TOGGLE

THE MICROCOMPUTER TURN (ON)

MONTHLY NEWSLETTER FOR TACOMA-SEATTLE AREA MICROCOMPUTERUSERS

Volume 31 **Number 12** **May 2011** **Issue #336**

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In *iPV6 is Coming* the author discusses the new Internet Protocol Version 6 to replace IPv4. According to the article ''It will have 128-bit addresses which will provide for a possible of 340 trillion, trillion, trillion addresses (3.4 x 10^38).'' whereas the existing iPV4 could access only a soon to run out 4.3 billion addresses. Read all about it.

In *Exclusive Interview! How will the change to ipv6 affect you?* , the author Linda Gonse asks the question of Jeri Linder McNeill, Provisioning Engineer at the Packet Clearing House, San Francisco.

In *How to Publish a Book* the author describesthe steps he went through to self-publish a book. He mentions several aids to publishing that are available to a budding publisher.

In *Are You Guilty?* the author tells us again to clean up our eamails before forwarding them. You've probably heard these before but didr you do anything about it?

In *Make money online! Fire your boss* the author points out that this is not automatic. You still have to take action for things to happen to your advantage. You need to be organized and have a plan. Worth a read if you are contemplating such an action.

In *You Have Reached a Voice Mailbox ... Beep* the author complains of the sometimes obscure and puzzling messages left automatically by some phone systems when the callee is not available. He notes that these obscure messages do not seem to improve because the phone subscribers themselves are not subject to endless sequences of confusing questions - their callers are.

In *ClipCube - A Better Copy & Paste* the author point out the advantage of ClipCube. It keeps track of everything you've copied. Could you ude this? Take a look.

In *Erase Data From Your iphone* the author shows how to erase personal data from your cell phone when you give it to another person or charity.

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In *Windows 7 Service Pack 1* the author discusses waht's involved in activating Service Pack 1 for the Windows 7 operating system.

In *Should You Encrypt Your Hard Drive?* the author says: ''It's true that encryption will make the data on your hard drive a lot more secure. But encryption takes a toll on system performance, so you have to strike a balance between security and usability. '' He then suggests limiting this action to specific areas. Read and learn.

In *3 ways to help you identify a security tool virus on your computer* the author gives the addresses of a website expanding on this short article.

Hardware

In *USB 3.0 - The Super-Speed Bus* the author describes the latest version of the Universal Serial Bus which is about to be implemented.

In *Paper Flash Drives - a Concept* the author gives us a brief glimpse into the future at a concept that may or may not come to fruition.

This Month's Program

Bob Henkel will discuss his experiences with a new photo management application. The Program Presentation is called::

A New Slide/Film Scanner

COMMUNICATIONS NOTES & TIPS

iPV6 is Coming

by Cal Esneault, Cajun Clickers president
http://cccclinuxsig.pbwiki.com
from Orange County PC Users Group newsletter - Apr 2011

Canonical (Ubuntu Linux) and Google recently announced they would participate in a 24-hour trial of IPv6 on June 8, 2011, along with Facebook, Yahoo, and others. This means is that some of the big names in open source software will be involved with the new Internet Protocol, version 6 (IPv6) which will be needed to replace the current Internet Protocol, version 4 (IPv4).

To get to an Internet address, we usually type in a name, such as Clickers.org or Google.com. Software then goes to a distributed database from a Domain Name Server (DNS) and uses a table to translate this into a 32-bit numerical identifier. The identifiers are split into four 8-bit segments. Since 8 binary digits (bits) can span the range from 0 - 255, we sometimes see these addresses as the decimal equivalents separated by periods. For example, **192.168.1.2** is a typical address for our internal networks when using routers. If we use the last ''block'' (last 8 bits), we could theoretically have 256 computers in this network. The total number of distinct addresses in IPv4 is **256 x 256 x 256 x256 = 4.3 billion**

When the Internet first started, no one could conceive that more than 4 billion addresses would be needed, but the need for each home network and each mobile phone to have an address is straining that concept. Recently, the last big ''blocks'' were issued to area centers for distribution. The problem is not as bleak as it may seem since many addresses can be issued temporarily, some early users took more than they really need and can give some back, and only one address is needed for a private network which handles many computers within its structure. Some believe that we will run out of freely available addresses by the end of 2011, and that new addresses will have to wait for an old one to be freed up.

