The Cursor

Monthly Newsletter of the
Washington Area Computer User Group

Meeting Location:
Fairfax County
Government Center

APCUG
Member of

Next Meeting:
August 19, 2006

These are the Dog Days of Summer!

Presidential Bits
August 2006 Meeting

By Paul Howard

At our July meeting, Kurt Desoto introduced us to the world of home video, using video cameras, coupled with PC software, to produce videos for organizations, families and friends. Kurt showed us the compact backpack he carries, stuffed with video and audio equipment to capture school marching band performances or family memories. Using Pinnacle software, the videos and sound are edited to provide DVD media for distribution to friends and family. Kurt described how the software could be used to provide some of the approaches to still images used by filmmakers like Ken Burns.

Our August 19th meeting will be held at the Fairfax County Government Center, Rm. 4 /5. Our speaker will be WACUG VP Jim Brueggeman, who will demonstrate PowerPoint: Tips and Tricks – techniques for using today's most commonly used computer program for making computer presentations. Before retiring two years ago, Jim had a second career in the aerospace industry. Working on projects such as the International Space Station, Jim used PowerPoint for some aspects of his assignments.

PowerPoint:
Tips and Tricks
presented by
Jim Brueggeman
WACUG,
August 19th

Lloyd's Web Sites for August, 2006

by Lloyd Johnson, WAC Member

http://www.wacug.org is the URL for the Washington Area Computer User Group. Visit it for past issues of Web Sites with hyperlinks.

1. An Hourly photograph of the world. Click on an Image to see the headlines behind the image. A truly a fascinating site. http://www.tenbyten.org/now.html

2. Is that Car a Lemon? Go to Center for Auto Safety to see if any report has been filed. http://www.autosafety.org

3. A friend gave me a bottle of Wine. How can I find out how nice it is? Try: http://www.wine-searcher.com

4. Why explore our Solar System? Three answers are given. http://solarsystem.nasa.gov/index.html

5. How to clean anything. http://www.howtocleananything.com/

6. AARP site for 50+ old drivers Get up to 5 to 10% auto insurance reduction (for 3 years) when you take the class. Enter your Zip code for a class location near you. The classes are usually 2 days 4 hours each day. http://www.aarp.org/drive

7. Barefoot friendly Business. What's the legality of walking or driving barefoot http://www.barefooters.org/

8. This may be a repeat, but is still worthwhile in Northern Virginia. http://www.weather.gov/os/hurricane

9. Fuel Cost Calculator. Enter make, model & year of your vehicle to find out approximate cost of gas between 2 cities. Updated daily. http://www.fuelcostcalculator.com/

10. Free Mozart downloads. Enjoy!! http://arts.guardian.co.uk/mostlymozart2006/

NCTCUG

Visit our "sister" user group. The National Capital Technology and Computer User's Group meets the first and fourth Wednesday of the month. They meet in Carlin Hall in Arlington at 5711 South 4th Street. Visit their web site for more information, a map and directions:

http://www.nctcug.org/

Meetings start at 7:00 PM

Windows Vista – A Preview

By Brian K. Lewis, Ph.D., Member of the Sarasota PCUG, Florida
Bwsail(at)yahoo.com
http:www.spcug.org

As you probably know by now, Vista is the next version of Windows that Microsoft will be releasing. It was supposed to be available this November, but it's release has been postponed to after January 1, 2007. However, that 2007 release date relates to the non-business versions of Vista. In other words, the versions that most of us will be using. The "enterprise" or business versions are expected to be shipped this November, unless something else slips.

As mentioned in the press, there will be more than one "consumer" or Home edition. You should realize that the six versions of Vista that are expected are really only two more than are currently available in Windows XP. In XP you have the Home and Professional versions plus the Multimedia and Tablet PC versions. In Vista you will have Vista Starter, Vista Home Basic, Vista Home Premium and Vista Ultimate. (Please remember that these names may change by the time Vista is actually released.) The non-consumer versions will be Vista Business and Vista Enterprise. I will limit the scope of this article to the consumer versions of Vista.

