

## Our Club

RCSI is a nonprofit 501(c)(3) group open for membership to anyone interested in computers and related technology. Our aim is to provide an exchange of information between users of digital devices. We are not in any way affiliated with any computer manufacturer or software company, and ***we do not sell your data or email address.***

## Program Meetings

**No admission fee for non-members.** *Everyone is welcome!* Second Tuesday of every month, except August, from 6:30pm – 8:30pm.

Help's Half Hour (Q & A)  
 6:30pm – 7:00pm. *Members and Guests are welcome to attend and bring their computer related questions with them to get answered.*

7:00 – 7:15, Club Business

7:15 – 8:30+, Main Presentation

Come and join in the fun and enjoy a snack! **You are welcome to bring a guest.**

## Become a Member

Go to our website, [www.rcsi.org](http://www.rcsi.org), and download a printed form for use by the Post Office mail, **or** enter your info online and pay with a credit card or PayPal, **or** attend a meeting.

The *Monitor* is published monthly by members of RCSI. Articles by our members may be reprinted by other user groups or nonprofits, without special permission. A courtesy copy may be emailed to the author or Monitor editor.

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



***\*\* Because of COVID-19, all club meetings are held online \*\****

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**March 9, 'Technology of Africa', 'Best of CES 2021'  
 videos presented by Tony Dellelo**

**April 13, 'Linux Distros',  
 presented by Sharan Kalwani, via Zoom**

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***\*\* Because of COVID-19, all club meetings and the  
 \*\* Linux sig are currently being held online. \*\****

## President's Corner

### Why Can't Standards be Standard?

By Greg Skalka, President  
 Under the Computer Hood User Group

Part of what makes our technology work so well is that it follows standards. There are both rules established and items held up as an example in common use. All of our electronic means of communication are successful only because of standards. Without accepted rules for



"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 (WGMC) from Rochester, NY. Call 966-JAZZ (585-966-5299) or 800-790-0415

Sound Bytes is the longest running computer call-in show in the known universe.

*We have stopped printing the Monitor newsletter and leaving hard copies at some area computer repair shops. Digital copies may be obtained from [www.rcsi.org](http://www.rcsi.org) or my Pcloud storage at <https://tinyurl.com/tonydel-rcsi> (this link works in PDF version only). Also includes presentation slides and articles too large for this newsletter.*

#### **Some Past Presentations:**

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  
Drones and Their Many Uses  
Gifts and Gadgets for the Holidays  
Cut the Cord, Streaming Services  
Autonomous Cars and Robots  
Open Source and Free Software  
Protecting Your Identity  
Keeping Mobile Devices Secure  
3D Printing, ENABLE project  
Internet Security and Privacy

operation, cell phone calls wouldn't connect, and text messaging wouldn't work. Without established standards for interfaces like USB, Ethernet, Wi-Fi – even 120VAC power – we would not have the tech capabilities we enjoy today.

That does not mean that everything must be done in the same way. Innovation is often the result of new methods being introduced; if these prove beneficial and become popular, they can become the new "standard" for use. Sometimes multiple factions will solve the same problem or provide the same basic capability in different but incompatible ways. Remember the VHS vs. Betamax videotape war of the 1980s? Even though both followed standards, VHS eventually proved to be more popular and became the usage standard, forcing Sony to abandon the production of Betamax. These battles to become the popular standard can improve the technology available, but they also cause grief for the user that found their adopted version became the loser.



Unfortunately, while some tech changes have merit, others appear to be changed for the sake of change. Some changes to long-held ways of doing things seem to be for the benefit of tech companies (and their ability to market and sell new products), rather than tech users. User interfaces are especially susceptible to the change for marketing's sake syndrome. I am so tired of Microsoft Office changing their user interfaces while providing little substantive or beneficial change.

Sometimes it is the competition that forces there to be differences. Manufacturers need differentiating factors and features to be able to gain market share over something other than price. Companies will often litigate with competitors that "copy" their key attributes. This usually forces multiple standards on the marketplace, as with Microsoft's Windows and Apple's MAC, or Apple's iPhone and Android phones. This can also result in different interchange formats between competing device families. Fortunately, in most cases, the basic governing standards within product types are still followed by all competing vendors. You may not be able to use Facetime on an Android phone, but at least it can call and text with an iPhone. It is bad enough that few accessories are interchangeable between Apple and Windows computers; imagine if you couldn't send an email between them?

The interchange of files between tech camps can be a tricky problem. Fortunately, there are some formats, like PDF (Portable Document Format) that are universally supported and recognized on all platforms, be they computers, tablets, or smartphones. Most Microsoft Office files are at least viewable on most platforms. Many image and video file formats are easily interchangeable, but unfortunately, there are quite a few that are not.

My wife and I recently went on a one-week driving vacation to a cabin in Idaho. Though we were kind of isolated from technology (off the power grid with solar/battery and no cell coverage), we brought along a lot of our tech devices. These included five image/video-capturing devices: a camera and smartphone each, plus my action cam. When we

## Special Interest Group

### Linux Sig

#### We are back!

Linux Workshop,  
**third Saturday of  
each month, Noon-4PM**



#### NEW LOCATION:

Gates Public Library  
902 Elmgrove Rd, 14624,  
between Buffalo Road and  
531 Expressway.