Internet designers have been working on the new IPv6 protocol to solve issues with the old system. It will have 128-bit addresses which will provide for a possible of 340 trillion, trillion, trillion addresses (3.4 x 10^38). (*Approximately 340 undecillion-LG*) This at first seems silly today since each person on earth could have trillions of addresses, but it becomes more reasonable when you realize that any electronic device in your home (which will soon be a computer) and any device in a factory or automobile could have a unique address for control purposes. Also, it is hoped this will be sufficient for a very long time so that the change will be permanent in even our grandchildren's lifetimes.

The addresses for IPv6 will be split into eight 16-bit units. Since the decimal number for each unit is large (2^16 = 65,536), the addresses will be in hexadecimal notation (a = 10, b = 11, ... , f = 15). An example address might look like **fe80:0:0::200:f8ff:fe21:67cf** where fields are separated by a colon, leading zero's can be omitted, and blank fields can be represented by multiple colon marks. There will be a protocol which allows current IPv4 addresses to be contained within the new IPv6 address. If all works as hoped, we wont care since our DNS resources will fill in numbers for us when we type in Clickers.org, etc., (or TOGGLE.ORG - ed) just like it happens today.

Modern operating systems (Windows, Mac OS, Linux, BSD) have already been configured to allow for IPv6 protocol. However, your current router and your ISP (Internet Service Provider) equipment may not be ready. In complex computer networks, all of the interactions between equipment and older software are not sufficiently known. Therefore, the test on June 8 will be the first of probably many to debug the issues which will have to be addressed. A similar situation was envisioned when we moved into the 21st century (known as the Y2K issue, where ambiguity between dates could occur since early software only used the last two numbers for years). In that case, the situation was handled well and none of the dire predictions about airplane crashes and business shutdown came to pass. It did, however, take a lot of work and effort to prevent chaos. Will IPv6 be a big event, or just a problem for computer professionals? We don't know yet, but open source folks are in there with everyone else to help keep our systems functioning.

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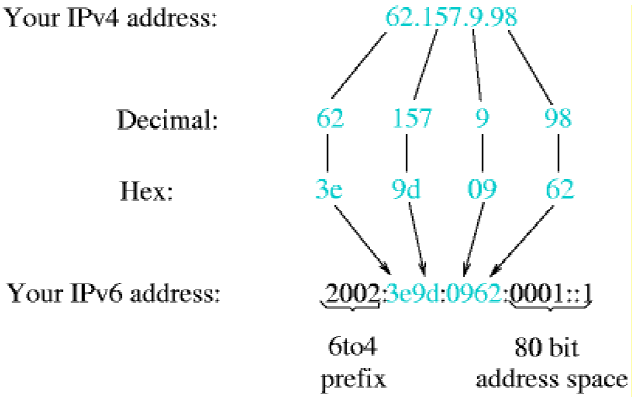


Exclusive Interview!

How will the change to ipv6 affect you?

by Linda Gonse from Orange County PC User's Group newsletter April 2011

How will we consumers know if our provider has made the change to IPv6?

IPv6 is entering the mainstream consciousness now that all the IPv4 Internet addresses have been handed out. A new protocol, IPv6, has to be in place running parallel to IPv4, in order for new addresses to be available.

''This is what is creating the myriad of technical issues that have to be overcome. It's easy to set up something new, it's really hard to transition to something new without any down time,'' said **Jeri Linder McNeill, Provisioning Engineer at the Packet Clearing House, San Francisco.**

She has graciously offered to answer our questions, provide more background on the protocol, and explain how the changeover will affect users. She is qualified to discuss Internet protocol through her work at the Packet Clearing House, ***www.pch.net***. It is a non-profit research institute that supports operations and analysis in the areas of Internet traffic exchange, routing economics, and global network development.

LG: Windows Secrets just published an article titled Caution: Bumps in the road to IPv6, by Woody Leonhard, ***http://bit.ly/gPXIHO***. Does this sound ''right'' to you? Do you have anything to add to this?

JLMN: Yes it sounds right, and my addition is basically as a consumer you don't have to worry about it anymore than you worry about your IPv4 address. Your provider will resolve this, and you shouldn't even really have to worry.

As for buying IPv6 capable ''routers'' - you should look for consumer gear that states it's capable of supporting IPv6 more for the fact that those companies deserve peoples purchases over the companies that are ignoring the new developments. Again, in all likelihood, this will be a transparent change to you.

As for there being ''No more'' IPv4 addresses-yes there are none left available to allocate to the Regional numbering entities, but those entities themselves still have numbers. To continue with the telephone number comparison, imagine that the last block of phone numbers was just allocated to MCI/Sprint by the FCC. That doesn't mean the last IPv4 address has been handed out by the consumer agencies like MCI/Spint or AT&T. They have more to hand out, for now, but they are a finite resource.

