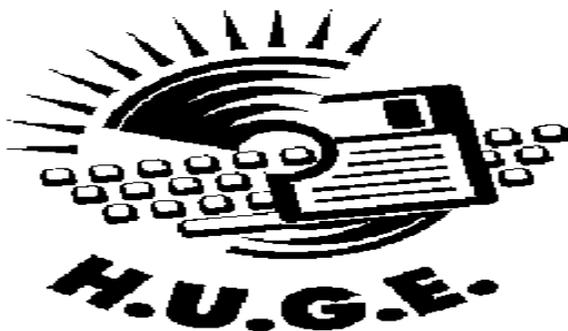# The PULP

HUGE this month:

General Meeting: May 21st

Pat in Command

See you there!

New Location !!!!!

**Knights of Columbus
2533 Main Street,
Glastonbury, CT**

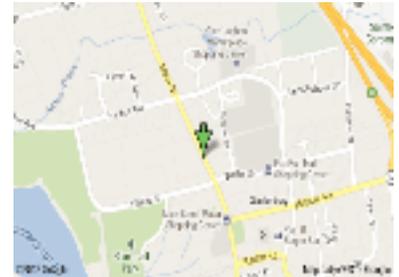Q&A Session: 7:00PM–7:30PM
Meeting starts at: 7:30PM

Contents:

Member of
APCUG
Association of Personal Computer User Groups

UGC™

Apple User Group

H.U.G.E.

MEETING LOCATION
Knights of Columbus
2533 Main Street
Glastonbury, CT

Editor's Corner

Pat will present what can be done with the Mac OS X command line. In June, I'll talk about tools (hardware & software) for maintaining, troubleshooting, and fixing your Mac or PC.

If you've recently lost your smartphone, check with NASA. They've been launching nanosatelittes using smartphones as the computer. According to Soluto (a web based PC monitoring service) the best Windows laptop is a 13" MacBook Pro. Consumer Reports latest survey of readers on their computer experience had Apple as providing the best computer tech support.

Apple's 2013 Worldwide Developers Conference is scheduled to open June 10, with a limit of 5 per organization. The $1599 tickets went on sale at 5:30 a.m. PDT, April 24, 2013 and ended at 5:33 with a sellout.

Researchers at the University of Illinois at Urbana-Champaign have developed a new lithium-ion battery technology that is 2,000 times more powerful than comparable batteries. Potentially, your laptop or smartphone could go a year without charging.

Here's a surprise -- a security researcher reports that your chance of getting malware is as high as 50% if you visit certain porn sites. Other researchers report that Bing shows more malware-infected links than Google.

The IEEE 802.11ad standard is coming, it will allow wireless speed comparable to USB 3.0 (5GB/s).

LG is accepting preorders (delivery in May/June) for world's first curved OLED TV. Think of it as your private IMAX theater. The 55- inch curved set is priced at $13,500. It is only 0.17 inches thick and weighs around 37 pounds. I may add it to the gift list.

Researchers at the University of Washington Ubiquitous Computing Lab can turn any LCD monitor in your hous into a touchscreen, with nothing more than a $5 EMI sensor that plugs into the wall and some clever software. The technology works by measuring the electromagnetic interference (EMI) caused by your hand when it moves near or touches an LCD monitor, and is called uTouch. It is similar to the technology in capacitance tablets. It can currently discern 5 types of movements.

Here is the appropriate copyright citation and a link to the full text. articles from "Tidbits"

http://creativecommons.org/licenses/by-nc-nd/3.0/

A Little Computer Quiz

by Stuart Rabinowitz

The trivia and minutiae of the computer related world. The answers will appear next month or you can submit an answer sheet at the General Meeting. Good Luck.

I was recently reminded of some old movies in which a computer had a major part as a character. BTW, the answers are not HAL 9000, Skynet, or Matrix.

1 There were 2 computers that plotted to take over the world in this 1970 movie named after one of them. Can you name the movie?

