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The Rochester Computer Society, Inc.
a computer/tech club open to everyone



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

Tues, April 10, 'New and/or Obscure Web Browsers, Related Software, and Recent Security Concerns' by Mark Zinzow

Tues, May 8

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

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



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QCS Review: Scams, Fraud & ID Theft, Part II

presented by Cpl. Hank Jacobsen
Davenport Police Department Crime Prevention Unit
by Joe Durham, Editor, QCS QBits

At our August meeting, Cpl. Hank Jacobsen presented Part II of his guidance for living in the 21st century and protecting ourselves from criminals out there who now use technology to advance their nefarious schemes.

In recent months, the story of crimes has become a bit more prominent on TV. Hank described the rash of car thefts that have occurred in our area. These thefts have been committed by kids 12 – 15 years of age.



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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: 5/5, 8/18, 11/3

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

The three pillars of crime were observed by these kids:

- 1) Desire
- 2) Ability
- 3) Opportunity

We don't have control of points 1 & 2, but we do have control of point 3. It is required of us to always lock our cars. The responsibility is on us. He reminded us not to leave any important items in view in our cars: our smart phones, our key fobs, our purses, our laptops or our garage door openers.

These kids operate in groups and go down the street trying cars. If it is locked they just move on. It is a waste of time. They look for the one car that is unlocked and go from there. Once they find that car they can open your garage door if the door opener is there, or steal your laptop if it is on the seat. Once in the garage they have access to everything there, and usually have access to the home from the garage via the unlocked access door and they continue their way of theft. So, it is a simple act: lock your cars, and take away item 3, opportunity.

In the electronic world how do you deny criminals the way of opportunity? First do not share any unsolicited personal information with anyone. This means emails, over the phone, at your door. Hank mentioned that there are times when you do submit personal information: apply for a mortgage, medical insurance, opening a bank account. In these instances, you are submitting the information, not the other way around.

He described that much of our personal lives are discoverable on the Internet: our names, and our mailing address. However, thieves are looking for that key that will unlock your funds. And this key is your social security and Medicare number. So, do not carry these cards with you at any time. If organizations and institutions need this data they now usually will ask you verbally for the last four digits of your number.

Another item not to carry with you: personal checks. Thieves will often work together. One person will distract you while another will take just one check from your checkbook. Once they have that they have your account number and bank routing number. It is now easy for them to go to a bank drive-up, make a small cash deposit with this access. Banks usually don't ask for an ID on deposits. Next the thieves will "spontaneously" note that they need some cash for something and then make a large withdrawal with that same information.

Hank noted that now telemarketers will spoof local area code numbers to make you think that a call is local. If you don't recognize the number don't answer it. If it is someone you know, or a party that is legitimately inquiring, they can leave a message on your answering machine. Like locking a car. Just don't answer. Please hang up. The thieves are fishing for that one person to accept their call and give you the information.

If you do lose your credit card, call your credit card company right away, you are only liable for \$50 if reported promptly. The credit card company will gladly issue you a new card and freeze your old one.

Hank did not recommend the use of debit cards. These cards are essentially cash from your account. If something goes amiss you are out that money and cannot get it returned.

As he described the safe use of credit cards, Hank mentioned that in our area and across the country there are credit card "skimmers" that are placed, usually on unattended ATM machines. These skimmers will capture your credit card information and contain a camera to record your password access. Once the bad guys have this information they can do whatever they wish.

His advice, in this case, was to frequent places that monitor their ATM use: your bank for example. If you do have to use an unattended ATM machine, gently but physically tug at the ATM entry box. If a skimmer is attached

RCSI Officers

Pres: Steve Staub 429-9877

srstaub1@rochester.rr.com

VP: Mark S. Lawson . . . 544-5377

mrlawson51@peoplepc.com

Treas: Dennis P. McMahon

. 235-1260

denmac733@gmail.com

Secretary: www.rcsi.org

Help's Half Hour . . Jan Rothfuss

Board Members at Large

Bob Avery 385-4491

webmaster@rcsi.org, 9/20

Jan Rothfuss 347-6020

jan_rothfuss@hotmail.com, 9/19

Tony Dellelo 734-6149

tonydel@techie.com, 9/18

Standing Committees

Linux SIG: . . . Carl Schmidtman

unixgeek@faultline.com

Programs and *Monitor* editor:

. Tony Dellelo

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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.*

made over the Internet in my name.

Two tips from the Los Angeles Police Department: If the theft is not in your local police department's jurisdiction, file another report with your PD when you get home. Also, create a script of exactly what happened so when you call / e-mail to report the theft to various organizations, you don't forget something critical and the reports are all the same.