Additionally, it's important for consumers to push their providers to support IPv6. Providers have spent many years ignoring this standard (over ten based on my count), because it requires a great deal of technical and monetary investment, which affects their profit margins. That's why it's worth your efforts to support those companies that are focused on getting this working at the consumer level.

LG: I didn't know that providers could have been making changes - for years yet! - and did not. That's not good.

JLMN: It's very common. A bunch of 'the Internet' still runs on routers that were new in 1997. Seriously. In 1999 all the sys admin conferences were pushing us to learn IPv6, or get left behind. Yes, 1999.

LG: If, as you said before, ''Your provider will resolve this, and you shouldn't even really have to worry,'' how do we consumers know if the provider has made the change to IPv6? Will we only know if we call them or buy a router that is IPv6 ''capable.''

JLMN: The best way is to follow the news and events about IPv6 deployment like this: ***http://isoc.org/wp/worldipv6day/*** And here's where you can test your IPv6: ***http://test-ipv6.com/*** Probably really good stuff to include in your newsletter.

LG: Won't providers like Time Warner and Comcast be among the first to make the changes?

JLMN: No, they are the last, because of the way the provision users. They have to oversell/oversubscribe to make a profit because of the rates they charge are so low... so converting something that they have already pushed to the limits with IPv4 is pretty damn hard. They've been talking about some very interesting kludges at the tech conference I attend (NANOG). This one in particular: ***http://bit.ly/elYSzA*** (It's very techie, but my point is it's a huge problem to solve now, had they solved it before broadband was widely deployed, it wouldn't be an issue. Remember, everyone was on dial up until about 2003.)

What is ipv6?

Internet Protocol Version 6 (IPv6) is a network layer protocol that enables data communications over a packet switched network. Packet switching involves the sending and receiving of data in packets between two nodes in a network. The working standard for the IPv6 protocol was published by the Internet Engineering Task Force (IETF) in 1998. IPv6 was intended to replace the widely used Internet Protocol Version 4 (IPv4) that is considered the backbone of the modern Internet. IPv6 is often referred to as the ''next generation Internet'' because of it's expanded capabilities and it's growth through recent large scale deployments.

The explosive growth in mobile devices including mobile phones, notebook computers, and wireless handheld devices has created a need for additional blocks of IP addresses. IPv4 currently supports a maximum of approximately 4.3 billion unique IP addresses. IPv6 supports a theoretical maximum of 2128 addresses (340,282,366,920,938,463,463,374,607,431,768,211,456 to be exact!). Recent advancements in network technology including Network Address Translation (NAT) have temporarily lessened the urgency for new IP addresses, however, recent estimates indicate that IPv4 addresses could be exhausted as soon as 2012.

More at ***http://whatismyipaddress.com/ip-v6*** or watch this short video ***http://www.youtube.com/watch?v=Dx0GRDIkaNE&feature=autofb***

How to Publish a Book

Evan Williams <ewilliams@collaboron.com>, ACGNJ

Perhaps you have written a book that you wish to have published. Self publishing a manuscript is not hard nor is it as unpopular as it used to be. Here is how I published a book entitled ''Building Consistent Websites, A Mathematical Approach Using Trees''. Admittedly there are a lot of different ways to publish a book.

Once you have written or are writing and have dreamed of how your book will look, a good first step toward self publishing is to get an ISBN number, an International Standard Book Number. Bowker.com (Bowker.com) is authorized to issue these numbers, which you need to sell your book. Bowker.com runs myidentifiers.com, where $125 will purchase this identification code for you and your publishing company. Your Company can be a sole-proprietorship registered under your own name, as is my company, New Holland Press (***www.newhollandpress.com***).

The ISBN number is not a Library of Congress number, which may be more difficult to obtain, nor is it a copyright, or a trademark for your publishing company. The nice thing about getting your own ISBN number, is that you maintain ownership of your book, or at least don't have to untangle a lot of legal. If you get your own ISBN number as a publisher you will have to prepare and print your book yourself. But if you are willing agree to some necessary terms, and understand them, a company like Author House (***www.authorhouse.com***) or Lulu (***lulu.com***) will help you to publish and print your book online.

I used LaTeX (a document preparation system for typesetting ***http://www.latex-project.org/intro.html***), which is favored by a lot of technical people to prepare technical books. Then I called Bookmasters in Ashland Ohio and they printed it. I heard about Bookmasters from their direct mail campaign when they targeted me after I had gone to bowkers.com. How is that for good marketing? I am very pleased with the 80 page hardcover they printed for me, their support and their help.