The starter edition is a very low end version that will support only 32 bit software. Its exact limitations don't seem to be available yet. So, we'll just have to wait and see what Microsoft does with this version of Vista. It is fairly certain that it will

GNU/Linux SIG

By Geof Goodrum

DOCSIS Cable Modems

I have used cable broadband Internet service in Alexandria since August 2000. Over that time, Comcast (initially, @Home) periodically bumped up the download speed from 1 Megabit per second (Mbps) to 6 Mbps (8 Mbps is available for additional cost). On June 1st, Comcast announced PowerBoost™ speed enhancer (http://www.comcast.com/powerboost/), which they claim can double the rate for the first 10 MB of a file download with 6 Mbps service or 20 MB with 8 Mbps service. Of course, reality is a bit different, since actual download rates are affected by network congestion, network equipment, line conditions, etc. To be sure, marketing plays a big part and the actual benefit to the average customer is questionable. Most people don't regularly download large files, so the difference of a couple of seconds is hardly significant. Those doing really large downloads (GNU/Linux distribution disc images, for example) only benefit for a relatively small fraction of the download.

The e-mail I received from Comcast about the PowerBoost feature said that I had to power cycle (turn off and on) my cable modem. This forces the cable modem to download Comcast's new modem configuration to enable PowerBoost. The e-mail also noted that compatible equipment, including the cable modem, was required to realize the benefits. I searched and found the PowerBoost FAQ http://www.comcast.net/help/faq/index.jsp?faq=ServicesPowerBoost18510 on the Comcast web site, which specified that the cable modem must be compliant with Data Over Cable Service Interface Specification (DOCSIS®) 1.1 or higher to work with PowerBoost. My cable modem, a Toshiba PCX-1100, only meets DOCSIS 1.0 specifications. While Comcast will upgrade leased cable modems free of charge, I bought my modem when I got the service. I don't regret the decision to buy; I recouped the original $100 purchase cost many times over what leasing a modem would have cost. Still, this led me to investigate the current pricing and technical specifications for DOCSIS cable modems.

The cable industry's non-profit research and development consortium, CableLabs®, defines the interface requirements for cable modems and certifies cable modems for DOCSIS compliance. The FAQ on the DOCSIS web site at http://www.cablemodem.com/ identifies the differences between the current DOCSIS specifications.

DOCSIS 1.1 adds the following features over DOCSIS 1.0:

- Quality of Service
- Dynamic Services
- Concatenation
- Fragmentation
- Payload Header Suppression
- IP Multicast
- CM Authentication

- SNMPv3
- View-based access control and management (VACM)
- CM Account Management
- Fault Management
- Secure Software

DOCSIS 2.0 adds the following features over DOCSIS 1.1:

- Significantly enhanced upstream capacity
- 6.4 MHz maximum upstream channel width
- 30.72 Mbps maximum upstream channel capacity
- Synchronous-CDMA operation
- Increased robustness to upstream noise and channel impairments
- Enhanced Reed-Solomon error correction
- Trellis Coded Modulation
- Channel utilization statistics

DOCSIS 2.0 is available on cable modems sold today. Prices range from around $50 to $120, but rebates are sometimes available (I ordered a D-Link DCM-202 cable modem for $51.99 before a $20 rebate).

Before replacing an existing cable modem, check with the cable service to ensure that they support the replacement modem. Most cable Internet services support DOCSIS certified modems, and DOCSIS modems are backwards compatible (i.e., DOCSIS 2.0 modems support DOCSIS 1.1 and 1.0 specifications). When you receive your replacement cable modem, you must call your cable company and provide the MAC address on the label of your new modem before it will work [N.B. If you use an Internet phone service like I do, make the call before replacing the cable modem].

The next DOCSIS specification in

development, 3.0, adds support for Internet Protocol version 6 (IPv6) and channel bonding. IPv6 is destined to replace IPv4 used today after a transition of several years (http://www.ipv6.org/). Channel bonding gives cable operators the ability to increase customer upstream data rates to 120 Mbps or better and downstream data rates to 160 Mbps or better. DOCSIS 3.0 modems may be available later this year.

While investigating my Toshiba modem's capabilities, I came across some tools and web sites with useful information. Many newer cable modems have a built-in web interface to allow diagnostics, such as network error statistics. Depending upon the configuration of the home network, customers may be able to access this web interface by entering the address http://192.168.100.1/ into a web browser [N.B. Be careful about changing any settings on your cable modem, as they may cause problems with your service provider]. However, cable routers with Network Address Translation (NAT) and firewall features may prevent this from working. Robin Walker's web site at http://homepage.ntlworld.com/robin.d.h.walker/cmtips/index.html has a wealth of information on getting diagnostic information from cable modems and evaluating the results. For example, my Toshiba cable modem does not have a web interface, but I was able to download Robin's free Java utility DocsDiag from the site and connect directly from my PC to the cable modem to retrieve the modem's diagnostic information. I should also note that Comcast disables the Simple Network Management Protocol (SNMP) on my cable modem whenever it is connec-

ted to their network, so DocsDiag returned "cable modem not found" until I disconnected the coax cable from the modem. This means I cannot get actual "running" diagnostics on my Comcast connection.

