



The Cursor



Monthly Newsletter of the
Washington Area Computer User Group

Meeting Location
Fairfax County
Government Center



Next Meeting:
March 15, 2008



Presidential Bits

March 2008 Meeting

By Paul Howard

Bill Walsh always amazes me with his demonstrations of GPS and map-related computer applications, and February's meeting was another great example. Bill wove a tale with a demo of the Street Atlas USA program, and a demo of a stand-alone Mio GPS unit that he acquired on a Black Friday shopping spree. It is always a hoot listening to Bill issue voice commands to his laptop, and have it talk back to him. Geof Goodrum followed Bill's presentation with video from the January Consumer Electronics Show in Las Vegas, including some flat panel TVs bigger than a lot of urban back yards.

This month's meeting, at the Fairfax County Government Center on March 15, 2008, from 12:30 – 3:30 PM, will feature a presentation by Lorrin Garson about HP's MediaSmart Server, a combination of HP hardware, and Microsoft's Windows Home Server software. Increasingly, families possess multiple computers in their homes. Many residences now have two or three desktop and/or laptop computers and a significant number have more, especially families with school-age children. Linking these

computers in some meaningful way, sharing information among devices and users, and maintaining multiple computers presents a significant challenge and a market for devices and technology to meet this need.

Networks and servers have long meet this essential demand in the workplace. However, these technologies have until now been too expensive and complex for home use. Hewlett-Packard has released a product called HP MediaSmart Server that is easy to implement and maintain in a home environment and provides a rich set of functions. Such functions include the following:

1. Automatic backup of home computers running Microsoft Windows OS.
2. Restoration of backed up files as well as restoration of entire computer systems.
3. Sharing digital files across the home network, including word-processing files, photos, movies, music, etc.
4. Worldwide access to home computers and files via the Internet.
5. Centralized storage of the family's electronic information

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Plus Bonus Pages in the Download Edition

Lloyd's Web Sites for March, 2008

by Lloyd Johnson, WACUG 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. Forbes Magazine (February 2008) list of America's most miserable Cities. Detroit is first. www.forbes.com/miserable
2. A Nonpartisan group evaluates the accuracy of political speeches, ads, and press releases. www.factcheck.org
3. MedlinePlus: Health Information from the National Library of Medicine <http://medlineplus.gov>

MedlinePlus will direct you to information to help answer health questions. MedlinePlus brings together authoritative information from NLM, the National Institutes of Health (NIH), and other government agencies and health-related organizations. Preformulated MEDLINE searches are included in MedlinePlus and give easy access to medical journal articles. MedlinePlus also has extensive information about drugs, an illustrated medical encyclopedia, interactive patient tutorials, and latest health news.

4. AMA: Atlas of the Body www.ama-assn.org/ama/pub/category/7140.html

This site by the American Medical Association, presents a complete atlas of the human body.

5. Everyday Mysteries www.loc.gov/rr/scitech/mysteries

Did you ever wonder why a camel has a hump? If you can really tell the weather by listening to the chirp of a cricket? Or why our joints make popping sounds? These questions deal with everyday phenomena that we often take for granted, but each can be explained scientifically. This site will help you get the answers to these and many other of life's most interesting questions

6. All-in-one Guide for MEN www.askmen.com
7. Want too look at 2008 Farmer's Almanac? www.almanac.com
8. State Health Fact <http://statehealthfacts.org/>

Statehealthfacts.org is a project of the Henry J. Kaiser Family Foundation and is designed to provide free, up-to-date, and easy-to-use health data on all 50 states. Statehealthfacts.org provides data on more than 500 health topics.

9. PublicRadioFan.com <http://publicradiofan.com>

PublicRadioFan.com features schedule listings for thousands of public radio stations and programs around the world. Follow the audio links to hear your favorite programs and discover new ones.

10. Kids.gov www.kids.gov

Kids.gov is Uncle Sam's family-friendly site that links to over 500 websites from government agencies, schools, and educational organizations, all geared to the learning level and interest of kids.



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with appropriate privacy.

This presentation will include a discussion of this specific device, its administration and functions.

Bob Rott will finish the afternoon with a photo presentation and additional remarks about his CES experience in January, and the APCUG annual meeting.

Don't forget to tell your friends about WAC! It's the best bargain for computer education and support out there – show them – invite them to a meeting soon!



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



GNU/Linux SIG

By Geof Goodrum

GNU/Linux Distribution Releases

GNU/Linux distributions are complete GNU/Linux operating system and application software collections. Many are freely downloadable or can be ordered on CDs or DVD at low cost. DistroWatch.com lists the following distribution release announcements for the period February 10 – 27, 2008.

Distribution

[CentOS 5.1 Live CD](#)

[Debian GNU/Linux 4.0r3](#)

[GoblinX Linux 2.6](#)

[Greenie Linux 1.2.8 “Battle For Wesnoth”](#)

[grml 1.1](#)

[Linux Caixa Mágica 12](#)

[LinuxTLE 9.0](#)

[NetSecL 2.2](#)

[Nexenta Core Platform 1.0](#)

[Parted Magic 2.0](#)

[Scientific Linux 5.1 Live CD/DVD](#)

[SLAX 6.0.0](#)

Linux Software of the Month

The software described below is downloadable at the links provided or may be requested on CD. In addition, WAC can provide CD-R and DVD±R media for any downloadable GNU/Linux operating system distribution (e.g. Fedora, Mandriva,

Ubuntu, Debian, Knoppix). Please note that download versions of commercial distributions do not include official technical support nor printed documentation.