Regardless of how you prepare your book (and Adobe InDesign may be a lot easier and nicer to use that LaTeX), and who prints it, it seems to me as if .PDF's (Adobe's Portable Desktop Format), that can be read in Adobe's free Acrobat Reader, is the lingua franca of publishing these days. If you really need to get your book out, why not create a .PDF and email it to your readership?

This brings up another topic - electronic publishing on the Kindle and the Nook, or iPad for that matter - which is something I haven't learned yet, partly because I don't have one of those devices. I have however circulated my .PDF and will send you one if you send a note to:
editor@newhollandpress.com.

Finally you still need to finance all of this. Depending on how you go about it your budget may not need to be that much - on the other hand you will still have some expenses. But like sales and marketing of your book, that is a different topic.

Are You Guilty?

By Frank Varano

I get emails constantly from people who put all their addressees in the To: field. And every time I see that, I shudder to think of the harvest a Spammer could make with all those exposed email addresses. I even see email forwarded several times with a new set of addresses nicely ready for harvesting.

So? Are you guilty? I personally think that the To: box should be abolished to force people to put all of their addresses in the Bcc: box. I've sent emails to 'offenders' hoping that I can start a snowball effect but to no avail.

The Bcc: field is available in every single email client Outlook Express, MSOutlook, Windows Live, Yahoo, Gmail - all of them.

There is no excuse on that account. I have a suspicion, however. Since I get called upon often to help others (especially novices) I watch how they learn. They know the Bcc: field is there because I show them. But they get so involved (and entrenched) in the most elemental procedure for sending an email that they only see the To: field.

True to my basic nature, I tried to find an analogy in real life as to why people do not use the Bcc: field. Here is what I came up with. Everybody can walk. We learn walking as early as 2 years old.

Later on we learn to run also and even jump. But for many walking, running and jumping is their limit to their mobility efforts. Yet, some become dancers and there are all kinds of dancers and some become gymnasts. Dancers use a more sophisticated means of mobility. Many cannot dance, no matter what. A lot of us dance to some extent. Some achieve stardom by dancing or gymnastics.

It is a far stretch to link the Tango to the Bcc: field. But unless one makes an overt effort to ferret out the Bcc: field, (if it is not obvious) he will not use it. His Internet usage is limited to the most elemental part: He clicks on the To: field and selects an addressee and that's it. He may be able to chew gum at the time.

What is worse is that some will have the address list handwritten on a piece of paper!. I've seen it all. I think that psychologists should use the computer for IQ testing.

Case Studies

One 'client' I have is a worst case of what I talked about in the left column. However, in this case, the learning process is understandably badly impaired by physical and health problems, like a stroke, or poor vision and very poor manual dexterity. Even arthritis.

In such cases (except for vision problems) I use a technique that I used for training cats long ago. I am not saying that the client has the level of intelligence like a cat. All animals can be trained to do things. The techniques vary with the different animals.

In the learning process, if you do something once, you may remember it at least for a short time. If you do it again much later it is almost like learning it all over again.. However, if it is

repeated immediately the client will retain it for a longer time. Repetition is the key.

I singled out people with vision problems. One client has macular degeneration and has great difficulty seeing small print or even finding anything on the screen. That exasperating wait interrupts the learning process because there is insufficient continuity between iterations of the actions being learned.

Lack of manual dexterity (either on the keyboard or mouse) is the other problem which interferes with learning. Anything which delays the repetition interferes with the learning process, badly.

You will not believe this one. I have a client I have never met. I deal with him on the telephone. He has macular degeneration. It is so bad he has to call his wife to read the screen. He is doing the computer work; she is reading the screen and I am on the telephone guiding him through her. That goes on for hours. Because of the lag times between actions, learning is difficult

Make money online! Fire your boss

by Jason Mills, Durham Personal Computer Users' Club

Have you heard this one: Make money online! Fire your boss. Work from home, when you want, with your computer in your underwear. Wouldn't you like to work for just a few minutes a day, travel, and have things that we only dream about?

Is it that easy? Even the fastest way to do it, will not happen without a lot of effort on your part, regardless of what the internet advertising would have you believe. Interestingly, there are a couple of reasons why people either fail in this business, or do not take the first step into it to begin with.

Firstly, one must take action. This is a huge problem for many as unfortunately, due to the over-abundance of advertising leading people to believe otherwise. You will not get rich overnight and quit your day-job tomorrow. Sitting around in your underwear and only doing 20 minutes work each day by pressing a couple of buttons, is certainly achievable, but first you have to learn how it all works. If cut-and-paste is still beyond you, your learning curve is going to be somewhat steep before the money miraculously starts flooding the bank account.