BroadbandReports.com (http://www.broadbandreports.com/) provides a variety of useful tools for testing Internet connection quality,and the site also provides consumer ratings and forums about ISPs. Use the menubar at the top of the home page to select the category of interest. Under "Tools", I have used the Java-based Speed Test most often. Choose a server physically near you. You have the option to post results and compare them with others.

Another web site I sometimes visit to test my download speed is C-NET (http://www.cnet.com/). Near the bottom of the link bar on the left side of the page is a "CNET TOOLS" section. The Bandwidth Meter under CNET TOOLS provides an easy to use speed test wtih comparisons to other typical network connections (e.g., DSL, T1, T3).

Press Release: Jinglehorse Eco-System Duo Now Available with Linux

The Jinglehorse EcoSystem Duo, an environmentally-friendly computer system that saves significant amounts of energy and uses the most eco-friendly materials available, is now available with Open-SUSE, Fedora Core 5, and Ubuntu Linux distributions.

ATLANTA, GA - July 17, 2006. Jinglehorse - manufacturer of desktop computers and provider of computer technology services to businesses and consumers- is now offering several Linux distributions with the EcoSy-

stem Duo. The EcoSystem Duo uses as little as 37 watts during normal use and a no more than 75 watts while under a full load, which is considerably less than most desktop systems that can use 300 watts or more. The EcoSystem Duo also uses components that follow the European Union RoHS standard, which means that the EcoSystem Duo contains far less toxic materials than other desktop systems. Aside from the obvious environmental benefits of such a system, the EcoSystem Duo is also exceptionally quiet, compact, reliable, and can save the average user hundreds of dollars on their energy bill during the lifetime of the system, making the EcoSystem Duo one of the most affordable and eco-friendly systems ever designed.

Available Linux distributions for the EcoSystem Duo include Open-SUSE, Fedora Core 5, and Ubuntu. Custom configurations and additional distributions are available upon request.

Jinglehorse LLC - http://www.jinglehorse.net/

Linux CD of the Month

In addition to the monthly CD described below, WACUG can provide CD-R and DVD±R media for any downloadable GNU/Linux operating system distribution (e.g. Fedora Core, Mandriva, Ubuntu, Debian, Knoppix). Please note that download versions of commercial distributions do not include official technical support or printed documentation.

Discs are available only by pre-order. Contact Geof Goodrum by phone (703-370-7649) or e-mail (ggoodrum@bigfoot.com) at least 48 hours before meeting day to order or for more information. Single

CD-R discs are available with a $3 donation; GNU/Linux distributions on multiple CD-Rs or single DVD±R are available with a $6 donation.

August 2006

DocsDiag – v030720. Freeware java executable for all platforms by Robin Walker. DocsDiag is a utility to gather diagnostic information from any DOCSIS-compliant cable modem that has SNMP access available to the end-user. It will be of primary benefit to end-users with cable modems that do not offer diagnostics via web pages. DocsDiag is a text-mode console program without any graphical user interface. It will run on any platform that supports Java console applications.

Ri-Li – v1.2.0. Free GNU General Public License source code by Dominique Roux-Serret and music by Maf464 with Mandriva and Debian packages. Ri-li is an arcade game. You drive a toy wood engine in many levels and you must collect all of the coaches for win. 14 languages: Arabic, Breton, Chinese, English, Esperanto, French, German, Italian, Japanese, Portuguese, Russian, Slovak, Spanish, Swedish. Colorful animated wood engine, 40 levels and 3 beautiful music tracks and many sound effects. Requires SDL and SDL_mixer library.

SeaMonkey – v1.0.3. Free Mozilla Public License source code and executable. Web-browser, advanced e-mail and newsgroup client, IRC chat client, and HTML editing made simple -- all your Internet needs in one application. The SeaMonkey project is a community effort to deliver production-quality releases of code derived from the application

formerly known as "Mozilla Application Suite". This release contains important fixes for *several security vulnerabilities* and various stability improvements. The following library versions (or compatible) are required for the GTK1 build: glibc 2.2.5, XFree86 3.3.x, GTK 1.2.x, Glib 1.2.x. Red Hat Linux **7**.0, Debian 3.0, and SuSE 7.3 (or later) installations should work. The recommended build (GTK2) requires glibc 2.3.2, XFree86 4.3.x, GTK 2.x, glib 2.x, libstdc++-3.3. Hardware requirements: Intel Pentium class processor (233 MHz or faster recommended); 64 MB of RAM; 100 MB of free hard disk space (significantly less space is required if you reduce the cache size).

