

The NCTCUG Journal

www.nctcug.org

May 2011

Volume 34 Issue 3

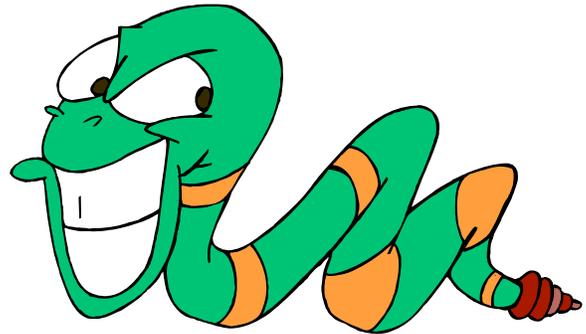
Malware, Viruses, Trojans Defined

By Ira Wilsker iwilsker (at) sbcglobal.net

In the past week, I was called upon four more times to clean malware off of infected computers. One user had a major name brand antivirus program installed, running, and updated and could not understand how the malware had penetrated his antivirus software and contaminated his computer. He had purchased the anti-virus software last fall from a big box electronics store based on the recommendations of a salesperson. He had been told that this particular brand of security software was the best as it was their top seller, and that antivirus software was all that he really needed.

Based on that recommendation he plopped his hard earned money on the counter, went home, installed it, updated it, and blissfully surfed the internet, opened email attachments, downloaded software and music, and had just a jolly good time online until his computer gradually slowed to a crawl, and friends informed him that they were receiving spam emails from him.

This user was perplexed, as his antivirus software was running, and indicated that it was updating several times a day. He just could not understand how 90 different malware programs had infected his computer. His problem started when he purchased inade-



quate security software; while the product he bought was excellent at protecting his computer from viruses, and some Trojans and spyware, it did not offer the all-inclusive protection of the comprehensive security suite offered by that publisher (and others as well) that would have only cost him a few dollars more.

There is a common misconception in user circles that viruses are the primary computing threat, as users have had heard about viruses for several years. Today, viruses are present, but a relatively minor threat in terms of prevalence. I did a quick analysis of the most common new threats recently listed by Trend-Micro, and found that viruses only made up 4% of the new significant threats to our computing security. On the other end of the spectrum, Trojans made up 42% of the commonly seen new threats, worms were at 14%, backdoors at 14%, web based threats were at 6%, java script malware was at 6%, 4% were hacking utilities, 2% adware, and about 8% other threats.

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Discovering Windows 7 – Part 6

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Perhaps one of the least discussed aspects of the Windows operating system is User Accounts. The first time you start your new computer, you will be prompted to enter a user name and a password. If a second person is going to use your computer you would be smart to create a new account for them. This may seem a little inconvenient, because each user needs to enter their own password to use the computer, but it helps protect your computer programs and information from someone else's mistakes. It also allows each user to create a separate profile with their own color schemes, fonts and screen backgrounds. It also creates separate folders for where you can store documents, pictures and media that you want to keep private.

Windows divides user accounts into two categories, "Administrator" and "Standard user." Administrative account owners can create, change and delete accounts; change settings that affect all other computer users; change security related settings, install and remove programs; access system files and access other user account profiles.

Standard account users can change or remove their password; change their user account picture; change their theme and desktop settings and view files in their personal folders as well as in Public folders. There is also a special account called "Guest" which is inactive by default. When activated, by an Administrative account user, it provides temporary, limited access to your computer for a person without a user account.

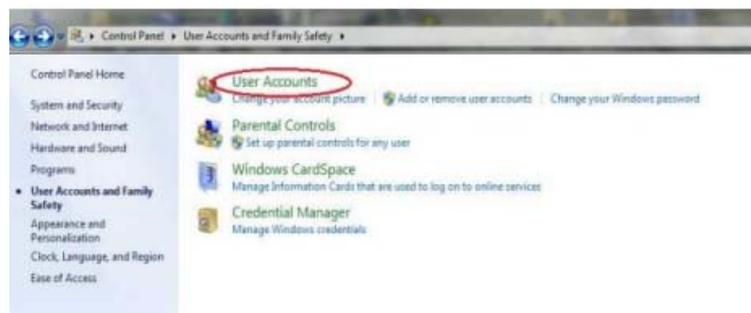
User accounts keep your information private. When you create a new user account, separate folders are cre-

ated for documents, pictures and media which cannot be accessed by other users. For example you could create user accounts for your children where they can play games and do homework but they will not be able to access, or damage, the financial records kept in your user account. You can also create your own unique desktop with your own wallpaper, desktop short cuts and Start menu options.

Accessing User accounts is pretty simple. Click on the Windows Start button and select Control Panel. If your control panel is set for "Category" view, select "User Accounts and Family Safety". As a "Standard" user you can change your account picture and password. You can also remove your password. This is an option you should consider carefully before doing it. If you are the only person who will ever have access to your computer it may seem like an attractive option. If anyone else, like a visitor may occasionally use your computer I recommend using a password and enabling a guest account for them.

You will not be able to perform "Administrator" functions, such as adding or removing accounts. If your control Panel is configured to show "Large" or "Small" icons, you will see a "User Account" icon. When you click on it you will see the options listed above. Because "Administrator" accounts are so powerful and have a potential for damaging your computer, some people create "Standard user" accounts for their everyday use.

