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MONITOR

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"Your Computer User Group of the Air", Saturdays from 12:00 pm to 2:00 pm with Nick Francesco, Dave Enright, and Steve Rae. Broadcasting on JAZZ 90.1 FM from Rochester, NY. Call 966-JAZZ (585-966-5299) or 800-790-0415

The RCSI '**Monitor**' newsletter can be found in most public libraries in Monroe County. *Free* copies can also be found in the following computer stores: Microworx, Just Solutions, TSC Electronics, and Pod Computers. Digital copies may be obtained from **www.rcsi.org** or my cloud storage at **http://tinyurl.com/tonydel-rcsi-newsletters/**.

Some Past Presentations:
Open Source and Free Software
Protecting Your Identity
Keeping Mobile Devices Secure
3D Printing, ENABLE project
Flash Drives-Not Just for Storage
Features, Mac OS X & Windows
Tablets, the Programs and Uses
Personal Finance Software
Amazing Browser Tips
Linux is Like Cars
Close up Photography

Member of apcug An International Association of Technology & Computer User Groups

Tues, June 12
Technical Innovations of the Near Future
presented by Arpad Kovacs

Tues, July 10
6:30 Help's Half Hour, 7:00 Business, 7:15 Main Presentation
our meetings end between 8:30 and 9:00 pm

Tues, August 14
Our Annual Club Picnic

In This Issue

Ask Leo !
By Leo Notenboom, https://askleo.com/
Making Technology Work For Everyone

Will a Hacked Website Leak My Email Address?

Your password protects your account from unauthorized access, but it doesn't protect your email address from exposure.

//

If a website is hacked (e.g. Walmart), can the hackers get my email address even if they cannot crack my password, which is 12 alpha-numeric characters?

Special Interest Group

Linux Sig

The workshop is the **third Saturday of each month**, at Interlock Rochester, 1115 East Main St. www.interlockroc.org

Enter through door #7 on the end of building, near *Comics Etc* and Goodman St. Find 'Interlock' on the intercom directory to get buzzed in and go upstairs to suite #200. We have experts on hand to fix problems and answer questions about Linux and FOSS (free and open source software). Bring your system in so we can help you get the most out of it. Hope to see you there.

Free, **Virtual Technology Conferences**, ONLINE
presented by APCUG

Saturdays: 8/18, 11/3

For Conference Description & Registration Links, go to apcug2.org/category/ **virtual-tech-conference**

It really, and I do mean *really*, depends on the specific nature of the hack.

But the short answer is yes, it's very likely your email address will be leaked as part of any significant hack or breach.

And that has nothing to do with the strength of your password.

But what happens next absolutely does.

Types of hacks

There are as many different types of hacks as there are people hacking, I suppose. What's relevant is that not all hacks cause the same kind of damage, or leak the same kind of data — if data is even leaked at all.

I'll use Ask Leo! (askleo.com) as my example, but the concepts apply to just about any website on which you can make purchases or have an account in order to access services. That includes retail sites (like Walmart), online services (like your email provider), government sites, or others.

One type of hack attempts to use my server to send spam to make it look like

it came from me long enough to deliver to recipients who trust me. Another might be to hack my website so each time you visit the site, malware downloads onto your machine. A third might try to place software on my webpages so your computer would mine cryptocurrency for the hackers when you view an Ask Leo! page.

In each of those cases, the hackers have no interest in the data I keep. They're not stealing anything. They're hacking for other reasons.

So, no, they won't get your email address, because that's not what they're after.

Breaches

So-called data "breaches" are the hacks that make the news. These happen when a hacker successfully penetrates a website's security to steal its database of users. For Ask Leo!, that might mean snagging the database of registered users or individuals who've made purchases here.

And, yes, absolutely, that would include email addresses. Indeed, they would likely be the primary goal to enable further mischief ranging from spam to targeted phishing attacks to hacking other services that might use them as your identifier.

Whenever you hear about a breach, email addresses are almost always one of the items on the list.

* * * End of Article * * *

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Planning Meeting

Held on 1st Tuesday of each month at 7 pm, at St. John's Meadows, Briarwood building.

Newsletter Printing

The newsletter was printed at St John's/Chestnut Court by the printing group, with the help of Don Wilder (computer and printer operator). *We will try and print on the 1st or 2nd* ***Thursday morning****, following the monthly meeting.*

How to Succeed in Technology (While Trying Really Hard)

By Greg Skalka, President
Under the Computer Hood User Group

You may be able to succeed in some things without really trying but dealing with technology is not typically one of them. While our modern lives are awash in new tech, we must often struggle to cope with it. New innovations bring the potential for much good for our world and our individual lives, but they can also have unanticipated negative consequences for our planet, our society and ourselves. On a personal level, our everyday interactions with technology can help us get ahead, save us time, connect us, isolate us, cost us resources and drive us crazy, often all at the same time. New technology usually means change, and how we deal with the changes will determine our success.

