

TOGGLE

THE MICROCOMPUTER TURN (ON)

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UPDATE

Communications

In *Downloading and Converting YouTube Videos* the author Ira Whilsker discusses several utilities that will convert on line videos to stand alone files that you can capture and play on your computer.

In *A Static or Dynamic IP address?* the author discusses a subject that most of us are never concerned with. Years ago, most of us had a static IP address but with the proliferation of machines on the web the number of separate addresses ballooned to the point that dynamic addresses became a necessity.

Operating System

In *Customizing The Mouse In Windows 7* author Vinnie LaBash discusses some of the things you can do to "customize" your mouse in Windows 7. He talks about many of the options available and may even mention one or two that you weren't aware of.

In *Windows 7 Tech Tips* author Brian Lewis discusses some of the features of Windows 7, some of which are hidden, also some that you may not know about but which can be very useful and informative. Some of the capabilities discussed have been available in other utility programs but are now available as part of the Windows 7 operating system. This article is worth a look to check out these features.

General Interest

In *Review - Ai Squared's Zoom Text Express* the author discusses a program designed to help users with problematical eyesight to use their computer more effectively. You can greatly magnify the screen image transitioning smoothly from area to area. You can reduce the glare by changing the screen background and the color of typed words, etc.

In *Burning a DVD in Movie Maker* Kim Kommando notes that copying a WMV file to a DVD is not enough you need to use a DVD authoring program.

In *Cryptography - a big word that helps keep the internet secure* the author discusses some of the techniques used to keep our encrypted communications on the Internet secure.

Hardware

In *Lipo Batteries - Bursting With Energy Important Safety Information!!* the author offers some common sense instructions and precautions that should be adhered to when using lithium polymer (LIPO) batteries.

In *Erasing Hard Drives* the Napa Valley Personal Computer User Group lists things you should do to erase personal information from your computer before disposing of it.



COMMUNICATIONS NOTES & TIPS

Downloading & Converting YouTube Videos

by Ira Whilsker

Websites:

www.forinside.com

Online download and conversion

www.downloadhelper.com

Firefox add-on and converter

www.orbitdownloader.com

Automated downloader

www.download-youtube.com

Online download

www.videolan.org

Free universal video player

www.any-video-converter.com

products/for_video_free/

www.dvdvideosoftware.com/free-dvd-video-software.htm

I frequently get emails from readers of this column and listeners of my radio show regarding problems they are having. While I cannot guarantee an effective answer, I can at least try to help them out, or tell them where they can find a solution. Some of the more interesting, or more common questions I will occasionally post here under the premise that if a few of you are having a similar problem, then many others are having a similar problem.

Last Friday I was forwarded an email that had been bouncing around one of the departments at Lamar University about how to download YouTube videos and convert them to a format that can be used in PowerPoint. Some of the faculty have rightly found that there is some useful content on YouTube that is applicable to academic lectures, and they would like to use this information in class. Fortunately, there are several good solutions.

My personal first choice in downloading YouTube videos and converting them into a format that can play in PowerPoint, or on most video players, is a free add-on for the Firefox browser called DownloadHelper (www.downloadhelper.net).

DownloadHelper is extremely popular with Firefox users, having been downloaded and installed about 54 million times! DownloadHelper places a small icon on the bottom edge of the browser window consisting of **three colored balls**; when the balls become animated, the DownloadHelper menu becomes available by clicking on the icon. Left clicking on the icon shows the title of the video, and clicking the title downloads the video in YouTube's native FLV format to your computer. Right clicking on the icon opens the menu which allows the user to convert the video into any of many popular formats. Alternatively, clicking on the three ball icon that appears to the left of the video title at the top of the screen opens a one-click menu that offers all of the options.

The one that I use most often is the "Download and Convert" which can download and convert the video in a single action. For compatibility purposes, especially when embedding the video in PowerPoint, I mostly select the WMV (Windows media format), but sometimes choose the quicktime MOV, or AVI formats. For those who do not have Firefox installed, it is available free at getfirefox.com, and does not interfere with any other browser on the computer.

For those using any browser, there are several free online services that will download YouTube (and other) videos to your computer, and some will also convert them to popular formats for you. Even though its server is frequently busy and located in Brazil, I like Forinside, at www.forinside.com. Forinside is extremely easy to use; all the user needs to do is copy the URL (web address) of the video and paste it into the text box, and use the pulldown menu to select a format. Clicking the download button will start the process. Forinside can convert online videos into any of the 10 most widely used formats, and can download videos and audio from YouTube, MySpace, Google Video, and MP3Tube. For those who already have videos on their computers that they would like to convert into other formats. Forinside offers that service for free. Simply click on the orange "File" tab, then "Browse" your hard drive for the file you want converted. Use the pulldown menu to select any of the 10 formats available, and click "Convert" and Forinside will upload the original video to its server, convert it to the chosen format, then download it to your computer in the new format. Your original video remains intact on your computer.

As stated above, the Forinside server is often very busy. Another service that can download YouTube videos directly to your computer is DownloadYouTube.com. This site is very easy to use from any browser. Simply open the desired YouTube page, and in the address bar of your browser insert the phrase "download-" (download hyphen) before the word "YouTube" in the URL, and the user will be directed to the Download-YouTube web page. On the Download-YouTube page either click on the "Click here to download" link, or right click and "Save Link As" or "Save Target as" and the file will be downloaded in the native YouTube FLV format. One of the easiest free YouTube downloaders is Orbit Downloader available at www.orbitdownloader.com. This download tool has some of the highest editor and user ratings on the popular download sites, and can accelerate downloading of not just YouTube videos, but most general downloads as well. Orbit Downloader integrates seamlessly into Internet Explorer, Firefox, and Opera, and includes a "Get It" button that appears when connecting to YouTube that offers a single click download. YouTube videos will be downloaded in their native FLV format.