The room we use is on the second  
floor, SE corner, by the restrooms.

[https://www.meetup.com/  
Interlock-Rochester-Hackerspace/  
events/psggnqybcbxb/](https://www.meetup.com/Interlock-Rochester-Hackerspace/events/psggnqybcbxb/)

#### Because of coronavirus,

we meet online. A link will be sent  
by email.

Come and get your questions about  
Linux answered. 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.

Carl Schmidtman

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

The 2021 schedule  
**Saturdays:**  
February 13, May 1,  
August 21, November 6  
from 1 – 4 pm, EST

For Conference Descriptions  
& Registration Links, go to  
**[apcug2.org/category/  
virtual-tech-conference](https://apcug2.org/category/virtual-tech-conference)**

returned, I collected all the photo and video files on one USB Flash drive and sorted them chronologically. This was a bit of a task, as it amounted to 23GB of data in over 2000 files. The fact that there were different file formats and different hardware platforms involved didn't help.

Being on vacation, my wife and I both took a lot of photos, but I took the majority – over 90% of them. She has fancier equipment but takes fewer shots, often looking mostly at artistry and composition. I have more modest equipment, and I've always taken lots of photos. I am concerned about good composition, but also tend to think of my photography as an augmentation of my memory. I take a lot of photos and videos of trips and family events simply to help me remember them.

My photos and videos were pretty easy to compile and view. I have a Panasonic Lumix "bridge" camera; this type of camera has the large body and lens of a DSLR (Digital Single-Lens Reflex) but with the smaller sensor (and lower price) of a point and shoot camera (it is a bridge between the point and shoot and DSLR). It also has a fixed (non-removable) lens like a point and shoot camera. My camera takes JPEG (Joint Photographic Experts Group) photos (.JPG file extension), which is a lossy file compression format and is probably the most popular photo image format. It takes MPEG-4 (Moving Picture Expert Group-4) videos (.MP4 file extension), which is probably the most widely-used video compression format. My Samsung Android smartphone takes photos and videos in these same formats. My small off-brand action camera also takes MP4 videos. All in all, they are pretty standard and universally compatible.

My wife has the fancy (or at least more expensive) hardware – a Canon premium DSLR and an iPhone. She has the Canon set to save photos as both JPG and raw (.CR2 file extension). The raw file format consists of the unprocessed or minimally-processed camera sensor data ("raw" data) and is a much larger file. It is the highest quality format and is the best to use if photo editing will be done. I copied only her JPG files from our trip, as that's all I wanted. Though I didn't use them, I was impressed that the Windows 10 photo viewer (Microsoft Photos) could view the .CR2 files she had taken, as I'd never been able to see them on my Windows 7 laptop.

The iPhone proved to be the biggest challenge and the most incompatible with my computing infrastructure. My first difficulty was in getting the photo and video files off of the iPhone and onto my Win10 computer. You can't just connect the two devices, and I would not know how to find the files I wanted on the iPhone if I could. Fortunately, I already had a solution to this problem. A few years ago I'd purchased a SanDisk iXpand 32GB Flash drive, which can act as an intermediary between the Apple and Windows worlds. This is a special Flash drive with both a USB type A connector and an Apple Lightning connector. It also contains an internal battery; this may be necessary because, unlike USB, Lightning peripheral devices can only provide power, and not receive it. Through the SanDisk app downloaded from the Apple Store, photo and video files can be located on the phone and then copied to the Flash drive from the iPhone, through the Lightning connector. The Flash drive can then be plugged into a Windows PC through the USB interface so that the files from the iPhone can be accessed and copied.

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## Standing Committees

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Membership and Help's Half  
Hour:: . . . . . Jan Rothfuss

## Planning Meeting

Held on 1<sup>st</sup> Tuesday of each month  
at 7 pm, at St. John's Meadows,  
Briarwood building. ANY CLUB  
MEMBER MAY ATTEND.

**NOTE:** Because of Covid-19, we  
meet online.

## Newsletter Printing

Limited copies will be printed and  
available at some of the local  
computer shops. *A few copies will  
be available at our meetings.*

## Club Mailing Address

Rochester Computer Society, Inc  
PO Box 18516  
Rochester, NY 14618

Even with the iPhone files on my Win10 computer, the compatibility battle was not over. The iPhone video files are .MOV (Apple QuickTime) compressed video files, which are compatible with Windows. The photo files, however, are .HEIC extensions, not immediately recognized by Windows. These are High-Efficiency Image Format files, a new MPEG format that Apple has adopted. Microsoft did provide an ac solution, however. Double-clicking on one of these files on my Win10 PC brought up a message to download an app from the Microsoft Store. Once I had downloaded and installed the HEVC Video Extensions app (\$0.99), my computer could view these photos.

In addition to this new file format, new iPhones also take photos in a mode called "Live Photo". In addition to the .HEIC image, the phone also captures a video running 1.5 seconds before and after the image, so each photo was taken results in two files. Since now I could see both, I decided to keep both.

After a bit of manipulation, I finally had all of the trip photos and videos I wanted in one place, all visible in Windows. Though Apple may keep changing their file formats, it appears Microsoft is providing ways to keep up and view their files in Windows 10.

