# TOGGLE

THE MICROCOMPUTER TURN (ON)

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In *TrueCrypt - Free open-source data encryption software for Windows 7/Vista/XP, Mac OS X, and Linux* with the current trend to store your files in ''the Cloud'' the author suggests taking a look at TrueCrypt a program used to encrypt your files before storing them in the Cloud, along with the thousands of others stored by other users..

### Hardware

In *How to Recover Data from a Dead Hard Drive* the author makes several useful suggestions about hardware and software needed to retrieve programs and data from the hard drive in a dead computer. Worth knowing about in case you ever have to do this. Incidentally the cable he referred to can also be used to transfer files from an old computer which is not yet dead, to a new one.

In *USB 3.0 - The Super-Speed Bus* the author takes a comprehensive look with paragraph headings are: A Quick Review of USB, Limitations of USB 2.0, Introducing USB 3.0, How is USB 3.0 Better?, Is It Worth Upgrading? Read the article, then you decide.

In *Lock Your PC With a USB Drive* the author says you can lock your computer by entering WinKey + L but need to enter your password to get back in. Here's another approach.

In *What does ''firewall'' mean?* the author explains the different types of computer firewalls.

In *RSS Explained* the author explains that ''RSS -- or really simple syndication -- is a labor-saving tool that allows people to tune into information sources that interests them. The information source could be a blog, a podcast, a videocast or any web site that includes RSS feeds.....The value of RSS accrues when you subscribe to multiple RSS feeds. ''

## COMMUNICATIONS NOTES & TIPS

### Changing Settings in Your Browser

By Gini Pedersen, San Diego Continuing Education;
Seniors Computer Group, http://www.iteachyou.com
gpederse (at) sdccd.edu October 2011 http://bugclub.org

Every software application comes with preset options that work most of the time for most folks. However, occasionally you will want to change these default settings.

Following are approximate steps for changing settings in most versions of Internet Explorer and Firefox:

Internet Explorer
1. Click TOOLS (or VIEW) - INTERNET OPTIONS
2. Make desired changes
3. Click Apply (if available) and click OK when done

Firefox
1. Click TOOLS - OPTIONS
2. Make desired changes
3. Click OK when done

**Adjusting Starting Page in your Browser**

Every browser is preset to open a specific starting webpage when you open the browser. If you'd prefer to have your browser open to a specific starting webpage, you can make this change within the settings of your browser. The following steps should work exactly (or similarly) for many versions of Internet Explorer and Firefox:

Internet Explorer
1. Click TOOLS (or VIEW) - INTERNET OPTIONS
2. Click General tab
3. Highlight Web address listed in Home Page Address box
4. Type in new Web address, including the http:// portion
5. Click Apply (if available); click OK when done

Firefox
1. Click TOOLS - OPTIONS
2. Make desired changes
3. Click General
4. Click OK when done

**Changing the Size of your Browser's Display Font**

If you're having trouble reading the text displayed on webpages, you might find it helpful to change the default font display. When you do, the new setting may remain active each time you open your browser.

To do this, go to http://www.iteachyou.com and do the following:

Internet Explorer
1. Click VIEW-TEXT SIZE
2. Make your choice

Firefox
1. Click VIEW-TEXT SIZE
2. Make your choice

Note that changing text size may not work on some Webpages

### Backing up an iTunes library

http://www.komando.com
Greater Tampa Bay PCUG 4 March 2011

Q. My son has an iPhone. His iTunes collection is 13.3 gigabytes. All of this is stored on our com-puter's hard drive. I would like to back up the music. What method do you recommend? Should I back it up online or use a thumb drive? Or are there other options?

A. Your question is troublesome, Larry. You see, 13.3 GB is not a particularly large amount of data. So, there's nothing terribly difficult about backing up this data.

But the fact that you're posing the question worries me. It sounds like you're not backing up at all. If not, you're asking for trouble. In seconds, your important documents, e-mail and other data could disappear. And you might never get it back.

So, I fear you have more to worry about than the music. You need a plan for backing up your entire system. You have many options. Let's look at the advantages and disadvantages of each. Choose the one that works best for you.

**CDs/DVDs**

Discs are a quick and easy way to share data. They're also good for making music CDs and DVDs for standalone players. However, CDs and DVDs are not suitable for backups. Their storage sizes are relatively small. You can fit a paltry 800 megabytes on a CD. With DVDs, this is upped to 8.5GB. Your son's music collec-tion would overwhelm either. Capacity isn't their only problem. The real catch is that they're not very reliable. Optical discs can be scratched or broken. However, the main worry with burned discs is deterioration. When you burn a disc, a laser heats a media layer within the disk. Over time, that layer changes, making the disc unusable. If you truly value your data, skip these discs.

**Flash drives**

Flash drives are handy for transporting data. They're small and can be put on a keychain or in a pocket. Furthermore, they're highly reliable. They're less susceptible to drops and falls than other media. The biggest physical threats to flash drives are theft and loss. Unfortunately, flash memory is relatively expensive. You'll pay more per gigabyte than with a hard drive. Also, storage capacities are limited. Thumb drives top out at 64GB, although 128GB ones are on the way. You'll pay a premium for a 64GB thumb drive--about $150. Flash drives are an excellent choice for backups, except for cost. Wondering how long a flash drive will last? Good question! You'll find the answer in my quick tip.