There is a free bundle of video software that can download YouTube and other media, convert them to most formats, and even edit video and audio files. The software bundle aptly named "Free Studio" contains 23 video and audio utilities, and is a 30 Meg download available for free download from

www.dvdvideosoft.com/free-dvd-video-software.htm. According to the publisher of Free Studio, “With this free software you can convert video and audio files between different formats and to iPod, PSP, iPhone, BlackBerry and other portable devices; burn and rip DVDs and Audio CDs; upload and download videos and music to your computer, iPod, PSP, iPhone and BlackBerry; perform basic editing of audio and video files.” This bundle, reviewed and top rated by several of the major download sites, may be a worthwhile bundle to download and install.

If there is a need to convert the YouTube FLV videos, or any other video formats, into a more useful format, such as WMV or MOV, a utility called “Any Video Converter Freeware” may be useful, as it supports dozens of video and audio formats, and can easily convert files between these formats. This software is available for download from www.any-video-convert.com/products/for_video_free, and according to its publisher, has been downloaded over 25 million times. The online service CNet gave Any Video Converter Freeware its highest 5-star rating.

If your only need is to play downloaded YouTube videos, there is an easy and free solution that does not require any conversion utilities. YouTube’s FLV format can be played on the universal video player (free) VideoLAN-VLC Medi Player (www.videolan.org). The VLC media player is one of the most widely used video players in the world, with over 110 million downloads, and has earned a very loyal following. VLC media Player can play almost every available video and audio format without the need for any plug-ins or add-ons, and is available for free, and will run on almost every operating system.

With these utilities and services, downloading YouTube and other videos and converting into another useful format is simple. I routinely use such downloads in class both as individual videos, and as videos imbedded in PowerPoint. There is much that can be done with online videos, and these utilities and services are worthy of a try.

A Static or Dynamic IP address?

by Jason Mills

Durham Personal Computer Users’ Club Newsletter

Everything on the Internet has an IP address. An IP address is a number that is assigned to a computer by an Internet service provider (ISP). Most ISPs offer only a dynamic IP address. This means that each time you connect to the Internet, your IP address may change. Computers use IP addresses to locate and talk to each other on the Internet, much the same way people use phone numbers to locate and talk to one another on the telephone.

When you want to visit www.whatever.com, you type the address into your browser and a request is made to the servers. Part of your request includes your computer’s IP address, this is how the www.whatever.com knows to which machine/IP it needs to send its information. In this case, it’s a web page.

It would be simple if every computer that connects to the Internet could have its own static IP address, but when the Internet was first conceived, the architects didn’t foresee the need for an unlimited number of IP addresses. Consequently, there are not enough IP numbers to go around. To get around that problem, many Internet service providers limit the number of static IP addresses they allocate, and economize on the remaining number of IP addresses they possess by temporarily assigning an IP address to a requesting Dynamic Host Configuration Protocol (DHCP) computer from a pool of IP addresses. The temporary IP address is called a dynamic IP address.

Requesting DHCP computers receive a dynamic IP address (think temporary phone number) for the duration of that Internet session or for some other specified amount of time. Once the user disconnects from the Internet, their dynamic IP address goes back into the IP address pool so it can be assigned to another user. Even if the user reconnects immediately, odds are they will not be assigned the same IP address from the pool. To keep our telephone analogy going, using a dynamic IP address is similar to using a pay phone. Unless there is a reason to receive a call, the user does not care what number he or she is calling from.

Users of a router will not see the IP ever change. This is because the computer is assigned static IP address from the router and the router is dynamically obtaining an IP address from the ISP.

To see your IP address, click start and run. Type CMD or Command or click start and type command in the search bar, depending on the version of Windows. This should open a black screen that allows you to type commands, similar to MS DOS commands. Now type IPCONFIG. You should now see your own IP address. If it looks similar to 192.xx.xx.xx, you have a router installed. You will need to review the router manual for instructions on how to see your ISP assigned IP address. To close this window, type exit at the flashing prompt.

Most web sites use static IP’s. Try this: reopen the command window and type PING WWW.YAHOO.COM. This will reveal its IP address with four replies. The replies just show how long the yahoo server took to reply. Now try PING WWW.MSN.COM. Note that it does not reply, this is because they have disabled the ping command from their server. But the IP address should still be shown. One more thing to try: enter the IP address into the address line of your web browser. The appropriate web page should open.

As mentioned above, everything on the internet has an IP address. But humans have a real hard time remembering all though (sic) IP addresses, and what would happen if 154.12.34.6 moved to 183.43.3.112? This is one of the reasons that we use Domain Name Servers or a DNS. When we request to see the web page www.abc.com, the request makes a trip to the DNS to learn what the correct destination IP address is.

OPERATING SYSTEM NOTES & TIPS

Customizing The Mouse In Windows 7

by Vinny La Bash, <vlabash@comcast.net>

Sarasota Personal Computer Users Group, Inc.

Windows 1.0 was released on November 20, 1985. Microsoft's first attempt at a multitasking GUI seems quite primitive by today's standards, but one major factor remains common throughout all versions of Windows since that first effort. Microsoft has always offered its customers the ability to customize the operating system. Windows 7 allows you to change almost anything about the way the system acts, looks, and feels.

