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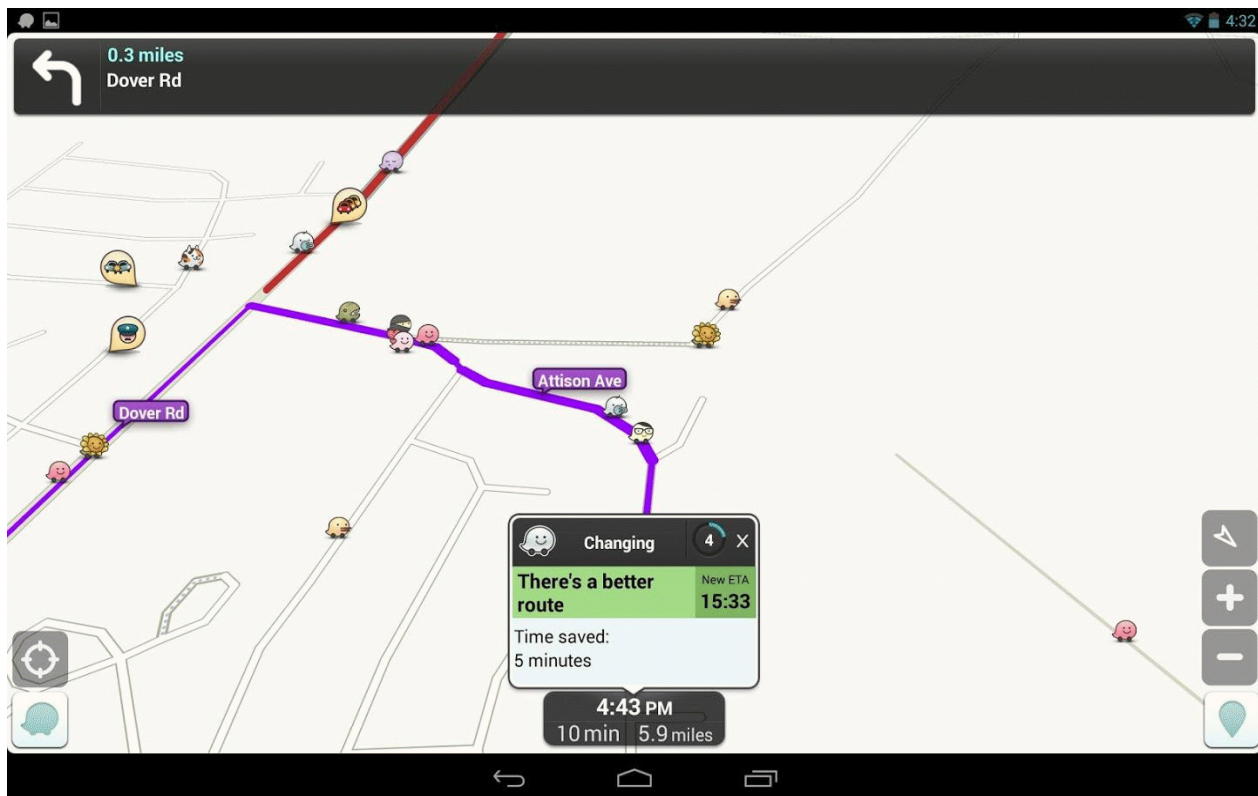


## WAZE Travel and Routing Information on Your Smart Device

by Ira Wilsker

Over the past several weeks, I have taken several out-of-town road trips. On these trips I used a novel free smart phone app for routing and traffic information called Waze (waze.com). There are an abundance of apps that function with the integral GPS built into almost all smart devices, including smart phones and tablets. Available for most smart devices with an appropriate wireless internet connection (cellular or Wi-Fi) running Android,

iOS (Apple devices), Windows Mobile, Symbian, and Blackberry powered devices, Waze provides much more current routing and road related information than most other competitive apps.



For those who may drive outside the U.S., Waze is multinational in scope, and offers real-time traffic information on an international scale. According to Wikipedia, As of 2013 Waze has a complete base map for the United States, Canada, United Kingdom, France, Germany, Italy, Netherlands, Belgium, Israel (claimed to be the best map for that country), South Africa, Colombia, Ecuador, Chile and Panama, but the company has plans to complete maps for other countries in Europe and elsewhere.”

With the motto, “Waze. Outsmarting Traffic, Together,” Waze describes itself as, “Get the best route, every day, with real time help from other drivers. Waze is the world’s largest community-based traffic and navigation app. Join other drivers in your area who share real-time traffic and road info, saving everyone time and gas money on their daily commute.” With millions of users (Yahoo! reported over 50 million users in mid-2013), Waze utilizes real-time information from users who have opened the Waze app on their smart devices. Waze anonymously, continuously, and transparently reports location, speed, and other information to a centralized server, which in turn almost instantly compiles and displays this shared information on other Waze equipped smart devices in the same user selected area. For privacy and security reasons, by default, the Waze configuration utilizes a user chosen screen name and avatar on the remote screens, and does not publically display any other personally identifiable user information.

While several other route mapping apps simply display traffic conditions as a colored line on a map, typically green indicating that traffic is moving fast, yellow indicates slowed traffic,

and red indicating major traffic slowdowns or stoppage, Waze utilizes a different approach. Since the Waze app on the users' devices are continuously reporting speed and location, based on GPS information, accurate traffic information is displayed along with a wide assortment of other helpful and useful information. According to the Waze website, this difference between Waze and the other GPS based routing apps is, "Get alerted before you approach police, accidents, road hazards or traffic jams, all shared by other drivers in real-time. It's like a personal heads-up from a few million of your friends on the road."