**Hard drives**

Hard drives are probably the most popular backup solution. These days, they're ridiculously inexpen-sive. You can pick up a 1 terabyte external drive for about $100.

You can get an external hard drive for even less. That assumes you don't mind doing a little tinker-ing. My fun tip will help you build your own external hard drive.

Of course, the most popular solution may not be the best. Such is the case with hard drives. They are relatively fragile. Drop one, and it's toast. Even if you're careful, a hard drive will fail over time. I wouldn't trust a hard drive past five years. Many fail much sooner than that.

There are many pros when it comes to hard drives. However, their high failure rate should give any-one pause.

**Online services**

An online service is probably your best option for backups. I use Carbonite to back up my computers at home and the office. (Carbonite is one of my advertisers.)

With Carbonite, you don't need to worry about media failing. And, with unlimited backups, storage capacity isn't a problem.

Online services also add additional layers of protection. Your data is stored off-site. So, you don't need to worry about a fire or other disaster taking your data. And, backups are performed automati-cally. With Carbonite, backups become a set it and forget it affair.

I get a lot of questions about Carbonite. Most are about security. That's a valid concern when you're storing data off-site.

Carbonite is serious about security. You can learn more about Carbonite's security and encryption features in my handy tip.

Carbonite has a special offer for my listeners. You'll get two months free if you use my sign-up page, Carbonite.com/Kim. That's in addition to the standard 15-day free trial.

You'll want to make sure you're backing up all the right files. Otherwise, you'll be in for a shock when your computer fails. My must-read tip covers the essentials.

Finally, some of the data you're backing up is probably sensitive. You don't want this data compro-mised. I have a great free download that will help you encrypt it.

## SPREADSHEET NOTES & TIPS

### How To Make PowerPoints Interesting

Book Review by Greg West, VP, Sarnia CUG, Canada, and APCUG Advisor. gregory@alternatecloud.com

All of us have had, or were forced, to sit through a PowerPoint presentation wishing we were somewhere else. The speaker was so boring, the presentation slides were cheesy and extremely confusing, and our insides screamed for us to get up and leave the room.

***Beyond Bullet Points*** is designed in such a way that this will never happen when you give your next presentation. This book takes us through the proper steps in creating the most interesting and very definitive presentation possible. Here is where we learn the importance of telling a story with our slides. Layout is another important issue that is fully covered in Chapter 4: ''Planning Your First Five Slides.'' This is where you learn how to grab your audience right away and keep them focused on your presentation.

You will learn why graphics are so important and how they can make or break a presentation. Chapter 8 is where the fun begins as you learn how to add graphics to various areas within your slides. You will learn how to use the graphics you already have on your computer, and how to get graphics from ''Stock Photography Web Sites''.

Your PowerPoint presentation comes together in Chapter 9: ''Delivering Your...Presentation''. The amateur presenters are separated from the professionals. This chapter prepares you for the delivery of your presentation. Here you are shown the basic ground rules for removing distractions, prompting a dialogue and how to enhance your presentation effectively.

A real treat is found in Appendix A where ground rules and checklists act as an overview, ensuring you have created a very professional presentation. Added features: This book comes with website links for ''Companion Content'' with key tools and a bonus Chapter 11, introducing a ''Visual Improv,'' PDF version of the ground rules and checklists. For all who is serious about their presentations, this book is a keeper.

Book Information

Title: Beyond Bullet Points: Using Microsoft PowerPoint to Create Presentations That Inform, Motivate, and Inspire
Author: Cliff Atkinson
Publisher: Microsoft Press / O'Reilly
Print ISBN: 978-0735620520
Released: March 2, 2005
Pages: 330 Dimensions: 9.5 x 7.2 x 0.7 Weight: 1.2 lbs.
Price: $24.99 (publisher's website; prices vary; newer version available)
For more information: https://www.microsoft.com/learning/en/us/book.aspx?id=7125&locale=en-us

## WORD PROCESSING NOTE & TIPS

### A Free Substitute for Microsoft Office

as seen in Big Bear Computer Club Bearly Bytes, March 2012

Microsoft Office is the gold standard for productivity software. It's used by everyone from students to major corporations. That popularity is definitely reflected in the price tag.

What if you can't afford Microsoft Office? Perhaps you just need something for a short-term project and can't justify the investment right now. Good news: There are several free alternatives to Office. Depending on your needs, some work just as well as Microsoft's productivity suite.

LibreOffice is an excellent alternative. It offers six programs, and you'll find most of them instantly familiar.

For example there's Writer, which is a Word clone. Then there's Calc, which is a spreadsheet like Excel. There's also Impress, a presentation program similar to PowerPoint.

Those are the options you're most likely to need. A drawing program, a database program and an equation program round out the offerings. All of these combined make for an excellent replacement to pricier suites.

LibreOffice is also compatible with the most popular document formats. It can read .DOC from Word and .XLS from Excel, for example. That only scrapes the surface of what it offers.