Unless you do a lot of typing you handle your mouse more than any other system component. The defaults Microsoft provides are very good which may be the reason most people never change them. It doesn't matter if you work with a modern wireless infrared mouse, optical mouse or the old-fashioned mechanical mouse with scroll ball, you can change the way it works. Southpaws take notice; the mouse defaults assume you are right-handed. Left-handed, right-handed or other, let's explore some mouse options.



- ◆ From the desktop, click on the Start orb.
- ◆ Click on Control Panel.
- ◆ Click on Ease of Access.
- ◆ Click on Change how your mouse works.

An impressive dialog box appears. The Mouse pointers section lets you change the size and color of your mouse pointer. I like the Extra Large Black option because the large black arrow makes keeping track of the pointer easy.

The next section in the middle of the dialog box lets you set up the keyboard to perform the actions of a mouse. This is like having a fire extinguisher in the kitchen. You hope you never have to use it but it's a godsend if your mouse dies.

Make it easier to manage windows: You can reduce the number of mouse clicks while using Windows and prevent mysterious rearranging of your desktop.

Click Mouse settings near the bottom left and a smaller but more complex Mouse Properties dialog appears. If the Buttons tab is not active, click on it and bring it to the front. You can change to a left-handed mouse, slow down double clicking speed, or drag without having to hold down a mouse button.

The Pointers tab lets you select even more pointer options than the first dialog box. The mouse pointer changes depending on what the system is doing, and you can modify the default pointer for operations such as selecting text, resizing windows or dragging an icon. Have fun.

Pointer Options; You can change how fast the pointer travels across the screen with the Select a pointer speed option. I think this was meant to make it easier to track the pointer position.

Sometimes you may open an unfamiliar dialog box with multiple choices. The Snap To option forces the mouse pointer to automatically position itself to the default option which gives you not only a starting point, but an opportunity to make a change without unintentionally changing the wrong item.

Whenever I feel bored with my mouse I activate the Display pointer trails and watch the pointer make multiple copies of itself as it races across the screen. The option was meant to enhance visibility, but it's more fun letting a five year old play with it. The last two boxes let you play hide and seek with the pointer. The Hide pointer while typing box makes the pointer disappear and the Show location of pointer when I press the CTRL key gives you a fighting chance to find it again.

The Wheel tab is handy if you do a lot of scrolling. You can set the mouse to scroll one line at a time, one screen at a time or anything in between. Your index finger will be forever grateful. A similar option controlling horizontal scrolling also available.

The Hardware tab displays information about your mouse. Is your mouse driver up-to-date? You can find out here. The dialog box will also inform you if it thinks the mouse is malfunctioning.

The best thing about changing any option is that you can always change it back if you don't like it. It's not permanent like death or taxes. Some mice offer more functions than the standard Windows control features can handle. In that case you need to install software provided by the mouse manufacturer.

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Windows 7 Tech Tips

by Brian K. Lewis, Ph.D.*

Sarasota Personal Computer Users Group, Inc.

Have you ever wanted or needed information about the hardware in your computer? Did you know that Windows 7 contains a command that can provide you with a list of your hardware components including memory information? It does and it is very easy to explore and to save to a file. There are other helpful little bits of information hidden in the recesses of Win7, so let's take some time to explore a few of them.

First let's check out the system information command. Go to Start and type "cmd" in the Search box (without the quotes), then press Enter. This will open a command window in which you can type "systeminfo", also without the quote marks. Press Enter again and you will get a detailed profile of your computer. This list will include the processor, BIOS version, operating system and updates, both installed and available memory and much more. In all, there are thirty-two categories of information provided by this command. You can scroll up and down through this information. Then, if you want to save this info to a disc file, type the command "systeminfo /FO CSV > systeminfo.csv". Again, without the quotes. This file will be saved in the directory shown at the beginning of the command line. So be sure you remember this location when you go to look for the file. A CSV file can be opened in a spreadsheet or a database program. Now you will have a ready reference for the components which make up your computer. It's not a bad idea to create this file and keep it for reference purposes.

Of course, if you are a frequent reader of Dr Herb's "Computer Buffet" you would have seen references to "Belarc Advisor". This free program gives you a profile of all the hardware and software on your machine. It also highlights problem areas such as non-working applications. The software information can be quite extensive. The last time I ran this application on a Windows machine I had more than eight pages of information. Far more than I really wanted. The systeminfo command gives you a summary which is printable in one page.

There is another use for system information. If you type this "system information" command into the Start-Search box, it will bring up a list of applications before you finish typing. Select "System Information" from the list and click on it. You now have a double pane window with a tree of topics on the left and an information window on the right. The first item is a general summary of system information similar to the information we obtained in the command window. But there are other more detailed topics under the headings in the tree list. For example, hardware resources, components and software environment. Under components you will find a very important topic problem devices. Hopefully, at this point there will

be nothing listed when you highlight this topic. But if there are, it can lead you to solutions for some of your hardware problems. Under software environment you will find a topic called Startups. This lists the applications that are loaded into memory when your computer starts. Always something worth knowing.

Another interesting item under Software Environment is Windows Error Reporting. This gives you a detailed list of applications that have "misfired" or produced system hang-ups. This can be useful when you have problems with either Windows or third-party applications. All of the errors I found on my system were related to missing drivers that I had to install after installing Win7. Once that was completed the errors disappeared. Yes, I said that with crossed fingers no use asking for bad luck, right?

