The NCTCUG Journal

Things That You Can Do With That Flash Drive

**By Ira Wilsker, APCUG Director; Columnist, The Examiner,
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Websites

http://portableapps.com
http://u3.sandisk.com/download/Download_no.asp
http://www.microsoft.com/windows/windows-vista/
features/readyboost.aspx

With the demise of the floppy disk, and the approaching demise of the CD disc for data purposes, the USB flash drive has become the defacto method of saving and transporting files between computers. These small USB drives are known by a variety of monikers, such as flash drive, pen drive, pin drive, and thumb drive. Since their introduction a few years ago, their capacity has increased, and their prices have plunged. They are readily available in the big box stores, discount stores, club stores, and online. The most recent ones I purchased for the holidays were 8 gig size (almost the equivalent of the data stored on 2 standard DVD discs, about a dozen CD discs, or about 5700 floppy disks), and cost under $15 each. In the after-Christmas sales, some 8 gig flash drives were advertised for $9 each (after rebate). This amount of non-volatile storage for

the price was inconceivable just a few years ago. I thought I was getting a bargain a few years ago when I bought my first flash drive, a 64mb Lexar, for $49, and now a drive with about 64 times that capacity is about one-fourth the price! I have co-workers and students who wear their flash drives on cords around their necks, where they are referred to as "geek beads".

Most of us use the drive simply for portable storage, the ability to carry files around with us, but in reality these flash drives can do much more than to simply be used for storage. Most of the USB flash drives on the market today comply with the USB 2.0 standard for high speed transfer, while there still are a few inexpensive, low capacity drives that are of the slower USB 1.1 speed standard, or only about 3% of the speed of the USB 2.0 drives. From a practical viewpoint, the user will not notice any significant difference in speed if small files are saved and read, but will notice a difference if large files are used.

Computer Speed, RAM and Virtual Memory

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One of the more frequent questions raised is: "will adding more physical memory (RAM), speed up my computer"? The answer is a qualified "maybe". The first thing you need to be aware of are the built-in bottlenecks that can slow down your computer. Programs and data move through your computer at different speeds in different locations. The central processor (CPU) is usually the fastest data handler in the system. The hard drive is the slowest and everything else, including the RAM, is intermediate in data handling speed. The speed of processing data in RAM is measured in billionths of a second, or nanoseconds, and the speed of accessing data on the hard disk is measured in thousandths of a second, or milliseconds. So, ideally, you want all the processing to go from RAM to the CPU and back to RAM. Unfortunately, that's not always possible even if your system has the maximum amount of RAM installed.

Every computer running Windows, from several generations back, uses "virtual memory" in addition to RAM. The definition of "virtual memory" is based on redefining the address space to "trick" programs into thinking they are using large blocks of contiguous memory. Virtual memory is a space on the hard drive, frequently called a "swap file" or "page file". This is a block that is mapped for temporary storage of programs, data, and operating system essentials. This technique gives an application program the impression that it has contiguous working memory (address space), while in fact it may be physically fragmented.

Virtual memory was designed at a time when RAM was much more expensive than space on a hard drive.

Even though RAM is now much less expensive, the latest versions of Windows (XP & Vista) still depend on virtual memory. In fact, much of the operating system kernel ends up in virtual memory. This kernel memory also controls the allocation of data to virtual memory. Consequently, it is not really possible to eliminate virtual memory when you are running Windows XP or Vista. If you do disable virtual memory, Windows becomes unstable.
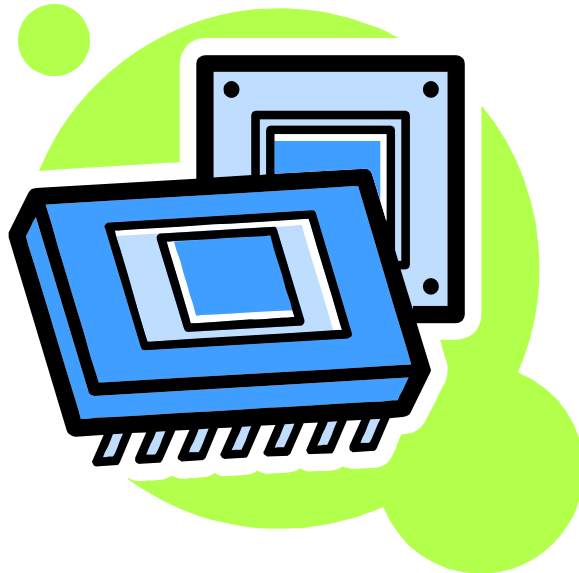
In a 32 bit computer running Windows, the maximum memory that can be accessed by the CPU is 4 gigabytes (232). It can not access addresses beyond 4 gigabytes (GB). (A gigabyte is a billion bytes.) Not every computer can accept 4 GB of RAM. Some older computers are limited to 512 megabytes (MB) and still run Windows XP quite successfully. However, if you have a newer computer whose motherboard can accept 4 GB of RAM, you may not be able to fully access all of that RAM. In some cases, RAM is shared with the graphics system. This is usually referred to as an "integrated graphics card". In such a case, up to 1 GB of your RAM may be used by the graphics leaving only 3 GB for the rest of the system. Then Windows takes 2 GB of space leaving only 1 GB for user space (programs and data). Even if some of this is placed in Virtual memory, the CPU still has only 4 GB of addresses. If you have a graphics card with its own memory, Windows will allocate 2 GB to kernel memory and 2 GB to user memory. Since some of the kernel memory will be in virtual memory, your

total memory will be a combination of physical memory (RAM) and virtual memory (hard drive), but the total will not exceed 4 GB in a 32 bit computer. Remember, the 4 GB limit applies to the number of addresses that can accessed by the CPU. Those addresses can be on the graphics card, the hard drive or in physical memory (RAM).

Windows sets up the memory system by dividing memory into pages. The most recently accessed pages are in RAM. Any pages that have not been referenced in a while are written to the file on the hard drive. According to Microsoft the paging file in a 32 bit system can be a maximum of 16 terabytes (one terabyte equals 1000 gigabytes). So the total virtual memory pagefile system can exceed the 4 GB limit by a considerable amount. However, no more than the 4 GB can be actively handled at time. The inactive pages are stored on the hard drive.