Now if only my Chromebook could open all these files. I've had poor luck with video files on my Samsung Chromebook, and none of the ones we took on the trip could be opened. It turned out the only thing it could see was the JPG files. It seems the Google Chrome OS needs to update its standards.



**The Most Photographed Spot** – I've been ordering a lot from Amazon since the pandemic, and a lot of the time the email I get from Amazon asking how my package delivery was includes a link to a photo of the delivered package sitting on my doorstep. Apparently, the delivery person now takes a "proof of delivery" photo. This may soon make my doorstep the most photographed location on my property.

**Reprinted from the November 2020 issue, Drive Light,**  
**[www.uchug.org](http://www.uchug.org), [president@uchug.org](mailto:president@uchug.org).**

## LINUX SIG

You guessed it. The library is closed, so Carl sent out a link last April to try an online meeting, using Jitsi. You might not get the total hands on approach, but you can ask questions and share screens during the meeting. The Linux Workshop will take place the **third Saturday of each month**, from Noon-4PM. No, you can't bring your machine in, but you can describe your problem and Carl and the other Linux gurus will try and help you. This is a video conference, so dress appropriately.

If you are not on the Linux emailing list, you can request a link to the workshop by contacting Carl Schmidtman, at  
[unixgeek@faultline.com](mailto:unixgeek@faultline.com).



## Tidbits of probably useless information

The Burj Khalifa is the tallest building in **Asia** and in the world. The skyscraper is located in Dubai, UAE. Completed in 2010, the building is 2,717 feet high, with 160 floors. The building was initially called Burj Dubai. The design of the building is borrowed from the Islamic architecture.

**North America** is disputed with the One World Trade Center topping out at 1776 feet, but this includes the spire, which most journals do not count. So, the tallest is still the Willis/Sears building in Chicago, followed by the 432 Park Avenue residential building in New York City.

The Lakhta Center super tall skyscraper is located in Saint Petersburg, Russia. With a height of 1516 feet, the building is the tallest in **Europe**. Lakhta Center has 86 floors. The skyscraper is the second tallest structure in Europe, after the Ostankino Tower.

Queensland Number One (Q1) is located in Queensland, Australia. With a height of 1060 feet, Q1 is the tallest building in **Oceania**. Q1 has 78 floors. The residential tower was officially opened in 2005. Q1 is also the tallest building in the Southern Hemisphere. Behind New Zealand's Sky Tower in Auckland, Q1 is the second highest free-standing structure in the Southern Hemisphere. The name of the building was given to honor the 1920-Q1 Australia's Olympic rowing team.

Located in Santiago, Chile, the Gran Torre Santiago is the tallest building in **South America**. The

*Continues on page 8.*

## Does Your IP Address Expose Your Home Address?

By Bob Rankin, [www.askbobrankin.com](http://www.askbobrankin.com)  
a Translator for the Technology Impaired

A concerned AskBob reader asks: 'Can someone determine my personal details (name, home address, etc.) simply by knowing my email or IP address? I am asking because I posted to an online forum, and both my email and IP address were displayed publicly. Does that give others the ability to find my actual geographic location? Can I be tracked down in any way?' Read on to learn the answer to this common question...

### Is Your Location Exposed Online?

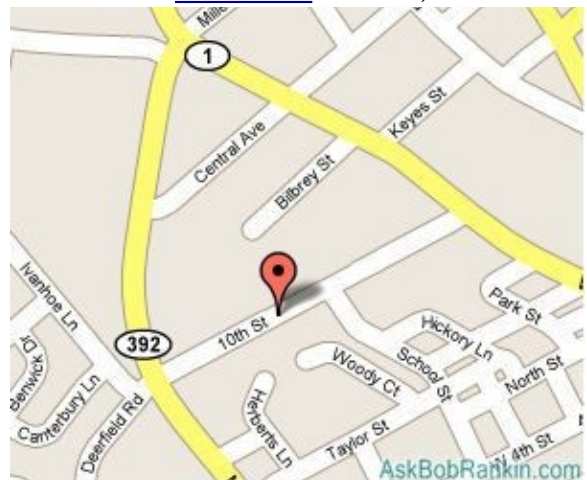
It's true that your IP address is no secret. It's a basic part of internet communication protocols to send your IP address whenever you connect to a website, send an email, make a forum/blog post, chat, play an online game, etc. Without your IP address, the computer on the other end wouldn't know where to send the reply. Think of it as the return address on an envelope.

But that DOES NOT mean that anyone can find your home address if they know your IP address. Knowing your IP address does NOT give anyone the power to hack into your computer, NOR does it reveal who or where you are. Typically, each time you go online (if you have dialup) or each time you start your computer (if you have cable, fiber or dsl) you will be assigned an IP address, randomly selected from a pool of IP's assigned to your Internet Service Provider (ISP).

### Finding the Physical Address for an IP Address

A person MIGHT be able to get a general idea of your geographic location, based on your IP address, by doing a lookup using a [free Geo-IP database](#), but that will only tell them the physical location of your Internet Service Provider -- not YOUR home address. Keep in mind that when you're at work, your ISP might be your employer. (One easy way to find your current IP address is with the [IP Chicken](#) website.)