If you click on "User Accounts" group title, not the titles under it, you will see more options. If you are an Administrator, besides being able to change your password, picture and account name you can change your account type and you can "Manage another account" (marked with orange ellipse). This is where you have the power to add and remove other user accounts. In addition to adding accounts you can specify the type (Administrator or Standard), set a password (or reset it if the user has forgotten it) and change their picture. If you decide to delete a user, besides removing



their ability to log on to the computer, you will remove all of the folders which the system created for them and their contents.

One last point before we leave the topic of user accounts: notice the title marked Change User Account Control settings” (marked with green ellipse). User Account Control is a security feature first introduced with Windows Vista. This is really intended to limit the changes a “Standard” account user can make. Any attempt to install a computer program by almost any publisher other than Microsoft will result in a window opening on the screen warning you that a new program is about to be installed and asking if you want to proceed. In addition, when a standard user attempts to do so the User Account Control dialog box opens. The user must select one of the Administrator accounts shown and enter the proper password or the program will not install. An Administrator user will also see this box but only has to click on “Yes” to proceed.

Obviously this verification process is useful if your computer exists in a “threat” environment (where it might be used by children or other people you may not trust). To many of us, however, who don’t consider our computers threatened, this security step is irritating.

Windows Vista gave us two simple options in the User Account window. You could just turn User Control on or totally off. Windows 7 has increased your User Control options. Windows 7 provides options with varying amounts of control from “Always notify” (or fully on) to “Never notify” (which turns user control off). The first option, “Always Notify” is the default. If it annoys you and you aren’t concerned about other users on your computer, try one of the alternate settings.



Discovering Windows 7 – Part 7

By Neil Stafest – Tacoma Area PC User Group

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This month we’re going to look at customizing the Task Bar and the Start Menu. Why would you want to do this? Read on.

The easiest way to show you why you might want to change the Task Bar — that bar with the Start Button, clock and various other items at the bottom of the screen — is to show you.

Do you have a lot of items on your Start Menu? Would it look better, maybe less crowded, by using smaller icons? If so, here’s how to do it. Start by pointing at a blank area on your task bar and then press the right mouse button. In the window that opens, left-click on “Properties”. The “Taskbar and Start Menu Properties” window will open.

There are a number of options under the “Taskbar” tab. In the box labeled “Taskbar appearance” you may want to consider the line labeled “Auto-hide the taskbar”. If you click on the box next to it (a check mark will appear) and then click on “Apply” at the bottom of the window, the Taskbar will disappear to the bottom of the screen. Any time you want to see it, just move your mouse to the bottom of the screen. Some people like this because it opens up more space on the desktop.

The next line down is “Use small icons”. That function is pretty obvious. You click on the box next to it and then the “Apply” button. If you have a lot of icons on your task bar you may want to try it.

There are more options on this menu but we won’t go into them here. Play with them if you like.

Now let’s look at “Start Menu” options. Go back to the “Taskbar and Start Menu Properties” window and click on the “Start Menu” tab. Now click on the “Customize” button. Scroll down the “Customize Start Menu” window to the bottom. Four lines from the bottom of the menu you’ll find “Use large icons” with a check box next to it. Click to remove the

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check mark and click “OK” to exit this window and “OK” again to exit the “Taskbar and Start Menu” window.

Want to try some more “tricks” with this feature? Bring up the “Start Menu” tab again and click “Customize”. Scroll down the “Customize Start Menu” about 15 lines and you’ll find a line that says “Downloads”. There are three options under this. The default position is off. If you turn it on you’ll have quick way of getting to files that you’ve downloaded. If you select “Display as a menu” you may get a very large list, sorted alphabetically, of all the files that you’ve downloaded. I prefer the “Display as a link” option. It opens Windows Explorer and shows the “Downloads” folder the same as if I had navigated to it from “Computer” on the “Start Menu”. You may want to explore changing the settings of other “Start Menu” items such as “Videos” and “Documents”. It’s your computer. Make it work the way you want!

Before we leave the topic of customizing the “Start Menu”, go back to the “Start Menu” tab and stop. Beneath the “Customize” button line is a line that says “Power button action” and a button with a pull-down menu next to it. I’m not sure why you would want to change the default action of this button but this is where you do it.

Below this option are two more in a box labeled “Privacy”. If you want to really shorten the list of icons in the “Start Menu”, uncheck the box that says “Store and display recently opened programs in the Start menu”. Below that is another option which shows recently opened items in the Start Menu and Taskbar. Personally I leave this block checked but you may prefer it turned off.

Experimenting with Taskbar and Start Menu properties can’t hurt Windows 7. Go ahead and experiment. All you’re doing is personalizing your computer by changing the appearance of things. You may discover a change you really like. If not, it’s very easy to restore things to the way they were.



Happy Mother's Day

You Know ‘Copy and Paste’—Meet their Cousin, Format Painter

By Nancy DeMarte – Sarasota PC Users Group – www.spcug.org

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When you begin to use the programs that are part of Microsoft Office, it is easy to overlook some of the tools which could make your life easier. I found that to be the case with Format Painter, a command which appears in several versions of Office programs, yet is greatly underused. Once you know what it can do and how easy it is to use, you will wonder why you never got to know it before.