For safety reasons, if Waze is used by the driver of a vehicle, the text input function is disabled once a destination is entered or selected off of a saved list. The driver can still be informed of upcoming traffic, hazards, and other reports, as well as audio turn-by-turn directions, without having to physically handle the device. There is an option button displayed where a passenger can enable the text based data entry process while the vehicle is in motion. In addition to the passive information on speed and other road information provided by the app itself, a passenger can actively contribute to the community of Waze users by using a simple icon based method of sharing road reports. These passenger entered road reports take the current location, as automatically provided by the GPS, along with manually entered information on accidents, traffic congestion and delays, disabled vehicles, speed traps, and other road hazards, which immediately show up on all other Waze connected devices in the area. In addition to road related information, users can also enter gas station prices observed on their route, which will be displayed to others driving through the same area. Waze says on its website, "By working together to report prices at the pump, Waze drivers can always save some gas money."

Too many of us have had to deal with outdated maps on our GPS or smart devices. While some newer free-standing GPS devices offer free quarterly updating of maps, many still charge substantial fees to purchase map updates. When using an internet based mapping service, it is often difficult (or impossible) for the user to either determine the age of the map displayed, or to enter map corrections, both of which may undermine the confidence of the user in the accuracy of the maps displayed. What is unusual about the maps displayed on Waze is that they are community edited; Waze has an active community of map editors who work continuously to improve and update the maps displayed by the Waze app. Map corrections and updates are constantly incorporated in the Waze display, down to the neighborhood level. These same community map editors also continuously improve the routing utility incorporated into the Waze app. Waze has made it as easy for any of



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the millions of users to submit suspected map errors or better routing information to the editors as it is to enter a road hazard; a single click on the appropriate icon, along with an appropriate comment, immediately sends the information to the map editors. For example, earlier today, while returning from Houston (my wife was driving), I submitted two suggested changes: the first was a suggested routing correction to my home address, submitting a shorter and faster route; the second was the location of a newly opened gas station.

While the information from users is anonymously displayed on the Waze display, using a moniker rather than a real name, users can also optionally select to send Waze information to selected individuals, or to post it on social networks, such as Facebook. On a recent out of town trip to visit a daughter and her family, I chose to provide her with a real-time web link that would display my current location and “ETA” (Estimated Time of Arrival). Since my wife was at the wheel at the time, it was safe for me to do the appropriate messaging. Clicking on the icon on the bottom-left corner of my screen, I selected the “notify” function, which presented me with a comprehensive list of messaging utilities; text messaging, email, Facebook, and several other modes were displayed. I selected to send my daughter a private text message which included a Waze generated unique URL, which when opened in her browser, displayed my real-time location and ETA, which was continuously updated in her browser. This same function can also serve to notify someone who is going to be met or picked up by the Waze user of the expected time of arrival.

The posting of travel information to Facebook can be useful if a group is trying to arrange a get-together of some type, and all of the participants can be kept apprised of the others’ locations and arrival times. While Waze supports posting of current location information to social networking services, such as Facebook, for security reasons, I cannot recommend this practice. Even if the social media post is only directed to friends, not all friends may be honest and trustworthy. Posting that a user is a distance away from home, and will not be returning for a lengthy period of time, opens that user’s home to possible break-in and burglary, as the perpetrators will know that no one is home and no one is likely to be home for a foreseeable time.

The Waze app has a most interesting history; originally invented in Israel in 2008 by a small group of developers as, “a GPS-based geographical navigation application program for smart phones with GPS support and display screens which provides turn-by-turn information and user-submitted travel times and route details, downloading location-dependent information over the mobile telephone network.” Waze was recognized by the 2013 Mobile World Congress as the “Best Overall Mobile App,” beating out several better known apps such as Dropbox. The original company, Waze Mobile, was acquired by Google in mid-2013 for the princely sum of \$1.3 billion, after being approached by other prominent internet giants, including Facebook. According to contemporary news accounts, “As part of the deal signed, each of Waze’s 100 employees will receive an average of about \$1.2 million, which represents the largest payout to employees in the history of Israeli high tech.” (source: haaretz.com, June 13, 2013).

While the Waze app is totally free to download and use, its business model is funded in a variety of ways. Waze offers advertisers an opportunity to place a very small, unobtrusive icon on a given location, which may encourage Waze users to patronize that location. Waze also sells its aggregate traffic conditions and reports to media outlets, mostly TV stations, for their use in broadcasting current local traffic information. Utilized by several New York and New Jersey TV stations, the Waze feed is also employed (as of June 2013) by over 25 other U.S. TV stations, as well as foreign TV stations, including one in Rio de Janeiro.

Provided that a driver is not distracted by its use, the free Waze app is an outstanding resource. Waze also asks that the app be used to monitor daily commutes, in addition to longer trips, so that others may get the enhanced benefit of a greater knowledge base of road information. Over the past several weeks, I have used Waze on my smart phone rather than Google Maps and the other road routing apps that I have installed. Waze uses the device's GPS to determine the current location, and then offers a simple search function to ascertain the destination. In using Waze I have entered, street addresses, the names of restaurants, and hotel names, with the integral search function rapidly calculating a route to the chosen destination. While on the road I used Waze to find the best gas prices, avoid major traffic congestion, and other road hazards.

Since Waze is free, and will run on almost any appropriately equipped smart device, regardless of operating system, I can wholeheartedly recommend it to travelers for both local and long distance driving.

### Websites:

<https://www.waze.com>

<https://play.google.com/store/apps/details?id=com.waze>

<https://itunes.apple.com/us/app/waze-social-gps-traffic/id323229106?mt=8>

<http://www.windowsphone.com/s?appid=f07f83eb-a8a4-49fd-8946-c67a9349e062>

<http://en.wikipedia.org/wiki/Waze>

<http://www.haaretz.com/business/.premium-1.529478>

**Smart Device Users Beware:  
Fraud May Be Just a Click Away**  
Even if you don't have a described "smart device,"  
it explains a lot about the QR Codes we often see.  
*from the Southeastern Wisconsin Windows User Group*

**Y**ou've installed anti-virus software to protect your personal computer and business network. You know the signs of phishing scams (including unfamiliar senders, poor grammar and misspelled words). And like most people who use the Internet today, you never open a suspicious e-mail or download files from a questionable website.