Cost: Free

***http://gofree.com/download/Windows-Software/Home-Office/LibreOffice.php?gclid=CP-k7Zu8560CFUUaQgod7Rx74A***

Systems: Windows XP, Windows Vista, Windows 7, and Mac OSX

## GENERAL INTEREST

### Genealogy

by Pam Rihel LadyGeneo@roadrunner.com

**Five Steps to Doing Genealogy Research Like A Pro**

Posted by Crista Cowan on January 20, 2012 in Ancestry.com Wiki, Research Helps, Searching for Records

If you caught Dan Curtis' Ancestry LIVE broadcast on Thursday morning you know that the topic of the week is Research Like a Pro. (If you haven't watched it yet go ahead. We'll wait for you.)

I've been doing genealogy research professionally for almost a decade now. When clients are paying you by the hour, you learn lots of really great shortcuts to keep you moving along and focused. The big tip I shared on Thursday's episode of The Barefoot Genealogist? (Drumroll, please.)

**Professional Genealogists Create Research Plans**

**1. What do I want to know?**

Be really specific about exactly what it is you are looking for. This helps you stay focused and is the key to the rest of the plan.

*Bad: Where do my Woodruff's come from?*
*Better: Where was my ggg-grandfather born?*
*Best: John Woodruff was probably born about 1831 in Ohio. Who were his parents?*

**2. What do I already know?**

**3. How do I know it?**

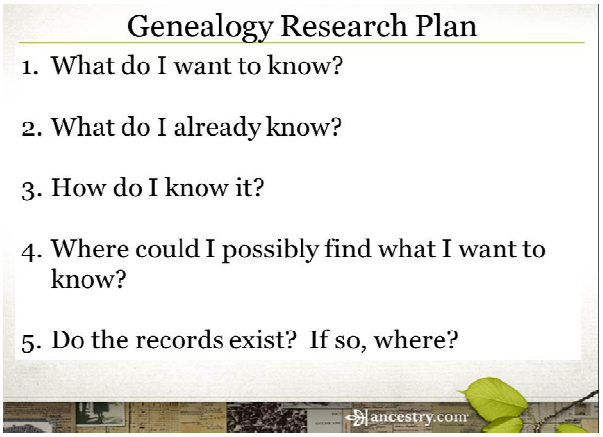
These two questions go together. And, I often bounce back and forth between them repeatedly until I've exhausted everything I already know about the person in question. I also make sure I've recorded everything I know about their spouse and children.

I like to put this information into the notes section of the person profile in Family Tree Maker. I enter the notes chronologically based on the person's life (not based on the order in which I found the records). You can see an example of how I do that at 7:22 in the video.

**4. Where could I possibly find what I want to know?**

**5. Do the records exist? If so, where?**

Again, we have a pair of questions that work well together. Create a list of records you could search - census, military, vitals, immigration, etc. Then do a search in the Ancestry Wiki for the place and record type to see if what you need exists. Also, be sure to check the Ancestry Card Catalog to see if what you want exists ONLINE at Ancestry.com



For those of you who are new to this fun and fascinating adventure called genealogy, I hope you find this helpful. For those of you who've been doing it a while maybe this will give you a renewed focus to break through that brick wall you've been struggling with.

Feel free to PIN this graphic so you have it available to you. Or, you could even print it out and put it near your computer so you make sure not to skip any steps.

*Bonus Tip: Look for a local genealogical society to join. You will find friends who are willing to help and offer fresh perspectives on your genealogy brick walls.*

Until next time - Have fun climbing your family tree...

*Dan Curtis* ***dancurtis@shaw.ca*** *- Written by Dan Curtis - Professional Personal Historian* ***http://www.dancurtis.ca***

## SOFTWARE NOTES & TIPS

### Repair Damaged Files Fast

from Komando.com as seen in Big Bear Computer Club Bearly Bytes March, 2012

We rely on our computers a great deal these days. We expect them to power up, work all day, save our work and then deliver it. Sometimes we even expect them to entertain us for hours.

Every once in a while, something goes awry. Your hard drive may begin failing or you fall prey to a destructive virus. If the damage is severe, your important files might be affected.

This is where File Repair can help. File Repair digs deep into corrupted files and extracts fragments of data. It then creates new, undamaged copies of those files so you can continue using them.

File Repair can fix many file types including Microsoft Office documents, pictures and videos. Keep in mind, there are times where a file is so badly compromised that the data is lost. File Repair can still extract data from it, but it may not be complete.

Note that the download link is far down the left side of the page. You'll need to scroll down to see it. It is in the gray box titled ''Download File Repair.''

Cost: Free www.filerepair1.com
Systems: Windows XP, Windows Vista, and Win 7

### TrueCrypt - Free open-source data encryption software for Windows 7/Vista/XP, Mac OS X, and Linux

By John Langill, Newsletter Co-editor, Southern Tier Personal Computing Club, NY
August 2011 issue, Rare Bits, STPCC Newsletter jlangil1 (at) stny.rr.com

The May 2011 issue of Rare Bits contained an article by Dick Maybach titled ''Cloud Computing'' in which he pointed out the necessity of securing your data via encryption when it ''...is stored on the same disks, uses the same memory, and passes through the same processors as everybody else's.'' And I recall Dave Bilcik voicing a similar warning at the May meeting and also mentioning the program TrueCrypt. It just so happens that I am currently using TrueCrypt and I believe it to be very satisfactory solution whether you need relatively modest security or very tight and sophisticated protection.

