

Useful Bits & Pieces

by Lorrin R. Garson

Columnist, Potomac Area Technology and Computer Society

Hacking Your Toilet?

What? Oh ya! If you own a Satis (\$5,000) smart toilet you may be in for a surprise. The manufacturer hardwired its Bluetooth PIN with "0000" so anyone with an Android phone can download the "My Satis" app and voilà—drive-by flushing is at any fun loving hacker's fingertips. Imagine the possibilities when repeated flushing, open/close the lid, air-dry functions and music selection can be remotely controlled. Your bathroom habits can even be tracked; now that truly brings snooping to a new [low] level. See <http://www.usatoday.com/story/tech/2013/08/06/smart-toilet-hack/2622723/>.

Hacking Transportation & the Military

On a more serious note, researchers at the Cockrell School of Engineering at the University of Texas in Austin have managed to spoof GPS signals and take control of a vessel in the Mediterranean Sea. This was done as a controlled experiment with the knowledge of the ship's owners. Although the specific method and equipment they used probably doesn't sufficiently scale to become a serious menace, it does point out the vulnerability of our current

GPS system and has serious implications for our military and the world's sea and air transportation. See http://www.computerworld.com/s/article/9241236/Spoofed_Fake_GPS_signals_lead_yacht_astray?v=ctw9ECgJ8L0y. See also <https://www.youtube.com/watch?v=ctw9ECgJ8L0>.

Monitoring Your Memory With MemInfo

This has nothing to do with helping aging geeks with their cognitive difficulties, but rather to see how memory is used on your Windows computer. MemInfo is a small utility that is stored in the System Tray that shows memory usage, physical memory, page file and the top ten memory-using processes. The utility is easy to use and configurable. It also has a Memory Defragmenter, which is of questionable value. See <http://www.carthagosoft.net/MemInfo.php> for information from the manufacturer and it downloaded from <http://www.carthagosoft.net/Downloads.php>.

The Perils of Free Software

Nothing is free, including free software. Understandably developers of software want to be paid for their efforts so they use various techniques to acquire revenue. Some developers have you subtly download additional software in conjunction with the application you want such

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Tom wasn't too bright, even for a turkey.

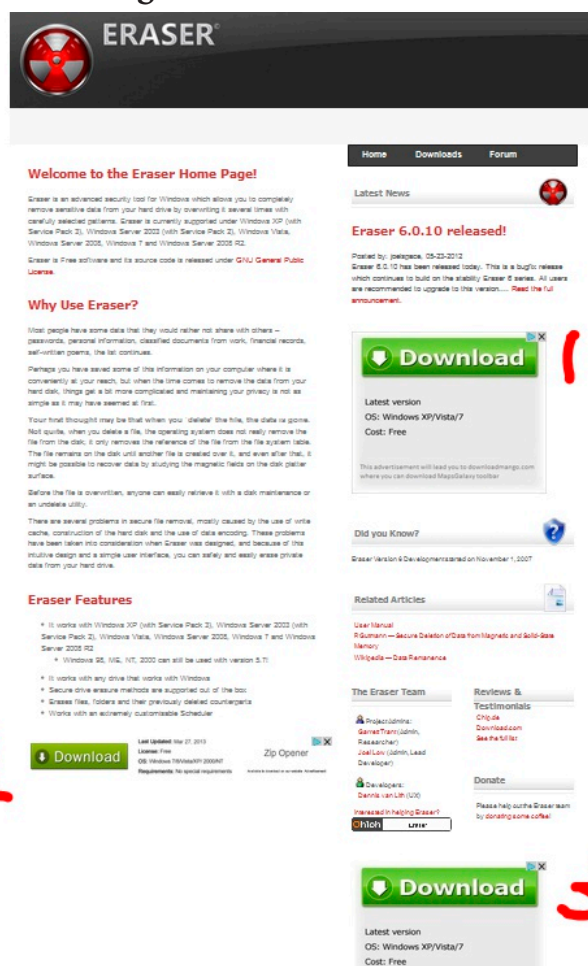
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as those pesky toolbars. Some just have advertising on their Web sites. Others have “Download” buttons from which you think you download the free software you are seeking, but these lead to other software that you may not want. This extra software, which more often than not is something you don’t want, is called “foistware.” Generally you don’t wind up with true malware but be alert to what you click on and be mindful of optional software that is preselected to be downloaded with the target software you want.

For a particularly egregious example, consider the free software Eraser, which is a reputable application that thoroughly deletes files and folders. The Web site from which you download this free software (<http://eraser.heidi.ie/>) is shown in Figure 1: Click on “Download” #1 and you will be presented with the opportunity to download Mango, MapGalaxy toolbar, ZipOpener,

Figure 1: Access to Eraser



Gaia, 7Zip, Codec, etc., each selected at random (?). Click on “Download” #2 and you are offered more of the same. Click on “Download” #3 yes, the same (unwanted) stuff.

But how do you download Eraser itself? Left-click on the word “Downloads” near the top right, then left-click on the line of text “Eraser 6.0.10.2620” (which can’t be discerned in Figure 1) and you will be redirected to SourceForge and you will be presented with the opportunity to finally download “Eraser 6.0.10.2620.exe.” This is shamefully ridiculous! Of course we shouldn’t be surprised if these directions change and even a more torturous path is posed. Is Eraser free? What’s your time worth and at what level of aggravation drives you to committing atrocities against humanity or hardware?

The Perils of Google Play

It should come as no surprise that miscreants are targeting Google Play (see <https://play.google.com/store?hl=en>) with scam apps. Fortunately, these apps seem to be quickly removed, but they do present a risk, so be careful. See <http://www.techhive.com/article/2045458/google-play-store-inundated-with-scam-apps-symantec-says.html> and <http://www.symantec.com/connect/blogs/yet-another-bunch-malicious-apps-found-google-play> for more information.

