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# THE WYSIWYG

February 2018

Volume 30, Issue 2

## STERLING HEIGHTS COMPUTER CLUB

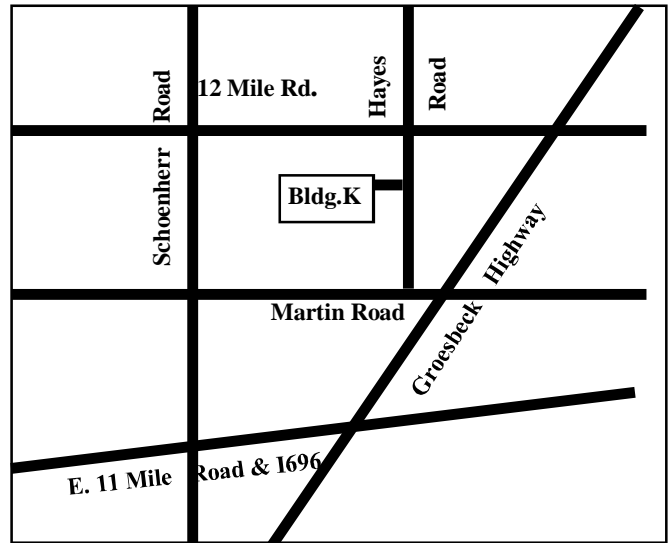
PO Box 385

Sterling Heights, MI 48311-0385



**MAIN MEETING: TUESDAY FEB 6**  
**6:30 PM**

**Macomb Community College  
South Campus  
14500 E 12 Mile Road, Warren  
John Lewis Community Center (Building K)  
[Second floor - left from steps or elevator]**



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**This Month's Main Meeting Topic:**  
**"Backups the Easy (and Cheap) Way" presented by member Don VanSyckel**

Guests and visitors are welcome. People can attend any SHCC meetings during two consecutive months before deciding to become a member or not. Meetings include the main meeting and SIG. July and August don't count since there is no main meeting. Membership includes admission to all SHCC functions and the newsletter. Membership is open to anyone. It is not limited to the residents of Sterling Heights.

**DUES: \$25/YEAR**

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**CLUB E-MAIL ADDRESS:** Info@SterlingHeightsComputerClub.org  
**CLUB WEB PAGE:** <http://www.SterlingHeightsComputerClub.org>

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Family Tree	Rick Schummer
Firefox	Don VanSyckel
FoxPro	Rick Schummer
General Computer Questions	Jack Vander-Schrier
Hardware	open
MS Publisher	Rick Kucejko
MS Word	Rick Schummer
Spreadsheets	Rick Schummer

### SHCC Coordinators:

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Associate Editor	Paul Baecker
Door prizes	Don VanSyckel
Greeter for visitors	Jim Waldrop
Newsletter publisher	Rick Kucejko
Program Coordinator	Mike Bader
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Jack Vander-Schrier (Call Jack after noon)	586-739-5952	<a href="mailto:jvanders@comcast.net">jvanders@comcast.net</a>

### 2018 SHCC Officers

President: Don VanSyckel  
 Secretary: Rick Kucejko  
 V. President: Mike Bader  
 Treasurer: Bernie DeFazio

### Four Month Meeting Schedule:

#### FEBRUARY 2018

- 6 - "Backups the Easy (and Cheap) Way" presented by member Don VanSyckel  
 7 - COMP meeting  
 11- SEMCO meeting

#### MARCH 2018

- 6 - SHCC Main Meeting  
 7 - COMP meeting  
 11- SEMCO meeting

#### APRIL 2018

- 3 - SHCC Main Meeting  
 4 - COMP meeting  
 9 - SEMCO meeting

#### MAY 2018

- 2 - SHCC Main Meeting  
 3 - COMP meeting  
 8 - SEMCO meeting

### Other Computer Clubs:

As a member of SHCC, you can attend meetings of other clubs where we have reciprocating membership agreements, at no charge.

#### Computer Club of Marysville and Port Huron (COMP)

Time: 1st Wednesday, 7:00PM  
 Place: Mackenzie Bldg, Room 201, St Clair Community College, Clara E McKenzie Library-Science Building, 323 Erie St. Port Huron, MI (810) 982-1187  
 Web Page: <http://www.bwcomp.org>  
 Reciprocating: Yes

#### South Eastern Michigan Computer Organization (SEMCO) (new location)

Time: 2nd Sunday at 1:15PM  
 Place: Bloomfield Township Library, 1099 Lone Pine Rd., Bloomfield Hills, MI 48302  
 Web page: <http://www.semco.org>  
 Reciprocating: Yes

#### Royal Oak Computer Club

Time: Every Wednesday at 12:30  
 Place: Mahany/Meiniger Senior Community Center  
 500 Marais Ave. Royal Oak, MI 48073  
 248-246-3900  
 Reciprocating: No

Newsletter submissions are due 10 days before the club meeting, but the earlier the better. They should be sent to : [newsletter@SterlingHeightsComputerClub.org](mailto:newsletter@SterlingHeightsComputerClub.org)

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## The President's Pen

by Don VanSyckel



**W**inter really hit hard the last few weeks but the bright side is only a couple more months and then Spring will pop. I can't wait.

In line with last month's presentation I ordered and installed a SimpliSafe home security system. I won't go into all the details, not knowing who might read this article, but the system consists of entry sensors and motion sensors. I installed entry sensors on all the doors and installed motion sensors are strategic location in my home. This system uses cellular technology to communicate with the central station. The system can use a standard phone line but I do not have any to connect. A standard phone line or even an internet connection can be cut in preparation to break into a house. The system is totally self contained and can be used without any additional connections or expenses.

If you choose to have the system monitored there are two levels to choose from. The first level, \$15 / month, is simple monitoring; if the alarm is triggered the personnel at the central station first contact you and you have the option of giving them a safe word to cancel the alarm. If they can't contact you or you do not supply the safe word they call the police. The second level, \$25 / month, of monitoring includes the function of the first level plus you are able to control, configure, and monitor the system yourself from either a smart phone or a PC. This is the option I selected and I'm glad I did. There is no contract for monitoring and in a few months I might switch to the less expense first level. There are also two levels of monitoring by the system. One is 'away' and all the sensors are active and the other is 'home' and all sensors except motion sensors are used.