TuxMathScrabble – v2.9-r1. Free GNU General Public License Python code by Charles B. Cosse of Asymptopia Software with Fedora Core and Mandrake RPM packages. TuxMathScrabble is a math version of the popular board game for education. The game challenges young people to construct compound equations and consider multiple abstract possibilities. There are four skill levels for practice, from basic addition and subtraction through multiplication and division. Requires Python, PyGame, wxPython, SDL libraries and the X-Window System.

GNU/Linux Distibution Updates - Security and bug fix monthly updates for Fedora Core 5.

Kernel Source - The latest versions of 2.4 and 2.6 kernel source code for all platforms.

The New, the Best, and the Worst – June 2006

Collected by Pim Borman, Website Editor, SW Indiana PC Users Group, Inc.

Open Document Format Long-term archiving of documents generated and stored in computer format presents formidable problems. Current storage media, such as magnetic tape, CDs and DVDs, have a limited, ill-defined lifespan. Programs currently used to read their contents sooner or later will become obsolete. And the most-used formats for storing office documents are mostly proprietary, mutually incompatible, and incompletely documented.

The international Organization for the Advancement of Structured Information Standards (**OASIS**) has developed an Open Document Format **(ODF)** based upon the XML-based file format originally created by OpenOffice.org. It was developed with inputs from a variety of organizations, *with the notable exception of Microsoft*, and a committee of the United Nations. It is publicly accessible, and can be implemented by anyone without restriction. The Open Document Format was recently adopted by the International Standards Organization as ISO/IEC 26300. Many foreign governments are adopting the new format, and it has also been adopted by the US National Archives

Microsoft, meanwhile, is developing its own proprietary, XML-based document format expected to be used in the forthcoming Office 12 suite. Most likely it won't be compatible with ODF.

The most recent version 2.0 of OpenOffice.org uses ODF as its native format, although documents can also be saved in formats that are compatible with the major proprietary Office Suites. (http://en.wikipedia.org/wiki/OpenDocument)

Camera Fingerprints

Jessica Fridrich and coworkers at Binghamton University have developed a technique to extract a characteristic "fingerprint" pattern from pictures taken by a digital camera. It depends on the observation that each original digital picture is overlaid by a weak noise pattern characteristic for the camera used. It is due to background electrical noise in the pixel units of the light sensing element.

That pattern can be seen by taking a picture with a digital camera with the lens covered. The resulting image is not pure black, as with a film camera, but shows a mottling in many colors, due to electronic noise. The mottling also shows up when a digital picture is underexposed, maybe because the flash did not go off. The mottling pattern is uniquely different for all cameras. It is distinct from pixellation that results from insufficient resolution.

It requires a number of pictures taken by the same camera to extract the characteristic pattern. Being able to identify the camera used can be helpful in legal prosecutions of child pornography and such. Study of the background patterns can also give an indication of image tampering.

Astrophotographers habitually take pictures of faint objects in a dark sky with CCD chips similar to those found in digital cameras. In order to eliminate the mottling from their images they take a "dark frame," a picture taken under identical conditions with the lens covered. They then digitally "subtract" the dark frame from the image to remove the mottling. This can be done with Adobe Photoshop, but it doesn't work with inexpensive digital cameras that internally process and compress photos, usually in JPEG format. (http://urel.binghamton.edu/PressReleases/2006/Jan-Feb%2006/Fridrich.html)

Linspire Back On Top

The best things in life generally go unnoticed. If you notice your shoes, they probably don't fit right. If everyone notices your new glasses they may not be flattering.

If you own a PDA, do you know what operating system it uses? Never noticed it? How about the operating system of your computer? You've noticed that plenty of times, haven't you?

The ideal operating system works quietly in the background, doing what's expected of it. Microsoft Windows has come a long way over the years, to the point where weeks may go by without you noticing anything wrong. But oh boy! when it crashes.

Over the past 15 years Linux, "the other operating system," has in the hands of computer professionals grown into a powerful, reliable tool. It has been running many of the largest computer servers in the world, including Google. Early efforts to make it available as a desktop operating system didn't get very far because of the steep learning curve to overcome in mastering it.