Microsoft Offering New Keyboard & Mouse



Microsoft has unveiled a new keyboard, mouse and a separate number pad called “Sculpt Ergonomic.”

As the name implies the keyboard is designed to combat carpal tunnel syndrome and related injuries. Both keyboard and mouse provide Windows 8 custom features. See http://blogs.windows.com/windows/b/windows_experience/archive/2013/08/13/announcing-

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[the-sculpt-ergonomic-desktop.aspx](#) for details. The mouse apparently isn't left-hand friendly.



Large Donation to PATACS

by Paul Howard

Treasurer, Potomac Area Technology and Computer Society



On September 4th, at the conclusion of an Arlington meeting, NOVACOM's former President, Karl Johnson, presented a check for \$2,548.88 to PATACS President Jim Rhodes, representing the remaining assets of the group.

In December of 2011, the NOVACOM Computer Club, which had its origins many years ago as a Commodore group, ceased operations. Over the years, several NOVACOM folks were also members of WACUG, and at times when we had special presenters from Smart Computing Magazine, attended NCTCUG meetings in Arlington.

We've been especially pleased that about a dozen folks from NOVACOM have been attending meetings in Fairfax and Arlington, have joined PATACS, and have made presentations at our meetings. We are thrilled to receive such a generous donation, but we value the new friendships and membership of these folks even more. Their participation has enlivened our meetings and helped us pursue new avenues of inquiry, enabling us to learn a variety of new things—and isn't that what we're all about?

Thanks to Scott Hanak

We just received word that longtime member Scott Hanak is leaving the DC area to return to Pennsylvania.

Scott has been one of the key volunteer technicians at the PC Clinics, providing troubleshooting and repair services to members, even assisting members outside of the meetings when necessary. Scott has also been an "Answer

Man" during the Q&A sessions of the Fairfax Meetings, contributing his depth of knowledge and experience as a trained computer technician.

Although we will miss his contributions to PATACS, we wish Scott well in PA!

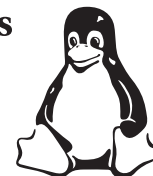


Linux and Open Source News

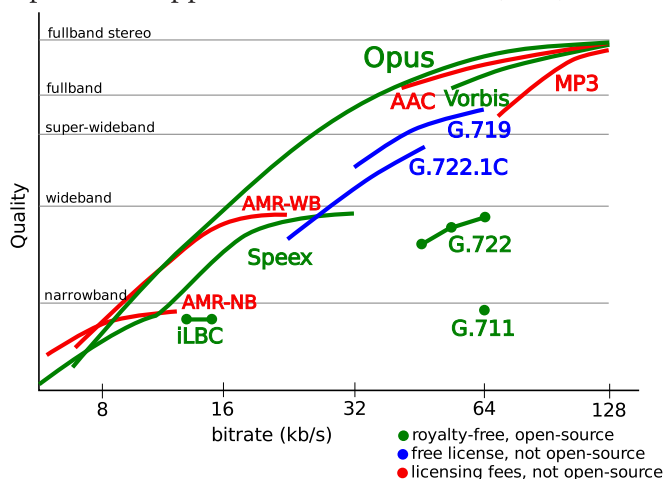
Opus audio file format

by Geof Goodrum

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It wasn't until a few months ago that I heard about the Opus audio compressor-decompressor (codec, <http://opus-codec.org/>). Opus combines multiple algorithms (including those from Xiph.org, the creators of the Ogg Vorbis and Speex codecs, and Skype/Microsoft) to provide highest audio quality with maximum lossy audio compression for applications from Voice over Internet Protocol (VoIP) phone calls to streaming and recorded music. The chart below (courtesy of Xiph.org) compares a variety of different codecs, including MP3 and AAC (iTunes) with Opus at different bit rates, showing Opus outperforming the others across all but the lowest bit rates. Opus also supports variable bit rates (VBR).



Opus was adopted by the Internet Engineering Task Force (IETF) as an Internet standard under Request for Comment 6716 (<http://tools.ietf.org/html/rfc6716>). It is also royalty-free with Open Source reference implementations. As such, the Firefox web browser (starting with version 15), Opera

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(starting with version 12) and Chromium/Google Chrome (starting with version 26) support Opus directly (i.e., without a plugin). The popular Open Source media player Video LAN Client (VLC) version 2.0.4 also supports Opus. A more complete list of applications is included in the Wikipedia article at

[https://en.wikipedia.org/wiki/Opus_\(codec\)](https://en.wikipedia.org/wiki/Opus_(codec)).

Support on portable media players is still lacking, but the free, Open Source Rockbox software (<http://www.rockbox.org/>, starting with version 3.13) supports Opus on many players.

So, the application support is well-along, but what about content? Not so much, yet. It is certainly worth using Opus in place of competing lossy formats if you rip audio from your own CD collection. You'll get better sound quality with smaller files. My favorite music service, Magnatune, announced support for Opus music downloads in September 2013

(<http://blog.magnatune.com/2013/09/opus-format-audio-files-now-available-at-magnatune.html>), with Opus streaming in the works. [Note that I prefer the Free Lossless Audio Codec (FLAC) downloads from Magnatune, which can be converted to Opus when storage space is an issue.]

Featured Open Source Software of the Month: November 2013

The software described below can be downloaded at the links provided or copied onto a USB flash drive at the PATACS Fairfax meeting. However, please check the package management tool included with your GNU/Linux distribution first, as installation is often just a click away.

Critterding – v1.0-beta14.

<http://critterding.sourceforge.net/>. Free GNU General Public License source code and Microsoft Windows executable by Bob Winckelmans.

