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The Digital VIKING

Twin Cities PC USER GROUP NEWSLETTER

Minneapolis & St. Paul, Minnesota USA • Vol. 44 No.8 • March 2024

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

March 2024

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General Meeting

Tuesday, March 12, 2024
7:00 PM

How to Create A Trivia Quiz

Via Zoom Only

Trivia quizzes are popular events often sponsored by neighborhood pubs, where teams compete against each other to win prizes and glory. There are several websites that offer—for a price—software to use to put together such quizzes. It is also possible to put together your own trivia quiz using software you may already have on your computer. We'll take a look at both and maybe even have a trivia quiz to test your knowledge at the next meeting.

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.

The Digital Viking

The Digital Viking is the *official monthly publication of the Twin Cities PC User Group, a 501(c)(3)organization and an all-volunteer organization dedicated to users of IBM-compatible computers. Subscriptions are included in membership. We welcome articles and reviews from members.* The Digital Viking is a *copyrighted publication and reproduction of any material is expressly prohibited without permission. Exception: other User Groups may use material if unaltered and credited.*

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Visit www.tcpc.com for meeting details.

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Editor Sharon Walbran

Making the Case for a Better Case

President's Corner
Greg Skalka, President, Under the Computer Hood User Group
www.uchug.org
president ** unchug.org

If we have nice things, we should want to protect them. We all have a lot of things in our lives that we value and don't want to lose. Some are material things – homes, cars, furniture, investments, and personal items. Some of these are highly valued because they would be costly to replace, and some have great value only to us. Other things we value may not be material but are also treasured – health, happiness, relationships, and capabilities. Some of these valued items are essential and integral to our lives; others are just nice to have, enhancing our lives. Unfortunately, the more we have, the more we have to lose and the more things we need to take care of. The things we need and love can degrade or break, be lost, stolen, damaged, or destroyed. We can lose things through neglect, accidents, hostile acts by others, or our lack of good judgment.

We all want to protect the nice things we have, but with so many possible risks and threats, it can be difficult, especially when we have so many things to protect. Sometimes it is not reasonably possible to protect against all threats to all our stuff. Depending on the value of something to us and the relative threats against it, we may want to consider insurance against its loss.

Insurance for our prized items can take two forms. One type is a protection against loss, while the other is a compensation for loss. Our automobiles are often critical in our lives, providing essential transportation to a job, school, or store. They can also be a means of recreation and entertainment and a source of personal pride. Many bad things could happen to our vehicles, including theft, vandalism, damage in an accident, and mechanical failure. To ensure these things don't happen, there are actions we can take and things we can buy to help prevent such losses. Parking in a private garage can help prevent thefts and damage that might occur when parked on the street. I have a friend that always parks his truck at the far end of a parking lot, away from other vehicles, to reduce the incidence of scratches and dings from other drivers. Investing in a car alarm system or a steering wheel locking device is often a good way to reduce the chances of theft. Regular vehicle maintenance is good insurance against breakdowns.

Unfortunately, it is difficult to eliminate all risks to your car while still using it. Since a car represents a significant asset for most people, most drivers purchase insurance against loss or damage. A reckless action or unintentional mistake while operating a vehicle could cause great injury or death to another, so our state requires drivers to purchase liability insurance to pay for damages to others and to prevent the personal financial ruin of those at fault. In addition, insurance against the loss of our cars from accidents, fire, theft, and other damage may be warranted if the loss would be a significant cost to us. For an older, low-value car, carrying more than a liability policy may not make sense, but more coverage is prudent for a newer, more expensive vehicle. Even so, depending on the amount of damage and the car's current value, this kind of insurance may not repair your vehicle but only reimburse you for its current value.

Much of our technology is costly and important to our lives and often justifies some insurance against loss. I am often asked by a store, either online or physical, if I would like to purchase product replacement insurance for that TV or other electronic device I am buying. Sometimes this additional coverage may be useful, but it carries a cost. You may also have similar coverage from using a credit card for the purchase or from a homeowners or renters policy. Many personal electronic devices, such as computers and smartphones, are costly to repurchase and so important in our lives that their loss goes beyond money. Imagine losing your phone at a critical time, like

when on a trip; the loss can go considerably beyond the cost of a replacement device. Insurance you can buy could replace your device, but it wouldn't typically compensate for the loss of use or data

The most prudent way to handle insurance is to buy only for what you can't afford to lose. For most of us, that extends to a home, car, some household items, jewelry, and firearms. Typically, insuring lower-cost items does not make sense. The only time I bought any replacement insurance for a smartphone was for my daughter's pricey iPhone when she was young, and I knew I'd be responsible for replacing it. To protect my own things, I prefer to ensure my continued use of them by being careful with them.

