MONITOR

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Tuesday, August 12

Geek Olympics and Picnic

Contents

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Personal Computer User Groups

Image Processing Software
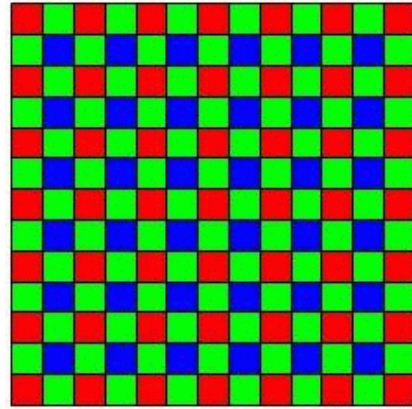
by Dick Maybach
Brookdale Computer Users' Group, NJ

A dobe's decision to charge a subscription fee for Photoshop has inspired some photographers to look for alternate solutions, in particular those available for free. Before you jump down this particular rabbit hole though, make a rational assessment of your needs. Photoshop is a highly refined program with a large user base and shelves of well-written books, and this one program does almost every photo processing task. If you are a professional or a serious photographer, its new subscription fee may not be a large item in your photo budget. By comparison, its free replacements are more limited, and you will probably need several different ones to cover all the tasks that Photoshop does. Each will have its own different, and possibly idiosyncratic, user interface, and probably the only documentation will be help files (or maybe not) and

Internet papers of varying quality. If you enjoy exploring new territory without a GPS, and have some time to learn, this can be a fascinating adventure; if not, just pay the Photoshop fee or switch to another commercial application with acceptable pricing.

This is a three-part article: this month I'll discuss software to retouch images, part 2 will cover developing raw image files, and part 3 the more specialized areas of panoramas and high-dynamic-range photography. Before diving into the programs, let's look at the overall process. Your digital camera captures an image as an array of blue, green, and red dots called pixels, where typically each pixel is captured as a 12- or 14-bit word. We call this unprocessed form a raw image, and high-end cameras can store images in this form. 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 array of filters is 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.
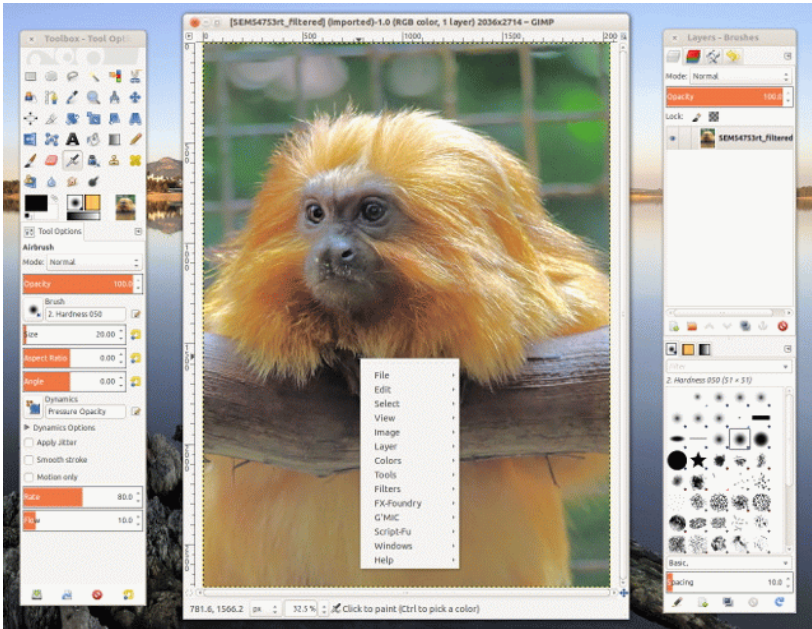
Usually, the camera converts the raw image into one where each pixel contains three colors, each stored as an 8-bit byte, and performs compression to reduce the number of stored bytes. The result is a Joint Photographic Expert Group (JPEG) file, and all cameras make this form available. Although convenient, JPEG images have lower quality than do raw ones. For snapshots, taken with good lighting and presented on a computer display or as a small print, the lower quality of JPEG is imperceptible to most people. For pictures taken in poor light, those needing a lot of retouching, those presented in large formats, or those viewed by critical audiences, you must be quite careful about how you transform a raw image to the final product. The process of converting a raw image to JPEG or its equivalent is called developing, as opposed to later work, such as removing red eye, which is called retouching. When most people use "Photoshop" as a verb they mean "retouch."

As your first step in looking for a Photoshop alternative, look at what you already have, in particular, the photo-processing software that most likely came

on a DVD included in the box with your camera. If you are a casual photographer, it probably does more than you need, usually including color correction, cropping, special effects, and possibly panorama creation and raw development, and because it has been tuned to your particular camera, it will probably automatically correct for lens distortion and other defects. (However, if your camera has a removable lens, it may not correct the distortion of all lenses from other manufacturers.) Even if you've been using Photoshop, try this software and see if it doesn't meet all of your important needs. Windows and OS X also have photo software, and such programs as Picassa (Windows), PhotoScape (Windows, Mac), Paint.net (Windows) are also available. These are all worthwhile programs, with features beyond image processing, such as organizing your collection and publishing on-line albums, but the program bundled with and tuned to your camera probably can do a better job of image processing.

The screen-shot shows a raw image being processed by Olympus Viewer 3, which is bundled with their enthusiast cameras. Your software is most likely not the same, so I won't discuss the details, except to say that it is sufficiently capable to satisfy all but the most rabid amateur photographer. Because Olympus knows their cameras' limitations well, their software does an excellent job of correcting for lens distortion and vignetting. It also has features for images with high dynamic range and for creating panoramas.