Critterding is a “Petri dish” universe in 3D that demonstrates evolving artificial life. Critters start out with completely random brains and bodies, but will automatically start evolving into something with much better survival skills. Think of this as the early computer simulation game “Life” evolved for modern computers.

Compiling Critterding from source code requires Freetype2 and SDL libraries, as well as the gcc compiler toolchain, included in major GNU/Linux distributions.

Double Commander – v0.5.7 beta.

<http://doublecmd.sourceforge.net/>. Free GNU General Public License source code and executables for GNU/Linux (GTK2 and QT), Apple MacOSX, and Microsoft Windows by Alexx2000. Double Commander is a cross platform open source file manager with two panels side by side. It is inspired by Total Commander. Features include:

- Unicode support
- All operations working in background
- Multi-rename tool
- Tabbed interface
- Custom columns
- Internal text editor (F4) with syntax highlighting
- Built in file viewer (F3) to view files of in hex, binary or text format
- Archives are handled like subdirectories. You can easily copy files to and from archives.
- Supported archive types: ZIP, TAR GZ, TGZ, LZMA and also BZ2, RPM, CPIO, DEB, RAR.
- Extended search function with full text search in any files
- Configurable button bar to start external programs or internal menu commands
- Total Commander WCX, WDX and WLX plug-ins support
- File operations logging

ripcheck – v20130927.

<http://sourceforge.net/projects/ripcheck/>. Free GNU General Public License C source code, Tcl executable script, and command line executables for Apple MacOSX and Microsoft Windows by John Buckman/Magnatune.com. ripcheck runs a variety of tests on WAV files to try to detect common CD ripping errors, including:

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- a short click at the beginning of a WAV file
- the occasional dropped sample (i.e. a sample value of zero) in the middle of a song. This might be audible as a click as well.
- the occasional repeated sample value, for about 1/1000th of a second. This would be audible as a very short tone.
- the occasional empty spot in the middle of a song.

Two versions of ripcheck are available:

- a very fast C version that displays warnings as text. We're providing compiled versions of the

program for Mac and Windows. On Unix/Linux, compile from source with the command "gcc ripcheck.c -o ripcheckc"

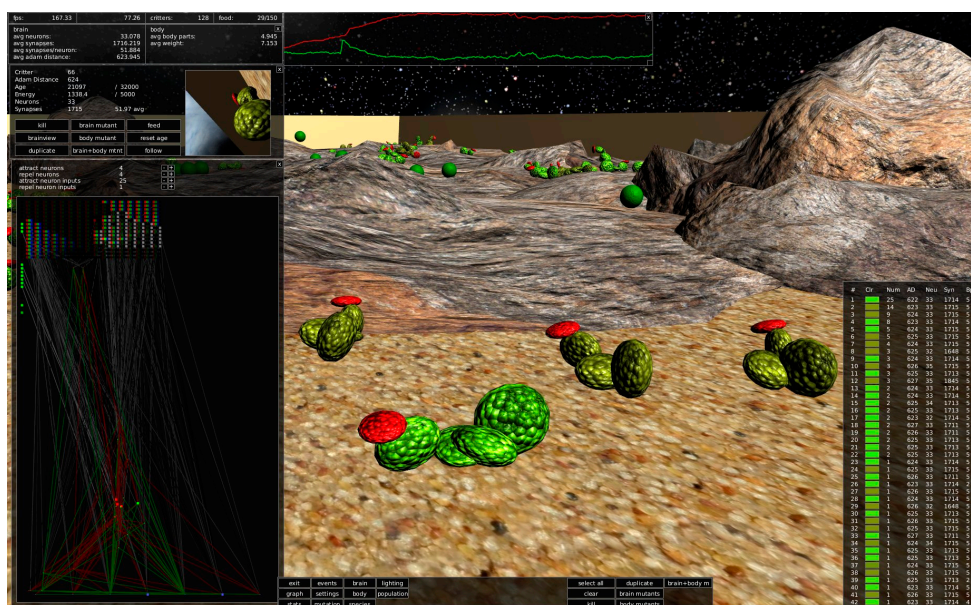
- a much slower Tcl program, which makes pretty graphics of the WAV audio data around a probable defect, zooming in on each one.



Note: this program will display warnings on audio files that are sometimes perfectly ok, especially on highly processed electronic music.

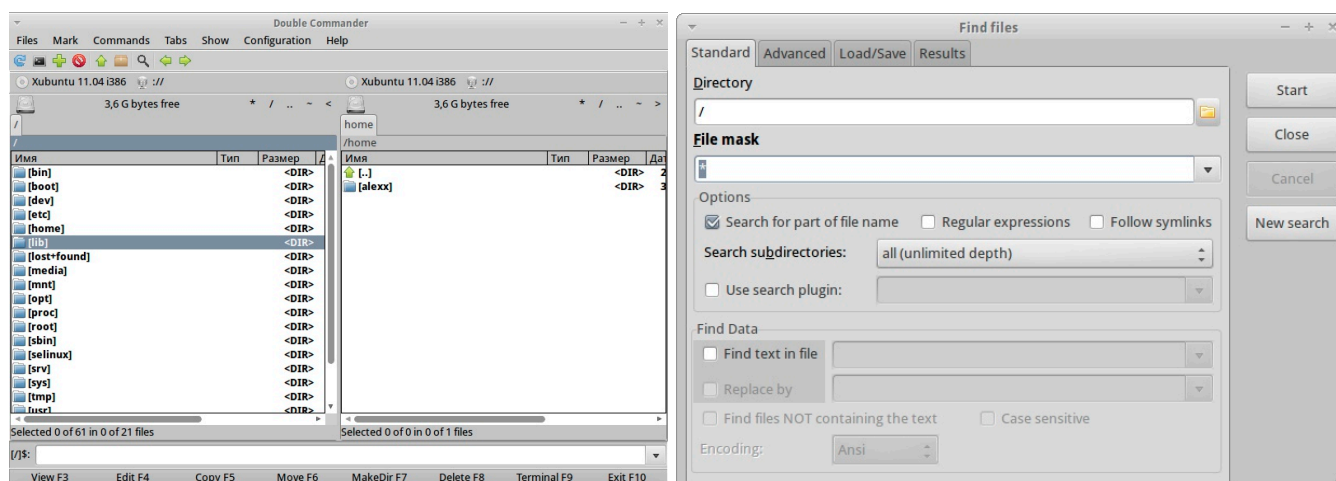
Kernel Source – v3.11.4.