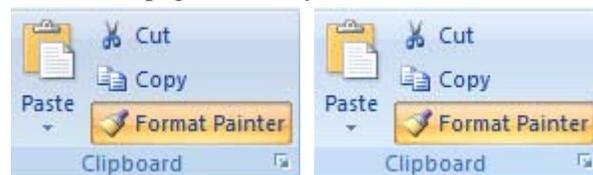
In Word 2007, Format Painter is located on the Home tab in the Clipboard group. In Word 2003, it’s on the Standard toolbar. It provides a quick way to copy formats from one place to another in the Office programs: Word, Excel, PowerPoint, Publisher, even Access. It doesn’t change any content like its cousins, Cut, Copy, and Paste, but it can reproduce even the most complex formats in seconds.

For example, let’s say you have created a long document with headings and sub-headings. You want to give it a little pizzazz by changing the sub-headings to a different font, font color, and size from the rest of the document. All you have to do is make your format changes manually to the first sub-heading and use Format Painter to replicate those changes on all the others.

Another instance where Format Painter is a lifesaver is when you are creating a document or outline where certain lines are indented. Occasionally, you will find that the amount of indentation becomes inconsistent as you work your way through the document. Rather than dragging the indentation marks on the ruler to the correct positions, you can use Format Painter to copy the exact indentation from the last correct area to any others that need to be fixed.

This tool works with text formats, like fonts, italics, and font colors. It also works with paragraph formatting, such as indents, alignment, bulleting, and line spacing. And it is available in all the popular Office Programs. When creating a custom PowerPoint presentation, for example, Format Painter can help overcome the challenge of keeping your custom headings formatted the same on all slides. Excel users can copy formatting from one cell to another with Format, which is Excel’s name for Format Painter.

It also works with certain graphics in some Office programs. In Word, you might want to include an auto shape like a large arrow on the cover of a brochure for emphasis. You might have resized it, added a border, and filled it with a custom color. Format Painter can reproduce that format on another arrow on the back page with very few clicks



Here’s how it works. It is best if you follow the advice from the professionals and type the entire document before formatting it. Then, once you get an item — word, phrase, or paragraph — manually formatted the way you want it, select it. Then click the Format Painter icon once, which turns the cursor into a paint brush. Scroll to the item you want to change and select it. Immediately it changes to match the format of the original item. If you have more than one item you want to change, double click the Format Painter and use it on as many items as you need to. It will remain active until you click its icon to turn it off.

Some quick tricks:

-   If you want to copy text formatting, select a portion of a paragraph. If you want to copy paragraph formatting, select the whole paragraph plus the paragraph mark.
- Make a mistake? Use Undo.
- Want all formatting done for you? In Word, choose one of the Templates (or Themes in Word 2007).

Format Painter is only one of several commands that even beginners can learn to use to save time and frustration when using Office programs. Other tools will be featured in future articles.

A Brief History Of Data Storage (Part 2 Of 2)

By Ron Hirsch - Boca Raton Computer Society

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[NCTCUG Ed. Note: we do not have Part 1]

In part 1 of this article, I introduced you to the binary system. In part 2, I'm going to give you a brief history of the primary way that data is stored in your computer. Remember, we are not going to use light bulbs, but we are going to use something which has two states. The light bulbs in part 1 had an on or off state. The use of magnetic material will now be substituted. And, even though it is not necessarily done as I will note, it may be simpler to think of a magnetic situation where something is magnetized to be a south pole, or a north pole. Since this represents 2 states, it qualifies as a binary device to store and access values.

Magnetic Storage Arrives

Some of the earliest magnetic devices were floppy disks, which were really floppy, unlike the floppy disks you may remember, which were 3.5", and were encased in a hard thin plastic case. The early 8" floppies used a thin sheet of plastic, which had a layer of very fine iron based coating placed onto it. Floppy disks are actually similar to the old audio record disks we used to play in the past. If you remember, these records had a fine spiral groove on them, and a special needle in a cartridge at the end of a tone arm, that rode in that spiral track, and produced sound based on small "bumps" and holes at the bottom of the groove. When vinyl LP records came along, they managed to get more music in the same space, by making the grooves smaller, and the needle finer.

Well, the floppy discs stored bits of data in a similar fashion, except the groove was an electronic groove, and the "bumps and holes" were magnetized "spots". And the arm was a very lightweight floating arm with a magnetic reading or writing device on the end, which would read or write all the magnetic spots, which are bits of information, which can then be converted into numbers or characters, as applicable.

Needless to say, the arm reading or writing all this magnetic info cannot really be allowed touch the surface, but must float just above it. If it touched the sur-

face, it could scrape off material, and cease to function properly.

And each magnetic bit must be sufficiently isolated from its neighbors, so that the magnetic sensor in the floating head can reliably read each bit at a rapid pace. Sounds like a tough task, considering that the number of magnetic "spots" on the old floppies did reach into the millions. As time marched on, smaller floppies arrived, bringing the size down to 3.5" with improved mechanical and electrical specifications.



The Hard Drive Starts To Come Of Age

When my company got its first computer, an IBM 32, the IBM rep told us that the built in storage capacity of 4 MB would be enough to last us for many years. We believed that story for about 1 week after we got the IBM 32. In addition, not only was the storage capacity very little, but the built in & non interchangeable monitor was so small, that it bordered on being useless. So we called IBM, and they agreed to take the unit back, and sell us an IBM 34, which did have more storage, and a better display. And not too much later, we again moved upward and went for the model 36. In that era of the late 70's and early 80's, cooling the computer, which was a huge monster, required that it be housed in its own small specially air conditioned room, which we constructed.