TrueCrypt is a software system for establishing and maintaining an on-the-fly-encrypted volume (data storage device). ''On-the-fly'' encryption means that data is automatically encrypted or decrypted right before is loaded or saved, without any user intervention. The entire file system is encrypted; e.g., filenames, folder-names, contents of every file, free space, meta-data, etc. No data stored on an encrypted volume can be read (decrypted) without using the correct password and/or key file(s), or correct encryption keys.

I'm not sure how unique TrueCrypt's approach is but I was nevertheless intrigued by it. The first step is to create a ''container;'' otherwise known as a TrueCrypt ''encrypted volume.'' To my mind, this is somewhat like obtaining a safety-deposit box at a bank.

TrueCrypt provides a ''wizard'' to assist with the task. As at a bank where safety-deposit boxes of various sizes can be rented, the encrypted volume can be created to have as much capacity as you need. For example, it can be a specific portion of a hard-disk, or an entire flash drive or other storage device. Unlike a safety-deposit box, however, you hold the only key... so you need to remember and protect it. And, into the container (the volume) you can store any number of files. If the capacity of the volume is exceeded, you simply create a bigger container.

One of the interesting facets of a TrueCrypt volume is that it has most of the characteristics of an ordinary file. That is, the volume can be moved or copied within the storage areas of a given PC, or to a different PC. The name of the volume can be changed; and the volume can be included in routine backups. It can be transmitted across the Internet; and even into the wild-blue yonder, if you're so inclined. And, even if you have no intention of salting ''the cloud'' with your personal data, what about that minuscule 8- or 32GB flash-drive you carry around in your pocket. The smaller they get, the easier they

are to lose. Wouldn't it be reassuring to have made it an encrypted volume so that whoever finds it won't have an easy time of it when they try to discover the contents of your personal data?

The downside of the file-like characteristics is that, like any file, an encrypted volume can also be deleted and all its content lost (...thank goodness for the Recycle Bin). That would be very bad if done unwittingly. But that's why we do back-ups! Yes? Once a TrueCrypt volume is mounted, the data files it contains can be copied to and from the volume just like they are copied to or from any normal disk; for example, by simple drag-and-drop operations.

Files are automatically decrypted on-the-fly in RAM (Random Access Memory) while they are being read or copied from an encrypted TrueCrypt volume. Similarly, files that are being written or copied to a TrueCrypt volume are automatically encrypted on-the-fly in RAM right before they are written to the volume. Note, however, this does not mean the whole file that is to be encrypted/decrypted must reside in RAM before it can be encrypted/decrypted. That is, there are no extra RAM requirements for TrueCrypt. The following paragraph explains how this is accomplished.

Let's suppose that there is an .avi video file stored on a TrueCrypt volume; that is, the entire video file is encrypted. The user provides the correct password and/or key file and mounts (opens) the TrueCrypt volume. When the user double-clicks the icon of the video file, the operating system launches the application associated with the file type typically a media player. The media player then begins loading a small initial portion of the video file from the TrueCrypt-encrypted volume to RAM in order to play it. While the portion is being loaded, TrueCrypt is automatically decrypting it in RAM. The decrypted portion of the video in RAM is then played by the media player. While this portion is being played, the media player begins loading next small portion of the video file from the TrueCrypt-encrypted volume to RAM and the process repeats. This process is called ''on-the-fly'' encryption/decryption and it works for all file types, not just for video files. The process also ensures minimal impact on processing performance.

Note that TrueCrypt never saves any decrypted data to a disk it only stores it temporarily in RAM. Even when the volume is mounted, data stored in the volume remains encrypted. When you restart Windows or turn off your computer, the volume will be automatically dismounted and files stored in it will be inaccessible and encrypted. Even when power is suddenly interrupted (i.e., without a proper system shut-down), files stored in the volume are inaccessible and encrypted. To make them accessible again, you have to mount the volume by providing the correct password and/or key file.

Of course, as with any unintended power interruption or shut-down, unsaved changes to files are lost because re-encryption of changes occurs only when files are saved to the volume in a normal fashion.

I've only touched on a few of the main facets of TrueCrypt. In addition, TrueCrypt offers a choice of encryption algorithms from which you can select one that will give the degree of security you feel you need. This and other aspects of TrueCrypt are fully documented in an excellent User Guide. The latest version of the free software, Release 7.0a, can be downloaded from the product's home Website at http://www.truecrypt.org, as well as from CNET's http://www.download.com, and other sites on the Web. The User Guide PDF and a more detailed description of TrueCrypt can be found at the product's home web-site.

TrueCrypt is one free program that is, in my opinion, an exception to my general perception of the breed. Of course, the developers gratefully accept donations. In this case, I think they are well deserved.