From the Quad Cities Computer Society, IA, Joseph895_us@yahoo.com.

it will often come lose and you can stop right there before you do further damage to your personal finances.

The state of Iowa requires that a seal be affixed to ATM entry points. If you see a broken or loose seal, that is an indication that something is amiss. Don't use it.

Do not use a simple easy to remember password: like 1234, your pet's name, etc. Hank mentioned that you can Google commonly used passwords and you can be sure that the bad guys do to. If you use a common one your account is compromised. He recommends that you use a password safe program that has one main password that you remember and then it creates complex passwords for each online site you visit.

Additionally, you can protect your online Identity by requesting a free credit report from the three major credit reporting agencies. He advises that you use a different request from one every four months. The firms are Equifax, TransUnion, and Experian. Here is the government website to accomplish this goal: <https://www.usa.gov/credit-reports>.

For your personal effects and electronic devices, you can additionally protect yourself by making a list of all the serial numbers. Hank mentioned that all pawn shops are required to submit serial numbers of items committed to their stores each day to the police department.

The QCS would like to thank Hank for his fine presentation. By using a bit of common sense, to stop and think before responding, and apply his practical tips we can prevent ourselves from becoming another victim of crime.

Be Prepared

Addendum to Cpl. Hank Jacobsen's Remarks

Submitted by Jim Buche, QCS Director at Large

Place the contents of your wallet on a photocopy machine, do both sides of each license, credit card, etc. You will know what you had in your wallet and all the account numbers and phone numbers to call and cancel. Keep the photocopy in a safe place.

But here's some critical information to limit the damage in case this happens to you or someone you know. As everyone always advises, cancel your credit cards immediately, but the key is having the toll-free numbers and your card numbers handy so you know whom to call. Keep those where you can find them easily. Immediately file a police report in the jurisdiction where it was stolen, this proves to credit providers you were diligent, and is a first step toward an investigation (if there ever is one).

But here's what is perhaps most important: (I never ever thought to do this)

Call the three national credit reporting organizations immediately to place a fraud alert on your name and SS#. I had never heard of doing that until advised by a bank that called to tell me that an application for credit that was stolen. The alert means any company that checks your credit knows your information

Smart TVs

by Dan Douglas
President Space Coast PCUG, Florida

If you haven't shopped for a new TV in the last few years, you are in for an education. There are now as many acronyms that you come across when selecting a TV as there is in buying a PC. The last TV I bought was a 'SMART' High Definition TV (HDTV) with 3D in the middle of 2012. At that time, you had a choice of a HDTV set with or without the 3D option and the choice of many sets that weren't 'SMART' or many that were 'SMART'. The 'SMART' that I'm referring to is the ability to stream content from sources such as Netflix, Amazon Video, Hulu, Vudu, etc. directly from the TV without the use of an external streaming device such as a Blu-Ray player, Amazon Fire, Apple TV, or Roku to name just a few of the most commonly found. 1080P was the best resolution available and sets bigger than 55" usually had a big price jump.

Now the easy part: when we jump ahead 5 years to 2017, we now find a mixture of both HDTV/2K 1920x1080 TVs and Ultra High Definition (UHD)/4K 3840x2160 TVs. There was a large price difference between the two types until this summer when the number of UHD sets has taken over from the number of HDTVs. Almost every set made is a 'SMART' one featuring an extensive collection of a mixture of both traditional (Netflix, Hulu, etc.) sources and non-traditional 'channels' (specialty channels like those available through Roku). Many TVs can be priced a little cheaper by not including an antenna tuner, recognizing the fact that the typical user uses an external box(es) for watching the programs of choice. Those are referred to as 'Displays' rather than a 'TV' which implies a tuner with network channel selection capability. Watch out if you want to install an antenna later and find there is no place to plug it into.

When we dive down deeper to the specifications, we find the harder parts to understand: High Dynamic Range or HDR is really where UHD sets shine on those that offer this feature – delivering a picture that is much closer to real life than was ever possible with a HDTV. HDR greatly increases the contrast range between white and black so that the image is more natural in its brightness and highlights. Coupled with HDR is a larger palette of colors that can be displayed – a HDTV can display about 17 million colors, whereas an UHD set, with an enhanced wide color gamut (WCG) can display over a billion! Most UHD sets will also up-convert 2K material to near 4K resolution.

As far as 4K material goes, there are many 4K sources now available. Netflix (for a small premium) offers a selection of many 4K shows/movies, as well as all Netflix original shows are shot in 4K now. Amazon Video also has a large selection of movies to rent/buy in 4K as does Fandango. My personal favorite is Walmart owned Vudu. Vudu offers a digital copy for life of almost every DVD or Blu-ray that you purchase. All new movies are also available to rent or purchase in 4K format, with older titles being added constantly.