If you haven't backed up your computer recently, then you should try the backup built into Win7. In previous versions of Windows the backup application provided by Microsoft was very slow and some versions were very limited in the media to which they would write the backup file. It was also useless when you changed your Windows version as the file formats in the backup file were not compatible with the newer version. In the Win7 help files there is information on how to restore a backup made with Vista to Win7. So at least the latest versions should be compatible.

These latest versions of the backup applications are much faster than previous versions. To try the backup applications, open the Control Panel and select System Security, then backup and restore. Here you have several options. You can do a complete image of your hard drive, just backup your data, or make a system repair disc. If you did not get a Windows installation disc when you purchased your computer, then the first thing you should do is make a system repair disc. All you need for this is a blank CD and then just follow the on-screen instructions. The next step would be to make a complete image file, preferably on an external drive. It's really not a good idea to put it on the same drive you are imaging even if it is a separate partition. Why? Because when the drive fails you won't be able to access the image file to restore anything to a new hard drive. Even if you do have a Windows installation disc the repair disc plus the image file are a better solution for restoring Windows and your files after a drive failure. The image file you create will be more current than the original installation disc when it comes to Windows updates. It will also include the installation of all the applications you added after you purchased the system or upgraded to Win7.

Once you have the repair disc and the image backup you can start doing data backups, or you can create new image files periodically. There is no need to make image files unless you have added applications or made substantial changes to your system. Windows file backup can be set to run automatically

to save your data files. It will also add new folders and files to the backup list when you create them. I would also recommend that this be saved to an external drive.

Do you have a need for a system to remember user names and passwords? Win7 has a credential manager which can be used for storing user names and passwords in an encrypted file. This application can be found in the Control Panel under User Accounts. If you can't find it, try searching within the Control Panel.

I frequently have a need to write down short notes or references to information I found on the Internet or in other sources. This is where Sticky Notes comes in quite handy. You can run this application by typing "stikynot" in the Start - Search box and clicking on the program that shows in the popdown menu. Alternatively, you can go to All Programs Accessories and click on Sticky Notes. These can be placed anywhere on your desktop. You can also pin the application to the taskbar so it will be readily available. Just right click on the menu item or one of the sticky notes and select "pin to taskbar".

If you want to see the minute by minute performance of your computer, try typing "resource monitor" in the Start - Search box. The complete term will show up before you have completed typing and you can then click on the item. This brings up a window in which you can view the memory utilization, cpu utilization and other resources as you use your computer. It's a great way to see which applications are using the most memory.

By playing around with the Control Panel and other aspects of Windows 7, you can find many helpful built-in functions. You can also query the Help files. On my system the Help response is much quicker than it was in Vista and XP. I also found that many subjects are better explained and more detailed. So if you are stuck on something, try the Help application that's on the Start menu. The more you play with Win7, the more you will find that may be useful.

**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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Review - Ai Squared's Zoom Text Express

by Bruce Preston, Danbury Area Computer Society

About 4 years ago, I woke up one morning to discover that I had what the neurologist diagnosed as spontaneous bilateral optic neuropathy, commonly known as 'stroke of the optic nerve'. It left me with a small area in the center of my right eye's field of view that is 20/40 but dim. Everything else is 20/400 or worse and dim. I've been able to continue my computer consulting business and a primary utility that has made it possible is Ai Squared's product ZoomText Magnifier/Reader.

FTC disclosure: Recently Ai Squared provided evaluation copies of ZoomText Express for review by representatives of user groups belonging to APCUG, and DACS asked me to review it.

The target market for ZoomText Express is anyone who makes extensive use of a computer and has problems with image clarity, eye strain, contrast, glare, etc. Their brochure references a 2003 study which reports that 55% of the working population makes use of a computer at some time or other during their work day. I suspect that the percentage has increased since then.

Here are the main capabilities of ZoomText Express:

1) A screen magnifier that works in several user-selectable modes:

Full Screen Magnification mode: This has magnification powers of 1.25x, 1.5x, 1.75x, and 2x. In this mode, the area surrounding the pointer (or cursor when editing) is magnified at the selected rate. Thus, for example, if you select 2x, and the mouse pointer is at the upper left of the screen, you see the upper-left quadrant of the screen expanded to fill the physical display. The ZoomText family has very smooth scrolling so that as you move the pointer around, the screen scrolls to keep the pointer/cursor within the field of view. They have a font improvement technology such that you do not get "jaggies" on the edges of characters. The scrolling is very smooth.

Magnifying Glass mode: With this mode, a virtual rectangular magnifying glass (choice of large area or small area) floats over the screen and only magnifies the area of interest. The same powers as listed are available.

2) Color Controls:

An all-white background can be responsible for glare on the screen, making it difficult to read text. This feature lets you select reverse video (white text on black) which some find easier to read. Alternatively, you may select a 'tint' option whereby white is replaced by a soft yellow - roughly similar to the color of a manila folder, thus reducing the glare.

3) Mouse Pointer and Cursor Enhancements:

Pointer Enhancements: Sometimes it is difficult to keep track of the mouse pointer - the standard mouse pointer is predominately white with a thin black outline. On a screen with a white background, such as within the text area of a word processor, or Window Explorer, or Internet Explorer, or dialog boxes such as FILE/OPEN it is easy to lose track of the mouse

pointer's location. ZoomText Express permits selection of a larger mouse pointer, and a choice of high-visibility fill colors.

Cursor Enhancement: The insertion bar cursor (the flashing I-beam indicator that shows where your next typed character will be placed) is even harder to find. To assist with this, ZoomText Express provides a pair of wedges filled with choice of high-visibility color. These are positioned above and below the insertion point.

