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TC/PC Exists to
Facilitate and Encourage
the Cooperative Exchange of
PC Knowledge and
Information Across
All Levels of Experience

**June 2016** 

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## **General Meeting**

Tuesday, June 14, 2016 7:00 PM

# Annual Meeting & Pizza Party

Location: Summit Place 8505 Flying Cloud Drive Eden Prairie, MN 55344

It's that time again when we elect officers and review what TC/PC has accomplished this year, what our financial situation looks like, and what the future holds for our group. Please come and bring your ideas and suggestions for meeting topics and ways you can participate in making the group even better in the years to come. After the annual meeting we will adjourn to Punch Pizza for pizza and socializing. See you there.

**Last Month's Meeting**: If you missed last month's meeting with Bill Ryder, "How to Start Your Own Engineering Business," you have a chance to listen to it on our website. Hear interesting insights from one of the entrepreneurs in our group. Here's the direct link:

http://tcpc.com/forum/may-10-2016-how-start-engineering-business

Tech Topics with Jack Ungerleider: All Things Internet—open discussion.6:00 PM before the General Meeting. ■

TC/PC is a Member of



## TC/PC Business Members

Friendship Village

## Thank You!

## The Digital Viking

The Digital Viking is the official monthly publication of the Twin Cities PC User Group, a 501(c)(3)organization and an all-volunteer organization dedicated to users of IBM-compatible computers. Subscriptions are included in membership. We welcome articles and reviews from members. The Digital Viking is a copyrighted publication and reproduction of any material is expressly prohibited without permission. Exception: other User Groups may use material if unaltered and credited.

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## Advertising

Full page (7½ x 9½)	\$100.00
Two-thirds page (7½ x 6)	80.00
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One-third page (7½ x 3)	50.00
Quarter page (3½ x 4¾)	40.00
Member Bus. Card (2 x 3½)	10.00

#### Multiple insertion discounts available.

Contact Sharon Walbran at:: SQWalbran@yahoo.com

Deadline for ad placement is the 1st of the month prior to publication. All rates are per issue and for digital or camera-ready ads. Typesetting and other services are extra and must be requested in advance of submission deadlines.

Payment must accompany order unless other arrangements are made in advance. Place make checks payable to: Twin Cities PC User Group

## TC/PC 2015-2016 Board of Directors

Meets once or twice per year. All members welcome to attend.

Visit www.tcpc.com for meeting details.

 President —Bill Ryder
 br@rydereng.com

 Vice President —Curt Trout
 ctrout@troutreach.com

 Secretary - Sharon Walbran
 sqwalbran@yahoo.com

 Treasurer - Sheri Trout
 strout@troutreach.com

Membership - - Open Position - -

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Newsletter Publisher Sharon Walbran 952-925-2726 SQWalbran@yahoo.com

Web Master Curt Trout ctrout@troutreach.com

Jeannine Sloan Ambassador for Friendship Village

Joel Hedland joelh@spacestar.net
Jim Schlaeppi jschlaeppi@charter.net

Lon Ortner 612-824-4946 csacomp@comcast.net

Steve Kuhlmey steve@kuhlmeysystems.com
Gary Grau oxygary2389@yahoo.com
Ross Held RHeld3745@aol.com
David Van Dongen davidvandongen@yahoo.com

## TC/PC Member Benefits

**Product previews** and demonstrations

Special Interest Groups Monthly Newsletter

Discounts on products and services

Contests and prizes

## Business Member Benefits

All of the above PLUS:

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20% discount on all ads Placed in the *Digital Viking* Newsletter

Up to 5 newsletters mailed to your site (only a nominal cost for each additional 5 mailed)

## **Newsletter Staff**

**Editor Sharon Walbran** 

**Contributors:** 

Jeannine Sloan

## **Amazon Echo**

By: Ry Crist , David Carnoy Reviewed: February 15, 2016

**CNET Editors' note (March 3, 2016):** On March 3, Amazon announced two new products in the Echo family: The \$130 Tap and the \$90 Dot. Both begin shipping on March 31. The Echo, reviewed here, remains at the top of the line at the same price of \$180.

I didn't know I wanted to talk to my house until I talked to my house. Now, after living with the Amazon Echo for a year, I talk to it every day.

I ask it for the morning headlines as I brew my 8:00 a.m. pot of coffee. I ask it to play the most recent episode of my favorite podcast while I work out. I ask it to set a timer when I throw a frozen pizza in the oven for dinner. I ask it to turn my lights out when I'm hitting the sack. It's always listening, and it always just works.

That's the true success of Amazon's likable smart speaker -- it fits in seamlessly with your daily routine. It doesn't ask you to change any of your habits, it just makes a surprising number of those habits better. It's the most futuristic product that I own, yet it's also right at place in my present.