The GNU Image Manipulation Program or GIMP (http://www.gimp .org/ for Linux, OS X, and Windows) is the closest free program to Photoshop, with a comparable range of features. Like Photo-shop, GIMP is designed both for photographic image processing and also creating computer art. Also like Photoshop, it has a bewildering number of add-ons, ranging from invaluable to useless. GIMP's main use for photographers is retouching (replacing an overcast sky with one having scattered clouds, removing red-eyes, patching in heads from several group shots to get one where everybody has their eyes open, and the like). However, it does have a serious flaw; it uses 8-bit arithmetic for all its processing. (The developers promise to incorporate 16-bit arithmetic in the next version, but its release is not yet scheduled.) This means that you should do as much processing as possible before handing off an image to GIMP. For example, if you begin with a raw file, make your exposure adjustments, color corrections, dynamic range adjustments, distortion corrections, sharpening, and noise reduction in a raw processing program with at least 16-bit fixed, or preferably 32-bit floating point, arithmetic.

The screen-shot shows the default GIMP display with three separate windows, two containing tools and the center one the image. The menu in the image window resulted from a right mouse click; it provides access to all the tools, as only the most-used ones appear in the tool windows. If you prefer, you can configure GIMP to use a single window. Unlike most other free image-processing programs, there are several good GIMP books available, and using the program effectively requires that you study at least one of these.

There are many other free digital photo applications besides GIMP, and an Internet search using "image processing software" will reveal dozens of alternatives, both free and commercial. Finally, while Photoshop can develop raw files, GIMP cannot, and next month we'll look at programs that handle this important step, in particular, RawTherapee and LightZone.

References

- Montabone: Beginning Digital Image processing Using Free Tools for Photographers—provides a good overview several photo tools, although the book is less helpful than it could be as all the example images are in black and white.
- http://www.cambridgeincolour.com/— contains many very valuable tutorials on photography and image processing. If you check only one photo Web site, this should be the one.
- Lecarme and Delvare: The Book of GIMP—is a reference for the current version of GIMP.
- Goelker: GIMP 2.8 for Photographers — concentrates on using GIMP as an image processor.

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Our Broadband Internet Access
Is Not As Good As It Could Be

by Ira Wilsker

Almost all of us are somewhat dependent on our internet access. While many businesses, schools, and other institutions can afford private, very high speed connections to the internet, most of us at home are subject to the limitations of our common carriers.

Here in southeast Texas, for home internet access, we have a few choices between wired and wireless broadband internet providers. Using the street address of *The Examiner* in downtown Beaumont as a point of comparison, but somewhat representative of the area, there are two wired broadband common carriers; Time Warner with its Roadrunner cable internet service, and AT&T (formerly known as Southwestern Bell) with its DSL service. According to a federal website, broad bandmap.gov, in downtown Beaumont, in the area of *The Examiner*, both providers are offering the same range of wired broadband speeds, ranging from 10 Mbps to 25 Mbps. If the wireless common carriers are also included, Verizon, AT&T Wireless, and T-Mobile are also offering internet service in the downtown area in the 10 - 25 Mbps range; Sprint Nextel and Leap Wireless International are offering wireless broadband in the range from 768 Kbps to 1.5 Mbps.

Downtown, with its density of population, businesses, and government agencies, there is an economy of scale for the common carriers that may justify the availability of faster than average broadband speeds. Using the same broadband map.gov website, I selected a location in the South Park area of Beaumont which is densely populated, in the vicinity of a university and a technical institute, but with a below average median income. Compared to downtown, Time Warner offered the same broadband speeds in South Park, but AT&T's DSL service was slower, at 6 - 10 Mbps. The wireless broadband access for this neighborhood was the same as for downtown.

In the northwest area of Beaumont, in the area of Major Drive and Hwy 105, residential broadband availability is inferior to many other parts of the city. Again, according to broadbandmap.gov, (last updated June 30, 2013), Time Warner is the only wired common carrier to offer relatively high residential access, with its 10 - 25 Mbps speeds. AT&T's DSL service is available, but is only listed as being available with speeds of 768 Kbps to 1.5 Mbps; to be fair, I happen to have firsthand knowledge of DSL users in this neighborhood getting DSL speeds almost double those listed on broadbandmap.gov, but still much slower than the posted speeds for the cable internet service offered by Time Warner. It also needs to be noted that AT&T's DSL service is faster when closer to an AT&T "switch" or fiber loop, and none are geographically close to this neighborhood. The wireless broadband speeds provided by the local cellular telephone providers are listed as the same speeds as available downtown, but again, by firsthand experience, some wireless cellular broadband in this neighborhood is very inferior in speed to those posted on the government website, as there are "dead spots" listed on the carrier coverage maps.

Just as an experiment, I tried the neighborhood of one of my daughters living in the Dallas suburb of Wylie. The wired broadband available at her house, according to broadbandmap.gov, far exceeds the speeds available here in Beaumont. In Wylie, the two primary wired residential common carriers are Time Warner and Verizon; the speed ranges posted for both carriers are 50 to 100 Mbps, which is twice to 10 times the speed available here in much of southeast Texas. A lesser wired common carrier, Platinum Equity LLC is offering the Wylie neighborhood wired inter-net at 1.5 to 3 Mbps. Wireless broadband is also available in that neighborhood, with four of the eight wireless carriers listed offering service at 10 to 25 Mbps (Verizon, T-Mobile, AT&T, and JAB Wireless), and the other four offering lesser speeds.