Virtual memory not only operates at the speed of the hard disk data access, it also requires special handling before it can be used by the CPU or sent to the video screen. Pages on the hard disk have to be read into RAM to be used. That also means that the space they will take in RAM must be vacated. If there was data there, it must be written to the hard drive, before the new pages can be read into RAM. This paging process must also be managed. Some memory is used just to keep track of which pages are in RAM and which are in virtual memory. This is the role of the Virtual Memory Manager. All of these processes of reading and writing to and from RAM require time. As a result, virtual memory use does slow the computer more than the amount that is just due to the slower speed of disk access.

Before you decide that you need 4 GB of RAM to solve your speed problem, you need to determine how much RAM your computer is designed to accept. Computers in today's market are sold with anywhere from 1- 4 GB of RAM. However, only a few years ago, computers were designed to accept a maximum of 1 GB of RAM or less. So you need to check your owners manual to see what the maximum RAM is for your computer. Then, if you don't know how much is installed in your computer, bring up the the device

manager window from the control panel. The first page will tell you how much physical memory you have in your system. You can also see the distribution of physical memory and virtual memory by bringing up the task manager (Ctrl-Alt-Del) and clicking on the Performance tab.

There are several other possible solutions to this problem. One is to look at your hard drive. If you have an older computer with an IDE drive, replacing it with a drive that has a SATA interface will speed up the data handling in virtual memory. Another change would be to purchase a graphics card with 256 – 512 MB of RAM and install it in place of the integrated video. That would release the RAM that was being shared with the video card.

The best, and most expensive, alternative for speeding up your computer is to replace your 32 bit computer with a 64 bit system. The 64 bit computers can access 16 exabytes of RAM (2^{64}). That is 16 million GB of RAM. Most of the 64 bit computers in todays market do limit physical RAM to anywhere from 8 to 256 terabytes. Not that we're getting into any really large numbers here, but the amount of RAM in a 64 bit machine is more than adequate to reduce virtual memory to a bare minimum. The catch is that 64 bit machines have other problems, especially with the limited availability of 64 bit software and drivers for peripheral devices. So before you decide to switch to 64 bit computing you need to check out whether or not drivers are available for your peripherals.

Finally, if your hard drive is heavily fragmented, this will also slow down data reading and writing. Simply defragmenting your drive will speed up the drive input and output. It may also improve the computer's boot time. As you can see, there are a number of things to consider if you need to speed up your computer.

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.
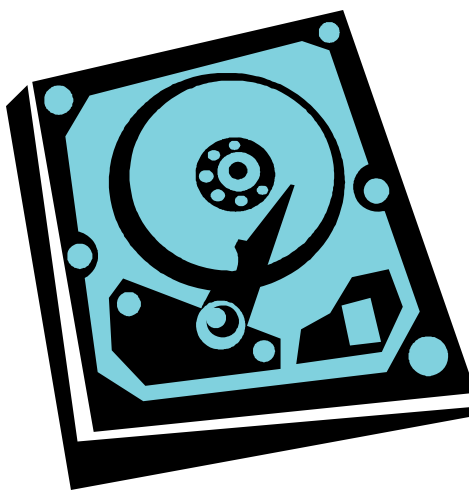
Replay Converter 3.20:
"Stream it - Record it - Keep it"

Review by Gregory West, Editor, Sarnia Computer Users' Group, Canada
www.scug.c editor (at) scug.ca

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Applian Technologies, www.applian.co

Applian offers a "try before you buy" and a 30-day Money Back Guarantee at http://tinyurl.com/yw9bh
Program File Size: 21 MB
Cost: $29.95 USA

First of all, I would like to state that this company offers excellent support. I use several of their programs and have had no problems. The programs do exactly as advertised.

What do you do with a video once you have downloaded it?

If you need to convert video files, audio files, or Rip and Burn DVD s this program is a "must have". As stated, this program also "Works great with YouTube, FLV files, iPod/iPhone". As all Applian s software, it is easy to use, fast, and supports all major file formats.

With this program you are in complete control. You do not need to know about confusing encodings either. With just the click of a button you just pick the format you want and in no time the work is done. However, if you do want to go under the hood and make some adjustments you can "trigger an Option to change things like bit rate, frames per second, or other encoding parameters before a conversion runs" and edit like the

pros.

Download Replay Converter supports the following video and audio formats:

VIDEO

DVD (NTSC and PAL)
Windows Media Video (WMV)
Real Video (RM)
AVI
MPEG 4 - MPEG-1 - MPEG-2
Quick Time (MOV)
Flash Video (FLV)
Flash (SWF)
iPod/iPhone - 3GP (for Mobile Phones)
Play Station Portable MPEG 4 formats

AUDIO

CD (Audio CD and Data CD)
MP3
WAV
AAC (M4A)
iPod/iPhone Audiobook (M4B/AAC) OGG
Windows Media Audio (WMA)
FLAC
Real Audio (RA)

Download Replay Converter is another amazing software program from Applian Technologies designed for anyone converting video and audio formats.

[*NCTCUG Ed. Note:* check out the Replay Capture Suite too. On a more personal note — I've been using Cucusoft converter www.cucusoft.com/ to rip DVDs to my iPod; it has a batch-convert mode; I don't know if Applian has one as I haven't looked into it that far.]

Mozilla Releases Firefox 3.5 Browser

By Ira Wilsker, APCUG Director; Columnist, The Examiner, Beaumont, TX; Radio Talk Show Host Iwilsker (at) apcug.net

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Website: http://www.getfirefox.co

It is no secret to regular listeners of my weekly radio show (KLVI 560AM 6-7pm Mondays) that I have been a longtime user of the Firefox browser. While Windows may come with Microsoft's Internet Explorer (IE) installed and an integral part of the operating system, I and millions of other computer users have chosen to use an alternative browser, such as Firefox, to provide features and security lacking in IE. There has been an active war between browsers for market share for several years, led by IE with its deep pockets capable of carrying on its battle though the use of prodigious commercial advertisement, backed by the financial clout of Microsoft. Firefox, from an open source, non-profit organization, Mozilla, lacks the financial capital to compete in the commercial marketplace, but has developed a loyal and expanding user base based on its quality and features, rather than its advertising. Mozilla's Firefox has been successful at capturing an estimated one-fourth of the browser market from IE, and has spawned competition from other non-Microsoft competitors, such as Google's Chrome, Apple's Safari, Opera, and several other browsers, all of which offer features and benefits lacking in IE. While IE, Chrome, and Safari have substantial financial backing behind their respective promotions, Firefox is forced to compete based on its merits and performance, and not the dollars behind it. Due to the competitive nature of the browser business, and the fact that when Microsoft developed IE and announced that it would be a free browser, despite many millions of dollars in development costs, all of the other major browsers now currently available were also provided for free.