The alarm was unexpectedly triggered soon after the installation by

one of the motion sensors. Then it happened again and I figured the cat must be running wild and triggering the motion sensor in the one room. I logged in and connected to the system. The individual sensors can be configured to one of four choices:

Alarm - away and home

Alarm- away

No alarm - send a text message

Disable

I selected "No alarm - send a text message" for the motion sensor that had triggered the alarm. Then my wife and I were out of the house one morning and I received nine text messages triggered by the motion sensor. Apparently the cat was having a wild time again that morning. So I logged in and set that motion sensor to "Disable". This ended the alarm alerts. All seems to be going well at this point with the entry sensors and other motion sensors.

Next I installed a smart thermostat, Emerson Sensi 1F87U-42WF. The documentation was very clear that it could be controlled from a smart phone or a PC. After installing it and going further in the documentation I discovered that to connect the thermostat to your wi-fi you had to use a smart phone. Since I don't have one I had a friend assist with his phone. The thermostat starts as a wi-fi access point which you connect to. Then you configure the thermostat to use your home wi-fi (SSID and password) and you're all set. At this point the thermostat can be seen and controlled from a smart phone or PC. If you're away from home and the heating system breaks you can see the temperature from where you are and call someone near your home to check the heat.

There isn't a lot you can do with a thermostat, mostly set the temperature and set up a schedule. The nice thing about the web site is you can set up various schedules and then pick one. The schedule you choose is downloaded to the thermostat. Two features I like about this model thermostat is it reports humidity and can display it on the panel. The second feature is the panel controls can be locked out.

This month I will be presenting information and techniques about backing up your PC. I hope you find this interesting and informative. The one thing I can't over stress is the need to do regular backups of your PC. You really understand this when you PC stops working because the hard disk breaks.



## Door Prizes

**D**oor prize drawings are held at regular club meetings. There were none available for the January meeting, so the names of 2 people were drawn to select a door prize first at the February meeting. The lucky winners were:

**Jane Minnick**  
**Rick Kucejko**

The winner must be present in February to collect the door prize.



## Last Month's Meeting

**L**ast month "Home Security And Automation" was presented by Derek Bricknell from Best Buy Madison Heights. A number of other topics of interest to members. The members present had many questions, on numerous technical topics, and hardware.

Visit Best Buy to get your security and automation equipment and ask for Mr. Bricknell and tell him your a member of Sterling Heights Computer Club.



# The First Dozen Changes To My Newly Reinstalled Windows 10

From the Ask Leo Newsletter

**A peek into my priorities as I install apps and make changes after a Windows 10 reset.**

I decided it was time to reinstall Windows 10 “from scratch” on my Dell Latitude laptop due to performance issues, suspected misconfigurations, and general cruft on the machine. Yes, I could have dealt with all the individual issues, but a completely clean reinstall would take less time and result in a significantly “cleaner” machine.

It used to be that “reformat and reinstall” was something Windows needed every year or two. That’s no longer the case, in my opinion, for most Windows 10 users. It’s quite reasonable to expect a stable Windows 10 installation (with updates, of course) to remain in place for the life of the machine.

As you might guess, though, I don’t fall into the category of “the majority of Windows 10 users”. With all the testing, installing, uninstalling, configuring, reconfiguring, and more, I tend to be rather hard on my Windows installations.

So, it was time to start over.

## Preamble

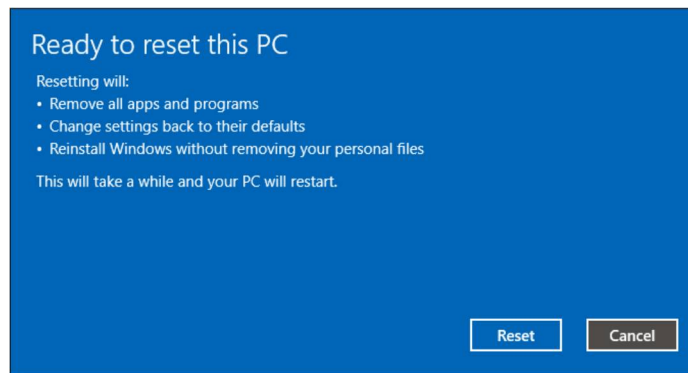
Before reinstalling Windows 10, I created a complete image backup, using the free edition of Macrium Reflect.

This is my safety net. Should anything about the reinstall go bad, from an actual failure to an accidental “oops, I didn’t mean to delete that”, a complete backup image would save me. I’d be able to restore the entire machine to the state it was in at the time of the backup, or I could recover individual files as needed from the backup.

If you’re considering the “nuclear option” (a reformat and reinstall) to

resolve computer issues, *take a complete image backup* before you begin. Just in case.

I used Windows 10’s “Reset this PC” to install a fresh copy of Windows 10 and erase everything that was already on the machine.



Then the work began.

## 1. Firefox

Normally, I’d not install a browser first, but I needed it to download step 2, below.

I normally use Chrome, but with the recent release of Firefox promising better performance and memory usage, I decided to see if installing it as the primary browser on this laptop would bear out those promises. (As you can see, the first thing I installed amounts to a “test”. I’m not an average user. )

## 2. Team Viewer

This was an install of convenience. My laptop lives in our family room, and I work in my home office. Rather than walk back and forth for every step, I wanted remote access from the beginning, and TeamViewer is my current choice. This allowed me to continue other work while various installations completed.

## 3. Windows Update

This might have taken the longest.

I visited the Windows Update page in the Settings app and had it check for updates repeatedly, installing all that were available at each point. This included the most recent major update, the “Fall Creators Update”.

I prioritized updating Windows over installing additional software for two reasons: in a subsequent step, I take a snapshot backup image that might be used in lieu of a reinstall in the future, and I don’t know what

software will be appropriate to have installed should that ever happen. I also want Windows to be solid and stable before installing additional software, so if conflicts arise I can more easily identify the culprit.

## 4. OneDrive

I make rather heavy use of OneDrive these days, and I wanted it configured and in place before the next step. This means that in addition to enabling OneDrive, I let it download and mirror all the files currently in my OneDrive storage to the laptop. Forty-six gigabytes later, OneDrive was up to date.

