

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.

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 friend.**

Become a Member

Go to our website, 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.

Monitor

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, provided they are unaltered. A courtesy copy may be emailed to our author or Monitor editor.

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



Vol. 37, No. 12

Rochester, NY

December 2019

NO December meeting, see you January 14, 2020

Tuesday, December 10, dinner at St John's Meadows, 5 pm

Tuesday, January 14, Video Night
Life Saving Devices, Inventions From the Past
 presented by Tony Dellelo

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Club and Regional News

Big changes coming to media, entertainment, newspapers

Authors: Michael Shalkey, Computer Tutor and Troubleshooter
 and John Weigle, Editor, Channel Islands PCUG, CA

Things are changing quickly in the world of media, entertainment, and newspapers, Michael Shalkey said at our last meeting.

Lawyers, big corporations, money and the Internet are behind the changes, he said.

TV networks used to broadcast over the air using signals of a certain frequency. The broadcasters had to pay a fee for the frequencies, and



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

The RCSI 'Monitor' newsletter can be found in some 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 Pcloud storage at <https://tinyurl.com/tonydel-rcsi>. Also includes presentation slides and articles too large for this newsletter.

Some Past Presentations:

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
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
Drones and Their Many Uses
Gifts and Gadgets for the Holidays
Video Night presentations

they charged businesses for advertisements. Anyone could put up an antenna and get the broadcasts as free TV.

When cell phones came in, fewer people were getting over-the-air signals. The government took some of the frequencies back and is selling them to cell phone carriers. On June 12, 2009, they went from analog to digital, a different type of wave form.

You may not have noticed then, because most of us are getting our TV from cable or satellite providers. Those providers pay TV channels to be included in their package. You have seen disputes for years about these fees.

Recently CBS and Direct TV fought over the amount that CBS would be paid to be on the Direct TV service. For a few weeks you couldn't watch CBS, but they resolved it (for now) and you can now watch CBS like normal, but I think the death of TV, as we know it, is coming soon. CBS did this because, although it came out with CBS All Access in 2014, it is now ready to really push it with exclusive streaming-only content.

That time when you couldn't watch CBS was the genesis for this presentation. Here is how to watch CBS on your TV using an app for your streaming box.

All of us hate the amount of money we spend each month for TV. Many have added boxes to watch content from the Internet. Some have already become cord-cutters and get their TV only that way.

Definition first. Sometimes the word streaming means following the TV schedule, just over the Internet, sometimes it is used for on demand, which means I want to watch something, and I want it now.

Live TV is now viewable using the LoCast app. It is very, very interesting. It's a non-profit that can legally pick up signals for free. It can put its own ads over the other ads. Because it's a local service, the programs available differ from area to area.

Some of you may remember a similar service a few years ago called Aereo, that had antennas in New York that received over-the-air signals and allowed subscribers to view those signals. Lawsuits went all the way to the Supreme Court, which ruled against them partly because they were reselling the content without permission of the copyright owners. The hope for LoCast is that, as a nonprofit, it is not selling anything. There will be lawsuits, but one of the supporters of LoCast is ATT, which has donated generously to LoCast.

You can get LoCast with most of the boxes like Roku, FireTV and similar boxes — and even a smart TV. The on-demand services like Netflix, Hulu, Amazon Prime Video, and HBO Go, are also available on those boxes but they charge a monthly fee. These are becoming so popular that if you have never tried them, you probably will soon.

If you want to start a conversation, waiting in line at a store or bank, say, “I just got Netflix. What should I watch? You can't shut up for 10 minutes.” Toby Scott said to expect a fight over something that's recommended.

Many shows are exclusive, meaning they're available only on one of the services.

One of the people in the audience wants to watch TV at a louder volume than others in the room. He wants to have earphones. He can pair a device with his Bluetooth headphones to the Amazon Fire Cube

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

2020 Schedule

Saturday: 2/8

For Conference Description
& Registration Links, go to
apcug2.org/category/virtual-tech-conference
from 1 – 4 pm, EST

through settings or through the newer Roku boxes that have a headphone jack in the remote control.

Shalkey was showing two devices: Amazon Fire Cube and Roku version 3. The headphone jack in the Roku remote shuts the volume off on the TV and puts it in the headphones or earbuds you have plugged in.