<http://www.kernel.org/>. Free GNU General Public License source code for all platforms by the Linux community.



Above: Artificial life evolves in Critterding

Below: Double Commander main panel (left) and file search panel (right)



Protect Your Online Search and Email Privacy

by Ira Wilsker

WEBSITES:

<http://info.yahoo.com/privacy/us/yahoo/relevantads.html>

http://info.yahoo.com/privacy/us/yahoo/opt_out/targeting/details.html

<https://history.google.com/history/settings?hl=en>

<https://history.google.com/history/lookup?hl=en&st=ad>

Most of us use the major search engines for online searches, and also use the free email services such as Gmail, Yahoo! Email, Hotmail (now Outlook mail), and others. Have you ever wondered how these “free” services can offer their services to millions of us for free? The answer is that all of these “free” services are supported by advertising, a very common, normal, and necessary practice. Advertising supported “free” services are extremely common; consider local over-the-air radio and television broadcasts, which are free for us to listen to or view, but are supported by advertisers who pay the media provider for the broadcast of their messages. The “free” email and search providers are no different in their source of funding, advertisers, than our local TV and radio stations.

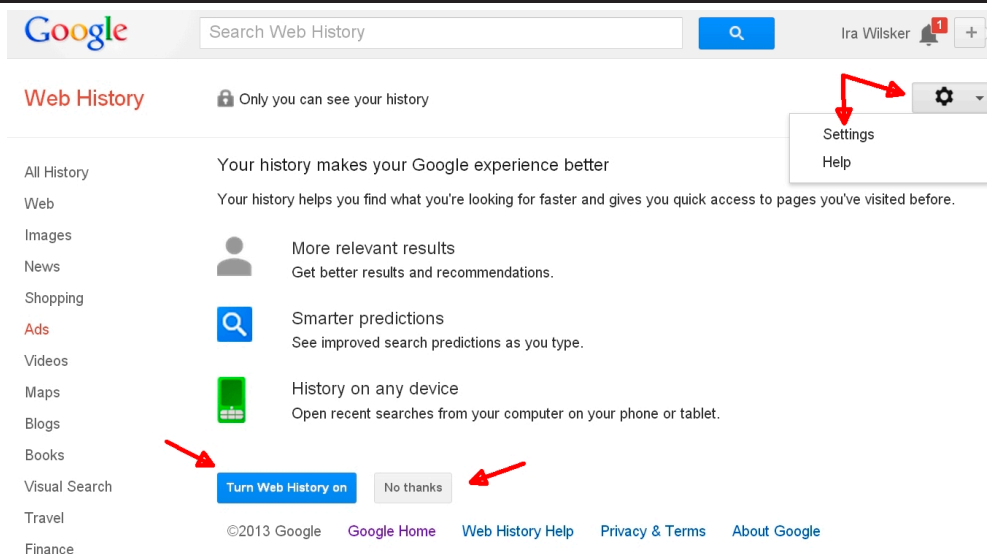
Many of the local TV and radio shows are targeted to different demographic groups, and sponsored by advertisers that want to reach and influence those groups. For example, a popular local Friday night hunting and fishing show on a major news-talk radio station is sponsored by businesses that sell hunting and fishing goods and services; this is both logical and efficient as the advertisers (sponsors) have a high probability of reaching potential customers in their target market. In order to provide “free” email and search services, the online providers must do much the same as the TV and radio stations, and offer their advertisers the ability to reach their respective target markets. While this process is totally normal, and stated in the privacy policies of the relevant providers, there

are still a sizeable number of Internet users who crave the “free” services, but do not want their personal search interests and emails tracked for the purpose of providing the paying sponsor with a targeted market. In order to both respect the privacy desires of their users, as well as comply with governmental privacy requirements (especially in the European Union countries), the major providers offer users a reasonable method to protect their personal interests and privacy. Even if a user decides to follow the privacy steps published by the Internet providers, the users will still have advertising materials appear, as the revenue stream is required by the provider in order to cover expenses and profit, but the advertising will be more generic, rather than carefully targeted. Search engines, such as the enormously popular and profitable Google, use targeted advertising in their search results, but this targeted advertising is typically based on the search term entered by the user. Google and Yahoo! generally place sponsored (paid) listings somewhere on the results page, with these paid advertisements somewhat related to the search term. This advertising is absolutely necessary in order to provide the “free” services.

While search terms on a search engine are self defining in terms of displayed advertising, the “free” email services and search engines often compile demographic or personal interest information on their users in order to provide the user with “enhanced” online experiences, which are often better targeted advertising. It has been well documented that Google captures key words in Gmail emails in order to create a marketing profile of individual Gmail users, which offers greater value to its advertisers; it is precisely these advertisers that cover the costs of providing the “free” services. Without these important advertisers, Google, Gmail, Yahoo!, Yahoo! email, and comparable online services could not provide their comprehensive “free” services to the consumers.