Firefox in its earlier versions has been around for several years, and attracted the interest of the computer press pundits who have recognized the superiority of Firefox over the 800 pound gorilla in the room, Microsoft's IE. What Firefox has lacked in financial capital, it has more than made up with its feisty adher-

ence to innovation and performance. Recently, Mozilla released version 3.5 of Firefox, a substantial update and upgrade to the not-so-old 3.0 series of releases. Over five million copies were downloaded during the first 24 hours of its release. It is available as a free 7.7mb download from www.getfirefox.com, and available for most contemporary operating systems including XP, Vista, Mac and Linux.

The new version 3.5 of Firefox has some dramatic improvements over the older versions of Firefox, many of which have increased the performance, features, and security advantages of Firefox over IE, and makes Firefox more completive with the advanced features of its competing browsers. One notable improvement in 3.5 is its rendering speed, the time it takes to display web pages being downloaded. One example of dramatic speed improvement is in displaying web pages containing Java, a very common form of coding on web pages today. In comparison

Top Features

Awesome Bar
improved Find the sites you love in seconds (and without having to remember clunky URLs).

One-Click Bookmarking
Bookmark, search and organize Web sites quickly and easily.

Super Speed
new View Web pages way faster, using less of your computer's memory.

Easy Customization
improved Thousands of add-ons give you the freedom to make your browser your own.

Private Browsing
new Surf the Web without leaving a single trace.

Anti-Phishing & Anti-Malware
improved Enjoy the most advanced protection against online bad guys.

Tabs
improved Do more at once with tabs you can organize with the drag of a mouse.

Password Manager
Remember site passwords without ever seeing a pop-up.

Session Restore
improved Unexpected shutdown? Go back to exactly where you left off.

Instant Web Site ID
Avoid online scams, unsafe transactions and forgeries with simple site identity.

Awesome Bar

improved A quick way to get to the sites you love—even the ones with addresses you only vaguely remember. Type in term into location bar (aka the Awesome Bar) and the autocomplete function includes possible matching sites from your browsing history, as well as sites you've bookmarked and tagged in a drop down.

For example, you could enter the tag: "investments" to find "www.fool.com". The Awesome Bar learns as you use it—over time, it adapts to your preferences and offers better fitting matches. New enhancements for Firefox 3.5 give you greater control over the Awesome Bar, and include privacy settings.
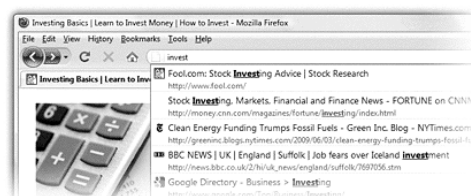
testing on an XP machine using different versions of Firefox, 3.5 was about twice as fast as version 3, and 10 times faster than version 2. In comparative tests performed by some of the leading computer magazines, Firefox was much faster than IE in loading a variety of web pages. To be fair, Safari and Chrome were also faster than IE 7 and 8 as well, with IE sometimes being very sluggish in loading and displaying websites by comparison. Firefox 3.5 has improved memory management which minimizes memory leakage, and also uses fewer system resources than IE, still another reason for improved performance.

Firefox 3.5 is very feature rich with security and conveniences that makes it a very attractive alternative to IE. One is the "Awesome Bar", also known as the address bar, where an intelligent wizard makes it easy to locate websites without typing or knowing the URL (internet address). Simply typing a keyword term in the address bar will cause Firefox to instantly reference the browsing history searching and then displaying web addresses with similar keywords, and then interactively searching the web for popular websites with that key word. The Awesome Bar is intelligent in that it learns about your surfing interests in order to make more relevant recommendations. Of course, if you know the web address, just simply type it in as always, but if you have been there before the auto complete feature will display your potential choices as fast as you can type. If a desired web address is displayed by the Awesome Bar, simply click on it to open the page.

Many of us have developed a large collection of favorites and bookmarks. Firefox 3.5 offers an improved version of its "Tags" feature where terms can be added to a bookmark for rapid sorting and display of appropriate links. For example, if I labeled the bookmark for THEEXAMINER.COM with the tag "news" (there is no limit on the number of tags that may be added to any bookmark), and typed "news" in the address bar, the Examiner link would be among the top placements instantly displayed in the address bar for immediate selection. Adding new links to the bookmark list is a simple one click operation;

simply click on the star at the right side of the address bar to create a bookmark with the currently displayed website.

One cute feature in Firefox 3.5 that has been continued from the earlier versions is a built in spell checker. When filling in online forms, blogs, Tweets, webmail, or other forms of text, Firefox will check the spelling of words entered in real-time, and underline any misspelled words with a red dotted line. Simply right clicking on the word will display the correctly spelled recommendations, and another mouse click will replace the erroneous word with the correctly spelled term.

Another useful feature is the tabbed browsing. While other browsers, including IE 8, have tabbed browsing, Firefox 3.5 tabs can be dragged and dropped wherever desired. I have been guilty of closing a tab, only finding later in the session that I want to go back to the now closed tab; Firefox saves closed tabs under the History menu as "Recently Closed Tabs", where a mouse click reopens the closed tab. A similar benefit is the ability of Firefox to remember where you have been; when closing Firefox, the user is given the choice to remember the open tabs, and automatically reload them the next time Firefox is opened.

Security & Privacy   View the video

Instant Web Site ID

Want to be extra sure about a site's legitimacy before you make a purchase? Click on a site favicon for an instant identity overview. Another click digs deeper: how many times have you visited? Are your passwords saved? Check up on suspicious sites, avoid Web forgeries and make sure a site is what it claims to be.

Faster, Safer, Smarter, Better

Performance   Security   Customization   New Features   Firefox vs. IE

The Fastest Firefox Yet

Things move quickly online, and we've beefed up the engine that runs Firefox to make sure you can keep up: Firefox 3.5 is more than twice as fast as Firefox 3, and ten times as fast as Firefox 2.* As a result, Web applications like email, photo sites and your favorite social networks will feel snappier and more responsive.

