Minneapolis & St. Paul, Minnesota USA • Vol. 43 No.3 • Oct. 2022

TC/PC Exists to Facilitate and Encourage the Cooperative Exchange of PC Knowledge and Information Across All Levels of Experience

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# **General Meeting** Tuesday, October 11, 2022 7:00 PM

# Introduction to IP Addresses & Port Numbers Webinar

**Presenter: John Krout** 

Via Zoom Only

At this month's meeting, John Krout, an APCUG member from the Virginia Area PC users group, will be presenting the first half of a webinar he gave at the APCUG May 2022 Wednesday Workshop. He will be teaching us all about IP addresses and Port Numbers as a prelude to the second half of his webinar which we will see in November on adding a Network Attached Storage (NAS) unit to your router. John does a good job of clarifying information for even the beginner user, so be sure to be there.

Note: All TC/PC Meetings and SIG Groups will be virtual until further notice. Visit tcpc.com for info..

Tech Topics with Jack Ungerleider via Zoom at 6pm before the General Meeting.

TC/PC is a Member of



### The Digital Viking

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Where to Get E-Books
By Tom Burt, Vice President, Sun City Summerlin Computer Club
<a href="https://www.scscc.club">https://www.scscc.club</a>
tomburt89134 (at) cox.net

A perennial challenge is to find suitable gifts for friends and family. Books have always been a popular choice. Now, with the maturing of the electronic book (e-book) format and industry, it should be easier than ever to find just the right title, purchase it and email a link for your giftee to use to access and read the book. Of course, things aren't so simple in practice, so you may want to read on.

This article is based on a seminar I gave in December 2020 titled "E-Books and E-Readers." My seminar slides are at: <a href="https://www.scscc.club/smnr/E-Books">https://www.scscc.club/smnr/E-Books</a> and E-Readers Seminar.pdf.

#### **E-book formats**

There are two main formats: Amazon Kindle and E-Pub. There are hardware and software readers for each. Both formats support digital rights management (copy protection) so that the purchaser of a book can't share it with more than a few others. Amazon mainly uses the Kindle format. E-Pub is used by Barnes and Noble and Kobo and for many self-published books. Adobe PDF and HTML are also often used for e-books. Apple's iBook format is a variation of E-Pub.

When buying an e-book, it's important to know what format it is in so you can be sure your reader device or program can read the book. A common problem for owners of Amazon's Kindle or Fire tablets is that they do not support the E-Pub format. The Amazon app store does not offer an E-Pub reader app. It's possible to "jailbreak" a Kindle or Fire tablet so that it can install Android apps from the Google play store, including Adobe's Digital Editions E-Pub reader. But that's a topic for another day.

### **E-Book Websites**

Here's a list of e-book websites with links to each:

Amazon Kindle Store <u>www.amazon.com</u>

Barnes & Noble http://www.barnesandnoble.com

Google Play Store Books <a href="https://play.google.com/store/books">https://play.google.com/store/books</a>

Kobo www.kobo.com

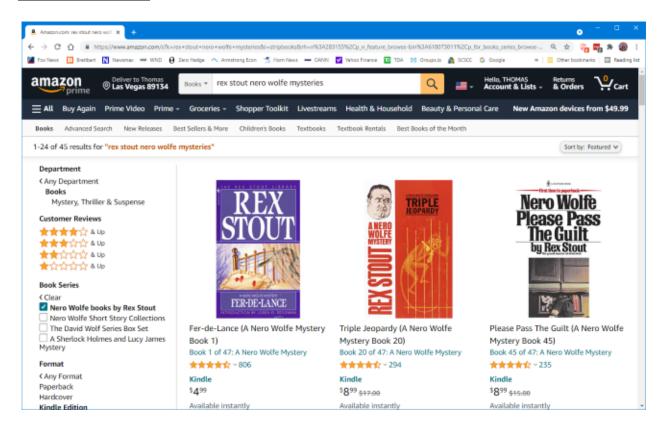
Las Vegas / Clark County Library (via OverDrive) <a href="http://lvccld.org">http://lvccld.org</a>

#### Open Library <a href="https://openlibrary.org/">https://openlibrary.org/</a>

#### Project Gutenberg (60,000 free ebooks) <a href="https://www.gutenberg.org/">https://www.gutenberg.org/</a>

**Let's** look at a few of them in more depth.

#### **Amazon Kindle**



The Amazon bookstore is vast. You can buy books in hardcover, paperback, audio, and e-book format. As with all Amazon shopping, the search is very smart, and you can set filters to narrow choices. In addition, you can click on items in the search results to view details and, from there, add them to your shopping cart.

If buying for yourself, E-books are delivered (downloaded) to the reading device you specify. You can also specify you are buying for someone else and enter the giftee's information so they can receive the book.

