Baczewski nominated Elizabeth Hinkle-Turner for that position, Jon Nelson seconded, and the council elected Elizabeth by acclamation.

There was no report from the **Instruction Planning Group** since they had not met.

Communications Planning Group

Lou Ann Bradley reported for the Communications Planning Group that they continue to work on a revision of the policy on Addition of Devices to the UNT network.

EIS Planning Group

Coy Hoggard reported for the EIS Planning Group that everyone was working very hard and that things were going well and on schedule. Plans are to begin using the centralized purchasing application in July, not by distributed areas, but by the Purchasing Dept. staff at first. The General Ledger system will be live by September 1, 2003, as well as Admissions and Development, with Payroll and Personnel systems going live in January of 2004. Coy stated that Joneel Harris is doing a series of overview presentations in the coming weeks and all of the sessions are full; however, additional sessions will be scheduled and their times announced later. Coy pointed out that those interested can go to the EIS Website at www.unt.edu/eis where there is a navigation tutorial under Presentations.

Research Planning Group

Maurice Leatherbury reported for the Research Planning Group that they have met and have come to the conclusion that there are no pressing items to recommend to the council. There was discussion of the Storage Area Network (SAN) and plans were made to conduct a trial connection of an academic department (Library & Information Sciences) to the SAN in the Computing & Information Technology Center.

Standards & Policy Planning Group

Maurice Leatherbury reported for the Standards & Policy Planning Group that they met to discuss GroupWise "Everyone" message guidelines and plan to continue that discussion at their next meeting.

Student Computing Planning Group

Philip Baczewski reported for the Student Computing Planning Group that they are continuing the development of questions for the Student Computing Survey which will be conducted in the Fall.

Distributed Learning Team

Patrick Pluscht reported for the Distributed Learning Team that a new release of WebCT called VISTA will be out shortly though an official release date has not yet been announced. The committee is planning a migration path to the new version, making plans for CDL staff to be trained, and planning pilot courses in the Fall, with a roll-out of the new product in Spring 2004. The current WebCT version would be concurrently supported until Fall 2004 with a cutover date in Spring 2005. Patrick stated that a considerable effort will have to be put into the conversion of current versions of courses into Vista. The new version is supported by the same Oracle database software as the EIS project software, will do load-balancing, and has other capabilities as well. Patrick reported that the streaming media server has been upgraded and plans are to have a redundant system up and running by the end of the summer. Also, Patrick has been consulted about putting some new video conference rooms at Research Park when funding becomes available.

Patrick announced that Don Foshee, Founding President of the Texas Distance Learning Association, passed away May 13th of natural causes. He had been the keynote speaker at many conferences including the TxDLA annual conference hosted in Ft. Worth last year. Patrick stated that he was key to the formation of the Texas Distance Learning Association, and was a member of the Hall of Fame of the United States Distance Learning Association.

IRC Meeting Schedule

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

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Staff Activities

Transitions

More name changes have accompanied our new [moniker](#). CampusWide Networks has a new name. It is now called **Network Computing Services** (NCS). They have also moved their Website to a new home under a new name - <http://ncs.unt.edu>.

New employees:

- **Jasmine Tan**, new ½ time programmer on EIS project.
- **Anup Pachlag**, new ½ time programmer on EIS project.
- **Larry Benson**, I/O Operator, Printing Services, Production Services (part-time).
- **Jeff Saxon**, I/O Operator, Printing Services, Production Services (part-time).
- **Michael Clark**, Statistical Consultant, ACS Research and Statistical Services (part-time).

The following people no longer work in the Computing Center:

- **Garvii Thomas**, Statistical Consultant, ACS Research and Statistical Services (part-time).
- **Randy Franek**, Programmer/Analyst Database/Central Programming Support, retired.
- **Matinka Dobreva**, ACS General Access Lab monitor (part-time).
- **Blake Broyles**, ACS Checkin developer, moved to a full time Computer Systems Manager position with the UNT Library Systems.
- **Yinghua Wang**, ACS General Access Lab monitor (part-time).
- **Eric Weiss**, Microcomputer Consultant, Helpdesk, ACS (part-time).

Awards, Recognition, Publications

The following people were recognized for their years of service to UNT in the June 6, 2003 issue of *InHouse@unt* and/or on their [Website](#) :

- **Coy Hoggard**, Executive Director of Administrative Information Systems

- 35 years of service .

- **Sue Ellen Richey**, Administrative Services Officer - 20 years of service.
- **Rebecca Sue Parton**, Student Records Data Systems Programmer - 5 years of service.
- **Alan Wilson**, UNT/HSC Fiscal Data Systems Programmer/Analyst - 5 years of service.