Now, needing more memory storage space, we purchased IBM's latest hard drive package, which was the size of a large refrigerator, and came with a single 64 MB platter. And, it could accept a number of additional 64 MB platters. These platters were the size of large pizza. I don't recall the cost of each platter, but the total unit, including the platters was many thousands of dollars.

Later on, in the mid-late 1980's the cost for a 30 MB hard drive for use in a personal computer had come down to about \$300. When my first personal computer, the IBM PC AT, had the 30 MB hard drive fail

one week after the one year guarantee expired, it cost me about \$300 (plus labor) to have a new unit installed in my machine. I stayed with the same 30 MB size, as the store representative said I'd never need any more than that. In retrospect, that size drive would only hold about 5-10 images from a digital camera in current times.

Hard Drives Continue To Grow In Capacity

When I had my 30 MB hard drive, it was actually 240 million bits. I could not imagine that many magnetic spots being available on that rapidly spinning disk inside the case. To me, that was unbelievable then. And to have all the storage capability, and to read and write from the drive at millions of bits per second, how could this be possible?

I moved on with a new computer every 4 years or so. And every machine had a bigger hard drive, and it needed it. The Windows operating system needed more and more drive space. And the programs also needed more space. And the hard drives started adding more platters inside the case. Each platter had its own read and write head, and the rotational speed continued speeding up to make things perform faster. And, the price per megabyte of space continued to drop. It seemed as if there was no limit. And how could these complex mechanical monsters continue to get better and cheaper?

Check Out This Comparison

My original IBM 30 MB drive cost about \$10 per MB, which is \$10,000 per GB. Today's hard drives are selling for about \$90 for a 1 terabyte drive, which is 9 cents per GB. In other words, storage space in the early days was 100,000 times more expensive than today. And, the size has shrunk dramatically. Current 1 TB drives are smaller than my old 30 MB IBM drive.

Here are some numbers which are hard to believe, but are true. The magnetic "spot" which is one bit on a hard drive has continued to shrink in size. That spot has gotten down to one millionth of an inch in diameter! And the rate at which bits are read from and written to has reached into the hundreds of million per second! This is inconceivable. Fortunately, the hard drive doesn't know that, and it continues to purr along anyway.

And, the power drain is much less for today's 1TB drive than the old 30 MB IBM drive. And, the statistical failure rate is claimed to have the drive run continuously for many years with no missed bits. I challenge this statement. In the course of my computer activities, I've had at least a dozen hard drives fail. And in recent times the failure rate has been high. In the past year, I've had 4 hard drives fail in 3 different machines. At the work they are doing, and the specs they are seeking, I'm not surprised. Fortunately, in every failure case, the drive was the C system drive, where I use True Image weekly. And, I always keep new spare drives around. So, a quick change out, and an image restore, and that machine is back in business.

Just How Big Is A Terabyte (TB)?

A terabyte is 1 followed by 12 zeroes, or 1 trillion bytes. If you started counting at a rate of 1 count per second, to reach 1 trillion, you would have to continue counting for about 30,000 years.

What Does The Future Hold?

In the past, it was always felt that since the magnetic hard drive is a "mechanical" device, it would ultimately be replaced by a nonmechanical component. Holographic storage seemed to be a potential medium. It had no moving parts, had virtually unlimited capacity, and looked promising. But, it has yet to meet its expectations. The newest kid on the block is SSD. This stands for Solid State Drive. You probably already use such devices, as this approach is used in digital camera memory cards, and flash drives. They have now been designed to have larger capacities and packaging/interface to be interchangeable with current magnetic hard drives.

The pricing is still much higher than magnetic drives, about 10 times as high, but this should drop rapidly in the next few years. Their performance can actually run circles around their magnetic counterparts. And, with no moving parts, they should last almost forever. Some manufacturers have already started building them into their high end models.

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Installing Windows 7 On An XP Computer (If I Can Do It, You Can Do It!)

Nancy Wallace – Sarasota PC Users Group

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I have a 2006 Dell laptop (32-bit) with an 80 GB hard drive and 1 GB of RAM. I have just successfully installed Windows 7 on this computer with a few glitches which I managed to resolve.

Following Microsoft's advice, I downloaded and installed the free "Windows 7 Upgrade Advisor Setup". The Advisor "... scans your PC for potential issues with your hardware, devices, and installed programs, and recommends what to do before you upgrade". I attached all my peripherals and ran the Advisor. To my surprise, it told me to proceed – no immediate impediments in sight (I had expected to find that I didn't have enough space and RAM).

Next I backed up all my data files and programs using Microsoft's "Windows Easy Transfer for transferring from Windows XP (32 bit) to Windows "; I stored this backup file on an external drive.

Then I began the Windows 7 Install – no problems. I downloaded the latest AVG virus protection program and began to install Microsoft Office Professional 2007. Half way through the installation it stopped and told me I had run out of space. When the Windows 7

installation begins it stores all of your data files and programs in a Windows.old file on the hard drive. Since I didn't plan to try to recover my old XP environment, I was able to delete that file and gained about 13 GB in the process. Then I was able to restart the Office installation. No problems.

I soon discovered that my Dell Printer (924, all-in-one) needed a new driver for Windows 7 and there is none available. However, I found that I could download a Vista driver for this printer, run it in compatibility mode, and it worked just fine — `_g11AWeb32924EN.exe` — I found this info in a Dell Forum.

I continued to re-install all my other programs — Quicken, WinZip, Adobe Photoshop, Adobe Reader, Skype and Quilt Pro.

