Web 2.0
The New World Wide Web Experience

John LeMasney

Monday, April 13, 2009, at 7:30 p.m.

The World Wide Web is changing. New technologies, such as XML and XHTML, have made the web dynamic and interactive creating a new, more powerful, web experience the user can interact with. Learn how to use social networking like Tumblr, Twitter, Facebook, Ning, LinkedIn, and more. Learn new ways to search and find information. Learn how to use new "Cloud" services provided by Google, Yahoo, Delicious, and others. Learn how to use Creative Commons to be creative with others and share your creations on the web. Learn about Blogs, Wikipedia, Open Source, and lots more. Learn about portability and interacting with mobile networks.

John LeMasney is the Manager of Technology Training at Rider University, in Lawrenceville NJ. He is also the Chair of the Ewing Township Website Committee, a mentor for the Team 2016 Ewing Robotics Team, a graduate student in Rider University's Master of Arts in Organizational Leadership Program, and a devoted advocate of Open Source Software.

Mercer County's Lawrence Library
Meeting Room 3
US Alternate Route 1 South & Darrah Lane, Lawrenceville, NJ

*Meetings of an organization at any of the facilities of the Mercer County Library System
in no way imply endorsement of its programs.*

In this issue:

Upcoming Schedule

April 24-26, 2009 ---- Trenton Computer Festival
May 11, 2009 -------- tba
June 8, 2009 ---------- tba *(Apple Update)*
July 13, 2009 --------- tba
August 10, 2009 ----- tba
September 14, 2009 - tba *(Linux Update)*

Summary of the March 2009 Meeting

At 7:30 p.m. Program Coordinator Arnold Rosner started the meeting.

Ron Graham discussed the social Twitter network and how we can benefit from it.

Submitted by Clarke Walker

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Link of the Month

Want to find out if you own any recalled products than go to:

http://www.recalls.gov/

Have you discovered a useful link or add-on? Then share it with the members of the P PC UG.

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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 (2^{32}). 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 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}). Most of the 64 bit computers in today's 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.

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Microsoft Releases Internet Explorer 8

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Websites:
http://www.microsoft.com/ie
http://www.ieaddons.com/en

Microsoft has released the latest iteration of its ubiquitous browser, Internet Explorer version 8 (IE 8). This browser is for all versions of XP and Vista, and is a 16.1mb download for XP.

I had tried one of the early beta (pre-release) builds of IE 8, and was impressed by its features and speed, a substantial improvement over what I felt was a lethargic Internet Explorer 7. Now I have downloaded and installed IE 8 on all of my computers, and my first impressions of it are quite positive. I have been using Firefox, IE's major competitor, almost exclusively for several years. I was not alone in using Firefox instead of IE, as Firefox has been taking market share from IE for years as it has generally offered more speed, features, and security than IE. Now with IE 8, Firefox has a worthy competitor which has added features, speed and security to challenge the gains made in the marketplace by Firefox.

Within minutes of its release, I downloaded the new version of IE 8 on my work computer. I went directly to Microsoft's IE website at www.microsoft.com/ie to download IE 8. Microsoft identified my operating system, and proceeded to connect me to the proper variety of IE 8, which I downloaded. The installation process was smooth, with several informational windows appearing with install options. One of the first windows to appear was a statement that the IE 8 install utility was going to download the latest version of Windows Malicious Software Removal Tool, and scan my computer for malware prior to the installation of IE 8. My computer was free of any detected malware, and the installation continued. A reboot was required in order to complete the IE 8 process, which I allowed. After the reboot, a small window appeared displaying the setup sequences of the new software. Subsequent windows offered me the opportunity to install add-ons, and select default search engines. IE 8 imported my selections from IE 7, and asked if I wanted to keep my IE 7 defaults and use them in IE 8, which I did. The final window displayed correctly identified that I had other browsers installed on my computer, including Firefox, Opera, and Safari, and asked if I wanted to import bookmarks (favorites) and feeds from them; I selected yes, and data was imported from my other browsers into IE 8, making them immediately available on that platform. IE 8 did indeed load faster than IE 7 ever loaded, and web pages appeared to load faster, but I have no empirical data to corroborate that.

IE 8 is more feature rich than IE 7, and in many ways appears to emulate the finer points available in Firefox. One feature in IE 8 that offers improved possibilities is "Accelerators" which provide quick access to information by simply highlighting a word, phrase, address, or other item on a webpage. If the proper accelerators are installed, then appropriate information in the form of maps, web searches, translations, email, blogs, and other relevant resources and outputs are immediately displayed.