While there are other national internet service providers, such as the handful of satellite internet providers that offer broad-band over almost the entire country, there are some major differences in internet speeds available in different states. According to the recently published "Akamai's State of the Internet" (akamai.com /dl/akamai/akamai-soti-q114.pdf), the northeastern and middle Atlantic states generally offer the fastest internet connection speeds, with Virginia leading both the average internet connection speed at 13.7 Mbps, and the highest peak connection speeds of 53.8 Mbps. Texas, by comparison, according to broadbandmap.gov, is ranked at 13th or 14th among the states, depending on metric used. Rhode Island has the largest percentage of users with internet connections faster than 10 Mbps, at 55%, with Massachusetts leading the states in the rate of internet connections faster than 15 Mbps at 27%; Texas is not listed on any of the several "top ten" speed lists.
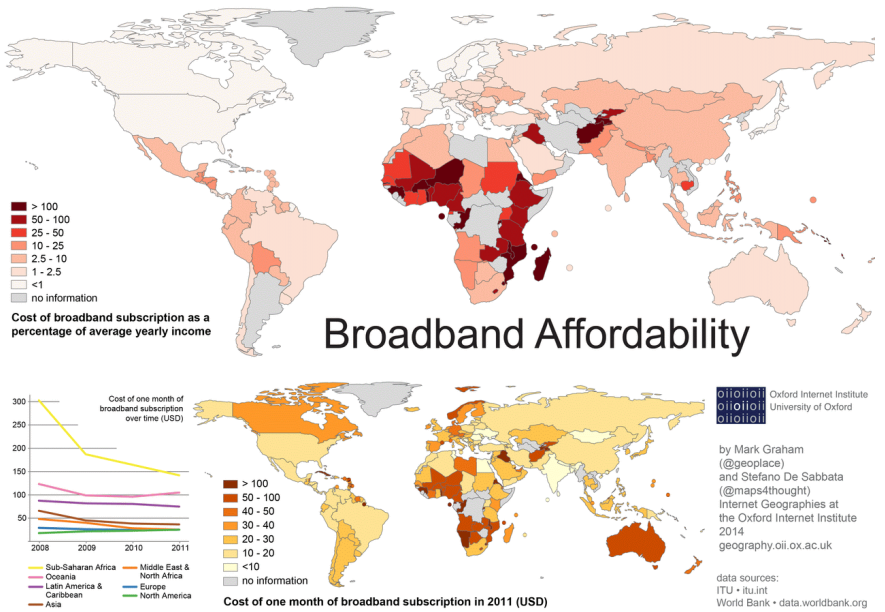
While many of us Americans are ethnocentric, believing that we are the biggest and best in everything technical, we would be shocked to find out how low we, as a country, rank in average available internet speeds. Globally, the average internet user connects to the internet at an average speed of 3.9 Mbps, but South Korea has the fastest average internet connection speed of 23.6 Mbps, followed by Japan at 14.6 Mbps, Hong Kong at 13.3 Mbps, Switzerland at 12.7 Mbps, Netherlands at 12.4 Mbps, and Latvia at 12.0 Mbps. The top 10 fasted average connection speeds by nation are rounded out with Sweden, Czech republic, Finland, and Ireland. The United States ranked 12th with average connection speeds of 10.5 Mbps, and 17th in average peak connection speeds at 40.6 Mbps. According to Akami, the United States ranks 7th globally in internet connectivity faster than 10Mbps (36% of users), but this is the highest ranking in the Western Hemisphere, with Canada next at 14th (32% of users). The fastest average speeds are available in parts of Asia and Europe, with much of the Southern Hemisphere, predominantly Africa and South America, being at the bottom in almost all internet metrics including accessibility, speed, and utilization; these low ratings generally correlate with high levels of poverty.

When we realize that many of us are now using the internet for entertainment, such as streaming HD movies and HD TV to our big screens, this lack of speed (bandwidth) may hamper our ability to utilize all of the available technology. Common online tasks, such as chatting, instant messaging, and email require relatively little in terms of connection speed, but streaming video, especially HD, can consume enormous amounts of bandwidth, an opportunity

that many of us are unable to utilize, as we are simply lacking the internet bandwidth to capitalize on the technology. If we consider commerce, faster internet speeds will obviously load pages faster, and process orders and payments much more quickly. Services such as YouTube could be viewed without the apparent delays that many of us routinely encounter as the video "buffers" or otherwise inexplicably pauses while being viewed. Online gaming quality improves significantly with greater connection speeds, as gaming delays due to inadequate bandwidth can cost players points or the game itself, as an opponent may have a superior connection, rather than better luck or skill.

While there may be alleged economic justifications and considerations, residents of our area, state, and nation may be technologically hindered and unable to compete in a global environment due to our inability to access affordable, very high speed internet service. I have performed several readily available internet speed checks on my home internet, and my daughter's Dallas area home internet, and her speed consistently is about 25 times faster than my home broadband internet; her much faster internet service is not much more expensive than my painfully slow (in comparison) connection, even though I have the "premium" service offered by my carrier. Her Dallas area neighborhood is fully "wired" with glass fiber, while my local neighborhood, including several newly built subdivisions, are still wired with obsolescent copper wire and slightly more modern coaxial cable.

We live in a rapidly changing technological environment; it would be great if we as a city and as a country could make use of the latest internet technology. Whether it is education or business, we all need modern, fast internet access; without it, we will find it difficult to compete with those who do have access to such technology.

Websites:

http://www.broadband.gov
http://www.akamai.com/dl/akamai/akamai-soti-q114.pdf
http://consumerist.com/2014/07/03/american-broadband-speeds-improve-still-not-in-top-10-globally/
http://www.broadbandmap.gov

Twitter for Seniors

by Larry McJunkin

You've never used Twitter. You say you're too old for Twitter … it's only for kids, and you could care less about reading what Lady Gaga had for lunch today. So obviously, Twitter is not for you. Wrong! If these are your thoughts about Twitter, I can say with authority that Twitter is not what you think.