Technology is simply putting science to practical use to solve our problems. We have been using technology since the dawn of humankind. Stone tools and fire-starting methods are just early forms of technology. We as a species have evolved, along with our society and our technology, each evolving at different rates. Our tech has changed, from hand axes to locomotives to smart phones, while our social system has gone from tribes to countries to a global community. We have physically changed as well, with less physical effort required in our daily lives, more leisure time and a greater abundance of food resulting in a rising obesity problem in the developed world. Each of these aspects has influenced the others, though it is unlikely we will evolve pointed fingers to better press on smart phone screens, as our tech and cultural changes are coming far faster than our human bodies can adapt.

We often get the latest tech gadgets to fill a need, enhance our lives, save time or money or simply keep up with others. Anything new is usually different from what we are used to, requiring some learning and adaptation. Even when we think we have mastered our technology, we can find that success is fleeting. More and more devices are programmable and are frequently connected to the Internet - often the device you have today behaves differently after tomorrow's updates. Setting up your devices can be challenging, and when things don't work, or stop working, where do you go for help?

As an engineer, I should have a front-row seat on the technology express we are all riding on. I've been educated in engineering principles and work daily to advance the capabilities of the equipment and networks our phones and computers use to communicate. Most of the time my work is rather unglamorous: creating spreadsheets, writing reports, probing uncooperative hardware. While I am closer than most to the origins of our new tech, I too am often confounded by devices that don't work as promised, dismayed when they fail and feel apprehension over where all these things are taking us as a society.

I've often been successful in solving my own problems with new devices and software, as well as maintaining and repairing my stuff. A lot of people look to me for help with their tech problems, and I am depended on to be the family IT (information technology) person, as well as appliance repairman, auto mechanic, handyman, plumber, electrician, gardener and tech installer.

With all these responsibilities, it is rare that I don't have a long list of household problems to solve. Successful resolutions usually require resources in both time (on my part) and money, and there is typically a trade-off involved. More of my time (in labor, research and experimentation) can be traded away by allocating more money to the tasks (hiring services to install, debug or repair, or spending more on insurance or service contracts). I could spend all my time maintaining and repairing everything I can myself, but then when would I get to enjoy the benefits of all this tech? I could easily farm out all the set up and upkeep for stuff in our lives, but would I be able to

afford it, and would I become dependent and unable to determine if I were being taken advantage of or controlled?

Somehow, we all must come up with a balance for this if we are to be successful users of technology. Paying for everything is easy, if you have the money. Attempting to solve your inevitable tech problems yourself is harder but has advantages. Here are a few of my thoughts on how to successfully coexist (and hopefully thrive) with today's (and tomorrow's) technology and solve your own tech problems.

Knowledge is Important. No one knows what is best for you or your family better than yourself - not expert reviewers (who may be biased), not governments (which can change) and not companies (whose interests are in making money, not what may be best for you). Unfortunately, you must often be knowledgeable in many fields to effectively evaluate which tech solution is best for you (between product types, between product brands, or even between low tech and high tech). Knowing the background and history of things, as well as how things (or devices) work can help tremendously when your stuff doesn't seem to work. Even if you are not going to debug and repair things yourself, having a basic knowledge of the parts in and functions of the problem device (computer, phone, car, appliance) is helpful in being able to evaluate if you are getting honest and cost-effective support services.

Being an Expert is Good but Having More General Knowledge Might be Better. Expertise is something gained by study and experience in a field, which takes time. Taking the time to gain more expertise in certain tech aspects can be very helpful. Becoming an expert in computer hardware, networking, computer security or home automation might be worth the effort right now, as these are currently hot topics. Hot topics can change as technology changes, however. Over the years I have gained some expertise in carburetors, floppy disks and parallel port (printer) interfaces, but now that knowledge and experience is less useful to me. Spending at least some time becoming a generalist might bring longer lasting rewards. One field I'd recommend learning more about is physics, which relates to almost everything we call high tech, from the orbits of GPS satellites to the operation of semiconductor devices.

That does not mean that learning new skills and emphasizing particular topics is not important. I fear we, as a society, may be abandoning some hands-on skills in favor of more on-line and virtual pursuits. While I don't follow them much myself, the increase in popularity of TV shows dealing with home remodeling (HGTV) and cooking (Food Network) means people still have an interest in creating things themselves, which is good. Knowing how to play music on Pandora or through your Amazon Echo is not the same as knowing how to play a musical instrument. Knowing how to get food delivered through GrubHub is not the same as knowing how to cook.