View all performance features.
Learn more about Firefox 3.5's performance upgrades.

* Based on the results of a SunSpider test of JavaScript performance on a Windows XP machine.

Firefox Performance: Fast — Faster — *Fastest*
Results of a SunSpider test on a Windows XP machine

Firefox 2	Firefox 3	Firefox 3.5
18,148 ms	3,669 ms	1,524 ms!

Since Firefox is not beholden to any other software company, there is no prejudice in the selection of search engines accessible from the integral search bar. In fact, there are literally hundreds of search options available, many with an integral smart search function that makes recommendations of search terms as they are being typed. The search selection does include not just the typical Google or Yahoo, but also hundreds of other domestic and foreign search engines as well as commercial resources. In addition to Google, Yahoo, and AllTheWeb (my personal favorite), I also have EBay, Amazon, and other shopping sites in my search list where products can be entered in the search box, and the results quickly displayed.

One interesting feature in 3.5, which can be easily selected or disabled at will, is "Location Aware Browsing" where capable websites will provide relevant local information such as restaurants or events based on the current geographical location of the computer. Firefox emphasizes that no personal information is disseminated when using this feature and it can be turned off at will.

One of the top selling points of this free product is the security of the browser. Integral with the browser is an anti-phishing feature which will prominently warn the user if he attempts to connect to a known phishing identity theft site. Firefox also protects against websites containing viruses, Trojans, and malware in their code. Since Firefox runs on top of the operating system, and not as a part of it, Firefox is inherently more secure than IE, and less vulnerable to attack. While no browser is absolutely secure, in penetration testing, Firefox has proven to be more secure than IE. If any serious security vulnerabilities are detected, Firefox is quick to release and distribute software updates, typically much faster than most competing browsers, and almost always faster than IE. Firefox offers an automatic update feature which can download updates as soon as they are released, keeping the browser up to date with the latest security fixes.

Firefox 3.5 is totally adequate as downloaded, and includes abundant features. For those who like to customize their browsing experience, Firefox has compiled a catalog of over 6000 plug-ins and add-ons. I use add-ons for a variety of purposes, including downloading and converting YouTube videos, color coding my tabs, and "IE Tabs" which will run IE only websites that require Active-X from inside Firefox, without loading IE.

I strongly recommend Firefox to everyone. It is easy to install, and will happily coexist with IE and other installed browsers, and not interfere with them. Firefox offers an option during installation to non-destructively copy and import favorites (bookmarks), cookies, passwords, and other information from IE, such that Firefox is ready to run and complete as soon as it is installed. If upgrading from an older version of Firefox, the newer version will perform some housekeeping tasks and install itself over the older version while maintaining all bookmarks, passwords, cookies, and other information.

I use IE for less than 5% of my browsing tasks, choosing to use Firefox for almost all other web browsing. Other than the fact that it is already installed on Windows computers, I sometimes find it hard to understand why so many would still use such a slow, vulnerable, and insecure browser as IE, when a reasonably secure and fast browser such as Firefox is available for free. Go ahead and download Firefox right now (getfirefox.com). Play with it for a while, experimenting with its myriad of features unavailable on IE. If you like it, go ahead and make it your default browser (I did). If not, either keep it as a secondary browser, or uninstall it (Add/Remove Programs). Once you try Firefox 3.5, I really do not envision many of you wanting to uninstall it, but I can see many more of you choosing Firefox as your primary browser, rather than the cumbersome IE.

How to Be a Geek Goddess

By Christina Tynan-Wood

**Reviewed by Sandy Berger, CompuKISS www.compukiss.co sandy (at) compukiss.com**

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I am an old hat when it comes to technology. I was a computer programmer back in the seventies before computers came into the home, and I've kept my hand in the technology arena all these years with my own computer consulting business and my technical writing career. Yet I've never considered myself a "Geek Goddess". As a matter of fact I have often been a little aggravated to hear Kim Komando refer to herself as "The Digital Goddess" — like she is something really special.

But Christina Tynan-Wood in her book, *How to Be a Geek Goddess*, isn't advocating that a Geek goddess is someone above everyone else. She says that being a Geek Goddess is "a simple matter of embracing the incredible innovation that's going on in our times and harness it for our own purposes".

Oh yes, and Christina understands the differences between how men and women look at, and deal with, technology. She starts the book off with the sentence, "My husband is a pompous ass." Many of us have noticed how men seem to pound their chests and promote themselves as the technology heroes of the day. Women, on the other hand, just want to use and enjoy technology.
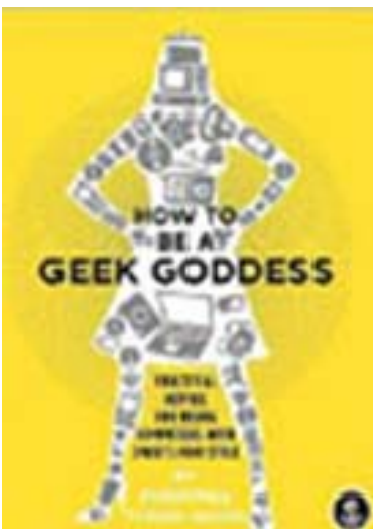
Christina's book is filled with good information about technology with everything from how to choose a computer sales person to hooking up with others online. There are tips on everything from controlling your email to troubleshooting a wireless connection. Chapters include: Getting in Touch with Your

Software Side, Where the Stores Never Close, The Wireless Home, Keeping It Safe, Geek Parenting, Groovy Gear and Gadgets, and Your 200 Closest Friends.