Twitter does not exist to tell you what a celebrity had for lunch, or what the thoughts are of the singer who was just voted this year's American Idol (though they might tweet this information). Twitter is a handy way to break news, share knowledge, and refer people to longer forms of communication.

Here's some great examples of how I use Twitter. Where we live, in Tellico Village (a golfing and boating community in East Tennessee), the demographic is very much retired and very much over the age of 60, and some of the most important information we receive each day comes via Twitter. Updates from our

three golf courses regarding whether carts are on the path or not; what the flag positions are; are any holes under repair; status of last night's storm damage … and the list goes on. The golf course superintendents post these tweets very early in the morning so the hundreds of golfers here know what to expect as they start their day on the links.

Twitter is a free social networking and micro-blogging service that enables its users to send and read messages known as tweets. Tweets are text-based posts of up to 140 characters displayed on the author' s profile page and delivered to the followers. That' s why information on Twitter is short, to the point and effective.

More than half the people I talk to about Twitter think they have to have a smartphone to use it. Not so! You can access Twitter via Web, Desktop Applications and smartphones. It costs nothing to use and it's just one more social media source, like Facebook, that you won' t know how much you needed it until you try it.

Twitter also has a built-in function for you to befriend and track the messages of other users. This is a simple way for you connect with like-minded people outside of your usual circle. A Twitter association can be developed into a long term acquaintance (if you desire).

If you do happen to have some famous folks you like (singers, actors, golfers, etc.), Twitter is a wonderful way to unobtrusively follow what they're up to. One of my personal favorites is Brandt Snedeker, the professional golfer from Nashville. His life is comedy of tweets that make me laugh almost every day. Recently, he's been trying to figure out how to win a war with raccoons and his garbage can … and so far the raccoons are winning!

As an individual, you have a variety of interests that a single newspaper or magazine can't cover. With Twitter you create your own personal newsfeed. You can get small bites information on local events, celebrities, politicians, hobbies or interests, your favorite news sites, etc. Much like you read a newspaper by scanning the headlines, on Twitter you can see short headlines describing an article and you can decide if you want to click on the link to read the rest of the story.

News is published on Twitter the instant it happens and if something big happens you'll likely find out when someone you follow tweets about it. In fact, Twitter became more widely known after a user tweeted a link to a picture of the US Airways plane that successfully landed in the Hudson River.

Unlike traditional media where it is a one-way medium, you can be involved in Twitter. You can re-broadcast (re-tweet) the information you find valuable. You can comment on issues and share your own views (within the 140-character constraint, of course).

You can quickly and directly contact local politicians, celebrities and other people you don't know. You don't have to find out their address and compose a lengthy message, you can instantly let them know your opinion. These are people you will probably never meet in real life but now you can get daily updates on their lives and their interests.

Public figures tend to have hundreds of thousands, if not millions of followers and they may not respond to a tweet, but they often do read their (most important) messages because a 140 character tweet is easier to read quickly

than a lengthy e-mail. Celebrities usually have an aide sift through tweets and pass on only the ones they think are worth reading.

You can also use Twitter to quickly inform friends and family about your daily life. You can tweet about things that aren't important enough for an e-mail but something you would mention to your friends if you bumped into them. You can also keep track of what they are up to by following them (if they're on Twitter, of course). You may also connect with other people with similar interests and strike-up an online friendship.

In any event, much like Facebook or Skype, don't be afraid to give Twitter a try. It' s free, nothing tracks you or your actions, and you might just find that it's fun! If it isn't for you … that's what the DELETE key is for.

A Good Password Manager
May Enhance Your Computing Security
by Ira Wilsker

With the spread of password stealing malware, password stealing interceptors on jeopardized websites, key logging trojans, and hackers using brute force to determine our online passwords, we all need to practice good password security. Over the years, I have been promoting password security in this column, yet I still find that many local people are still using simple passwords that are easy to guess. What may be even worse is that many of those same people who use simple passwords also use the same simple passwords on multiple websites, or use the same simple password on all websites! This violation of common sense has resulted in countless victims who have had bank accounts emptied, credit cards abused, spam emails apparently sent from our email accounts, problems with eBay and other online sellers, and a variety of other distressing events all because the one password used for all has been compromised. When the user of a single password for everything has that sole password compromised, then all of their online transactions become vulnerable, often resulting in a massive and expensive case of complex identity theft.

I have been preaching in this column for many years that we all need to utilize a complex and unique password for each website or other online account that we utilize; in this way if one password is compromised (a more likely occurrence now than in the past), that compromise will only impact that single web service, and not all of the other websites that we visit. For those skeptics reading this column, multiple evaluations of the passwords stolen in many of the major online data thefts and later published on hacker websites, still indicate that much of the public still have not learned this painful lesson. Earlier this year, the security and password management company Splashdata (splashdata.com/press/worstpasswords2013.htm) published the results of an analysis of millions of compromised passwords, including the 48 million passwords stolen during the October, 2013 data breach at Adobe, which were subsequently posted online by the cyber crooks. A disproportionally large number of users are still using simple, easy to guess passwords that make their online activities very vulnerable to identity theft. According to Splashdata, the top 10 of the most widely used passwords were (in order of most common and widely used): 123456, password, 12345678, qwerty, abc123, 123456789, 111111,

1234567, iloveyou, and adobe123. The list of most commonly used passwords published by Splashdata was actually much longer, a fact not lost on hackers and identity thieves. Since usernames and email addresses are very easy to find or deduce, someone wanting illicit access to an online bank account or email account only has to use a purloined username or email address and then sequentially try the most common passwords, which will then possibly give the hacker full access to those valuable accounts. If you are victimized in this manner, your bank balance is now theirs, not yours.