Having a Backup Plan is Helpful. For activities you feel are important, having a backup approach is crucial. This applies not only to the backup of data on a computer hard drive to avoid loss due to hardware failure or an attack by ransomware, but also to a "backup" of the computing function itself. One of the best investments I've made in my wife's computing resources is in her own laptop. Though she seldom uses it, preferring her desktop PC, it really took the pressure off me when her primary computer suddenly failed to boot up recently. She was able to reluctantly switch to her laptop for work and home computing needs, giving me the time to investigate her desktop machine's troubles and get it running again. Had I been in a rush get her back on line again, I might have resorted to simply buying her a new PC, an unnecessary additional expense.

I have bought several relatively low-cost, on-sale items over the years as alternates or back-ups to things I already have. These include routers, ethernet switches, cables (Ethernet, USB, power, etc.), battery chargers and USB

Computer Recycling

Some Residential Drop off Locations: **Call first**, to find out what is accepted, especially for 'tube type' tvs or monitors.

Deeley IT
–--(Pittsford), 585-381-3100
Tech Source
---(Rochester), (585) 789-1785
Stereo Shop
----(Webster), 585-787-7467

Certified Document Destruction & Recycling, accepts electronic waste, but charges 40 cents/pound for crt type monitors. Located in Rochester at 1133 Emerson St, 482-9400, www.cdd-r.com

TSC Computer & Electronics Repair, accepts most electronic waste, including printers. Does not accept crt type monitors or tvs. They are located at 765 Elmgrove Road, Gates. 429-6880, www.tscelectronics.com

drives. These can help you quickly isolate the cause of problems and perhaps get you running again, at least temporarily. It is always good to have more than one way of doing things, in case your primary means suddenly fails. It costs nothing to have multiple browsers available on your computer, in case accessing a web site becomes a problem. If you can't get your email to download on your PC, can you access it on your smart phone? If your Wi-Fi does not work, can your wired PC still access the Internet? These kinds of substitutions can help isolate the cause of problems with little cost or risk.

Even with a little extra cost, some redundancy in the things that are important to you can be justified. Having a second TV might keep you from missing that big game. A cheap second car (or a bicycle) can be an alternative to missing work when your car won't start. Keeping a spare phone charger or USB battery pack at work or in the car can be a lifesaver when your smart phone battery is low or fails to hold a charge.

A Logical Outlook and the Application of the Scientific Method Can Help Solve Problems. In helping you solve a problem with their product, a company's tech support department may have a script to follow in directing you on what to check and in what order. You won't have this advantage if you perform your own troubleshooting, but a little logic and thoughtful consideration can help. Following the scientific method will always keep you on the right track. First, ask a question (typically, why does this thing not work?), then research (what may be the cause?). Next, come up with a hypothesis (a possible cause for the failure), and develop an experiment to test for that cause, recording what you did and the result. You can repeat this as necessary until the problem is solved.

Typically, you will want to try the most likely and easy to test reasons for failure (reboot, cycle power, verify power connections, verify cable connections, verify all system inputs are good, etc.) before moving on to more complicated, unlikely or expensive things to try. Even if you can't resolve it yourself, keeping a written record of what you have tried, and the detailed results will be helpful if you do finally need to talk with tech support.

Solving Problems Requires Practice. Just as with playing a sport or a musical instrument, you only become good at solving problems if you practice it. Some tech problems will turn out to be easy to solve, while others may require more experience, knowledge and perhaps effort. Understand that there are going to be some problems that may seem (or may be) unsolvable. Always try the easy and low-cost / low risk debug steps before calling in the experts / tech support, so you can build up that experience and confidence in your debugging skills.

Persistence Usually Pays Off. If at first you don't succeed, try, try again. This proverb certainly applies to resolving tech issues. My win/loss record for solving problems is pretty good, and it is improved by my not accepting a loss at times, but instead keeping the issue open. I have a few problems I continue to pursue a solution to, just not very actively currently. I've found an acceptable work-around or alternative to the issues, and while I do intend to continue to seek solutions, I am free to work on more pressing activities in the short term. One example is the problem I started having with my network hard drive a few months ago. I found it turned off a few times, and when restarted, it would not boot, but instead gave an error indication. Later it would boot and is currently running, but I apparently can't access the drive. I have the data backed up on an external USB hard drive, so getting the network drive working right now is not critical. Hopefully I will find time to continue debugging on it soon.