The August 2018 TOE has the program on the Amazon Fire Cube including the voice activation and channel changing.

As you know, I like wine. My wife and I went to a wine event in Paso Robles. We can take as many pictures as we want on our phones and upload them to Amazon Photo. It's free. I then put those photos in their own folder. Now I can set the FireTV Cube to show the pictures in that folder and talk about them when friends come over.

For streaming services, the big three are Hulu, Netflix and Roku. The up-and-comers are HBO-Go, YouTubeTV, CBS All Access, and the new Disney Plus (launching in November).

With Netflix, Hulu and Amazon you can have profiles so you will be offered films that match your previous choices, he said. Some of the shows on these channels could not be sold to the big networks, he added.

A lot of the old favorite shows are being pulled back by the networks that broadcast them originally.

Q. Do you see the future as cord cutting?

Michael Shalkey: Yes. I think in the future no one will have home phones, newspapers and cable TV. The satellite and cable people are doing this to themselves. For people who are cutting the cord because of the cost it's going to be hard to decide what they want to keep and to be sure that cutting the other things are not more expensive than the bundle.

Q: If you get rid of the phone and TV what are you going to pay for Internet?

Michael Shalkey: It depends on where you are and what you need. Depending on where you live, you might not save much by cutting everything. When you are calculating, please do the math right. If you are already an Amazon Prime member, there is no cost for Amazon Prime Video. If you currently have Internet in your house (and who doesn't?), you can't really count that as an added cost in the cord-cutting scenario unless you are seriously thinking about getting rid of the Internet at home.

Q: I have a home with two TVs for two families and Wi-Fi for cell phones. What speed do I need to run effectively?

Michael Shalkey: It depends. I would not think of moving into a new home now and having less than 15 megabits per second. It really depends on your users. Music is already streaming. How many of you

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Planning Meeting

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

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.

have bought a music CD in the last year? How many of you have an AM radio (few said yes). Big producers have changed the music world. The TV world is not far behind and many changes have been made in music.

Q: I was watching a Prime movie, and there were commercials, which I haven't noticed before.

Michael Shalkey: It's their platform. I haven't seen them, but they can advertise their own shows, particularly before the movie (kind of like a movie trailer in a theater).

Q: Can we have more than one of such devices and listen to different things in different rooms?

Michael Shalkey: Yes. I can watch a movie on Netflix in the bedroom while my wife watches something else in the living room on her box. I don't think smart TVs are that smart. The manufacturers don't update the apps.

Q: How many options do you have and what do you pay for them?

Michael Shalkey: You pay for the Roku box but you don't pay to use it. I pay for Netflix, and I pay for Hulu and I'm a prime member of Amazon, but I don't count it as a monthly expense because I buy so much. I'd be saving a lot of money if I could get my wife to drop Direct TV, but she does like her Hallmark Channel.

Q: What about live sports and news reports?

Michael Shalkey: It depends on what you want and what the channel you want is doing. LoCast is live TV, but that is only the traditional over-the-air networks. It does not include ESPN, CNN or MSNBC.

Q: Do you find much overlap in the channels you get?

Michael Shalkey: Yes and no. Yes, different boxes get the same "channels" like Netflix, but I don't pay more per month for each device, so that's no problem. I don't see much overlap.

Comment: The Amazon Echo can also play radio stations, and if you have more than one they can be used as an intercom.

Michael Shalkey: You can also use them to make phone calls.

From the September 2019 issue, The TOE, www.cipcug.org,
jweigle@vcnet.com.



Tidbits of probably useless information

Bank robber John Dillinger
played professional baseball.

If you toss a penny 10000 times, it
will not be heads 5000 times, but
more like 4950. The heads
picture weighs more, so it ends up
on the bottom.

The glue on Israeli postage
stamps is certified kosher.

The housefly hums in the middle
octave, key of F.

If your eyes are six feet above the
surface of the ocean, the horizon
will be about three statute miles
away.

The longest word in the English
language, according to the Oxford
English Dictionary, is
pneumonoultramicroscopicsilicovo
lcanoconiosis. The only other
word with the same amount of
letters is
pneumonoultramicroscopicsilicovo
lcanoconioses, it's plural.