The information in this 315 page book is all accurate and informative. Yet, this is not a reference book. It is rather like a free-flowing novel with technical information. If you want a book where you can look up how to do things, you will have to look elsewhere. This is a book for women who want to absorb some pointers here and there while reading about all the things you can do with your computer. If you are already very familiar with computers, you can skip this book. But again, if you want to immerse yourself in technology and pick up some knowledge and useful tidbits on the way, you will love this book. And you may even become a Geek Goddess yourself!

memorize in order to preserve history and culture. Whether writing is ultimately a blessing or a curse, it appears here for the foreseeable future. The same can be said for always-on electronic communication. It's silly to lament a simpler past. It's equally silly not to use the tools now available to understand the implications of changes taking place and make the most of developments. iBrain helps folks from each side understand their own point of view better and gain some perspective on the other. Definitely worth reading while waiting for the next discovery in brain science.

iBrain: Surviving the Technological Alteration of the Modern Mind, by Gary Small, M.D. and Gigi Vorgan. List price, $24.95. Harper Collins, Publisher, 2008 www.drgarysmall.co

iBrain: Surviving the Technological Alteration of the Modern Mind

By Gary Small, M.D. and Gigi Vorgan

In iBrain, Dr. Small addresses the differences between the mental processes of "digital natives" and "digital immigrants." Digital natives are those born after about 1980, who have never known a world without computers, Internet, video games. Those born before electronic saturation have, with varying amounts of skill and willingness, learned to use these electronic extensions of the human mind. But no matter how proficient we become, we always operate as outsiders, immigrants with the slightest trace of accent, not quite able to function with the unconscious abandon of a native speaker in the digital culture.

Gary Small is the Director of the Memory & Aging Research Center at the Semel Institute for Neuroscience & Human Behavior and the Center on Aging at UCLA. In previous books he popularized some of the new information on brain development, plasticity, and neurological changes.

This is a book, actual paper with static black ink. the book itself does not have a Web site, though Dr. Small has one that focuses heavily on the book—http://www.drgarysmall.co. I went there and was immediately blasted with a feature clip from a Los Angeles area TV show's brief review of the book and the topic of brain plasticity.

The book has many short case studies/vignettes that make a point or describe how it looks in real life. While these are all probably valid for the group they describe, it's missing large segments of the population. It seems to me that Dr. Small is stuck in a restricted point of view that every kid in the industrialized world has the same kinds of experiences that his UCLA environment provides his family. Where are the single mothers holding down two minimum-wage jobs, the foster kids pushed out on their 18th birthday? I wonder what kind of differences Dr. Small would find in looking at the brains, and minds, of the digital native generation who struggle with basic literacy or

with the English language. He frequently mentions that digital natives 'multitask and parallel process with ease,' though other sources find that multitasking sets the mind up for errors and may not be as productive as linear focus sequential tasks. Since he doesn't give his sources for these tidbits, it's hard to check his accuracy against other studies.

Frequent anecdotes put the brain science into everyday life and illustrate how we'd see the neurochemistry in the everyday world. There are several self-analysis surveys. They are designed to help the reader figure out from her/his own behavior what might be going on inside his brain. The questions are worded in such a way that they add to understanding of the topic.

There are points for both groups to consider. Digital natives, often fail to develop social and interpersonal skills. Digital immigrants plod through information, missing connections. Immigrants generally know they are in foreign territory: digital natives might be surprised to consider that their citizenship in the post-information age is not necessarily an all-encompassing advantage. This might be a book you'd like to show to your acquaintances (including family members) who have a different orientation than you do.

I've heard that when writing was introduced to many oral cultures, it was lamented as the end of memory, since people no longer need to
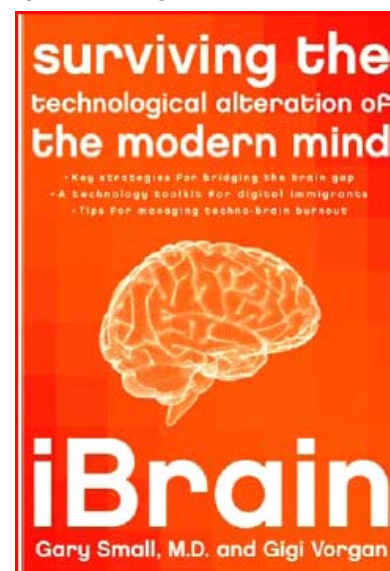
Windows 7 XP Mode

By Ash Nallawalla, APCUG Director, Review Editor, Melbourne PCUG, Australia
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I will be writing a review of Windows 7 in due course, but here is a preview of a key feature that will interest many readers.
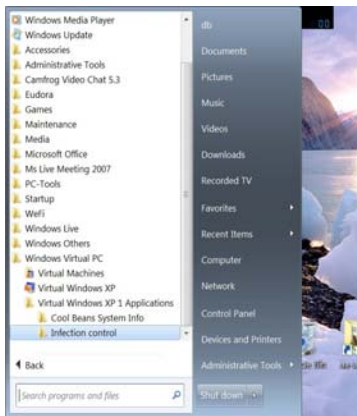
Windows XP Mode

Windows XP Mode is aimed at small business users who wish to run their Windows XP-era applications on their Windows 7 desktop. They might have avoided upgrading to Windows Vista owing to an in-compatibility with their old programs or the simple reason of "Windows XP does the job." However, as they buy new computers later this year or by January 2010, they might find a copy of Windows 7 included with the purchase, or they may have other compelling reasons to upgrade.

An exciting optional feature that was kept under wraps until recently was Windows XP Mode (XPM). This feature will work in certain editions but is an additional download.

Key Facts

- Windows XPM is included with Windows 7 Professional, Windows 7 Ultimate and Windows 7 Enterprise customers.

- Windows XPM combines Windows Virtual PC and a pre-installed virtual Windows XP environment to enable users to run many older applications.

- Windows Virtual PC enables users to launch virtual applications from the Windows 7 Start menu.

- Windows Virtual PC includes support for USB devices and is based on a new code base that includes multi-threading support.

- Windows XPM is pre-configured with the Windows XP firewall and can apply updates automatically from Windows Update. It is not pre-configured with anti-virus or anti-malware software, which need to be sourced separately.

IT Professionals

Windows XPM is not recommended for corporate deployments. Wait for Microsoft Enterprise Desktop Virtualisation (MED-V) Version 2.0, which will be released as a beta 90 days after the general availability (GA) of Windows 7.

- MED-V v1 is currently available for Windows Vista and it enables Virtual PC deployment in larger organisations. It provides centralised management, policy-based provisioning and virtual image delivery.

- MED-V v1 builds on Microsoft Virtual PC 2007 to help enterprises with their upgrade to Windows Vista when applications are not yet compatible.

- MED-V v2 will add support for Windows 7 (both 32 bit and 64bit) and Windows Virtual PC.

Windows XPM is for SMBs

Windows XPM stand-alone is intended for small and medium business (SMB) users who can install their XP applications themselves and who might not have IT Professional staff. Each PC has its own virtual Windows XP environment that is controlled and managed by the user.