In most cases my persistence has paid off more quickly. Recently my father had a problem going to web pages on his Windows 7 desktop computer. His Internet Explorer web browser could bring up web pages but clicking on links in those pages was ineffective. I reviewed all the browser settings, and found no way to repair or reinstall IE, which I believed was the problem. To prove this, I proposed testing another browser. My father agreed to try using Chrome, which I attempted to install using IE, the only browser on his PC. Unfortunately, the Chrome browser installation is accessed from a link on a Google web page, which I could not get to work with IE. I finally tried installing Firefox, which did not require going through a web page link to install, and it had no trouble with links in web pages. I then used Firefox to install Chrome, and my dad was then happy on the Internet again.

Knowing Where to Get Answers is Important. When the problem is with a product or service, the manufacturer or provider is the first place to look (especially if it is still under warranty). Technology user groups can be a great place to get help with general problems and learn new things. For more specific issues, a user forum or web site (like CNET) can answer questions and provide helpful hints and tutorials. Of course, your search engine can bring helpful information from all over the Internet. I once needed to replace the rechargeable battery in my electric toothbrush and was able to find replacement parts and disassembly videos through a web search. This does not help much, however, if your problem is in getting on the web.

From the February 2018 issue, Drive Light, www.uchug.org, president@uchug.org.

To Win 10 or Not to Win 10: That Was the Question

By Art Gresham, Editor
Under the Computer Hood User Group, CA

This is a true story about how a recent upgrade to Windows 10 went on one computer.

The background of this upgrade is about a desktop computer at work. We had purchased three HP Prodesk 405 computers for our office staff. Over the next couple years, they each developed a recurring failure by unexpectedly scrambling the video making them useless. The only fix was to force-power off-restart. After which they would run days or weeks without a problem.

Ultimately all three users became aware that the problem was a common shared problem and brought it to my attention. We tried various 'fixes', looked online for help, reinstalled drivers. Nothing seemed to solve it. And there seemed to be no common activity that caused it like a browser, web page, running application. Gradually two of these were replaced by other, more friendly, units. One administrator began testing a Chromebook which has proven very satisfactory. Another seems to have gotten better (maybe some updates that changed?)

But as a result, I received one system (computer, monitor, keyboard) to dispose of. Being the cheap sort, I had not donated it to a recycler, thinking maybe I could yet find a way to salvage this otherwise very functional, newer than most of our computers, powerful box. Months passed.

Late in November I plugged it in and began experimenting - nothing to lose since it had been basically written off. Since it was a Windows 7 system I thought that perhaps an upgrade to Windows 10 might solve the problem, IF it is a software (drivers?) issue.

So, I began the process of an upgrade. Now note that my decision to start this upgrade began well after the July 2017 cutoff on when Microsoft had provided free upgrades. And purchase of a copy was out of the question. However some of the helpful sites that I subscribe (CNET) to had published an article in November documenting the fact that Microsoft had extended the offer under certain circumstances. Specifically, systems using assistive technologies, (magnifying, large cursor, text to speech etc.) could still be updated. The cutoff for that program is 31 December 2017. Thought it would be worth a try, and at the very least, an educational experience.

So, I followed the instructions from CNET:

> Here's how to get the upgrade at no charge:
> From a Windows 7 or 8.1 device, go to the webpage entitled "Windows 10 free upgrade for customers who use assistive technologies." Click on the Upgrade now button. Run the executable file to install the upgrade.

Now to back up and tell you more of the story. Our (school) network is shared by a lot of users. Sometimes the download time can be rather slow as lots of them (over 100 students, plus teachers and staff, plus Chromecast devices, Wi-Fi thermostats, wireless printers etc.) all compete for the space on the various routers, through the firewall, and out to the ISP. So, experience has taught me that a major download (such as the major updates to Windows 10 that have come out over the last year) can take many hours to succeed. I am patient, and this is not a priority so sure I can just let it run and work on other things. And it runs. Hours. And fails. Multiple attempts, each getting a little farther until it actually starts the upgrade process. Which then fails.

Because this (senior administrator's) computer had been protected by the HP Drive Encryption service the update process would not complete until that was removed. Google that for the solution. It was not easy, again involving multiple steps to Stop the service, shut off the service, unencrypt the drive (again…. hours), uninstall the service. Delete the program. This will not be a problem for most computers, but it was a complication that had to be solved outside of the Microsoft upgrade process.

And again, restart the upgrade. Which went back to the Download the Upgrade process….. Hours!. And when it finally started, it….. Failed! This time with a Windows error message window-10-upgrade-failed-error-c1900208. And again, Internet to the rescue. A search turned up the answer at an infopackets.com answer

This suggested a couple solutions, including downloading the Windows 10 Media Creation Tool. Again, hours to

download. Optionally it can be loaded to a thumb drive, or run direct from the hard drive. So, I start running it from the hard drive. Again hours. A couple more failed to run, restart, run again. Until at last a successful start and run of the Windows 10. By now it is a week later. And the Windows 10 upgrade, begun about 8:30 completed by 9:45. And it all looks good. Old files still in place, everything looks to be running. Now to let it run a couple days to see if the video crashes. After over two years of frustration maybe I am on the road home to recovering this desktop computer. Only problem now is that no one really wants it. Everybody wants to have one of the new 15-inch Chromebooks.