Discs are available only by pre-order. Contact Geof Goodrum by e-mail [g\(linux@wacug.org\)](mailto:g(linux@wacug.org)) 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.

March 2008

Hugin – v0.7 beta4. <http://hugin.sourceforge.net/>. Free GNU General Public License source code by Pablo d’Angelo. Hugin is a toolkit for stitching digital photographs and assembling panoramas, together with an easy to use graphic front end.

Enblend – v3.0. <http://enblend.sourceforge.net/>. Free GNU General Public License source code by Andrew Mihal. Enblend is a command line postprocessing tool for creating panoramic images. After you align image features using a program like Hugin, there are often photometric problems that lead to ugly seams in the final composite. Enblend blends away these seams using a multiresolution spline. This technique gives good results on both low spatial frequency objects (sky and clouds) and high spatial frequency objects (trees and houses).

Globulation 2 – v0.9.2. http://www.globulation2.org/wiki/Main_Page. Free GNU General Public License source code by the Globulation 2 Team and Mandriva 2008.0 executable package (v0.9.1). Globulation 2 is an innovative high-quality Real Time Strategy game that minimizes micro-management by automatically assigning tasks to the

units. The player has to choose the number of units he wants for the different tasks, and the units will do their best to satisfy the requests. This allows to manage more units and to focus on strategies. It can be played by a single player, through your Local Area Network (LAN), or through Internet thanks to Ysaagoon Online Game (YOG), a meta-server. It also features a scripting language for versatile gameplay or tutorials and an integrated map editor.

GNU Source-highlight – v2.9. <http://www.gnu.org/software/src-highlight/>. Free GNU General Public License source code by Lorenzo Bettini. GNU Source-highlight produces a document with syntax highlighting when given a programming language source file. It handles many languages, e.g., Java, C/C++, Prolog, Perl, PHP3, Python, Flex, HTML, and other formats, e.g., ChangeLog and log files, as source languages and HTML, XHTML, DocBook, ANSI color escapes, LaTeX, and Texinfo as output formats. Input and output formats can be specified with a regular expression-oriented syntax. Kernel Source – <http://www.kernel.org/>. 2.6 kernel source code for all platforms (stable 2.6.24.3 and pre-patch 2.6.25-rc3).



Year 2007 Tax Software

by Milton G. Gugenheim, Jr., a member of HAL-PC, Texas, and an AARP Tax Aide Instructor and Local Coordinator for over 12 years

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Personal Software

Most of us seem to put the dreaded tax chore off until the last moment and then find ourselves faced with incomprehensible IRS forms, shoeboxes of receipts, check registers, antacids and headache pills. The return must be filed by Tuesday, April 15, 2008 (you can file an extension to delay filing until August 15, 2008. But payment, without P&I, is due April 15, 2008 – the IRS is nice, but not that nice!)

Fortunately help is on the way in the form of a couple of good tax preparation programs from Intuit – TurboTax, H&R Block – TaxCUT and 2nd Story's TaxACT. This review covers the two most popular programs.

In addition to well-crafted interfaces and good online help, both TaxCUT and TurboTax include Microsoft's Internet Explorer Web

browser for seamless integration with the World Wide Web for updating. An internet connection is required to obtain updates as the software is released in December, before the IRS has completed all the forms, etc.

Even if you think that you need the skills of an experienced CPA in the preparation of your return, either of these programs will help you to become better organized and possibly keep accountant fees to a minimum.

I found the following software tax packages for the 2007 tax year: TurboTax Basic, TurboTax Deluxe, TurboTax Premier, TaxCUT, TaxCUT Deluxe, and TaxCUT Premier, for Windows 98, 2000, ME, XP. Vista and MacPowerPC processor. Most of the local office supply stores and other retail and software outlets stock the software.

There are free tax preparation programs on the web. Go to a search engine and enter "free federal income tax programs". TaxACT is a good free program. The program is easy to use and includes forms most tax payers require. A paid version is also available for more complex returns.

Features

TurboTax Basic is the basic package needed to file all individual returns including professional or sole proprietor, and includes Internet Explorer on the CD. TurboTax Deluxe includes all the features of TurboTax Basic and one free e-file (after rebate). Plus extra help for deductions – the deduction finder (library resources, tax planner, on-screen references and IRS publications, video advice and a financial planner). TurboTax Premier includes all the feature of TurboTax

Deluxe plus help for investments, complex taxes, Schedule C business and Rental Property.

TaxCUT Deluxe is almost identical to TurboTax including Internet Explorer 6 on the CD. TaxCUT Deluxe includes all the features of TurboTax Deluxe, tax tips, on-screen IRS instructions and publications. All the programs will import financial data from most popular financial programs, and include details on preparing a return, reviewing a return, electronic filing (e-file) via a second party, planning for next year, plus help locations.