But what have you done to protect your iPhone, Android or tablet from cyber theft?

Many smart devices currently operate without anti-virus and malware protection. Although there haven't been many high-profile fraud cases involving smart devices, opportunistic hackers are targeting these devices as the world of quick response (QR) codes grows.

[http://www.bizactions.com/img/Technology/lores\\_security\\_mobile\\_phone\\_code\\_safety\\_kk.jpg](http://www.bizactions.com/img/Technology/lores_security_mobile_phone_code_safety_kk.jpg)

### Scammer's Delight

QR codes appeal to fraudsters for several reasons:

They're easy and cheap to create. All you need to do to set up a QR code is go to an online service and enter a web address. The site generates a QR code in seconds for free.

Malicious codes can be printed on stickers and placed on top of legitimate QR codes. Or a fraudster might post the code on a subway station bulletin board or a tourist monument and wait for curious victims to click on the image.

The human eye can't decipher QR codes. People can't tell a legitimate QR code from a malicious one. So it's easier to hide a "click jacking" scam than a phishing scam or virus. Smart devices don't usually slow down or show any other signs of "infection" until the user's data has long-since been compromised.

QR codes are relatively new, but rapidly growing. Hackers will increasingly exploit QR codes as more people purchase smart devices and more businesses use them for marketing purposes.

Users new to the QR code world may be unfamiliar with the risks of clicking on malicious codes and may not be security-conscious enough when using their smart devices.

## What are QR Codes?

QR codes are square, two-dimensional barcodes that were originally used by auto manufacturers in the 1990s to track vehicle parts. Today, QR codes have become a popular marketing tool for businesses to connect with customers using smart devices.

You've probably seen QR codes in magazine ads, on business cards and product packaging – even in taxis. Instead of remembering a web address and typing it into your browser, you can simply snap a photo of a QR code with your smart device.

Once clicked, QR codes perform all kinds of functions, quickly and easily. For example, a code might link to product specs on the company's website, enter the user into a prize contest, provide directions to an event, purchase a product using a PayPal account, "like" a company on Facebook or download coupons.

Unfortunately, QR codes can also be used to commit fraud.

## Anatomy of a QR Code Scam

Some QR codes are self-contained. That is, all the product information is coded into the image. If you have a QR reader on your smart device, it auto-converts the image and directs you to a website.

Other QR codes require you to download or purchase an application (app) to access an online server, which looks up the desired information or performs some other function. Both types of QR codes – direct and indirect – are susceptible to fraud.

Scammers can, for example, embed shortened URLs into QR codes to misdirect victims to cloned websites, where the fraudster sells product without ever fulfilling the contract or installs malware to gain control over the device. The next time the user accesses his or her mobile wallet or PayPal account, the malware captures that information and makes fraudulent charges.

Alternatively, proprietary apps pose a security risk by allowing the QR code author to install measurement and tracking systems onto the smart device. Most QR code apps require consent to a user's agreement – which many people fail to read – and these could authorize the QR code author to track your cell phone usage, access your contacts and other personal information, or ring up charges for premium texts on your cell phone bill, for example.

An even bigger threat occurs when the user connects the smart device to a computer to charge it or sync data. The malware can "leap" to the PC, infecting it and any networks to which the computer is linked. This security risk is one reason some companies are leery of implementing bring-your-own-mobile-device (BYOD) programs.

## Users Provide the First Line of Defense

Surprisingly few iPhone, Android or tablet users have taken steps to protect against fraud. Here are four simple things you can do to protect your smart device starting today:

[http://www.bizactions.com/img/Bullets/arrow\\_10x20\\_red\\_mb.gif](http://www.bizactions.com/img/Bullets/arrow_10x20_red_mb.gif)

Never click a QR code in a public place, such as a bus stop or mall. Only scan QR codes from trusted sources or vetted by third parties. Be especially careful when traveling overseas where QR code "click jacking" scams tend to be more common.

[http://www.bizactions.com/img/Bullets/arrow\\_10x20\\_red\\_mb.gif](http://www.bizactions.com/img/Bullets/arrow_10x20_red_mb.gif)



Always check a QR code for a sticker before scanning it. Use your fingernail. If it looks like a sticker, it could be a scam.

[http://www.bizactions.com/img/Bullets/arrow\\_10x20\\_red\\_mb.gif](http://www.bizactions.com/img/Bullets/arrow_10x20_red_mb.gif)

Never provide personal information or passwords if requested by a website linked to a QR code, even if the site appears to be legitimate.

[http://www.bizactions.com/img/Bullets/arrow\\_10x20\\_red\\_mb.gif](http://www.bizactions.com/img/Bullets/arrow_10x20_red_mb.gif)

Install a QR code scanner app that screens URLs before directing you to the site. These apps block unsafe sites and stop online threats before they're downloaded to your device. Search for "secure QR reader" on your smart device. Read the reviews and select one from an anti-virus software provider you know and trust.

The end result of all this is simple: Your smart devices are personal computers. Treat them that way. Don't wait for a major cyber threat to occur to prove that smart devices are vulnerable to viruses and malware. Contact an information technology professional for more information.

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## Live CD-ROMs

by Dick Maybach

*Brookdale Computer Users' Group, NJ*

A live CD-ROM contains all the files normally stored on a computer's hard disk and when booted acts exactly the same as a hard disk, except of course that it can't store data. Although these media are normally called "live CD-ROMs," because they were available first, DVD-ROMs and USB memory sticks now can fulfill the same role. The hard disk plays no part when the PC boots from such a medium, and your PC will run fine even when its hard disk is malfunctioning or even absent.