To make Linux easier to use, a number of Linux distributions on CD-ROM have become available. They

typically bundle the Linux Kernel with drivers for peripherals, sound and video cards, and network connections, and include a boot manager to allow side-by-side installation of Linux with MS Windows. In addition, the self-installing distributions typically include a windows interface, an Office Suite such as OpenOffice.org, an Internet browser and email program (Mozilla), a paint program (The Gimp), a variety of card and arcade games, and other useful or entertaining features.

The ideal distribution provides the best off-the-CD support for a wide variety of peripherals, useful programs, and easy access to a broad range of other programs available for the Linux operating system. Over the last several years I have reviewed most of the major distributions and concluded that Linspire (nee Lindows) and Xandros came the closest to the ideal.

Last year Linspire underwent a major upgrade to version 5.0, including support for the latest version of the Linux Kernel, itself a major upgrade. Unfortunately, I couldn't get the new Linspire to run well on my computers, so I reluctantly switched to Xandros on my desktop, and kept the old Lindows 4.5 on my laptop for everyday Internet access. Xandros does not have the same range of software available, including updated versions, as Linspire.

Recently Linspire issued its greatly improved version 5.1, and I am glad to report that in my opinion they are back on top again. It faultlessly recognizes all my systems, including the recent AMD 64-bit double-core CPU in my new computer. In fact, Linux was weaned on 64-bit processors and runs best in that en-

vironment. Linspire continues to offer its extensive program library ($20/year) that lets you download programs over the Internet and install them, all with a single mouse click. It doesn't get easier!

Try it sometime. Use the free LIVE CD version of Linspire 5.1 to boot your computer. It allows you to experience Linux without permanently installing anything on your hard drive, and to determine your system's compatibility. After you turn the system off nothing is left behind. (www.linspire.com)

Maybe some day you'll be running Linux without even noticing it!

Noticeable

One amazing event during our special May meeting that went unnoticed: Jim Geiser, 75, SWIPCUG President and volunteer fireman, backing a humongous, $400,000, gleaming red firetruck into its cramped stall in the fire station – in a single try! (http://swipcug.apcug.org/Photos/photos06.htm)

Did you see his interview on CNN in mid-May?

Managing Device Drivers

By Vinny La Bash, Member of the Sarasota PCUG, Florida
labash(at)spcug.org
www.spcug.org

Windows is the most widely used operating system (OS) in the personal computer world.

For each piece of hardware that's connected to a Windows based computer, somebody somewhere has written a piece of software to make the device work with a computer. This piece of software is called a "Device Driver." One of the most useful features of a well-written device drive is making itself all but invisible to whoever is using the computer. You create a document, send it to your printer, and somehow the document prints. Your device driver takes care of all the little details necessary for the printing operation to occur.

Drivers are one of the three most important broad categories of software in computers. The first is the operating system, the second is whatever applications are installed, including communications, and the third is device drivers. Drivers are important for two reasons. First, your peripherals won't work without them, and second, corrupted or out-of-date device drivers are responsible for most system crashes.

There are other reasons why it's important to keep your device drivers up-to-date. Sometimes a manufacturer will become aware of some kind of defect or glitch in the driver software and issue a fix. You will need it. A different manufacturer may have a driver for its own device

that will cause a conflict with an out-of-date driver on your device. Over time, updates for Windows may eventually cause problems with an out-of-date driver.

Proper device driver management is essential to keeping your computer crash proof. If device driver management is unfamiliar territory, please pay attention. You'll be glad you did. Microsoft introduced the concept of Signed Drivers with Windows 2000 and continued with Windows XP. If a device driver is "signed" by Microsoft, it means that the driver has been subjected to meticulous, painstaking, extensive testing to ensure compatibility with your Windows operating system.

Anytime you install a signed driver, Windows checks it by default and also guarantees it has not been altered or changed in any way. If the driver is not signed, Windows alerts you with a strong message that the driver has not passed Microsoft's rigorous certification tests.

Windows will also ask if you want to install the driver anyway, and will do so if you give it permission. Keeping your computer safe from unstable software is always a good idea. Fortunately, changing the Windows default is relatively easy, but you need Administrator privileges.

Right-click the My Computer icon on the desktop, then select Properties. Click the Hardware tab and then the Driver Signing button. Choose Block to let this be the new default, and you're done. Windows will now block any device drivers that it does not recognize as signed.

