Our Club

RCSI is a nonprofit 501(c)(3) group open for membership to anyone interested in computers and new technology. Established in 1981, 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 July and 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

The club would like to have you as a member, and your subscription will help to keep us going. 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.

The Rochester Computer Society, Inc.

a computer/tech club open to everyone

M NIT R

Vol. 41, No. 10 web: www.rcsi.org Rochester, NY October 2022

October 11, Annual Security Presentation by Bob Gosticha, via Zoom

November 8, 'Gifts and Gadgets', Arpad Kovacs 'Newest Nanobots', Tony Dellelo

December 13, 'Potluck Video Night', members bring a 5 to 10 minute video to show

In This Issue

The Other Side of the Bitcoin

By David Kretchmar, Computer Technician
Sun City Summerlin Computer Club

In the April 2021 edition of the Gigabyte Gazette, I contributed an article titled "Bitcoin - the New Gold?". I stated that "Gold and Bitcoin, as different as they are, both have characteristics of good investment vehicles and sound money."

In the April article, I emphasized the positive aspects of Bitcoin (along with other cryptocurrencies). I concluded by stating, "Bitcoin is becoming a valued currency not by force of government declaration or people's acquiescence, but by recognition and popular acceptance."

Yet any investment with tremendous past profits and massive future potential also necessarily has tremendous *downside* potential. In this article, I will discuss what I think could be the downfall of Bitcoin and other cryptocurrencies.

Scarcity?

Under current protocols, the maximum number of Bitcoins that can ever be mined is 21 million. There are approximately 18.8 million bitcoins in circulation today. It is estimated the last bitcoin will be mined in 2040.

Many cryptocurrencies have a finite limit, and the speed at which they will be increased is largely unknown and not controlled by any authority. But the scarcity element exists only <u>within</u> some specific cryptocurrencies, such as Bitcoin, Cardano (45 billion limit, 32 billion in circulation), and Litecoin (84 billion limit, 24 billion in circulation).

Other cryptocurrencies, such as Ethereum and Dogecoin, have no limit. There are well over 1,000 cryptocurrencies in existence, with new ones being created seemingly weekly. The potential supply of cryptocurrencies is infinite, limited only by the human imagination and the willingness of individuals to fork over their cash. Cryptocurrencies are far from scarce.

Loss of Key

The key is the secret code required to access a cryptocurrency wallet. The loss of this code means the loss of all assets stored in the wallet. If the PC hard drive or flash drive fails or is accidentally discarded, this can happen. According to estimates, this is common; it has happened with up to 25% of crypto-wallet owners who have lost over 18 billion dollars' worth of digital currencies. Unfortunately, it is impossible to restore the code and recover the currency if lost.

Technical issues

Technical problems on the servers where cryptocurrency wallets are stored happen with disturbing frequency. Investors who have suffered losses cannot claim a refund regardless of whose fault it is. Usually, the problems are caused by hackers and occasionally by bugs in software or hardware, but no matter – when the money disappears, it is gone.

Government Intervention

Some governments seem willing to accept or at least accommodate cryptocurrencies, such as the US and Canada. However, other nations, such as Russia and China, have denounced or outlawed cryptocurrencies within their borders. In late September, the Chinese government expanded its ban on Chinese financial institutions providing crypto-related services. In addition, it restated its goal of forcing miners out of business. This announcement knocked 10% or more off of the values of many cryptocurrencies on 9/24/21 before a small recovery.

Governments lose the ability to use fiscal policies to control their economies when they allow the widespread adoption of digital currency. In addition, if cryptocurrencies were widely adopted, nations would lose the purpose and power of their national banking systems.

There are fears of rising cybercrime and other crime rates due to the increased ability to transfer value through untraceable financial transactions. In addition, some claim the rise of crypto-based payments could increase the ability of people to engage in illegal activities without leaving a trail, another reason many governments opposed the adoption of cryptocurrencies. However, I believe these fears are overstated since law enforcement has been able to trace and recover some cyber ransom proceeds, which would probably be impossible with cash.

Speculation Gone Wild?

On a Sunday afternoon in early September, my wife and I almost accidentally wandered into a "cryptocurrency seminar" held in a small meeting room at DV here in Sun City. We soon discovered that we were in a multi-level marketing rally, including testimonies of several people stating they had made hundreds and thousands of dollars in seconds or minutes by using the system the presenters were promoting. Loud claps and cheers followed each testimony. They named several cryptocurrencies; most were unknown to me.