2 What movie featured the Master Control Program?

3 Joshua was in what movie?

4 What movie featured the grid?

5 One movie had a computer named Deep Thought, which one?

Answers to April, 2013 Quiz

1 Who coined the term "computer virus" and when?
  A Fred Cohen in a 1983 research paper

2 1987 saw the release of computer viruses 'Brain' and 'Stoned', which was the first documented virus?
  A Brain was first and infected boot sectors on DSDD floppies. Stoned came later and attacked the MBR on HDD.

3 In 1988 John McAfee and Eugene Kaspersky are reported to have been on a mailing list that tracked and developed methods of dealing with virus attacks. They went on to start anti-virus software companies, but what was the name of the virus that got them started?
  A 'Virus-L' on the BITNET/EARN network

4 On Jan. 26, 1983 the first copy of what software was sold?
  A Lotus Development Corp. sold the frist copy of Lotus 1-2-3 for $495. By the end of the year it had sold $53 million worth, tht tripled the next year.

5 DRM, which links software/media to a specific account or piece of hardware, had an origin on what computer?
  A The Lisa which assigned its unique serial number to the application so that you could run the application only on that particular Lisa machine.

Sandbox Computing
Written by Brian K. Lewis, Ph.D., a Member of the Sarasota Personal Computer Users Group, Inc., FL
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I spend a lot of my time surfing the web looking for research material; computer tech sources, genealogy data, vocal music and other information. This means that I am downloading many web pages, clicking on many links and generally opening up my computer to all types of malware. I always have to be aware that there are many traps on web pages that are just waiting for the unwary surfer. It used to be that having an up-to-date virus checker, a working firewall and parasite scanners, you could adequately protect your computer. That changed to some degree when the "drive by" downloads appeared. Now with the constant appearance of "holes" in the Windows operating system (XP & Vista) and the various web browsers, it is less obvious that you can protect your computer from unwanted visitors. Microsoft recently (October 22, 2008) released an out-of-cycle patch (patch 958644) for Windows for what has been described as a very serious opening that could be exploited regardless of the browser you are using. There have also been recent articles on "clickjacking". In this situation "buttons" or links are floated behind the link you think you are clicking. The only option to prevent this is to disable JavaScript. That creates more problems as JavaScript is a very important part of the whole web experience and is used on almost every page. So when you do know that you can run a script and when you can't? Well, the "Sandbox" may be a way to surf safely and avoid the installation of malware on

your computer without having to disable JavaScript.

My Sandbox experience is based on using the sofware application "Sandboxie" (www.sandboxie.com) with Windows XP and Firefox 3.0. As with everything related to computing, your results might be different. Sandboxie is a very small program, approximately 450 KB. So it is quick to download and doesn't require a lot of memory to run.

Next, let's take a look at what is meant when I talk about a computer sandbox. The sandbox is a complete "virtual computer" running in your computer's memory. This virtual computer is isolated from the real operating system files and creates any files it needs for use within the sandbox. When the sandbox closes, everything in it disappears unless you chose to keep it. It's like having a bank vault within a building where everything can be locked within the vault and nothing is removed without special permission. The neat thing is that nothing that happens within the sandbox can have any effect on your computer. This means that Trojans, rootkits and other malware have no chance to affect the operation of your computer outside of the sandbox. If a problem occurs when you are running in the sandbox, all you need to do is shut it down, you are returned to your normal computer operations and the malware is erased.

When Sandboxie is started it creates a sandboxed folder which contains a drive folder, user folder, and Registry "hives". The "hive" is Microsoft's term for collections of related Registry keys stored together. The parts of the Registry needed for sandboxed operations are stored in a

hive which is then integrated into the Registry. There are also instances of Windows services stored within the sandboxed folder that can be accessed by applications running within the sandbox. These are referred to as "process objects" and are needed for normal operations. When the sandbox is running there may be instances of these objects running both sandboxed and non-sandboxed. Also, you can run an application within the sandbox at the same you are running it outside the sandbox. The complete operating system is not loaded into the sandbox. This reduces the memory required for the sandbox operations.

Applications running in the sandbox can not hijack non-sandboxed programs. Therefore they can not operate outside the sandbox. New files or other created objects have a path assigned by Sandboxie which directs them into the sandboxed folders. Sandboxie prevents any programs running inside the sandbox from loading drivers directly. It also prevents programs from asking a central system component, known as the Service Control Manager, to load drivers on their behalf. In this way, drivers, and more importantly, rootkits, cannot be installed by a sandboxed program. This is one of the features that prevents rootkits from being installed outside the sandbox.