## 5. Back up again

I installed Macrium Reflect and created a complete image backup of the entire hard disk. Then I saved that backup image to my archives.

In the future, should I ever feel the need to “reformat and reinstall” this laptop, I can restore this backup image instead, saving me all the preceding steps. The only thing I’d need to do after restoring the image is revisit Windows Update for any updates.

## 6. Tweaks and twiddles

This isn’t an installation as much as it is customization. While it’s really an ongoing process, I mention it at this point because for me, this is when it really starts.

I pinned common applications (like Firefox) to the taskbar. I changed the notification area to show all icons always, and then disabled individual icons as needed — for example, I don't need the Dell mousepad indicator to be visible at all. I cleaned up my desktop so only the Recycle Bin remained visible, and so on.

### 7. Evernote

Next, I installed Evernote. I'm a heavy Evernote user, using it for everything from random notes to my daily "to-do" list.

The primary reason for installing it now, however, was to take the notes that would lead to this article.

### 8. Xplorer2

Xplorer2 is one of several Windows File Explorer alternatives. I started using it years ago, and have come to rely on its dual-pane interface to make copying and moving files somewhat easier. It's exceptionally customizable, and generally a useful and functional alternative.

### 9. Dropbox

I'm also a heavy user of Dropbox. I use it to share files with my staff, as well as quickly make a file publicly accessible for a short while. Like OneDrive, it keeps files accessible across multiple computers and mobile devices.

### 10. Cryptomator

Cryptomator is a relatively new addition to my arsenal. I've been evaluating it for several months as an alternative to BoxCryptor. (BoxCryptor's fine, but Cryptomator's free, and from the same people that put out CyberDuck and MountainDuck, two other programs I use.)

I use Cryptomator to encrypt the sensitive data I store in OneDrive. This allows me to fully, safely utilize OneDrive's cloud storage and synchronization to back up my important files as well as automatically replicate them across the many machines I use.

### 11. World of Warcraft

OK, ok, WoW is my guilty pleasure. I make no excuses. I found myself sitting in the family room wanting to check something in the game, so I went ahead and installed it. This laptop is in no way a "gaming" machine, but it's useful for a few administrative tasks.

### 12. Bluetooth headset

To be completely honest, I paired the headset to this laptop so I could demonstrate multiple output devices in an *Ask Leo!* Tip Of The Day. It's also convenient, at times, to be able to listen to something on the laptop without disturbing others in the room.

For the record, the headset is a Plantronics Backbeat Pro. It's served me well for several years now, and there are newer models available.

### Postscript

Since putting that list together, I've installed Microsoft Office 365, but

that's about it. So much of my work has moved online that the urgent need to install a large number of applications on the laptop itself has decreased dramatically. The web browser installed in step one made the laptop almost instantly useful for a wide variety of operations.

I've explicitly not installed some things I would have previously, most notably a suite of command-line tools. That may change over time, as I run into situations where I need something. For now, though, my hope is to keep this a relatively clean machine...

...subject to whatever tests and experiments I might run as part of answering *Ask Leo!* questions, of course.

*This article is republished, with permission, from the [Ask Leo! Newsletter](#).*



## Introduction To Digital Security And Privacy

A club meeting - reviewed by John Kinkopf, Danbury Area Computer Society, CT

[www.dacs.org](http://www.dacs.org) [dacseditor@dacs.org](mailto:dacseditor@dacs.org)

A recent guest speaker was Robert Hurlbut, an independent software security consultant and co-host of the Application Security Podcast. Robert delivered an excellent talk that covered many aspects of the wide field of software security. An expert in the field, he managed to provide lots of useful information without becoming too technical.

Asked from the audience which anti-virus software he uses, Robert answered rather provocatively: none! Most in the computer security field don't use an anti-virus software . . . though he keeps Microsoft's Windows Defender on, included with Windows 10. Why? He explained that those in the security field live in a secure way, while anti-virus software usurps

elevated privilege of one's system, more than any other application. We don't know if anti-viruses have faults in their code or security issues. And the majority of attacks these days are not the viruses of old, but things like ransomware that anti-viruses can't find, no way.

Updating Windows is essential to combat ransomware, and using Windows 10 over Windows 7 is his recommendation; definitely don't use Windows XP or earlier versions. Where a couple years ago there were 100,000 new virus patterns per year coming out; now it's 200,000 per DAY with which anti-viruses can't keep up. Thus, restrict your machine from executing things without your permission, meaning beware of clicking on things, and don't surf the internet as administra-

tor, but rather in a user account. He also mentioned that there have been recent [but disputed] allegations against Russia-based anti-virus Kaspersky Labs.

Our connected world is a tracked world. Many TVs, home devices, and Echo or Home personal assistants listen to you. Many smart devices are security openings. Stores you enter may try to hook up with your phone's wi-fi to find out things about you. Credit card purchases leave footprints. [Yahoo scans my Trenton Computer Festival emails to pitch me "Meet Trenton Singles" ads. They guess and list my email recipient's phone number ("No, an out-of-state friend's church"), and "related contacts" as I compose.]

Private photos that iPhones backed up to the iCloud were obtained by fooling celebrity victims into divulging passwords with phishing emails. [Websites derive revenue from letting Facebook, Twitter, and marketing analysts observe which can be blocked by the NoScript extension for Firefox.]

Showing an RFID shield, Robert told how his Fitbit activity tracker began flashing numbers and making strange noises at the DEF CON hacker convention. Though visitors are warned to turn off any Bluetooth device at hacker conventions, a Fitbit's listen remains on. He's refraining from connecting it to anything until he can test it for tampering on a laptop he can wipe.

Get rid of many routers known to have vulnerabilities. Buy your own wi-fi equipment, using your own router over those an ISP provides, so you're managing your wi-fi instead of them. Use WPA 2 for your home wi-fi encryption; DON'T use WEP.