## HARDWARE NOTES & TIPS

### How to Recover Data from a Dead Hard Drive

By Bryan Lambert, Geeks.com www.geeks.com
Hartford User Group Exchange December, 2011

One of the most dreadful feelings that you can have is having a pc computer or laptop die that hasn't been backed up recently; especially if you have valuable pictures, music, videos, documents or other files on it.

In this Tech Tip we'll take a look at how to recover your valuable pictures from a dead computer.

**Where to start**

Computers are complex machines and when they work right, they are fun to use - but when something goes drastically wrong, it can feel as if your world crashed down around you. If your hard drive is still in working order, there is a very good chance that you'll be able to recover your pictures, music, videos and valuable documents (and other data) simply with another computer; a specialized cable, a screwdriver; and a little time.

To start off, your best bet it to get a specialized USB cable that can plug directly into your hard drive that you'll recover from the dead computer. There are several types, and I'd recommend getting one that can handle both PATA (IDE) and SATA hard drives (the two most common used in consumer computers) as well as 2.5" (laptop) and 3.5" (desktop) hard drives (Geeks.com sells several that run in the $13-16 range). You can also use a hard drive or external drive cases as well - but personally I find the specialized USB cable to be the easiest and most flexible option.

Next, remove the hard drive from the dead computer. On desktops it is usually held in with four Philips screws and on laptops it is usually under an access panel on the bottom of

the computer. Remove any cables and caddies that the drive may have - all you need is the bare drive. Then plug in the USB cable into the hard drive (and a power cable if it is a desktop drive - also provided with the USB cable kit) and then plug the other end of the USB cable into a working computer. The computer will then set up the drive as an external storage device and voil'a! you'll now have access to the files on that drive (provided that the drive is not encrypted or using some type of security feature).

**Where to look**

OK, so the drive is now plugged into your computer and seen as an external drive, now what? You have several options. One option is to simply look for the files on the drive from the dead computer that you plugged into the USB port and copy them onto the working computer. This is my preferred method personally. I like to ''brute force'' my way through the drive with Windows Explorer (or a similar file browsing tool) and manually copy/paste the data from one computer to the other. Another option is to follow a Windows dialog box (that usually pops up when you plug in an external drive) and have it help you copy your data from one computer to the other. If you are manually choosing to ''brute force it'' personal data is usually stored by default in the computers operating systems ''home directory'' for users.

Common Locations for home directories (where <root> takes the place of the drive letter):

1. Microsoft Windows 95-Me <root>\My Documents
2. Microsoft Windows 2000/XP/2003 <root>\Documents and Settings\<username>
3. Microsoft Windows Vista / Windows 7 <root>\Users\<username>

**Other ''What ifs''**

What if the files on the drives are erased? If they are, you can use a free recovery program such as Piriform's Recuva to look for and (hopefully) restore the files. This simple, easy-to-use tool is terrific for recovering pictures from a camera's memory card that have accidentally been erased as well!

What if the hard drive is the reason that the computer died (actual hardware failure)? If the hard drive is the part that caused the computer failure, then you may be out of luck. Yes, there are specialty recovery services that will pull apart the drives data platters and attempt to recover data (and they are usually successful - such services were used, for example, to recover data from the hard drives that were used on computers from the space shuttle Columbia after it broke apart in 2003) but such services are usually very expensive.

**A word to the wise**

Backup, backup, backup! Whether using one of the Internet based cloud services or a separate external hard drive - if you make it a habit of backing up regularly, chances are good that you'll keep the loss of such a failure to a minimum if a computer fails. Of course one of the benefits of using cloud-based backup services is that you can have access to your pictures anywhere you have Internet access.

**Summing it up**

A computer that dies can be a loss - but don't lose hope that your valuable pictures (and other stuff) are gone forever. With a little work, you can retrieve your data off the hard drives from a dead computer!

## USB 3.0 - The Super-Speed Bus

By Andrew Petrovic, Ottawa PC Users' Group, Inc., Canada February 2011 issue, PC News
http://opcug.ca/public/index.htm
opcug-webmaster (at) opcug.ca

I thought that it would be a good idea to introduce to you a new and upcoming development - the USB (Universal Serial Bus) version 3.0, as this technology will become mainstream in a fairly short time.

USB version 1.0 was created in 1996, but was more widely available in 1998 as version 1.1, superseded by version 2.0 in 2000. Over the next few years this will be replaced by version 3.0, already released and now being used by some consumers.

**A quick overview of USB**

The reason that USB was created all those years ago was in order to provide an interface for computers and peripheral devices that was easy to set up and use, as well as being low-priced. Actually, the USB data protocols used are very complex, but fortunately the USB controller chips take care of these details, so users don't have to be concerned. USB is designed to be 'Plug and Play' without the user having to set up parameters such as interrupt requests, addressing, etc. as well as not having to reboot the computer after adding a peripheral.

In USB versions up to 2.0 there are only four wires that are connected: power; ground; data - and data +.

This is the 'A'-type connector usually found on a computer interface or hub:

This is the 'B'-type connector often found on the USB peripheral:

There are various other 'mini' and 'micro' connector types as well.