You need an Amazon Kindle or Fire Reader tablet or Amazon's free Kindle Reader app to read Kindle books. There are versions for Windows, macOS, Linux, Android, and iOS.

If you subscribe to Amazon Prime, you have access to an extensive collection of e-books at no charge via the Prime Reading service. In addition, you can have free access to up to ten e-books for as long as you wish. Then, return or buy one of the ten you have when you want another.

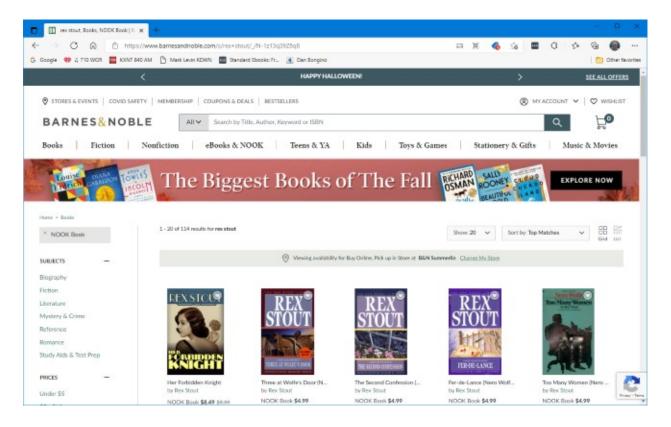
The Amazon Fire HD 10 tablet with 32 GB of storage lists for \$100.

#### **Barnes and Noble**

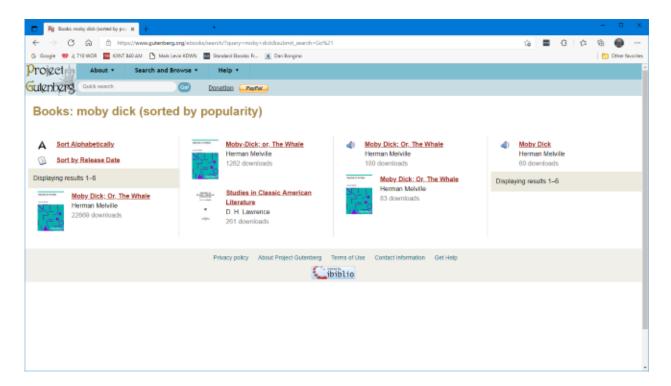
Barnes and Noble sells books in "Nook book" (E-Pub) format and paperback and hardcover. B&N also sells a family of Nook reader tablets and has a free reader app. In addition, you can set up an account on B&N and enjoy special pricing, free e-books, and other perks.

See the screenshot below to get a sense of their online store. The search window is very smart.

The Nook book reader is a 10-inch Android tablet (made by Lenovo) with 32 GB of storage, listing at \$130. It has full access to the Google Play Store apps. This would include the free Amazon Kindle Reader app for Android. So, a Nook reader tablet could double as a Kindle Reader, allowing you to shop for books in either Nook or Kindle format.



#### **Project Gutenberg**

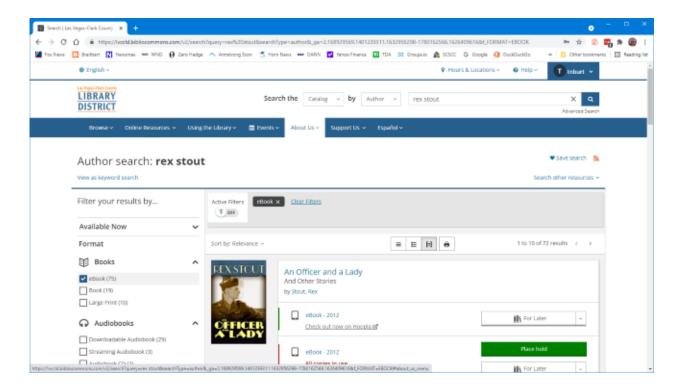


Project Gutenberg was founded by Michael Hart, who invented e-books in 1971. Its website claims to have 60,000 titles in its library. All these titles are completely free. Most are "classics" that are out of copyright. For example, I searched for Albert Einstein and found an English translation of his Special and General Relativity expositions.

I tried downloading a copy of Herman Melville's "Moby Dick" in Kindle format and read it using the free Calibre book reader app on my PC. But unfortunately, the Amazon Kindle Reader app wasn't able to open the book.

#### Las Vegas Clark County Public Library

The Las Vegas Clark County Library District website offers a rich collection of e-books and other e-media that you can borrow for up to 21 days. The only requirement is a library card number and an associated PIN. For APCUG readers, your public library very likely offers comparable services.



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Hopefully, that helps you know more about e-books and how to get them. I love them because of the convenience and the ease of reading. And they take up zero space in the house.