For those who like the free online search and email services, but want to minimize the personal and demographic information gathered by those “free” services, there are simple

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methods that can be used to opt-out of the targeted advertising, but will still be exposed to the generic advertisements. Yahoo! offers a simple one-click “opt-out” service at info.yahoo.com/privacy/us/yahoo/opt_out/targeting/details.html. In a box headed “Internet-based Ads”, Yahoo! displays the current Internet based ads selection (on or off), and a radio button that allows the user to choose “Opt In” or “Opt Out.”

Google uses a variety of efficient methods in order to generate advertising targeted at its registered Gmail, Google Search, Chrome browser, and other Google services users. One major method that Google uses to track its registered users is by compiling all of the search terms the user entered on the Google search engine. For those who want to better protect their privacy, and switch most of the supporting advertising from targeted to generic, Google has provided a simple method to delete the “Web History” that Google has compiled on them. The process of removing your personal Google tracks is simple and fast at history.google.com. If you are a registered Google user (Gmail, Google+, or other Google services), login to your account, if necessary. On the top-right corner of the history.google.com webpage is a gear icon; click on the gear icon, and select settings. If already logged into a Google service, the settings page can be accessed directly at

history.google.com/history/settings?st=ad&hl=en. To stop Google from compiling your personal data, click on the “Turn Off” radio button (or “Turn On” if that is what you want).

If the user would like to review what has been recently compiled and saved, and then selectively delete items, clicking on the hyperlinked phrase “recent activity” on this “Settings - Google Search” page will display the recently added tracking information, which the user is free to selectively delete. For those who would like to delete all of the information which has already been collected and compiled, it will be necessary to click on the hyperlinked (blue) words “delete all” on this same page.

Google, Yahoo!, and similar services, prefer that users do not opt-out of history tracking, claiming that the compiled history improves the user’s online experience. Google, for example, indicates several specific user benefits by enabling tracking, including faster web searches, quick access to previously searched pages, improved relevancy of search results and recommendations, more intelligent predictive text as search terms are entered, and the ability to reopen recent searches on other smart devices (phones and tablets).

Since the process to opt-in or opt-out of history tracking is fast and easy, and since the online search and email services claim distinct user benefits by allowing this tracking, it is up to the user to decide what is best for him personally.

Got Windows 8? Then Get Start8

by Tom Kuklinski

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April 2013 Issue, Horizons

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Some reviews of Microsoft's Windows® 8 have been brutal. I have been using Windows 8 since December 2012. It is on a desktop and does not have a touch screen. It works well. I have not experienced a crash to date.

Overall, I do like Windows 8. Do I prefer it to Windows 7 or XP? Yes, I do! That is a powerful statement. Here is why.

Windows 8, like Windows 7 is pleasant to use. I find it overall to be aesthetic in appearance. It is like having two operating systems. The so called Metro-Modern Start Screen consists of blocks that contain your programs. There is no START BUTTON like in previous Windows versions. This look was made to conform to hand-held devices like phones and tablets. These devices use touch screens and this layout works. However, when using a traditional Windows 7 desktop, it almost becomes useless. There is no point to have it other than to remain consistent in appearance between hand-held devices and your desktop or laptop. Microsoft made one of these Metro-Modern Start Screen program blocks to access the good old traditional desktop of by gone Windows versions. EXCEPT, there is no START button like previous versions of Windows.

Some of the apps that are made for the Metro-Modern look may work different that you would expect on a laptop or desktop application. For instance, Internet Explorer 10 when in the Metro-Modern mode will be in a minimalist mode. You will not have the full robust appearance that you would be used to having if launched from a Windows 7 desktop. However, Microsoft did include the full version of Internet Explorer 10 in the Windows 8 desktop. Sounds confusing. It is, until you become accustomed to this. However, this difference really is not great. You can choose to stay in the familiar traditional Desktop mode that looks like Windows 7 and not visit the Metro-Modern Start Screen very much.

However, one great issue exists. This single issue may be the problem as to why Windows 8 has not been too successful. The START Button at the lower left corner of your screen is missing. Microsoft purposely left this button out. So if you use Windows XP, Vista or 7, you are familiar with the Start button and rely on it for just about everything you do. Picture it gone. Now you see the problem.

It is this anomaly that may have caused the negative reviews and caused slow sales of Windows 8. So Microsoft, wake up and give us that START BUTTON back.

Until Microsoft does include the Start Button, here comes a company that has been around for thirty years. It is Stardock. This company created a program called Start8™. The purpose of this program is to put the good old Start Button back on the Windows 8 Desktop screen and function as before.

Start8 costs a mere \$4.99. To me this is a bargain. Let's take a look at this Start8. You need to download it from www.stardock.com. Then install it. Simple and done. You can customize this START. You can choose a STYLE. It can be the traditional Windows 7 theme or custom to your preference. You may choose a Windows 8 style. You may have translucency, flag look START button or customize.

You also can choose, Large Icons, Show Recently used applications, Open sub Menus, create shortcuts, show Windows 8 Modern User Interface, control some Window 8 features – on and on.

That is about all it does. It is cheap and works well. This is one of those programs that is so obvious. In fact, this one program may actually increase sales of Windows 8.

I recommend this to anyone that uses Windows 8. Thank You, Stardock.



Permissions—Do you have the right ones?

by Phil Sorrentino

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March 2013 issue, PC Monitor

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In the early days of computing, when we didn't have multi-users Operating Systems and networks, permissions were less necessary because the files and folders created were for the use of the one and only user. Files were shared using floppy disks and sneaker-net (run with the floppy from computer to computer). But, as operating systems improved and allowed multiple users and our computers were connected by Ethernet networks, permissions became necessary to make sure only those intended could view or change your files and folders.