When we talk about USB components, we call a peripheral that plugs in to a computer port a 'device' and the port and controller associated with the port on the computer is called the 'host'.

Each device has a 'descriptor'. When a device is connected to a computer, the descriptor tells the host what kind of peripheral it is. From the product IDs it provides, the computer then knows what type of driver to load for that device. A driver is a small piece of software that interfaces between a hardware device and the operating system.

Other information passed to the computer includes the device's power requirements; protocol settings; etc. When a

USB device is unplugged, the host instructs the operating system to unload the driver for that device.

As far as the user is concerned, the most important element of the upgrades to the USB technology is the increasing speed of data transfer. The following table shows the differences in data transfer speed between the versions. The theoretical speed quoted by manufacturers would, in reality, not be possible to achieve and is based upon operations that include extra packet transfer overheads, as well as a few other things. The real life actual maximum speed is likely to be between 30% and 60% of the quoted theoretical speed.

Version 1.1 had two speeds, 'Low' and 'Full'. Version 2.0 just bettered the 1.1 version 'Full' speed.

| USB Version | Designation | Theoretical maximum speed |
|---|---|---|
| 1.0 | "Low speed" | 1.5 Mbps = 190 KBps |
| 1.1 | "Full speed" | 12 Mbps = 1.5 MBps |
| 2.0 | "High speed" | 480 Mbps = 60 MBps |
| 3.0 | "Super speed" | 4.8 Gbps = 600 MBps |

Note the difference between Mbps (Megabits per second) and MBps (Megabytes per second). There are 8 bits in one byte, so when comparing speeds take note of which terminology you are using.

**Limitations of USB 2.0**

So if USB 3.0 is appearing on the market, it must be because previous versions are not able to do the job. Well, this is partly true. Version 2.0 will be able to be used for quite a lot of devices for a while, but as peripherals get faster and require faster interfaces, so USB 3.0 will become more desirable to end users. The sort of devices that are likely to require the faster data transfer speeds are external USB disk drives and components that deal with video.

It's not just speed that is a limit. Each USB 2.0 host port can provide up to 1/2 Amp (500 mA) of current to power a device that does not have its own additional power supply. Often this is simply not enough. Some external disk drives may require up to 900 mA of startup current and that is why they are often supplied with a 'Y' cable that plugs into two USB ports in order to feed enough power (for those portable drives that don't use an external power supply).

USB 2.0 data only moves unidirectionally. In other words, data can be sent to a device or from a device but not both at the same time. This cuts down the overall speed attainable.

**Introducing USB 3.0**

Whereas the upgrade from USB 1.1 to USB 2.0 used the same connectors with the same four wires, the upgrade from USB 2.0 to 3.0 is very much different.

Take the USB 2.0 configuration and add another entire set of connectors to it and call it 'Super speed'. This is how USB 3.0 has been created. The original USB 2.0 wires are still in place and the USB 3.0 adds five more wires (two pairs of data wires and a signal ground cable).

This is how the 'A'-type looks (Female - Receptacle), with pins 1 to 4 being identical to the original USB 2.0 specification:

Cables and connectors are backwards compatible as well, so you can plug in a USB 2.0 device to a USB 3.0 port - you just won't get any extra speed advantages because only the USB 2.0 connectors will be used, though the power pins are the same so more available current should be available for USB 2.0 devices.

**How is USB 3.0 better?**

Apart from being fully compatible with previous USB versions, the faster data transfer is quite a dramatic improvement for USB 3.0 compatible devices because of a faster clock control speed; the use of asynchronous signaling for simultaneous sending and receiving; and an interrupt mechanism that does not use the time-consuming polling that USB 2.0 used.

One area where USB 3.0 may fall down is with the length of the cable that can be used. It could be limited to 3 meters if high throughput devices are used, as compared to the 5 meter cables possible with USB 2.0.

The limitation could be overcome using USB hubs or extenders and perhaps fiber-optic cabling might be possible in the future.

**Is it worth upgrading?**

USB 2.0 will likely be around for the next few years anyway, but in time newer computer motherboards will provide USB 3.0 ports as standard.

If you want to try out the technology now, there are add-on adapters available that plug in to a spare PCI-Express slot on your PC and provide two or more USB ports. There are also a few USB 3.0 external disk drives available, as well as hard drive enclosures with USB 3.0 interfaces where you can put in your own internal drive.

If you only have slow devices on your USB connections, it's no great advantage to upgrade. For example, keyboards and mice only require the slowest USB version and will not work any better on faster USB ports.

If you must have the faster transfer speeds for storage or video devices, then you should consider some form of upgrade. There are alternate interface types, such as eSATA and FireWire, but they are a less common interface type than USB and they also require a separate power line, as well as not always being 'hot-swappable'.

Other things that will benefit from the USB 3.0 interfaces are card readers and connections from digital cameras, when transferring pictures to the PC, though not when you plug in

the current 'slower' devices. USB 3.0 thumb drives will be faster on a USB 3.0 interface but the current USB 2.0 thumb drives will be no faster on a USB 3.0 port. Interestingly enough, USB 3.0 thumb drives will be faster on existing USB 2.0 ports because the whole USB 3.0 flash drives had to be redesigned with faster chip access in order to take advantage of the USB 3.0 port speed.