Windows XPM is best suited for older business and productivity applications such as accounting, inventory and similar software. These applications tend to conform to the basic Windows Application Programming Interface (API).
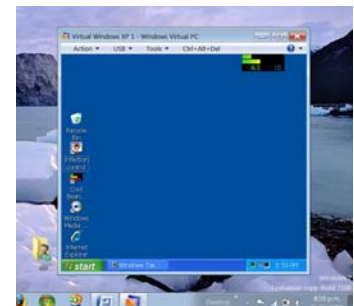
Windows XPM not for Consumers

Windows XP Mode does not have 100 percent compatibility with all Windows XP software. It is not aimed at home users because many consumer programs require extensive use of hardware interfaces such as 3-D graphics, audio, and TV tuners that do not work well under virtualisation today.

In Use

Windows XPM is available from the Windows 7 Start menu. It displays a regular Windows XP desktop and you can install your old software from there just as you would on a Windows XP machine. Thereafter, those programs appear just below the Windows XPM menu item.

Requirements

Of course, there's always a catch. Not all CPUs will support Windows XPM. You need hardware-based virtualisation (go and check your CPU specs now). Intel and AMD have CPUs that have this feature but don't assume all recently purchased CPUs support hardware virtualisation. See these sites for more information.

- Intel: http://www.intel.com/technology/ virtualization

- AMD: http://www.amd.com/us-en/ 0,,3715_15781,00.htm

My PC is about six months old and has a Core 2 Quad processor - the Q6600 chip. I checked this Intel page to confirm that I'll be able to test this feature when I get my hands on it:

- http://ark.intel.com/cpu.aspx?groupId=2976

The next thing to check is for BIOS support on your motherboard. I have an Asus P5K SE/EPU and its user guide mentions Vanderpool support is enabled by default (you can turn it off). Vanderpool was the code name for Intel Virtualisation.

While Windows XPM isn't for everyone, it will certainly address the need of some businesses that need to run legacy applications.

Preventive Computer Maintenance

By Stuart Rabinowitz, Editor-in-Chief, the PULP, newsletter of the Hartford User Group Exchange, CT www.huge.org s.e.rabinowitz (at) att.net

The single most important maintenance item that should be done on a regular basis is BACKUP YOUR DATA. What the schedule is depends on much data you can afford to lose. Try daily/weekly to an external hard drive and monthly to a CD/DVD, or use a backup application. Make sure that your software is updated; primarily the operating system and your primary browser.

Use utility software: get a sense of how your computer operates when it's operating correctly. For the Mac use 'Activity Monitor' or 'Tech Tools'. On the PC (in the control panel) administrative tools/performance. You can also check your internet connection speed at: http:// reviews.cnet.com/internet-speedtest/?tag=ont.int.band *{NCTCUG Ed. Note: this link appears broken as of 11/09; try a Google search for check internet connection speed for some ideas!]*

For the PC users—do regular spyware/virus scans. Make sure the definitions are up to date. Primarily for PC users—Defragment your hard drive (this may take a while). Mac users do not really need to do this since OS X (10.3 +) does it automatically.

Free up some space on your hard drive (PC users can use disk cleanup; Mac users can use CacheOutX). Clean out old files that you don't use, after you've backed them up. Uninstall those programs that you don't use. Apple recommends that you have at least 10% free, a bit more for PCs, this will improve virtual memory and may improve disk performance.

Clean the Hardware—to clean the monitor and keyboard use a dry microfiber cloth (be sure the computer is turned off) and gently (don't press hard) wipe the monitor, unplug the keyboard and wipe. If there are hard to clean areas, spray the cloth lightly with a vinegar/water solution and then wipe. For an optical mouse wipe the bulb gently. You'll need to open a mechanical mouse to clean the rollers. Use a cotton swab with isopropyl alcohol.

How Can I Tell What I Can Do to Items on My Windows PC?

By Gabe Goldberg, Computers and Publishing, Inc. Tiplet (at) gabegold.com

Obtained from APCUG with the author's permission for publication by APCUG member groups; all other uses require the permission of the author (see e-mail address above).

Windows exists to let you manipulate objects on your PC. (And, of course, to make Microsoft even larger—though possibly not more disliked—than the http://en.wikipedia.org/wiki/Sirius_Cybernetics_Corporation — Hitchhiker's Guide to the Galaxy's Sirius Cybernetics Corporation.)

But if all you could to to things was left click, highlight, drag, drop, copy, and delete them, that wouldn't be interesting. So we use the right mouse button for object-specific actions.

Since Windows would be nothing without its jargon, the Right Click pop-up list is called a *context menu*, showing options and actions available in the "context" of whatever you click. The default – bolded (dark end emphasized) -- is what happens if you double click the item or simply select it and press Enter. File and program icons have default actions of open and launch, respectively.

Context menus can include actions shown on menu bar dropdown lists but also often include actions not otherwise available. Choices depend on the type of object clicked (such as desktop icon, hard drive letter, or file name) and its location. And they usually include standard actions such as Copy, Paste, Delete, Rename, and Properties.

Other actions are determined by—surprise—the context. For example, right-clicking within an e-mail being composed might also show Undo, Cut, Paste Without Formatting, Paste As Quotation, and Select All. And my Windows Explorer offers Open, Print, Edit, Send To, FAX Recipient, Open With, Scan With Norton AntiVirus, WinZip, Send To, Cut, Create Shortcut, Rename, and Properties. Context menus clearly offer a variety of actions; note that several of my choices designate software I've installed (Norton Anti-Virus and WinZip). And some actions such as Send To open submenus with detailed options.

Properties is among the most powerful context menu actions, displaying information, attributes, and settings for Windows objects. For hard drives and the like, it's also the gateway to actions and useful programs to run. A useful common keyboard shortcut is highlighting an object and pressing Alt-Enter to displays its properties.

Right-clicking the Windows Task Bar, on program names and unoccupied areas, produces short lists of powerful actions. And right-clicking items in the Notification Area (formerly called the System Tray, at the right side of the Task Bar) shows useful options. That's how I learned that right-clicking Windows' "updates available" icon reveals the updates' characteristics.

Right-clicking can also modify actions taken. For example, dragging an object while pressing the right button pops up a context menu when the button is released. Offering choices such as Move, Copy, Create Shortcut, etc., this allows easier control than remembering to Ctrl-click to specify Copy rather than Move.