If you have ever tried to share a folder on one of your computers on your home network, you know how frustrating it can be to get things to work. Well, "permissions" is one of the things that has to be understood and setup properly. Of course, there are many other things that have to be set up first, but permissions, often times, is a stumbling block. If you are setup with a "Homegroup" (all machines are running Windows 7), then the job is a little easier than if you are setup with a "Workgroup" (machines can be running XP, Vista, Windows 7 or even be Apple computers). All the computers in a Workgroup must be setup with the same workgroup name (check in the System control panel for this setting, on the computers running Microsoft OSs).

Permissions may be a challenge because there are two types of permissions to be considered. There are "share permissions" and NTFS permissions. Share permissions are necessary when accessing folders across a Local Area Network (LAN), from another machine. NTFS permissions are necessary when accessing any file or folder that you do not own (i.e. created it yourself). So, both permissions must be set up when you are trying to share files and folders on a LAN. Share permissions are easily setup for a

file or folder. Just right-click on the file or folder you want to share (in Windows Explorer) and choose "Share with" and then select those that you want to share with. (Selecting "Specific People" will open a window that will let you select those people you would like to share with. Pull down the arrow and select "Everyone" and then click "Add", if you would like to share with anyone on the network. But keep in mind that "Everyone" includes anyone you let onto the wireless portion of your network. Be especially aware if you do not have your network protected with at least WEP encryption.)

The NTFS permissions are the next things to consider. NTFS permissions is a core component of the Windows 7 security system. Using this feature, you can specify exactly which other users are allowed to open your files and folders, and how much they can do with the files and folders. Using Windows Explorer to setup the NTFS permissions for a file or folder, right-click the file or folder and select "Properties". In the Properties window, select the Security tab. Here you will see a list of Users and the Permissions for each User. Click a User in the "Group or user name" box and the permissions will be shown in the "Permissions for Authenticated Users" box. In this box you can Allow or Deny the following Permissions "Full control", "Modify", "Read & execute", "List folder contents", "Read", "Write", and "Special Permissions". (You would think that Deny is just don't Allow, but there are further details that complicate this issue and it would take more than the length of the Monitor to completely explain, however there is a good description of these issues in the best seller "Windows 7, the missing manual".) A brief explanation of these permissions is as follows:

- List folder contents, which can only be set for folders allows a user to see the files and folders inside the folder.
- Read, allows a user to examine the contents of the file or folder, but not make changes.
- Read & execute, allows a user to examine the contents of the file or folder and also run any file that is in the folder.

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- Write, allows a user to read a file and make and save changes to it.
- Modify, allows a user all the abilities of Write and Read & execute, and also allows the ability to delete the file or folder.
- Full control allows a user to do anything to the file or folder, including changing its permissions, and even taking ownership of the file. (Ownership is normally given only to the user who created a file or folder.)
- Special Permission, seems to be fairly extensive and best described by an article from Microsoft at <http://support.microsoft.com/kb/308419>.

This is a little to the side of the topic of Permissions, but it is related. You will notice that there are two levels of Computer Users, Administrators and (Standard) Users. Administrators have permissions to create, delete, and manipulate files and folders. Administrators can also execute programs, install programs, create accounts and change permissions. Some of these can be very dangerous in the hands of a malicious person or piece of malware. (There must be at least one Administrator for every computer.) (Standard) Users typically have lesser permissions but permissions can be increased as previously discussed. Microsoft recommends, for security reasons, that there be only one Administrator, and all other Users be the (Standard) User type. This is probably good advice for most installations because of the extent to which an Administrator can manipulate files and folders. Should a virus or Trojan horse get control as an Administrator, the malware could easily wreak havoc. But with the lesser permissions of a Standard User, the malware may be thwarted and not be able to pull off its nasty job.

Setting the share permissions for different Users on a file or folder can be done if necessary, but if you are on a small LAN and all the Users are known to be trustworthy, then when it comes to sharing a file or folder, you might consider sharing with “everybody”. And set the NTFS permissions for each User to what that User

needs, and no more. This will probably help make it easier to setup your network and share files and folders on that network, and if a problem occurs, it should make the troubleshooting less difficult.



Review: Vidometer for iPhone/iPad

by George Harding

Treasurer, Tucson Computer Society, AZ

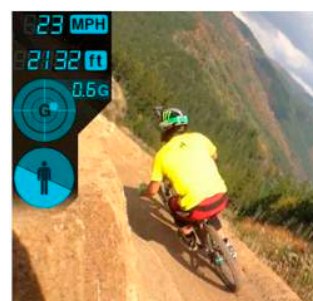
January 2013 issue, eJournal

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Here is one of the neatest applications for iPhone that I've seen. It uses many of the internal facilities of the iPhone at the same time to record your activity.

Showing on the screen are Speed, Altitude, Attitude (tilt), Acceleration and G-force. All this info shows in the upper left corner of your screen as you take video while you are driving, skiing, biking or other mobile activity.



There are many iPhone apps that use one of the internal iPhone facilities, such as Altimeter, Level, Compass and so on. Vidometer is the only one I know of that uses so many. This app uses the accelerometer, GPS and gyroscope to build its graphical overlay on the video screen.

The video you take is recorded and can be played back and a library of the recordings is available for later viewing. There is a power save mode that engages after a minute or so of recording. This saves your battery when making an extended video. And, best of all, it's free!

It's available for iPhone 4 and higher and several models of iPad. Requires iOS 5 or later.

About: Vidometer

Vendor: Hitcase

www.hitcase.com/vidometer

Price: Free

The Demise of the Digital Camera

by Jerry Schneir

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I probably should have used one more adjective in the title, “inexpensive”, so that the title would have read “The Demise of the Inexpensive Digital Camera.” You only have to look around you at any party or gathering and see that the majority of the picture taking is being done by the guests with “smart phones.” Relatively few cameras appear at these gatherings, so you might ask why? What has happened? What is happening to fuel this dramatic change?