Oh well. Something new learned. Something good accomplished. Next thing……?

From the January 2018 issue, Drive Light, www.uchug.org, 1editor101@uchug.org.

Tidbits of probably useless information

The Philadelphia mint produces 26 million pennies per day.

A lightning bolt generates temperatures five times hotter than those found at the sun's surface!

A violin contains about 70 separate pieces of wood!

It is estimated that 4 million "junk" telephone calls, phone solicitations by persons or programmed machine are made every day in the United States!

It takes glass one million years to decompose, which means it never wears out and can be recycled an infinite amount of times!

Device Power Options

By Jim Cerny, Forum Leader
Sarasota Technology Users Group, Florida

On – Off – Shutdown – Sleep – What are all these power options? Today our computer devices usually have several choices for "power", even the "off/on" switch does more than just turn your device on or off! Many devices today – especially devices that use batteries – give us more choices about how we use the power we have available. One of the best ways to learn the options for your device is to use Google – enter "power options for my iPad" for example. You will be surprised at what is available. Here we will look at the usual basic power options used by most devices (iPads, iPhones, Windows computers, laptops, etc.).

The main power button, the one you use to turn your device "on" or "off", is really only putting the device in or out of "sleep" mode. Sleep mode uses very little power and allows your device to keep your recent activity in memory, so you can easily resume where you left off when you return (by hitting the same button to turn it back "on"). This is a good thing for most devices, especially phones, because you will still get incoming calls and messages, etc.

To turn your iPad or iPhone device completely off (also known as "shutdown" or "power off") you need to HOLD DOWN the off/on button until you see "slide to power off" on the screen. Slide where indicated and your device will be completely off. You will use NO battery at all and you will NOT be able to get a call, text messages, or alarms until you turn it back on. To turn your iPad or iPhone back on from "power off" you need to HOLD DOWN the off/on button until you see a white apple on the screen. Release the button and wait for your device to power up. Other power settings for your iPad or iPhone are in "Settings" then "battery" or "Display and Brightness".

For Windows computers and laptops, touch (or left-click) on the "Windows" button at the far left of the taskbar and then touch the power icon symbol (a circle with a short vertical line at "noon") and then select "shut down". To turn your Windows computer back on, just hit the start button. A complete shutdown or power down is good for your device because when you power it back up it does a good check of everything to make sure all is working as it should.

Laptops have several more power options. You can find these options in the control panel or enter "power" in the search box to find "power and sleep settings", or ask Google how. Here you can adjust your settings as to how long (minutes) your screen stays on with no activity before going to sleep. But you can also select power options for when your laptop is running on the battery or plugged into the power outlet. You can also select what happens when you

close the lid of your laptop. (When my laptop is at home it is connected to a large monitor screen, so when I close the lid of my laptop, I want it to "do nothing"). The "restart" option will shut down your Windows computer and then

boot it back up right away.

Other possible options for devices include what to do when your battery gets low on power, adjusting the brightness of your screen, even slowing the speed of your device. There seems to be an option or setting for just about anything these days. You need not concern yourself with most of the power options available unless you are using your device many hours a day and frequently see the "low battery" message. Another easy solution to being low on power is to buy and charge up an external power pack. This can come in handy for long airline flights when you will not be able to plug in to recharge your device. But then again, maybe putting yourself into "sleep mode" could be for the best anyway!

The "power" icon

The "settings" icon

The "settings" app icon for iPads and iPhones

The "battery" icon showing power level

From the September 2017 issue, Sarasota Monitor, www.thestug.org, jimcerny123@gmail.com.

Wi-Fi dead spots? — Try a Wi-Fi extender, or maybe a mesh network

By Phil Sorrentino, Technical Thoughts
Sarasota Technology Users Group, FL

If your home is very large or if there are many walls between your router and the location at which you want Wi-Fi access, you may have Wi-Fi dead spots. Your Wi-Fi signal, as all electromagnetic emanations, is diminished by distance and by certain intervening objects, such as walls. (Your specific Wi-Fi capability is dependent on many things, but a typical Wi-Fi router, using the 2.4GHz band and 802.11n, can work 100 to150 feet with no intervening objects). Not to get very technical: for distance, the signal drops off proportional to the inverse of the square of the distance; and for intervening objects, the loss getting through the object is dependent on the type of material and its density; metal may stop the signal dead in its tracks. So, if there is a line-of-sight back to the router, dead spots are probably far from your router. If there is no line-of-sight back to the router, you might have dead spots wherever the signal encounters a lot of loss going thru walls and objects. (I have seen a reference to Wi-Fi as being a "3 wall solution", meaning that the signal may get through no more than three walls, so if you have a spot more than three walls away from the router you will probably have a dead spot.).