One MLM rally provides anecdotal evidence of probably nothing. However, I have to wonder how many other like-minded individuals worldwide have embraced the suspension of logic and critical thinking required to be swept up by the allure of quick profits in cryptocurrencies.

Conclusions

Many of us can remember the "dot com" boom at the end of the last century. Any company claiming to have an idea relating to providing anything through the then-new Internet could issue stock and reach a substantial valuation. Many new companies had no earnings or revenues, yet they doubled in price the day they started trading. Investors knew these stocks had no intrinsic value, but no matter if they could sell them at a higher price than they paid. That sounds very much like most cryptocurrencies today.

When the crash came in 2000, even the few good Internet companies such as Amazon and Priceline (Booking.com) saw the destruction of a substantial majority of their market value. This persisted for many years until they eventually recovered and went higher. Unfortunately, most of the dot com companies whose value soared astronomically came crashing back to earth, becoming worthless losing investors billions of dollars.

The current cryptocurrency craze exhibits many similarities to the dot com boom and echoes many speculative bubbles of the past. For example, the Dutch "tulip mania" in the 17th century is considered the first

recorded speculative asset bubble. Prices for some rare tulip bulbs reached amazingly high levels, $750,000 in today's money, then dramatically collapsed to virtually nothing.

A $50k cryptocurrency investment has the potential to become a half-million dollars or more or to become worthless; you won't even be left with a beautiful flower. And remember, there exists no centralized exchange like there was with stocks and even for tulip bulbs. So, it could be very ugly. History never repeats, but it certainly rhymes.

Reprinted from https://www.scscc.club, Dkretch@gmail.com.

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

Talk, Texts, Data – How much, and for how much?
By Phil Sorrentino, Newsletter Contributor
Sarasota Technology Users Group

As you probably know by now, along with a smartphone comes a phone plan. This plan defines how you will be charged, by your Wireless provider, for using your phone. Some of the more popular Wireless providers are AT&T, Verizon, & T-Mobile, because those three companies own the three major wireless networks in this country. In addition to those three, there are resellers like Consumer Cellular, Mint Mobile, Ting, and Boost Mobile. (A reseller is an organization that sells wireless services under its own name but uses the networks of other service providers, for example, Ting uses T-Mobile.) If you have a "completely unlimited" plan, that is, no limits on the number of talk minutes, texts, and especially data, the rest of this article is just academic because you pay one price no matter how or how much you use your phone, but if you don't have a completely unlimited plan, this may be interesting. Many plans that sound like (completely) unlimited plans are unlimited talk and text with typically a very large Data allotment, but not complete data. (A completely unlimited plan for a single phone may be around $70/month, but less if you have multiple lines. For example, I have seen an unlimited plan advertised as $37.50/month each for two lines; that's $75/month for two unlimited lines.)

"**Talk**" time is the number of minutes you can use your phone for voice cellular phone calls. This would be the time you spend on your phone talking to people who are using smartphones, flip phones, or even home phones. Phone calls are from phone to phone, so you need a phone number for the phone call recipient. Phone calls typically go via the cellular phone network (cell phone towers), though you may be able to use wi-fi calling under certain conditions. Talk minutes are relatively inexpensive; they are almost free with most plans. If you want a plan with only talk minutes, they can currently be had for around $20/month with unlimited minutes or about $15/month with around 250 minutes. Talk used to be the whole reason for having and using a phone, but now there are many more uses for the smartphone.

What is the most popular sport in
the world?

An instrument of socio-
economic change, sports has done
more than entertain us. It has
helped build one of the most
vibrant economic systems the
world has seen. In some of the
world's most prosperous
economies, revenue generated
from entertaining sports activities
has helped increase economic
growth.

Our ranking is based on the
estimated number of fans,
including global audience reach
(TV views), online popularity
(social media and search results),
gender equality,
sponsorship/endorsement deals,
and the primary population region.

Association football (soccer) is
the most popular team sport
globally, with about 4 billion fans
scattered across the globe.
With an estimated 270 million
players, soccer is a team sport
with the highest number of
participants in the world.