Both satellite providers Direct TV and Dish offer a variety of 4K channels and rentals. Apple has just announced the new Apple TV box with 4K/HDR support with a large selection of material available on iTunes. YouTube also features many 4K/HDR videos and movie trailers. My personal favorite 4K source though, is a UHD Blu-ray player. Nothing outside of a movie theater can compare to the sight and sound of playing a 4K disc or streaming 4K content from Netflix or Vudu through a receiver with a Dolby Atmos 5.1.4 speaker setup in your own house. If anything in that last sentence is unknown to you, wait until next month when I'll discuss the sound aspects of UHD and the implications of HDCP 2.2 and HDMI 2.1!

From the November 2017 issue, Space Coast PC Journal, www.spcug.com, datadan@msn.com.

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Computer Recycling

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

Monroe County *ecopark*

(Cathode Ray Tube TVs and monitors - \$10 each credit/debit card only) 10 Avion Drive
Rochester, NY 14624
Phone: (585) 753-7600 (Option #3)

Best Buy stores accept most electronic waste (CRT and some other TVs include a fee of \$25 each)

Maven Technologies offers *free* residential drop off, 9:00 am – 4:00 pm (M-F), 1450 Lyell Avenue, Rochester, NY. The processing center is located on the NW corner of Lyell and Mt Read, behind the 'strip mall'. Go to the customer entrance. 458-2460.

Pod Computers accepts most electronic waste (no tv's or crt's), located at 1925 South Ave, the wedge where South Ave and East Henrietta Rd meet. 244-2240.

What do you do with your Computer - Besides shopping?

By Phil Sorrentino, Contributing Writer
The Computer Club, Florida

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 9th 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 “The Computer Club’s” website to see when the next “File Explorer” class is scheduled.
 - 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.

From The Journal of The Computer Club, Inc., <http://scccomputerclub.org> / Philsorr.wordpress.com, philsorr@yahoo.com.

* * * * * SOFTWARE and HARDWARE * * * * *

Ask Leo !

By Leo Notenboom, <https://askleo.com/>
Making Technology Work For Everyone

How Should I Encrypt the Data on My Laptop?

Protecting data on your computer is key. I’ll look at three common encryption methods.

//

My wife needs to encrypt patient files on her laptop. She has been encrypting individual files, but I wonder if you recommend a program that will encrypt folders. e.g. her Documents folder? Is there a way to encrypt a hard drive or [partition](#)?

Encrypting individual files is perhaps the least efficient way of protecting data. There’s also a serious potential for data leakage, as you must securely delete the unencrypted files after encrypting them. Most people don’t do that.

There are three basic approaches to securing data on a laptop. Which is most appropriate for you or your wife depends a little on how conscientious you are and a little on how geeky you are. Of course, all methods depend on how religious you are about backing up.

Whole-disk [encryption](#)

Once implemented, this is probably the easiest, most transparent approach to encryption. The good news is that it’s

typically built right into the operating system.

The way it works is simple: you instruct the OS to encrypt the drive. Some time later (usually hours), the job completes and the data stored on the hard drive is encrypted.

Logging in to your machine “unlocks” the encryption. Once you log in, you use your computer as usual. That the data is encrypted on disk is completely transparent to you.

The good news here is that absolutely everything on the disk is encrypted: your data files, programs, the operating system, temporary files — even the “empty” unused space between files, which can often contain remnants of files that existed previously. And, as I said, you don’t need to change the way you use your machine. As long as you can log in, you can access your data.

If you can’t log in — as in you’re someone who’s just stolen the computer — the data is inaccessible to you. Period.

The biggest risk is that everything is accessible *if you’re logged in*. For true security, you never use sleep or hibernate modes, and always shut down your computer when walking away from it in a compromised area.

Container encryption

There’s no practical “folder” encryption in Windows. You can mark a folder to be encrypted, and it behaves much like the whole-disk encryption described above. If you can log in, you can access it, and if you can’t log in, you can’t. If you’re considering this path, I’d probably go whole-disk anyway, since it avoids the whole issue of leaving traces via temporary and remnant files.

Otherwise, the more general approach is to create an encrypted “container” using a tool like [VeraCrypt](#) (the successor to [TrueCrypt](#)).

This technique creates a single (usually large) file that contains your data. Because the contents are encrypted, the file looks like random data. You access the data by “mounting” the file, at which point its contents appear as another drive. You access the files on that drive normally; they’re transparently decrypted when read and encrypted when written to disk.

Mounting requires you to know the [passphrase](#) for the container. As long as the container is not mounted, the files don’t appear and cannot be accessed. Once you [mount](#) it, supplying the correct passphrase, you can access its contents.