Installation

All packages were easy to install following the given directions. TurboTax Basic requires 175 MB of disc space without the installation of Explorer. TaxCUT Deluxe requires 170 MB of disc space without the installation of Explorer

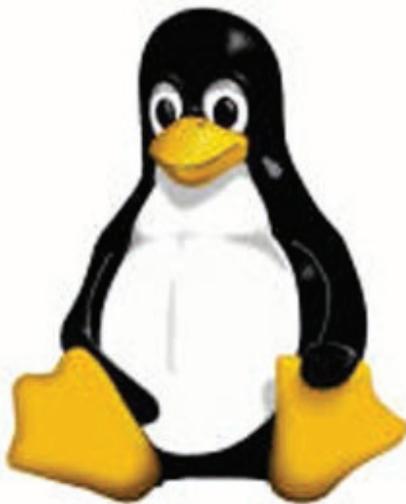
Manual

Both TurboTax and TaxCUT include a on-screen user guide with typical screens of the described function. All the usual files, edit, forms, tools and help are in the tool bar. TaxACT has almost as much on-screen help.

General Overview

All of the packages have an easy step-by-step program to walk the taxpayer through the various steps required to do a return. The experienced taxpayer may prefer the forms method after completing a basic information page. The taxpayer selects the form and fills in the required information. Some have supplemental sheets for recording information, which is then transferred to the form. Help is available from any screen. All programs import from

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Quicken and Microsoft Money.

Details

The latest tax changes are incorporated in the packages (at the time of release). Each package allows the taxpayer to enter data on various forms after completing the basic information sheet. The return is then saved. Be sure to give the file a name if more than one return will be prepared using the same program. The programs may be used whether you are the organized type or the shoe box type. The shoebox type should organize the various types of entries first.

Printing

TurboTax and TaxCUT allow you to print an IRS return or select a form or schedule to be printed. The current computer printer setup does not have to be changed. Check to be sure you have the latest updates prior to printing the return for filing. Print a return for filing and a return for your records. The record return will contain detail sheets. I have no experience using these programs to e-file.

Summary

The Basic package of TurboTax or Deluxe of TaxCUT is more than adequate for most users. The upgrade packages are great for users who like the “bells and whistles” that include lots of helpful literature, suggestions, etc. The street price for the basic packages is around \$20, TurboTax Deluxe, and TaxCUT Premier is about \$40 Each company has an extensive business program for about \$70 +. A new program is required for the each tax year. TurboTax and TaxCUT sites, each sell the programs and it will cost more than the local stores.

www.taxcust.com and for TaxACT go to: www.taxact.com.

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64 Bit Computing – Pros and Cons

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In July 2005 I wrote an article for the Monitor on using the 64 bit version of Windows XP. My conclusions at that time were that most users should wait the arrival of Microsoft's next operating system before leaping into 64 bit computing. So Vista's 64 bit version (Vista x64) has now been here for about a year, should you be considering a change from your 32 bit processor to a 64 bit processor? I'll lay out some of the pros and cons of this so you can make a decision.

First, let's consider why 64 bit processing is in the future of computing. To do this we need to consider some very basic information on how computers function. As most of you are well aware, computers process information as either a 0 or a 1. Or in the really old days of computing, these were switches that were either “on” or “off”. Each value constitutes one one binary “bit” or instruction. A central processor with a 32 bit instruction set can process 32 bits per clock cycle. Thus if you have a CPU that runs with a 2 GHz (2 billion cycles per second) clock cycle, it is

processing 64 billion bits per cycle. That's the theory, in practice there are limitations which may reduce the actual processing speed. Anyway, a 64 bit processor could handle twice the number of bits per second as a 32 bit processor. Again, because of other limitations, the actual processing speed advantage is less.

There is another major advantage to 64 bit computing and that is the size of the address space or the amount of memory that can be used. For a 32 bit processor, working memory is limited to 2 raised to the 32nd power (2³²) or 4 GB of memory. A 64 bit processor can address 16 Exabytes of Ram. That's, 2 to the 64th power (2⁶⁴) or 16 Million Gigabytes! At the present there are no machines that support this much RAM. For one thing the cost of that much memory would be excessive. So manufacturers are generally limiting motherboards and chipsets to 128 GB of RAM or less as Vista x64 can only address up to 128 GB of RAM. The maximum RAM is usually greater than the 4 GB limitation of the motherboards designed for 32 bit processors.

So the question becomes, why do computers need any amount of memory even close to any of these figures? The answer relates to how people use their computers. A lot of users, and I'm one of them, open more than one application at a time. This can have a definite effect on the speed of operation of the computer. When you open an application in either Windows XP or Vista, the operating system sets aside a 4 GB memory space for the application, drivers and other required information. So each application that is open has its own 4 GB memory

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space. It is a rare personal computer that has 4GB or more of RAM. In fact, Windows XP can not address more than 4 GB of RAM and it uses almost one GB for its own components. So how is this handled?

The solution to the requirement for very large RAM space for each application is called "Virtual Memory". The computer stores much of the required information for an application on the hard drive. It then moves data back and forth between RAM and the hard drive as it is needed. A paging table is used to track the locations of data on the hard drive and in RAM. So, even when you open only a single application, a large part of it will be stored on the hard drive or in "virtual memory". When information on the hard drive is needed, the paging table remaps it to RAM memory and also moves data from memory to the hard drive. Because read/write access to the hard drive is much slower than read/write access to RAM, the overall processing time is much slower. If you are simply doing word processing or writing e-mail, then the speed difference is not really noticeable. If you were doing calculations using a large spreadsheet while setting up a Power Point presentation with complex graphics, then you would probably notice a slight slow down in the overall operation of your system.