Cricket, 2.5 billion fans (UK,
Africa, Asia, America, Europe,
Australia)

Hockey, 2.0 billion (Europe,
Africa, Asia, Australia)

Tennis, 1.0 billion (worldwide)

Volleyball, 900 million fans
(worldwide)

Table Tennis/Ping Pong, 875
million (worldwide)

Basket Ball, 850 million
(worldwide)

Baseball, 450 million (America,
Caribbean, East Asia)

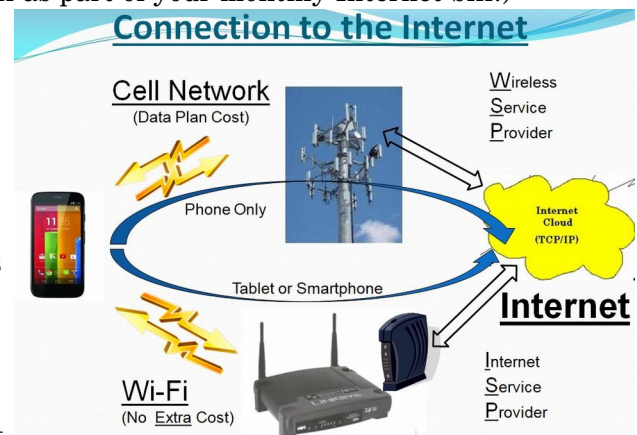https://sportytell.com/sports/most-
popular-sports-world/

"**Texts**" is the number of typically short typed-in messages that are
sent immediately to the phone number you have chosen from your
contact list. Texts (text messages) can only be sent from one phone to
another, so you need a phone number to be the recipient of the text
message. (Smartphone, Flip phone, probably not a home phone.)
Texts typically go via the cellular phone network (cell phone towers)
but can go via wi-fi if you are in the vicinity of a wi-fi router. (Note:
Data is used for attachments to texts.) Texts have become a fairly
common way to keep in touch with people because of their instant
messaging nature. A text is immediately sent to the recipient, giving
him the message and the ability to answer immediately or at a future
time.

"**Data**" is the amount of "data" that is transmitted over the
cellular phone network (cell phone towers). Data allotments typically
come in GigaByte or half GigaByte increments (some may even be in
hundreds of MegaBytes). Data allotments may be on a per-line basis,
or with some plans, the data can be shared among a group of phones
in a so-called family plan. When you are out and about, even
traveling in your car, all the data transmitted to and from your phone
is charged against your monthly data allotment. Fortunately, when
you are not out and about and you are in the vicinity of a wi-fi router,
the data that gets transmitted is not charged against your monthly
data allotment. (You have already paid the Internet Service Provider
for the use of the wi-fi as part of your monthly Internet bill.)

Data may be
transmitted from
your phone by any
widget or open App.
(Keep in mind that
widgets are open as
long as your phone is
not powered off.
Fortunately, most
widgets use very
little data.) Many
Apps need a constant

flow of data to keep their information current; Maps and Waze are
two apps that come to mind. All of the Apps on your phone are
designed to be the Client in the Client-Server computing model.
These Apps can only do their job when connected to their server. (The
Internet provides the connection via cell phone towers or wi-fi.)

If an App is not closed after it is used, it may still be transmitting
data to, and receiving data from its server, even if you are not looking
at one of its screens. So, if you don't have an unlimited plan, make
sure you close any app you will not use. If you don't want to use any
data at a given time, most phones can turn off the Data, typically in
"Settings." Make sure you leave yourself a reminder to turn Data
back on afterward. (With the Data turned off, you will still be able to
make and receive voice calls and probably texts, though you will
probably not be able to receive attachments, like pictures, to texts.)
Data is really what makes the smartphone so useful and versatile.