If you use a large regional or nationwide ISP, the IP lookup probably reveals nothing of interest -- either the location of your ISP's local switching facility, or a placeholder address that corresponds to the center of the town where you live. The IP address for most dialup users will be the location of the ISP's central office. It's the same when you connect to the Internet via your smartphone's cellular data plan. The IP address for my Verizon phone resolves to Albany, New York, about 150 miles from my home. And if you're connecting to a public wifi hotspot in a library or coffee shop, the IP address will be associated with the wireless service provider - not you at all.



## Jere's Tech Tips

By Jere Minich, Apcug Advisor,  
Region 5 (AL, FL, GA, SC)

### HOW TO PAUSE UPDATES

**ON WINDOWS 10** – Windows 10 automatically downloads and installs updates as they become available. To stop this, you can “pause” updates for up to 35 days in just a few clicks—even on Windows 10 Home. Here’s what you need to know about pausing Windows Update.

Go to How-to Geek and pause the update. <https://bit.ly/3nm1RPi>

### HOW TO SET UP WIFI GUEST IN WINDOWS 10

– With the widespread use of cell phones today everyone who comes to visit wants access to your WiFi. Not wanting to give out my WiFi key to the world, I used to set up a second router in my house and give out its credentials. Now I use Windows 10. Go to Daves Computer Tips and keep the guests happy.

<https://bit.ly/3oQKvud>

### HOW TO CREATE A STRONG PASSWORD YOU CAN REMEMBER

– As more and more of our lives move online, the need to maintain secure online profiles is critical. Creating a password isn’t good enough, it needs to be a STRONG password. A common misconception, however, is many think a strong password is hard to remember. Not true and, I have some good news for you. Today I’ll review how to create an easy to remember, yet rock-solid password. Groovy Post does it again here. <https://bit.ly/2JENtTx>

Bottom line: The physical address returned by an IP lookup *\*could\** be within a few miles of your home, or it could be wrong by several orders of magnitude.

### When The Law Comes A Knockin'

Of course there is an exception to every rule. If Joe or Jane User calls your ISP and wants to know who was using a certain IP address last Tuesday, the ISP will tell them to pound salt. But if an officer of the law hands your ISP a court order to reveal that information, they must do so. Your ISP's logs will enable them to determine which customer was using a certain IP address on a certain date and time, and they must reveal that information if a court has found probable cause that a crime was committed by that person.

For the truly paranoid (or the criminally inclined) there are ways to surf the web anonymously. Tor is a global network of anonymous proxy servers. Each node acts much like a VPN (virtual private network) server. It accepts your browser’s requests for Web content, connects to the server(s) on which the objects reside, downloads copies and transmits them to your browser. The remote server does not get any data about you, since you never connect to the remote server; a Tor node does that on your behalf. See my article [Tor Browser: Polished and Private](#) for details on using Tor.

### What About Email Addresses?

The same concepts apply to your email address. The part that follows the “@” sign is the domain name. This can be your ISP, your employer, a webmail provider, or an email forwarding service. Given the domain name, one can determine the domain owner's physical location, but nothing personally identifying about the email user without a court order.

Of course, if your email address is something like Jsmith90210@acme-widgets.com, then you're leaving little to the imagination of a determined hacker or stalker. Web-based email accounts are not truly anonymous, either. Even if you don't provide your real name when signing up, they can capture your IP address and track you through your ISP if necessary. But again, a court order would be needed.

### Other Considerations

It's much more likely that you or a family member will reveal your physical location the old-fashioned way -- by just blurting it out. Kids who chat or play online games should be reminded often that they should never reveal any personal information, including their last name, phone number or home address. And of course, when you make an online purchase, you're explicitly providing your home address to the merchant. (Do they have a privacy policy that ensures that they won't sell your digital soul to third parties?)

And then there are the [all-too-frequent data breaches](#), which have the potential to reveal all kinds of personally identifying information to the curious and malicious. Oh, and if you have any malware on your system, all bets are off. Those things are designed to violate your privacy.

###

## Scam Alerts

These are actual text messages sent to my cell phone, starting in December.

Your Netflix account will be locked because your payment was declined [do31r.com/Rgpz2r...](https://do31r.com/Rgpz2r...)

Hi George, FedEx is delivering your order today! To verify delivery address, please fill in your details here now >> [gx27o.com/zQ09Ql...](https://gx27o.com/zQ09Ql...)

You have (1) message from AT&T, visit [qb20j.com/d75QE86...](https://qb20j.com/d75QE86...)

George, you have been accepted for our COVID relief program. You are now eligible to earn \$1,472 per day. [Ow19w.comllvjB...](https://Ow19w.comllvjB...)

Hey George! This is Dave from DMV, you kept your record clean which means you get \$600 from us >> Claim here [xy17x.com/5ziM1B7...](https://xy17x.com/5ziM1B7...)

Due to the pandemic, Netflix is giving everyone a free 1-year subscription to help you stay at home. Get yours here [jg09s.com/F8eegQB...](https://jg09s.com/F8eegQB...)

USPS Update: George, Parcel ID-HW9427 is pending delivery in our warehouse. To avoid additional fees, please confirm delivery time: [uv07p.com/j1aMQPE...](https://uv07p.com/j1aMQPE...)