After initially debuting as an invite-only beta-gadget for \$99 (I was one of the lucky ones who bought in at that price), the Amazon Echo now retails for nearly twice that: \$180. The Echo isn't yet available in Australia or the UK, but that price converts roughly to about AU\$255 or £125. For most, I still think it's worth the cost. The Echo is more than a souped-up speaker with Siri-like smarts -- it's the connected home experience you didn't know you wanted.



Take the Amazon Echo out of the box and plug it in, and you'll hear the sound of Alexa waking up. She'll say hello, then talk you through the setup process. You'll connect to the speaker's Wi-Fi network on your phone or tablet, then sync things back up with your home network in the Alexa app. Within a minute, you'll be up and running.

The speaker will light up whenever it hears you say its wake word, "Alexa" (or "Amazon," or "Echo," in case you don't want to anthropomorphize the thing. Or in case your name happens to be Alexa). From there, you'll tell the Echo what you want. Whether that's some light jazz, the latest headlines from NPR, a 20-minute kitchen timer, an especially dumb joke or any one of the countless other things you might think to ask for is entirely up to you.

The Echo is a good listener. Hidden within are seven noise-cancelling microphones that use "far-field" voice recognition technology. All that really means is that it's good at hearing you even when you aren't next to it, and even when there's other chatter going on. In my home, the Echo can understand me just fine from several feet away, even when I've got the TV on.

#### What can it do?

More and more each month, it seems. Most recently, the Echo unveiled new tricks that let you hail a ride from Uber, order a pizza from Domino's or stream music straight from Spotify -- provided you're a paid, premium subscriber of the service.

In CNET's original Amazon Echo review, David Carnoy rightly pointed to Spotify as a notable omission from the list of music streaming services from which Alexa can pull. At the time, it would play tracks from the Amazon Prime Music library (about 1 million songs), but if you wanted to stream from Spotify's library of more than 30 million songs, you needed to control things on your phone or tablet, then use the Echo as a plain old Bluetooth speaker.

The new integration finally adds in the voice-powered Alexa smarts for Spotify's premium subscriber base -- you'll just need to be sure to end your request for a song, album or artist with "on Spotify," as in, "Alexa, play Adele on Spotify." It's a good get for Amazon, and the biggest feather in its music-streaming cap yet, joining Pandora, iHeartRadio and TuneIn as services you can ask Alexa to stream from.

It's not just songs from the Amazon Prime Music library -- you can ask Alexa to stream music from Pandora, Tuneln, iHeartRadio and now Spotify, too.

#### Chris Monroe/CNET

As for audio quality, the Echo features dual downward-firing speakers that promise 360 degrees of "immersive sound." Some of us at CNET, myself included, have noted that its bass tends to weaken or distort at maximum volume, but I haven't had a problem with that personally, since I rarely find myself needing to dial things up much higher than 60 percent or so. To my ear, the Echo does a fine job of filling a room with sound, especially with crisp speech playback, something you'll notice when you listen to a podcast or stream an audiobook.

Still, if it's audio quality you're concerned with, you can find better-sounding speakers at this price. The option to



sync the Echo up with an external sound system and use it more strictly as a point of control would be a good fix, and a nice touch for the audiophiles out there. Unfortunately, you can't do that -- at least not yet. Amazon seems pretty committed to the idea of the Echo as an all-in-one device.

All of that said, the Echo is more than a music streamer, just as an iPhone is more than a phone. The key is Alexa. She's helpful, she's capable and she's mostly good at understanding what I'm asking of her, enough so to put her right on par with Apple's Siri as far as virtual assistants go.

But unlike Siri, which is still secondary to touch as a means of interfacing with iOS devices, Alexa is essentially all the Echo has. It was critical for Amazon to get her right -- thankfully, she delivers (and yes, calling Alexa "she" feels more correct than calling Alexa "it," a testament to how personable she is).

The Echo is more than a music streamer, just as an iPhone is more than a phone.

At the Echo's launch, Alexa's native capabilities included reading off weather forecasts, setting timers and alarms, and managing your to-do list and shopping list (and, of course, crossing items off of that shopping list by making purchases on Amazon whenever you ask her to). One trick that I use almost every day is to ask her for the news. In response, she'll offer a curated list of the day's headlines and news blurbs from popular sources such as NPR, CNN, BBC News and Fox Sports Radio. You pick which sources you want to hear from and which categories you want to hear about in the Alexa app.

Since launching, the Echo has only gotten smarter. Most of what's new comes by way of Alexa's "Skills," which are essentially the Echo's apps. There are over a hundred of them at this point, and whenever you enable one, you're basically teaching Alexa a new trick. And, thanks to Amazon releasing a software development kit that third parties can use to craft those Skills, the list of options is growing rapidly.