Smartphones are a valuable item, typically fairly expensive and risky to own. They go out in the world with us as our nearly constant companions and are subject to many dangers our home-bound electronic devices don't face. Our phones are susceptible to being dropped and damaged, submerged in water, stolen, left behind, and lost. Many people have asked me how to dry out a phone; most were unsuccessful in recovering theirs. I've seen many people with cracked phone screens, indicating some accident or mistreatment. It seems rare for a phone to die of "natural causes" (a hardware failure); most seem to suffer an accident or other incident.

I bought my first smartphone in 2017, and though it was relatively inexpensive (a Samsung Galaxy J3 Prime at $150), I was still concerned that something would happen to it. I didn't take it away from home until I bought a case to protect it. As it turned out, I found the almost perfect case for it. It was just a no-brand case I bought from Amazon (about $25), but it had all the characteristics I was looking for. It starts with a flexible silicon sheath that covers all sides but the screen and has a sizable lip above the screen surface to protect it. There is an opening for the camera lens, connector, and jacks in this cover; best of all, it is a bright fluorescent green color. It was one of the few cases I found of this type that was not just plain black. I sought out this bright coloring not for fashion but for utility. This bright coloring has saved me from accidentally leaving my phone in a dark restaurant booth or anywhere else I might not notice.

J3 Case

This near-perfect case had a hard black plastic piece that snaps on the back, providing a pop-out stand for the phone and additional corner protection. I've accidentally dropped the phone many times, and it has always survived. However, the screen was still vulnerable, so I sought a case with a holster. I have never figured out how people can carry their phones in their pants pockets. The phone seems too big to carry in a front pocket comfortably, and I'm likely to sit on it and break it in a back pocket. The holster can clip on the belt (or the front side pocket opening, where I prefer it) and carry the phone comfortably, with easy access. The phone (and the "permanent" part of the case) slides up and out of the holster; I soon mastered this quick-draw technique.

This case protected my phone so well that the phone suffered no damage or loss in the five years I actively used it. It survived many drops and falls, and I was fortunately careful when handling it (and myself) near water. The only flaw in the case was that it protected my phone so well that it could not survive as long. The holster was the least durable part. I broke the belt clip off a few times (the first time getting into a car with it clipped to my pants), and a hard plastic tab that holds the phone in broke once. The case survived the best; only once did the black part have a tab break-off. Maybe a

much more expensive case could have survived the five years of phone use, but I found that buying about five of them worked as well. I just made sure I always had one or two on hand.


Tekcoo Case

Last June, I decided my five-year-old phone was no longer sufficient, so I bought a Samsung Galaxy S22. I wanted a case exactly like the one I had for my J3, but I could not find one. There were some possible candidates, but none combined the heavy-duty protection, holster with slide-up phone removal, and a bright color element. Desperately needing something to protect my new and expensive ($700) smartphone, I ordered the two most likely candidates from Amazon, one made by Tekcoo and one from Encased.

Encased DuraClip

I first tried the **Tekcoo** case as it had bright green parts, but it seemed cheap (only $10). None of its pieces were very flexible, so I was worried about damaging my phone by snapping it on. The things that really killed me were the integral screen protector that obscured the screen a bit and the holster, which had the phone removed on the long edge rather than the short edge.

The **Encased DuraClip** case was one of several I considered from this company. At $18, it seemed much higher in quality and had the kind of holster I wanted, but it was all black and offered much less protection than I wanted. The case was relatively thin, rigid plastic, and fit fine, but it offered minimal protection for the top of the phone and none on the bottom. It was almost flush with the screen surface and offered little protection. I immediately needed something to use, so I kept the Encased case and returned the Tekcoo to Amazon.

Motive vs Encased

I was still not thrilled about the protection the Encased DuraClip case offered. I considered another from the same company but after a couple of weeks decided to try another brand on Amazon, **MOTIVE**. Their Bunker series case was much more robust and only $20. The part that made me pause was that the phone was held in the holster by a spring clip rather than sliding in from the top, but I soon got used to that. The MOTIVE case gives much more protection on all sides, with reinforced corners and a thick lip around the screen and the camera. It advertises that it allows the use of a screen protector, so I also bought one that a friend with an S22 recommended, but I have yet to install it. I found this case was far better for protection than the Encased, but since I used the Encased case for several weeks, I didn't feel right about returning it and kept it as a spare.