Another interesting feature in IE 8 that may be of interest to many users is "Web Slices", where the user can automatically monitor desired information, displaying updated information as it becomes available. Web Slices can monitor auctions, sports scores, weather, stock quotes, and other dynamic content, and can directly provide that updated information, without user intervention. If a Web Slice is available on a web page, a green icon will appear in the top right corner of the page; clicking on this icon will add the "slice" to the favorites bar, enabling real-time tracking of the selection. When new information is available about the selected web slices, the relevant web slice will be highlighted. Clicking on the highlight will take the user directly to the updated information.

IE 8 offers a "Smart Address Bar" which displays recommendations as a web address is typed in the address bar. The suggestions are distilled from the browsing history, favorites, and previously selected feeds, as well as Windows Live Search. If a single word is typed in the address bar, the Smart Address Bar will reach out and try to match the term against domain names, making web surfing faster and more efficient.

I frequently go online to show my L.I.T. students information on the web. Sometimes the fonts on the web pages are so small, that students in the back of the classroom can not view the displayed content. IE 8 solves that problem with its enhanced zoom feature, "Improved Zoom". This feature improves the resolution and readability of a webpage, while maintaining the desired layout. Clicking on VIEW – ZOOM allows the user to zoom in or out on a webpage, from 50% (zoom out, smaller text, more information displayed) to 400% (zoom in, larger text, less information displayed).

Web surfers are often concerned about their personal privacy while browsing on the net. IE 8 offers a feature, "InPrivate" that allows the user to control the protection of his personal information while online. When selected, InPrivate deletes the browsing history, temporary internet files, filled forms, cookies, usernames, and passwords when closing the browser, leaving no traces of browsing or search history on the computer.

Sometimes a website appears to crash the browser while being viewed, shutting down all of the opened tabs, and requiring a reloading of the browser. IE 8 offers "Automatic Crash Recovery" where if the content in a tab crashes, the other opened tabs are unaffected, such that other opened pages are not closed or lost unexpectedly. IE 8 will attempt to recover the lost tab once it has identified and resolved the problem.

Phishing, identity theft, and web-borne malware have become endemic, and a threat to web users. IE 8 includes a "SmartScreen Filter" which incorporates anti-phishing tools to protect the user from imposter websites designed to trick the user into entering his personal information. The SmartScreen Filter also incorporates sophisticated anti-malware capabilities to help prevent web-borne adware, spyware, and other dangerous software from installing itself on the users' computer. If a dangerous website is opened and detected, the address bar and window will turn red on the page, and a prominent warning will be displayed on the red background. Other protection is provided by a cross site scripting (XSS) filter, which can detect and protect from malicious code execution while online, providing additional protection. A cute feature, which can help protect from phishing and identity theft is "domain highlighting" which highlights the domain name in the address bar, with the remainder of the address string in gray, displaying the true identity of the website.

Internet Explorer 8 is much improved over version 7, with improved security and enhanced features. Users of earlier versions of IE should upgrade to IE 8. Users of other browsers should give IE 8 a try, as they may be pleasantly surprised. Even though I have been a loyal Firefox user for several years, I will be using IE 8 far more than I ever used IE 7.

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Computer & Internet Tips and Tricks

by Gregory West, editor@scug.ca
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As Editor for the Sarnia Computer Users Group, I do a lot of online research for interesting websites and also free software. I am also fortunate to have people who send me their online gems. Here I share some of these amazing finds with you.

Remember: The programs you are about to see are FREE and legal and for you to download and use. Try out programs, or simply take a sneak peek at what they can do for you; the choice is yours. So, happy clicking and email me with what you think about these programs: editor@scug.ca

Gimme Back Those Deleted or Lost Files - File Recovery Program
Website: www.recuva.com
Runs on Microsoft Windows 98, 2000, 2003, XP and Vista

We have all done it. You have too, come on, admit it. Yes when you accidently delete a file from your computer, the Recycle Bin, digital camera memory card, USB stick, or even songs from your MP3 player, this program will help you to recover those lost files. It is a good program to have on your computer for those times when you least expect it and you DELETE in error.

ATTENTION ALL eBay USERS – A Must Have eBay Desktop
Website: http://desktop.ebay.com
Runs on Windows XP/Vista or MacOS X 10.4/10.5

This desktop application puts you in total control of your eBay bargaining with an eagle eye live gatekeeper of your bid or bidders. Never miss an eBay bargain again.

This is WEB 3.0 at its best. "EBay's slick new app does more than simply recreate the auction site on the desktop -- it makes the whole experience thoroughly interactive and much more engaging" (wired.com).

Catch Thieves in the Act, Live and Recorded Video Security System Using Your Webcam
Website: www.yawcam.com
Works on Windows 2000/XP/Vista

This security webcam software for windows is simple and easy to use and includes most of the usual security camera features such as: Video streaming, Image snapshots, motion detection, and Online Web Forum for help.