So the primary advantage of 64 bit computing is the tremendous increase in address space. This advantage is also present when running 32 bit software on a true 64 bit machine. Running 32 bit software on Vista x64 is referred to as running on the Windows on Windows64 or WoW64. By utilizing the added address space of x64, the time required

for loading, unloading and switching processes can be greatly reduced or eliminated. This can also eliminate the frequent hard drive cycling that is referred to as "thrashing", which can occur in a 32 bit system.

If you decide to move to a 64 bit system, just be sure to add plenty of RAM. Certainly you should have a minimum of 8 GB. The motherboard should also have a system bus designed to work with a 64 bit processor. Otherwise the bus can become a major bottleneck. In fact, you really should not try to upgrade a 32 bit machine by installing Vista x64. To really be successful, you should buy a machine which is designed from the ground up to run Vista x64. Also, the upgrade version of Vista x64 will only upgrade the 64 bit version of Windows XP.

That brings us to the "cons" about Vista x64 and 64 bit computing in general. 64 bit processors have been available for four or five years for desktop computers. However, when we relate this to machines with Windows operating systems, the big problem is slowness of the adoption of 64 bit hardware and software by manufacturers. One example is the lack of device drivers for peripheral hardware. So just what do you need drivers for? The one that affects most people is the printer driver. Operating systems don't always include a printer driver because of the great variety of makes and models. Although I know that many HP printer drivers are delivered along with the 32 bit Windows OS. However, this is not true for the 64 bit version. If a 64 bit driver is available for your printer you may have to download and install it yourself.

With Windows Vista, you not only must have a 64 bit driver, it must be a "signed" driver or Vista will reject

it. A signed driver contains a digital signature or a certificate in the program code which meets Microsoft's requirements and is from a company that has a license (Publishers Identity Certificate) from Microsoft. You may have already encountered an "unsigned driver" message when you tried to install software or drivers. In Windows XP and 32 bit Vista you were able to continue the installation in spite of the lack of the signed driver. In Vista x64 this is not possible. Vista will discontinue the installation after advising you of the lack of the signed certificate. This procedure was implemented to try to stop "rootkit" malware from installing itself in the heart of the operating system – the kernel. Rootkits are able to hide within the computer by altering register keys and processes. By blocking the installation of unsigned device drivers Microsoft is hoping to reduce the rootkit problem.

A driver is also needed for your graphics cards. Both ATI and NVidia released 64 bit drivers for their newest cards in December, 2007. There is considerable doubt that they will produce 64 bit drivers for any of their older cards. Another reason why you have to consider new hardware when you are thinking of transitioning to a 64 bit OS. Other hardware that needs 64 bit drivers include scanners, sound cards, modems, serial ATA (SATA) / RAID and just about any other hardware peripheral. So you may need to update all of your hardware in order to get 64 bit drivers. Also, since the graphics drivers have only appeared almost a year after Vista's debut, other hardware manufacturers may still be working on drivers. You definitely need to do your homework if

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you are considering the purchase of an x64 system.

Software is another area that is slow to take advantage of the extra processing capacity of Vista x64. Although, as I mentioned earlier, x64 can run 32 bit software it is done in an emulation mode. The 32 bit application can not take advantage of the wider data path that is available in x64. Although there is some advantage due to the added memory in an x64 machine, the software is not using the hardware to full advantage. Just as happened when computers shifted from 16 bit processors to 32 bit processors, there was considerable delay before manufacturers moved solidly into the 32 bit realm.

So what applications are currently most likely to have 64 bit applications that can use the full capacity of x64?

- Applications for creating digital content in computer-aided design and digital video editing.
- Applications that require mathematical precision and floating-point performance.
- Applications that involve large, high-performance databases.
- Vision acquisition and analysis applications with large amounts of data moving directly into memory at rapid rates.

I suspect it will still be several years before 64 bit computing will be the mainstream for personal computers. So, unless your requirements are similar to the above list, I would suggest you stick with 32 bit systems for a while longer.

Dr. Lewis is a former university

and medical school professor of physiology. He has been working with personal computers for over thirty years, developing software and assembling systems. He can be reached at bwsail@yahoo.com.

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Moving on to Vista – Part 4

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Windows Vista is a resource hog. A year ago, when I reviewed Vista for TAPCUG, my advice was to not upgrade an existing computer and buy Vista, wait and get it with a new computer. Today I stand by that advice. There are no new major programs that require Vista to run. If you're content with the way your existing computer(s) run with Windows XP there is no real reason to upgrade.

When you do buy a new computer there are several features you should look for for it to run Vista well. The first is RAM (random access memory). I don't think any manufacturer is selling a new computer with Vista with less than 1 megabyte of RAM but if you really want Vista to work well with large applications (Microsoft Office, video editing software, many games) try to get 2 gigabytes of RAM. You won't be sorry. There is no point in install-

ing more than 4 gigabytes of RAM. Windows cannot access memory above 4 gigabytes.