Right-clicking can't break anything, since choices are displayed but no immediate action is taken; you can close the context menu by pressing the Esc key or left-clicking outside the menu. Remember that right-clicking can be faster than searching pull-down menus for the action you want. And exploring context menus often reveals powerful object-specific capabilities.

Left-handed friends can swap left and right mouse button functions for easier operation by opening the Control Panel, clicking the Mouse icon, and switching primary and "Right Click" button definitions.

Washington Area User Group Partners

Working Together For Our Members

NCTCUG.ORG WACUG.ORG CPCUG.ORG

NCTCUG Annual Financial Report, Fiscal Year 2009

By Paul Howard, Treasurer

NCTCUG's fiscal year concluded on September 30th in excellent financial condition. Our cash flow was negative: -$365.95 This resulted from start-up expenses for our DSL connection in Carlin Hall, and attic shelving costs for the equipment and materials we store there.

Membership stands at 49. Our "rainy day fund" established years ago has grown to four CD accounts for future needs. Although our membership has declined over the years, NCTCUG is financially sound because of prudent planning and continued fiscal restraint.

Member generosity accounts for forty-seven percent of our income. Donations, either directly as contributions made with dues payments, or through the Pizza SIG are vital to the group. Bruce Frazer donated a Lenovo laptop computer to the group in December.

Member donations were received this year from: Colder, Howard, Johnson, Leggett, Mikosinski, Pafford, Schmidt, Throneburg, Wenri, and Willard.

Pizza SIGs were sponsored by Jim Brueggeman and Paul Howard. Pizza SIG donors include Brueggeman, Fujii, Garson, Howard, Keys, Mabudian, Mikosinski, Phillips, Schmidt, Walsh and Wenri.

A restricted reserve fund is established within one of our CD accounts for the eventual replacement of the jointly owned computer projector, shared with our user group partner, WACUG.

Our account balances at the close of the fiscal year (September 30th) were: Checking Account $3523.86. CD accounts: Restricted - $801.36; Unrestricted - $4210.93. NCTCUG maintains a checking balance of at least $1000.00 to avoid bank service charges.

> The "organizational documents" area of our web site contains additional information about the user group's financial operations, including prior years' Financial Reports for comparison purposes.

This Annual Treasurer's Financial Report for Fiscal Year 2009 has been approved by the Board of Directors of NCTCUG. The account balances noted above are based on in-person queries of our bank – statements for all accounts have not yet been received. On that basis, the balances and the Cash Flow Report below are hereby certified as correct.

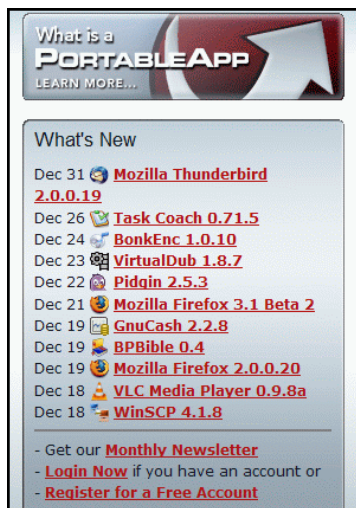Paul Howard, Treasurer
James Rhodes, President

Cash Flow Report FY '09: 10/1/08 - 9/30/09	
Revenues	
Pizza SIG	661.00
Donations	385.00
Total Donations	**1046.00**
Dues	1100.00
Interest Income	41.27
Insurance Reimbursement from WACUG	26.64
Total Revenues	**$2,213.91**
Expenses	
Insurance - Liability & Personal Prop.	333.00
Legal - VA Corporation fees	25.00
APCUG Membership dues	50.00
Administrative Postage	8.80
Total Administrative	**416.80**
DSL service, equip. & installation costs	623.91
Attic Shelving	264.06
Computer Equipment	331.43
Meetings & Other Svcs	**1219.40**
Newsletter Postage	240.30
Newsletter Printing	703.36
Total Newsletter	**943.66**
Total Expenses	**$2,579.86**
Results from Operations	**-$365.95**

Prepared 11/01/2009 Ver. C

There are some other standards for USB flash drives that many users may find beneficial, if their flash drives have the capabilities. Users of Microsoft Vista (Home Basic, Home Premium, Business, and Ultimate versions) may find it advantageous to purchase flash drives that are labeled as "ReadyBoost". According to Microsoft, "Windows Vista introduces Windows ReadyBoost, a new concept in adding memory to a system. You can use non-volatile flash memory, such as that on a universal serial bus (USB) flash drive, to improve performance without having to add additional memory "under the hood." If the drive is compatible with the ReadyBoost standard, some of the flash memory in the drive can effectively and temporarily be added to the RAM (memory) installed in the computer, with an improvement on performance. If the

Washington Area
Computer User Group

WACUG Meeting will be held on December 12, 2009 *[2nd Saturday]* from 12:30 to 3:30 pm. Starting with the January 17th, 2009 meeting, WACUG will hold joint meetings with **OPCUG** [www.olligmu.org/~opcug/] It is anticipated that all meetings, except June, July, and August, will be held at the **Osher Lifelong Learning Institute** [www.olli.gmu.edu/] at George Mason University, 4210 Roberts Road, Fairfax, VA, known as the Tallwood Campus.

Topic: Hands On — Setting Up Home Wireless Networking Security: Routers and Laptops; PC Clinic

See the WACUG site for January 2010 information!

You do not need to be a member to attend. For more information on WAC meetings and events, call the WAC AnswerLine (voice) at (703) 370-7649.
Also see WAC's Web Site at

   http://www.wacug.org/

Vista user with a compatible flash drive right clicks on the flash drive letter displayed under "My Computer" or Windows Explorer, and then left clicks on Properties – ReadyBoost, Vista will recommend how much of the available memory on the drive can be effectively and safely utilized by Vista. Other data stored on the ReadyBoost drive is protected from damage, and will not be harmed if the drive is used as a ReadyBoost drive. Because of the higher performance requirements, ReadyBoost compatible flash drives are slightly more expensive than standard drives, but are often the least expensive way to add memory to a Vista computer.