Not all manufacturers send their drivers to Microsoft for testing. For small firms this can be an expensive proposition. Does this mean you should never install an unsigned driver? No, but you should do some checking of your own to ensure that the company has a good reputation in the industry. Sometimes a new device driver will prove unstable for various reasons. Windows XP has the ability to delete the driver and install a previous version. Open the Device Manager, and double click the device that's causing problems. Switch to the Driver tab and Roll Back the driver to the previous version.

What we've discussed so far is fine if you're using relatively new equipment, but suppose you're having trouble with something that's old and the manufacturer has gone out of business. Chances are good that the original installation disk is lost or deteriorated to a point where it is no longer useful. There are many other reasons why you could have difficulty finding a device driver, but these are the most common.

In the past, finding the right device driver or firmware was often a tedious, time consuming, and frequently impossible task. Nowadays, we have web sites such as www.driverguide.com to help us. The site has been around since 1997, and has seen many improvements. It has a unique membership base of thousands who collectively compiled a massive database of drivers, firmware, and support documents that is the largest and most comprehensive on the Web.

Recognizing that most people who use computers are not experts, they have devised an easy step-by-step process that will help you find and install drivers. There is an archive of hundreds of thousands of files containing not only drivers, but vo-luminous information on manufacturers including links to other sites with driver information. Also useful are the discussion boards where you can chat with others who have the same hardware, and learn from their experience.

After you search for a driver and find it, help doesn't stop. The Driver Summary provides you with a rundown of all the information you're likely to need to make the decision about whether or not to download and install the driver. This information is put together from the original manufacturer, plus ratings and comments from those who have previously downloaded and installed the file. It's nice to have everything in one place.

There are many web sites where you can find information about device drivers, but this is one of the best places to use as your starting point. Managing device drivers does not have to be a search in the dark. Use the tools available to you, and your system will be stable and a lot less prone to crash.

not support the new graphics interface called "Aero". In fact, it doesn't appear that the Home Basic edition will support this new graphics interface either. However, Home Basic will require a minimum of 512MB of RAM. From most reports it appears to me that Vista running on less than 1 GB of RAM will be seriously slow. Just like computers that try to run XP on only 128 MB of RAM.

So what does Aero offer the average computer user? If you have a 3D graphics card with enough video RAM (128 MB or more), then Aero will provide an entirely different appearance on your screen. (Some commentators have compared the Aero graphics interface to that of the Apple Macintosh OS X!!) Graphics designers refer to some of the capabilities as transparency, blurring, window previewing, and graphical rollover indicators. The easiest way to describe some of the effects is to provide some examples. The minimize, maximize and close indicators that you find in the upper right corner of your current window will change color as you pass your mouse over them. And this color will spill out around the edges of the icon. This gives you an additional visual indicator when your mouse is in the right position. Another example is when you place you mouse on the shortcut on the taskbar you will see a thumbnail view of the program. So when you are multi-tasking you can easily see which application you want. Or, you can check on the progress of a video feed or other running processes. Some other advantages of Aero are the ability to see "around the edges" of windows to the windows behind. This involves the transparency and blurring referred to earlier. This is advantageous to those who do multi-tasking. This ability is also apparently built-in to the new tabbed interface being included in Internet Explorer 7. There is also a change to the Alt-Tab function which allowed users to tab through the list of running programs to find the one they wanted to shift to in earlier versions of Windows. In Vista this function, now called Flip, allows users to see a larger thumbnail view of open programs. There may also be a related 3D view which will show all the open windows twisted to a 45 degree angle. The user can then cycle through the windows by repeatedly pressing the Tab key.

The Aero graphics will be incorporated in the Home Premium and Ultimate versions. However, it requires a minimum of 128 MB of fast video RAM, DX9 3D support and a minimum of 1 GB of system RAM. Some comments have led me to believe that it will not work with motherboards that use shared RAM for the video function. It requires a separate graphics card. Also, I would never recommend trying to run a system with these minimums. They should both be doubled at the very least. If your PC doesn't have this capacity, then you will still be able to run Aero, but in a limited or basic mode. It will not display all the features found in the full Aero mode.

There have been a number of articles related to hardware requirements to run Vista. In my mind, I think it's a little early for these specs to be firm. One thing you can be sure of, Vista will require more RAM, a large hard drive and a fast central processor. Both Intel and AMD are touting their latest generation of processors as being necessary for running Vista. It does appear that current single core processors will be able to run Vista in 32 bit mode. I suspect that at some later date you will need to consider a dual-core 64 bit processors or a 32 bit processors that runs hyperthreading. Naturally, the 64 bit processor will have a definite advantage in running Vista.