My Quilt Pro is a 1995 version and its Help file is written in HLP format. Microsoft no longer supports this format but provides a free HLP compatibility module which I downloaded without any trouble (WinHlp32.exe). As I continue to use this program, I am encountering more and more "compatibility" issues – always related to storing and updating files. So I've decided it's time to upgrade to a Windows 7 compatible version.

Whenever I open Adobe Photoshop Elements 4, I get the message: "This program has known compatibility issues". When I "check for solutions online", it doesn't find any. However, it seems to work OK – so far, so good.

With Quicken I found I had to re-register my Bank and Credit Card company info before I could begin the Online Transfer functions – no problems there.

End result, my computer capacity is 70 GB – I now have 40 GB used and 30GB free. So, it looks like I don't need to buy a larger computer after all – yippee!



Understanding Libraries In Windows 7

by Vinny La Bash, vlabash@comcast.net

Member of the Sarasota Personal Computer Users Group, Inc.

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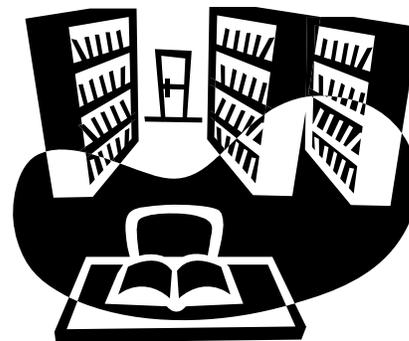
Some people think of a library as a building that houses a collection of books. It's an accurate physical description, but tells you nothing about a library's true value to society. A library is a reservoir of knowledge. From the ancient Library of Alexandria to the Library of Congress, the function of a library has been to make a civilization's knowledge available to those who wish to educate themselves.

Libraries in Windows 7 will probably never serve such a noble purpose, but they can be helpful instruments for those who care to organize their files in a logical, coherent manner. Windows XP used a basic format called Known Folders as places to store files. There was My Documents, My Pictures, and My Music. Vista added a few things, but the basic structure remained the same even though Microsoft removed the "My" portion of the name.

In Windows 7 Microsoft recognizes that people store information anywhere and everywhere on their PC. Libraries allow total control over the Documents Library folder structure. By including a folder in a library you tell Windows where your data is located and the library function will keep track of it. You can put folders located on different disk drives in the same library.

A library acts like a folder with a group of files or sub-folders within it. This is good because you don't have to learn anything radically new in order to start using libraries. It's important to understand however, that folders are not stored within libraries. They merely look that way. A library displays files and folders that may be stored anywhere on your PC including external hard drives.

Libraries have now become an important data management tool. You can create broad categories of information, such as documents or videos. Store them wherever you want in different folders on separate disk drives, and arrange the information by properties such as date, subject and author.



Windows 7 contains a default set of four libraries.

There is the Documents library followed by the Music, Pictures, and Videos libraries. Each one works in exactly the same way, and they all replace the standard folders in XP and Vista. Each default library in Windows 7 has some default content which can easily be removed.

Browsing in a library is no different from browsing folders. View the data any way you please, then revise or delete information as desired.

From the Desktop, open the Computer icon. In the left pane under the Desktop miniature icon is the list of the four default libraries. Displaying the content of a library is as simple as left-clicking on the library name.

If you want to create a new library, right-click on the library icon and then select New/Library from the menu. Name the new library in the same way as you would a new folder.

To add a folder to a library, start by clicking on the Windows Explorer icon in the Taskbar. In the left pane, locate the folder you want included in the library and left click it to select it. Don't open the folder. In the toolbar at the top of the Windows Explorer window, click Include in library, and then select a library.

It really is that easy. You can have up to 50 folders in a library which should be enough for most people. To add folders stored on external drives, make sure that the drive is connected to the PC and turned on. Use the same procedure as outlined above.

Other than documents, the most common file types are videos, photos, and music. You can optimize a library for these specific categories. When you opti-

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mize a library you change the options that are available for arranging the files in that library. To optimize a library right-click the library you want optimized. Choose Properties from the menu, and choose the file type in the Optimize this library for list.

After a library has outlived its usefulness and you wish to delete it, the library is moved to the Recycle Bin. The files and folders that were stored in the library are intact. No information is lost, but the way the folders were organized is cancelled. If you inadvertently delete one of the four default libraries, it is easily restored by right-clicking Libraries and then selecting the Restore default libraries option.

Here are some basics about what can and can't be included in a library.

Any folder on your primary drive (C:) can be included in a library.

Any folder on an external hard drive can be included in a library provided the drive is connected to your PC and turned on. This includes thumb drives in general unless the manufacturer prohibits it for some reason. Like regular hard drives, content will not be accessible if the thumb drive is disconnected.

Any folder on an internal hard drive, including its partitions, can be included in a library.

If your PC is part of a network, folders can be included in a library if the network is indexed or if the network is structured that the folder is accessible off-line.

You can't include folders stored on a CD or DVD in a library.

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Tor: Anonymity On-line

By Dick Maybach n2nd (at) charter.net

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Tor protects your privacy when you are on-line in two ways: (1) it prevents other users of the network you use to reach the Internet (for example a public Wi-Fi hotspot) from seeing the data you exchange and with whom you communicate and (2) it hides your identity from those with whom you communicate. For most of us, item (1) is more important. For example, when we use a Wi-Fi hotspot to access the Internet, every byte we send and every one we receive is accessible to all its other users.