The other issue is a video card. Vista wants at least 128 megabytes of memory for video. For best results, the memory should be installed on the video card. Some computers steal the video requirements from your computer's RAM. It works but the card will run slower. 256 megabytes of video card memory is even better.

Many people don't partition their hard disks, I do. I suppose it goes back to the days when larger hard drives started to appear and our computer operating system couldn't recognize and use the larger space. Of course all that has changed now, Windows can almost any hard drive size most of us will install. When I had to partition my hard drive, to fully utilize it, I discovered other benefits. Its easier to make a backup copy of a smaller hard drive. If I create a partition for just my photographs, and I only need to make a new backup of my pictures, I can just backup the partition containing the pictures and not everything else. A faster and easier process. I can also install another operating system (Windows XP or maybe Linux) on my computer by creating a separate partition and run it using a simple process called dual booting.

So I wanted to partition the hard drive that came with my laptop to use some of the excess space to store a backup copy of drive C. I bought a new copy of Partition Magic. I've used this program many times to partition drives on other computers. Unfortunately I discovered that Vista doesn't like Partition Magic. A trip to Symantec's home page

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showed that they have no updates for Vista. As I was wondering how I would solve this dilemma, I discovered that Vista has a new built-in Disk Management utility and one of its functions will partition hard drives.

To use the you first have to get to the Disk Management window. From the start button, go to the control panel. Click on System and Maintenance and scroll down to "Create and format hard disk partitions", at the very bottom of the window. You will see what appears to be a table of every disk and partition installed on your computer. Among other things you'll see the capacity of each disk and the free space available. Select the hard drive that you want to partition and right-click on it. You need to free up empty space on the hard drive so on the drop down menu. Select "Shrink Volume" and specify the amount of space you want to free up in the Shrink Dialog box. The free space will appear in the Disk Management window as a black bar and labeled as "Unallocated".

Now you are ready to create your new partition. Right-click on the "unallocated space". From the menu select "New Partition". Then you just follow the wizard that appears to select the size and type of partition you want to create and format it. It may sound complicated but if you follow the steps listed above its easy.

Windows assigns drives (hard drives, DVD drives, etc) in alphabetical sequence so if drive letters C, D and E were already used your new partition will be labeled drive F. Typically, when you buy a computer from a company such as

Hewlett Packard, drive C will be your hard drive, drive D will be a partition labeled "Recovery Drive" (used to restore your computer to "factory condition" in the event of a catastrophic crash) and drive E will be a CD/DVD drive.

Its a cosmetic thing but I like to group all my hard drives and partitions together. You can use the Disk Management window to relabel your drives. Just select one of the drives, right-click on it and select "Change drive letter and paths". When you left-click on "Change drive letter and paths" press the "Change" button and pick a new letter to label the drive. I usually start by re-labeling the Recovery Drive drive "R" to make the letter "D" available for a new hard drive or partition. Then I re-label the CD/DVD drive drive Z. When this is done, all the letters from D through Q are available for hard drives, hard drive partitions and flash drives.

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New Technology Terms

By Sandy Berger, CompuKISS
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Words, words, words...In the fast-moving world of technology, new words and phrases are constantly introduced. In order to keep up with the times, you need to learn about the

current terminology. This need not be a drudgery. In fact, it can be fun to see what new words and abbreviations are popular. Check these out and you can wow your friends next time computers and technology become the subject at the 19th hole or the neighborhood cocktail party.

SSD (Solid-State Drive)

This is a type of memory that you will be hearing more and more about in the future. It is a type of flash memory that has no moving parts. Some small laptop computers are appearing using SSDs for storing data instead of hard drives. Because SSDs have no spinning disks like the ordinary hard drives, they offer improved battery life for laptop computers. They also have better data access speeds than hard disks.

404

You may recognize this as a common message on the Internet. It indicates that the requested page could not be found. This may mean that the page has temporarily or permanently moved and is not currently available. However, recently the term 404 has come to have another meaning. It refers to someone who is totally clueless. From the error message "404 not found", this has become a slang term meaning that the person's brain could not be located. If you decide to call your spouse a 404, make sure that he or she has not read this column or you'll be in big trouble.

Crowdsourcing

Using the skills of a wide variety of people to do a job or perform a task is called crowdsourcing. The people who perform such a function are often found on the Internet. Although

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these people can be paid, often they are often volunteers.

Geotagging

This is technology built into a digital camera or part of a camera add-on device that is able to tag each photo with the exact location that the picture was taken. Photos can then be sorted based on where they were taken. They can also be plotted on maps.

HDMI (High-definition Multimedia Interface)

This is a newer audio and video interface that is often found on televisions, DVD players, video game consoles, video cameras, and other video equipment. This type of connector replaces older standard connectors like composite video, S-Video, component video, and DVI. HDMI carries both audio and video in one cable. It supports digital rights management systems. HDMI cables can be very expensive in comparison to older audio and video cables.

One Laptop per Child (OLPC)

Led by Nicholas Negroponte, this is a nonprofit organization whose mission is to design, manufacture, and distribute affordable laptop computers to children around the world. The laptops were initially called the "\$100 laptop", but the final build cost almost \$200 each. In 2007, the One Laptop per Child organization started distributing these laptop computers to children in developing countries. The laptops are bright green and white portable computers with special features like a sealed keyboard. They are called XO computers.