Windows & Android Tips

WHY YOU SHOULD USE ANDROID APPS IN WINDOWS 11 – "It's finally possible to run Android apps on Windows PCs. But why bother? If you're skeptical about Android apps in Windows 11, we'll explain why you should give it a try. Technically, Windows 11 is not the first time Android apps have been able to run on Windows. Emulators like BlueStacks have made it possible for years, but Windows 11 makes the experience, well, good. That doesn't mean you know what to do with it, though." This article can help. [Why You Should Use Android Apps in Windows 11 (howtogeek.com)](#)

THIS CLEVER PERSON USED A RASPBERRY PI TO MAKE AN ELECTRONIC NOSE – "People use Raspberry Pis to make a ton of creative and unique gadgets, but this one might take the cake. Or rather, smell it. Creator Luis Rodriguez Mendoza was inspired by trained sniffing dogs at the airport then wondered whether low-cost gas sensors could do the same thing." Read more at [This Clever Person Used a Raspberry Pi to Make an Electronic Nose – Review Geek](#)

9 EASY-TO-USE ARDUINO MODULES FOR BEGINNERS – If you're new to Arduino, these beginner-friendly modules are great to start learning with. [9 Easy-to-Use Arduino Modules for Beginners (makeuseof.com)](#)

Data makes the smartphone a personal digital assistant with endless uses, gives you access to enormous databases, and provides answers almost instantaneously.

As you can see from the amount of information describing talk, texts, and data, the emphasis is on data. The cost of most plans is directly correlated to the amount of data; it almost seems that talk and texts are just about thrown in at no extra charge. It is the fact that your smartphone can interact with a much more capable server at the other end of the internet that gives your smartphone all of its various amazing capabilities. It is data that lets us check our email, consult our calendar, find the nearest Japanese restaurant, keep in touch with people, and research and purchase items on Amazon or many other retailers on the internet, all without us moving from the comfort of our homes, offices, or automobiles.

From the newsletter of www.thestug.org, philsorr@yahoo.com.

Some Useful Technology

by Jeff Wilkinson, President
Sun City Summerlin Computer Club

I recently decided to put music on our patio for an upcoming party. While we have an intercom station on the patio, the sound was not acceptable for music. So, I decided to upgrade. I investigated various methods, from wired extension speakers for my existing stereo, multiple Amazon Echo's, and a few other complex or pricey solutions. Since I had recently "ripped" a whole series of my favorite music CDs and loaded them on a Plex server along with several downloaded music selections, I wanted access to that growing music collection. In addition, I had compiled multiple playlists for use in different situations, parties, easy listening, smooth jazz, 60's music, etc.

A sale on the Echo Smart Speaker, 4th generation, prompted my purchase of two, intending to use the multi-room music feature to sync them together. In addition, I could locate them on the patio since I had conveniently placed electrical outlets available. The Echo Smart Speakers sounded good and were perfectly acceptable for a party with multiple conversations and ambient noise. I put the Echo Smart Speakers on the patio, and they worked fairly well, although there appeared to be some syncing problems.

About that time, I came across a BOGO (Buy One Get One) offer for Santana Samba 20-watt wireless speakers and thought I would give them a try. I was totally surprised at their performance. The sound was excellent; the pairing via Bluetooth to a single Echo Smart Speaker was easy, and I could pair the two speakers together for excellent sound given their small size. With my new configuration, I played music from my Plex server with a simple command to Alexa: "Ask Plex to play … " virtually any song title, artist, or playlist in my growing collection. I can also access Sirius radio and Amazon music, offering me a wide choice of streaming music.

PC Maintenance & Utility Software

www.davescomputertips.com

Hibit Uninstaller – Excellent free uninstaller, portable version available. Includes a nice range of additional tools; startup manager, junk file cleaner, file shredder, and more.
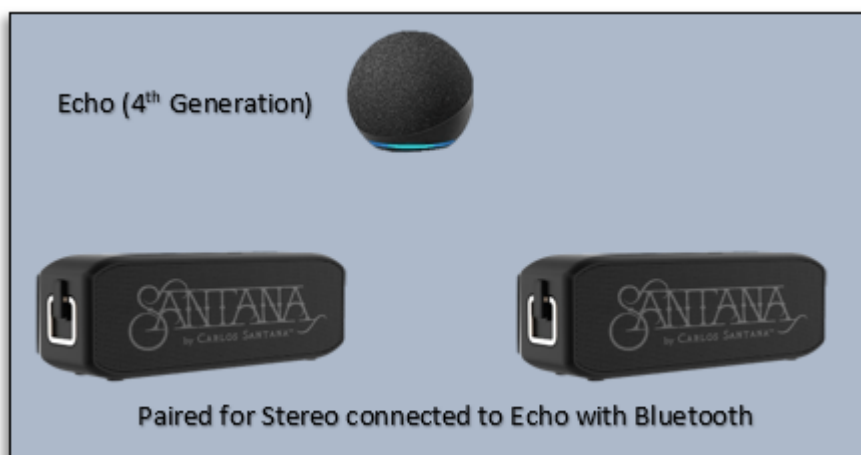
Revo Uninstaller – A free uninstaller that goes above and beyond the uninstaller built into Windows. Will search for and delete leftover files and registry items. Includes a couple of handy tools and has a portable version too.