Only one person in two billion will
live to be 116 or older.

An ostrich's eye is bigger than it's
brain.

Mel Blanc (the voice of Bugs
Bunny) was allergic to carrots.

Cleo and Ceasar were the early
stage names of Cher and Sonny
Bono.

Al Capone's business card said he
was a used furniture dealer.

The very first bomb dropped by
the Allies on Berlin during World
War II killed the only elephant in
the Berlin Zoo

Part 1 of 2

Forty Years

President's Corner

By Greg Skalka, President
Under the Computer User Group, CA

There have been a lot of changes in the technology that affects our
everyday lives over the last 40 years. Personal computers, cell phones,
the Internet and web sites are just a few of the things we probably use
every day that were not around when our user group started. So many
technologies have improved so much since then, that our lives have been
forever changed. Wireless communications, small and powerful
batteries, robotics and automation and the ultra-miniaturization of
electronics have altered our world economy and our personal behaviors.
Our cars, homes, neighborhoods and workplaces have been transformed
in many ways. How we get our entertainment, find jobs, search for a
mate, order food, pay our bills and communicate with our friends and
family have been changed in ways we usually don't think about much.

A couple of recent events in my life have pointed out some of the
ways my life and lives of everyone I know have changed due to the
advances in technology in the last 40 years. I recently had to change
jobs, due to lay-offs at my longtime employer. In spite of the claimed
improved economy and employment situation, I was very concerned
about how long my job search might take, as I know there is age
discrimination in the workplace (good luck proving it, though). I also had
not had to look for a job in almost 20 years and found the employment
search landscape had changed considerably. While resumes are still
important, including key search terms in them is critical to getting
noticed by employers. Most of the searching and applying is now done
online, on company web sites and new job search sites like LinkedIn,
Indeed and Glassdoor. Even applying for state unemployment benefits is
best done online. California has its own job search web site, CalJOBS.
Job seekers must post their resumes on the CalJOBS site as a condition
of eligibility for unemployment compensation (though I believe it is
possible to mail them a resume for posting). Fortunately, due to some
old-fashioned networking with ex-coworkers now at other companies, I
was able to find new employment relatively quickly.

My son got married a few days ago. While a lot of young people are
not including marriage as part of their relationship plans, those that do
are involving more technology. While my son's wedding invitation did
involve a mailed card, most of the information and the RSVP capability
were on the web site it referenced. The boutonniere I wore as father of
the groom had real flowers but was held to my lapel by very small and
powerful rare earth magnets, rather than a pin.

Those born in the last 40 years have grown up with all this new
technology and have more easily adapted and accepted it. Some of us
older folks have had a harder time. That is a major reason why user
groups like ours are in decline. Young people see no need for
organizations geared towards helping learn and use new tech, leaving a
shrinking population of older users that still find them of value. The
only exceptions seem to be groups aimed at robotics and 'maker' tech,

Jere's Tech Tips

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

HOW TO FIND YOUR WINDOWS 10 PC HARDWARE AND SYSTEM SPECS –

Whether it's for troubleshooting or replacing a part, sometimes you need to know what's under the hood of your Windows 10 PC. Check out our guide on how to find your PC's hardware specs.

There will be times when you need to know what's under the hood of your computer. Maybe you want to install an NVMe M.2 SSD or add RAM to your laptop. You might need to know your Windows version or other system details to make sure you can run a software program. Or, maybe you need to troubleshoot a problem.

Whatever the reason, here's our guide on how to find full system specs of your Windows computer. Either by using utilities built into Windows 10 or using a third-party app.

Go to this Groovy Post web page and get the procedures with screenshots. <http://bit.ly/2JCkrRD>

**HOW TO CREATE DESKTOP
SHORTCUTS ON WINDOWS
10 THE EASY WAY** – Windows 10 still lets you create desktop shortcuts to applications, files, folders, and even websites. Desktop icons may a little out of fashion, but they're still useful as part of a nicely organized desktop.

This How-To Geek article to create a shortcut to an application: <http://bit.ly/2MZISuv>

which probably seem way beyond those just looking to solve their email and smart phone problems.