In actual operation, using Sandboxie is very simple. To make it even simpler, there is a short tutorial available on the Sandboxie web site. This can be accessed from within the program the first time you run it or directly from the Sandboxie home page by clicking on the "FAQ & Help" link.

After installation it can be set to load whenever the computer is started. This puts an icon in the system tray. Clicking on this icon brings

up the Sandboxie Control Center. This window lists all sandboxed applications and object. When I started it, the window indicated nothing was sandboxed. So, using the menu I selected run an application and then selected Firefox. This changed the list in the window to show Firefox as well as the two RegHive files. With Firefox up, I did my usual web surfing. Along the way I received a message from Sandboxie that a new version was available that I could download. At this point, I really couldn't tell that anything was different from my previous surfing experience with Firefox. So I went to the Sandboxie page and downloaded the new version. After finishing I closed the Sandboxie Control Center. Then I went looking for the download so I could install it. Well, it didn't exist anywhere on the hard drive! I had closed Sandboxie without marking the update to be saved! As a result the download was deleted, along with all the other sandboxed files when I closed the Control Center. So I opened the Control Center, restarted Firefox and downloaded the update. This time I selected it to be saved before I closed the Control Center. Then I was able to install the update.

I should also point out that now I have an icon on the desktop which automatically runs Firefox sandboxed. Sandboxie can be set up to isolate your browser automatically whenever you open it. To do so, add the name of your browser's executable file, such as firefox.exe or iexplore.exe, to the list of programs Sandboxie always opens in a sandbox. If you don't do this, Sandboxie will not set your browser to open automatically in the sandbox.

As you can tell from these comments, Sandboxie does not require a reboot to start

Digital Photography
By Dick Maybach, member, Brookdale
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December 2012 issue, BUG Bytes
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As you probably know, a digital camera is far more complex than its small size indicates. Indeed, some models have multiple processors to handle the demands of image processing, especially when making movies and photo sequences.

If you were to look at most digital camera sensors under a microscope, you would see something like the figure below, although with many more colored squares (typically well over a million), one for each pixel.
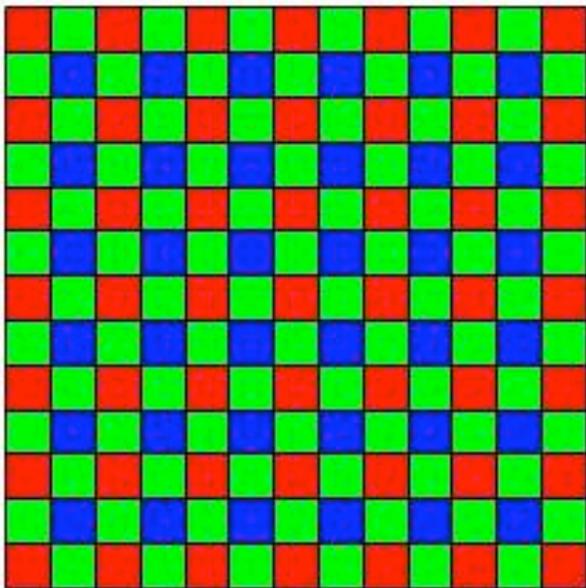
This is an array of filters, called a *Bayer filter array*, after the Kodak engineer who invented it. The array covers the sensor, with the result that about half the pixels are sensitive only to light in the green portion of the spectrum, a quarter are sensitive to red, and a quarter to blue. Typically, the camera records the output of each pixel as a 12-bit word. The camera's processor converts this data so that each pixel is presented as three 8-bit bytes, one each of red, green, and blue, using data from several adjacent pixels. Most often, it then compresses the information into a JPEG image to save space on your memory card. This compression technique is lossy; that is, the result won't be quite as sharp as the original, but for pictures viewed on a computer screen or as reasonably-sized prints you won't see the loss.