When I give security presentations, I am frequently told by some members of the audience that complex passwords, consisting of upper case letters, numbers, lowercase letters, and on some websites symbols like $, !, &, and others characters, are too hard to remember, especially for all of the secured websites that they visit. These people have to make a decision; create, use, and manage different complex passwords for every online service that they visit, or face the high possibility of dire consequences. This is precisely why one of the most increasingly popular utility categories used online is a password manager. The better password managers can selectively create complex and random passwords, auto-fill usernames and passwords when requested by a webpage, selectively fill common forms with personal information (name, address, phone, etc.), notify the user if a password may have been compromised by a data breach on one of the visited websites, and perform other security services as well. A quick review of the major websites presents a lengthy list of password managers, but it seems that the same handful keep appearing as among the best in published reviews.

My primary "go to" website when looking for software is Gizmo's TechSupportAlert.com, which has a listing under the heading "Best Free Web Form Filler and Password Manager" (techsupport alert com/best-free-web-form-filler-password-manager.htm). Utilizing its widely respected volunteer community of thousands of geeks and nerds, Gizmo's posted ratings and evaluations of software are widely respected and followed. Gizmo's top rated password manager is LastPass (lastpass com), available in both free and paid versions ($12/year). LastPass was awarded the top rating of 5 out of 5 stars by the community evaluators, and given "Gizmo's Freeware award as the best product in its class!" To be honest and with open disclosure, I have been using LastPass Premium (the paid version) for several years and have found it indispensible; I have it on my desktop and laptop computers as well as my Android smart phone and my tablet. The free version of LastPass arguably the most capable and comprehensive free password manager available, and is compatible with most major browsers (Internet Explorer, Chrome, Firefox, Safari, Opera), most contemporary operating systems (Windows, Mac, Linux), and almost all mobile and portable operating systems (Android, iOS, Windows, Blackberry, Firefox OS, Windows Surface RT). The paid Premium version adds a few features such as better multifactor authentication, better access on some mobile phones, enhances sharing, provides priority technical support, allows better form filling on Windows applications, and other enhanced functionality. Both the paid Premium and the free versions seamlessly and automatically synchronize passwords between the different devices. My LastPass can also do

a security check to determine if any of my usernames and passwords have shown up on any of the listings from compromised online services.

The number two rated password manager on the Gizmo list is RoboForm (roboform.com), which was also awarded a 5 star rating by the Gizmo community. I had used the free version of RoboForm for several years until the free version ceased functioning on Firefox, which led to my switching to LastPass, a change which I do not regret. LastPass imported all of my passwords and other information from RoboForm. While the free version of RoboForm is also compatible with all major browsers and operating systems, as well as smart phones and tablets, the free version is currently limited to storing only 10 forms and passwords, while the much more powerful full version "RoboForm Everywhere for Windows, Mac and Mobile," with unlimited storage of passwords and user information costs $19.95 per year (half-price for the first year). According to the RoboForm website, the paid version offers "New simplified pricing – one license for all your computers and multiple devices – best value. The RoboForm Everywhere license allows you to use RoboForm software on all your Windows computers, Macs, and other mobile devices, and includes automatic synchronization of all your RoboForm data."

Other well rated, but less capable password managers that passed muster on the Gizmo forums include KeePass (4 star rating, unrestricted freeware), Password Safe (4 star rating, unrestricted freeware), PINS (3 ½ star rating, unrestricted freeware), KeyWallet (3 star rating, unrestricted freeware, but not updated for any version of Windows newer than Windows XP), and Access Manager (3 star rating, unrestricted freeware).

Other respected online services have also rated and evaluated the major password managers, and arrived at somewhat similar rankings while including more of the paid password managers. A recent posting by InfoWorld Security Central on June 18, 2014 (infoworld.com/d/security/review-the-best-password-managers-pcs-macs-and-mobile-devices-244519), titled "Review: The best password managers for PCs, Macs, and mobile devices," along with a subtitle, "6 local and cloud-based password managers make passwords stronger and online life easier for Windows, Mac, iOS, Android, BlackBerry, and Windows Phone users" somewhat mirrored Gizmo,s findings, along with some additional candidates. The InfoWorld evaluations gave LastPass its highest final score of 8.7 out of 10, with a 10 for available features (tied with KeePass in terms of features), and scored or tied the highest in all of the other categories except for value; LastPass was given a score of 9, while KeePass (which is free) was given a 10.

KeePass was given the second highest composite score in the InfoWorld testing, with an 8.4 out of 10, faring well when compared to LastPass in each of the items on the scorecard, only beating LastPass on value (free). On this InfoWorld scorecard, Dashlane came in third with a score of 8.0, followed by 1Password (7.9), PasswordBox (7.8), and SplashID Safe (7.2).

I am currently experimenting with PasswordBox (passwordbox.com), as they recently had a deal on one of the software daily deal sites offering an unlimited lifetime subscription for the paid version for only $9.99, which was less than a single annual subscription for the full-featured paid version. PasswordBox also offers a feature rich free version for Windows, Mac, and most portable smart

devices, all of which are immediately synchronized with each other, but the free version is limited to 25 passwords. I had PasswordBox import my LastPass information, and simultaneously keep both of them synchronized with each other as well as my laptop, smart phone, and tablet. On a literal side-by-side comparison, my first impression is that my LastPass Premium is more powerful than the paid version of PasswordBox, as PasswordBox has periodically displayed a popup indicating an inability to auto fill the information on some websites that I visit, but also states that they are aware of the problem and are working on a solution.

I will likely stay with LastPass Premium as my password manager, but will continue to give PasswordBox an opportunity to prove itself. If I wanted a full featured but totally free password manager, I would choose KeePass based on its ratings from Gizmo and InfoWorld.