Geek Uninstaller – Terrific free portable uninstaller. Fast scan and removal of leftovers. 'Force Removal' mode for broken or stubborn programs. Full support for both 32-bit and 64-bit applications.

HWiNFO – Free portable system information and diagnostics utility. Displays information relating to the system's hardware. Real time monitoring, including core temps. Available in 32-bit and native 64-bit portable editions.

MooO System Monitor – The most comprehensive free system monitoring tool with more than 70 fields to choose from. Extensive, portable, and highly customizable.

TeamViewer – is remote control software that connects to any PC or server around the world within a few seconds. You can remote control your partner's PC as if you were sitting right in front of it. This is a great tool to troubleshoot and fix computers without having the computer in front of you!

Echo (4th Generation)

Paired for Stereo connected to Echo with Bluetooth

The example above shows a practical use of some amazing technology available to us today. Here's another … I recently started using a Windows 10 feature, "Your Phone." You can mirror your Android or iOS smartphone to your PC screen with a little setup and configuration. With this app installed on your phone, you can manipulate your phone via your PC keyboard, open and run phone apps, view your picture gallery, and do virtually anything you can do on the phone! For example, I find it easier to type and send a text message from the PC keyboard!

While many of us didn't grow up immersed in technology, much of it is very useful and can add a new dimension to everyday tasks. Your computer club strives to help users explore existing features and introduce new technology to our members.

Reprinted from https://www.scscc.club, president.scscc@gmail.com.

Security Tip: Offline Malware Scanners

By Bob Rankin
a Translator for the Technology Impaired

You almost certainly have an "always on" Internet security tool already installed on your computer. It provides constant protection against viruses and other malware that may sneak into your computer. But no anti-malware program is foolproof; something may slip through its defenses and infect your hard drive. So what can you do if a really nasty virus disables your anti-malware protection, or fouls up your hard drive so Windows won't even start? Here's the answer...

When to Use an Offline Malware Scanner

If a virus is clever enough to disable your anti-virus program, render it ineffective, or foul up your hard drive's boot sector, you'll need something other than a standard anti-malware program to repair the damage. That's when you need offline protection: a bootable CD or flash drive that bears an effective malware detection and removal program. I highly recommend that you make such an emergency kit and keep it handy. The alternative is to re-install Windows on the hard drive, possibly losing your personal files in the process. You may want to run an offline malware scanner even if you don't suspect a problem, as an extra security measure.

By Steve Costello
scostello@sefcug.com

What is the Internet Archive and What Can I Find on It?
https://www.groovypost.com/explainer/what-is-the-internet-archive-and-what-can-i-find-on-it/
I use the Internet Archive all the time. The Wayback Machine helps me keep links working on my blogs, as whenever I am alerted to a broken link, I replace it with the working Wayback Machine link if there is one. I find audio, video, and photos all the time. There are many things available, most of which are free to use.

Yes, You Can Use Libreoffice As A PDF Editor – Here's How
https://www.makeuseof.com/libreoffice-pdf-editor/
If you have LibreOffice you can edit PDFs. This MakeUseOf post explains what you need to know about using LibreOffice this way.

Printer Queue 101
https://cynmackley.com/2021/04/24/printer-queue-101/
This post explains how the print queue works, and how to clear it if you have printer problems. (Note: I realize that people seldom print out things anymore, but that makes something like this useful for the occasional problem.)

Does A VPN Really Make Your Online Activity Private?
https://www.howtogeek.com/717587/does-a-vpn-really-make-your-online-activity-private/
If you use a VPN or plan to use one, to make your online activity private you should read this post first.

Microsoft's Windows Defender Offline is a free emergency anti-malware program for Windows 7, 8, 10 and 11 systems. Defender Offline restarts your computer outside of the Windows environment, in order to scan for and remove any malware that might be lurking. Read on for instructions on how to use Defender Offline, and be sure to see the links at the end of this article for other offline malware scanners you may want to try.