So, if you have a dead spot, or dead spots, you may want to think about a Wi-Fi extender (a simple solution), or even a new "mesh network" (a more involved, more expensive solution). A Wi-Fi extender is a device that may look like a router, but is a receiver and transmitter. It receives the Wi-Fi signal and immediately retransmits the signal. The retransmission may then be received by a device that is in a dead spot of the original signal, (but not in a dead spot of the extended signal). The Wi-Fi extender simply extends the area that the Wi-Fi signal may be received. When you set up an extender, you do have to make sure that the Wi-Fi extender is not placed in a router dead spot. If the Wi-Fi extender can receive the router signal, it will retransmit it and devices that can receive the extender's signal will be included in the Wi-Fi network as if they got the signal directly from the router. Wi-Fi Extenders can be purchased for anywhere from about $50 to $200, depending on features and capabilities. You may even find one

below $50 if you wait for a sale; I found one for $25 and it seems to do the job quite well. If you are interested in reviewing some possible choices, just Google "Wi-Fi extender reviews" and you will find a good number of reviews based on price, features, and specifications. So that is the easy (and less expensive) solution, and probably the one you will want to try first.

The other solution, the Wi-Fi Mesh Network solution, is more involved and usually much more expensive. A mesh network may be $200 to $400, or more. Basically, a Mesh Network is a communications network made up of many nodes (access points), organized in a highly-interconnected grouping where all nodes cooperate in the collection and distribution of data in the network. Each node is a router and an access point for your devices. The size of the area to be covered will determine

How many nodes you would need to install. (One recommendation I saw was to install a node every 50 to 75 feet, but that depends entirely on the shape of the installation area.). From Wikipedia, "Mesh" refers to a rich interconnection among devices and nodes. Wi-Fi mesh networks consist of routers and devices that use the network. The devices are typically the laptops, tablets, and smartphones you have in your home. The mesh routers (access points) send messages to the devices, and other routers. The routers are placed in an arrangement so that each one can send and receive from at least one other router. The more routers that can send and receive messages from many other routers, the more robust the network will be. (Though I have seen some indications that there may be some practical limits as to how many nodes can be used in a home mesh network.). A mesh network is usually highly reliable due to its multiple redundant paths to a device. If one node is inoperable, the other nodes can still communicate with each other directly or through one or more of the other nodes. This type of network can be very dynamic, much like the Internet itself. (The Internet topology and design allow for messages to be re-directed around nodes that may be inoperable so that a message always arrives at its intended destination. Though, this may be hard to believe if you have ever had an unexpected and unexplained temporary problem with an Internet session.).

From reviews I've seen, a mesh network may be a great solution for a large home or a home with multiple levels. If a mesh network seems to be a solution for you, do a little research before you jump in. Google the term "Wi-Fi mesh network" and look at some of the reviews. You will find many of the router manufacturers you are familiar with, like Linksys and Netgear, but you will also find some new names such as Eero, Luma and Amped Wireless, as well as Google. So, if you think you have dead spots in your Wi-Fi setup at home, you may want to give one of these two possible solutions a try.

From the September 2017 issue, The Monitor, www.thestug.org, philsorr@yahoo.com/Philsorr.wordpress.com.

Alexa… What can you do?

By Phil Sorrentino
Newsletter Contributor

Alexa is a Digital Assistant. If you have access to an Amazon Echo or Amazon Echo Dot, ask Alexa "What can you do?" Alexa will tell you "A lot. You can tell me to turn up the volume, play music, create a To Do list, or look up a topic on Wikipedia." Finally, it will suggest, "To find out more, check out the Things to Try page in the Alexa App." (If you don't have a device, befriend someone who has one and give it a try). When you go to the Amazon Echo App and choose Things to Try, you will see quite an impressive list headed by "What's new?" (new things Alexa can do), and Echo Show (an ad for the new Echo Show device). And 28 more topics, alphabetically arranged, starting with "Ask questions," "Calling and messaging," and "Check your calendar." These are many of the things that you can try after you get over asking: "Alexa, what is the temperature," "Alexa what time is it," and "Alexa, tell me a joke."