Later versions of Windows and Linux should natively support USB 3.0 at some point. Windows XP will not, but USB interface and peripheral manufacturers should be able to supply suitable drivers for XP systems.

## Lock Your PC With a USB Drive

by Km Kommando <Komando.com>

You can't always be in front of your computer. But stepping away doesn't mean leaving the computer vulnerable. There are easy ways to keep people out of your personal business.

For instance, Windows will lock your computer when you get up. Just click WinKey + L. This preserves your session and brings up the log-in screen. To get back in, you have to enter your password. That works. But there is a better way.

Predator makes locking and unlocking your PC a breeze. You do it with a USB drive. During installation, you designate a drive to serve as your key. Insert it while working. Take it with you when you step away. Pulling it out locks the computer.

Plug it back in to log in. Normally, no password is needed. If you misplace the drive, enter your password to get back in. An alarm will sound if someone enters an incorrect password three times. And it will log any attempts to access the PC while you're away. You'll know if and when someone was trying to snoop.

Cost: Free
Link: www.montpellier-informatique.com
System: Windows XP, Vista and 7

## What does ''firewall'' mean?

By Leo Notenboom, June 5, 2011
Article Source: http://articlesbyleo.com/

The bottom line is that a large class of viruses and other types of malware can be prevented simply by using a good firewall.

What's a firewall? Well, in your car it's the ''wall'' of metal behind the dashboard that sits between you and the engine. Its purpose is to prevent engine fires from roasting you and your passengers.

A firewall for your computer is much the same - its purpose is to keep you from getting burned.

A firewall is at its core very simple: it blocks or filters certain types of network traffic from reaching your computer.

What do I mean by ''certain types''? There's network traffic you do want to reach your computer: like the pages of web sites you visit or the software you might download. And then there's other traffic you might not want like malicious people or computers trying to access your computer remotely or viruses and worms trying to infect your machine.

A firewall knows the difference. It lets the good stuff in and keeps the bad stuff out.

Firewalls can also usually be configured; they can allow you to say ''this kind of connection from the outside is OK''. A good example is remote desktop. A firewall may by default block any attempt to connect via remote desktop. But you can also configure the firewall to allow that type of connection to come through. Doing so you would be able to access your computer from another computer, be it across the room or across the internet. But even though you've allowed one type of traffic - remote desktop - other types of traffic like certain types of viruses are still blocked.

Some firewalls will also monitor outgoing traffic for suspicious behavior.

One characteristic of many viruses is that once you're infected they attempt to establish connections to other computers in order to spread. Many software firewalls will detect and either warn you or simply prevent those attempts.

And that leads to a very important distinction. There are two types of firewalls: hardware and software.

♦ A hardware firewall is just that - a separate box that sits between you and the internet that performs the filtering function. Traffic that is filtered out never even reaches your computer. Even the least expensive broadband router can perform the function of a firewall quite nicely. The downside for a hardware device is that most will not filter outgoing traffic.

♦ A software firewall is a program that runs on your computer. It operates at the very lowest level, as close to the network interface as possible, and monitors all your network traffic. While all network traffic still reaches your machine, the firewall prevents malicious traffic from getting past it and on to the operating system. The firewall prevents your system from actually noticing or doing anything with malicious traffic.

The good news is that all versions of Windows after XP have a software firewall built in, and all versions after Windows XP SP2 have it turned on by default. In fact, the security

center will take steps - perhaps even annoying you in the process - to ensure that the firewall is either turned on or that you're aware of the risks in not having it turned on.

The bad news is that a firewall can't protect you from everything. A firewall is focused on protecting you from threats that arrive via malicious connection attempts over the internet. A firewall will not protect you from things you invite onto your machine yourself such as email, attachments, software downloads and removable hard drives.

But even so, protecting from those network threats is important.

In general, I recommend a hardware firewall such as a broadband router and leaving the Windows firewall turned off. However, regardless of your approach, be it a router, be it the Windows firewall, or be it some other software or hardware solution, some kind of firewall is always a necessary part of keeping your computer safe when connected to the internet.

*Get more free tech help and advice from Leo Notenboom by visiting http://ask-leo.com With over 30 years of industry experience, including an 18 year career as a software engineer with Microsoft, Leo gives real answers to real questions from ordinary computer users at Ask Leo! Subscribe to Leo's newsletter at http://ask-leo.com/leos_answers_*

## RSS Explained

As seen in Big Bear Computer Club Bearl Bytes, March 2012

RSS -- or really simple syndication -- is a labor-saving tool that allows people to tune into information sources that interests them. The information source could be a blog, a podcast, a videocast or any web site that includes RSS feeds.

The value of RSS accrues when you subscribe to multiple RSS feeds. You can then monitor multiple information streams with a minimum of effort. There are many different software tools for subscribing to RSS feeds. One of the most popular is a web site named Bloglines. Some web browsers let you subscribe to RSS feeds. Safari 2.x and Firefox are two browsers that do. Firefox lets you to subscribe to RSS feeds using something called Live Bookmarks. You can also use a Firefox extension named Sage to subscribe to RSS feeds.