Our Past

In 1979, some San Diegans interested in new technology decided to form a group to help each other and collectively increase their knowledge in the new field of personal computing. In those days only the truly avid hobbyists pursued this interest. Institutional analog and digital computers had existed for some



H8 computer, no monitor, note the keypad

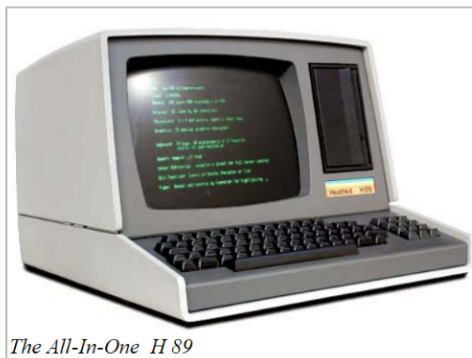
time, but it was the developments of the transistor, solid-state electronics and the integrated circuit that allowed the creation of computing devices that individuals could afford. These early digital computers were often initially available only in kit form, and this particular group favored kits made by the Heath Company, long a supplier of kits for amateur radios, test equipment, television and audio electronics.

The San Diego Heath User's Group (SDHUG), as they were originally named, was one computer. They met for a time in the Heathkit store in La Mesa. A computer enthusiast at the time found it difficult to learn about computers and



Inside the H 89

solve their own problems without a user group to help them. Remember that the commercial Internet was still a decade away. There were dial-up BBSes (bulletin board systems), but those required working terminal hardware and software and a sophisticated user. In those days, your display was a few rows of lights or if lucky, a green CRT. Input was by rows of switches or



The All-In-One H 89

perhaps a keyboard. Computer data storage drives were floppy and were both large in size (8 inch) and small in capacity (about a megabyte). Still,

Programs recommended by our members

How does **Avira Free**

Antivirus compare to Avast Free Antivirus? Both products are very similar and offer great sets of features. However, Avira is scoring lately as **#1 antivirus** in the independent tests, especially in the virus and malware detection and a low number of false positives.

On the other hand, Avira is much more aggressive in terms of up-selling to paid versions and the pop-up offers are extremely annoying. Of course, Avast is using them too, but not that frequently.

Avira has also recently started pushing a new product called **Avira Free Security Suite**, which combines all Avira free products – Antivirus, Phantom VPN (500 MB/month), Password Manager, System Speedup, Scout (browser) and Software Updater. Obviously, the whole free suite requires much more system resources, so we recommend staying with the basic Free Antivirus and adding the components you need.

Avast definitely offers more in terms of advanced features and tools like Home Network

Security for scanning router vulnerabilities, Browser Cleanup for scanning browser extensions, or Software Updater for scanning outdated software in your system.

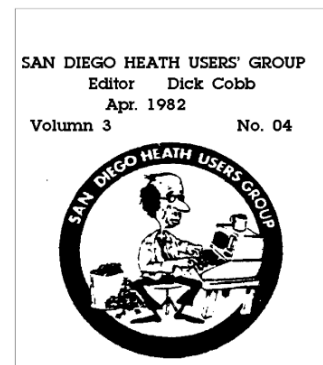
Avira is purely an antivirus, which isn't necessarily a bad thing. Both products offer an option to create a bootable disc, with the latest antivirus version to clean your system when it doesn't start.

these computers were useful, and our group's membership grew. We have a pretty good collection of our group's newsletters archived on our website, going all the way back to the June 1980 issue, with a few missing here and there from the early years. I started going through our old newsletters last fall, with the intent of writing up what history I could from the information in those first issues. While we have two charter members presently on our membership list as active members (and also serving as board members), I was barely part of that first decade of operation. I did not join the group until March of 1989, and so wanted to research what went on in those early years before I found out about the group. I wrote three columns on my interpretation of our first decade of operation; these appeared in our August, September and October 2018 newsletter issues. Unfortunately, I only got up to January 1983 in my historical review. I'd hoped to finish writing up at least that first decade before our 40th celebration, but with luck I'll find an opportunity to continue later this year. Those early newsletters revealed that a lot has changed over the years but a lot has also stayed the same. Our initial membership count was 27, and our cost of membership was \$10. Jim Quinn was the founding President; he is currently serving as our Vice President. Though Jim left the group for a while during his working years, that he has come back once retirement provided him the time to join and serve on our board again is remarkable. Mike Trempe, our present Treasurer, is another Charter member of SDHUG still involved and serving after 40 years!