SEO (Search Engine Optimization)

Search Engine Optimization is the process of tweaking a website to improve the volume of traffic that is produced by search engines. The idea is to give the website a higher ranking in the search engines thereby producing more traffic to the site. SEO includes using keywords and website design to get higher rankings with search engines.

Skype

This is an online service that allows users to make telephone calls over the Internet. The software is free and there is no charge to call the computers of other Skype users. Your computer must have a microphone in order to use Skype. With the addition of a webcam, Skype callers from computer to computer can also place video calls where they can both see and talk to each other. Skype also allows you to call landlines and cell phones for a fee. Skype has other services such as instant messaging and file transfer.

FTW

This stands for "For The Win". You may remember it being a part of the game show "Hollywood Squares" where a certain square would be selected "For the Win." It is also used in some online games like World of Warcraft. It is now a popular term that usually projects a boast, as in "I did it FTW." It is often used ironically and sarcastically.

Bot

A bot computer is one that has been infected with some type of malware that allows the computer to be controlled by an outside entity. Millions of computers are bots that are now under the influence of malware distributors who use these computers to send out spam, attack other computers and websites, and carry out scams and identity theft. The

computer owner is usually unaware that their computer has been compromised since this activity is performed in the background.

BotNet

A series of bot computers, sometimes as large as millions of computers is called a BotNet. The BotNet does the bidding of some entity that has compromised the computers and taken control of them by installing some type of malware.

Zombie

This term that means the same thing as a Bot. It is a personal computer that has been infected with a virus that allows an outside force to control it. Such a computer can be used to send out spam or attack other computers without the owner's knowledge. Millions of computers today are zombie computers. They are part of a Zombie Network of computers that are controlled by hackers.

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Botnet—The Evil Network

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This one might even be too much for Webman. There is a community of evil geeks who own a number of computers that are used exclusively for delivering viruses.

Usually backdoor Trojans, the virus is designed to infect the average computer users machine when launched periodically from the evil geeks' "Zombie" machines. The virus does not necessarily cause problems on the targeted computers but it uses these average users' machines to deliver spam. With this chain reaction method, huge quantities of spam can be spread with very little chance of tracing it to the source. ISP's have admitted they spend more of their resources on combating these "Botnets" than the old-fashioned crackers and hackers.

"If you suspect you are being used as a pigeon for a botnet operator, it is worthwhile downloading a good, tested anti-virus application that has

a tracking firewall. The usual symptom that suggests there is a botnet present is a dramatic slowdown in performance."

Aside from cluttering up the internet with spam, the botnet can deliver "denial of service" attacks. This is a serious financial concern for companies trying to establish themselves on the internet as well as institutions that provide important community services.

The usual routine is, the spammer, who wants to get a message out to the world, pays the botnet operator, who then sends the file to his zombies which in turn launches the spam to the innocent distributors. Sometimes, banks of computers in offices and institutions are commandeered by the botnet operator for this criminal activity.

In preparing this article, I could not find proof as to how the original virus is delivered to the unsuspecting so I am assuming it is the usual method. Either the user clicks on a deceptive button while surfing the net and triggers a download, or an email attachment is opened unwittingly. The culprits often use a harvesting program that goes to

the ISP server and gathers all their email addresses. Some mass mail programs actually send email to the addresses on the server at the same time they are collecting the addresses for future use.

Botnet applications are cleverly designed so they often escape detection by anti-virus software. However, some firewalls such as ZoneAlarm will track incoming and outgoing calls so if the user is patient enough to investigate each of the unidentified communiqués going on between the hard drive and the internet, the botnet may be found.

If you suspect you are being used as a pigeon for a botnet operator, it is worthwhile downloading a good, tested anti-virus application that has a tracking firewall. The usual symptom that suggests there is a botnet present is a dramatic slow down in performance. As always, it is a good idea to search the internet for the latest information on topics like this because the war between good and evil is forever evolving.

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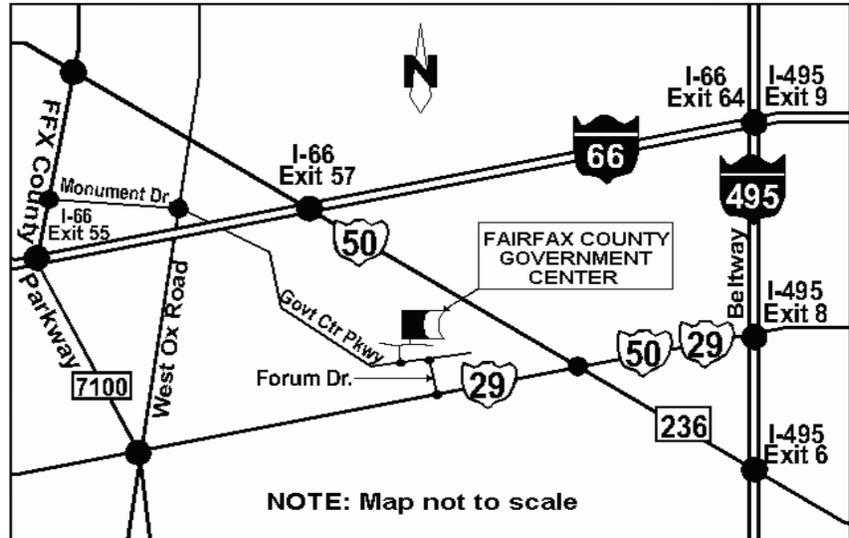
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Benefits of Using a Computer Sandbox