What’s handy about containers is that they’re portable. You can copy a container file (even without knowing its passphrase) to other machines, and open the container (as long as you *do* know the passphrase) there. It’s a single file that contains everything of import, and once mounted, you access the contents just like any other file.

The downside is that the program you use to access the file — say your word processor — may make temporary files outside of the encrypted container. Depending on how sensitive your data is, you’ll probably want to get into a habit of making sure those temporary files are deleted and the newly free space is wiped when you’re done.

Transparent file-by-file encryption

This is a file-by-file variant on container encryption. It was developed specifically for [cloud](#) storage providers such as Dropbox or OneDrive. You want to be able to encrypt files stored using those services, but you don’t want to have to upload an entire encrypted container every time one small file therein changes. File-by-file encryption solves this.

Using tools like [BoxCryptor](#) or the free [Cryptomator](#), instead of creating a separate container file, you simply designate an existing folder on your machine to be the container. Like a container, you then “mount” the folder using the encryption software, and it appears as a separate disk drive on your machine. Data written to that drive is encrypted and written to the folder. Data read from that drive is read from the folder and decrypted.

While unmounted, the folder you designate contains nothing but encrypted and inaccessible files. Once mounted — after specifying the correct passphrase, of course — the drive makes them all accessible in unencrypted form.

The same downsides apply as to encrypted containers: unencrypted temporary and other files can be left outside the container, depending on how your programs work.

But file-by-file encryption is ideal when protecting data that might be copied to cloud storage. I have a substantial

portion of my OneDrive protected in this manner.

A word about backing up

Always [back up](#) the *unencrypted* data. Secure it some other way.

I say that because depending on the algorithms used, or the situation you find yourself in, you could find yourself with encrypted data that cannot be decrypted. Be it losing a log-in password, hard drive corruption, or something else, it's not uncommon to find yourself in a situation that's so secure you can't even access the files yourself.

Back up your data in its unencrypted form. Depending on exactly how you back up, you might secure it physically, by storing those backups in a secure location, or secure them by password-protecting the backups themselves, if the [backup](#) software supports it.

But I strongly recommend against blindly backing up encrypted files.

Which is right for you?

I can't say what's right for you.

Whole disk encryption is, perhaps, the most transparent and easiest-to-use method once implemented. Just remember that should you be unable to log in to your machine for any reason, all its content will be lost. I use whole-disk encryption for the laptop with which I travel.

Container encryption might make sense if you're looking at a single folder of data and you don't need to synchronize with cloud storage. I used to use this exclusively, in the form of TrueCrypt, as it was a great way for me to copy containers from machine to machine. I no longer use this method.

Transparent individual file encryption is perfect for cloud storage, and even for more general-purpose encryption needs that don't require the file synchronization aspects of tools like Dropbox or OneDrive. If the concept of mounting a drive to access your files, remembering to unmount it, and possibly running additional secure cleanup afterwards doesn't seem daunting to you, this may be an option. As I mentioned above, I use this technique (using Cryptomater) for the majority of my OneDrive files.

Finally, since you indicated that your wife is using this in a professional capacity, be sure to check the requirements for her profession. As I understand it, in the U.S., for example, HIPPA may mandate some requirements.

[How Do I Encrypt a Disk?](#) covers encrypting a disk using BitLocker in Windows. Go to askleo.com for details.

Learn something every day. Never stop learning. Share what you learn.

Ask Leo! exists because of those three statements.

Freshly Squeezed Reviews

Elevate, a new type of cognitive training tool

By Frank Petrie

With Apple's focus on health apps, it has become easier to track your physical activity, your nutrition, your sleep cycle, your nutritional intake, and even manage your stress. One aspect that doesn't draw enough attention is strengthening your mental fitness.

There are many apps to choose from for this purpose. Of the handful of apps that I've tried, I have found one to be the most effective and comprehensive: Elevate (<https://www.elevateapp.com>). Elevate is a new type of cognitive training tool designed to build communication and analytical skills. Elevate has been selected by Apple as the App of the Year. Since launching in May 2014, elevate has been downloaded more than 10 million times on the App Store and Google Play². (Before I go any further, this review was done using a Pro version of Elevate.)

Start training your brain

Elevate measures your performance in listening, writing, speaking, math, and reading. They manage to accomplish this in very entertaining, yet challenging ways, utilizing both visual and aural approaches. In the Pro version, there are 40+ games to choose from and as with any exercise regime, you perform daily for optimum results.

As an example, there are four writing games that I find myself constantly returning to. First, one game launches a space shuttle from the pad. You are presented with a word at the top of the screen. Below, you are given two

choices.

You are to pick the option that best shares the same meaning (occasionally, they toss in 'None of the Above') before the shuttle crashes back to the ground.