Controlling it: ZoomText Express has a useful and intuitive control panel. The main controls are three large icons. The first is a pair of round buttons having either a "+" and "-" for zoom in or zoom out respectively. Zoom In increases magnification stepping through the powers - 1, 1.25, 1.5, 1.75 and 2. Zoom out reduces the magnification through the same steps. Between these two buttons is a larger button with the international power on/off icon. This temporarily turns off the Zoom Text enhancements, but leaves the utility running so it may easily be restored. The usual Windows conventions for resizing the control panel, minimizing it, or terminating the program (the X) are in the upper right corner. ZoomText offers to save your configuration settings so once you find a combination you like you may establish it as the default. The interface also has tabs for the less frequently used functions of modifying the pointer, cursor, view (full screen or magnifying glass) or color (normal, reverse video, tinted). Lastly, a large Zoom button is used to get at a FILE and preferences capability such that you can save your settings. This is a plus if the machine is shared by people with different preferences or requirements. In addition they have assigned various Alt-key combinations to permit changes of settings such as zoom level by way of the keyboard.

Summing up:

For this evaluation I installed ZoomText Express on my wife's notebook computer. It has a high-resolution, 16:9 ratio display which means that the icons and task bar buttons, etc., are rather small for my needs. The machine runs Vista Home with all the graphic interface gizmos that implies. This is the machine we take with us when we travel. (Gotta check the e-mail at least 5 times a day, right?) Previously I just asked my wife or son to log in and do things for me, with ZoomText Express I now can work comfortably and with less frustration. I think that Ai Squared has a winner for the target market of those who need a bit of vision assistance. At \$49 (download) or \$59 (CD media) it is affordable. You may download a trial version from their web site. When I became legally blind, a representative of a Connecticut State agency told me that 95% of people designated legally blind have some vision capability. ZoomText Express may not be sufficient for the legally blind. For them the Ai Squared's flagship products ZoomText Magnifier or ZoomText Magnifier/Reader bring more capabilities to the computer, but at a higher price. For details on any of Ai Squared's products visit their web site: <www.aisquared.com> or call them at (802) 362-3612.

Burning a DVD in Movie Maker

by Kim Kommando <http://www.kommando.com>

Q. I spent hours making a DVD in Movie Maker. It was to honor my brother at his funeral. When I took it to the funeral home, the DVD wouldn't work. I was told that Movie Maker movies can't be played on a DVD player. A lot of people were disappointed. I would like to give the movie to family members. Can I get this DVD to work in a DVD player?

A. I'm sorry for your loss. It's a shame that the DVD couldn't be played. But I can help you with your fallback project.

Movies created in Windows Movie Maker won't necessarily play on standalone DVD players. That's true even if you burn the movie to DVD. This has tripped up a lot of people.

Windows Movie Maker creates movies in the WMV or AVI formats. These work on computers and portable gadgets.

You need to use a DVD-authoring program to create your DVD. The version of Movie Maker included with Windows XP won't author DVDs.

Manufacturers often include software for authoring DVDs. Look for DVD-creation programs that came with your DVD drive or computer. Or, you may have a program like Nero or Roxio Creator. These will do the trick.

You also can download a free DVD-authoring program from my site. I don't recommend downloading free disc-creation programs from other sites. They often include spyware.

If you're using Vista, you may have the software you need. The Home Premium and Ultimate versions include Windows DVD Maker. This will create your DVD. Open your project in Movie Maker. Then, click File and then Publish Movie.

Select DVD and click Next. When DVD Maker opens, follow the prompts to create your DVD.

Windows 7 doesn't include Movie Maker. Instead, you must download it. The program is still free, however. Find the download link on my site.

You will find DVD Maker in Windows 7. That means you can create your DVD once you've downloaded Movie Maker.

To create the DVD, open your project in Movie Maker. Find the Sharing section on the Home ribbon. Click DVD.

Follow the prompts to create your DVD.

For more help creating movies in Movie Maker, visit my site:

Add sound to videos the easy way <www.kommando.com/tips/index.aspx?id=7514>

Combine videos and photos for a great gift <www.kommando.com/tips/index.aspx?id=5197>

Create split-screen videos easily <www.kommando.com/tips/index.aspx?id=5440>

Cryptography - a big word that helps keep the internet secure.

By Phil Sorrentino, Sarasota PCUG, Florida

July 09 Monitor www.spcug.org president (at) spcug.org

You may have asked yourself some of the following questions. How secure is the internet? What has been done to make the Internet secure? How safe is my private information during an internet transaction? If so, read on; if you are a very trusting individual and figure that “they” will keep the internet secure, jump to the next article. During this time when the Internet provides essential communication between tens of millions of people and is being increasingly used as a tool for commerce, security has become a very important issue. And when it comes to computers, “security” is of concern on many different levels. There is physical security that keeps your computer hardware from being stolen. There is software security that keeps people out of our private files. There is “malware” security, that keeps your computer software from being infected with viruses, spyware, worms and the like. And finally there is “network” security that keeps private data protected as it goes from one computer (or client) on the internet to another computer (or server) on the internet. This article deals with network security, which is ensured by applying cryptography to messages that are transmitted on the Internet.