A Digital Assistant is a complex piece of software that can perform many tasks or services for the user. A Digital Assistant typically includes access to large databases and includes Artificial Intelligence (AI) capabilities. The Digital Assistant software runs on a Server, aided by the App running in the local device (smartphone, computer or dedicated device like the Echo). Remember Client-Server Technology? Digital assistants typically are voice controlled and provide verbal and/ or action results (like answering a question or

turning a light on or off). Amazon's Alexa is just one of the digital Assistants that are finding their way into regular use. Others that you may be familiar with are Google's "Ok, Google," Apple's "Siri," Microsoft's "Cortana," and Samsung's "Bixby."

(Siri has been around the longest and appears to have the largest user base, followed by Google and Alexa). All of these can provide answers to basic time and weather questions, and even basic information lookup questions. Alexa is unique in that it is accessed by use of the Amazon Echo, Echo Dot, or Echo Show devices, not by a computer or smartphone (though you need a smartphone to setup many of its capabilities). Google's Assistant, which is like Alexa, can be accessed by a smartphone (or tablet), and the Google Home device. The Google Home device is like the Amazon Echo device.

Going back to Alexa's list of "Things to Try," there are many things that can be very useful in your daily routine, such as Control of smart home devices, Control music, check your calendar, setting alarms, timers and reminders, Creating ToDo and Shopping lists. Some if these things are inherent and are part of Alexa, and some of these require additional support in the form of "skills." Skills are Amazon's term for additional support from a source other than Alexa or the Alexa App. To see a comprehensive list of these skills, just Google "Amazon Skills," and select "Amazon.com: Alexa Skills."

- Setting a timer is built into Alexa. All you have to do is say "Alexa, set a "Name of timer" for "number of minutes," for example: Alexa, set a "Cook the rice" timer for "15 minutes." In 15 minutes, Alexa will announce "Cook the rice timer" is done." Alexa will continue to announce it until you acknowledge it by saying "Alexa, Stop." (I know battery operated kitchen timers are cheap and reliable, but you typically can't set them by voice).
- You can also set Alarms for specific times, like "Alexa, set an alarm for 7 in the morning." The alarm, when it occurs, is a pleasant sequence of gentle tones. Again, to stop the alarm tones, just say "Alexa, Stop."
- Another nice feature built into Alexa is the ability to create and maintain a ToDo list and a Shopping list. To add an item to the ToDo list just say, "Alexa Add "Item name" to the ToDo list, like "Alexa add Check the Oil" to the ToDo list. And similarly, to add something to the Shopping list, just say "Alexa, add "Food name" to the Shopping list, like "Alexa, add Butter to the Shopping list." After you make either of these requests, Alexa will respond and indicate that the item has been added to the requested list. Creating a list is all well and good, but the nice benefit here is that when you look at the Alexa App on your smartphone, your Shopping and ToDo lists are there and immediately updated. So, now your shopping list is available the next time you are at the food store, and your ToDo list is available when you get to Home Depot parking lot and wonder why you drove there.

Another feature I found useful was the ability to check and maintain my calendar. Alexa can be set up to use many calendars, including the Google Calendar. Once the calendar is set up, you can inquire about the activities on your calendar just by saying "Alexa, what is on my calendar for today," or "Alexa what is on my calendar for the next two days." (Alexa can report the activities on your calendar for today, tomorrow, or even four days from now, but will not report activities that happened in the past). You can even add items to your calendar just by saying "Alexa add "Appointment" to my calendar," like "Alexa, Add "Dentist next Tuesday at 10 in the morning" to my calendar." Alexa will respond that the appointment has been added for the desired date and time. And just as you would expect, when you look at your calendar, on your smartphone or computer, you will see the new appointment. And of course, you can delete items using Alexa. And, you still have complete control over the calendar with your computer or smartphone.

Home automation is another area where Alexa can be very useful. Home automation can take the form of controlling lights, locks, thermostats, and a security system. To accomplish these types of tasks, an appropriate Alexa compatible device and a "skill" for that device will have to be set up. But, once these things are in place, Alexa

(as well as your smartphone) can control those devices. I set up a tp-link, Alexa compatible, LED light and obtained the tp-link skill, and once set up I was able to control the light just by saying "Alexa turn on (or off) the living room lamp". (Very cool, sure beats the old X-10 control system). Maybe an Amazon Echo or a Google Home can help you with some of your daily activities.

From the December 2017 issue, Sarasota Monitor, www.thestug.org, philsorr@yahoo.com.

Power Strip Versus Surge Protector—Which Do You Need?

By Tim Elder, Treasurer
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These two devices are quite similar in appearance, but they are definitely not the same. If what you need is an extension cord with multiple outlets, a power strip will work fine because it acts as an extension of the wall outlet but does not add any protection capabilities. It will have multiple outlets, probably an on-off switch, which can disconnect all outlets at once, and maybe a circuit breaker or fuse. But if you are connecting to a computer, TV, home theater, or other electronics, a power strip will NOT be fine, because it cannot protect your expensive electronics from power line surges; for this you need a surge protector, sometimes called a surge suppressor or surge diverter.