#### How smart are those Skills?

The Skills section of the Alexa app reminds me of the early days of the iPhone's App Store. There are some from big names such as Yelp, and the Skills for Domino's and Uber that I mentioned earlier. Most, however, come from smaller developers. Some offer genuine niche utility, while others, like a Skill that teaches Alexa to recite "cat facts" on demand, veer toward banal gimmickry. And as of now, there isn't a great way to sort through all of them -- no categories, collections or top picks. With the list growing, a refresh of the Skills section (and of the entire Alexa app, frankly) ought to be high on Amazon's to-do list.

Still, the point is that there's something for everyone. If you're a gamer, there are Skills for games such as Minecraft and Destiny that'll turn Alexa into a helpful sidekick. If you're a budding mixologist, there's a Skill that'll teach Alexa to talk you through complicated cocktail recipes. If you're a musician, there are Skills that let you use the Echo as a metronome or guitar tuner.

The Echo works with a growing number of smart home gadgets.

#### Tyler Lizenby/CNET

Something else you'll find in the Skills section: a growing number of smart home products. Notable among these are home security systems from Vivint and Scout, the Garageio smart garage door opener and the Automatic car monitoring gadget. All of them promise to bring Alexa into the mix and give you the power to monitor or control your gear using only your voice.

This is the "a-ha" moment for Alexa's Skills, the point in the story where the scope of the Echo's potential really comes into focus. Anyone who doubts that voice control is the next big frontier for the smart home (a frontier in and of itself) need only look so far as Apple. The company is currently betting big on Siri controls to help sell the masses on HomeKit. its iOSpowered vision for the connected home.

Here's the thing: Alexa does it better. The Echo is a dedicated voice control device that stays plugged in. It's always ready to take a command, and anyone can use it, regardless of what sort of phone they use, or whether or not they have an Amazon Prime account. If you have guests staying in your home for a few days, you don't have to transfer your account settings to anyone else's device, or share a password with anyone. Just scribble any relevant Alexa commands onto a notecard for them. It's as simple as that.

Other Echo integrations go even deeper than the ones you'll find in Alexa's list of Skills. Lifx and Philips Hue's connected lights, Belkin's WeMo line of smart switches, Ecobee's connected thermostats and smart home platforms such as Wink, SmartThings and Insteon all offer native support for the Echo. That means that you don't need to enable a Skill for any of those devices -- you can connect them with the Echo straight out of the box. And, unlike the Skills, the native integrations don't require you to remember any extra vocabulary in order to use them (i.e., "Alexa, tell Vivint to arm my security system," or, "Alexa, ask Automatic where I parked my car." Instead, you can just say "Alexa, turn off the lights.")

Alexa also works with the free online automation service IFTTT. The marquee feature here is that you can write your own custom Alexa commands and use them to trigger whatever you want. This comes in handy with the Nest Learning Thermostat, an IFTTT-compatible smart home gadget that doesn't offer Echo support or an Alexa Skill. After a few minutes on IFTTT, you'll be able to tell Alexa to turn the heat up and down.

We've tested the Echo/Nest combo out pretty extensively in the CNET Smart Home, and it's worked flawlessly for us

-- the only caveats are that you'll need a separate IFTTT recipe for each potential voice command, and that each one of them will need to start with the IFTTT keyword "trigger," a la "Alexa, trigger the Nest to 68 degrees."

#### What can't the Echo do?

I've already mentioned that you can't put external speakers under the Echo's control -- you also can't sync Alexa up with any smart TVs yet. I wouldn't be surprised if that changes soon, given that Samsung's SmartThings connected home platform already enjoys native Echo support. Extending that same sort of support to Samsung's smart TVs seems like a logical next step, and could let you switch channels or navigate Netflix using your voice.

Deeper smartphone integrations for the Echo would make a lot of sense -- if Amazon can figure out a way of keeping things private.

#### Sarah Tew/CNET

Additionally, though you can pair the Echo with your phone over Bluetooth for audio output, you can't ask Alexa to call someone, the way you can with phone-based virtual assistants like Siri or Cortana. The closest you can currently get to using the Echo as a speakerphone is by pairing it with Ooma, an Echo-compatible smart home phone system. Even then, you'll only be able to ask Alexa to dial someone, or play your voicemail. You'll still need to use your phone to talk to someone.

On a similar note, deeper smartphone integrations would be a helpful addition to Alexa's toolkit, and a handy way to help keep your phone in your pocket. It'd be great if you could ask Alexa to read incoming emails or texts, for instance -- ideally with the same option for a voice passcode that you can currently use to keep your kids from going on an Alexa-powered shopping spree. You similarly wouldn't want your nosy roommate asking Alexa to dig through your inbox.