Remember the “s” in “https://” and the little lock icon on the browser when you went to a “secure” website? Well, cryptography is behind all that security. Cryptography is used to secure Internet and even telephone communications. Cryptography is nearly as old as written language itself. It was invented to address the age-old question: How can I communicate with my friend, so that no one else will know what was communicated? Cryptography becomes necessary whenever one is attempting to communicate private information over an “untrusted” medium, such as the Internet. Typically, you can be sure that the message you send over the internet will get to its destination, but you cannot guarantee that intermediaries (computers along the way) will not be able to see and read your message, unless it is protected.

With a collection of not-so-expensive equipment and a good deal of knowledge, a message on the internet can be intercepted (sniffed), and if it is “plain text”, it can be read. For mundane e-mail messages, this is not much of a concern, but for messages that contain private information, such as passwords or bank account or social security numbers, this could be an invitation for Identity Theft.

Cryptography to the rescue. Cryptography (from the Greek for “hidden writing”) is the ancient science of encoding messages so that only the sender and receiver can understand them. Cryptography can be defined as the conversion of data (plain-text) into a scrambled code (cipher-text) that can be sent across a network, and deciphered by the rightful receiver at the other end. There are two main techniques used to encrypt data, Symmetric and Asymmetric. Symmetric encryption uses

the same key for encryption as it does for decryption. Symmetric encryption is also called Secret-key encryption because the key is kept a secret between the two cooperating parties. Asymmetric uses separate keys for encryption and decryption. Asymmetric encryption is also called Public-key encryption because one of the keys is allowed to circulate in the public (and one is kept private). Cryptography is now available to everyone thanks to the development of modern computers, which can perform more mathematical operations in a second than a human being could do in a lifetime. An ordinary PC, with the proper software, can produce codes of such complexity that the most powerful supercomputer using the best available software could not break them in thousands of years. Before modern times and the personal computer, cryptography was concerned solely with message confidentiality. Message confidentiality is conversion (encryption), of messages from a “plain-text” form into an incomprehensible one (cipher-text) for transmission and then back again to the original form, at the other end (decryption). This keeps the message unreadable by interceptors or eavesdroppers who do not have knowledge of the “key” needed for decryption of that message. (With the advent of the personal computer and the proliferation of digital information, the field of digital message protection has expanded beyond only confidentiality concerns to include techniques for message integrity checking, identity authentication, digital signatures, and password protection all of which we will leave for future discussions.)

As stated above, Secret key cryptography refers to encryption methods in which both the sender and receiver share the same key. Secret key cryptography is ideally suited to encrypting long messages, providing privacy and confidentiality for messages typically used in computer to computer transactions. Public Key Cryptography refers to methods in which two keys are owned by each participant, one for encryption (public key) and one for decryption (private key). Public Key cryptography is suited to short messages and is typically used to exchange “secret keys” between two computers. Public Key cryptography could, theoretically, also be used to encrypt messages but this is rarely done because Secret-key cryptography is about 1000 times faster than Public-key cryptography.

So, just how do these schemes work in our typical computer to computer (network) communications? Secret-key and Public-key cryptography are used to setup and maintain a secure data path from a client (your computer browser) to a server (information or data storage system). Because Secret-key cryptography is best used for long messages, a secret key will be used to encode all messages during the transaction. But how do we get a secret key to be used by both computers for the transaction. In comes Public-Key cryptography. Public-key cryptography, which is best suited for short messages, is used to send the secret key (which is short) from one computer to the other, so that both will have the secret key for encoding the messages that follow. The server has a public key for the client (your computer) and it encodes a “secret key” with that

public key. It then sends the encoded message to the client and the client can then decode the message with its private key. The private key is used to decode the “secret key message” so that the client knows what to use as the secret key for subsequent message encoding (i.e., the decoded secret key). This all sounds very complicated, and it is, but all of this is controlled by the “secure software protocols” and you, the user, don't have to get involved at all. (I've actually simplified the operation a bit, but the essence of how cryptography is used is still pretty accurate.) So, with the use of Public-Key, and Secret-Key cryptography, you can rest assured that the messages you are sending over the Internet will not be of any value to anyone attempting to intercept such information. What more could you ask for - through the use of cryptography, the untrusted Internet can now be used to send private messages, therefore providing secure communications, over the Internet, for everyone.

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HARDWARE NOTES & TIPS

Lipo Batteries - Bursting With Energy Important Safety Information!!

by Terri Neary (major contributions by Tom Cott)
ICON Graphic Newsletter of Long Island PC User Group

Lithium-ion polymer batteries, polymer lithium ion, or more commonly lithium polymer batteries (abbreviated Li-poly, Li-Pol, LiPo, LIP, PLI or LiP) are rechargeable batteries (secondary cell batteries). These are becoming advantageous to cell phone manufacturers since they can be designed in a multiple of sizes and shapes to fit the devices as required. Li-poly batteries are also gaining ground in PDAs and laptop computers. They can be found in small digital music devices such as iPods and other MP3 players as well as gaming equipment like Sony's Playstation 3 wireless controllers. Lithium batteries have become the preferred power source for most electronic manufacturers today.

A lithium-ion battery pack, *Li Ion*, uses a liquid electrolyte solution just like Ni-Cad and other common batteries. A rigid container is necessary to hold this liquid. A lithium ion polymer battery pack, LiPo, pack uses a “gel-type” polymer as the electrolyte media. This polymer can take any shape and does not require a rigid enclosure. LiPo battery packs have a much higher energy density than other battery packs because the cells are not bound to cylindrical containers with dead space in between.

However, there is a major problem with these batteries. They can EXPLODE. If not charged correctly they are a hazard in the making. Unless you are prepared to follow the safety requirements necessary to charge or discharge them properly just don't bother using them.