By some estimates, smart phones account for over 50% of the cell phones in use today, and those smart phones all have built in cameras. And within the last couple of years, the cameras in those smart phones are getting much, much better. To prove my point you only have to look at two new products to be announced, one from Nikon and the other from Nokia, one a camera company the other a phone company.

The Nikon S800c combines a camera with Wi-Fi capability, even internet browsing. It will not be long before a phone is added to that device. Nokia on the other hand created a phone, the 808c Nokia PureView Pro which combines a phone with new digital technology. It dispenses with the usual scaling/interpolation model of digital zoom used in virtually all smartphones, as well as optical zoom used in most digital cameras, to vary the magnification and field of view. This new technology which is already in use by Sony in some of their more advanced cameras (Sony NEX F3), allows zooming without any lens elements changing positions. And amazingly enough, the results are really fantastic.

More and more camera manufacturers are equipping their cameras with the ability to transfer images from the camera to a phone, iPad type device or a computer directly, no wiring required. As phone manufacturers start to incorporate this new technology into their phones, the need for people to have both a smart

phone AND a camera diminishes. Many manufacturers, aware of the missteps of Kodak in failing to recognize the change in technology (film to digital) and the eventual destruction of the company, are moving quickly to rearrange their product offerings.

What will be showing up in the marketplace are more mid to high end cameras with fewer and fewer low end cameras. The reasoning is pretty simple, the camera phones, as good as they are getting, are still a very long way from producing images as good as those from the mid to high end range of cameras. If you take a close look at the camera offerings of today you may note the changes that are taking place right now.

Digital SLR cameras are moving in two price directions, up and down.

Canon/Nikon/Pentax/Sony are locked in a battle in both the high end professional/ semi-professional/dedicated amateur lines at one end and the beginner/intermediary dSLR camera lines. However, this is an area that has fragmented greatly; new camera designs along with new technology are resulting in smaller and lighter cameras capable of producing results equal to that of their bigger cousins. I can hear the verbal challenges now to that statement, but I am noticing more and more pros/semi-pros using this newer technology and reaping the benefits of fewer backaches from the lighter, pounds lighter equipment. These stark changes were brought about by the “mirrorless interchangeable lens cameras. In some circles these are referred to as CSC (compact system cameras) or ILC (interchangeable lens cameras) or EVIL (electronic viewfinder interchangeable lens cameras). Cameras in this mirrorless grouping are the Fuji X-Pro 1, the Sony alpha and NEX family of cameras, the Nikon J1/Vi cameras, the just announced Canon EOS M cameras, the micro four-thirds (mFT) line of cameras such as the Olympus OM-D5 and Panasonic GX1, and of course the entirely different Ricoh line of interchangeable lens AND sensor cameras.

In addition to those camera groupings another new collection of cameras has appeared, the

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large sensor fixed lens cameras such as the Canon G1 X and the Sony RX 100 along with the Fujifilm X10 and X100. I can see some questions arising about what constitutes a large sensor. To my way of thinking, sensors in the size range of 1/1.7 and larger meet that criterion, but just barely. But wait, the camera companies are also introducing more mid- to high-end point and shoot cameras such as the Panasonic FZ200, Pentax X5, Canon SD500, Nikon P7700, and Fuji SL300.

But if you look, you will see relatively little effort or money being spent on the inexpensive line of cameras, those retailing for \$200 or less. What you are seeing is product renaming with a change in camera color but very little in the way of any new features. What also appears to be happening here is that as the new models appear the older models are marked down substantially. As an example, Olympus Pen LP-2 was \$550 or more. It can now be had for about \$300 while the even older version, the LP1 is still around and going for a bit under \$300 and those are prices with the kit lens. The Fuji S4500 came out at about \$300, but today it can be bought for under \$200 and it came out in January of this year.

The economic downturn of the last few years certainly has played a part in the changing face of digital photography, making it less lucrative to introduce middling to low cost cameras and to focus on the mid to upper range of cameras with special features, such as better video, longer zoom ranges, great low light and high ISO ability. You will also be seeing a move away from the traditional CCD sensor to the CMOS and BSI-CMOS type sensor since these are far better suited to video and low light photography.

One other very bad thing is happening and that is the increase in camera complexity. I hear it almost every week from my students, "I can't understand the manual (if there is even one included), there is no index or the index is vastly incomplete, the booklet uses abbreviations without ever defining them, they seem to assume I know something when I do not, they don't explain a feature or how to use that feature." I

have long maintained that the instructions are written by people whose native language is NOT English and may not even be photographers.

This is a most interesting period in photography. Image quality and the ability to use high ISO settings or shoot in dim light has never been better. Cameras, at least the mid to high price cameras, have more features and generally perform much better. The next five years will see very significant changes in the photographic landscape, stick around, you may even like what you see.



Review: Kingston HyperX SSD

by George Harding

Treasurer, Tucson Computer Society, AZ

February 2013 issue, eJournal

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Solid State Drives (SSD's) are a wonderful addition to the hardware library of storage devices. They are small, have no moving parts and are much faster than other storage media. On the down side, they are more expensive than other media and storage sizes are smaller than what is easily available in other media. The speed advantage is one that can be capitalized on to load one's operating system faster.

You can use your hard drive to hold and access your applications and data, or you can use the SSD for some applications, those that take longer to load.

I received a very nice 240 GB unit for review. I had tried a couple of other SSDs, but had problems of one sort or another with them. The Kingston unit comes complete with what you need to install it in either your desktop or your laptop.

The box contains the SSD, a nifty screwdriver suitable for either Phillips or slotted screw heads, a drive enclosure, a 3.5" mounting bracket, a USB cable, a SATA drive cable and a CD-ROM with instructions and a version of Acronis software.

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The procedure for a desktop is to clone your hard drive to the SSD with the Acronis software. Then you reboot from the SSD. The hard drive can be used as storage for data and applications, as usual. Another approach is to install operating system software to the SSD and boot from it.