#### The Other Side of the Bitcoin

By David Kretchmar, Computer Technician, Sun City Summerlin Computer Club <a href="https://www.scscc.club">https://www.scscc.club</a>

Dkretch (at) gmail.com

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 within 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 17<sup>th</sup> 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.

## **Waymo Self-Driving Cars**

# by Jeff Wilkinson, President, Sun City Summerlin Computer Club <a href="https://www.scscc.club">https://www.scscc.club</a>, president.scscc (at) gmail.com

On a recent visit to San Francisco, we noticed <u>Waymo</u> cars on many downtown streets. At first, we thought it was part of Google maps since Waymo is an Alphabet company, Google's parent company. But after seeing multiple Waymo cars together, we, you guessed it, Googled it and found out it was a ridesharing service.

The Waymo taxi service began in Phoenix shortly after mapping the greater Phoenix area was completed in October 2020. This driverless service was previously available only to research testers and onboard safety drivers. Now, it serves a 50-square-mile area in the Phoenix suburbs of Chandler, Tempe, and Mesa. With a huge investment at stake, the challenge is to reduce the amount of human interaction required to safely perform the service.

At this time, San Francisco is in Beta testing, initially offering free rides to select passengers in San Francisco via its <u>Trusted Tester</u> program. Waymo's fleet includes Toyota Priuses and hybrid Chrysler Pacificas, but, Waymo has partnered with **Jaguar** to deliver the world's first fully self-driven premium EV experience. We saw only these vehicles in San Francisco.

Because San Francisco's terrain is hilly, with dense streets and multiple obstacles from continuous construction activity, Waymo cars will have a safety driver on board. The team has been mapping the city since 2019, and the cars contain 5 LiDARs (Light Detecting and Ranging) and one surround-view camera on top of each vehicle. LiDARs provides a detailed, 3D map of the car's surroundings. It gives shape and depth to the objects, roads, buildings, and more—the data from these sensors is fed to a computer running Google's machine learning algorithm.

The human body has five senses, hearing, sight, smell, taste, and touch. We use these

senses to navigate the world we live in. Some of these senses are detected with man-made sensors in self-driving cars. Cameras for sight, taking multiple photos to be compared with known objects using the computer algorithm. Cameras are used with object detection algorithms to classify all the things the car sees into



usable data for the algorithm. The cameras are also placed for a 360-degree view and are adapted for identification in various light and climate conditions. Once the camera has gathered the data, an object detection algorithm, which involves computer vision and neural networks, is used to classify the objects into labels like pedestrians, cars, signs, and more.

LiDAR is used to simulate the touching sense and provide range and distance information. The camera can rotate at hundreds of revolutions per minute and provide a 360-degree view and high-resolution information range. The vertical angle of detection allowing height measurement and the updating frequency are other important features. In addition, multiple channels with input from different laser beams provide higher quality data to the object detection algorithm.

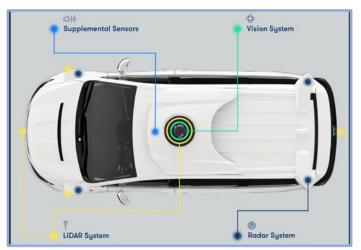
The Waymo driver uses the information it has gathered, along with its over 20 million miles driven in the real world, to predict where other objects (like pedestrians, cars, etc.) would go, how fast they would move, and the way they move.

It predicts **all** the possible paths each object may take in less than a second. With constant updates and corrections as the trip begins.

In addition to safety and navigation, self-driving vehicles must be power-and-fuel-efficient. Therefore, numerous sensors, actuators, application-specific circuit boards, and subsystems are installed in self-driven cars to manage system-level operations, power consumption, and fuel efficiency.

The voltage in the vehicle battery is crucial for the safety of the users and the vehicle's functionality and is constantly monitored. Autonomous cars use milliohm meters and shunts feeding differential amplifiers to precisely measure the battery voltage drop.

Actuators, step motors, and solenoid valves in the electronic fuel injection system help improve fuel efficiency and reduce emissions and are also actively monitored and controlled.



Self-driving vehicles depend on sensors, actuators, and processors to make crucial decisions on the road, ensuring the safety and comfort of their users.

So, these self-driving Waymo Jaguars with the odd-looking spinning lidar and cameras are rolling technology hubs with dynamic inputs feeding various actuators and solenoids, which are constantly updated by feedback from even more sensors!!

Initial tests yielded less than stellar feedback, but progress is steadily being made, which is not surprising given the complexity of the project!!

# **Special Interest Groups (SIGs)**

Most SIGs will meet at Edina Executive Plaza, Conference Room #102, 5200 Willson Road, Edina, MN
Confirm with a SIG group if they meet elsewhere.
For more info contact the SIG Leader(s) listed here.

w Work phone h Home phone c Cell phone \* Meets at an alternate location

Get SIG announcements! Link from www.tcpc.com

#### **Board of Directors\***

All members are welcome! Check www.tcpc.com for location.
Selected Saturday mornings

#### Linux on Saturday

This is for the Linux newbie and those trying to come over from Microsoft to a different operating system.