Moreover, the system leaves no traces on the PC of anything that occurred while it was running. However, the PC's hard disk is available as a storage medium, and, if it is operable, you can read from and write to it if you wish. Likewise, all the peripherals and ports are available; for example, you usually can access networks, including the Internet, use any USB devices, and do printing. There are several applications for live CD-ROMs:

- trial or installation of a new operating system,
- file system repair, backup, and restore, file recovery from corrupted hard disks, running diagnostics, disk cloning, and cleanup of malware, such as viruses and root kits,
- anonymous Internet browsing, and
- temporarily using other computers without risking making unwanted changes to them or leaving your passwords.

The overwhelming majority of portable operating systems are based on Linux, as both Microsoft and Apple require a separate purchase for each computer, and transferring one of their operating systems among several computers violates their terms of service. There are a few based on DOS, but they are quite limited compared to their Linux counter-parts.

Live CD-ROMs are most often available in the form of ISO images. These aren't files; instead they are bit-for-bit copies of the contents of a CD-ROM or DVD-ROM. Many media burners can write these; if yours can't, make an Internet search for "iso image burners" to find a suitable application. You may prefer to use a live memory stick which is faster, more convenient to carry, and can also store data. If so, I recommend the free program *unetbootin*, which converts an iso image to a suitable form and writes it to a stick. It's available for Linux, OS X, and

Windows. Finally, if you have virtualization software, such as Oracle's VirtualBox, you can boot directly from the iso image file without burning anything.

To use a portable operating system, a computer must be configured so that it checks its CD-ROM drive and USB ports for bootable media before it checks the hard disk. Most computers check for CD- and DVD-ROMs, but you may have to set up your ROM BIOS to check for bootable USB memory sticks. Owners of new machines will also have to disable the safe boot feature on Macs and secure boot on PCs. Secure boot is a new "feature" of PCs that prevents software from running unless it has been approved by Microsoft. You should be able to disable it, but not all PCs allow this. It will make running live CDs more difficult, and may prevent them from running on some machines altogether. Finally, the use of live CDs on Macs can be problematic; you may have to do some reconfiguration or even replace your wireless keyboard and mouse, as these can have proprietary drivers.

Using a live CD-ROM to try out Linux on a Mac or PC is a common application, but a Windows installation disk is also an example, although it's limited to installing and repairing Windows. Regardless of what is on the hard disk, your computer will boot the live CD-ROM system; the hard disk has nothing to say about this. So long as you don't write to the hard disk, you can do whatever you like without affecting the installed system, which won't even know a session has taken place. CD- and DVD-ROMs and even memory sticks are much slower than hard disks, so don't expect speed. Aside from this, operation should be the same as though the system on the live CD-ROM were installed on your hard disk. If you have enough RAM, some light versions of Linux will transfer themselves to a RAM-disk, and these will be quite fast.

There are far too many portable operating systems to cover in this short article; see [https://en.wikipedia.org/wiki/List\\_of\\_live\\_CDs](https://en.wikipedia.org/wiki/List_of_live_CDs) for very brief descriptions of many of them. Instead, I'll introduce some examples that you can use as starting points for the applications listed above.

## Trying out a New Operating System

Which operating system you try out depends on the age of your hardware. (The critical feature that older computers lack is Physical Address Extension or PAE.) If your PC is modern enough to run Windows Vista or later, you should consider Ubuntu (840 Mbytes) or Linux Mint (960 Mbytes). (See the following two screen-shots.) Both have complete office suites and all the other applications you are used to, and both have full-service user interfaces with more bling available than you really need.

*From the December 2013 issue of BUG Bytes, newsletter of the Brookdale Computer Users' Group, NJ. Courtesy of APCUG.*

## Interesting Internet Finds

by Steve Costello

*Boca Raton Computer Society, FL*

**I**n the course of going through the more than 200 RSS feeds, I often run across things that I think might be of interest to other user group members.

### Tell Your Relatives:

### No, Microsoft Won't Call You About Your Computer

There has been a rash of telephone calls from scammers claiming to be from Microsoft. Read this post so you can recognize the problem, and let family members who might not be so tech savvy know about it. <http://www.howtogeek.com/176605/tell-your-relatives-no-microsoft-wont-call-you-about-your-computer/>



## **7 business card apps for smartphones: Scan 'em and store 'em**

This post from *Computerworld* talks about some apps to scan and store business cards on your smartphone. I use the Evernote app myself, instead of a separate app just for business cards, but this might be useful for others. If you don't use something to keep track of them, you can never find the proper business card when you look for it later.

[http://www.computerworld.com/s/article/9244134/7\\_business\\_card\\_apps\\_for\\_smartphones\\_Scan\\_em\\_and\\_store\\_em?pageNumber=1](http://www.computerworld.com/s/article/9244134/7_business_card_apps_for_smartphones_Scan_em_and_store_em?pageNumber=1)

## **So You Got a New Android Phone: Here's All You Need To Know**

Some of you may have gotten a new Android phone over the holidays. MakeUseOf gives you all you need to know to get started with it in this post. <http://www.makeuseof.com/tag/so-you-got-a-new-android-phone-heres-all-you-need-to-know/>

## **How to Fix Android's Biggest Annoyances: 2013 Edition**

Lifehacker addresses Android annoyances and how to fix them in this post, and others linked to it for specific annoyances. A lot of useful information for Android users here.

<http://lifehacker.com/how-to-fix-androids-biggest-annoyances-2013-edition-1488535064>

## **Get Free TV With Hulu?**

Thinking of cutting the cord from your cable company? Bob Rankin explores using Hulu to do so. [http://askbobrankin.com/get\\_free\\_tv\\_with\\_hulu.html](http://askbobrankin.com/get_free_tv_with_hulu.html)

## **Sandboxie Review**

I have been using Sandboxie (the free version) for years now. Check out this recent review to see if this might be helpful for you.

<http://www.ghacks.net/2013/12/11/sandboxie-review/>

## **What's in Your Toolkit?**

Leo A. Notenboom shows what is in his toolkit, and talks about what you should have in yours. Discs, operating systems, anti-malware tools, and other utilities, for emergencies.