Motive Deconstructed

I really like the MOTIVE case, though it is all black and easier to accidentally misplace. I have considered marking it somehow, perhaps with bright paint, but have not yet been motivated. I've dropped it a few times, and the phone has survived just fine. After using the MOTIVE case for several months, I decided to play the game I played with my J3 phone and bought another as a spare. Just in case (pun intended).💻

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What is Electricity?

(Hint, the answer is not what you think)
Art Gresham, Editor, Under the Computer Hood User Group
March 2023 issue, DRIVELIGHT
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Several months ago, I read an article on the internet about the First Trans-Atlantic Telegraph Cable.

Significantly, it was a failure. But after laying several more cables and making some important discoveries about Electricity, cables, and technology, we all know it was a world-changing success. But that is another story.

What I want to share in this article is what followed my reading. Some of their discoveries surprised me as a college-trained Electrical Engineer (BE, EECS, Univ of New Mexico). I thought I knew how Electricity works, What it is, What it does, How it moves. However, after much research on technical websites (many of them with mathematical proofs and discussions that are almost over my head, like https://physics.info/electric-current/, and watching some profound videos such as those listed at the end of this article), I found out that I was wrong in almost all of my understanding.

For example, What is Electricity made of? Well, I know the answer. It is electrons.
And how fast do the electrons move? Everyone knows they move at about the speed of light.

Wrong. And Wrong.

Along with ChatGPT, I found a somewhat simplified but accurate set of questions and answers.

A. What caused the failure of the first trans-Atlantic telegraph cable?

It failed due to a combination of technical problems, environmental factors, and human error.

The cable was laid in 1858 and stretched for more than 2,000 miles between Ireland and Newfoundland. At the time, it was the longest cable ever laid and represented a significant technological achievement. However, problems emerged soon after the cable was put into operation.

One of the main technical problems was the insulation used on the cable. The insulation was made of gutta-percha, a natural latex material that was supposed to protect the copper wires inside the cable from the seawater. However, it was discovered that the insulation was not strong enough to withstand the high voltages required for long-distance telegraphy. As a result, the cable suffered from frequent breaks and signal interference.

Environmental factors also played a role in the cable's failure. The cable was laid at a depth of approximately 2 miles, which was much deeper than any previous cable. The extreme pressure and cold temperatures at this depth caused the cable to become brittle and break more easily.

Human error also contributed to the failure of the cable. During the initial testing of the cable, the technicians in Newfoundland used too much voltage, which caused the insulation to break down and the cable to fail.

There were also problems with the equipment used to transmit and receive the telegraph signals,

which led to errors in the transmission and reception of messages.

Despite these setbacks, the first transatlantic telegraph cable laid the foundation for future cable communications and demonstrated the potential for global communication through undersea cables.

Part of the cause of the failure was the technical team's lack of understanding the impact of the EMF waves when propagated under the ocean. They were working with the basic premise that it was all about the electrons moving in the cable in a linear fashion.

BUT...

B. Is electricity actually an EMF wave or movement of electrons?

Electricity can refer to both the movement of electrons and electromagnetic waves.

When we talk about electricity in the context of a circuit or a wire, we are usually referring to the movement of electrons through the wire. In this case, electrical energy is transmitted through the movement of charged particles, which can be electrons, ions, or other charged particles.

On the other hand, when we talk about electricity in the context of electromagnetic radiation, we are referring to the propagation of electromagnetic waves. These waves consist of oscillating electric and magnetic fields that travel through space at the speed of light.

So, in summary, electricity can refer to both the movement of charged particles and the propagation of electromagnetic waves, depending on the context in which the term is used.

Later research leads me to several YouTube videos trying to demonstrate the speed of electricity. (See References)