### Virtual Private Networks (VPN)

To provide a secure channel to network servers over the internet, companies commonly use Virtual Private Networks for off-site workers. Phones can also be connect-

ed by VPN. Free personal VPNs offer privacy, not anonymity — you pay by providing info of your use that may be sold. Robert advises, nothing is free; don't use a free VPN. Use VPNs when you can, and only reputable pay VPNs [\$60-\$120/yr]. [Websites rate VPNs.] Robert subscribes to F-secure Freedom; it logs attempts stopped to track you and how much transmitted data was protected; they've been a reputable provider for 25 years. PIA is a VPN recommended by publications as doing minimal logging of the user's IP address and usage. For banking Robert answered that he would use a VPN, but they raise banks' suspicions of your authenticity. Asked about using a VPN to bypass media play geo-restrictions, Robert followed up by email that he once used ExpressVPN, and gave these references:

<https://thevpn.guru/how-bypass-geo-restrictions-location-errors/>

<https://www.bestvpn.com/best-bbc-iplayer-vpn/>

Audience members pointed out that governments may require VPNs to provide their logfiles of users. A VPN user in the audience shared that PIA's encryption processing made his battery life prohibitively short, in his experience. OpenVPN is open source; keep its patches up-to-date. OpenVPN how to:

<https://openvpn.net/index.php/opensource/documentation/howto.html>

### Browsers >Tor > Tails

Unfortunately, browsers track you. While Apple is good at security, their Safari browser lags; but, at least it excludes Flash, notorious for having security and reliability issues. [News Flash: Adobe will pull the Flash plug-in in 2020.] Search engine DuckDuckGo.com claims not to track you . . . they say. URLs beginning with https provide improved communication

security over http sites.

By relaying online communication through multiple nodes on its volunteer network around the world, free download Tor (The Onion Router) anonymizes a web surfer's identity and point of origin. Once the route for each use is established, one surfs the internet via Tor's modified Firefox browser — during which all other browsers must be closed for Tor's anonymity to be effective. Downsides are that while preserving your web anonymity on your end, many websites recognize Tor exit nodes, and place restrictions. For example, Wikipedia restricts edits made through Tor; BBC blocks its use to access iPlayer. And Tor's practicality is limited by slowed browsing from bouncing communications around multiple anonymizing nodes in world locations of varying internet speeds. Only download Tor from the Tor Project website:

<https://www.torproject.org>

Tor is used to access Tor sites on the dark web which Edge, Google, and Chrome won't. Because it's possible that data may still unmask you, the next step is to use Tor in Tails.

Tails (The Amnesic Incognito Live System) is a live operating system the user boots from a USB drive or DVD for the purpose of having no connection to anything on the PC, say a library PC, just the network. When your session is finished no data is saved, everything is anonymous, and traces are not left when you disconnect. But associating with, for example, your email or Facebook would give you away, of course. As using your home computer would identify you to your ISP. It's better to get a dedicated laptop with completely separate email and other accounts that you never use in ways to identify you. The Tails website:

<https://tails.boum.org>

### Passwords

Early August News Flash: Robert

Burr, responsible for the 2003 recommendation that secure passwords include upper and lower-case letters, and symbols that render remembering passwords difficult, made the media rounds rescinding the suggestion, or “\|3V €R ^\1|\|D.” His, and Robert’s current thinking is to use long passphrases – passwords composed of words strung together into a nonsense phrase you can remember. [For example, “A wet duck only flies at midnight,” “The blue sun melts the wet snow” – from TV’s “Get Smart”]

The “Have I Been Pwned?” website is a free service to which one submits their email address. The site, maintained by Australian Troy Hunt, will reply if the account is found among the millions breached, along with when, what, and where it was found, say perhaps in Pastebin, where a lot of stuff happens. You may also sign up for its Notify Me service, to be notified in the event future account compromises are found, for which Pwned needs to save your email. Robert has met Troy; the site gets some financial support but he does this mainly as a labor of love. Website:

<https://haveibeenpwned.com>

A Password Manager (software) helps you manage your passwords with one master password that should be chosen to be especially difficult to crack. Password Managers can also manage security questions. Security question answers you choose need not be truthful, and should not be obvious. The password manager Robert uses is Blur, often recommended in books, which also can create virtual credit cards for you. Blur hasn’t shown up in any breaches or other problems, while 1Password and LastPass have had reported security fallibility.

### **Two-factor authentication (2FA)**

An example: Upon entering my account password, YouTube requires that I submit a code sent to

my email (or phone). Robert likes it; I feel my YouTube account is more secure. But he thinks that it’s crazy to give oft-hacked Yahoo his phone number. The website TwoFactorAuth.org lists whether or not websites support the additional security of 2FA.

### **Email**

All emails are wide open. [Like my ballot at the Putnam County polling place!] They are transmitted from server to server, where hackers can view them along the hops. Even if you delete an email, the email services have made copies for sending redundancy. Be wary of clicking on email links and attachments. For privacy consider premium email services based outside the U.S. that encrypt. OpenPGP.org can be tried for encryption. A member of the audience reported using it in Gmail. The cable email accounts are worse regarding sharing your email information. Don’t ever send forms with your social security number via email. [Send word documents only as PDF files, for with Word file hidden histories a recipient could work back all your revisions, back to the resume I started writing this review over!]

### **Credit Cards**

Robert said your health care records are worth even more to criminals. Check your credit report annually, at the beginning of the year. A few months later check Experian and Transunion for whether anyone is opening an account in your name. Robert found someone had opened an account under a previous address. One can download them or receive them by regular mail, but don’t have the reports sent by email. Consider putting fraud alert and credit freezes on your credit card.

Beware of credit card skimming. July News Flash: wafer-thin “insert skimmers” stealing bank card information at ATMs are proliferating. August News Flash: tiny

gas pump skimmers transmitting credit card information, as Robert mentioned, are featured on TV news. Robert mentioned that credit cards with chips are partially better, but not as good as in Europe, where a PIN is required, too. At locations credit card skimmers target, it’s better to use a prepaid card or Apple Pay. But Apple Pay’s one-time token uses near field communication (one needn’t contact, but be in proximity) and there are devices the hacker can use to connect and obtain information.

Iconic hacker Kevin Mitnick advises having someone else buy your debit cards so video cameras don’t record that it’s your purchase. NSA whistleblower Edward Snowden did this, along with using Tails.