Secondly, human nature cannot be dismissed in this cause to failure, as the majority of people will be wanting the easy way out, if not have everything done for them, believe me, this will not happen. Because you are your own boss and there is no clock to watch, there can be a tendency to become easily distracted. Then again there is the opposite, if the desire to succeed online is strong, it is easy to work around the clock.

Having said all that, be assured, it is possible to make a more than decent living online. However, it must be treated as a business; this is no hobby if you want to make money online.

Making a living online working from home, is still basically the same as making money through traditional methods ie: you are providing something of use to others, and you get compensated for what you provide. Remembering you need to provide something of value so you establish a long-term relationship with your customers, which are like everybody else on the Internet. Providing something of value is in fact a necessity, when you consider the competition. We are not talking about just competing shop owners in one town, or even city - we are looking at the rest of the entire Internet business world. There are millions of competitors and competing websites and businesses.

So, how do we offer something of value in order to get more than our fair share of traffic to our offers? Well, this can be information, on any subject. The trick is to research the subject, or get someone else to do the research, and offer up to data, relevant information, not some fluff or nonsense; the internet is already overflowing with garbage. There is an entire other world on the internet offering purely information, this is information marketing, where for a price you can acquire relevant information on any subject, with the rights to re-sell it to your prospective customers. This information can come in the form of downloadable books and magazines, videos and software; the list is endless and limited only to the imagination.

Offering people valuable information, or usable information, is what will have them returning as repeat customers. But just like any business, you must first get the prospective customers trust, and this takes time.

None the less, an online internet business is an achievable goal provided one puts the time and effort, and takes action, to make money online.

After you have decided on a product line, stuff to sell, all that you need is a domain name and a hosting provider. The software that runs your online shopping cart is free. I use Zen Cart. ***http://zencart.org/***

''Zen Cart(TM) truly is the art of e-commerce; free, user-friendly, open source shopping cart software. The e-commerce web site design program is being developed by a group of like-minded shop owners, programmers, designers, and consultants that think ecommerce web design could be and should be done differently.''

''Some shopping cart solutions seem to be complicated programming exercises instead of responding to users' needs, Zen Cart(TM) puts the merchants and shoppers requirements first. Similarly, other shopping cart software programs are nearly impossible to install and use without an IT degree, Zen Cart(TM) can be installed and set-up by anyone with the most basic web site building and computer skills.''

''There are hundreds of shopping cart programs available, but none come close to offering the level of options, features and support available with Zen Cart(TM). Even the commercial programs have a hard time competing.''

There are hundreds of templates available and a large support community if you need help. Or you can always hire a designer to help you out further.

You Have Reached a Voice Mailbox ... Beep

by Cass Lewart, ACGNJ

Modern automation would be great, if only it were used with the consumer in mind. A friend of mine recently subscribed to a new high-tech phone service with innumerable options and features. When I called him and the line was busy I heard instead of the familiar busy signal, the cryptic announcement ''You have reached a voice mailbox ... beep''. Did I dial the right number? What am I supposed to do with a voice mailbox?

With all the information available to the phone company it would be just as easy to announce to the caller: ''Number 555-123-4567 is busy, please leave your message after the beep''. As I am a programmer, I know how easy it would be to implement such a meaningful message instead of a cryptic one.

In another recent phone call to schedule an appointment at a nearby location, I was prompted for my zip code. Then I was treated to an endless list of locations and submenus not related to my zip code.

The problem is that most companies respond only to customer complaints when the customer threatens to switch to a competing product. Unfortunately, most consumers are overwhelmed by the marketing hype, and are not technically savvy or vocal enough to demand a better product.

When providers of software stopped printing user manuals, did many people complain? A modern operating system has many features that would be useful to consumers if they would be aware of their existence. Without even rudimentary printed documentation such features are only known to a few techies.

Apple and other manufacturers started putting rechargeable batteries into all their portable products with a 1-2 year lifetime and no easy way to replace them. Without a working battery, portable products are useless. To replace a battery you have to ship the product to the manufacturer and attach a hefty fee. How can you beat it for planned obsolescence? Still, hardly anybody complained.

Well, not all is lost. I recently called my doctor and instead of a litany of automated prompts I heard a human voice, a live person who took care of me in a few minutes. Although in a recent Jeopardy game, the Watson computer won over live contestants, there is still a place left for us humans.

ClipCube - A Better Copy & Paste

by Komando.com From Bearly Bytes

Copy and paste is the best innovation in computers since the microchip! Ok, that's a bit of an exaggeration. But it is difficult to overestimate the value of copy and paste.