An electrical surge is an intense very short duration voltage spike.

A surge protector does its "magic" by means of built-in electronic components which quickly cut the power when an electrical surge comes through the mains (this is a British term which works well for the electrical distribution grid—the system bringing electrical power into the building) or from electric motors within the house which can reflect surges back through the wiring. In order to work properly, a surge protector must be connected to a grounded outlet. A surge protector will cost more than a similar-appearing power strip.

The difference in capabilities of the two devices will be found on the packaging, and on the back of the device if the packaging has already been removed. Power strips and surge protectors will often be placed near each other on the store shelves; so, make sure you read the readin' to make sure you get what you need. A surge protector is generally, clearly labeled as such, but its capabilities can vary considerably. Surge protectors are rated by the amount of electrical energy they can absorb, either all at once or bit-by-bit; this will certainly be advertised on the packaging. Suggested specifications to look for, which can be misleading if you are not paying attention, include: 2000 joules where more is better; and, sometimes listed, response time which is usually in nanoseconds, shorter is better.

How do you know how much of this protection is left? The number of joules is like a reservoir, but you can't tell how much has been used already. Thus, a surge protector should be replaced, say, after 5 years; after this it can serve as a power strip. Since our memories are fickle, put a self-adhesive note on it saying when it was installed. A surge protector will likely have a pilot light to tell you when the connected items are protected from line surges. If this light goes out or changes color, the surge protector has given its life to protect whatever was connected. It will have to be replaced. But this pilot light is not foolproof, meaning that it can give false assurance.

When purchasing a surge protector, be sure to get more outlets than you think you need and remember that transformer plugs can block adjacent outlets. Also remember that a surge can come in over phone or cable wires; look for connections for these if your setup uses them.

Many surge protectors also have USB charging ports. Labeling should also include a United Laboratories seal. When I was checking the stores, the price varied from $10 to $60 depending on the number of outlets, the number of USB charging ports, and the joule capacity which ranged from 500 to 4350. The selection at Staples was much better than at Walmart.

As with the protection pilot light, a surge protector is not foolproof, and you probably do not want to gamble with Mother Nature. If an electrical storm is approaching, you should shut down the computer, then turn off the surge protector switch or unplug it. Anytime the power goes off suddenly for any reason, your first move should be to turn off the surge protector switch to stop the risk of a surge when the power comes back on.

If you want even more protection than a surge protector offers, consider a UPS (Uninterruptible Power Supply.) These offer a battery backup which provides a few minutes to properly save files and shut down the computer. They can also smooth any bumps in the incoming electrical supply; this capability is called AVR, Automatic Voltage Regulation. A surge protector can be purchased to protect the whole house from external surges, but these must be installed at the service entrance with the supply disconnected. An electrician is recommended.

From the February 2018 issue, The Memory Map, www.camug.com, treasurer@camug.com.

Review: TouchLock …

by George Harding, Treasurer
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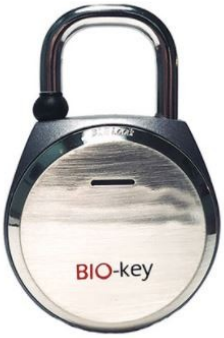
Security is important for us all, but even more important when you have to physically secure something. When you park your bike, you want to see it there when you return. A good lock is essential.

TouchLock is a good lock, one that cannot be easily defeated. It is an electronic device controlled by an app on your cell phone of other device.



The big selling point for this lock is that it can be controlled biometrically. You can easily lock it in the usual manner by pressing the hook on the lock into its hole. Unlocking it can be done in two ways.

The company provides an app that may be used to unlock by Bluetooth. Bluetooth is a short distance wireless technology used today by many devices to avoid connecting wires.

The app requires you to register as administrator, then setting unlock and administrator passwords. Once these are set, you can unlock using the app with either the fingerprint touch or the password.

Additional users may be added by downloading the app onto the user's phone. Control is accessed by entering the admin password.

The lock contains a battery that may be recharged using the included cable via USB. The company says the battery will last a year without recharging.

The lock is a heavy duty piece of hardware with an LED light on its front surface and a micro-USB slot for the charging cable. There is no key slot or combination wheel. It is all controlled by the app.

The TouchLock comes with the lock, charging cable and a heavy-duty cable for threading through a bike's spokes and frame.

There are several versions of the TouchLock, varying both physically and by decoration.

TouchLock by Bio-Key bio-key.com Price $50

From the April 2018, www.aztcs.org/actuary110@yahoo.com.