RSS's primary value is that it brings information to you without you having to visit multiple web sites. In a knowledge economy, anything that streamlines the flow of information from producer to consumer gives benefit to both producer and consumer. You tune into the information you do want, and tune out the information you don't want.

Some examples of how RSS simplifies peoples' lives:

RSS has invaded every part of our life, but we just don't know it. RSS is an information delivery method that gives added convenience to both senders and receivers of the information.

As an example, RSS feeds can be used by a nonprofit organization to distribute different kinds of information to different people. One RSS feed could be the organization's calendar of events or classes. Another could be a call for volunteers.

A third feed might be information for funders. The more feeds an organization offers, the more narrowly tailored the information delivered to people served by that organization or supporting that organization.

Other examples of RSS feeds:

A used car dealer can have an RSS feed that details newly arrived used cars.

A public library could have an RSS feed of newly purchased books. A police department can have separate RSS feeds for different neighborhoods, giving up-to-date information on safety concerns in each neighborhood.

Information received in an RSS feed can be filtered by keyword and colorized in text. So you have control over the RSS feed. You decide the ways in which that stream of information is going to serve your needs. RSS feeds become immensely useful when people work collaboratively in a wiki. (A wiki is a web page that different people can edit.) Changes to the web page can be monitored via an RSS feed. This allows anyone participating in the wiki to have a clear idea of who is adding the most value to the wiki. RSS allows for better monitoring and gives added transparency to the collaborative process.

There are two kinds of RSS feeds -- static feeds and dynamic feeds. A static feed might be sports scores or the feed from a single blog. A dynamic feed is a stream of information where there is searching going on to pull out specific pieces of information to add to the stream.

It's also possible to combine several RSS feeds into a single new feed. One web site that let's you do that is rssmix.com Why would want to do that? Suppose you live in a metropolitan area with several different li-brary systems spanning several counties. Each library system provides an RSS feed of the events happening within their library system. You'd like to keep track of library events in multiple counties. rssmix.com would let you combine RSS feeds in that way.

# Help Lines

| HARDWAREHELP | Advisor No. |
|---|---|
| Reformat Hard Disk, FDISK | 2,4,5 |
| Install Hard Drive, CD-ROM/RW | 2,4,5 |
| Install Video Card | 7 |
| Partitioning Hard Drives | 2 |
| Internet/Intranet | 6,7 |
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| MPs Files, WMA Files, WAV Files | 3,4 |
| Burning CD's | 3,5 |
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| SOFTWAREHELP | Advisor No. |
|---|---|
| Win 95/98/ME/2K/NT/XP | 2,3,4,7 |
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| Microsoft Word | 2,7 |
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| WordPerfect | 1,7 |
| Norton/Symantec AntiVirus | 2,3,6,7 |
| Norton System Works | 2,7 |
| CompuPic / CompuPic Pro | 3,7 |
| Winzip, WinRAR | 6 |
| Ccleaner | 3,4 |
| Outlook, Outlook Express | 2 |
| Internet Explorer | 2,7 |
| RegSeeker | 3,5 |
| Instant Messaging | 2 |
| Installing Software after Reformatting | 5 |
| Deleting Files; Wiping | 6 |

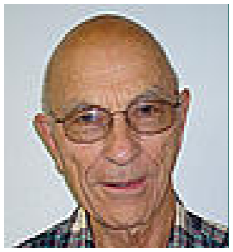
**ADVISORS**

| Name | Phone | Hours |
|---|---|---|
| [1] Fred Shelton | (253)752-0120 | Variable |
| [2] Bob Henkel | (253)537-6732 | 8A-8P any day |
| [3] Tom Stepanek | (253)922-7939 | 7-9P Mon-Fri |
| [4] Carl Tenning | (206)824-3843 | 6-9P Mon-Fri |
| [5] Oclad Wesley | (253)212-0352 | 6-9P |
| [6] Bob Thomson | (253)752-5582 | Variable |
| [7] Ray Mills | (360)692-7568 | 6-9P Mon-Sat |

## TOG OFFICERS

**President: Carl Tennimg**

**Newsletter Editor: Robert Thomson**



**Treasurer: BoB Henkel**

**Librarian: Tom Stepanek**

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**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) & **$24** to Bob Henkel., 10613 25th Avenue E., Tacoma, WA 98445. Make checks payable to TOG

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

Member's Name:_____

Address:_____

City:_____ State:_____ Zipcode:_____Plus Four _____ Country: _____

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

## TACOMA MEETING

When: **Mon 9 Apr 2012 -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

## TOG BOARD MEMBERS



**TOG Web Site: http://www.toggle.org**

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

**Corporate Sponsors:**

**Raymond Mills & Associates**
**www.rm-a.com**

## 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.

**Program Presentation**

No program has been announced at press time. But as usual members will bring problems and discoveries that they have encountered while using their computers and are sure to lead to interesting discussions. Come and bring your questions.