Another useful feature often found on a USB flash drive is known as "U3". Drives that are U3 compatible are labeled as such. A U3 powered flash drive allows the user to carry special versions of hundreds of programs on the flash drive that can be run directly from the flash drive without being installed on the computer. This is an effective way to carry the actual software the user is familiar with, and run it on other computers. When unplugged from the com-

puter, U3 leaves no data or other information left on the computer that was used. Some of the popular programs that come in U3 formats are the Firefox browser, Skype telephone, McAfee Antivirus (about $15), RoboForm Password Manager, OpenOffice (the comprehensive suite of office software

including a Microsoft compatible word processor, spreadsheet, presentation program, database, and more, free), Thunderbird email client, and dozens of games. Most U3 drives come preinstalled with password protection and a "U3 Launchpad" which is a menu driven directory of the software on the U3 drive.

For those of us who have standard non-U3 drives, there is now an alternative that provides for the same functionality. This alternative to U3 that will run on almost all contemporary flash drives is called "PortableApps", and can be found online at www.portableapps.com. According to the PortableApp website, "A portable app is a computer program that you can carry around with you on a portable device and use on any Windows computer. When your USB flash drive, portable hard drive, iPod or other portable device is plugged in, you have access to your software and personal data just as you would on your own PC. And when you unplug the device, none of your personal data is left behind."

Dozens of portable apps are available, including the Firefox browser, OpenOffice office suite, antivirus software, games, password managers, and many other pieces of software. The PortableApp Suite is totally free, and does not contain any spyware or adware. In addition to the bundled suite, there are many other programs available, almost all free, which will run as portable apps. The PortableApp website keeps a running tally of new software that is available, including new releases and versions, as well as beta (pre-release) software. A simple click will install the selected software on the flash drive.

Now that many of us are routinely carrying flash drives, it is nice to know that they may be capable of doing much more for us than just transport data.
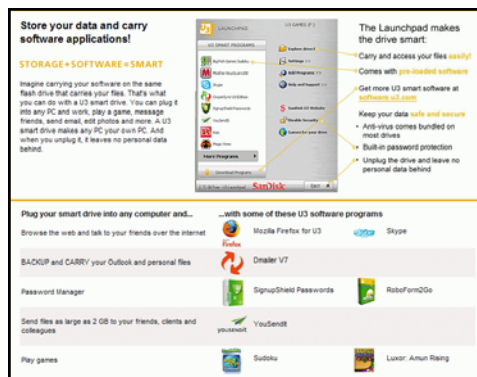
NCTCUG Information

NCTCUG, Inc. 201 S. Kensington St. Arlington VA 22204-1141

Club Information call: 301-577-7899   **Web Site: www.nctcug.org**

Officers and Directors

All officer terms expire 2010

President	Jim Rhodes	703-931-7854
1st VP	Ron Schmidt	301-577-7899
2nd VP	Roger Fujii	703-426-5917
Treasurer	Paul Howard	703-860-9246
Secretary	Bill Walsh	703-241-8141

Director:	term expires	
Mel Mikosinski	2010	703-978-9158
John Keys	2010	703-451-0896
Nick Wenri	2010	703-759-3938
Lorrin Garson	2011	
Sy Fishbein	2011	703-536-5894
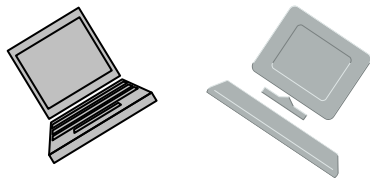
Article Submissions

Articles, helpful hints, and other items of interest to readers of the NCTCUG Journal are always welcome and will be published as soon as possible after submission. Priority is given to members' contributions. Articles may be submitted in MS Word (.doc) or Rich Text Format (.rtf) or plain unformatted text (C/R only at end of paragraphs, no indents preferred) via email to the editor nctcugbj@verizon.net

Membership Policy

The National Capital Technology and Computer Users Group, Inc. is a non-profit [501(c)(3)] organization founded in 1978 to educate users of all Tandy computers and MS-DOS compatible computers. Membership dues are $25.00 (U.S.Funds) per year, with a $5 surcharge for international mail. Membership in NCTCUG includes membership in all SIGs, access to the BBS and software libraries, and subscription to the Journal published 8 times per year. Applications may be obtained at any club meeting, by downloading from the BBS, by calling one of the officers or board members, or by writing to the club. A sample newsletter, membership application and related information may be obtained by enclosing $1 and mailing your request to Jim Rhodes, 201 S. Kensington Street, Arlington VA 22204.

Advertisement Policy

Members' advertisements: Ads are accepted from members for non-commercial purposes at no charge. Copy should be sent to the Editor in the same format as article submissions. Commercial Advertisements: Ads are accepted from commercial advertisers at the rate of $40 per full page, per appearance, with discounts for multiple insertions. Smaller ads are priced accordingly. Payment for ads must be made in advance of appearance. Advertisers must supply a permanent address and telephone number to the editor.

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COMPUCENTER BBS

Is no longer in operation. It has been replaced by the 'compucenter' mailing list at http://groups.yahoo.com/group/compucenter/

If you are moving

Please send your change of address to the club address as soon as possible to avoid missing issues.

Thank You!

(Continued from page 11)

If your computer case is easy to open (i.e. not an iMac or Mac Mini), then open it up (after shutting down and un-plugging it) and use compressed air to blow out the dust. Do not use a vacuum since it may create a static charge that could damage the electronics. After closing the case you can clean out the fan in the back.

You'll also probably want to have the following tools:

- ✓ Screwdrivers—standard, phillips, and torx in different sizes (especially the small ones)
- ✓ Nutdrivers--1/4" and 3/16"
- ✓ Pliers, part grabbers, and tweezers
- ✓ Compressed air
- ✓ Microfiber cleaning cloths
- ✓ Antistatic strap—especially if you want to put your hands inside the computer
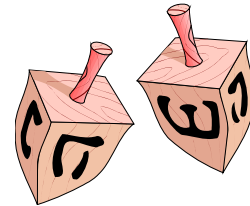
December 2009/January 2010

1st Wed. (12/2, 1/6)
7 p.m. General Meeting

4th Wed (12/23, 1/27)
7 p.m. Internet SIG

3rd Monday (1/18)
7 p.m. Board of Directors
No Board meeting in December
       Happy Holidays!

All meetings are at **Carlin Hall**, 5711 S. 4th St., Arlington VA: East off of Carlin Springs Rd, just south of Arlington Blvd/Route 50.
See website for directions to post-meeting pizza gathering.

NCTCUG, Inc.
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