In the second game, you are given a sentence. You are to choose which word(s) are redundant or superfluous. If you should pick the wrong selection, an explanation is provided as to why your choice was incorrect. (As I'm writing this review, I'm finding myself a bit paranoid, proofing this review repeatedly. It's apparent to me that I need to keep practicing.)

My third favorite is to bolster your memory. You are given a passage to read. But it is only presented to you one word at a time in rapid succession, with each word placed in individual cells. At the end of the passage, you are presented with a question derived from the passage. There are two possible answers available to you. If you choose the correct one, you move on to the next passage.

If not, you are presented with the complete passage with the pertinent information in bold font, pointing out the section that provided the correct answer.

Finally, another game presents you with Russian nesting dolls. Within these dolls are several pictures. When a word appears, you click on the picture which best displays that word's meaning.

Get instructed

To view a game's instruction, open the game and tap the Pause button in the upper-left corner of the screen. Then tap Game Instructions. To get back to the game, tap the Back button and then the Resume button.

There is a math game that deals in percentages. If left to my own device, I would correctly answer these. But when they're presented with time constraints, it's surprising how many simple mistakes you can make.

And should you find yourself somewhat overwhelmed by the challenge, you can find inspirational quotes in the Expert Tips exercise, part of the public speaking category on the study page.

The app keeps track of your progress in each category, utilizing their Elevate Proficiency Quotient (EPQ).

Based on your historical performance, the app provides you with suggestions on how to improve your performance in any chosen discipline where you appear to be having difficulty. (Personally, I am terrible with names. The tip for using mnemonic devices to match the name with the face I have been doing for years but without much success. This app enables me to keep practicing and hopefully improve.)

5 Icons

On the bottom of Elevates home screen, you'll find five icons. The first icon takes you to the button that you push to begin your session.

The second takes you to a screen that keeps track of your progress. There is your EPQ, your Rankings in the community, your Activity measured by time, and Milestones (such as how many days in a row you have trained).

Next is Study. Here you can choose from specific categories that you would especially like to train extra in. Click on one of these and you will be presented with a detailed explanation as to what that category is about and the benefits it provides.

The fourth icon, Notifications, will take you to various ARTICLES where you can read a summary of your weekly activity, how to improve your skills by reviewing recent errors, or to a screen where you can customize your settings, such as how many games you would like to play each session or pick your training goals.

You can choose which games you would like for your daily session, to tailor your session to work on your weaknesses or strengthen things that you are already proficient at.

While writing this review, I felt that even though the developer refers to each exercise as a "game," it belittled the thoroughness of this app and how very professional it is. Read their Effectiveness Study, which you can see here: <https://www.elevate-app.com/research>. You'll appreciate just how seriously the developer takes expanding this extremely productive tool.

Elevate is an iOS app that requires iOS 9.0 or later and is compatible with iPhone, iPad, iPod Touch, and Apple Watch. There are numerous subscription models from Monthly to Lifetime to choose from.

To get a feel for the app there are videos available on site (https://www.dropbox.com/sh/dzkhrijxs06iz1kg/AABG-BEes6_qMQ7hSZ4rjCfE9a?dl=0). The free version limits you to three games daily, selected from a limited number of exercises. A Pro subscription increases that number to five. Plus, there are 40+ games to choose from, 17 which

can only be accessed by obtaining a subscription (with additional Pro games added regularly). You also receive “regular deliveries of premium learning material, and access to Pro-only study tools to deepen your skills.”

Any Pro version is an in-app purchase. Merely launch the app, tap “Explore Pro” in the top right corner of the screen, then tap the button at the bottom of the screen to unlock “Pro.”

I cannot express enough how impressive this app is. You really owe it to yourself to download a copy. Although I found the Pro version to be worthy of the subscription, even if you only used the free version, you’ll find this app to be indispensable to improving your mental agility. (But you’ll inevitably go for the Pro version.).

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Software Information Developer: Jesse Pickard

System requirements: iOS 9 [compatible with iPhone, iPad and iPod Touch; works with Apple Watch] and Android

Version reviewed: Pro

Price: App is free to download; various subscription prices.

Download: iOS App Store or Google Play Store

For more info: <https://www.elevateapp.com>

From the August issue, BCUG Bytes, Brookdale Computer User Group, www.bcug.com,
TMC-NLC@yahoo.com.

Are your iPhone and Android photos really backing up to the cloud?

Tech tips and news from TechMoxie to you
Pam Holland, President and Instructor

Some things to check...