I think I use this handy feature at least 100 times a day. It's such a productivity booster. But as great as it is, it could still use some improvements.

It would be so much easier if your computer remembered what you've previously copied. Thankfully there's ClipCube. It keeps track of everything you've copied.

Now you can repaste anything you've previously copied. It's great for keeping track of Websites, too. You can copy the link to the site. When you need to revisit the site, you can find the exact address in ClipCube.

ClipCube is a portable application. You don't have to install it to use it. But it may be marked as a virus by your security software. Don't worry. It's safe to use.

We'll give you the tools you need to succeed!

Cost: Free
Systems: Windows XP, Windows Vista, and Windows 7
http://www.clipcube.wikispaces.com

Erase Data From Your iphone

Source: http://www.tipb. com

Interested in selling or giving away your old iPhone, iPod touch, or iPad but need to know how to make sure you've erased all your personal information from the device first? Luckily Apple makes it easy to securely wipe all your data. Although we highly suggest performing a full firmware restore and setting up your iPhone, iPod touch, or iPad as ''new'', if you're not near your computer you can still get the job done:

1. Tap the 'Settings' icon
2. Tap 'General'
3. Scroll down to the bottom and tap 'Reset'
4. Tap 'Erase All Content and Settings'

If you have a passcode setup, you'll have to verify your credentials before being asked one last time that you're positively sure you want to dispose of everything on your iPhone. The process can also take some time depending on how much music, video, apps, etc. you had stored on the iPhone, and Apple is writing over the data multiple times for security's sake.

Once it's done you're good to give away or sell your iPhone, iPod touch, or iPad without having to worry about anyone getting into something you may have left behind.

OPERATING SYSTEM

Windows 7 Service Pack 1

by Chris Taylor, Ottawa PC News April 2011

On February 22, 2011, Microsoft released the first service pack for Windows 7 (SP1). I immediately received a lot of questions from people asking me if I think they should go ahead and install it.

In the universal answer to all IT-related questions, ''That depends.'' I generally encourage a bit of caution with Windows service packs. They basically rip out the entire guts of Windows and replace them. There is little reason to rush out and install them. There are lots of guinea pigs out there willing to install service packs. I figure, within a month or so, a few million people will have installed the service pack. If I have not heard of major problems by then, it is probably safe to go ahead.

As an aside, I say this when I updated the BIOS on my new netbook 2 days before going on a trip where it was really important for me to have a working computer! It worked. Whew.

Microsoft will continue to provide security updates for the Release to Manufacturing (RTM) version of Windows 7 for another 2 years. So from a pure necessity point of view, you have a long time to decide to update. There are a few new, non-security, fixes in SP1. If you want these, the only way I know to get them is to install SP1.

What's new?

The main thing about SP1 is that it rolls up all the fixes released at Windows Update so far.

Microsoft highlights very little that is new in SP1, mentioning improvements in:
- reliability when connecting to HDMI audio devices
- printing using the XPS Viewer
- restoring previous folders in Windows Explorer after restarting.

There are other fixes noted in the detailed documentation Notable Changes in Windows 7 and Windows Server 2008 R2 Service Pack 1.doc but, unless you understand things like Support for Advanced Vector Extensions (AVX) or SP1 introduces a number of key enhancements to improve support of recently introduced storage devices with a 4KB physical sector size (commonly referred to as ''Advanced Format''), the above list seems to cover what most people are going to be interested in.

Getting SP1

The most efficient way to get Service Pack 1 is from the Windows Update site. Just click on Start | All Programs | Windows Update. Service Pack 1 will be listed as an Important Update. The update will not be selected by default so you have to select it. The size of the download will depend on your particular configuration. If you are running 32-bit Windows 7, the download may be as small as 44 MB. The 64-bit version may be as small as 74 MB.

If you have several computers to update, you might consider downloading the entire Service Pack 1 locally once and then running it on each of your computers. The 32-bit version weighs in at 537 MB. The 64-bit version is 903 MB.

You can also order Service Pack 1 on DVD at http://go.microsoft.com/fwlink/?LinkId=208642. The DVD is free, but the shipping will cost you $10.

Arm yourself with info

A service pack is a big deal. It is worth taking a bit of time to check into it. A good starting point for information about SP1 is http://support.microsoft. com/kb/976932. As well, the web site http://windows.microsoft.com/installwindows7sp1 has lots of details that are worth reading.

Before you install

Once you have decided to go ahead with SP1, there are some additional things you should do.