<http://askleo.com/whats-in-your-toolkit/>

## **How to Speed up Any Android Phone by Disabling Animations**

HowToGeek tells how to speed up any Android phone.

<http://www.howtogeek.com/175033/how-to-speed-up-any-android-phone-by-disabling-animations/>

## **WPA2, WEP, and Friends: What's the Best Way to Encrypt Your Wi-fi?**

This post from MakeUseOf explains the various options to encrypt your wi-fi, and what the best is.

<http://www.makeuseof.com/tag/wpa2-wep-and-friends-whats-the-best-way-to-encrypt-your-wi-fi/>

## **HOWTO: Extend Laptop Battery Life**

Bob Rankin talks about making your laptop battery last longer.

[http://askbobrankin.com/howto\\_extend\\_laptop\\_battery\\_life.html](http://askbobrankin.com/howto_extend_laptop_battery_life.html)

## **How To Fix Flash Player Crashes Issue in Google Chrome**

I was having the crash problem, and this MakeTechEasier post, gave me the solution. Things are much better now.

<http://www.maketecheasier.com/fix-flash-player-crashes-issue-in-chrome/>

## **What Is the Clipboard in Windows and How to Manage It?**

7tutorials answers the question, and provides some clipboard management options.  
<http://www.7tutorials.com/simple-questions-what-clipboard-windows-how-manage-it>

*From the November and December 2013 issues of Boca Bits, newsletter of the Boca Raton Computer Society, FL.*

## Member to Member Tips

*HAL-PC, TX*

### Free-Software ALERT

**A** new software contrivance was discussed at the Build-or-Buy SIG. Previously, when free software was offered, one was frequently referred directly to the programmer's website. In more recent times, one would notice that the desired software was accompanied by boxes to select additional software to download and install. At least you had a chance not to download the add-ons.

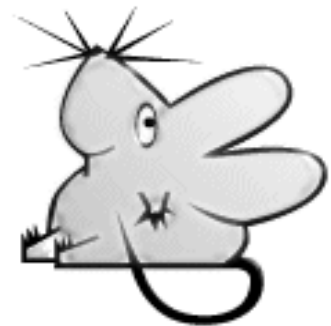
Then came the "installers." Here you couldn't directly access the desired software, but had to be subjected to advertisements and also other software you were virtually trapped into downloading in order to get to the free software that you wanted. CNET is infamous for this. Some of this unwanted software is almost as bad as viruses, Trojans, and worms. The most common "additives" include taskbars, driver updates, and performance improvers. It can be extremely pervasive.

Joe Whinery, a Co-Chair of the Build or Buy SIG, along with Gill Boyd, discussed a process to counter this:

1. Always check the download order to uncheck any unwanted software. Look for "boxes."
2. To install, select Custom instead of "Default" or "Automatic" or "Recommended" when downloading, so you can select what is to be downloaded.
3. Read each screen of the install operation.
4. Look for a "Decline" option (which may appear to be grayed out, but is functional).
5. Decline these options.
6. When the download is complete, Install, but DO NOT RUN the downloaded software, instead: Go to Control Panel, then Add/Remove Programs (Programs and Features in Win7 and 8).
7. Then SORT by date.
8. Examine the listing for the software that you WANTED. If there is anything else with the same date/time that you did not intentionally install, delete it.

Now you can safely run your desired program. This may seem like a chore but it is much easier than trying to undo something that infiltrated your machine.

*Courtesy of APCUG.*





## "Am I Being Tracked Online?"

**Q.** When I go to Google and search for items to buy, later on I see those same or related items as ads at the top of other pages I visit. It sure seems like I'm being tracked and then being solicited soon thereafter. Is that what is happening or do you think it is just a coincidence? Thanks for all the help you give us, Mr. M.

**A.** It is definitely not a coincidence. Tracking (also called search profiling) is an inherent part of life online today. Everything we do online leaves a trail, and in your situation, Google (and other search engines) does indeed monitor searches and uses that data to personalize what appears on subsequent searches as far as advertising. It's very similar to going to a grocery store where you participate in a loyalty program or use a "club card" to take advantage of frequent shopper discounts: Everything you purchase is archived, your shopping profile analyzed and coupons and other targeted ads provided, based on your previous purchases.

**Q.** Those flexible, flat, ribbon cables inside my computer, do they need to be replaced periodically or do they last for the life of the computer? Thanks in advance for your help, Mr. M.

**A.** Multiple hard drives, DVD drives, even old floppy drives, all connect to your computer's motherboard with flat, ribbon-like cables known as Parallel Advanced Technology Attachment (PATA) interface cables or Multiple ATA (MATA) cables. (Bonus Tip: If you ever have a problem with the latter, simply ask your tech support person, "What's the MATA?" then stand back and enjoy the gales of laughter that are sure to follow.)

Available in a variety of lengths and colors, in 40- and 80-pin configurations, these cables, in addition to being an inexpensive method of transferring data, have a high tolerance for heat and great flexibility (not unlike Mr. Modem 40 years ago) for reaching even the most awkwardly placed motherboard connections.

The sturdy construction of a typical ribbon cable adds significantly to its longevity. In fact, I have never had to replace a ribbon cable due to any malfunction caused by degradation of the cable itself. So unless a ribbon cable has suffered physical damage, such as a cut or tear – you should not have to replace any of these cables during the working life of your computer.

**Q.** Where can I find the CheckDisk utility and run it? I'm using Windows Vista.

**A.** CheckDisk (CHKDSK) is a Windows utility designed to check and correct hard drive errors. To run CheckDisk in either Vista or Windows 7, click Start > Computer, then right-click the drive that you want to scan. Click Properties > Tools tab > Check Now (under error checking.)