UPS: parcel 1z70189 notice: on the way! Check> [j9fvr.info/wPNLdm2...](https://j9fvr.info/wPNLdm2...)

## \*\*\*\*\* SOFTWARE and HARDWARE \*\*\*\*\*

### Protect Your Computer Against Power Outages

By Matt Batt, Past President  
The Computer Club

The two main causes of damage to computers, TVs, modems, and other sensitive electronics are a sudden loss of power and power fluctuations. Basic power strips do not protect your PC from any sort of electrical fluctuations; surge protectors can protect against power surges, but they offer no protection against drops in line voltage or loss of power.

To protect your computer against power outages or voltage fluctuations, you need a battery backup. UPS (Uninterruptible Power Supply) units are basically surge protectors that contain a battery inside. In the event of a power failure, your computer will seamlessly switch over to battery power and continue to run. This gives you time to shut down your machine without any damage.

Many UPS units come with software that can detect when the unit switches to battery power and shut down automatically in your absence.

There are many different UPS offerings on the market. There are small units that can keep a desktop computer running for 5-10 minutes or longer, more expensive units that can keep multiple computers running for hours.

The most important step in choosing a UPS is to buy one that has enough power to give your computer system enough time to shut down properly. While it is possible to calculate the power usage of a computer system by analyzing all of its components, for purposes of this article we can estimate the requirements of a typical computer user in our club.

UPS systems are rated VA (Volt-Amperes). Ignore how it is calculated, but a typical low-end desktop needs a UPS rated at about 480 VA while a high-end computer with a high-end video card would need a UPS rated as high as 1200=1500 VA.

*Two types of UPS units have an application to home electronic systems.*

The least expensive is a Standby UPS. This type of unit charges its battery and waits. When the power cuts off it will automatically switch to the battery for backup power. The switch takes milliseconds and is fast enough so that most electronics do not shut down.

For a higher cost, you can get a unit with Automatic Voltage Regulation (AVT) that corrects power fluctuations without switching to battery power. This feature protects you from instabilities in line voltage often experienced in lightning storms.

*There are a few other considerations to note.*

Some units include software for your computer that senses when the UPS switches over to battery power and can automatically initiate the shutdown process.

UPS units generally have a mix of power/surge protected and surge protected only outlets. Make sure that there are enough outlets for your needs.

Some UPS units include surge-protected/filtered ports for your Ethernet and Coax cables. Personally, I don't use these as I've had

*Continuation from page 5.*

Gran Torre Santiago is 980 feet high. Completed in 2012, it is made up of 64 high floors and six basement floors. The building was designed by César Pelli, an Argentinian architect. Together with two hotels, two office towers, and the largest shopping mall in Latin America, the Gran Torre Santiago forms the Costanera Center complex. The 61st and 62nd floors of the skyscraper have an observation deck known as the Sky Costanera that offers a 360 degree view of Santiago.

The Carlton Centre is the tallest building in **Africa**. Located in Johannesburg, South Africa, the building is 740 feet high. The skyscraper has 50 floors that house both offices and shops. Completed in 1973, the Carlton Centre was once the tallest building in the Southern Hemisphere. 46% of the floor area of the Carlton Centre is below the ground level. Together, with the Carlton Hotel, the two buildings form the Carlton Centre Complex. The Carlton Centre and the Carlton Hotel are linked by below-ground shopping center, with over 180 shops.

The Long Duration Balloon (LDB) Payload Preparation Buildings are the tallest buildings in **Antarctica**. These two identical buildings are 49 feet high. They are located in McMurdo Station City, a research center on the southern tip of Ross Island, in Antarctica. Completed in 2005, the buildings are part of a United States Research Centre, operated by the National Science Foundation (NSF). The LDB's are moveable buildings built on skis placed on a berm.

*Found on [www.worldatlas.com](http://www.worldatlas.com).*

problems with ethernet cable performance degrading through a UPS.

Be sure to get units that have user-replaceable batteries. UPS batteries last 3-5 years. When a battery fails, you'll either need to buy batteries or buy a whole new unit.

I've used Cyberpower and APC UPS units and they all worked as advertised. The two units from Amazon both have shutdown software and replaceable batteries. The APC is rated at 500VA and costs \$55.00. It has 5 outlets with Battery backup and two with just Surge protection.

It's the model I use on most of my computers and TVs. The Cyberpower has AVR, is rated at 1000VA, and costs \$109.00. It has 5 outlets with Battery backup and four with just Surge protection. I use one like it for my main computer, Internet modem, router, and my phone system.

Be careful out there! Think about having a UPS system on your computers, TV, home theater system, and even your phone system to prevent damage caused by power surges and power loss.

From the newsletter of [www.scccomputerclub.org](http://www.scccomputerclub.org), [mattbatt@gmail.com](mailto:mattbatt@gmail.com).



## Modern Television Technology

By Jeff Wilkinson, President

Sun City Summerlin Computer Club, NV

After a recent class on "Getting the Most From Your Roku" and in preparation for a March General Meeting update on "Cutting the Cord" I reflected on how different television viewing is today. Growing up in San Francisco, my family had just a few choices for television viewing, all over the air, and received with an antenna either mounted on the roof or rabbit ears that sat on top of the huge console. I'm sure we all remember the gyrations we went through when using rabbit ears in an attempt to receive a stable snow-free and ghost-free picture! And, of course, the drudgery of walking over to the TV to manually change the channel.