On a Windows 10 or 11 system, here's how to start Defender Offline. From the Start menu, select Settings, then click Update & Security > Windows Security > Virus & threat protection. Next, select "Scan options" under Current threats. Select the "Windows Defender Offline scan" option and then click the "Scan now" button.

Your PC will restart, then load Windows Defender Offline. After scanning and removing any malware that was found, your computer will restart Windows. Expect the process to take 10 to 15 minutes.

On a Windows 7 or Windows 8.1 system, the process is a little different. Scroll down the Windows Defender Offline support page and you'll find download links for the 32-bit or 64-bit version of Defender Offline. (If you're not sure which version you need, there's a link on the download page to help you determine if your PC is running the 32-bit or 64-bit version of Windows.)

When you run the installation program, it will prompt you for a blank CD, DVD, or flash drive with at least 250 MB of free space. I highly recommend using a flash drive as your Windows Defender Offline medium. Malware changes daily, and so does the malware signatures data file. A flash drive is re-writable, so Windows Defender Offline will download the latest signatures file if it is installed on a flash drive; not so with write-once optical media.

During installation, the latest database of malware signatures will be downloaded, so you will need an active Internet connection. Windows Defender Offline will be installed on the removable medium along with the signatures and files necessary to boot from the medium. Store the medium in a safe place until you need Windows Defender Offline.

To use Windows Defender Offline, restart your computer using the Windows Defender Offline medium instead of your hard drive. If Defender doesn't load when you restart, you will need to reconfigure your computer's BIOS to get it to boot from removable media. That involves interrupting the startup process (usually by holding down the F2 or Ctrl key), entering the BIOS setup utility, and changing the order in which boot devices are tried during boot-up. The removable media device (CDROM or USB flash drive) that holds Windows Defender Offline should be checked before the hard drive. When the system boots from the correct device, Windows Defender Offline will load.

You can then run a scan of your hard drive to detect malware. If any is found, you will have the option to try to remove it.

No matter what real-time protection you use, Windows Defender Offline is a good, free backup in case your real-time protection is

Unusual Product

millo air: New Generation Motorless Magnetic Blender!

Cordless, allowing you to blend anywhere, powerful enough to crush ice, and so silent that it won't even wake the baby.

We've invented the world's first blender with a Magnetic Air Drive (aka MAD) at its core. There is no motor in the blender base, instead we use a powerful magnetic field generator which is absolutely silent. The spinning magnetic disk inside of the blending lid is hermetically sealed, so you can barely hear it.

Millo air is so innovative that it creates use cases never imagined before. As it's powerful, portable, durable and significantly quieter, it's ideal for use in the gym, office, picnic, camping, beach or vacation abroad.

The power range of most wireless blenders is up to 10W. millo air is so powerful that it crushes the competition with an astonishing 450W peak power, now that's a beast! Its German designed blades are able to crush ice, nuts or full size carrots in a matter of seconds.

millo air runs on Li-ion batteries, meaning the blender can make up to 10 blends before it needs to be charged again.

Sure, there are other magnetic blenders out there, but their specs are not as good.

Check it out at https://www.kickstarter.com/projects/millobyadam/millo-air-your-smoothie-in-a-minute-anytime-anywhere.

compromised or you cannot boot Windows because of a malware infection. Other options for offline malware scanning include the Avast Rescue Disk and Kaspersky Rescue Disk. I honestly can't say if one is better than the other, but it's nice to have options. And you can use more than one if you like.

Of course, a hard drive that doesn't boot up successfully doesn't necessarily indicate a virus. If your offline malware scanner doesn't detect any problems, and you're having trouble starting Windows, see my related article Hard Drive Data Recovery Services for other tools you can try to revive a non-booting hard drive.

End of Article # #

* * * * * 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 PDF or web versions of this newsletter.

Uber turns to autonomous vehicle startup Nuro for Eats deliveries

Kirsten Korosec@kirstenkorosec / •September 8, 2022

Image Credits: Uber/Nuro

Uber will use Nuro autonomous delivery vehicles to shuttle meals and other goods to its Eats customers as part of a 10-year commercial deal between the two companies.