For a laptop, the procedure is somewhat different. You first remove the internal hard drive and install in its place the SSD. The internal hard drive is mounted in the supplied drive enclosure and attached to the laptop with the USB cable. You clone the hard drive as before.

I had a few difficulties with these installations. First, I tried the desktop approach, but the Acronis software would not clone the hard disk to the SSD. The latter was grayed out in the destination choices, so I took the alternate approach and loaded Windows 8 to the SSD and was able to boot to it.

In the case of the laptop, I was not easily able to remove the internal hard drive, so I gave up on that approach. Kingston's Tech Support will be helping to solve my difficulties – more later.

The HyperX is a well-put-together kit and should be usable by most anyone. The instructions are very clear, with pictures each step of the way. The Acronis software is reliable.

About: Kingston HyperX SSD

Vendor: Kingston

www.kingston.com

Price: \$275, \$203 @ Amazon



Interesting Internet Finds

by Steve Costello

President/Editor, Boca Raton Computer Society, Inc., Florida

June 2013 issue, Boca Bits

www.brcs.org

Steve Costello (<http://ctublog.sefcug.com/>)

Editor (at) brcs.org

In the course of going through the more than 200 news feeds in my Google Reader, I often run across things that I think might be of interest to other user group members.

The following are some items I found interesting during the month of May 2013.

HTG Explains: Why Does Chrome Say PDF Files Can Harm Your Computer?

<http://www.howtogeek.com/161461/htg-explains-why-does-chrome-say-pdf-files-can-harm-your-computer/>

How to Create A PDF With Fillable Forms in LibreOffice

<http://www.maketecheasier.com/create-a-pdf-with-fillable-forms-in-libreoffice/2013/04/29>

4 Best Free Alternatives to Microsoft Visio

<http://www.nirmaltv.com/2013/05/02/4-best-free-alternatives-to-microsoft-visio/>

Fix: Bluetooth Mouse disconnects randomly in Windows

<http://www.thewindowsclub.com/bluetooth-mouse-disconnects>

Is geotagging my photos a bad thing?

<http://askleo.com/is-geotagging-my-photos-a-bad-thing/>

How To Choose A Strong Password

<http://www.techsupportalert.com/content/how-choose-strong-password.htm>

How To Use Remote Desktop Connections Like An IT Pro

<http://www.makeuseof.com/tag/how-to-use-remote-desktop-connections-like-an-it-pro/>

Send to Kindle — eRead (Almost) Anything

http://www.wonderoftech.com/send_to_kindle/

Tips and Tricks With Technology To Save You Time

<http://inspiretothrive.com/2013/05/tech-tips-and-tricks/>

How to Print to Any Printer from Android

<http://savedelete.com/how-to-print-to-any-printer-from-android.html>

Upload EPUBs & PDFs To Google Play Books; Read On Web, iOS & Android

<http://www.addictivetips.com/web/upload-epubs-read-on-web-ios-android/>

Fairfax Meeting: November 16**Favorite Apps**

Presented by Kyla Lupo

Do you have an Android smartphone and an iPad? Or maybe an iPhone and a Nexus 7. Do you wonder what apps should work well on both devices? And what about your computer?

Whether it's a Mac or a PC, there is a rising number of apps that can be used across ALL your devices! From games to movies, from word processors to music—there's an app for all of that, regardless of what platform you're using.

Come to an interactive and informative presentation with Kyla Lupo, from Smart Again Tutoring and learn some great new apps for any of your devices. She's been busy searching the App Store and Google Play to find the best apps out there, and testing them to make sure they work the way they are advertised. Bring all your devices and your questions. Be prepared to share your favorite cross-platform app!

**Micro Center® In Store Clinics**

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Micro Center stores host free events called "In Store Clinics." The clinics cover a wide range of topics. All Micro Center store locations follow the same schedule of topics.

A link for store locations is at the top center of the home page, www.microcenter.com. For those in the Washington, D.C. area, the only store in Virginia is in the Pan Am Plaza at 3089 Nutley Street, Fairfax, VA 22031, phone (703) 204-8400, and the only store in Maryland is in the Federal Plaza at 1776 E. Jefferson #203, Rockville, MD 20852, phone (301) 692-2130.

Micro Center Clinics are held on most weekends, except during holidays. The same topic is usually presented on both Saturday and Sunday. Topics may change and clinics may be cancelled without notice. Please verify the schedule with the store before leaving and register online for e-mail updates (http://www.microcenter.com/instore_clinic/sign_up.html).

Signing up in advance reserves a seat, recommended as space is limited. This can only be done at a store, either at the Tech Support or Customer Support area.

October – November 2013 Schedule

Start Time is 2pm local unless otherwise stated.

Oct 19 & 20: Safe Web Surfing

Oct 26 & 27: Windows® 8 Basics

Nov 2 & 3: Digital Image Processing

Nov 9 & 10: Multiple Monitors

Nov 16 & 17: Smartphones, Tablets and eReaders

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<http://www.patacs.org/arlingtonmeetings.html>

General Meeting

1st Wednesday (11/6), 7 p.m. ET

Technology & PC Help Desk

4th Wednesday (11/27), 7 p.m. ET

Board of Directors

3rd Monday (11/18), 7 p.m. ET

Fairfax Meetings

(with OLLI PC User Group)

Osher Lifelong Learning Institute (OLLI)
4210 Roberts Road, Fairfax VA 22032

<http://www.patacs.org/fairfaxmeetings.html>

General Meeting

3rd Saturday (11/16), 12:30 p.m. ET

Online-Only Webinar

2nd Wednesday (11/13), 7-9 p.m. ET

<http://www.patacs.org/webinarpat.html>