By Gene Barlow
User Group Relations
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A computer Sandbox is newer technology that is not very well known, but, it can be quite useful in many situations. By using a Sandbox utility, you can place your computer in a protected state where you can try some rather risky things on your computer and not have your computer damaged in the trials. Once you place your computer into Sandbox mode, you can safely run anything on your computer, knowing that all changes to your hard drive will not be permanently made to your computer. While in Sandbox mode, your computer runs as if all changes to the hard drive were actually made to your system. But, at the end of using the Sandbox, you can throw away these changes, putting your computer back exactly the way it was before entering the Sandbox.

Let's take a look at some real life situations to better understand the benefits of using a Sandbox utility.

Installing New Software

Everyone knows that when you install a new software product on your computer, parts of the product are placed all over your computer's hard drive. Entries are made to the Windows Registry, special supporting files are placed in certain directories of the operating system, and other shortcut and setting files are scattered in various places on your hard drive. These are in addition to the main folder that is installed on your hard drive with the software programs. Most software will uninstall easily, but often pieces of the product are left behind on your hard drive. These leftover pieces of orphaned software can build up and slow down your computer. Some software products include hid-

den viruses or other bad programs as you install them. The end result is that installing new software on your computer can be a risky thing to do.

Using a Sandbox to install and test new software is a much better approach. With a Sandbox, you put your computer in Sandbox mode before you download and installed the new software. Since the Sandbox lets you use the newly installed software just as if it had been permanently installed on your computer, you can run the new software to try it out and see if you like it. You can also run virus utilities to see if the installation gave you a virus you were not expecting. If you find viruses on your computer or just decide you do not like the newly installed software, you can get out of the Sandbox and throw away all traces of that software product and any hidden virus that came with it.

Letting Others Use Your Computer

Another reason to use a Sandbox is to let others use your computer. Other users may change your computer to match the way they like to use computers. For example, many of us have grandkids that come to visit and want to play on our computer. They may download games they like, change your wallpaper and default font sizes. They may pick up viruses in the process of getting your computer changed to their needs. When they leave, your computer no longer is the same as it was before they arrived. It may take you days to get it working again like you want it to. With a Sandbox, you can place the computer in Sandbox mode before they arrive and then let them play on your computer to their hearts content. When they leave, you simply exit the Sandbox and throw away all changes that they made to your computer. It is instantly back the way it was before they started to use it.

Computer Labs and Classrooms

User groups that have computer labs or classrooms have a similar situation. The classroom computers are setup carefully by the instructors before the class begins. Once the students have used the computer throughout the day, the computers are different and modified from what they were in the beginning of the day. This may cause problems for the students that follow them, so the instructors will often restore the computer's hard drives to put them back to normal. With a Sandbox, this long restore process is not needed. Instead, put the computers in Sandbox mode at the beginning of the day before the students arrive. Then at the end of the day, exit the Sandbox and throw away all hard drive changes made by the students. The computers are quickly returned to their normal state as you exit the Sandbox.

Browsing the Internet

Much of the Spyware that you pick up on your computer comes from simply browsing the internet. Some web sites are designed so that simply passing your cursor over a part of the screen is enough to activate a download of Spyware to your computer. Not only that, but your privacy is at risk when you browse the Internet. Windows automatically saves all of the places you browse to and all of the screens you see on the Internet. Browsing the Internet in a Sandbox is a much better approach. Place your computer in Sandbox mode before you start to browse the internet. Then browse all of the sites you want to. When you are done browsing the internet, exit out of the Sandbox and throw away all Spyware and traces of web sites you may have visited.

We offer three excellent Sandbox products that you may want to use on your computer. Let's look at each

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of these briefly to help you decide which one would best meet your needs.

StorageCraft ShadowSurfer

The smallest and least expensive Sandbox we offer is ShadowSurfer by StorageCraft Software. This product is the quickest product to install and the easiest product to use of all of our Sandbox products. With ShadowSurfer, all changes to your hard drive are always thrown away when you exit the Sandbox, which is what you want in most cases anyway. This excellent product runs on Win2000 and WinXP systems and is available from us at the discount price of just \$20. This is an excellent beginning Sandbox product for most home users.

Acronis True Image 11 Home Try&Decide

The next step up in ability and price is a feature that Acronis has added to their new True Image 11 Home backup utility. This feature is called Try&Decide and it is a Sandbox feature built into this award winning backup utility. Try&Decide requires that you create and use the Acronis SecureZone on your hard drive to contain the temporary changes to your hard drive. When you exit the Sandbox with this product, you can choose to keep all changes to your hard drive or throw them all away. This excellent product runs on Win2000, WinXP, and WinVista operating systems and is available from us at the discount price of just \$29 for a download or \$33 on a CD. This is a very good Sandbox feature that comes with an outstanding backup utility.