Google for something like Windows 7 Service Pack 1 problems to see if anyone else has been experiencing problems that might affect your installation. Make sure you have enough disk space available;
- 32-bit from Windows Update - 750 MB
- 64-bit from Windows Update - 1,050 MB
- 32-bit from downloaded version - 4,100 MB
- 62-bit from downloaded version - 7,400 MB

Back up your computer. While I think the process should go smoothly, I am all too familiar with the refrain, ''That wasn't supposed to happen!''

Make sure your anti-virus is up-to-date and consider running a full scan of all your hard drives before beginning. You don't want some piece of malware to interfere with the process.

If you are updating a laptop, make sure you are plugged in. Running out of juice halfway through a service pack update would be a bad thing!

Reboot your computer just before updating. Don't run any other programs prior to updating to Service Pack 1. Probably not really a necessary action, but I like to minimize the chance that anything will interfere with a service pack update.

Microsoft notes, ''Some antivirus software might prevent SP1 from installing, or might slow down the installation. You can try temporarily disabling your antivirus software. If you do so, be sure that you're aware of the risks involved, and be sure to re-enable it after the service pack is installed.'' Personally, I do not recommend disabling anti-virus.

Count on the process taking at least 30 minutes.

Should You Encrypt Your Hard Drive?

by Bob Rankin, Internet Tourbus

It's true that encryption will make the data on your hard drive a lot more secure. But encryption takes a toll on system performance, so you have to strike a balance between security and usability. Laptop and removable drives are most vulnerable to theft, and therefore are prime candidates for encryption. USB thumb drives are particularly prone to loss, and can be encrypted just like any other drive. Desktop computers are less exposed to theft. Desktops in homes are probably least in need of encryption protection. Of course, only you know what data is stored on your home computer and what might happen if it gets into the wrong hands.

Hard drive encryption software encrypts data on the fly. That is, data is encrypted as it is written to disk and decrypted as it is read from disk. The CPU cycles required to encrypt and decrypt data are system overhead that detracts from other operations. To minimize this per-formance hit, you should encrypt only data that needs protection.

Application software, the operating system, and user settings seldom need to be encrypted. It's the data generated by applications that is most sensitive. So it is best to partition your hard drive into two or more logical drives, one for sensitive data and the other for non-sensitive data. Encrypt only the drive (partition) that will store sensitive data. Of course, you must make sure that your application software saves and reads data only from the encrypted drive.

Free Encryption Software

BitLocker Drive Encryption is an encryption utility built into the Ultimate and Enterprise editions of Microsoft Windows 7 and Vista, as well as Windows Server 2008. By default, BitLocker uses 128-bit AES encryption. BitLocker encrypts logical drives, which may span more than one physical drive. It's a free tool that does a good job of protecting data.

TrueCrypt is a free, open source encryption utility. It creates a virtual encrypted disk and mounts it as a new drive letter, allowing you to use the virtual disk as if it was a real drive. TrueCrypt works over networks and can encrypt removable media as well as hard drives. Performance is maximized by TrueCrypt's use of ''parallelization and pipelining'' so that read/write operations happen almost as fast as they would on unencrypted media.

Modern Intel processors support hardware-accelerated AES encryption, which can be 4 to 8 times faster than software-only encryption schemes. BitLocker and TrueCrypt can take advantage of hardware acceleration if the processor supports it.

Individual files can be encrypted using the Encrypting File System (EFS) service built into professional editions of Microsoft Windows. One of the benefits of EFS encryption is that only users who know the decryption key can access EFS-protected data. Under BitLocker, anyone with administrator rights can decrypt BitLocker-protected data.

Personally, I believe that encryption is overkill for most users. It's a security measure that should be reserved only for the most vulnerable data and disk drives. If you travel with a laptop, or you deal with confidential client files, encryption might make sense for you.

From the Internet TOURBUS, Vol 15, Number 57, 15 Mar 2011.
To subscribe go to: <http://internettourbus.com/tickets.html>

3 ways to help you identify a security tool virus on your computer

Submitted by Mike Lyons, ORCOPUG president

There is no doubt that quality security tools can be a boon to your PC's security. A good antivirus and firewall can protect you from most threats and do so without being an excessive drag on system resources. Going without is possible, but risky, as any mistake made on your part could easily result in infection.

Unfortunately, those who want to spread malware know that people want to protect their PCs and have created a weapon that exploits it - the security tool virus. This is a threat that has been around for some time, but continues to be an issue, as the people who tend to download a security tool virus are also usually people who don't have a way to detect it.

Let's take a look at some common traits these malware threats possess that blow their cover - the news clips from members.