We have long recommended that our clients make sure that photos on mobile devices are backing up to the cloud. That way if anything happens to your phone, your photos are safe. Most often, phones are set up this way, so it is infrequent for us to find a problem. But it is important to know that *most mobile devices are set up to back up only when connected to Wi-Fi and do not back up over data.*

Why is this significant? Those vacation pictures you take over the course of a week at the beach may not get backed up until you return home and your phone is again connected to your home’s Wi-Fi. And now that unlimited data plans are much more common people are connecting their phones to WIFI less

frequently – even while at home.

Here are some tips:

- If you are an iPhone user, know that your photos will *only* back up over Wi-Fi and while the phone is charging. Apple does not have an option to back up over data. So, try to connect your iPhone to Wi-Fi overnight if you are traveling.
- If you are an Android user, you have the option to back up over data as well as Wi-Fi. But this must be enabled in your Cloud settings.
- For iPhone users especially, consider using a second back up app that permits back up over data. We have started using Google Photos which offers unlimited photo storage if you are willing to store photos at “high resolution,” not “full” resolution. If you want full resolution, Google offers 15 gb free storage and additional storage for a fee. Google Photo settings can be adjusted to back up over data.
- No matter where you store your photos, check periodically to make sure they are truly being stored as you intend. Log into your iCloud account, for example, and see if your photos are indeed there.
- Be careful when deleting photos! If you delete a photo from your device, it will delete from the cloud and other devices. For example, if you delete from your iPhone, the photos will be deleted from other devices connected to the cloud like your laptop or iPad.

Printed from the October, 2017 article in www.techmoxie.com.

Chromebooks for Seniors

by Rich Davis, Communications Director
Computer Booters of Sun Lakes, AZ

Chromebooks are laptops that use Google's operating system. They are quite inexpensive as compared to a Windows or Apple machine. My newest Chromebook is 15" and was \$129.00 as a refurbished item.

I had a back injury some years ago when I heard about Chromebooks as they had just been rolled out. The critics slammed them as being quite useless. I seemed to be drawn to them after reading a lot about how they work. This looked like a good computer to me. I decided to challenge the critics and make this my main machine if I could. I would be able to spend some time learning as I was laid up.

One drawback that the critics named was storage. My first Chromebook had only 18gb of hard drive. I had a Gmail account and found that I had 15gb of space for free. I could also add an SD card to give me much more. Also, when you buy a Chromebook you get an extra 100gb of online storage for free for a couple of years. Another, or maybe equal to the first was that you had to be online to use your Chromebook. I always am so that didn't bother me. Improvements have made the Chromebook useful offline as of now. The third obstacle was that you couldn't load software.

True, but instead we use apps that are downloaded. In my opinion, they are better than software. Some of the apps are not as robust as a complete software suite. But, hey, I have slowed down with work and the apps work fine for me. Also, Google sets up a drive in the cloud, which means on their servers, for the user. Included is a software suite almost as good as Microsoft Office and compatible with it.

Once I got the knack of using my Chromebook I never looked back. Updates take a few seconds. The laptop starts in 7 seconds. The battery life is about 10 hours. I can watch Netflix movies, Skype, Email, create documents and slideshows, and much more. There is no need for antivirus software.

It is perfect for me. Did you know that 70 percent of schools use Chromebooks because of their price and functionality eclipsing iPads and Windows machines for students? So, the critics were dead wrong. They didn't give something new a fair chance. A couple of years ago my grandson, 14, told me how cool my Chromebook was. I sure was proud of my decision to go with my gut and try something new.

From the October 2017 issue, The Computer Booter, www.computerbooters.org.