Create and use unique, complex passwords on each of the websites where you have accounts, and use a good password manager to manage those passwords. Websites:

http://www.techsupportalert.com/best-free-web-form-filler-password-manager.htm

http://www.infoworld.com/d/security/review-the-best-password-managers-pcs-macs-and-mobile-devices-244519

https://lastpass.com

http://keepass.com

https://www.passwordbox.com

http://www.roboform.com

http://splashdata.com/press/worstpasswords2013.htm

Restart Print Spooler

Q. When I try to print certain photos, I get an error message that tells me that Windows cannot connect with my printer and that I need to restart the spooler. What the heck is a spooler and how do I restart it?

A. Spooler alert! A print spooler is software that temporarily stores print jobs on your computer's hard drive or in memory (RAM) until the printer is ready to print them. Think of it as a print queue. The way a print spooler is typically restarted is to restart the computer. That clears the queue and resets it.

To manually restart the spooler, be sure you are logged into your Administrator account in Windows, then go to your Control Panel and click System and Maintenance, then click Administrative Tools.

Next, double-click Services. If you are prompted for an Administrator password or confirmation, type the password or provide confirmation. Right-click the Print Spooler service, then click Properties. On the General tab, next to Startup Type, make sure that Automatic is selected.

If the service is not already running, under Service status, click Start, then click OK. If you are prompted for an Administrator password or confirmation yet again (enough is enough!), type the password or provide confirmation.

It is certainly possible that the problem you are experiencing has to do with the source files (photos) and not your computer/printer and if that's the case, that would be beyond your control. If your printer works fine for just about everything other than a few specific photos, chances are it's the photo files that are the culprit.

Q. I had Hotmail which then changed into Outlook.com and in the process, all my Contacts were lost. I called Microsoft but they have done absolutely nothing to help me. Is there any way I can get my Contacts back?

A. Gosh, Microsoft wasn't responsive to your phone calls? How unusual. I sure miss the old days, back when I had Bill Gates on speed dial. He would answer the phone and I'd say, " Is Ali Gator there?" Oh, how we would laugh. But I digress....

I can't promise the following will work, but it has worked for some individuals who had a similar unpleasant experience: First, log into your Outlook.com account and click the drop-down arrow next to Outlook in the upper left-hand corner. You will see options to Choose Outlook.com, People, Calendar or OneDrive. Select People.

Click the drop-down arrow next to Manage at the top of the page and select Restore Deleted Contacts. If there are deleted contacts that Outlook can restore, you can restore all of them or select individual contacts. After making your selection, choose Restore. If the cybergods are smiling upon you, your selected contact(s) should reappear in your Contact list.

Q. A few months ago I changed my Start menu in Windows XP to display the Classic Windows Start menu. I now want to change it back to the default but I can't remember how I changed it in the first place. Can you point me in the right direction?

A. Right-click the Start button and select Properties. That will display the Taskbar and Start Menu Properties screen. Select the Start Menu tab where you can then choose between the XP-style Start menu or the Classic Start menu, as well as a button to make additional customized changes, if you wish. I prefer the Classic Start menu, but try them both and use whichever one tickles your digital fancy.

Mr. Modem' s DME (Don't Miss 'Em) Sites of the Month

I Fix It

iFixit is a global community of people helping each other repair things. It is heralded as "The free repair guide for everything, written by everyone." If you enjoy repairing things yourself or if you are willing to share your knowledge, you won't want to miss this site. The Guides section has its own featured items and categories of different things you can find repair guides for, such as iPhone and iPad repair, gaming device repair, cars, trucks, phone repair, cameras, household items, appliances and electronics to name just a few. I checked, and parking tickets are not among the items the site's contributors will fix. Pity.

www.ifixit.com

Perils at the Great Falls

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Pandemiya: The New Trojan Horse

by Bob Rankin

A new Trojan Horse malware program appears to be written entirely from scratch, a rarity in the malware trade and a special cause for concern among security researchers, anti-malware developers, and end-users. Here's what you should know…

Researchers at RSA Security discovered the new "Pandemiya" program while trolling hacker forums for clues of what the bad guys are up to. According to RSA's Eli Marcus, Pandemiya contains over 25,000 lines of fresh code, and is intended to be an alternative to the Zeus botnet platform that enslaved several hundred thousand PCs worldwide.

Pandemiya infects victims mainly through drive-by downloads delivered by exploit kits, an increasingly popular channel among cybercrooks because it works so well. I wrote about this recently in How NOT to Get Exploited. It takes almost no technical expertise to set up an exploit kit on a bogus Web site offering fake security freeware. Unwitting visitors have their systems "scanned for vulnerabilities" while selected malware is downloaded and installed on their machines without their knowledge. Boom! Your computer is now a zombie soldier in a botnet. Its resources will be combined with those of other slave machines to launch massive Distributed Denial of Service attacks; send gigabytes of spam; and perform other illicit tasks for the botmaster. But that"s not all; Pandemiya also raids the PC it has enslaved.

Pandemiya monitors its host's input/output streams looking for login credentials for financial accounts. It scans for Social Security Numbers, credit card details, bank account info, and other data useful to identity thieves. All of the useful things it finds are transmitted to the botmaster for packaging and resale to other cybercrooks.

An "interesting" feature of Pandemiya is its modular design, which makes it easier to enhance with add-on programs written by third parties. Like many modern malware programs, Pandemiya uses encryption and obscuration techniques to hide its presence and activities from anti-malware programs, network analyzers, and other countermeasures. It"s pretty sophisticated stuff!