Security tool viruses use aggressive fear-based advertising such as this one, that pop-up on your screen image (shown) is one way. Read about the other methods and view the screenshots at ***http://www.makeuseof.com/tag/identify-security-tool-virus/*** or ***http://bit.ly/gtcIJw***

HARDWARE NOTES & TIPS

USB 3.0 - The Super-Speed Bus

by Andrew Petrovic. Ottawa PC News, February 2011

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.

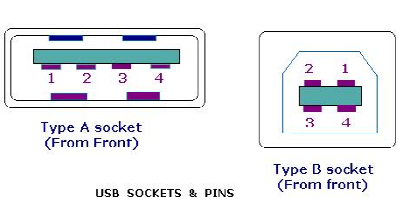
USB version 1.0 was created in 1996, but was more widely available in 1998 as version 1.1, superseded by version 2.0 in 2000. Over the next few years this will be replaced by version 3.0, already released and now being used by some consumers.

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 (Mega bits per second) and MBps (Mega bytes 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 speedsare 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.

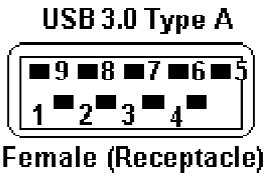
Introducing USB 3.0

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 æSuper speedÆ. 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, 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 signalling 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 metres if high throughput devices are used, as compared to the 5 metre cables possible with USB 2.0.

The limitation could be overcome using USB hubs or extenders and perhaps fibre-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'.

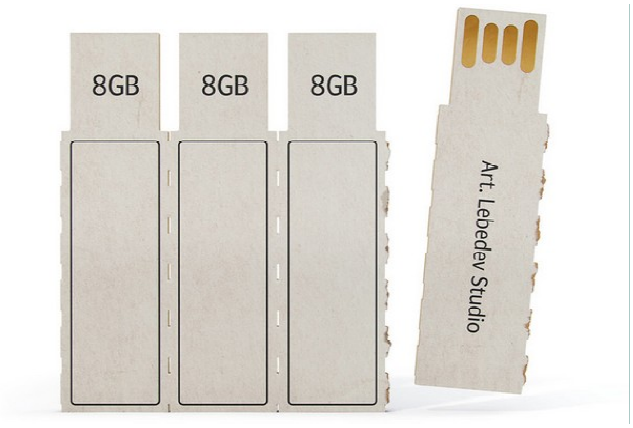
Other things that will benefit from the USB 3.0 interfaces are card readers and connections from digital cameras, when transferring pictures to the PC, though not when you plug in the current 'slower' devices. USB 3.0 thumb drives will be faster on a USB 3.0 interface but the current USB 2.0 thumb drives 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.

Paper Flash Drives - A Concept

Durham Personal Computer Users' Club

Almost like tear-off paper matches, these tear-off flash drives may soon become a reality. Current flash drives cost as little as a buck or two per GB. Paper drives could beven cheaper and disposable. Art Lebedev Designs came up with this idea. If USB sticks are made out of thick paper, then not only is the media writeable (in the digital sense), but the surface is also writeable (in the pen and ink sense). You'll see lots of other fresh computer related ideas from Lebedev at: ***http://www.engadget.com/tag/artlebedev***



We're a little less of a disposable society than we used to be, but that's not to say we wouldn't embrace an opportunity to get back into our formerly carefree and wasteful ways. This concept spotted over at Art Lebedev, designed by Alexei Lyapunov and Lena Ehrlich, could get us there, eight or 16GB thumb drives printed on cardboard and produced so inexpensively that you can simply tear one off, scribble on it, then give away to friends to share files -- just a concept at this point, but this vision of tomorrow seems awfully likely to us.

Help Lines

HARDWARE HELP	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
Audio Cards	4
MPs Files, WMA Files, WAV Files	3, 4
Burning CD's	3, 5
Homesite	7
Net Objects	7

SOFTWARE HELP	Advisor No.
Win 95/98/ME/2K/NT/XP	2, 3, 4, 7
Win 7	4, 7
Microsoft Word	2, 7
Microsoft Excel	4
Microsoft PowerPoint	4
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

Tacoma Open Group for Microcomputers (TOG)
New Member Application/Existing Member Change of Address Form

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

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

Member's Name:_____

Address:_____

City:_____ State:_____ Zipcode:_____ Plus Four_____ Country:_____

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

TACOMA MEETING

When: **Mon 9 May 2011 -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

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

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.

This Month's Program

Bob Henkel will discuss his experiences with a new photo management application. The Program Presentation is called::

A New Slide/Film Scanner