How times have changed, now we change channels from our favorite viewing spot and control source, volume, channel, and even record our favorite shows!

Today, we watch TV on smartphones, tablets, computers, and television sets in various resolutions. We stream to TVs using different devices like Roku, Fire TV Stick, and Android boxes, and we do it in a multitude of formats.

Many years and millions of dollars have been spent to build a streaming infrastructure capable of on-demand and live streaming to a myriad of different devices and configurations. The Internet wasn't set up to do this – top quality video in such a large scale according to said streaming media consultant and expert [Dan Rayburn](#). Streaming isn't a static medium like TV, and our on-demand consumption pattern requires



## Penguin Platform

By “Free John” Kennedy, Apcug  
Advisor, Regions 3 and 6/7

### A BEGINNER’S GUIDE TO NAVIGATING THE LINUX

**FILE SYSTEM** – As a new Linux user, one of the first skills that you need to master is navigating the Linux file system. These basic navigation commands will get you up to speed. Read this article from *Red Hat* to learn which ones they are. <https://red.ht/32C9lnz>

### HOW TO PERFORM MINIMAL INSTALL OF UBUNTU

– You can now install Ubuntu without unnecessary software. You’ll learn the steps to use the minimal install option at this PureInfoTech webpage.

<https://bit.ly/34HvBxD>

### 7 LINUX PORT SCANNERS FOR ADMINS AND

**ENTHUSIASTS** – Port scanners are tools that help users identify open ports on a computer network. Admins can use them for reviewing security policies and monitoring network services.

Plus, an abundance of Linux port scanners makes it easy to discover sensitive network information. In this guide, you will be introduced to some of the best port scanners available for Linux users. Users just starting out can use them to gain hands-on experience with network security. From *MakeTechEasier*:

<https://bit.ly/2X1zNFn>

video to travel through lots of steps as it’s formatted for the final destination device.

If you look at some of the parts of the required process of streaming a live event, it is a complicated and involved process. First, you must capture the event, then convert the file format and maybe add a content protection scheme or ad insertion for on-demand revenue models and, finally, formatting for delivery through the Internet to a multitude of devices.

According to Mr. Rayburn, it’s a lot more complicated. There’s no standard for encoding, so video files need to be “wrapped” differently for every platform they’re delivered to; files are wrapped differently for [Roku](#) than they are for a desktop browser, a smart TV, or an Android or iOS device. A single video file could be wrapped 20 times or more depending on the devices to which it’s being delivered. Enjoying video on a powerful computational device such as Xbox or PlayStation is different than streaming to a device with less memory and computational power such as a Fire Stick. The size of the video file segments must be adjusted as well as the metadata payload. And we have begun to take for granted that the video we desire will be available in 720, 1080p, or even 4K quickly and reliably when and where we want it. Video streaming is a whole new frontier to be developed and as the deployment of streaming options continually expands, so must the technology and computing power needed to reliably deliver it.

Just a little background as to what is involved in streaming content as we all anxiously look for ways to improve our television viewing experience.

Reprinted from the February 2020 issue, Gigabyte Gazette,  
[www.scscc.club](http://www.scscc.club), [pres.scscc@gmail.com](mailto:pres.scscc@gmail.com).

\* \* \* \* \* BITS and PIECES in the NEWS \* \* \* \* \*

**Editor’s Note:** To continue reading the following articles, you may copy the long URL at the end of the article and enter it into a web browser or click on the URL in the web version of this newsletter.

### Predicting risk of spinal fracture using bioengineering

By Dr Hossein Mokhtarzadeh, University of Melbourne  
Professor Mary L Bouxsein, Assistant Professor Dennis Anderson  
and Brett T Allaire, Harvard Medical School

Researchers have developed a first-of-its-kind predictive tool for spinal fracture in people who have osteoporosis, including activities and spinal joints that carry higher risk.

The World Health Organization has recently named the next ten years as the “[decade of healthy ageing](#)”. But the global COVID-19 pandemic may hamper this goal, as reduced movement due to social distancing has the [potential to negatively impact our physical fitness](#), leading to severe muscle and bone diseases. One of the biggest health issues during ageing is osteoporosis, named a “*silent bone disease*” since there are not many symptoms visible to the naked eye.

## **\* \* Jokes Stolen from Everywhere \* \***

### **HOW TO START A FIGHT!**

I took my wife to a restaurant. The waiter, for some reason, took my order first. "I'll have the rump steak, rare, please." He said, "Aren't you worried about mad cow?" "Nah, she can order for herself."

And that's how the fight started...

### **HUNTING**

A big-game hunter went on a safari with his wife and mother-in-law. One evening, while still deep in the jungle, the Mrs awoke to find her mother gone. Rushing to her husband, she insisted on them both trying to find her mother. The hunter picked up his rifle, took a swig of whiskey, and started to look for her. In a clearing not far from the camp, they came upon a chilling sight: the mother-in-law was backed up against a thick, impenetrable bush, and a large male lion stood facing her. The wife cried, "What are we going to do?" "Nothing," said the hunter husband. "The lion got himself into this mess, let him get himself out of it."