Pandemiya is one of those infuriating malwares that rises from the dead. Its core code hides itself well, infecting various Windows components with subprograms that do the dirty work. The core code continually refreshes its subprograms, so if one is excised by your security software, it will be restored on your next reboot or restarting of the infected Windows component.

RSA learned that Pandemiya is being sold for $1,500 in its basic form; another $2,000 enables plug-ins from third parties that enhance its evil powers. A Facebook attack module is reportedly in the works.

How to Remove Pandemiya

Fortunately, Pandemiya can be removed with some delicate but straightforward registry editing and command-line system modification. I expect that anti-malware developers are updating their products to detect and eliminate Pandemiya very quickly. Users should pay special attention to keeping updates current.

According to VirusTotal, most popular antivirus programs are detecting Pandemiya as a malicious entity. (Note that the green circles with check marks indicate that the tool did NOT flag the file as malicious.)

Norton's free Power Eraser is one tool that claims to eliminate Pandemiya and other "deeply embedded and difficult to remove crimeware." It's an on-demand scanner, so you can use it without any worries about it conflicting with currently installed anti-virus software. The docs for this program mention that it's an aggressive tool, and can remove things that aren't necessarily harmful.

When I tested it, it identified an old audio driver as potentially harmful (it's not) and also flagged some registry items for Google Update and Google Chrome autostart that are safe. So my advice is to make a restore point before running it, and closely examine the items that it recommends for fixing or removal.

In the never-ending battle between white and black hats, Pandemiya is a game-changer because it is new, and not just a variation of older malware. That makes it more successful as long as it's unknown to anti-malware developers. Now that the cat's out of the bag, Pandemiya can be beaten as other known threats have been.

Your thoughts on this topic are welcome. Post your comment or question below…

Read more:

http://askbobrankin.com/pandemiya_the_new_trojan_horse.html#ixzz3775dNcBB

New Trends in Laptop Computing

by Ira Wilsker

One of the primary factors that makes technology so intriguing to me is the rapidity to which it changes. My major name brand, "formerly" top-of-the-line desktop PC is three years old, and still working perfectly, but has gone from a "gee whiz" technological level when it was new, to a "ho hum" level today. What was the fastest multi-core processor (CPU) available in consumer computers when I purchased mine, is no longer even listed by its manufacturer, and can only now be found deeply discounted on eBay, and sometimes in the "clearance" bargain bins of the online and big box technology sellers. In computing parlance, three years of calendar time is two or three generations in computer time.

I recently had the opportunity to visit one of our local big box office supply stores to look at some of the laptop computers that were advertised on sale. While I am definitely not oblivious to the degree of change taking place in the computing sphere, it was amazing how much hard ware technology has changed, and how Moore's Law, originally prophesized in 1965, still continues today somewhat unabated. In a paper presented in 1965, Gordon E. Moore, co-founder of Intel Corporation, predicted that the number of transistors in a dense

integrated circuit doubles approximately every two years. Another Intel executive David House, predicted that chip performance would double every 18 months considering the increase in the number of transistors in a circuit along with their increase in speed. In 2010, the International Technology Roadmap for Semiconductors predicted that this rate of growth will slow by the end of 2013 when transistor counts and densities on microprocessors will double every three years.

This logarithmic increase in processing power has also been coupled with a dramatic decrease in costs, which has universally made available our "smart" technologies, with one of the latest iterations being termed "The Internet of Things," where more devices will be "smart" and interconnected, and powered by microprocessors. It is this dramatically increased level technology coupled with a dynamic decline in the cost of technology that has made these new devices so common, as was clearly displayed by the new laptops at the big box store.

There is not much need here to explain the history of laptops ranging from the big and heavy "lunch box" computers with their small monochrome screens, to the sleek and lightweight models of today. There has also been a lot of talk in the media recently about the concept of "convergence," where the concept of a full powered computer, a tablet, and a phone would be merged into a single device. While there will inevitably be revolutionary technological improvements in the near future, there is already significant evidence that much of that "convergence" is already here.

I was amazed that the large selection of laptop computers displayed in this major big box office supply store, with its reputation for selection and price, contained only a relative handful of what I would consider the traditional laptop computers that we are all so familiar with. Most of the laptops on display incorporated the popular touch screen display technology of tablets and smart phones along with the computing power, keyboard, and storage capacity of a more traditional laptop. These new touch screen laptops were surprisingly reasonably priced, often price competitive with the better tablets, thin, and lightweight. All of these newer devices had sharp and colorful touch screens, large internal storage, reasonable memory and video capabilities, WiFi-n capability, adequate keyboards, and other features that most of us are familiar with. Many utilized the newer SSD (Solid State Drives) that offer much of the extensive storage capacity of a traditional hard drive, without the power consumption or vulnerability to physical damage, such as if dropped. Almost all can be used as a touch screen or with an integral touchpad, as well as with a USB connected or wireless mouse. All had a longer advertised battery life than comparable traditional laptops, and many also included the capability of utilizing the wireless broadband connectivity offered (for a fee) by the major cellular phone companies. Almost all of the models that I looked at also had a common Ethernet port for wired connectivity, several USB ports (many of which are the newer and faster USB 3.0 standard), an HDMI port for connecting to a TV or other video device, a DVI connector for connecting to a modern digital monitor, and a VGA port for connecting to other older video devices. Almost all of these new style laptops incorporate a build of Windows 8 explicitly designed for maximum functionality and ease of use on these devices.

Many of these new technology laptops offer a "twist," "flex," or "yoga" type of top or cover containing the touch screen that can be folded or closed inward like a traditional laptop, or turned or twisted outward, resembling a traditional tablet. Several of the models had a detachable screen which could be used independently as a tablet, but still running Windows 8.1.