It's also worth mentioning that the Echo won't let you program smart home scenes the way that competing platforms like HomeKit will. You can add compatible lights and devices in the Alexa app, and then group them to turn multiple things on and off at once, but you can't, for instance, program a scene that sets the Hue bulbs to blue and raises the thermostat to 70 F. In fairness, Alexa's IFTTT channel gives you plenty of workarounds, but still, it'd be nice to see some sort of scene support in the Alexa app itself.

#### What about the competition?

That's the funny thing -- there really isn't any, at least not from Amazon's major competitors. Apple and Google both have voice-controlled virtual assistants. They both have major skin in the smart home game. Both have a demonstrated interest in the music streaming business. Neither one has an Echo, though.

More Amazon news:

- · Amazon's Alexa makes herself at home
- · Amazon's new wireless smart speaker lets you Tap to talk with Alexa
- · Echo Dot brings Alexa's voice controls to whatever speakers you want
- · How to order an Amazon Echo Dot without an Amazon Echo

The closest thing to a competitor would be HomeKit, the set of smart home control protocols in the latest versions of Apple's iOS platform for mobile devices. HomeKit allows you to use Siri to control compatible smart home devices, but you still need an iPhone or an iPad. That's a problem if guests or family members don't use iOS devices.

The Echo is 15 months old, and it's a clear breakout at this point. If nothing else, it's proven that there's a place for a dedicated voice-control device in the modern home -- and a market for it, too. Recent reports claim that Amazon is close to unveiling a second Alexa product, a smaller, more affordable and more portable streamer code-named Fox. If those reports are true, Amazon could potentially have a second-gen smart speaker out before its competitors launch their first. That's a significant head start in a dynamic new category -- not to mention the fact that you'll already find Alexa's voice search capabilities with Amazon Fire TV.

In addition, Amazon's Alexa Voice Service makes the software that powers the virtual assistant available to third-party manufacturers. That means that any device with built-in microphones and speakers can add Alexa-powered voice controls with just a few lines of code. We saw the first hints of third-party Alexa devices at CES 2016 -- as more of them arrive, Alexa will have even more opportunities to gain footing throughout the home.

#### The speaker of the house

We asked the smart home to start making sense. Amazon Echo heard us. In an age of app-enabled connected gadgets and automated everything, the Echo does something different. It isn't just a smart speaker. It's a user interface for your home, the thing you use more than anything else. It's overwhelmingly good at what it does, and it's learning to do more and more every day. And I'd be remiss not to mention the impact that the Echo is already making with the elderly and disabled.

That's the kind of transformative tech that's worth buying into. At \$180, the Amazon Echo is a worthy and futuristic upgrade for your home. It'll surprise you, and it'll grow on you. You might not know you want it. But you do.





By Jeannine Sloan

## **Recycling Food Waste**

Food waste in quantity is noxious to compost. It takes weeks to decompose and SMELLS bad. A new process, to pickle the waste takes less time and produces biomass pellets that can be used as fertilizer and wastewater that could be cleaned and reused. Read about it

http://www.fastcoexist.com/3059402/

## Get the Most out of Microsoft Edge

Since its debut, Microsoft Edge has challenged users -- it's got a new user interface, it's not as chock-full of features as people would like, it's frustrating to people who had a thorough grasp on Internet Explorer or Google Chrome. Our writers have been grappling with Edge too. Here's how we've made it work for us.

http://winsupersite.com/windows-10/get-mostout-microsoft-edge#slide-0-field\_images-71951

Editor's note: It still does not support RSS feeds. □)

## **SSD Care & Maintenance**

Solid State Drives are slowly but steadily taking over data storage requirements of users. So follow the tips given and keep your SSDs healthy and functional. So it is very important that you keep your SSDs healthy and functional tips for keeping SSDs healthy and functional can be found here:

http://dottech.org/197008/how-to-keep-ssds-healthy-andfunctional/#JAtSbB232qsPwHSjh.99

### **Windows Narrator**

The Windows operating system includes several accessibility features that make using Windows easier, for people with age-related or other disabilities. The Narrator in Windows 10 is a built-in tool that is used to read text aloud. There are some new features in Windows 10 Narrator. **New to Narrator-** Not everyone knows but Narrator can be launched on your PC just by pressing **Windows key + Enter key** simultaneously. And if you are using a Tablet or a Windows Phone, you can launch Narrator by pressing **Volume up + Start button**. Read more here:

http://news.thewindowsclub.com/narrator-windows-10-new-features-83984/

## **Look Up Your IP Address**

Use the handy keyboard shortcut Ctrl+Shift+Esc (all three keys are in a column on the left side of a standard keyboard) to open Task Manager. Click the Performance tab, and then choose a network adapter to see its details. (On my machine the label is 'Wi-Fi', not 'Network adapter')

http://www.zdnet.com/article/windows-10-tip-look-up-your-ip-address/#ftag=RSSbaffb68