### **HOW TO START A FIGHT!**

My wife and I were sitting at a table at her high school reunion and she kept staring at a drunken man swigging his drink as he sat alone at a nearby table. I asked her, "Do you know him?" "Yes", she sighed, "He's my old boyfriend. I understand he took to drinking right after we split up those many years ago, and I hear he hasn't been sober since." "My God!" I said, "Who would think a person could go on celebrating that long?"

And that's how the fight started...

## **Bone fracture and its consequences**

The human adult skeleton comprises nearly 210 bones that form the foundation of our body. Structural defects, particularly in the spine, can lead to fractures that result in chronic pain, disfigurement, reduced quality of life, and increased risk of dying. Bone density scanning by dual-energy x-ray absorptiometry (DXA) is routinely used to identify individuals at high risk of bone fracture.

Continue reading at <https://pursuit.unimelb.edu.au/articles/predicting-risk-of-spinal-fracture-using-bioengineering>.

APCUG, **Tech for Seniors**, via Zoom, is a weekly event on Monday mornings. The session begins at 11:30 a.m. EST for a half-hour of "social time" and at noon, the actual meeting begins and is locked so no one can interrupt the speakers.

The meeting ID is **526-610-331** (there is no password) and you'll be placed in a waiting room and then admitted.

Here is a link to previous episodes: [\(132\) Ronald Brown – YouTube](#).

## **Microsoft: Pluton Chip Will Bring Xbox-Like Security to Windows PCs**

By [Ryan Whitwam](#)

Microsoft hopes to improve PC platform security, and it's turning to CPU manufacturers to help it do that. The Windows maker has [a new security chip design called Microsoft Pluton](#), and it's probably coming to your next PC whether you want it or not. Intel, AMD, and Qualcomm are working to make Pluton part of their upcoming designs, which should make PCs more difficult to hack, but it also bakes Microsoft technology into your hardware.

Microsoft says it started working on Pluton to address the troubling trend of CPU-based attacks like Spectre and Meltdown. Currently, many Windows PCs have a Trusted Platform Module (TPM), which is a separate chip someplace on the motherboard that the CPU uses to secure hardware and cryptographic keys. However, you can purchase expensive circumvention kits that physically tap the signal between the CPU and TPM to extract privileged data. Hypothetically, Pluton should block such attack vectors because it's part of the CPU.

Devices running on CPUs with the Pluton module should be much harder to hack in the same way the Xbox One was harder to hack than previous versions of the console. That's actually where Microsoft took its inspiration. The Xbox has an integrated security module that makes it harder to play pirated games. There are plenty of arguments against that sort of heavy-handed DRM, but Microsoft's engineers learned a great deal about security strategies from the Xbox. Bringing that know-how to the PC could solve a lot of problems... and maybe introduce a few new ones.

Read more at [www.extremetech.com/computing/317512-microsoft-pluton-chip-will-bring-xbox-like-security-to-windows-pcs](http://www.extremetech.com/computing/317512-microsoft-pluton-chip-will-bring-xbox-like-security-to-windows-pcs).

## Odds and Ends

### History of Computers: A Brief Timeline

By [Kim Ann Zimmermann - Live Science Contributor](#)

**2016:** The [first reprogrammable quantum computer](#) was created. "Until now, there hasn't been any quantum-computing platform that had the capability to program new algorithms into their system. They're usually each tailored to attack a particular algorithm," said study lead author Shantanu Debnath, a quantum physicist and optical engineer at the University of Maryland, College Park.

**2017:** The Defense Advanced Research Projects Agency (DARPA) is developing a new "Molecular Informatics" program that uses molecules as computers. "Chemistry offers a rich set of properties that we may be able to harness for rapid, scalable information storage and processing," Anne Fischer, program manager in DARPA's Defense Sciences Office, said in a statement. "Millions of molecules exist, and each molecule has a unique three-dimensional atomic structure as well as variables such as shape, size, or even color. This richness provides a vast design space for exploring novel and multi-value ways to encode and process data beyond the 0s and 1s of current logic-based, digital architectures."

[[Computers of the Future May Be Minuscule Molecular Machines](#)]

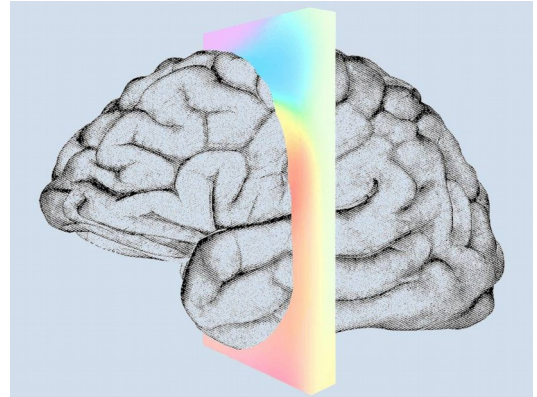
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[www.livescience.com/20718-computer-history.html](http://www.livescience.com/20718-computer-history.html).

### Elon Musk's Neuralink reportedly gives monkey mental game playing power

By [Ewdison Then](#) - Feb 1, 2021

Elon Musk is both famous and infamous for his mind-blowing ideas and enterprises, but one that's almost literally so is the idea of hooking up brains to computers to allow the control of other computers using just brainpower. To prove that he's actually serious, Musk even founded the startup Neuralink to research and develop the technology to make that happen. That startup has reportedly hit an important milestone, according to Musk, an achievement that includes implanting a chip on a "not unhappy" monkey in order to let it play a video game using mind control.