It is important to have a properly sized LiPo battery pack. LiPo battery packs are designed to deliver a set amount of current. This value is determined by the C rating of the battery. To determine how much current a battery is rated for, simply multiply the C rating by the capacity of the battery pack.

For example, a 5000mah LiPo battery pack with a 20C rating can safely provide $20 \times 5000\text{mah} = 100,000 \text{ mA}$ or 100 amps. Discharging a LiPo battery pack at higher current than it is rated for is very dangerous. First you cannot use the charger for the NiCad or NiMH batteries. These chargers are NOT designed for the LIPO batteries nor are trickle chargers. They cannot accept an overcharge without fear of causing damage to the cells.

There are a few mandatory steps when using LIPO batteries.

1. Use only battery chargers specifically designed for the LIPO battery. Some cell phone chargers can charge these batteries but this is highly discouraged. It is far better to purchase the correct charger.
2. Make sure the charger displays the correct cell (S#) count for the battery you are charging. If it does not indicate the correct number, discontinue the charging.
3. Before you charge the cells on a lithium battery make sure that all the cells are within 0.1 volts of each other. If they are not charge each tap separately to 4.2 volts so that they are all equal. Check the voltage on each cell after use to be sure they are all discharging equally. If they are not you have a faulty cell and the battery should be thrown out.

Taps are now on most lithium batteries. They allow you the option of charging each cell separately. You need to make sure you get the correct connectors to go with your tap. Do not try to charge more than one tap at a time. You can possibly short your batteries out totally. You should refer to your battery's individual cell maker for the tap pin-outs.

4. Current and voltage are the two variables that must be determined when charging LiPo batteries. The voltage should be set to the nominal voltage of the LiPo battery pack. A 5000mAh 11.1V LiPo battery pack would be charged at 11.1V. The current should never exceed a 1C charge rate. For example, a 5000mAh 11.1V pack should be charged at 5 Amps or less. Charging at lower rates down to .77C could increase the life of the battery, although there is not conclusive evidence that I am aware of to support this. For example, a .77C charge rate of a 5000mAh pack would be 3.85 Amps. Most LiPo chargers automatically detect the voltage (or cell count) of the LiPo battery pack. It is always a good idea to double check, or confirm that the charger detects correct the voltage pack. However you should NEVER charge a LIPO battery at more than 1C. It is better (actually safer) to charge three (3) packs rather than charge 1 pack 3 times quickly. Nowadays, there are batteries that supposedly will accept charges of more than 1C at a time, but this actually shortens the lifespan of the batteries.

5. NEVER charge your LIPO batteries unattended. This is one of the major reasons for car and house fires causing major destruction by lithium fires. When charging your batteries

make sure to place them on a safe surface, such as Pyrex dishes with sand on the bottom, plant pots, vented fire safes, and fireplaces. Charge them in an open well-ventilated space with a container of sand easily available. This way if they do decide to explode there is a better chance of containing it.

6. Do NOT ever puncture a cell. If one gets punctured accidentally, then you should slowly discharge the battery. To do this, place it in a well-ventilated place (such as where you charged it) and attach it to a flashlight. You can use any flashlight of equal or higher voltage but do not use one of lower voltage. Keep attached to the flashlight until the light goes out then dispose of properly. If you accidentally drop or damage the battery be careful to ensure the battery was not damaged. Placing batteries that might be broken into cars and storage areas are major causes of lithium fires. They can combust without you even being there and there goes your car or house.

7. These batteries are susceptible to changes in heat. Keep them in your pants pockets rather than attached to the equipment if possible, they especially do not like the cold. So again keeping them cool is important. Try to keep them below 160°F after use.

A LiPo fire is extremely high in temperature often registering over 1000°F and isn't just one type of fire but rather is actually three types: plastic, chemical and metal at the same time. If you have a class D fire extinguisher you might attempt to put the fire out by yourself, but the best bet is to get away from the flames and call your local fire department. They will have the correct extinguishing methods.

LIPO batteries can be stored for 1 to 2 months without significantly losing their charge. However, if you do not intend to use the batteries for a longer period, many manufacturers recommend that you discharge the cells to approximately 3.7 volts and then store in a cool dry place. Several articles recommend placing them in metal containers for long-term storage.

While researching this article I originally did not realize what kind of damage these batteries can cause with misuse. Now I have come to see that improper care and use can be dangerous. Your belief that the method of use and storage you have for them is correct could be wrong and cause you considerable damage. One article I read indicated that a dog was able to get his mouth on a battery when the owner was not looking and came close to exploding until the owner noticed it in the pile of dog toys. He was able to dispose of it properly before it exploded from being punctured by the dog's teeth.

REMEMBER this can happen to you! Don't be the person who said, "I know what I am doing" and comes home to discover his house is not there any longer. [Simple precautions can save your life.](#)

TOG Editor's Note: A 5-minute Video on YouTube at: <http://www.youtube.com/watch?v=QJCZ4ayioCU> of a staged demonstration of a Lithium Ion battery fire in a generic notebook computer. Although artificially induced, the reaction by the battery and the resulting chain reaction are real.

Erasing Hard Drives

Compiled by: Napa Valley Personal Computer Users Group

A guide to surplusing computers
and electronic storage devices.

One of the greatest concerns people have when disposing of their old computer equipment is the removal of the very personal data contained on them. The dangers of not properly erasing the hard drives is in the possibility of unwanted exposure of sensitive personal or business data and unwanted publicity.