### **Mobile Security**

Update to the latest operating system version and patches. [Ha! Google no longer supports Android versions predating 4.4.] For iOS definitely get the latest version, 10.3.3, which patches a chip vulnerability that was exploited at the Black Hat hacker conference. Passwords or passcodes protect your device. Adjust your permissions per app to, “No, no, no, no.” Robert keeps his Uber car service location permission set to Never, except for the few minutes he needs to switch the permission to Always to use the app. Robert answered how to, for an Android phone, go to Application Manager, click on the app, and it should show you the permissions, at least since the 6.0.0 Marshmallow release. Anything version 5 or below, you couldn’t do this. For Android, you definitely want an anti-virus. Sync, back-up your data, and install a phone finder app. It is very important to turn off wi-fi and Bluetooth when you’re not home or not around trusted endpoints, which is nearly everywhere. Turn them off when they are not needed.

Pineapple is a popular device at the hacker conferences. If your phone has ever been connected by wi-fi it retains that information, and con-

nects when in range to any of them when its wi-fi is on. The Pineapple connects to your phone, without your knowing, by pretending to be one of its former wi-fi connections.

The most secure mobile phones are the basic flip phones, turned off [in an RFID shield]. Tether your mobile phone to a hotspot in lieu of wi-fi or Bluetooth. Law enforcement uses fake cellular towers to spy. [August News Flash: Android messaging apps were found carrying SonicSpy trojanware to spy on audio, take control of phone cameras, and nearly all of a phone's functions.]

**Security News Sources**

Robert said that he keeps current by following several security news sites on Twitter. KrebsOnSecurity.com is an oft-referenced website, widely sourced when it detailed how customer accounts were hacked though Target's air-conditioner computers. [One can subscribe to his email newsletter.] Robert has Google searches set up to feed emails when certain terms come up such as router or VPN. One audience

member subscribes to Wire's news feed, another visits <https://www.social-engineer.org>.

**Books Robert Recommends**

*The Complete Privacy and Security Desk Reference: Volume 1: Digital* – Michael Bazzell and Justin Carroll

*Hiding from the Internet: Eliminating Personal Online Information* – Michael Bazzell

*Personal Digital Security: Protecting Yourself from Online Crime* – Michael Bazzell

*The Art of Invisibility* – Kevin Mitnick

*How to Be Safe in the Age of Big Brother and Big Data* – Kevin Mitnick

***This article has been obtained from APCUG with the author's permission for publication by APCUG member groups.***



There are two *really* interesting things about Office 365 Home subscription:

- -It's all of Office. Desktop editions of Word, Excel, PowerPoint, OneNote, and Outlook, as well as Publisher and Access (for PCs but not Macs), are all included.
- -You can install it on up to five computers! If you have five computers, it's effectively \$20 per year per computer. Even if you only have two machines, you've cut the effective price in half. (The five computers can be Macs, PCs, or any combination.)

That last point alone makes it really hard to compare against the package product, which can be installed on only one machine.

There is a cheaper subscription: \$69.99 per year, but it can be installed on only one machine.

The subscription models also throw in a terrabyte of OneDrive storage, as well as a bunch of Skype minutes for calling traditional mobile and landlines.

In comparison, Office Home and Student includes four basic Office applications: Word, Excel, PowerPoint, and OneNote, can be installed on exactly one computer, does not include any of the OneDrive or Skype additions, and costs a one-time payment of \$149.99.

**Is A Microsoft Office Subscription Worth It?**

*From the Ask Leo Newsletter*

**W**hat's this business with renting software? It might be fine for businesses, but I can't afford to pay every year for the foreseeable future. Is it that much better that the payment is worthwhile?

When Microsoft introduced Office 365 as an annual subscription rather than a one-time purchase, I had the same reaction.

Then I did the math.

It turns out it's a pretty good deal.

**Office from "a box"**

Microsoft Office is still available the way you've purchased it in the past. Whether you want to buy the Professional or the Home and Student

edition, you can spend a few hundred dollars and buy one copy. Instead of a literal box, it'll more likely be a download, but it's still a one-time purchase licensed to run on one computer.

No one is forcing you to change.

But you might want to think about it.

**Office subscription**

The option is to pay \$99.99 per year for the Office 365 Home subscription.



Word



Excel



PowerPoint



Outlook



OneNote



Publisher (PC only)



Access (PC only)



**The same product**

Make no mistake. It's not a different product. It's not "that much better." *It's the same product.*

Even for a single computer, I think it's pretty cool. You're always guaranteed the latest and greatest versions and features of these key applications.

But if you're in a home like mine, with at least two different people running at least three or four different computers, all of a sudden it becomes *really* appealing. If you've got a mixed household (again, as I do), you install the Mac version of Office on a Mac and the Windows version of Office on a Windows machine ... up to five different machines.

It doesn't take five machines to make the numbers work. In my opinion, it's almost a no-brainer as soon as you have two or more computers.

While a subscription may feel kind of "icky" (for lack of a better term), once you get past that initial reaction, in my opinion it's a really good deal.

**Of course there is risk**

Let's acknowledge the risk: Microsoft could raise the price.

In the three or four years since the option's been available, that hasn't happened.

There's also nothing that says you have to subscribe forever. If you don't like it, you don't renew. You make your choice every year, if you like.

To me, getting all of Microsoft Office on five machines for \$100 a year is a clear and obvious choice.

**Do the math**

I'm not suggesting you get the Office 365 subscription. I'm also not suggesting you go the one-time purchase route.

I'm suggesting you do the math.

Don't let the fact that it's a subscription spook you away from what may very well be a more cost-effective solution. Choose what's right for you by more objective standards than "I don't like subscriptions".

And while you're at it, be sure to factor in OpenOffice and LibreOffice, both of which are free. In many (though not all) cases, they can be suitable alternatives as well.

***This article is republished, with permission, from the Ask Leo! Newsletter.***



destination, but the internal workings are very different. You can't use a CDMA phone on a GSM network (and vice versa), just like you couldn't use the gas engine from the gas-powered vehicle to run an electric vehicle. So, if you are on a CDMA network, you need a phone with CDMA radio-telephone circuitry, and if you are on a GSM network, you need GSM circuitry in your phone. So, which phones have what, may be a question you will have to answer when signing up for your next cell phone plan.

Although there are many places to buy a cell phone, in the United States there are only four major cell phone networks. (US Cellular is actually a fifth, but much smaller network.) The four are Verizon, AT&T, Sprint, and T-Mobile, and they are evenly divided by the technologies used.