Congratulations to **Mitch Smith**, Computer Support Specialist, Administrative Computing, EIS Project, and his wife, Maggie, just had twin boys, Blake and Bryan. Mitch began working for the EIS Project in April.

As we reported last month, Student Computing Services Manager, **Dr. Elizabeth Hinkle-Turner**'s commissioned work, *Finish Line*, for video, electronics, trumpet, and organ was featured at the International Trumpet Guild annual conference May 22 at Texas Christian University. A review of the piece and photo (captioned Ventus Musicus) are available here:

<http://www.trumpetguild.org/2003conference/thur/202.html>

Finish Line will also be performed by the Mid-American Contemporary Music Ensemble at Bowling Green State University, Ohio in July at the Feminist Theory and Music annual conference where she will also present the paper, "Hear Me Now: the implication and significance of the female composer's voice as sound source in her electroacoustic music".

EIS News and Events

Check out the EIS [Homepage](#) for news and other information regarding the EIS Project. **PeopleSoft's response to Oracle's hostile bid** is an item you might find interesting.

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Campus Computing News

Powered by Google

By [Charity Beck](#), CWIS Developer, UNT Central Web Support

In the continuing effort to improve the University of North Texas computing experience, the UNT search engine will officially be powered by Google starting at the end of July. The new search engine, Google, may be used now, but the old search engine, HTDIG, will be gone by the end of July. The main UNT site (<http://www.unt.edu>) and UNT Search page (<http://www.unt.edu/search>) are currently using the Google search engine.

If you have a search field located on your site you need to change the form action attribute as well as the form field.

An example of the OLD way to code your search field:

```
<form method="get" action="http://pan.acs.unt.edu/cgi-bin/htdig.pl"
class="formsize">
< input type="hidden" name="exclude" value="">
< input type="hidden" name="restrict" value="">
< input type="hidden" name="config" value="htdig">
<input type="text" name="words" size="8" value="Enter terms"
class="formsize" onFocus="document.forms[1].words.select()"
tabindex="3" id="searchterms">
<input type="submit" name="Submit" value="Search" class="formsize"
tabindex="5">
</form>
```

The NEW way to code your search field:

```
<form method=GET action=http://www.google.com/u/unorthtexas>
<input TYPE=text name=q size=31 maxlength=255 value="">
<input type=submit name=sa VALUE="Search">
</form>
```

In an effort to maintain the integrity of Google's search results, Google takes a proprietary approach to indexing it's sites. Page Rank is their secret defense against spammers and advertising guerillas.

PageRank relies on the uniquely democratic nature of the web by using its vast link structure as an indicator of an individual page's value. In essence, Google interprets a link from page A to page B as a vote, by page A, for page B. But, Google looks at more than the sheer volume of votes, or links a page receives; it also analyzes the page that casts the vote. Votes cast by pages that are themselves "important" weigh more heavily and help to make other pages

"important. Google's order of results is automatically determined by more than 100 factors, including our PageRank algorithm. Due to the nature of our business and our interest in protecting the integrity of our search results, this is the only information we make available to the public about our ranking system.

So you might ask, "How do I improve my site's rank within the search results?". Good question! After reading several articles, tutorials, and technical documents I gathered some helpful (not foolproof) tips.

- Make your title, located between the <title></title> tags, as descriptive as possible. For example, if I was creating a site for WebCT, I would use the title "WebCT at University of North Texas".
- Use keywords, or words you would use to perform a search, within the content of your page. Again, if I was creating a site for WebCT, I would use the word 'WebCT' as many times as possible throughout the content of the page.

Since Google uses "PageRank" to index sites you might say to yourself "Well, I guess I don't need those META tags that the [UNT Web Publishing Guidelines](#) talk about". This would **NOT** be the case. The State of Texas requires all state agencies to adhere to the state's search engine, TRAIL (Texas Records and Information Locator, <http://www.tsl.state.tx.us/trail>), policies. So you still have to include your 'Title', 'Author', 'Keywords', and 'Description' META tags!

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Going, Going, Gone . . .

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

Don't forget that a number of long-time services are *still* being terminated. Here is the list, by date:

- **May 31, 2003** - Academic Mainframe Services were terminated for individual account holders. See "[Academic Mainframe Services to be Terminated](#)" for further details.
- **August 31, 2003** - Usenet Newsgroup Services to be Discontinued. See "[This Just In . . .](#)" for more information.
- **August 31, 2003** - Computing Center to Discontinue Dialup Network Services. Details are available in the April "[Campus Computing News](#)" article.

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Summer Hours

A shorter version for the rest of the summer. - Ed.