The software program is very easy to work with and after a short time you can set your webcam to catch a thief stealing your stuff. The video or pictures are sent immediately to the Internet (where you designate for safe keeping). The program senses motion in a room. You can have the program set so that it will record a video of the thief in action, or email you a photo, or upload (FTP) the live video to a website.

Real nice to be able to hand over a full video of the thieves in your house. If you are away, say in Florida, you can easily email the Police the video or photo of the live crime scene with full video and photos of the bad guys.

Windows Live Family Safety
Website Download: get.live.com
Website Information: http://tinyurl.com/24k8fo

We are all worried about young children using the Internet these days. This program puts you in control of your computer and Internet browsing experience. You are in charge of your children's online Internet surfing habits. You can also monitor Windows Live Messenger contacts and block who they talk to online. As well, you can also block Internet websites too. This is a must have for any family with a computer connected to the Internet.

NOTE: "Windows Live Family Safety is a Web service that's free to people who use Microsoft Windows XP. If you use Windows Vista—the operating system installed on many new computers—you can use the built-in family safety tools." (Microsoft.com)

Connect to your Home Computer While Away with Logmein
Website: www.logmein.com

While away from home, wouldn't it be nice to access files and programs from your home computer. Now you can. You can easily connect to your PC with a software program called logmein. This program is also used by large corporations to connect to offsite PCs. This program will also allow a friend to fix your computer even though they are thousands of miles from your PC. It is easy to set up and easy to operate. Give it a test drive...You will love it.

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The Kindle2 May Make Newspapers Obsolete

by *Sandy Berger,* sandy (at) compukiss.com
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Every now and then a revolutionary new product comes along at a time when it is most needed. So it is with the just released Kindle2 wireless reading device, fondly called an e-book reader.

Up to now, electronic book readers have been very slow in taking off. Sony has had a book reading device for several years. Last year Amazon came out with the first version of the Kindle, which was impressive and fairly popular, but had a few drawbacks.

Now, however, the time for these devices may have finally come. At 8" x 5.3" the Kindle2 is about the size of a paperback. At about 1/3" thick, it is thin but strong. In this second iteration, Amazon has corrected the design flaws of the original Kindle. It is now easy to use. The e-ink technology allows you to read the words on the Kindle just as you would read a book, with no eye strain or glare. You can adjust the size of the text to your liking. To turn the page you simply press a button. The reader even lets you read several books at once, always returning you to just where you left off. You can look up any word with the built-in dictionary. You can underline words and add your own notes to the pages. This Kindle will even read the text of most books to you. So if you are engrossed in a book on the Kindle and need to pick up the kids, you can take the Kindle along and have it read to you in the car.

The best part of the Kindle, however, is the reading material and how it is delivered. The Kindle2 can hold more than 1,500 books. You can choose from over 240,000 books in the Kindle's Amazon store. Most of the books are priced at $9.99. You can also subscribe to newspapers and magazines on the Kindle. The books, newspapers, and magazines are downloaded directly to the device over a free cellular network. I drove down a rural highway in North Carolina and downloaded a book and was reading it in less than five minutes. Better yet would be sitting on a beach and downloading a romance novel. In any case, the Kindle is ultimately useable. The biggest drawback for the Kindle right now is the price. At $359, the Kindle is pretty expensive.

But if you are you ready to watch the ebook market explode, stick around for awhile. The Kindle2 has appeared on the horizon just as the economy is slumping. There are many hard-hit business sectors, but the newspaper and magazine industry is already showing signs of cracking. CNN reports that many major newspapers are struggling including the San Francisco Chronicle, the Chicago Sun-Times, the Minneapolis Star Tribune, and the Miami Herald. Certainly online versions of newspapers and magazines are an alternative, but up to this point very few newspapers or magazines have been able to support themselves with online subscriptions and/or advertising.

As the print industry is looking for ways to cut costs, ebook readers may be an answer. If there were no print costs, perhaps large newspapers would be able to provide e-book readers to subscribers as part of the subscription costs or at least at a highly reduced rate. If the electronic device were done well enough, it could mimic the printed version and be filled with ads just like the print newspapers and magazines. Normally I would expect that this type of transition would take a few years, but the economic woes may put a rush on this type of move. The Hearst Corp., one of the largest publishers, is already planning to launch its own wireless e-book reader. Most are speculating that this would be a device with a larger screen that would more closely imitate the newspaper and magazine reading experience. Hearst, who is a mega-publisher, would be in a great position to create the liaisons needed to make this type of device and its content work. Fortune reports that the Hearst device will be available sometime this year.

There is no doubt that we live in a world that is changing because of technology and this type of technology may be in your hands sooner than you think.

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All unattributed articles are solely the fault of the editor.

This and previous Princeton PC User Group Newsletters can be found at:

http://www.ppcug-nj.org/newsltr.html

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