The partnership, which kicks off this fall, will start in Houston and Mountain View, California and eventually expand to other areas, including the greater Bay Area, according to the companies.

Nuro has managed over the past few years to land partnerships with a number of high-profile companies, including Walmart and Kroger. This latest deal, however, marks an escalation of Nuro's commercial plans.

It also highlights Nuro's enviable position in the nascent autonomous vehicle industry. Nuro is one of the few companies to have received all of the necessary approvals and permits to operate an autonomous vehicle delivery service — that can charge customers — in California. Which means it can — and will — receive a fee for every autonomous delivery made for Uber.

Reported in https://techcrunch.com/2022/09/08/uber-turns-to-autonomous-vehicle-startup-nuro-for-eats-deliveries/.

Innovative Chinese missile breathes air or water for multi-mode attacks

By Loz Blain, September 13, 2022

The new cross-media boron missile under development by China would offer supersonic speed and range in the air, and supercavitating approach speeds underwater, for devastating anti-ship capabilities.

This remarkable anti-ship weapon would run an innovative boron-powered ramjet engine that works in both air and water. Supersonic in the air and supercavitating under the water, it could strike farther and faster than any conventional torpedo.

A research team from the National University of Defence Technology in Changsha, Hunan province, has published plans for a 5-meter (16.4-ft) "cross media" anti-ship missile that's so fast that no existing ship defense system can defeat it, according to the South China Morning Post.

In the air, it would cruise at up to Mach 2.5, at altitudes about 10,000 m (32,800 ft), for distances up to 200 km (124 miles). It would then dive low and skim the waves for as much as 20 km (12.4 miles) to avoid detection. About 10 km (6.2 miles) from its target – or indeed, whenever necessary – it would plunge into the water and become a supercavitating torpedo, reducing drag by traveling in a bubble of air to maintain speeds up to 100 m/sec (224 mph/360 km/h).

It would produce enormous thrust while breathing air or seawater, due to a supersonic ramjet engine running on solid fuel rods containing around 60% boron, which reacts violently and produces enormous heat in either air or water. Boron has been used extensively in propulsion fuels, from jet fuel additives to solid nanotube fuels for hypersonic propulsion systems, but the research team says its cross-media ramjet engine is particularly innovative thanks to its high boron fuel content, and its ability to work above or below the surface.

Source: South China Morning Post via Interesting Engineering

Read the rest in https://newatlas.com/military/china-boron-missile-torpedo/.

Odds and Ends

A Webb Telescope image is being used to push malware

By [M. Moon](#), [@mariella_moon](#)
Bad actors hid malicious code in Webb's First Deep Field for a malware campaign.

One of the first images taken by the [James Webb Telescope](#) that was released by NASA was the "sharpest infrared image of the distant universe to date." It's a wondrous photo showing a detailed cluster of galaxies. It's also currently being used by bad actors [to infect systems with malware](#). Security analytics platform [Securonix](#) has identified a new malware campaign that uses the image, and the company is calling it the GO#WEBBFUSCATOR.

The attack starts with a phishing email containing a Microsoft Office attachment. Hidden within the document's metadata is a URL that downloads a file with a script, which runs if certain Word macros are enabled. That, in turn, downloads a copy of [Webb's First Deep Field](#) photo (pictured above) that contains as a malicious code masquerading as a certificate. In its report about the campaign, the company said all anti-virus programs were unable to detect the malicious code in the image.

As reported in https://www.engadget.com/webb-telescope-image-malware-campaign-023410082.html.

Researchers have developed a way to generate hydrogen from air, decoupling production from freshwater resources and providing a new direction for a carbon-free future

University of Melbourne, 7 September 2022

Hydrogen – green hydrogen in particular – is generally agreed to be the ultimate clean energy. Unlike fossil fuels, which we know contribute to the large-scale CO_2 emissions causing global warming, burning hydrogen doesn't release carbon dioxide or any other greenhouse gases. Green hydrogen goes a step further by using renewable energies in production.

Like conventional hydrogen production, it is collected through a process called electrolysis, in which water is split into hydrogen and oxygen using a power source. But here, that power is from renewable sources – whether solar, wind, geothermal or tidal.