Verizon and Sprint use CDMA and AT&T and T-Mobile use GSM. (US Cellular uses CDMA.) CDMA stands for Code Division Multiple Access and GSM is short for Global System for Mobile (*Communications*), both of which are terms used to represent the collection of many radio-telephone technologies that comprise the two different systems. CDMA actually describes the technology that is used to keep separate all the data channels that use the same wireless frequency band. Whereas GSM is the name of a standard used to describe the protocols used in digital cellular networks.

But then, what is in a name? A rose, by any other name, would still be a rose. By the way, most of the world outside the US uses GSM, so if you need to use your phone over-seas, it will probably have to be compatible with GSM.

## Is Your Cell Phone CMDA Or GSM? - Should You Care?

by Phil Sorrentino, The Computer Club, Florida  
<http://sccccomputerclub.org/Philsorr.wordpress.com>

The short answer to the second question is "probably no," but there are some benefits from knowing the differences that may help you decide which cell phone provider or cell phone to choose.

The answer to the first question depends on your cell phone provider. CDMA and GSM are the two

basic technologies used in modern digital cellular networks, which are then used by mobile phones. These two technologies are very different. The difference is much more than the difference between a Ford and a Chevy. It's more like the difference between a gas-powered car and an electric vehicle; they both do the same thing, they get you to your

This is another example of how an open standard can dominate over a proprietary product (think Android over iOS). GSM is an open standard, developed by the European Telecommunications Standards Institute, whereas CDMA is a proprietary technology developed and owned by Qualcomm. (Just to be complete, GSM uses a Time Division technique for keeping channels separate.)

Another difference you may be already be aware of, is the SIM card, or Subscriber Identity Module. GSM uses a removable SIM card as a container for customer information. CDMA does not typically use a SIM card. The SIM card is an integrated circuit chip that is intended to securely store the International Mobile Subscriber Identity (IMSI) number and its related cryptographic key, both of which are used to identify and authenticate subscriber devices. It's much easier to change phones on GSM networks, because of the removable SIM card. Just take the card out, put it into another phone, and the new phone now has your number. CDMA networks use a different technique to identify and authenticate subscriber devices.

CDMA uses a network based database. The phone information has to be put into a "white list" database, that is then used to control access to the network. If you have a CDMA phone with a SIM card, it may be there to support foreign GSM networks and the phone may be called a "world phone" (which may be good to have if you travel a lot).

You may also find a SIM card in a newer CDMA phone. It may be there to support the newer faster 4G LTE networks, because SIM

cards are part of this new standard. Where did 4G LTE come from? you might ask. Well, so far, we haven't said anything about network speed and that is what 4G LTE refers to.

Most current networks operate at a 3G speed, which translates to a data rate of around 1-2Mbps. 3G has been in use since about 2003. The G only indicates Generation. The 4<sup>th</sup> Generation or 4G provides an almost 10 times increase in speed, so 4G will move data at around 10Mbps.

The LTE indicates "Long-Term Evolution", which is a standard for high-speed wireless communications for mobile phones and devices. LTE is the upgrade path for both GSM and CDMA networks. (By the way, 1G was for analog cell phones and 2G was for early digital cell phones.)

So now many phones have the appropriate hardware and software that enable them to operate on both 3G and 4G networks of their specific type of network, GSM or CDMA. The cost of a phone that can operate on the 4G network will be higher than a phone that can operate only on the 3G network. (There are many technical details defining and describing the 3G and 4G and even the future 5G standards but I have simplified things so as to not get bogged down in those voluminous and sticky details.)

All of the four major networks have 4G, so if money is not an issue, a 4G phone would be advisable. Also, if you spend a lot of time on the web or regularly stream video, 4G might just be worth the extra phone cost. So, in general, if you expect to trans-

fer large amounts of data, 4G is definitely worth it, but keep in mind that it is very easy to go over your data plan limit when you are working at the higher speed.

Finally, if you want to future-proof your phone, get a 4G phone. 4G is only going to get better because that is where network operators are spending their money. Also realize that a 4G phone is backward compatible and will operate on 3G and even 2G networks. You still might consider only a 3G phone if you don't have a need for the faster data rate of 4G, and/or you use it mostly for voice. Also, if you live in an area that doesn't have 4G yet, the 3G phone might be just fine.

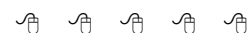
So, in the long run, you should probably care about the network type so you can make an informed decision the next time you have to buy a phone or phone plan.

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## Member Ads

**A**ds are available free to SHCC members, and are limited to computer related items for non-commercial purposes. Any ad shall be a maximum of twelve newsletter lines of text.



**VISIT THE SHCC WEB SITE:**  
<http://www.SterlingHeightsComputerClub.org>

## Can You Beat The Bots?

by David Kretchmar, Sun City Summerlin Computer Club, NV  
<http://www.scscclb.club> [tomburt89134@cox.net](mailto:tomburt89134@cox.net)

When tickets for a musical I wanted to see (Book of Mormon) went on sale at the Smith Center's website, I immediately went on line to buy tickets. I was surprised to learn that only a few scattered seats remained, even though tickets had only been on sale for a few hours. Yet ticket scalpers had plenty of seats available - for double or triple their original selling price.

When the play returned to the Smith Center last year I went on online the minute as soon as tickets were available (12:00 A.M.) and I could score 4 tickets for great seats (about 5<sup>th</sup> row center orchestra) at a reasonable price, but I noticed many good seats had already been sold. How could this be, I wondered?

The answer is, of course, Bots; they are software robots that enter multiple orders, sometimes many thousands of times instantly, for scarce items. Often popular items such as show, and sporting event tickets, popular electronics, and hot children's toys are the target of Bots.

Since the dawn of the Internet, scalpers have been using shopping Bots to scoop up online ticket sales within seconds of their being offered. They then sell the tickets for huge markups. Often shoppers will place orders and tickets will disappear from their virtual shopping carts before they can check out.

Congress acted to stop ticket scalping by passing the Better Online Ticket Sales Act of 2016 AKA the Bots Act of 2016, but the new regulations apply only to event tickets. The popular East Village and then Broadway play Hamilton is credited with helping to precipitate the legislation. The Broadway show sold out more than a year in advance, and

\$200 face value tickets were going for \$800, shutting out even members of Congress.