While not as heavily loaded or as powerful as some of its big brothers, I was favorably impressed by one of the smaller Lenovo Flex touch screen laptops, with its 10.1" screen. I compared it to the generic 10.1" Android tablet that I purchased about six months ago, and the Lenovo Flex model had twice the available memory, 40 times more internal storage, higher resolution screen, twice the battery life, integral keyboard, Windows 8.1, superior connectivity, and other capabilities lacking in my Android tablet. The Lenovo Flex was a little thicker than my tablet (about 3/4"), but still only about half the thickness of my older traditional laptop. The Lenovo Flex was a little heavier than my tablet, but seemed far more rugged. With a touch screen that could be folded outward resembling a tablet, this Lenovo Flex computer was priced under $300. Models of touch screen laptops manufactured by Acer, Dell, HP, Lenovo, and Samsung were also abundant, with screen sizes ranging from 10.1" to 15.6" available. The different computers had an assortment of processors, memory up to 8GB, and SSD or hard drives with storage capacities up to 1TB. Utilizing the latest in technology, the ease of use of an interactive touch screen, and priced competitively with comparable traditional laptops, if I had to purchase a new laptop today, it would be a touch screen and not a similar more traditional laptop.

While not carried by this particular big box store, another touch screen maker of note would have to be Microsoft, which is selling a series of its own touch screen devices under the moniker "Microsoft Surface". Often priced a little higher, but still competitive, with the other makers, Microsoft calls its Surface computers "The tablet that can replace your laptop." The latest models being promoted by Microsoft as "Surface Pro 3" include a very high resolution 12' screen, up to 9 hours of battery life, and latest Intel fourth generation multi-core processors up to the i7. Most of the Surface computers from Microsoft basically are advanced tablets running Windows 8, but offer a removable cover (optional at extra cost on some models) that includes a keyboard, and options such as a kickstand that allows the tablet to be supported in a comfortable upright position like a common monitor, USB and external video connectivity, cellular carrier connectivity, and other optional enhancements. While in a form factor closer to a tablet than a laptop, these Microsoft Surface tablets offer the power and functionality of more traditional laptops. Introduced in 2012, with screens from 10.6" to 12" the Surface family has gone from the original Surface tablet, to later generations of Surface RT, Surface 2, Surface Pro 2, and the latest Surface Pro 3. Each subsequent generation offers more power, speed, and functionality than the previous models; with Microsoft's name and marketing clout, it is likely that we will be seeing more Surface tablets replacing traditional laptops.

With all of these newer types of computers becoming more available and affordable, my next major PC purchase may very well be a touch screen laptop. Just to add another variable to the mix, most of the monitor makers are also producing touch screen monitors that can be used with modern desktop

computers or as an adjunct to a touch screen laptop. If I do not purchase a new touch screen laptop right away, and wait for a few months, newer technologies may become available, and prices may drop.

Decisions ... decisions.

Websites:

http://shop.lenovo.com/us/en/landingpage/convertibles-splitter/
http://en.wikipedia.org/wiki/Moore%27s_law
http://www.microsoft.com/surface/en-us
http://en.wikipedia.org/wiki/Microsoft_surface

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The description and download links are at this MSDN page. Formats are PDF, EPUB, and MOBI for many but some are DOC or DOCX.
http://www.techsupportalert.com/content/large-collection-free-ebooks-microsoft.htm

The Lighter Side

Customer: "Uhh, I don't have a 7 key."
Tech Support: "It's between the 6 and 8."
Customer: "I don't have a 7 key."
Tech Support: "Do you see the 1 key?"
Customer: "Yeah."
Tech Support: "What's to the right of that?"
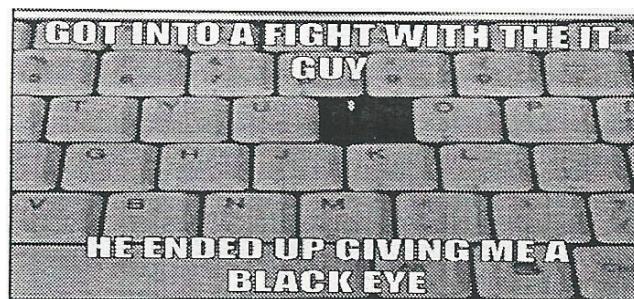Customer: "2."
Tech Support: "And further right?"
Customer: "3, 4, 5, 6."
Tech Support: "What's the next one?"
Customer: "8."
Tech Support: "It should be to the left of the 8 and the right of the 6."
Customer: "Ohhhh, *that* 7 key."

Next month's meeting is the picnic. $5 for meat, drinks, and tableware can be given to Steve at the door but, if you haven't already done so, do call Steve with your meat order.

For the dish to pass, A to I bring appetizers, H to R bring salads, S to Z bring desserts. We have never been disappointed with the food.

Photo SIG

Needs a leader.

Digital Photo SIG meets first Thursday of the month, Sept. through June, at St. John's Meadows, (West Lobby).

Linux SIG

The next workshop is the third Saturday in September, the 20th, at Interlock Rochester, 1115 E Main St. Enter through Door #7 on the end of the building near Goodman. Go up stairs to suite #200.

Come to get your questions about Linux answered. We have experts on hand to fix problems and answer questions about Linux and FOSS. Bring your system in so we can help you get the most out of it.

Enter through Door #7 near Main Street end of building. Find Interlock on the intercom directory to get buzzed in.

Hope to see you there!

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420 Dewey Avenue Rochester, NY 14613, 2nd Floor Warehouse – behind the City Recreation Dept, Administration Building. Hours of Operation: 9 am-4 pm M-F (call Helpdesk first, before visiting).
Helpdesk Phone Numbers:
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http://acdcareers.com/Community/PCRecycling.php

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