One defense would be to add a separate defensive tool for every offensive one, which is the approach taken to foil Windows viruses. The result will surely be the same – an ever-increasing kit of defensive programs to counter the never-ending supply of offensive programs.

A much sounder approach is to run *Tor*, which defends against all such attacks; as a result you need install only one tool. Item (2) is probably less important to you; it prevents sites you visit from knowing who you are or what other sites you've visited.

We are seeing ever more intrusions into our privacy by governments and businesses, and Tor was developed to help us preserve our privacy, safety, and dignity in the face of this. Although Tor is legal in all countries, you can do illegal things using it. In this way, it's similar to the gas pedal on your car, which is essential if you want to go someplace, but must be used with restraint to avoid awkward and expensive discussions with the law.

Tor hides not only what you say, but also who you say it to. You could use it to communicate back home from a location where disclosing your country of origin or religion might expose you to unpleasantness or risk. This feature also allows you to circumvent restrictions that your ISP has placed on the Web sites you visit. It's used by individuals, businesses, activists, reporters, the military, and law enforcement for investigations and to protect themselves, their organizations, and those with whom they communicate.

Using it, you can surf the Web, exchange e-mail, use instant messaging, and transfer files. However, please don't just install it and assume you're safe. You need to change some of your habits, and reconfigure your software. *Tor by itself is NOT all you need to maintain your anonymity.*

Tor consists of two parts – a public, secure virtual private network (VPN) and the software to access it. The software is free and available for Windows, Mac OS X, Linux, and some smart phones at <http://www.torproject.org>. Most PC and Mac users will want the *Tor Browser Bundle*, which includes the Firefox browser. (For reasons you can read on the Tor Web site, neither Internet Explorer nor Safari is suitable for secure browsing.) The Tor VPN is distributed and accessible worldwide, is free, and is provided and maintained by volunteers. Because the network consists of thousands of independent Web sites, it's quite robust; there is no single point of failure.

How does Tor work? When you access the Internet with it, you first communicate with a *Tor Directory Server* over an encrypted link (one with a URL beginning <https://>). Here, you obtain a list of available *Tor Nodes*. The Tor software on your computer selects at least three of these; call them Node 1, Node 2, and Node 3. It then sets up a secure link to Node 1, which forwards your traffic to Node 2, which forwards it to Node 3. All these links are secure, and only Node 3 can decrypt your packets. Finally Node 3 sends your packets to your desired end site. Note that if the end site is secure (indicated by a URL beginning with <https://>), even Node 3 can't read your data.

Packets coming to you follow the reverse path, Node 3 encrypts them in such a way that only you can do the decryption. As far as the end site knows, it is communicating with Node 3; it has no way of finding your computer's URL. An observer on your local network knows only the URL of the Tor Directory Server and Node 1; he can't find the location of the end site or read any of your packets. Only Node 1 knows your location, and only Node 3 knows that of the end site. Note that Node 3 can also see the data you exchange, unless you're using end-to-end encryption, i.e., talking to a site with a URL beginning <https://>.

When you install Tor, you will also install the Torbutton add-on for Firefox, which allows you to turn Tor anonymous browsing on and off. Turning Tor on changes some of Firefox's operation.

- None of the cookies you acquired during normal browsing will be available. This is because cookies can tell the site you are communicating with a lot about you and which sites you've visited. As a result, you will have to reenter passwords where they are required. These cookies will return when you toggle Tor off.
- Some sites will be displayed in a foreign language. Since they don't know where you are, they assume you are located in the same country as Node 3. See the Tor site for work-arounds.
- You will see moderate delays while surfing the Web. There are at least three intermediate sites on the path to your final destination, and several layers of encryption are involved. While the delays are noticeable, I haven't found them to be obnoxious, and I consider it a good trade-off to achieve better security.

Many users need only browser access to the Internet when away from home, since through it they can also exchange e-mail and transfer files. (I've found that the FireFTP add-on is convenient for the latter, but see the Tor site for instructions on how to configure it and follow these exactly.)

If you want to use secure instant messaging, use *Pidgin*, which Windows and OS X users can obtain by installing the *Tor IM Bundle*, available on the Web site. (Pidgin is in most Linux repositories.) You can't use Tor for file sharing, i.e., using BitTorrent; instead use the I2P network, <http://www.i2p2.de>.

See the Tor site for how to configure other Internet access programs, including some that provide access to your home computer. However, if you really need access to files on your home computer, it would be better to transfer them to your laptop or to a cloud service before you go. Otherwise, a power transient or other failure could disable your computer until you return home to restore it.

Accessing the Internet away from home without Tor is like driving without insurance, you can *almost* always get away with it. That doesn't mean it's a smart thing to do.



Drop It In The Box: Dropbox, What It Is, How It Works

By Jo Grazide, Leader, Word Processing Workshop, Brookdale Computer Users Group, NJ
February 2011 Issue, Bug Bytes <http://bcug.co> gio520 (at) gmail.com

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What Is Dropbox?

Suppose you were able to save work without using a flash drive, a disk (CD or DVD-R or RW), or an external drive, or even email, and move files between your laptop and desktop? For many years, I, like so many of us, had developed methods and procedures to upload, download, and save documents, music and pictures to a storage device, only to have to rely on memory to locate it afterwards. Another irritating problem for me, especially when I was working, was to identify the "latest" version, so that an older file would not overwrite my work during a "Save As."