A dialog box will appear that provides an option to automatically repair errors, as well as an option to look for and attempt to fix bad drive sectors. If a sector of your hard drive contains corrupted data, it can probably be recovered. If a sector is bad due to a hardware problem, such as physical damage to the disk surface, then it cannot be recovered. It's a good idea to click (select) both boxes.

Once you click Start, CheckDisk can take anywhere from a few minutes to a few hours to complete, so it's often best to run it at night when you won't be using the computer. Whenever you decide to run it, be patient and let it take whatever time it requires before using the

computer again.

CheckDisk has been redesigned in Windows 8 (of course), so visit <http://bit.ly/PWXQLa> for step-by-step instructions.

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

### Dog Tricks

This site not only contains written instructions how to teach your poodle to doodle, but it also has video instructions. Some of the tricks include turn around, crawl, speak, twirl, high-five, take a bow, make a sandwich, wash the car, groom the cat – it's amazing! Click the trick you want to teach your canine, then follow the instructions. I started to check out a similar site in order to teach my cats tricks, but one of the cats jumped on my keyboard and hissed, "Don't even think about it." Sigh.

<http://www.loveyourdog.com/tricks.html>

### Forget the Film, Watch the Titles

When Mrs. Modem and I leave the compound and go to the movies, it always annoys her that I'm the last one to leave the theater because I remain seated until the final closing credits scroll off and the screen goes dark. This site celebrates the talented people who create the opening and closing credits that most movie-going heathens ignore. This isn't a site that will appeal to everyone (Mrs. M. comes to mind), but I think it is interesting to peek behind the scenes and see how the credits can transcend their functional role of setting the tone for a movie by becoming mini works of art.

[www.watchthetitles.com](http://www.watchthetitles.com)

### Makers

A treasure trove of videos about extraordinary women from all walks of life. Through video interviews, these fascinating women share their life experiences and personal stories.

[www.makers.com/browse](http://www.makers.com/browse)

*For more information about Mr. Modem's award-winning, weekly computer-help newsletter featuring personal answers to your questions by email, visit [www.MrModem.com](http://www.MrModem.com)*

## Review: East-Tec Eraser 2014

[www.east-tec.com](http://www.east-tec.com)

by Herb Goldstein

*PC Monitor, Sarasota PCUG, FL*

**I**t's a miracle! Yes, finding something on the internet can seem to be miraculous. But the actual miracle is no longer finding what you are looking for; it's finally completely getting rid of what you've found! In fact, getting rid of what you've found is the real miracle. Pound on your delete key all you will, take an oath it's gone and forgotten, and don't you know that some smart-aleck computer enthusiast will come along and make a liar out of you despite your fervent oath.

Bringing back the text or photo you have vigorously deleted is not as miraculous as it may seem. The real miracle is how easy it can be to bring back from the dead. With surprisingly little effort your deleted item can be readily restored. Now if your restored text or photo happens to exist in any variety between embarrassing and deadly, you may wish you backed up your delete key with something that really did the job.

East-Tec Eraser is the quintessential software for eliminating anything you really want to get rid of without worrying that it will show up unexpectedly because someone was able to

restore it. What's more, it's easy to use and fool-proof.

After an easy installation, East-Tec Eraser opens with a vertically placed menu bar the first item in which is Privacy Guard. Its purpose is to erase sensitive data you have gathered from Windows and the internet that was extracted without your knowledge or permission. It will not erase files you have saved or that are needed for normal operation.

The Privacy Guard engages as the first and basic "hot" item in Eraser's menu and in my initial venture gathered a collection of 2,351 previously "deleted" files that had been originally quarantined by Malwarebytes or Norton Utilities over a several year period among a collection of other files that I had long ago considered "gone forever." Well what do you know? There they were just sitting there unknown and out of reach to me, just waiting to be reclaimed by someone with the smarts to do it. With the click of a single button in Privacy Guard, one by one each of those 2,351 files was finally and finitely laid to rest by East-Tec Eraser.

Of course the object in the future would be not to wait until a few thousand of those files were accumulated, but to use Privacy Guard regularly on an ongoing basis which I will make it my business to do henceforth. Needless to say, before using Privacy Guard you need to be certain you are not erasing something you plan to possibly restore at a future time. This is a caveat that holds true for anything else you feed to East-Tec Eraser in one or another of its tools. The items selected by Privacy Guard will conform to pre-chosen defaults.

Button #2, Erase Files and Folders, allows you to indicate files or folders that you want to add to your erase list. You can specify certain criteria or otherwise drag and drop specific files or folders to this area.

Button #3, Erase Deleted Data, ensures that previously deleted files are removed from specified drives on your computer beyond recovery.

Button #4, Media Wiper, was designed to address all removable media devices up to 64 GB. It also has provisions for wiping entire disks or partitions.

Button #5 cleans traces of your online activities at certain intervals which you specify.

How does it all work? To the best of our judgment, East-Tec competently removed everything it boasted it was going to. We had the opportunity to put East-Tec Eraser through its paces in both Firefox and Chrome browsers. It worked equally well with both and can be expected to work similarly with other common browsers. Erasing the free space allocated to previously deleted files needs to be done while the computer is not in normal occupied usage. It takes plenty of time.

East-Tec provides for very secure erasing that meets and exceeds the U.S. Department of Defense standards for the permanent erasure of digital information. If there is a caveat, it is in nomenclature. East-Tec provides for a free trial period for Eraser. You need to wright the software out to make certain you are comfortable with its instructions, straightforward as they may be. It is very powerful software whose purpose is to readily, permanently and irretrievably erase. Not too much imagination is required to imagine problems that can result in improper use. While there is little really difficult in its usage, wisdom dictates caution. East-Tec helps by making a trial copy of Eraser available to you. It will also help convince you it is software you don't want to be without if you desire to maintain unrestricted control over what is available or not on your hard drive.

As you would expect, whatever Eraser activities you may be employing at the moment need be during a period of time when your cyber-activities are not otherwise occupied. Eraser helps by offering a scheduler to properly and conveniently plan the periods of time during which Eraser functioning will occur and prevent other computer or internet usage.