The other questions is, how well will Vista run current 32 bit software? Most of the new computers currently being manufactured have 64 bit processors. These are designed to work with both 32 bit and 64 bit operating systems. Vista will be a 64 bit OS. There are very few 64 bit software applications available and most of your current software is, or should be, 32 bit. It is expected that "well behaved" 32 bit software will run on Vista without problems. Only those applications that don't install system level drivers or try to take control of the OS are considered well-behaved. You will have to replace your anti-virus and firewall software. That is a given. New Vista applications should be available when Vista comes on the market. The same is true of anti-trojan/anti-parasite software. Other software that might be a problem would include video games and multimedia applications. Those of you who have been running Windows for a few years and have upgraded from earlier versions are already familiar with one of the real road blocks to getting started with a new OS. That's right – device drivers! Every device driver for your hardware like printers, scanners, external USB drives, etc, will have to be re-written. Early adopters of Vista will have similar problems.

Windows XP runs 16 bit software in "Windows on Windows" (WOW) emulation mode. Vista will run 32 bit software in much the same way using an emulation layer to talk to the software. This converts the 32 bit program calls to 64 bit code. This process should be transparent to the user. Now, if you still have some 16 bit software or DOS software, it really is time to upgrade. These will not run on Vista without the use of third-party emulation software. There is no indication that Microsoft will support 16 bit or DOS applications.

Now the next topic is one that is really of primary interest with this Windows upgrade. It is also the one for which the least info is available. That is – Security! Windows XP and Internet Explorer have developed quite a reputation for being full of security holes. In spite of all the efforts to plug the gaps, new ones keep showing up. Microsoft has indicated that Vista will be far more secure than previous versions. The problem is that in trying to tighten the security net, Microsoft seems to be making things more difficult for the average user. With XP Home, the user generally operates in an administrator mode so that new applications can be installed and unused ones removed without having to set up additional permissions. With both XP Home and XP Professional, Microsoft has tried to get individual users to use a limited non-administrator mode on a regular basis. This has been singularly unsuccessful. The reason for running in the limited user mode is to prevent malware from accessing system applications in the Windows director and subdirectories and/or the registry. When the computer is set up so that accessing these functions requires a password, less damage can be done, by any outside influence, to the operating system or to the installed applications. However, because the limitations of the user mode are so great, most Windows users end up running in the administrator mode to simplify making changes to their computer. Well, it appears that Microsoft is going to change that. Vista will enforce the limited user or user account control (UAC) to prevent the user from having constant access to administrative functions. Microsoft obviously doesn't believe that users can be allowed unlimited access to their own computers. Included in this there may be increased blocking of online software distribution. You may get more pop-up warnings when your installed software tries to access the Internet. Nearly all applications need to access the Internet at one time or another. This gives them the capability to download updates, patches, bug fixes and other security related information. Many applications also need to hook into the operating system in ways that are similar to those used by malware. If your operating system is constantly popping up warning windows and telling you that your computer is at risk, how would you react? Especially if responding to these warnings by clicking on "Cancel" closes the program and prevents you from using an application. You may try to go back and run all of your applications as an "Administrator" as you did in XP. However, Vista has various levels of "Administrator" and may still require you to enter a password for non-Microsoft applications. Now for the caveat: Vista is not yet in final beta form, therefore there can be many changes, especially in the security setup. It will depend in part, on the comments from the testing community. Hopefully not all of them will be system administrators for large corporations. What Microsoft has admitted in one of their own tech articles is that "Windows services represent a large percentage of the overall attack surface in Windows". That is a direct quotation. So if Windows is the problem why are they trying to solve it by limiting the ability of users to use their computers and their software?

Over the coming months I will continue to provide updates on my own experience with Vista as well as information I obtain from other beta testers. We'll see just how much benefit we'll really get from this Windows upgrade.

Dr. Lewis is a former university & medical school professor. He has been working with personal computers for more than thirty years. He can be reached via e-mail: bwsail at yahoo.com.

Editor's comments. This article was edited to fit the space available.