Second Saturday @ 9 AM-Noon Note: No Meetings June-August

Jack Ungerleider

612/418-3494 c jack@jacku.com

#### **Tech Topics**

Technical presentation/discussion on various technical topics from the following areas:

- Web/Internet
- Mobile Devices and Apps
- Playing with Programming
- DIY (3D Printing, R-Pi, other hobby electronics, etc.)

Second Tuesday @ 6:00-7:00 PM Every month Right before the general meeting.

Jack Ungerleider

612/418-3494 c jack@jacku.com

#### **Microsoft Access**

All levels. Presentations by expert developers within the group and by MS reps.

Third Saturday 9:00 AM—Noon

Note: No Meetings June-August

Steve Kuhlmey 952/934-8492 skuhlmey@hotmail.com

#### **Microsoft Office**

Addresses the use, integration, and nuances of the Microsoft Office applications.

Combined with Systems on Saturday
Third Saturday of the Month
9:00 AM—Noon

**Note: No Meetings June-August** 

Steve Kuhlmey 952/934-8492 skuhlmey@hotmail.com

Directions to Accord, 1515 Energy Park Drive for General Meetings:

From I-94 in St. Paul, take the Snelling Avenue exit, then go north on Snelling Avenue about one mile to Energy Park Drive. Take Energy Park Drive and take the first left into the driveway to 1515 Energy Park Drive.

From I-694 or Hwy 36 in St. Paul, take the Snelling Avenue exit, then go south on Snelling Avenue past Como Avenue to Energy Park Drive. Take Energy Park Drive and take the first left into the driveway to 1515 Energy Park Drive.

Directions to Edina Executive Plaza for Systems on Saturday, Access, Word and Picture Perfect SIGs: Take Highway 100 to the 50th Street/Vernon exit. [If you have come from the north, cross back over Highway 100 to the east side.] Take the first right and go past Perkins [The golf course will be on your left.] and continue on the east frontage road (Willson Road) to the next building—5200. There is ample parking in the building's lot.

Conference Room #102 is on 1st floor.

# Help yourself by helping others!

Join the team & share your knowledge with others.

Contact TC/PC at www.tcpc.com

Meetings start at 7:00 PM (9:00 AM on Saturday) unless otherwise noted. \*Virtual Meetings during Covid pandemic.

October

November

Sun	Mon	Tues	WED	THU	Fri	SAT
25	26	27	28	29	30	1
2	3	4	5	6	7	8 Linux on Sat- urday SIG 9am—Noon
9	10	11 7pm General Mtg IP Addresses & Port Numbers 6pm Tech Topics	12	13	14	MS Office SIG (includes Access) 9am—Noon
16	17	18	19	20	21	22
23	24	25	26	27	28	29
30	31	1	2	3	4	5
6	7	8 7pm General Mtg TBA 6pm Tech Topics	9	10	11	12 Linux on Sat- urday SIG 9am—Noon
13	14	15	16	17	18	MS Office SIG (includes Access) 9am—Noon
20	21	22	23	24	25	26
27	28	29	30			



## You have just read an issue of The Digital Viking.

Would you like to receive this delivered directly to your email or business each month?

As a member of TC/PC, the Twin Cities Personal Computer Group, one of the benefits is reading this monthly publication at www.tcpc.com..

As a member of TC/PC, you may attend any or all of the monthly Special Interest Group (SIG) meetings and be eligible for software drawings. The small membership fee also includes access to real-live people with answers via our helplines, discounts, and various other perks.

Does membership in this group sound like a good way to increase your computer knowledge?

It's easy to do! Simply fill in the form below and mail it to the address shown. (If you use the form in this issue, you will receive an extra month for joining now.)



#### 10/22 I'm signing up for: Here's the info for my TC/PC Membership: O Individual/Family Membership (\$18) O Business Membership (\$100) If an existing member your # Company name Make checks payable to: **Twin Cities PC User Group** 341 County Rd C2 W Roseville, MN 55113 State Zip http://www.tcpc.com OHome OBusiness OChange address: OPerm. OTemp. 'til \_\_\_\_\_ O Check # O Bill me Home phone\_\_\_\_\_ Work phone\_\_\_\_ O New member O Renewal O Prior member I'm interested in: Online address(es) O Training classes O Volunteering O Special Interest Groups: New User, Access, Where did you hear about TC/PC? \_\_\_\_\_ List here: O I DO NOT want any of my information disclosed. O I DO NOT want to receive any mailings Administrative Use Only Rec'd

# October 11, 2022 7:00 pm General Meeting

# Introduction to IP Addresses & Port Numbers Webinar

**Presenter: John Krout** 

**Via Zoom Only** 



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