This holiday season Shopping Bots will again be used to snatch up hot toys and electronics as soon as they become available online. Then they will only be available on sites such as eBay, or maybe Craig's list where they will be sold at inflated prices. But if your grandchild just must have the latest incarnation of a certain toy (remember "Tickle Me Elmo" a few years ago), the outrageous price will often be paid rather than having to deal with a very disappointed kid.

Many vendors have attempted to limit the power of shopping Bots with software programs, with limited success so far. Vendors identify Bots by their Internet IP address, but Bots have learned to disguise these. Bots can also pay in a variety of way to obscure the fact they are Bots. In this cat and mouse game of vendors vs.

Bots the Bots have usually eventually been successful.

Some vendors are having some success addressing the issue. Adidas, the sports shoe manufacturer, has initiated a new program called Confirmed. This App lets a buyer reserve and pay for shoes online, then pick them up in person at a retailer (you go brick and mortar!). You might have noticed some online sellers require potential buyers to put an item in their virtual shopping cart before the price is revealed. This is partially designed to prevent shopping Bots from zeroing in on a good price and blocking out retail buyers.

You can do some things to prevent Bots from stealing your successful on line buying experience. Learn what the suggested retail price of an item is before you shop, and don't pay any more. The biggest way to defeat scalpers is to shop early. And good luck with that toy.

*This article has been obtained from APCUG with the author's permission for publication by APCUG member groups.*



## What To Do With Your Computer - Besides Shopping

by Phil Sorrentino, The Computer Club, Florida  
<http://scccomputerclub.org> / [Philsorr.wordpress.com](http://Philsorr.wordpress.com)

A long time ago, circa 1980, when personal computers first made their appearance, there was very little that us ordinary citizens could do with them. But as they found their way into the hands of some very smart people, who were also practiced in the art of programming, useful programs, or what we now call Apps, started to appear. You may have a slightly different view, but to my recollection, replacing the typewriter was the first "killer app" that appeared. Word processing took advantage of the computers

capabilities and allowed many people to create works of literature quickly, accurately and by themselves. Over time, word processing on a computer completely replaced the typewriter and the many thousands of people it took to keep them operating; the typing pool disappeared. Many people were caught off guard. Because many people always had a person to create their inter-office memos, they never had to learn to use a keyboard. (Fortunately, I was forced to take a keyboarding course in the 9<sup>th</sup> grade. Its value became quite evident later when I

had to use a keypunch machine to create lines of source code for a main-frame computer.) So, now with word processing available, most people could create their own inter-office memos and eventually turn those memos into emails (initially only within the company). Email was one of the next “killer apps” to appear. These early applications started before and without the benefit of the internet.

But before we get to the internet, there were many other “killer apps” that became part of computing. Here’s a brief walk down software memory lane. Spreadsheet software started as VisiCalc and evolved thru SuperCalc, Lotus 1-2-3, MultiPlan, and finally to the current Excel.

Graphics software, software that allows one to manipulate images on the computer, came on the scene early and now is represented by Adobe Photoshop, CorelDRAW, Microsoft Paint, and probably some others that I am not familiar with.

Presentation software, that provides a sequence of slides for presentation before a large group, became a popular addition to other software used in an office setting. Presentation software is currently dominated by Microsoft’s PowerPoint.

Photo Editing software became popular after picture file types, like .jpg, .png, and .bmp, were invented, around the mid-nineties.

Music player software became available after the invention of music file types, like .mp3, again, in the mid to late nineties. Video player software also arrived in the nineties, with the invention of video file types like mpeg-1, mpeg-2, and mpeg-4.

Boy, the nineties were a busy time for inventing useful computer file types. Database software

was also another “killer app” that came on the scene in the late 1980s and early 1990s; remember dBase II, or FoxPro, or Paradox.

Communications software and the internet changed everything. They allowed computers to communicate with other computers which allowed people to take advantage of computers that were in remote locations. Networking software made computer to computer communications possible. Networking software, which was initially an addition to the Operating System, eventually became, and is currently, an integral part of the Operating System.

In the very early nineties, the World Wide Web appeared and with it, browsers. Browsers are another “killer app” and are what give us the ability to visit any website on the internet. You may remember some of the first browsers; MidasWWW, Lynx, NCSA Mosaic, Internet Explorer, Netscape Navigator, and Opera. Safari, Firefox, and Chrome came along a little later. It’s through using the browser that you can get to all those wonderful retail sites for shopping on the internet.

So, early on, before the internet, the answer to the question of what you will do with a computer was simpler and was probably one of the following: Word processing, Graphics manipulation, Database development and uses, Communications. The uses were pretty limited. But today, there is a much wider choice of activities to answer the question. The computer is a very versatile machine and today you could be using your computer in many ways, to accomplish many different things, such as:

1) Keeping in touch with your friends and family using email or social networking apps.

2) Watching movies or videos, (that you have purchased, borrowed, or created), on your living room big screen TV.

3) Watching movies that you are streaming from the internet (Netflix, Hulu, YouTube, etc.) on your living room big screen TV.

4) Listening to music, from your local music database of tunes that you have purchased or “ripped” from CDs or converted from older tapes or vinyl.

5) Listening to music that you are streaming from a cloud music source (server) like iTunes, Pandora, Google Play Music or Spotify.

6) Organizing your picture database so you can locate a particular event or specific picture.

7) Showing certain photos, from your picture collection, to your family and friends, on your living room big screen TV.

8) Fixing the exposure on some of the pictures you recently took with your smartphone.

9) Creating “Movies” of your latest vacation from the pictures and video clips you took with your camera or smartphone, while on vacation.

10) Managing your home family finances using a few basic financial spreadsheets, or a financial software App like Quicken or MSN Money.

11) Scanning old paper pictures to create a pictorial family history.

12) Scanning documents to create a database of important documents for your estate or your children.

13) Writing your own personal history to pass down to your children or other family members.

14) Checking your calendar for today's activities or to see if you can make an appointment for 2 o'clock, in three weeks.

15) Reading or keeping up with the current news.

16) Checking on your financial accounts.

17) Checking on the stock market, or a particular stock, or trading stock in your brokerage account.