The DOS and Windows commands to delete files do not delete the data from your hard disk. They merely delete their own record of the fact that the area of the disk they occupy is unavailable to other uses. To do this, the command merely unlinks the file in its File Allocation Table (FAT) by changing the first character of its name to a special byte. Consequently, the undelete commands merely have to change the character back to restore the data, as is amply demonstrated retrieving deleted files from the Windows recycle bin. Contrary to popular belief, reformatting the hard drive does not affect the disk data. The command merely formats a new file record for that logical drive. It does not remove the data until the system overwrites it with new data.

To ensure confidentiality and in some cases to ensure compliance with software license agreements, binary overwrite programs that zero out the data have been developed that overwrite all addressable storage and indexing locations on the drive. Many programs meet the Department of Defense security standard 5220.22-M by utilizing a three pass binary overwrite of the drive with zeros (0x00, 0xFF) and random data. This is the only way to be sure that the data has been destroyed and cannot be recovered even with the use of special computer forensic and file recovery tools.

Many such programs are available freeware, shareware and fee based from the internet. Most programs are executable from a bootable 1.44Mb floppy disk the user creates following specifically detailed instructions. The process is relatively easy and can be accomplished with a very small investment of time. The following are URLs that may assist in the process;

Active @ Kill Disk: <www.killdisk.com/eraser.htm>

Autoclave v0.3 <<http://staff.washington.edu/jdlarios/autoclave/>>

Paragon Disk Wiper v5.5: <<http://www.disk-wiper.com/>>


Eraser: <www.heidi.ie/eraser/>

DBAN: <<http://dban.sourceforge.net/>>

TOGGLE Editor's Note:

We also have, in our library, the DoD 5220-22M program that overwrites the hard drive with 1's and 0's. Ask our librarian, Tom about it.

Help Lines

SOFTWARE HELP	Advisor No.	HARDWARE HELP	Advisor No.	
Win 95/98/ME	2, 3, 4, 7	Reformat Hard Disk, FDISK	2, 4, 5	
Win 2K/NT/XP	2, 3, 7	Install Hard Drive, CD-ROM/RW	2, 4, 5	
MS Word	2, 7	Install Video Card		
MS Excel	4	Deleting Files, Wiping	6	
MS PowerPoint		Internet/Intranet	6, 7	
WordPerfect	1, 7	Audio Cards	4	
QuickBooks	8	MP3 Files, WMA Files, WAV Files	4	
Norton/Symantec AntiVirus	2, 3, 6, 7	Burning CD's	3, 5	
Norton System Works	2, 7	Partitioning Hard Drives	2	
CompuPic/CompuPic Pro	3, 7	Net Objects	7	
Winzip, WinRAR	6	Homesite	7	
JV Registry Cleaner	3	MS Access		
Outlook, Outlook Express	2			
Internet Explorer	2, 7			
Netscape Navigator	7			
Instant Messaging	2			
Installing Software after Reformatting	5			
Ccleaner	3			
Easy CD DA Extractor	3			
ADVISORS	PHONE		HOURS	
Fred Shelton [1]	(253) 752-0120		Variable	
Bob Henkel [2]	(253) 537-6732		8A-8P anyday	
Tom Stepanek [3]	(253) 922-7939	7-9P Mon-Fri		
Carl Tenning [4]	(206) 824-3843	6-9P Mon-Fri		
Oclad Wesley [5]	(253) 503-7833	6-9P		
Bob Thomson [6]	(253) 752-5582			
Ray Mills [7]	(360) 692-7568	6-9P Mon-Sat		
Sandee Gimblett [8]	(253) 952-3538			

Tacoma Open Group for Microcomputers (TOG)

New Member Application/Existing Member Change of Address Form

For **Tacoma Open Group** annual membership, send form (if needed) & **\$25** to Bob Henkel., 10613 25th Avenue E., Tacoma, WA 98445.

Make checks payable to TOG

Please print or type. Date: _____ Sponsored by: _____

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Home Phone: (____) _____ Work phone: (____) _____ E-Mail Address _____

TACOMA MEETING

When: **Mon 12 Apr 2009 -7:00 PM**
Where: SE Tacoma Community Centre
1614 99th Street E.
Tacoma, Washington

From I-5 take Exit 127 (Hwy 512) to
Portland Ave., north on Portland to 99th,
left over tracks. Building is on south side.

Future Dates: 2nd Monday of Month

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Deadline: 15th of this month to appear
in next months' issue, if room

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How To get To The Meeting

For those readers still unfamiliar with how to find our meeting place we have reproduced the map showing its relationship in Tacoma to Portland Ave S. and the 512 Freeway. The 512 Freeway can be entered from I-5 in Tacoma on the west or from Hwy 167 in Puyallup on the east. Proceed to Portland off-ramp and turn north to 99th Street. Some folks in the middle of Tacoma may prefer to take Portland southbound to 99th. At 99th turn west over the tracks and there you are!



TOGGLE

Tacoma OPEN Group for Micros
1808 Lenore Drive
Tacoma, WA 98406-1920

Change Service Requested

PROGRAMS

This Month's Meeting

This will be a regular monthly meeting. Meeting discussions are always interesting and the ever-popular Q&A (Question & Answer) period is sure to pique your interest, come up to your expectations and tickle your fancy. Come and share your own experiences, problems and discoveries.

No formal presentation has been announced at press time, however our lively question and answer sessions are sure to bring up some interesting subject matter for discussion. If you have something you wish to have discussed please notify Carl Tenning so that he can add that subject to the agenda.