StorageCraft ShadowUser Pro

The most advanced Sandbox utility we offer is ShadowUser Pro by StorageCraft Software. This is a professional-level Sandbox product that has many options and features

to it. With this product, you can password protect the controls of the Sandbox, so that nobody can disable the Sandbox unless they know the password. Perhaps the biggest differences between this product and the other two Sandbox products is that you can pick and choose what files to throw away and what files to keep as you exit the Sandbox. This top of the line Sandbox product runs on Win2000 and WinXP operating systems and is available from us at the discount price of \$47. This is the product you should use if you are running a public computer workstation that needs tight controls.

A Sandbox offers you a new way to protect your computer from damage from the software you install or access on the internet. It also keeps your hard drive safe from damage caused by others using your computer. The selection of Sandbox products we offer lets you pick and choose which one is right for your needs. To order your Sandbox product, go to www.ugr.com and find the Sandbox product you are interested in. Then click on the Buy Now button on that product page to place your order using our secure web shopping cart. As you complete your order indicate the order code of UGNL0108 to qualify for these excellent discount prices. If you have questions about this new technology or about any of these products send an email to gene@ugr.com and I will try to help you.

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All Computers Wait at the Same Speed

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I first heard that phrase about ten years ago at a geek conference in Seattle. A decade ago is earlier than the Stone Age in computer years. It was probably meant to make fun of the propeller heads that couldn't live without the fasted CPU on their motherboard. The geeks' concern with processing speed seemed ridiculous to those who understood that computers spend very little of their time processing information. They spend it waiting for us to tell them to do something. You would certainly find your life very boring if you had to spend 99% of your time waiting for other people to act before you could do anything.

What are we talking about? We're talking about keeping your system properly tuned so that you don't have to wait while it tries to do its job. It's no secret that Vista has had performance problems. Microsoft has promised that their upcoming service pack should resolve most if not all performance issues. We've heard similar kinds of promises from Redmond before, but this time they

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say they really mean it. In fairness, not every performance issue can be laid at Microsoft's doorstep, but it's always fun to blame them because they're such an easy target.

Vista puts great demands on your CPU due to Aero and other assorted graphical gizmos built into the product. They should have named it the Eye Candy OS. Responding to the user community, Microsoft also added security features and additional functions that were not present in XP. When you ask your CPU to do more, you're adding overhead. This means you need more CPU power or you live with a slower system. If Vista performance has been less than stellar, the good news is that you can do something about it other than buying a new computer. Here are some of the things you can do to make Vista more appealing from a performance standpoint.

You're probably tired of hearing this one. It's like mother telling you to eat your vegetables. You know she's right, but you don't want to hear it. **ADD MORE MEMORY.** Vista is hungrier for RAM than any of its predecessors, and with memory as cheap as it is, it doesn't make sense to keep it on a starvation diet. XP runs great on one gigabyte of RAM. Vista should have two gigabytes as a minimum, and you won't go wrong by installing even four gigabytes.

Even with enough physical memory, Vista can still act like a tired old dog if you have a lightweight video card. Go into the Performance Information and Tools utility in Control Panel, and check out your video card with the Windows Experience Index. You need a video card that's certified for Vista Premium and supports Direct X 10. Use the money you save on RAM to buy a good video card. Don't try to do this one on the cheap.

A real help to good performance is bringing your power settings to the High Performance option. Do this from the Power Options utility in Control Panel. The default setting is Balanced which is OK for XP but not Vista. The High Performance setting gives you full access to all the Power in the CPU.

Turn off the sidebar. While this feature is visually appealing, it has few socially redeeming traits. Turning off this feature can sometimes result in significantly faster startups and shutdowns. Disable the sidebar by right-clicking it. Select Properties, and remove the checkmark in the box that starts the sidebar when Vista wakes up.

Fine tune your indexing options. Vista has a great search feature, but it's totally dependent on indexing the files and programs on your hard drive. It's a mixed blessing. You have a fantastic search capability when you index all locations, but you take a performance hit. By indexing fewer areas, performance will improve, but your search feature will be less robust.

Vista won't let you turn off indexing completely, but you can disable indexing for locations that may not be important to you. Do this from the Performance Information and Tools utility in Control Panel.

Here's another "eat your veggies" type tip. Empty the Recycle Bin and adjust it so it doesn't take up more than 2% of your hard drive. Right click on the Recycle Bin, select Properties, and make the necessary adjustments in the dialog box. Don't forget to defrag your disk once in a while, and empty the Recycle Bin before you defrag, not after.

Open My Computer from the Desktop. Right click on the C: drive, select Properties and check how much space you have left on your hard drive. If you're approaching 90% or more, you need to take

non-essential files and move them to another location. Vista needs free disk space to perform certain housekeeping functions, and if it has to hunt around for room or use virtual memory, your performance hit could be enormous.

Keep your device drivers up-to-date. Device drivers were designed to ensure that programs or hardware peripherals could "talk" to the system without problems and do their jobs properly. Newer drivers can improve 3D performance, fix bugs and other graphical glitches in games and video programs. Device drivers can avoid memory conflicts and prevent programs from squabbling over resources. Newer device drivers can support innovative features within applications, and ensure compatibility among different programs.

These are only some of the things you can do to improve Vista performance. Removing unnecessary startup programs, preventing spyware and virus infections, and updating old software are additional steps you can take. If your system is frequently hanging up or crashing after doing everything you can do to improve performance, then it's time to consider reformatting your hard drive and reinstalling everything, but that's another article.

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