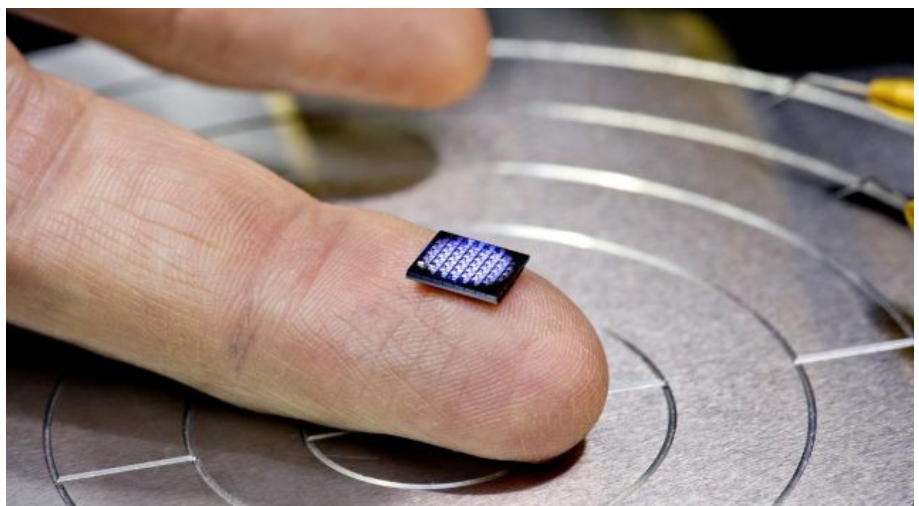
***** TECH CORNER *****

IBM Creates World's Smallest Computer for Blockchain Technology

by Ryan Whitman

Computers are shrinking rapidly. You can build a pretty capable little machine powered by a device like the Raspberry Pi, but that's still huge compared with IBM's latest machine. The company that started out selling massive mainframe computers has developed the world's smallest computer. Each one is smaller than a grain of salt, but it packs more computing power than you'd expect.

The micro-computer is a complete system-on-a-chip (SoC) with a processor, memory, storage, and a communication module. The CPU contains several hundred thousand transistors, and IBM says it's capable of performance on par with an x86 CPU from 1990. That's

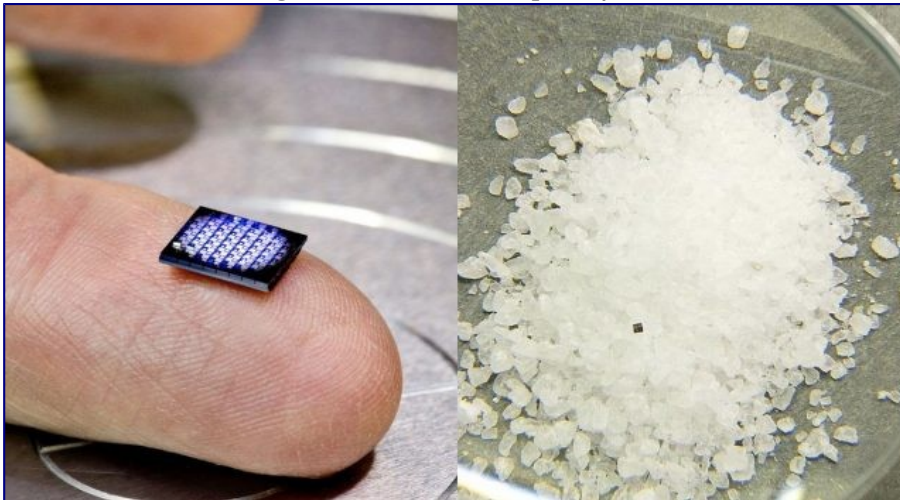


not very fast compared with even the slowest modern computers, but it's impressive for something you can't see without a magnifying glass. It makes more sense when you look at the impressive developments in other SoC designs. The latest Qualcomm Snapdragon chips are about 1 square centimeter and have more processing power than supercomputers from the early 90s.

The chip is just a prototype right now, but IBM has big plans for this (literally) microscopic computer. It's touting this as a significant advancement for blockchain technology, but not the same blockchain that's used to track Bitcoin transactions. A blockchain is merely a distributed ledger that can be used for various purposes. IBM and other companies have been looking for ways to use blockchains without the cryptocurrency attached.

With a total footprint of 1mm x 1mm, the IBM micro-computer could be embedded in almost anything. In the image above, there are 64 of the tiny motherboards joined together. You can get a better idea of how small the computer is in the image below.

The company posits that manufacturers could use the chips and blockchain technology to verify the authenticity of goods. Even big retailers like Amazon are sometimes fooled by counterfeit items, but an embedded computer could help identify the real deal. These chips could also boost the Internet of things (IoT) by making more devices "smart" without adding to their size or complexity.



64 boards on the left versus a single computer on the right.

Adding a computer to everything sounds expensive, but IBM doesn't think that will be the case. A final version of the microscopic computer could cost as little as 10 cents per unit to manufacture. IBM expects to begin offering these "crypto-anchor" micro-computers to customers in the next 18 months or so. At that point, it will be up to industry to devise a blockchain system

to authenticate goods. IBM believes this technology will become commonplace in the next five years.

Reported on March 19, 2018 in www.extremetech.com.

Researchers improve fabrication process of nano-structures for electronic devices

by Michelle Cometa
Rochester Institute of Technology

Researchers at RIT have found a more efficient fabricating process to produce semiconductors used in today's electronic devices. They also confirmed that materials, other than silicon can be used successfully in the development process that could increase performance of electronic devices. This fabrication process—the I-MacEtch, or inverse metal-assisted chemical etching method—can help meet the growing demand for more powerful and reliable nano-technologies needed for solar cells, smartphones, telecommunications grids and new applications in photonics and quantum computing.