If you just upload your photos to your PC or make prints, you are missing much of the fun of photography, and your pictures won't be nearly as good as they could be. If you use a real camera (as opposed to one in a cell phone), it most likely came with a CD that has digital darkroom software. With this you can correct many imperfections, such as
?   cropping to improve the composition or to remove stray heads, arms, signs and such at the edges,
?   straightening to eliminate a tilt,
?   making the image brighter, and
?   correcting the color or making the colors more vibrant.

Even if your camera is a cell phone, you can use a free program, such as *Picasa*, available from http://picasa.google.com/, to do the same. Windows 7 doesn't include a photo editor, but you can download *MS Photo Gallery and Movie Maker* from http://windows.microsoft.com/en-US/windows-live/photo-gallery-get-started. (This photo editor is part of Windows Essentials, which includes instant messaging, mail, blog composing, and Internet family safety programs, but you can download only what you need.) Both programs also help you organize your photo collection and create Web albums. They are easy to use, provide a good way to get started, and many people will decide they need go no further.

The above programs provide only basic retouching. You can do much more with software than ranges from inexpensive (*Adobe Photoshop Elements*, *Corel Paintshop Pro*) to free (*GIMP*). However, all these involve a significant learning curve, and you will need to study a good book to avoid endless frustration. You can no more learn effective digital photo retouching by trial-and-error than you can learn effective writing by typing randomly and looking at the resulting spell-check and grammar-

To 'Cloud' or Not To "Cloud", That Is the Question
Submitted by Joan Frerichs, CIACUG Board Member
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I'd heard of saving computer files to the "cloud," but I really didn't know very much about it until our April CIACUG meeting when David Williams provided members with a great deal of helpful information about how it works.

If you have never had your computer "crash," be destroyed in a fire or flood, be struck by lightning, or stolen, you have been exceptionally fortunate, or, perhaps, you haven't been computing very long. After spending many painstaking hours of inputting data, contact lists, medical histories, financial information, etc. on our first computer, we experienced a crash that lost all of that data forever. Many times you toss or shred the paper trail thinking your information is safe forever. How naive can one be? It can be an "oops moment," or it can be devastating. We had to consider ours an "oh phoo moment" and move on with life and start over, and that is disconcerting, to say the least. If you have business information and customer lists on your computer, it can put you out of business temporarily, at the very least.

If you've been backing up your files to an external hard drive, what if that is destroyed in a fire? If you've been religiously backing up your data to disc times two, putting one in the fire safe (not very safe) and taking one to an off-site location, that gets time-consuming and cumbersome. The easy solution....back it up to the "cloud."

If you are a non-business user, there are several cloud servers that give you a certain amount of free storage, and it was pointed out that it is a good plan to review the sites to see what they have to offer and then choose a couple that you feel fit your needs and you are comfortable with probably being around for the long-term. There have been servers that have "disappeared" in the past without ample warning for users to recall their data. Thus, it's a good plan to save the same data on more than one cloud server. If you are a business user or require more space than the free allotment, there will be a charge. With some servers you can increase your allotment by "recommending" their service to others, and if they should decide to sign on with that service, you may then be allowed additional storage space.

The next step is to set up your accounts, organize your files, save your files to the clouds and then synchronize your pc, your laptop, your iPad, etc. so that any changes you make to any of your saved files will automatically be updated on all your devices. That's a time-saving plus. Also, you are able to access those files in the cloud from any web-based hardware that has access to the internet. You can also share data files, photos, etc. with friends and family. Be sure to remember, or write down, your user names and passwords.

Following are some links to websites for comparison purposes:

20 Clever Apps and Services That Make Great Use of the Cloud
http://bit.ly/JydzyV

Comparison of online backup services
http://bit.ly/5P003Z

Cloud Drive Comparison
http://rww.to/j2FUhI

The "Top Best Cloud Storage Companies" Reviewed!
www.thetop10bestonlinebackup.com/cloud-storage

15 Best Free Online Data Storage & Backup Services
http://bit.ly/rQGb1p

Listed below are some of the free cloud storage servers and the amount of free storage:

DropBox	2 GB	dropbox.com
Windows Skydrive	7 GB	skydrive.live.com
BOX	5 GB	box.com
Google Drive	5 GB	drive.google.com
SugarSync	5 GB	sugarsync.com
ASUS Webstorage	2 GB	asuswebstorage.com/
Wuala	5 GB	wuala.com/
Apple iCloud	5 GB	icloud.com
Amazon Cloud	5 GB	amazon.com/clouddrive
Google Music		play.google.com/music

You might also be interested in checking out the following:

TonidoSync	www.tonido.com
LiveMesh	download.cnet.com/Live-Mesh-2011/
Social Folders	socialfolders.me
Insync	ww.insynchq.com/

from pg. 5

the sandbox process. Sandboxie does sandbox access to files, but not to the complete hard drive. It does sandbox access to registry keys. It also sandboxes access to many other classes of system components, in order to trick the sandboxed program into believing that it isn't being tricked. So you can open and close Sandboxie repeatedly while you are using your computer without having to do any rebooting.

If this discussion has interested you and you would like to take Sandboxie for a test run, the free version can be downloaded from: www.sandboxie.com. This application is free for personal use. However, there is a Pro version available for $30.00. If you like the program and can afford it, buy the Pro version. This software is the work of one person, Ronen Tzur, and this payment is his means of support to continue working and improving this software. After some experience in running Sandboxie, I can highly recommend it as an excellent method of protecting your computer from malware. :

*Dr. Lewis is a former university and medical school professor of physiology. He has been working with personal computers for over thirty years, developing software and assembling systems

from pg. 6

check messages.
We have been discussing photo retouching, where you work with (usually) JPEG files.

There is another process, *developing*, which transforms the raw data from the camera's sensor to a JPEG file. This conversion loses information and results in lower dynamic range and lower resolution. Typically, the raw data captures two stops of additional brightness range than exists in the JPEG file. More expensive cameras can store raw images on memory cards, in addition to or in place of JPEG ones. If you properly develop a raw image, the increased dynamic range can significantly improve back-lit images and ones with strong shadows. Many photo-editing programs let you work with raw images to recover portions of pictures that would otherwise produce pure blacks or pure whites if blindly converted to JPEG. Working with raw data also lets you accurately correct color casts due to incorrect white balance and do a better job of reducing noise.

The development process that occurs in many cameras corrects for the camera's imperfections, such as distortion, aberration, and vignetting. You must be careful to include the same corrections if you develop outside the camera. Most likely, these corrections are made in the software that came with your camera, but you will have to enable it correctly if you use third-party software. My approach is to develop the pictures with my camera manufacturer's software, save the results in a format that is not compressed, retouch with GIMP, and save as a JPEG file.

The developing situation is a bit muddled, as many cameras process the data before storing it in a raw file, typically to correct for optical imperfections. (Perhaps we should call the result a "rare" rather than a "raw" file.) Unfortunately, they haven't shared with the public the extent to which they do this.

An advantage of using the camera manufacturer's software to process raw files is that it often allows you to add special effects

after you take the picture. You can concentrate on taking pictures and decide later if you want to use for example, enhanced colors, compensate the exposure, or make a black-and-white image.

Because the subject is so complex, I haven't tried to make this a how-to-do-it article. Rather, I hope to encourage you to try digital photo editing. Getting started is easy, and the results are rewarding, even with the most basic programs. You can go as far as your interest takes you.

from pg. 8

Teradesk   www.teradesk.net

Now, get organized and SAVE, SAVE, SAVE (TO THE CLOUD). It can keep you safe and sane.

from pg. 2

A security researcher announced that he'd written an Android app that allowed him to hijack a jet with his Samsung Galaxy smartphone on a simulator.

Editor-in-Chief:
Stuart Rabinowitz

PULP Staff

Editor   Stuart Rabinowitz
Distribution   George Carbonell

Membership: Anyone may become a member. Dues are $12 per year and include a one-year subscription to The Pulp as well as access to the HUGE Public Domain disk libraries. Meeting topics, times and places can be found on page 1 of this issue.

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May 2013

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
			1 1964 1st BASIC program	2	3	4 Star Wars Day Free Comic Day
5 1966 Amateur Computer Society founded	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21 General Meeting 7 PM	22 1973 Ethernet invented	23	24	25 Towel Day
26	27	28	29	30	31 1943 work on ENIAC starts	