## **Hot Tea**

The American street artist HOT TEA, based in Minneapolis, makes stunning creations combining existing urban structures, such as fences, to non-destructive materials. Some beautiful ephemeral geometric pieces made with simple yarn of colored wool.

http://tinyurl.com/mwvqdww

## For the Courageous Windows 7 User

Convenience rollup update for Windows 7 SP1 This article describes a convenience rollup for Windows 7 Service Pack 1 (SP1)-based and Windows Server 2008 R2 SP1- based computers. This rollup package includes almost all the updates that were released after the release of SP1 for Windows 7 and Windows Server 2008 R2, through April 2016. This convenience rollup is intended to make it easy to integrate fixes that were released after SP1 for Windows 7 and Windows Server 2008 R2. We recommend that you include this rollup package in the image creation process to make it easier to quickly set up a computer.

https://support.microsoft.com/en-us/kb/3125574

## Minimize Every Window

Use the keyboard shortcut WIN + M keys on your keyboard, and every open window is minimized

## System Restore in Windows 10

This underrated feature can be a godsend if a program or driver installation caused havoc. It saves your PC's state at a specific point in time, so you can easily revert to that state, if anything goes wrong.

Open Start > Settings and in the search box type create a restore point. Click the matching result, select the drive you want to use to store your restore point (typically the system drive) and click Configure > Turn on system protection. This action activates the system restore functionality. Click OK to confirm, and in the main window click Create... to create a restore point, and give it a name. http://www.makeuseof.com/tag/system-restore-factory-reset-work-windows-10/

## Flightradar24!

Flightradar24 tracks every major aircraft in the skies right now, and actually updates the plane's path as it flies to its destination.

https://www.flightradar24.com/45.01,-93.43/7

Other real-time maps:

http://www.makeuseof.com/tag/5-mesmerizing-maps-world-real-time/

#### Checklist

For those who have updated older machines to Windows 10 and are having issues Microsoft's official system requirements for Windows 10 are:

•Processor: 1GHz or faster processor or SoC

•RAM: 1GB for 32-bit OS or 2GB for 64-bit OS

Hard disk space: 16GB for 32-bit or 20GB for 64-bit OS
Graphics card: DirectX 9 or later with WDDM 1.0 driver

•Display: 800x600

#### **Panoramio**

Share and explore the world in photos. Wonderful browsing site: http://www.panoramio.com/

## **Keyboard Shortcut**

Windows OS includes the Narrator, which is a built-in accessibility feature that can read text on your computer screen aloud. It can also read out and describe various other events which may occur on your PC, including reading out error messages. So if you have vision impairments, you will find this feature useful as it can also allow you to use your PC without a display. In Windows 10 simply use the keyboard shortcut Win+Enter to turn on and off the Narrator feature. Additional Narrator shortcuts here: http://tinyurl.com/j69mb3tn

#### What Is A Pixel?

It is an abstract representation of a specific coordinate, like a point on a map. A pixel is simply the individual point of color on a digital image. <a href="http://auctionrepair.com/pixels.html#splain">http://auctionrepair.com/pixels.html#splain</a>
The site also discusses dpi and displays a line you can measure with a household ruler to figure out what dpi your monitor is displaying. Common monitors display at 72dpi and the line is about 4".

## **Global Forest Change Explorer**

Forests are the mighty lungs of our planet. They absorb carbon dioxide, and emit oxygen on which all people and animals on Earth rely. For the sake of our future, it is critical that all people, including the next generation, understand our global forests in order to manage them sustainably. Today, Science in the Classroom, Dr. Matt Hansen of the University of Maryland, and Google Earth Engine are presenting

Global Forest Change Explorer

to help engage young people in forest conservation.

https://maps.googleblog.com/2016/05/bring-worldschanging-forests-inside.html

## **How To: Personalization Options in Windows 10 Settings**

This walk through of the Windows 10 Personalization settings will show you how to setup the Windows 10 background, colors, lock screen, themes and other options on the Start Menu. http://winsupersite.com/windows-10/how-personalizationoptions-windows-10-settings#slide-12-field\_images-54941

## **Resources at the Library**

Freegal: Downloadable songs and music videos from hundreds of musical genres and thousands of labels including Sony Music Entertainment. Files downloaded are yours to keep and transfer. Go to hclib.org,

Click 'Browse',

Click 'Online resources', Scroll to and click on "Freegal", login with your library card # and password.

http://www.hclib.org/

#### **New Wireless Accounts**

The industry consultant found that in the first quarter of 2016, 32 percent of new wireless accounts were connected cars.