# Chromecast - Watch On-line Entertainment on Your Big Screen TV

by Phil Sorrentino  
*Sarasota PCUG, FL*

Chromecast is a new device from Google, aimed at getting your on-line entertainment on to your living room TV (or any TV with an HDMI input). For video streaming, Chromecast may be similar to AppleTV and Roku devices, though I haven't used either of these. Chromecast is an exciting device for both consumers and developers alike, because it offers an inexpensive (\$35) and simple way to stream entertainment from a Website or a computer to your living room big screen HDTV. (By the way, a less elegant way to accomplish this is to connect your TV directly to your computer, via HDMI, and then go directly to the websites with the computer. This is not usually convenient because of the locations of the computer and TV and the cables and wires needed to set this up.) Chromecast is small and it plugs directly into the back of your TV, keeping it completely out of sight.

Wikipedia adds: "Chromecast is a digital media streaming adapter developed by Google. The device, a 2.83 inch dongle, plays audio/video content on a high-definition television by streaming it via Wi-Fi from the Internet or local network. Users select the media to play on their television from the Google Chrome web browser on a personal computer or from a supported App on their mobile device."

Chromecast's basic features are as follows:

- 1080p output video resolution

- Wi-Fi 802.11b/g/n

- USB powered

- Compatible with Android and iOS devices

The minimum system requirements needed to take advantage of Chromecast are as follows:

- HDTV with HDMI input

- Wi-Fi 802.11b/g/n network

For use with a Tablet or Smartphone:

- Android OS 2.3 and higher

- Apple OS iOS 6 and higher

For use with a computer:

- Windows 7 and higher

- Mac OS 10.7 and higher

Chromecast works with devices you already own, including Android and Apple tablets and smartphones. It also works with the Chrome Browser for Windows and Mac. A Browser, with the Chromecast extension, allows you to send the contents of a "Browser Tab" to your HDTV allowing you to experience photos, videos, and music on your HDTV. It turns any TV with an HDMI input into a smart TV, albeit only as smart as the Chromecast device.

Chromecast allows you to view on-line entertainment on your living room HDTV; however, currently it seems to be limited to Netflix, Hulu plus (not Hulu), YouTube, Google Play TV & Movies, and Google Music. Indications are that many others such as Pandora, HBO Go, Vimeo, and Redbox, are in the pipeline. You will need an account with any of the pay services, such as Netflix or Hulu plus (YouTube is free, so far).

Chromecast is packaged in a very neat, compact box. Included in the box are the Chromecast device (it looks like a flash memory device with an HDMI connector), an HDMI extension cable (for hard to reach HDMI connections), a micro-USB to USB cable (to supply



power to the device), a power supply adapter (if a convenient USB port is not available), and a tiny 14 page product information pamphlet. The “Getting Started” directions are printed on the inside of a swing-out cover and are clear and simple.

Chromecast plugs into your TV’s HDMI port, while the power is supplied by connecting the devices micro-USB port to a USB port, on the TV (if available), or to the external power supply that plugs into ac power (recommended). Because Chromecast accomplishes its magic using your Local Area Network, aka Wi-Fi, you will need to enter the password to your Wi-Fi network during the setup process.

The Setup, in a nutshell, is simply, Plug the device into your TV, Connect it to your Wi-Fi, and let it do its thing. The setup is really easy to do and it took only a few minutes, although the TV screen did go dark for a few tense moments while the Chromecast was rebooting leaving an uneasy feeling until the “ready to cast” screen appeared. Once Chromecast was “ready to cast,” streaming from an Android tablet or the Chrome browser was easily accomplished.

(Note: It is a good idea to follow Google’s directions to download the Setup App on to your mobile device first. With this done, setup was very easy.)

Google uses the term “cast” to indicate streaming. The “cast” icon appears in the tablet App or in the Chrome browser in order to enable “cast”ing to the Chromecast device. The “cast” icon is a rectangle with a symbol in the lower left corner that looks like a Wi-Fi symbol.

Using a tablet, the Chromecast App is used in conjunction with YouTube (or other Chromecast enabled App, such as Netflix). After you start YouTube (or Netflix) on the tablet, touch the “cast” icon towards the top of the screen. A window will open to allow selection of the tablet display or the Chromecast device (that has been discovered). Select the Chromecast device and the YouTube video will be shown on the HDTV hosting the Chromecast device. The tablet acts as a controller to direct the video/audio from the source to the Chromecast device for use on the TV. Could it be any easier? (Return to this window to return YouTube back to the tablet display.)

Google has set up a website at [https://support.google.com /chromecast/](https://support.google.com/chromecast/) for product information and it includes some very good directions for using Chromecast. This site is a very good Help resource for getting started with, using, or just learning about Comcast’s capabilities.

Google has indicated that YouTube, Netflix, and Hulu Plus are just the beginning. Many others have voiced their support, and many independent developers have started to develop Apps for this new device. It’s only a matter of time before Chromecast has many new uses.

*From the December 2013 issue of PC Monitor, newsletter of the Sarasota PCUG, FL. Courtesy of APCUG.*

## Backups and Disk Cloning

Recap of October 2013 Meeting

by Anne Moss

Secretary, Northern Neck Computer Users’ Group, NJ

**B**rian Riley, Vice President of the NNCUG, gave a Membership Meeting presentation on computer backups and cloning of hard drives. Most of his presentation centered on what you can do to get your computer working quickly after a virus infestation or hard drive failure.

He explained that while backing up is necessary, the problem is that you have to have a working operating system and backup software to restore the backup you made. This may



entail having to reinstall the operating system and backup software before you can even start to get your computer back.

He then explained the difference between cloning a disk and making a disk image. With cloning a disk, you get an exact copy of the disk, that if inserted into your machine, will allow you to resume work from the point the clone was made. Disk imaging on the other hand, which is how backups work, makes a copy of the contents of the disk in some kind of compressed format (zipped), which then has to be restored by a program that can read that format.