Enter Dropbox, a useful application that eliminates lots of work and uncertainty.

Dropbox is a free download that offers protection and convenience and is easy to use. There is basically no learning involved. You should, however, be familiar with Drag & Drop and Move vs. Copy. Why not give Dropbox a try and see whether this is for you.

I first heard of Dropbox during a meeting of my camera club. Some members seemed happy with it; there were no negative comments, leading me to investigate. Having a way to store photography files without worrying about loss or corruption seemed an ideal solution to the problem of travel pictures. I got to test this, when I maxed out the Dropbox folder at around 2 GB during a vacation in Boston. There are two ways to increase your storage capacity – you can purchase the program on a monthly or yearly basis, or you can have friends join the service and be rewarded a few more MB's up to a whopping 8 GB.

Get the App

To acquire Dropbox, you need to go to the website at www.dropbox.co. The download is quick and easy. Just run it, and follow the instructions. There are six initial steps:

- 1) Take the tour
- 2) Install Dropbox
- 3) Put files in your Dropbox folder
- 4) Install Dropbox on other computers
- 5) Share a folder with friends or colleagues
- 6) Invite friends to join

It is necessary to install the program on all computers that you will be using. The setup is done on the website, and the instructions are easy.

In my case, this is my laptop and my desktop. As I move around with the laptop, to meetings or anywhere I use it, I'm able to save files as they are created, directly into the Dropbox folder, which sits in the system tray area. By clicking on its icon, Dropbox will provide easy and helpful commands.

In addition, I know that once I reach home, altered files will be available and updated on my desktop machine. They can be dragged into their proper locations on the storage drives. This has been extremely useful. Instead of dealing with two documents, a newer version and an older version, there is only one synchronized version.

Another nice aspect is that I don't have to worry about misplacing storage disks or flash drives, which does happen. I also would think that it lessens stress, as there is nothing to lose!

On the Website

There is plenty of information on the Dropbox website. There are videos and explanations of the synching process. Basically, anything that is put into the local folder is also recorded on the Internet. You can also access your files and upload them directly onto the Dropbox server.

It can be compared to using GoogleDocs or Windows Live Mesh. Collaboration, by the way, is possible. I haven't delved into this, because I simply need a way to move data between computers. If you want to learn more, you need to visit the Dropbox website and study this feature.

The Dropbox website has five tabs:

- “Get Started” walks you through several chores before you can earn some extra space. This is simple and easy to understand.
- “Files” is the online list of your current Dropbox inhabitants, their sizes and the dates they were modified. You can sort each column by clicking on its heading. There are buttons here that let you do even more. A basic knowledge of file management is all you need to comprehend this part of the application.
- “Events” is a listing of various edits, deletions, and other information about your files.
- “Sharing” allows you to create a new folder to share, or share an existing folder. By following the prompts, you can identify who you want to share the folder with. In my case, I began typing my husband's email address, and it was prefilled for me. This would make it easier for multiple shares in a business or committee setting. Perhaps our next Board meeting minutes will appear in a Dropbox folder!

I also found that once the shared folder appeared in my local Dropbox folder, I could rename it and manage it locally. A refresh caused the change to appear on the website immediately. I like this type of efficiency. There is no lag time, and information can be relayed quickly between computers.

- Finally, “Help” is all the rest. It seems that the Dropbox website is complete; you can spend much time learning about it. I would suggest that you jump in and try out the program; you can learn by doing as well.

There are a couple of things I would warn you about as a new user. If you simply drag and drop the file back and forth, it copies the file. You may want to right-drag and choose move to ensure you have the latest version of your work or photograph. Also, having a comfort

level with storage online to some extent, and not adding things like your Social Security number or banking information, goes without saying. Aside from that, there are no problems I can see with using this reliably.

One Last Thing

I do have one favor to ask you if you do join Dropbox; please use the link! It will enable both of us to get some extra space, a great reward and well deserved!

The link to join on my behalf is <http://db.tt/sHvgWQ>. I promise I will not waste that space!!!!!!

System Requirements

Hardware: At least 512MB of RAM; free space on your computer equal to your Dropbox storage quota.

Software:

- Windows: Windows 2003, Windows XP, Windows Vista, Windows 7 (32 and 64-bit).
- Mac OS X: Tiger (10.4) or later.
- Linux: Ubuntu 7.10+ and Fedora Core 9+.
- iPhone iOS 3.1, Android 1.5 and Blackberry 4.5.

Pricing: Up to 2 gigabytes of free storage space; DropBox 50, up to 50GB storage for \$9.99/month or \$99/year; Dropbox 100, up to 100GB storage for 19.95/month or \$199/year.

For more information:

<https://www.dropbox.com/plansproducts/desktop>



(Continued from page 1)



It is obvious that protective software that protects the computer primarily from viruses is failing to protect the user from the majority of contemporary threats; it is precisely this fact that led to this user's infected computer,

despite his premium quality antivirus software. A lot of users have a misconception about the common threats in circulation, believing that they are generically all viruses, but, as I saw in this case, this blissful ignorance may lead to a computing nightmare.

While not necessary to use a computer, it would likely be beneficial for computer users to be aware of the different threat groups that can impact our computing. According to Wikipedia, "A **computer virus** is a computer program that can copy itself and infect a computer." Many viruses attach themselves to legitimate programs or data files on the infected computer. The fact that a computer virus can copy itself to infect other computers is what makes it different from other types of malware, for which viruses are commonly confused.