Since hydrogen can 'store' power produced by renewable sources, it complements renewables by offering a continuous supply of power. So promising is green hydrogen for a low-carbon economy, many see it as Australia's next great export, due to its ample source of solar and wind.

FRESH WATER OR HYDROGEN?
But producing hydrogen through water electrolysis relies on a very clean water supply, which is a scarce commodity. According to UN-Water, 2.3 billion people live in water-stressed countries, of which 733 million live in high and critically water-stressed countries (UN-Water, 2021).

Then there is the geographic mismatch between renewable electricity and freshwater availability. Areas rich in solar and wind and therefore ideal for green hydrogen production, often suffer water shortage, making competition for fresh drinking water even higher stakes. Places like this include much of middle Asia, West Asia, and India, North Africa, West of North America, and a large part of Australia.

TURNING AIR INTO HYDROGEN
Researchers at the University of Melbourne are close to providing a way to overcome these issues, with a working prototype of a device that produces hydrogen without consuming freshwater resources.

The technology, which was recently [published in Nature Communications](#), is called Direct Air Electrolyser (DAE) and works by draining water directly from the air before then going through the standard electrolysis process.

Continue the article at https://research.unimelb.edu.au/research-at-melbourne/climate-hub/our-climate-capability/a-new-device-creates-hydrogen-from-air.

Russia May Have Just Put Elon Musk's Starlink On Notice

By Kyle Encina/Sept. 16, 2022

It seems like Elon Musk's Starlink initiative might have been given a stern warning by Russia in a statement that could come with grave implications. The Starlink map shows that its coverage had spread out to

most parts of the globe, with support in some countries already planned for years ahead. However, Russia appears to be the biggest country not on Starlink's waiting list, and that might not change any time soon. In March, Ukrainian Vice Prime Minister Mykhailo Fedorov asked Musk to give his country access to Starlink's services amid the ongoing Russian invasion.

The SpaceX founder later responded to Ukraine's pleas in an expeditious and amicable manner. Within just two days, Ukraine received satellite Internet access, but not without Musk warning users of the potential dangers of utilizing Starlink in wartime. While this might not have directly placed SpaceX in Russia's crosshairs, Musk's swift compliance might have exacerbated the issue even further. The question now is, does Russia see Musk's indirect involvement in aiding its opposition as somewhat of a military threat that needs to be addressed, or is it all simply water under the bridge?

Read More: https://www.slashgear.com/1012363/russia-may-have-just-put-elon-musks-starlink-on-notice/?utm_campaign=clip.

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

Maker Faire Rochester

Saturday, November 19th, 2022, 9 am to 5 pm

What is Maker Faire?

Maker Faire is a gathering of fascinating, curious people who enjoy learning and who love sharing what they can do. From engineers to artists to scientists to crafters, Maker Faire is a venue for these "makers" to show hobbies, experiments, projects. We call it the Greatest Show (& Tell) on Earth - a family-friendly showcase of invention, creativity, and resourcefulness. Glimpse the future and get inspired!

FREE! e-RECYCLING EVENT 10•15•22
8:30am - 12:00pm
Monroe Community College (Student Lot M-1)
1000 E Henrietta Rd
Henrietta, NY 14623
*Ticket is REQUIRED for entry

Register at **WWW.SUNNKING.COM**

Whether you've got a basement full of old TVs or a handful of unused charging cables... e-Recycling Events are the best FREE way to responsibly recycle them! **Saturday Oct 15**.

RCSI

The club is having it's first **'Pot Luck'** video night. Just like pot luck dinners, where everyone brings a dish to pass around, each member can bring a 5 to 10 minute video to show. You do not need to explain the video, but just show something that interests you. The video should be technology or computer related. This could be an eye opening night, since each person has different interests and backgrounds. This event will take place at our December 13th meeting.

Got Questions?:

Send an email to either person below and they will get back to you. The questions can be related to the OS (Operating System) or hardware related issues. Please give them time for a response, as they do this service on a volunteer basis. Thank you.

Windows OS: . . . . . Arpad Kovacs, podcomputer@gmail.com

Linux & some Mac: Carl Schmidtmann, unixgeek@faultline.com

New Meeting Place
Our Usual Meeting Place is being renovated.
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 SECOND building on the left – **Chestnut Court**.
Our meeting place can change. Please check our website before each meeting. **www.rcsi.org**