I can't speak for anyone else, but I am going to take another look at Linux before I shell out the cash for a new computer for Vista not to mention the actual cost of Vista

The Cursor

Copyright ©2006 WACUG   Monthly Circulation: 100

The 2006 WAC Board of Directors, SIG Leaders and other Volunteers

President:..Paul Howard, 703-860-9246, plhoward@verizon.net
Vice-President:......................................Jim Brueggeman, 703-450-1384, bigjimo1@aol.com
Secretary:..Jorn Dakin, 703-534-8691, ldakin@alumni.uchicago.edu
Treasurer:...Bob Rott, blbob1b@verizon.net
Director Emeritus: ....Lu Spriggs, 703-361-0014, spriggsl@erols.com
Internet Support: ....Lloyd Johnson, lloydhj@aol.com
Vendor Contact: ....Chuck Roberts, 703-876-9787, chrobe@cox.net
PC SIG Leader/Disk Librarian:............Bob Mason, 703-503-9324, Bob.Mason@remjem.com
Linux SIG Leader, Membership Chair: . Geof Goodrum, 703-370-7649, ggoodrum@bigfoot.com
Meeting Setup/APCUG Liaison: .... Bill Walsh, 703-241-8141, bill.walsh@cox.net
Web Site Team: ....Paul Howard and Chuck Roberts
Newsletter Editor:..................................Chuck Roberts, 703-876-9787, cursor@wacug.org
Member at Large:............................... Mel Mikosinski, 709-978-9158, mevlin2003@aol.com

Send membership inquiries and address changes to: membership@wacug.org
Send article submission and reprint requests to the Editor: cursor@wacug.org

2006 WAC Membership/Renewal Application

Dues are for the Calendar Year and include Disk Library Discounts, and WAC's monthly newsletter, *The Cursor*, by 1st Class mail to your home. Half-year memberships now available.

Individual/Corporate/Family Dues: $15.00

Remit payment in person at the WAC Membership table on meeting day, or by mail to:
Washington Area Computer User Group
30 Fendall Ave.
Alexandria, VA 22304-6300
Make checks payable to WAC. Please do not send cash by mail. *Thank you for joining WAC!*
Complete if you name and address do not appear on the reverse side. Include E-mail Address
Name:
Street:
City:
State: Zip:
Phone: (   )   –

E-mail:

Membership Survey: Help us to help you by completing this survey. List the computer systems you own / use (in order of preference)

Operating System(s):
Modem(s):
Printer(s):
Other Hardware:
Favorite Software:
Connection: (circle one)   Dial-up   or   Broadband

Circle Your Interests: Photo Printing   Investing   Games
Digital Photography   Internet Access   Education   Music
Graphics/Animation   Genealogy   Video   Finance
Programming Language(s)
Hardware Upgrades/Repair   List others below

Next WAC Meetings: • Aug 19 • Sept 16 • Oct 21 • Nov 18 • Dec 18

Call (703) 370-7649 for the latest meeting information or Visit our Web Site at: http://www.wacug.org

August Meeting will be held at the Fairfax County Government Center

Through Front Entrance to the Left Hallway, Past the Elevators to: Conference Room 4/5

Service Desks Open at 12:30
Meeting Starts at 1:00 PM
FREE ADMISSION
BRING A FRIEND!
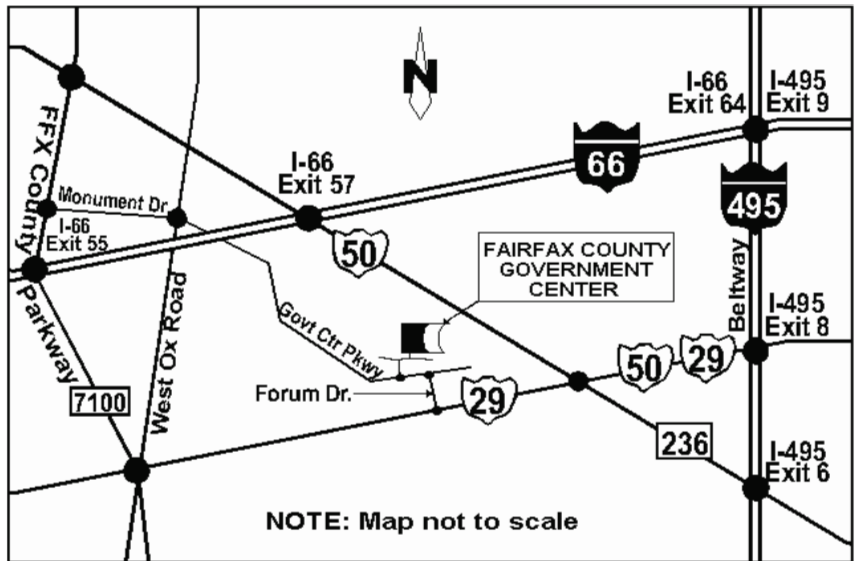
Washington Area Computer User Group
30 Fendall Avenue
Alexandria, VA 22304-6300
ADDRESS CORRECTION REQUESTED