The firm also found that 23 percent of new accounts were opened for tablets. The remaining 14 percent was captured by machine-to-machine devices, more commonly referred to as Internet of Things (IoT) devices.

http://www.techspot.com/news/65026-connected-cars-now-responsible-more-new-wirelessaccounts.html

#### Iran Demands

Iran is ... demanding that foreign messaging apps "transfer all data and activity linked to Iranian citizens into Iran ...," according to news reports in Iran's state-run media.

http://www.techspot.com/news/65023-iran-demands-foreign-messaging-apps-store-citizens-data.html

## How Alexa, Siri and Google Assistant Will Make Money from You

Apple, Amazon, and Google say their virtual helpers—Siri, Alexa, and the less snappily named Google Assistant—can make our lives easier by acting on our commands to book cabs, order pizza, or check the weather. But like all the other free-to-use goodies that tech giants offer up, these new personal assistants must also earn their keep. How will they do that?

https://www.technologyreview.com/s/601583/

## **New EU Hate Speech Rules**

In a moment of unity among tech giants and the European Union, Facebook, Twitter, Google-owned YouTube, and Microsoft agreed on Tuesday to a new code of conduct. Read more here: http://www.digitaltrends.com/web/eu-hatespeech/#ixzz4AFjomQ3S

## **TLS**

Transport Layer Security (TLS) and its predecessor, Secure Sockets Layer (SSL), both of which are frequently referred to as 'SSL', are cryptographic protocols that provide communications security over a computer network.[1] Several versions of the protocols are in widespread use in applications such as web browsing, email, Internet faxing, instant messaging, and voiceover- IP (VoIP). Major web sites use TLS to secure all communications between their servers and web browsers. The primary goal of the TLS protocol is to provide privacy and data integrity between two communicating computer applications.

https://en.wikipedia.org/wiki/fTransport\_Layer\_Security

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## **Special Interest Groups (SIGs)**

w Work phone h Home phone c Cell phone \* Meets at an alternate location

Most SIGs will meet at Edina Executive Plaza, Conference Room #102, 5200 Willson Road, Edina. MN Confirm with a SIG group if they meet elsewhere.

For more info contact the SIG Leader(s) listed here.

Get SIG announcements! Link from www.tcpc.com

#### **Board of Directors\***

All members are welcome! Check www.tcpc.com for location.
Selected Saturday mornings

#### **Linux on Saturday**

This is for the Linux newbie and those trying to come over from Microsoft to a different operating system.

First Saturday @ 9 AM-Noon Note: No Meetings June-August

Jack Ungerleider

612/418-3494 c jack@jacku.com

#### **Tech Topics**

Technical presentation/discussion on various technical topics from the following areas:

- Web/Internet
- Mobile Devices and Apps
- Playing with Programming
- DIY (3D Printing, R-Pi, other hobby electronics, etc.)

Second Tuesday @ 6:00-7:00 PM Every month Right before the general meeting.

Jack Ungerleider

612/418-3494 c jack@jacku.com

#### **Microsoft Access**

All levels. Presentations by expert developers within the group and by MS reps.

Third Saturday 9:00 AM—Noon

Note: No Meetings June-August

Steve Kuhlmey 952/934-8492 skuhlmey@hotmail.com

#### **Microsoft Office**

Addresses the use, integration, and nuances of the Microsoft Office applications.

Combined with Systems on Saturday
Third Saturday of the Month
9:00 AM—Noon
Note: No Meetings June-August

Note: No meetings bune-August

Steve Kuhlmey 952/934-8492 skuhlmey@hotmail.com

#### Directions to Summit Place for General Meetings:

Proceed to Eden Prairie Center Flying Cloud Drive . [Flying Cloud Drive runs along the West side of the Eden Prairie Center.] Once you have driven past Eden Prairie Center (on the left) along Flying Cloud Drive you will come to a stop light at Prairie Center Drive. The next intersection with a stop light and left turn lane is Fountain Place. Turn left at Fountain Place and go straight into the parking lot. Turn left again to the first covered entry way of Summit Place. There is plenty of parking in the large parking lot in front of the first Summit Place covered entry way. When you enter the door at the first covered entry way, ask to be directed to the Performance Room for the TC/PC meeting. For a map of more detailed directions and *info on Web SIG and Board meeting*, check the TC/PC website.

Directions to Edina Executive Plaza for Systems on Saturday, Access, Word and Picture Perfect SIGs: Take Highway 100 to the 50th Street/Vernon exit. [If you have come from the north, cross back over Highway 100 to the east side.] Take the first right and go past Perkins [The golf course will be on your left.] and continue on the east frontage road (Willson Road) to the next building—5200. There is ample parking in the building's lot.

Conference Room #102 is on 1st floor

## Help yourself by helping others!

Join the team & share your knowledge with others.

Contact TC/PC at www.tcpc.com

Meetings start at 7:00 PM (9:00 AM on Saturday) unless otherwise noted. \*Meets at Edina Executive Plaza.