Viruses can be spread through digital media (USB drives, CD or DVD discs, and floppy discs) or through network connections that the virus can use to copy itself to other attached computers. Once a virus has infected a computer it may perform a variety of tasks as programmed by its author. Viruses may damage

the data on a hard drive or degrade the performance of the computer. Some of the viruses are stealthy and their effect may not be noticeable by the user, as the viruses do their damage in the background. Some viruses are functionally benign, other than they reproduce themselves countless times on the infected hard drive, until they consume all of the free space on the hard drive.

Computer worms are a malicious computer program that wriggles through computer networks sending copies of itself to other computers attached to the network. Most worms are free standing programs, and are commonly programmed to spread themselves through the network without any action by the user. Most worms have an explicit nefarious function such as deleting files on the infected computer, or encrypting critical files, only releasing them after an extortion payment is made to the cyber criminal. Some worms open a backdoor into the computer that will enable the creator of the worm to take remote control of the computer, converting the computer into a "zombie" under his control, which can be used to generate revenue for the originator of the worm by sending spam mail from the infected computer, with the spam fees collected going to the author of the worm. Some worms are used to create a **zombie network** of computers, also called a "botnet", where the compromised computers can be used to launch directed cyber attacks on other computers or networks, in an act of cyber terrorism.

Washington Area Computer User Group

WACUG Meetings will be held on May 14 & June 18, 2011 from 12:30 to 3:30 pm. 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.olligmu.edu/] at George Mason University, 4210 Roberts Road, Fairfax, VA, known as the Tallwood Campus.

Topics

May 14th -Firefox/Thunderbird
Customization and Add-ons;
June 18th - Comparing the Mac to Windows PCs

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/>



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For those who are aware of the epic “Helen of Troy” of Greek mythology, the term “Trojan Horse” means an object looks like it serves one purpose, but really has an unobvious, usually nefarious, purpose. Cisco, the networking company, describes a Trojan as, “It is a harmful piece of software that looks legitimate. Users are typically tricked into loading and executing it on their systems”.

In cyber speak, a **Trojan Horse**, typically shortened to the simple moniker “**Trojan**” is a program that appears to have a useful function, but after being installed by the user, the Trojan may be used to perform other undesirable functions. Some Trojans are money makers for their authors because they place paid (and usually unwanted) pop up advertisements (Adware) on the infected computer, redirect web searches, or shift online purchases to a seller not of the buyer’s choice without his knowledge. Some Trojans are key-loggers, which are commonly used for identity theft, or to give unauthorized users access to a computer system.

Trojans are often spread through intentionally downloaded software, surreptitiously bundled with another often legitimate program, from email attachments, and purloined websites with executable contact (ActiveX is sometimes used for this). Some Trojans can be installed on the target computer by way of code written in Java, or a Java script, that when executed, implants the harmful content on the victim computer.



One of the more recent and costly types of malware to attack our computers is generically referred to as “**Rogue Antivirus Software**”, which is usually implanted on the victim’s computer by a Trojan. There are thousands of these rogue programs in current circulation, infecting millions of computers at any given time. Rogue antivirus is sometimes installed by the user using “social engineering” tactics, which tricks the user into clicking on something that installs the rogue software. Some of the common lures to ensnare the user into loading rogue software on the computer are offers for free screen savers, toolbars, utilities to play specific video formats (often attached to an email), sham online security scanners, contaminated PDF files, insecure web browsers, and other vectors.

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NCTCUG Information

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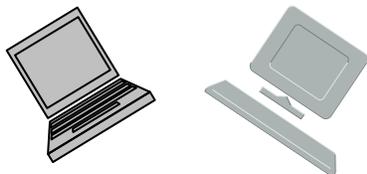
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Article Submissions

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

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

Thank You!

(Continued from page 15)

The common thread of this rogue software is an authentic looking popup that informs the user that his computer is (falsely) infected with hundreds of viruses and Trojans, and for a fee it will clean the computer. These popups which will not permanently close will typically hijack the computer, destroy the installed legitimate security software, prevent access to online services that can kill it, prevent cleaning utilities from executing, and otherwise take control of the computer until the user pays a fee, typically \$30 to \$70. This fee is to be paid by credit card or other online payment service to a website that looks legitimate, but is really a complete scam. Not only will the rogue software not clean the computer of the pseudo infections after the fee is paid, but now a cyber criminal, often in Russia, has the user's credit card information. It is not uncommon for that same credit card information to promptly be sold on illicit websites, and to have substantial unauthorized charges appear on the compromised credit card account.

While there are many other cyber threats out there, those listed above are among the most commonly encountered by users. The traditional antivirus software will protect from some of the threats listed, but not all of them; this enhanced security capability is in the purview of the comprehensive security suite, or a combination of different types of individual security utilities, and not the free standing antivirus program. This is explicitly why I currently recommend a high

quality integrated security suite, rather than an anti-virus program. There are several good commercial security suites available, as well as a few free security suites. Just be aware that antivirus software by itself is inadequate to protect against today's contemporary cyber security threats.

May 2011

1st Wed. (5/4)
7 p.m. General Meeting

2nd Wed. (5/11)
Online-Only Webinar using Skype
for information see club page at
<http://www.nctcug.org/webinarsig.html>

4th Wed (5/25)
7 p.m. Internet SIG

3rd Monday (5/16)
7 p.m. Board of Directors

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.

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