"What is novel about our work is that for the first time we are looking at applying I-MacEtch processing to

indium-gallium-phosphide materials. I-MacEtch is an alternative to two conventional approaches and is a technique that has been used in the field—but the materials that have been explored are fairly limited," said Parsian Mohseni, assistant professor of microsystems engineering in RIT's Kate Gleason College of Engineering. He is also director of the EINS Laboratory at the university.

Demands for improved computer processing power have led researchers to explore both new processes and other materials beyond silicon to produce electronic components, Mohseni explained. The I-MacEtch process combines the benefits of two traditional methods—wet etching and reactive ion etching, or REI. Indium-gallium-phosphide is one of several materials being tested to complement silicon as a means to improve current capacity of semiconductor processing.

"This is a very well-known material and has applications in the electronics and solar cell industries," he said. "We are not re-inventing the wheel; we are establishing new protocols for treating the existing material that is more cost effective, and a more sustainable process."

Semiconductor devices are created on wafers through a multi-step process to coat, remove or pattern conductive materials. Traditional processes are wet etch, where a sample with blocked aspects is immersed in an acid bath to remove substances, and reactive ion etching, where ions bombard exposed surfaces on the wafer to change its chemical properties and remove materials in those exposed regions. Both have been used to develop the intricate electronic patterns on circuits and use silicon as a foundation for this type of patterning. Improving patterning methods by I-MacEtch could mean reducing fabrication complexity of various photonic and electronic devices.

Researchers and semiconductor fabrication scientists have been using MacEtch extensively for processing silicon. At the same time, assessments of other materials in the III-V range of individual elements that may be conducive to this same type of fabrication with similar advantages are underway. In his research, Mohseni is also looking at different alloys of those III-V materials, namely the ternary alloys such as indium-gallium-phosphide (InGaP).

The research detailed in the upcoming issue of the American Chemical Society's *Applied Materials and Interfaces* journal highlights how the nanofabrication methodology was applied to InGaP and how it can impact the processing of device applications and generation of high aspect ratio and nano-scale semiconductor features, said Thomas Wilhelm, a microsystems engineering doctoral student and first-author of the paper. The novel processing method can be significant in the development of ordered arrays of high aspect ratio structures such as nanowires.

For solar cells, the goal is to minimize the cost-to-power-produced ratio, and if it is possible to lower the cost of making the cell, and increasing the efficiency of it, this improves the device overall. Exploring new methods of fabricating the existing, relevant materials in a way that allows for faster, less expensive and more controlled processing by combining the benefits of wet etching and RIE has been the focus of Mohseni's work. The improved process means avoiding expensive, bulky, hazardous processing methods.

"We are using a simple benchtop set up and we end up with very similar structures; in fact, one can argue that they are higher in quality than the structures that we can generate with RIE for a fraction of the cost and with less time, less steps throughout, without the higher temperature conditions or expensive instrumentation," he said.

Information supplied by Rochester Institute of Technology and reported on March 20, 2018 in phys.org.

Tidbits of probably useless information

Every day, 20 banks are robbed. The average take is \$2,500!

The most popular first name in the world is Muhammad!

Tablecloths were originally meant to be served as towels with which dinner guests could wipe their hands and faces after eating!

Tourists visiting Iceland, should know that tipping at a restaurant is considered an insult!

One car out of every 230 made was stolen last year!

The names of Popeye's four nephews are Pipeye, Peepeye, Pupeye, and Poopeye!

I would like to take the time to acknowledge the passing of a giant. He wasn't a member of the club, never visited with us and never did a Skype presentation for our members. This is someone who is admired around the world and has become a household word to many and is regarded as one of the most brilliant theoretical physicists since Einstein. His name – Stephen William Hawking, 1942 – 2018.

Hawking had a rare, early-onset, slow-progressing form of motor neuron disease (also known as amyotrophic lateral sclerosis, 'ALS' or Lou Gehrig's disease) that gradually paralyzed him over the decades. Even after the loss of his speech, he was still able to communicate through a speech-generating device, initially through use of a hand-held switch, and eventually by using a single cheek muscle. He died on 14 March 2018 at the age of 76. I have read, over the years, that several inventions were developed for Professor Hawking, so that he could still communicate with us. These devices are now used for others that have crippling diseases.

He was a hero to many, because he beat the odds and gave hope to others. In 1963, Hawking contracted motor neuron disease and was given two years to live. Yet he went on to Cambridge to become a brilliant researcher and Professorial Fellow at Gonville and Caius College. From 1979 to 2009 he held the post of Lucasian Professor at Cambridge, the chair held by Isaac Newton in 1663.



Cosmologist, space traveler and hero.

Some final words preserved on youtube.

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

Paraphrased from www.hawking.org.uk and Wikipedia at https://en.wikipedia.org/wiki/Stephen_Hawking.