June 2016

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## **Protect Your Privacy While Surfing the Internet**

By Dick Maybach, BCUG Bytes, January 2016, Brookdale Computer Users Group, NJ

Many of the entities that handle Internet traffic have little regard for maintaining our privacy. ISPs typically record the sites we visit and store our e-mail. Search engines keep histories of our searches and the sites we visit. Social media sites and Internet vendors collect as much data about us as they can. Many make it available to both commercial and government entities.

As recent headlines have shown, these data are often stored with minimal attention to security. For example because of Edward Snowden, we know that the NSA stored the data it collected unencrypted, on computers that had the means of copying it to portable media, and allowed maintenance staff access to this equipment and to carry storage devices in and out of the facility. We know about Snowden because he disclosed what he had learned; we don't know how many others have quietly sold data to the highest bidder, and neither do their employers.

The point I'm trying to make is that the only one concerned about your privacy is you. The rest of the world will pry to extreme limits of the law, and beyond, to profit from whatever it can find out about you. So what can you do? Actually, quite a bit, but there are trade-offs between the degree of privacy and convenience. I can describe some of the tools I've found to be helpful and the inconvenience they introduce; you will have to decide which to use.

#### Protection while browsing

Certainly browsing the Internet exposes you to risk, as you often connect to sites about which you know little. I prefer using the Firefox browser, because it has some very useful add-ons that help you protect your privacy, including Better Privacy, HTTPS-Everywhere, NoScript, and Privacy Badger.

Better Privacy (<a href="https://addons.mozilla.org/enus/firefox/addon/betterprivacy/">https://addons.mozilla.org/enus/firefox/addon/betterprivacy/</a>) protects against flash-cookies. These Local Shared Objects (LSOs) are pieces of information placed on your computer by a Flash plug in that track your laterant use. Potter Privacy lets you list

computer by a Flash plug-in that track your Internet use. Better Privacy lets you list and manage these Flash-cookies, e.g., to remove those objects automatically on browser exit. I use this as an "install and forget" add-on, and I've never found it necessary to disable it.

HTTPS Everywhere (<a href="https://www.eff.org/https-everywhere">https://www.eff.org/https-everywhere</a>) is a Firefox, Chrome, and Opera extension that encrypts your communications with any website that offers https service. It's a result of a collaboration between the Tor Project and the Electronic Frontier Foundation. This hides your communications from any parties between you and the site, just as though you were talking to your bank. This too is an "install and forget" add-on.

NoScript (<a href="https://noscript.net/">https://noscript.net/</a>) disables JavaScript, Java, Flash, and other plug-ins, and as a result, seriously disables many sites. I start by enabling it everywhere, and disabling it, often just temporarily, only for those sites I trust and need.

Privacy Badger (<a href="https://www.eff.org/privacybadger">https://www.eff.org/privacybadger</a>) is available for Firefox and Chrome. It checks for tracking on every site you visit, and blocks it either completely or partially, depending on how each particular site behaves. You can click on the Privacy Badger icon to can see what action it's taking at the current site, as shown in the screen-shot below, which shows that cookies are blocked for apis.google.com and no content at all is accepted from the other six.

Note the Frequently Asked Questions at the bottom of the shot. Clicking on this will display information about what Privacy Badger does. By the way, the Avast antivirus extension blocks the installation of Privacy Badger and other extensions. Internet Explorer can also disable tracking, but only for specific sites. Interestingly, Privacy Badger identifies 11 trackers at https://www.microsoft.com/en-us/ and blocks cookies from the 10 of these it considers harmful. [Editor's note: Privacy Badger is alpha software, so could be buggy, according to a note from the developers.]

#### **E-mail Protection**

E-mail has much in common with postcards, in that everyone who handles it can see the contents. The only way you can safeguard your email is to encrypt it, and the standard methods are Pretty Good Privacy,

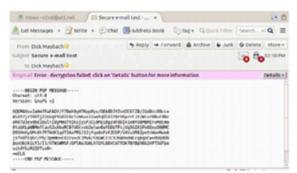


https://www.symantec.com/products-solutions/families/?fid=encryption, and its open-source variant Gnu Privacy Guard (GnuPG), https://www.gnupg.org/. Both of these adhere to the OpenPGP standard, http://www.openpgp.org/. (Also see https://en.wikipedia.org/wiki/Pretty Good Privacy.)

They use public key encryption; that is, there are two keys, a public one and a private one. Files can be encrypted with either, but can be decrypted only with the matching one. You distribute your public key freely and carefully protect your private key. Your correspondents use your public key to encrypt messages to you, which only you can decrypt because only you have the matching private key.

GnuPG is available for all the popular personal computer operating systems. However, it is a command-line program and is much easier to use if accessed a graphical front-end, such as the EnigMail add-on (<a href="https://www.enigmail.net/home/index.php">https://www.enigmail.net/home/index.php</a>) for Thunderbird, Mozilla's e-mail client [see the image below]. To





encrypt a message, just click on the padlock icon, which will change from open to closed.