One of Jim's reports from an early issue said, "Having received no other nominations for club officers, the following is the ballot we will vote on at the September meeting." Sound familiar? In those early years they also had elections of officers with no contested positions. Even worse than today, the board members sometimes served double duty, as that slate included a President, Vice President/Treasurer, Secretary/Membership, Librarian, Editor and one Member at Large (six board members in total).

Like today's offerings on our website, the group also had software it provided as a service to its members. In 1981, it included games, personal accounting and income tax software and programming and printing utilities. All these benefits must have been enticing to the computer geeks of those days, as the September 1981 newsletter listed the addition of eight new members from the previous month (dues were \$12 per year at the time). In that first decade of SDHUG, membership swelled to a high of around 175, but declined to around 55 by the time I joined in 1989.

From the June 2019 issue, Drive Light, www.uchug.org,
president@uchug.org.



Some Interesting Websites and Internet Finds

Steve Costello,
scostello@sefcug.com

*How To Reinstall Windows
Without An Installation Disc*
<https://askleo.com/how-to-reinstall-windows-without-an-installation-disc/>

This question comes up all the time at user meetings. Leo Notenboom provides several excellent answers. Basically everything he says in the post boils down to being ready before the need comes up.

*Is Linux Really Immune To
Viruses and Malware? Here's the
Truth*

<https://www.leetvofficial.com/is-linux-really-immune-to-viruses-and-malware-heres-the-truth/>

Linux is becoming more popular now, especially with support for Windows 7 coming to an end. Before you switch you should be aware of the virus and malware issues.

*How (And Why) To Use Google's
Chromebook Simulator*
<https://www.howtogeek.com/439256/how-and-why-to-use-googles-chromebook-simulator/>

If you are like me and considering buying a Chromebook, you should check out this post.

*How To Optimize Your Google
Drive Storage*
<https://www.online-tech-tips.com/google-softwaretips/how-to-optimize-your-google-drive-storage/> If you use Google Drive storage (and if you have a Google account you should) it should be optimized. This post explains how to optimize the storage.

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

Tech Front News

from Bob Rankin, 10/9/19

Here's a fun read about [things you might think are obsolete](#), but really aren't. Pagers, faxes, cassette tapes, and other gadgets still have a place in modern society.

Do people really want foldable phones and laptops? Samsung and Microsoft are betting you will. At an event on October 2nd, Microsoft has introduced two new foldable devices, the [Surface Neo and the Surface Duo](#), directly competing with Samsung's Galaxy Fold phone. Both will go on sale in about a year.

If you have one of the older Roku streaming devices, [you might lose access to Netflix on December 1st](#). Netflix has not been terribly precise about which models are on the naughty list, but here's how you can tell. If your Netflix app does NOT have the (very annoying) "autoplay next" feature, you'll need to upgrade.

For over a year, Google has been teasing a feature of Google Photos that can [colorize old black and white pictures](#). Now it appears the Colorize feature is available in beta. Colorize uses artificial intelligence to identify elements in your black and white photos, and apply the appropriate shades of color.

Security experts urge the use of "two-factor authentication" to prevent unauthorized access even if your username and password are compromised. Now the FBI is warning [that might not be enough](#), because attackers can trick a user into disclosing a multi-factor authentication code. The FBI advises the addition of "biometrics or behavioral information such as time of day, geolocation, or IP address" to login protocols.

After paying a ransom of about \$700, a German ransomware victim [decided to hack them back](#). By hacking into the attacker's command and control server, Tobias Frömel was able to generate decryption keys for almost 3000 other victims and notify them.

The [Qnano Glove](#) is a wearable glove designed to treat hand osteoarthritis, as an alternative to physical therapy and medications.

<https://www.foxnews.com/science/mystery-scrolls-julius-caesars-read> Researchers are hoping to use an X-ray beam to virtually unwrap and read the contents of 2000-year-old scrolls that were buried and charred during the eruption of Vesuvius. The Herculaneum Scrolls, purportedly from the family of Julius Caesar, cannot be handled, but it is hoped that x-ray beams and special software can detect the carbon ink on them.