The actual goal of Musk and Neuralink is to cut out the middleman when it comes to interfacing with external computers. Musk says that humans today are practically like cyborgs because of their use and dependence on devices like phones and computers. That said, the connection between humans and computers, namely fingers or voice, are low-bandwidth and slow. Neuralink, therefore, wants to create a neural brain-to-machine interface that would make that almost as fast as a thought, quite literally, too.

That would, of course, require some sort of implant, and Neuralink's design involves a chip that uses tiny wires to connect to the brain itself. Naturally, the company's first experiments involve animals, from pigs to monkeys, and its CEO, none other than Musk, was only too proud to reveal their latest achievement.

Finish this article at [www.slashgear.com/elon-musks-neuralink-reportedly-gives-monkey-mental-gameplaying-power-01657659/](http://www.slashgear.com/elon-musks-neuralink-reportedly-gives-monkey-mental-gameplaying-power-01657659/).

### Xiaomi device will charge devices from across a room

by Peter Grad , Tech Xplore, January 29, 2021

The multinational electronics company Xiaomi announced the development of a new power transmission system that can charge a cellphone from across a room without any wires or charging pads.

The Mi Air Charge Technology, still in development, is capable of providing 5 watts of power to a [device](#) around 16 feet away. Transmission is unaffected by physical objects between transmission and receiving points.

As a company blog posted on its web site stated today, "The core technology of Xiaomi's remote charging lies in space positioning and energy transmission."

The charging base is composed of an array of 144 antennas that utilize beamforming to send millimeter-wide waves directly to a cellphone or other device. Beamforming creates [wireless signals](#) that are aimed towards a specific device to achieve a faster, more reliable and more direct connection. Traditional wireless signals disperse waves to reach multiple devices over a wide area.

Devices such as smartphones capture the waves and convert them into power. Beacon antennas on the devices to be charged emit low-power signals allowing the charging station to pinpoint their location. A 14-antenna receiving array captures and converts the waves into power. Multiple devices can be charged simultaneously.

Miami says it hopes to soon broaden the reach of Mi Air Charge Technology. "In the near future," Xiaomi says, its "self-developed space isolation charging technology will also be able to work with smart watches, bracelets and other wearable devices."

"Soon our living room devices, including speakers, desk lamps and other small smart home products, will all be built upon a wireless power supply design, completely free of wires, making our living rooms truly wireless," Xiaomi says.

You may continue at <https://techxplore.com/news/2021-01-xiaomi-device-devices-room.html>.

## As Robots Fill the Workplace, They Must Learn to Get Along

[Will Knight](#), 02.02.2021

Warehouses, factories, and hospitals are deploying more robots, often made by different companies. That can lead to communication problems.

So many robots work at Changi General Hospital in Singapore that until recently it wasn't uncommon to find two delivery bots sitting in a hallway or outside an elevator in a standoff.

Such impasses used to happen "several times a day," says Selina Seah, who directs the hospital's [Center for Healthcare Assistive and Robotics Technologies](#). Unsure how to move around another object, or human passersby, the [robots](#) would simply freeze, each waiting for the other to move first. "The humans would have to actually go down and pull them apart," she says.

Seah says Changi has about 50 robots, from eight manufacturers. As at other hospitals, robotic systems assist professionals with delicate surgical procedures and guide patients through surgery and rehabilitation exercises. At Changi, dozens of mobile robots also perform tasks like cleaning or delivering medication, supplies, and patient notes. But they're not good at communicating with one another.

The standoffs at Changi offer a glimpse of a future problem for many businesses, as multiple robots, from different makers, struggle to navigate within the same busy spaces. Besides health care, robots are rapidly being adopted in manufacturing and logistics and are starting to appear in stores and offices.

You can finish the article at [www.wired.com/story/robots-fill-workplace-must-learn-get-along/](http://www.wired.com/story/robots-fill-workplace-must-learn-get-along/).

\*\*\*\*\* CLUB and REGIONAL NEWS \*\*\*\*\*

### RCSI

No, we haven't closed. Our usual meeting place has closed to outsiders, but **we are practicing social distancing online**. We have used Zoom and Jitsi for our planning and monthly meetings. The planning meetings are held the first Tuesday of each month, at 7:00 pm and are open to any member. A link will be emailed to members, before our next planning meeting. ANY CLUB MEMBER MAY ATTEND and voice their opinions about club operations.

Rob Truman gave us an excellent presentation on Internet security and Google tracking.



**Geezer Tech**  
Chandler, Arizona

Rob's website, <https://geezertekaz.com>

### **Online During Covid**

#### **Our Usual Meeting Place**

##### **St John's Meadows at**

Johnsarbor Drive, is on the left, past Clinton Avenue, when going West on Elmwood Avenue. The opening in the white fence is Johnsarbor Drive. At the "T", turn right. The meeting is in the first building on the left – **Briarwood**.

Our meeting place can change. Please check our website before each meeting. **[www.rcsi.org](http://www.rcsi.org)**