When you click Send, you will see the unencrypted form of the message and a window asking for your passphrase. GnuPG passwords are stored in an encrypted database called a keyring, which requires this passphrase for access. The received message looks normal, although you may have to enter your passphrase to unlock it. (Depending on your settings, the system will remember a passphrase for a fixed time or perhaps for as long as you are logged on.) [

Anyone reading your message without decrypting it will see only what's depicted in the image here:

Once you have e-mail encryption set up and (here's the tough part) have convinced those with whom you correspond to do the same, it's very easy to use. I discussed e-mail encryption in more detail in my July 2014 article (available at http://www.bcug.com/.)

#### **Protection at Wi-Fi Hot Spots**

At home your PC is probably protected by a firewall in the cable modem provided by your ISP, but you have no such protection when you operate at a wi-fi hotspot. Indeed, widely-available software lets anybody using the same hotspot capture all the traffic on it. You thus need extra protection, and I consider Tor (<a href="https://www.torproject.org/">https://www.torproject.org/</a>) to be essential here. It encrypts all your communication over a virtual private network and is available for Windows, OS X, and Linux. A snooper at a hot-spot sees only an https link to a node on The tor network; not only is he prevented from reading your packets, he doesn't even know with whom you're communicating. Your packets remained encrypted until they reach the exit node, which doesn't know where you are, nor does the machine with whom you're communicating. I discussed Tor in more detail in my June 2014 article.

If you use Thunderbird for e-mail, you can of course use EnigMail to encrypt your messages. For additional protection you can use the

TorBirdy (<a href="https://addons.mozilla.org/en-us/thunderbird/addon/torbirdy/">https://addons.mozilla.org/en-us/thunderbird/addon/torbirdy/</a>) add-on. This routes all your email, both sent and received, over the Tor network. It protects you against hotspot snoops, but of course leaves you vulnerable to those in other parts of the network.

#### **Protection at Insecure Computers**

You must careful when using a borrowed PC, either a friend's or especially one at an Internet cafe. Even if these are free of malware and are connected to secure networks, they often store passwords, Internet browsing history, and e-mail by default. If you must do something non-trivial, such as banking or e-mail, you should use a live USB memory stick with a secure operating system such as Tails, <a href="https://tails.boum.org/">https://tails.boum.org/</a>. This doesn't use the PC's hard disk at all, so it will neither be affected by any malware there, nor leave any traces of your activities. It uses Tor to access the Web, and thus prevents snooping from the network.

Finally, when you exit, it wipes RAM.

You can enable persistent storage to create an encrypted volume on the memory stick where you can

store documents as well as Internet favorites, e-mail and e-mail addresses, and passwords. If you lose the memory stick and have used a good password, a finder won't be able to access your data. Tails has a virtual keyboard, which you can use if your suspect that the PC on which it's being used has hardware to record keyboard activity. For example, you would use the virtual keyboard to enter passwords.

Yes, Tails is Linux, but as the screen-shot here shows, its graphical interface should be familiar to almost any computer user. The most commonly-used applications are available on the menu bar at the top, and the rest reside in the Applications menu. As always though, you should experiment with it at home before you really need it.



The screen-shot above shows the desktop of Tails Linux distribution.

#### Social Networks

Remember that anything you disclose will stay on the Internet and will be available to friends, enemies, relatives, employers, and all others, forever. Please use common sense. If on Facebook you talk about your new Porsche, your art and antique collections, and your upcoming three-week vacation to Spain, you shouldn't be surprised to return to an empty home and garage. Similarly, that hilarious picture of you spilling beer down your shirt may not be quite so funny if it shows up years later while you are running for public office.

#### **Smart Phones**

We have been discussing how to improve privacy when you use your PC, but I believe that smart phones are by far the bigger threat. While most PCs access the Internet through firewalls that are part of the router supplied by an ISP, cell phones typically connect directly to public networks and are always on. They allow tracking not only of their users Internet use, but also their geographical location. Yet, far fewer privacy and security tools are available for them and malware apps abound. Owners should review their uses of these devices, and the apps that are running on them, with respect to the associated potential loss of privacy. They will probably decide that some uses are better done from the relative security of a PC and some apps should be deleted.

Protecting your privacy isn't difficult, nor need it significantly hinder your Internet use. It just requires that you learn to use the right tools and keep your wits about you.

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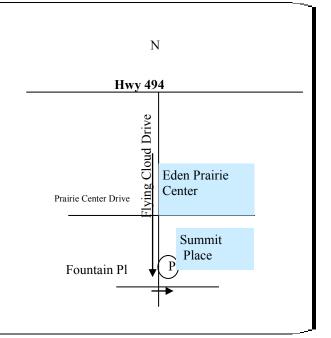
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