A headline at The Verge says "MICROSOFT DOESN'T THINK WINDOWS IS IMPORTANT ANYMORE." Not exactly true, but we seem to be heading in that direction. "The operating system is no longer the most important layer for us," Microsoft CEO Satya Nadella said recently. Instead, the [company will focus on Microsoft Graph](#), a collection of programming interfaces that connects devices to Microsoft's cloud

Penguin Platform

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

HOW TO BACK UP YOUR LINUX SYSTEM – Don't risk data loss. Back up your valuable data from the Linux command line. How-To-Geek's article uses the rsync command for this, and HTG even found some nice optional graphical interfaces for it.

There are many ways to accomplish making a backup copy of your files. HTG wanted to show us a robust, flexible, and reliable way to protect our data. They chose rsync because of its well-respected algorithms that calculate the differences between files in the source directory and the target directory. Only the differences between two versions of a file are transferred, not the whole file if that can be avoided.

Read more at
<http://bit.ly/2Sj7GOR>

WHERE TO PLACE YOUR ROUTER FOR THE BEST WI-FI SPEEDS – If your home Wi-Fi seems slow in some rooms, your router might not be in the best location. Wi-Fi doesn't travel far—especially through metal and concrete. So, it's important to determine the best place for your router.

This How-To-Geek article gives solid advice on Router Placement.
<http://bit.ly/2Sm3q0K>

services. Rough translation, "We'll make our money by selling subscriptions to cloud services, instead of one-time software purchases."

Kaspersky researchers say that newly-discovered Reductor malware "compromises encrypted web communications in an impressive way," enabling hackers to [spy on encrypted web traffic without being detected](#). Poisoned software downloaded from "warez" (pirated software) sites is the problem, they say. To prevent the problem, "Only install what you need, and only get your software directly from the vendor, developer or official market store."

Remember the [Essential Phone](#)? I wrote about it back in 2017, but apparently it never gained much traction. Now Andy Rubin, inventor of the Android operating system and CEO of Essential Products, has unveiled a [new handset with a radical design](#). It's long, slender, comes in bright colors, and will feature a new user interface to accommodate the "radically different form factor."

The [Nokia 2720 Flip](#) isn't a smartphone. Sort of. The new flip phone has a tiny 2.8-inch screen and an old-school T9 keyboard. But it can do WhatsApp, email and Google Maps.

#

Very Large Array (VLA)

by George Harding, Treasurer
Tucson Computer Society, AZ

The VLA is a physical structure about 50 miles west of Socorro, New Mexico. It consists of 27 large disk radio telescopes in a "Y" arrangement, a Control Center and various auxiliary structures. The



purpose is to capture and analyze radio waves being emitted from space to create meaningful pictures and data about outer space objects. It was originally created in 1980 and has been significantly improved since then. It is used by astronomers and others as needed in their respective occupations.

Each disk is massive, weighing 220 tons and is 82 feet in diameter and 94 feet high. It can rotate and tilt so as to aim in any given direction. Any disk can be moved along special railroad tracks. Since each disk presents such a large surface, they are subject to damage in high winds.

**** Computer Jokes ****

Stolen from Everywhere

Once upon a time, a computer programmer drowned at sea. Many were on the beach and heard him cry out, "F1! F1!", but no one understood.

F1! = Help!

10 Laws of Computing

1. If you have reached the point where you really understand your computer, it's probably obsolete.
2. When you are computing, if someone is watching, whatever happens, behave as though you meant it to happen.
3. When the going gets tough, upgrade your computer.
4. The first place to look for information is in the section of the manual where you'd least expect to find it.
5. For every action, there is an equal and opposite malfunction.
6. To err is human ... to blame your computer for your mistakes is even more human, it's downright natural.
7. He who laughs last, probably has a back-up.
8. The number one cause of computer problems is computer solutions.
9. A complex system that doesn't work is invariably found to have evolved from a simpler system that worked just fine.
10. A computer program will always do what you tell it to do, but rarely what you want it to do.

In this event, the disk is parked pointing upward to present the least surface for the wind.

Each leg of the "Y" formation contains nine disks, which can be rearranged in several ways. The configuration changes periodically from fully spread out along the "Y" to fully compressed and to two intermediate designs. The effect is to widen the aperture of the telescopes or to narrow them.