Usually this is done with a “restore” disk, which is a bootable CD or DVD that contains enough of an operating system to run the backup software that can restore your drive, but requires you to make that disk ahead of time. If you haven’t done that (and most backup software, including what comes with Windows 7, has utilities to make one of those disks), you need to restore from the original Operating System Install disks. This is a time consuming process!

Brian showed us what he called a “toaster” drive, which is a USB or ESATA device that allows you to put a regular 3½" (desktop hard drive) or 2 ½" (laptop drive) in a slot, and run your backup or clone to it.

Tiger Direct has a listing of toaster drives here (NewEgg and Amazon have them also) [http://www.tigerdirect.com/applications/category/category\\_slc.asp?MfrId=0&CatId=2785](http://www.tigerdirect.com/applications/category/category_slc.asp?MfrId=0&CatId=2785)

He then explained that if you have chosen a computer that has your C: accessible from the outside of the machine, you can take that disk and easily and quickly replace the damaged or infected drive with it.

Brian explained he had made a clone of the laptop drive he was giving the presentation on the night before, he simulated the computer becoming infected with a virus, shut it down, replaced the hard drive, and rebooted continuing the demonstration, all within three minutes.

He pointed out making a clone is not the complete answer to backups: clones do not do versioning of your files for example, and it is still important to do a regular backup.

There are two key questions you have to ask yourself in choosing a backup method:

1. How important is my data? Is merely having a second copy of it enough, or does it have to survive a catastrophic event like a fire? If it is the latter, you must have an offsite backup, if it isn’t then just a backup copy will do.
2. How much important data do I generate in what period of time? If you spend all day working on a project, then you probably want a backup on a daily basis. If redoing everything you have done for a week isn’t a problem, then a weekly one will do. If all you do is play games on your computer and answer e-mails on line, then you probably don’t need more than a clone – your data isn’t changing.

Things that cause data loss come in many forms: from “happy clicking,” where you accidently overwrite something you have been working on all day with an inappropriate update; virus infestation that makes your machine unusable and may scramble the contents of your hard drive; hard drive failure (sooner or later they all fail); or catastrophic event such as a fire or burglary.

Even if you are using anti-virus software, your machine can become infected by a virus that was built to get around that software. Often the first thing these viruses will do if they manage to get a foot-hold on your machine is turn off your anti-virus software.

Brian suggested a simple step: since many viruses work on the account level, you should always create a second account on your machine with administrative privileges. This may allow you to log in as that other user and run your anti-virus software that has been disabled under your main account.

He also suggested you should hover over any link with your mouse to see where it is sending you. Depending on the application, the address the link is sending you to will be displayed in a tool-tip or on the bottom of the screen. If that address goes somewhere unexpected, don't click on it!

## What backup software should you use?

Windows 7 ships with backup software, and allows you to make a restore disk. It doesn't do cloning, it isn't easy to tell what it is backing up, and the backup requires a disk larger, sometimes double the size, of the drive you are using as your C: In other words you would need a one terabyte drive to back up a 500 gigabyte one.

It was suggested using Macrium Reflect, which is available as either free or paid software. The major difference for the home user between the two is the free version can't do incremental backups (that is, only backup the files that have changed since your last full backup). You can read more about it on their website: [www.macrium.com/reflectfree.aspx](http://www.macrium.com/reflectfree.aspx)

Along with the free version, the Standard version costs \$49.99, and the Pro version costs \$58.99. There is cloning and backup software available from other vendors also.

Acronis is another backup/cloning program. Brian and Rob stated it is much more bloated but not as user friendly as Macrium.

If you are interested, reviews of 10 of the top contenders for 2013 can be found here: <http://data-backup-software-review.toptenreviews.com/>

Brian emphasized that if your concern is getting your computer up and operating as quickly as possible from a simple hard drive failure or virus infestation, then cloning is the way to go.

He also made the point that one does NOT have a backup UNTIL it is confirmed that the data can be RESTORED from the backup!

*From the October 2013 issue of The Computer Link, newsletter of the Northern Neck Computer Users' Group, NJ. Courtesy of APCUG.*

## Society News

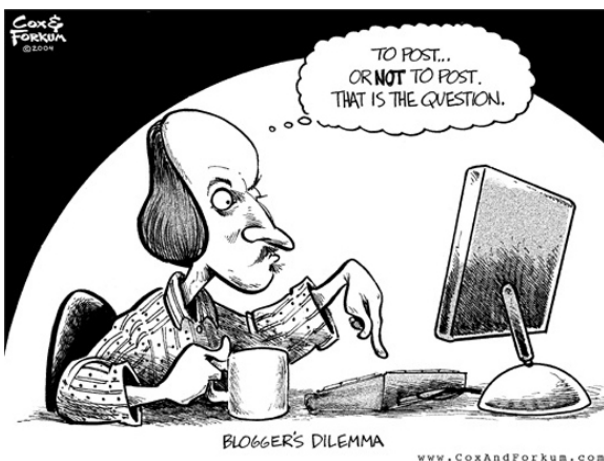
### President's Corner:

The latest club news is as follows. A sad note the following club members passed away recently. Our club treasurer's wife, Nancy MacMahon, Ted Zajac and Al Saia, both very active members, passed away suddenly and we also lost former member Bob Crowell.

Now for a brighter note We had an excellent presentation at the meeting, "Online File Storage for Free." The presentation was great. The presenter, Francis Chao, was live in Huntington Beach, CA. This is the first time we have done a live online presentation and it went extremely well. Members can expect more online presentations in the future.

Within the next six months we will have two important topics to cover, election of club officers and a decision on when and where the club will hold its yearly picnic, "The Geek Olympics." More information in upcoming months. If you have any suggestions please call me

Steve Staub



### The Lighter Side