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

Following are the hours for Computing and Information Technology Center-managed facilities for the summer. All staff offices will be closed Friday, July 4. Summer I is from June 2 to July 3; Summer II is from July 7-August 8. The fall semester starts August 25.

The [Helpdesk](#), ACS General Access Lab and Mainframe Print Services will maintain the following hours during this period.

- **Print Services** will maintain it's normal hours (6 a.m. - 2 a.m. M-F, 8 a.m. - Midnight Saturday).
- The **Helpdesk** will maintain its regular schedule: Monday-Thursday 8 a.m.-Midnight; Friday 8 a.m. - 8 p.m.; Saturday 9 a.m. -5 p.m. The actual office ([Information Sciences Building](#), Room 119) closes each weekday evening at 8 p.m., Saturday at 2 p.m. Phone/email support is available only during the remaining scheduled hours.
- The **ACS General Access Lab** ([ISB 110](#)) :

Summer I and II, June 1 - August 7

Monday - Thursday - Open 9:00 am - 9:45 pm
Friday - Open 9:00 am - 8:45 pm
Saturday - Open 10:00 am - 8:45 pm
Sunday - Open 1:00 pm - 9:45 pm

August 8 (Friday) - Open 9:00 am - 4:45 pm
August 9 (Saturday) - Open 10:00 am - 4:45 pm

July 4, August 10 - **Closed**

August Intersession, August 11 - 23

Monday - Friday - Open 9:00 am - 4:45 pm
Saturday, Sunday, **Closed**

Monday August 25 - Resume regular Fall/Spring semester hours.

Hours for Other Campus Facilities

The University is [officially](#) closed for Independence Day - Friday, July 4.

General Access Labs

- **WILLIS:**

Sunday, June 1: Open 1 p.m., resume 24 hour schedule.

July 4 - **Closed**

- **SLIS:**

June 2 - August 8

Monday - Thursday: 8 a.m. - 11 p.m.

Friday - Saturday: 8 a.m. - 10 p.m.

Sunday: Noon - 10 p.m.

July 4, August 9 - 19 - **Closed**

- **MUSIC:**

June 2 - August 7

Monday - Thursday: 8 a.m. - 9 p.m.

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

Saturday: 10 a.m. - 5 p.m.

Sunday: 1 - 9 p.m.

July 4, August 8 - 24 - **Closed**

- **SCS:**

May 12 - August 8

Monday - Thursday: 8 a.m. - 10 p.m.

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

Sunday: Noon - 10 p.m.

July 4-6, August 9-24 - **Closed**

- **SOVA:**

June 2 - August 6

Monday - Thursday: 8 a.m. - 10 p.m.

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

Saturday: 9 a.m. - 5 p.m.

Sunday: Noon - 10 p.m.

July 3-6, August 7 - 24 - **Closed**

- **COE:**

May 12 - August 8

Monday - Thursday: 7 a.m. - Midnight

Friday: 7 a.m. - 6 p.m.

Saturday: Noon - 8 p.m. Sunday: **Closed**

Early closings: August 8, 29 (close at 6 p.m.)

Closed: July 4, August 9 - 25, August 30 - September 1.

- **COBA:**

May 12 - August 7

Monday - Thursday: 8 a.m. - Midnight

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

Sunday: Noon - Midnight **August 8:** 8 a.m. - 4 p.m.

Closed: July 4 - 6, August 9-22

- **CAS:** July 4, all labs **Closed**

GAB 330

June 2 - August 8

Monday - Thursday: 8 a.m. - Midnight

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

Saturday: Noon - 8 p.m.

Sunday: Noon - Midnight

July 4, August 9 - 24 - **Closed**

GAB 550

June 2 - August 8

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

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

Saturday: **Closed**

Sunday: **Closed**

July 4, August 9 - 24 - **Closed**

Terrill Hall 220

June 2 - August 8

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

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

Saturday: **Closed**

Sunday: **Closed**

July 4, August 9 - 24 - **Closed**

Wooten Hall 120

June 2 - August 8

Monday - Thursday: 8 a.m. - 10 p.m.

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

July 4-6, August 9 - 24 - **Closed**

- **System Center Dallas ([SCDGAL](#))**

May 12 - August 8

Monday - Thursday: 8:30 a.m. - 10 p.m.
Friday: 8:30 a.m. - 6 p.m.
Saturday: 9 a.m. - 5 p.m.
Sunday: **Closed**

July 4 - **Closed**

"Normal" hours for all of the labs can also be found at the General Access Lab [Website](#).

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Today's Cartoon

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"MOM SAYS I CAN ONLY USE THE COMPUTER THREE HOURS A DAY.
IT TAKES LONGER THAN THAT JUST TO DELETE MY SPAM!"

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