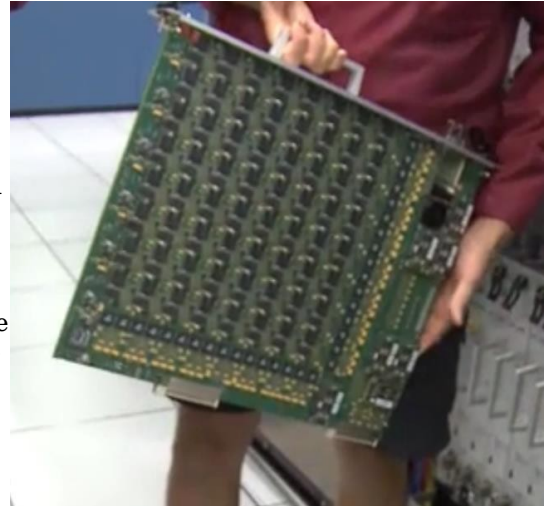
The signals from each disk are transferred by fiber optic cables to a system which translates the analog data to digital. The process is quite complicated but is performed by a supercomputer called the correlator. Each of the boards comprising the correlator contains some 180 ICs, each with from 250 to 600 pins. VLA personnel state that it is five times faster than the fastest general purpose computer in the world!

Anyone can access the data produced, for whatever purpose desired. The VLA can be requested for a particular job needed by an astronomer by submitting a proposal. If approved, the proposal is translated into a script for controlling the array for a specific period of time. After completion, the results are given to the requestor and after some months, made available to the general public.

The facility is open to the public and a visitor center is available. Tours are provided from time to time.

The site of the VLA is the plains of San Augustin, selected to be as far away from other electronic emanations as possible. Cell phones, for example, emit a radio signal several hundred times louder than the faint signals from outer space. Visitors are asked to keep their phones in airplane mode to mask these signals. In addition, the plains are surrounded by mountains which help to shield the array from man-made radio noise. For more information see [tps://public.nrao.edu/telescopes/vla/](https://public.nrao.edu/telescopes/vla/). The Very Large Array is owned and operated by the National Radio Astronomy Observatory.

From the July 2019, www.aztcs.org, actuary110@yahoo.com.



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 go to www.rcsi.org/newsletr.htm and click on the URL.



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AI in agriculture: Helping farmers and creating jobs

posted October, 2019

(BPT) - Artificial intelligence is transforming industries, and agriculture is certainly entering a new era thanks to these advancing technologies. AI has the power to help farmers do their jobs more effectively while also creating job opportunities.

A prime example is King Nelson, a formulations chemist for Syngenta, who recently helped develop a new herbicide. This required an in-depth series of tests that requires him to put together a list of all the products a grower might

use with it in a tank mix.

"It's not just other formulations," Nelson says. "You have to consider surfactants, fertilizers and additives like crop oil, hard water and soft water. When you start thinking about all the possible combinations, you're looking at more than 1,000 of them. It's daunting."

Even if Nelson and his team worked 24 hours a day, it would take months to determine whether their new herbicide formulation is field ready.

The solution? Greensboro, North Carolina-based Nelson depends on Syngenta's research facility in Jealott's Hill, England, to make these tests possible. ARTEMIS (Automated Robot to Evaluate Millions of Interesting Solutions) is a robot that can run 1,500 experiments in a week. Those experiments arm Nelson with the information he needs to answer growers' questions on tank-mix compatibility.

The rest of this article can be read at <https://www.brandpointcontent.com/article/34014/ai-in-agriculture-helping-farmers-and-creating-jobs>

Artificial Womb



Artificial wombs are mechanisms that are used to grow an embryo outside of the body of a female. Could this be the future of reproduction for humans? Scientists at Cornell University have grown mice embryos in man-made, bubble shaped wombs.

This technology could bring hope to parents who before could not have children. It could also open the door for mothers to choose to have their babies outside their bodies, to avoid the stress of childbirth.

If and when artificial wombs become available, they are sure to be controversial. What are the moral and ethical implications of artificial wombs? What effect would being developed outside the womb have on the child?