18) Sharing 200 pictures of the wedding you recently attended, with other wedding attendees using your OneDrive cloud account.

19) Researching "hip injury" using Google because of a twinge you noticed when you woke up this morning.

20) Checking your computer club's website to see what the next meeting topic will be.

21) Writing an article for the next month's newsletter.

22) Creating a PowerPoint presentation to give at the next club meeting.

23) Backing up your computer so your very valuable data will never be lost.

24) Playing the latest shoot-em-up, or "brain training" game. And finally,

25) Shopping on the internet.

One reason for knowing what you do with your computer is to help you decide on what computer to buy, or more importantly, how much computer you may want to buy, the next time you purchase a computer. You don't really need the fastest computer around if all you are going to do is shop on the internet, a Chromebook might even be appropriate.

***This article has been obtained from APCUG with the author's permission for publication by APCUG member groups.***



## Energi Charger Station

by George Harding, Tucson Computer Society  
www.aztcs.org georgehardingsbd@earthlink.net

**H**ere's a handy charger for you. It can charge five devices at once! It senses your device capability for charging and adapts to it. It works with small and large devices. It has a removable external charger.

Tylt offers this product to their long line of innovative tools. I have an external charger for my iPhone that is both a case and a charger. The case provides the usual protective features. The charger fits around the case and connects by the built-in lightning connector. Pretty slick!

Energi is another example of innovative engineering for consumer devices. The main unit connects to a standard wall outlet and provides five USB slots for charging your de-

vices. Each is capable of charging either a smartphone or similar device or a tablet.

Each slot has what the Company calls SmartDetect technology to provide maximum rapid charging. That means both fast charging and no over-charging. The latter benefit is important in today's environment of concern for fires caused by over-



-charging.

The four standard USB slots provide 2.4 amps of power while the fifth slot can provide 3.5 amps for even faster charging.

A unique feature of this charging station is the removable battery pack (the fifth slot). It can be easily removed and carried in a pocket or purse for on-the-spot use. No need to find a wall socket when you run out of charge.

The fins on the top of the unit can be used to organize your cables whether because there are too many or they are too long.

The unit comes with a start-up guide which is very short, with diagrams as well as text in several languages.

The unit comes with a one year warranty after you register your unit. Energi Charging Station by TYLT

Price \$80

[www.tylt.com/charging-station](http://www.tylt.com/charging-station)

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## SHCC Emergency Cancellation

**S**terling Heights Computer Club meets at Macomb Community College (MCC). We will meet if MCC is open and will not if MCC is closed. MCC closure is announced with other school closings on many local TV and radio stations and on their web site. All members of SHCC have an email address. One of the SHCC officers will send an email to the addresses SHCC has on file alerting members to the event cancellation. If your email is broken, call an officer; don't leave a message, call another officer if you don't talk to someone live. It is your responsibility to keep the email address you have listed with SHCC current.



**WYSIWYG WEB WATCH (www)**by Paul Baecker [webwatch@sterlingheightscomputerclub.org](mailto:webwatch@sterlingheightscomputerclub.org)

This column attempts to locate sites containing valuable, amusing, and free content, with no overbearing pressure to purchase anything. Club members are encouraged to submit favorite sites (a description is optional) to the e-address noted above, for inclusion in a future WYSIWYG issue. Also check the SHCC web site (“Web Page Reviews”) for previous gems.

How to build lightweight furniture that folds, inflates, knocks down, stacks, or is disposable and can be recycled, from the 1970s.

<http://www.core77.com/posts/42562>

High resolution panoramic photography, primarily of the Lower Silesia region of Poland, but also of other European locations.

<http://zieba.wroclaw.pl/english.htm>

Cookies are a necessary part of the way the web works as well as a source of privacy concerns and security risks. Learn all about cookies here.

<https://www.whoishostingthis.com/resources/cookies-guide/>

How to “uninstall” Linux or delete Linux partition from a Windows computer.

<http://linuxbsdos.com/2015/10/30/how-to-uninstall-linux-or-delete-linux-partitions-from-windows/>

How to install Firefox Focus, an Android browser that blocks trackers and clears your history.

<https://www.techrepublic.com/article/concerned-about-browsing-privacy-heres-how-to-install-firefox-focus/>

The purpose of AMS is to observe, monitor, collect information, plot and report on meteors, meteoric fireballs, meteoric trains, and related meteoric phenomena, including the sightings over SE Michigan in Jan. 2018.

<https://www.amsmeteors.org>

How to improve your mouse-pointing accuracy in Windows 10.

<https://www.maketecheasier.com/improve-mouse-pointing-accuracy-windows10/>

Live CDs are perhaps the most useful tool in any geek’s toolkit. This live CD how-to guide outlines many uses that live CDs or DVDs can offer, from data recovery to enhancing privacy.

<https://www.makeuseof.com/tag/download-50-cool-uses-for-live-cds/>

How to use VirtualBox: A user’s guide. (Includes download link.)

<http://www.makeuseof.com/tag/how-to-use-virtualbox/>

Android security 101: How to secure your data connections & browse the web safely.

<https://android.gadgetsacks.com/how-to/android-security-101-secure-your-data-connections-browse-web-safely-0180466/>

How to change *Standard User Account* to *Admin Account* in Windows 10.

<http://www.intowindows.com/how-to-change-standard-user-account-to-admin-account-in-windows-10/>

120+ Linux commands that are actually useful.

<http://www.codemio.com/2016/09/useful-linux-commands.html>

If car journeys were like commercial flights. (5-min. video)

<https://www.youtube.com/watch?v=IrlCG1c1tWY>

What Is “Google Play Services”? Why do you need it? Is it even safe?

<https://fossbytes.com/google-play-services-necessity/>

Wall Street Journal touts this as the home for America’s most elegant, adventurous and addictive crosswords and other word games. Daily additions to the collection.

<https://blogs.wsj.com/puzzle/>

**NOTE: Many of the links in the digital newsletter connect to the Internet if clicked. For those that do not, copy and paste the link into your Internet browser.**

## World Wide Web Column on the Club Web Site

Check out the WebPageReviews section on the club’s web site. You can see past web sites reviewed in this column on our club web site. They are arranged into various key word categories to help locate a specific site.