For other articles on artificial wombs, go to https://www.futureforall.org/futureofmedicine/artificial_womb.htm

Ring doorbells leak users' Wi-Fi passwords in clear text

News comes amid mounting criticism of the Amazon-owned surveillance company


A flaw found in Amazon's Ring doorbells could allow hackers to intercept owners' Wi-Fi passwords in clear text during the initial setup phase, according to security researchers.

The vulnerability has since been patched following [Bitdefender's private disclosure](#) to Ring, but the researchers said it could have provided a platform for attackers to "mount a larger attack against a household network".

The issue – a vulnerability that was initially discovered on 20 June 2019 - lies in the connection between the smartphone app and the Ring device. Data transmission takes place over the HTTP protocol [instead of the more secure HTTPS](#).

The smartphone app sends the network details over to the Ring doorbell via an unprotected Wi-Fi network in order for it to connect to the residence's network and begin surveillance.

Read the rest of this article at <https://www.itpro.co.uk/internet-of-things-iot/34786/ring-doorbells-leak-users-wi-fi-passwords-in-clear-text>.



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Rogue Trend Micro Employee Sold Customer Data to Tech Support Scammers

By Wang Wei, November 7, 2019

Do you always feel uncomfortable trusting companies with your data? If so, you're not alone.

While companies do much to protect themselves from external threats, insiders always pose the highest risk to a company's data.

Unfortunately, when we say companies can't eliminate insider threat completely, cybersecurity firms, who are meant to protect others, are not an exception.

Cybersecurity firm Trend Micro has disclosed a security incident this week carried out by an employee who improperly accessed the personal data of thousands of its customers with a "clear criminal intent" and then sold it to malicious third-party tech support scammers earlier this year.

According to the security company, an estimated number of customers affected by the breach is 68,000, which is less than one percent of the company's 12 million customer base.

Trend Micro first became aware of the incident in early August 2019 when it found that some of its consumer customers were receiving scam calls by criminals impersonating its support employee, which initially led the company to suspect a coordinated attack.

But it wasn't. Read on to find out more at <https://thehackernews.com/2019/11/insider-threat-data-breach.html>.

New study suggests 'Pac-Man-like' mergers could explain massive, spinning black holes

RIT Associate Professor Richard O'Shaughnessy contributes to study in Physical Review Letters

ROCHESTER INSTITUTE OF TECHNOLOGY

Scientists have reported detecting gravitational waves from 10 black hole mergers to date, but they are still trying to explain the origins of those mergers. The largest merger detected so far seems to have defied previous models because it has a higher spin and mass than the range thought possible. A group of researchers, including Rochester Institute of Technology Assistant Professor Richard O'Shaughnessy, has created simulations that could explain how the merger happened.

In a new paper published in [Physical Review Letters](#), the researchers suggest that such large mergers could happen just outside supermassive black holes at the center of active galactic nuclei. Gas, stars, dust and black holes become caught in a region surrounding supermassive black holes known as the accretion disk. The researchers suggest that as black holes circle around in the accretion disk, they eventually collide and merge to form a bigger black hole, which continues to devour smaller black holes, becoming increasingly large in what O'Shaughnessy calls "Pac-Man-like" behavior.

"This is a very tantalizing prospect for those of us who work in this field," said O'Shaughnessy, a member of RIT's Center for Computational Relativity and Gravitation (CCRG). "It offers a natural way to explain high mass, high spin binary black hole mergers and to produce binaries in parts of parameter space that the other models cannot populate. There is no way to get certain types of black holes out of these other formation channels."

More about this article at (includes links to RIT),

https://www.eurekalert.org/pub_releases/2019-11/riot-nss110819.php

Help's Half Hour

Notes by Jan Rothfuss

Q: Does anyone use the Edge browser?

A: Heard that it is better than Explorer. It is still optional to use. Chrome is #1 and Firefox is #2.

Q: A friend has a Hotmail account but is now getting a message that he must reset it.

A: He may have to go to Microsoft

We live in a wonderful age, the 'Age of the Internet'. If you have a computer question, you can 'google' it and usually get the solution in a moment or two. BUT, we need questions for our 'Help's Half Hour' section, so how about a compromise. Bring a question to the meeting and share the solution with the members.

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