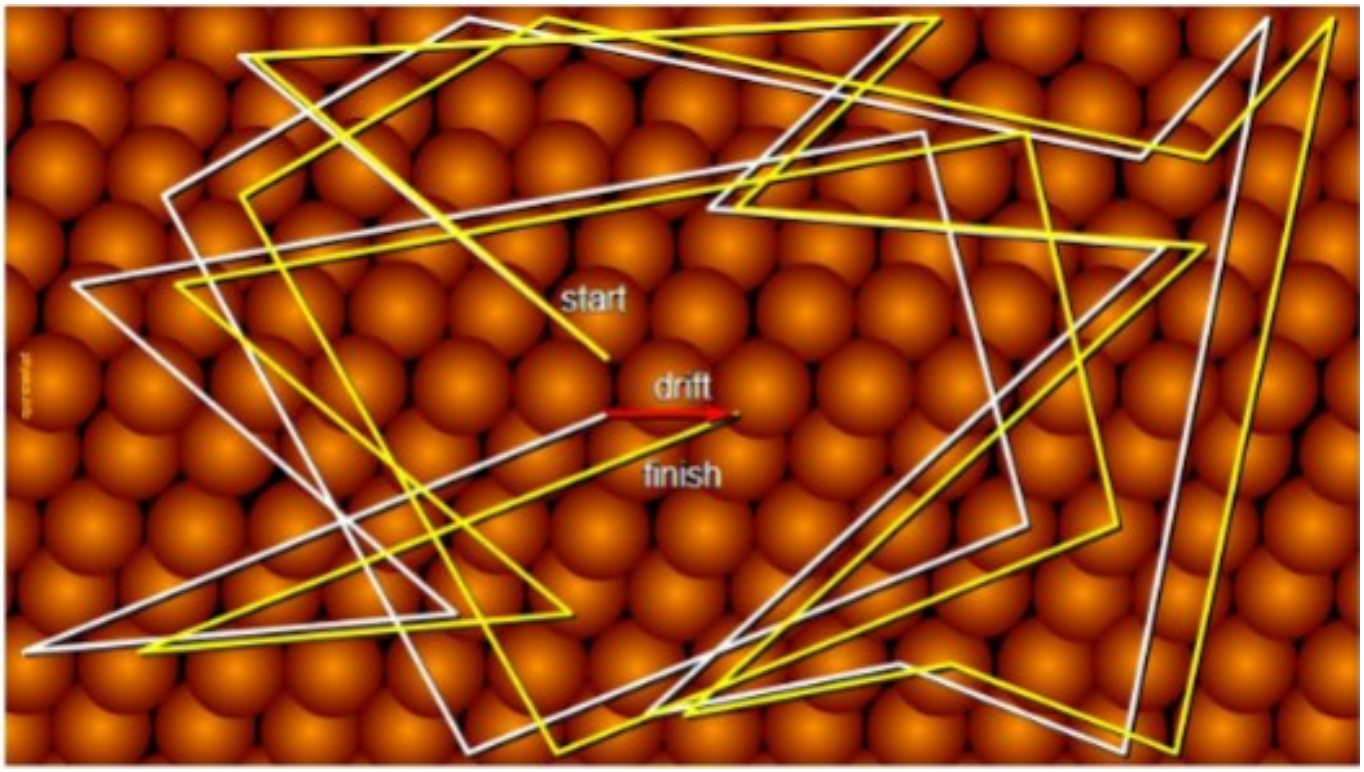
The earliest discoveries of electricity until the 1880s (see article on Tesla) dealt with simple Direct Current. So let's ask:

C. Do electrons move through a DC circuit at the speed of light?

No, electrons do not move through a DC (direct current) circuit at the speed of light. In fact, the speed at which electrons move through a circuit is much slower than the speed of light.

In a DC circuit, electrons move from the negative terminal of the voltage source (such as a battery) to the positive terminal. The speed at which they move is called the drift velocity, and it depends on the material the wire is made of and the strength of the electric field in the wire. Typically, the drift velocity of electrons in a wire carrying a current is on the order of millimeters per second, which is much slower than the speed of light (which is approximately 299,792,458 meters per second in a vacuum).

It's worth noting that while electrons themselves move relatively slowly through a circuit, electrical energy is transmitted at the speed of light through the electric and magnetic fields surrounding the wires. This means that changes in the electric field at one end of a circuit can be detected at the other end almost instantaneously, even though the electrons themselves are moving much more slowly.



The Drift Velocity of electrons in a copper wire is about 3 mm per second.
Drawing courtesy of https://physics.info/electric-current/

But what about AC (Alternating Current)? If those electrons are that slow-moving, how does the energy from a Generating Station in Arizona get here so fast, or even at all?

D. Do electrons move through an AC circuit at the speed of light?

No, electrons do not move through an AC (alternating current) circuit at the speed of light. As with a DC circuit, the speed at which electrons move through an AC circuit is much slower than the speed of light.

In an AC circuit, the direction of the current periodically reverses, causing the electrons to oscillate back and forth. This oscillation is characterized by a frequency, which is the number of complete cycles of the current per second and is measured in hertz (Hz). In a typical AC circuit used for power distribution in homes and buildings, the frequency is 50 or 60 Hz.

The speed at which electrons move in an AC circuit is still determined by the material the wire is made of and the strength of the electric field in the wire, just as in a DC circuit. The average speed of the electrons over time is still much slower than the speed of light, typically on the order of millimeters per second.

As with a DC circuit, changes in the electric field in an AC circuit propagate through the circuit at the speed of light, even though the individual electrons are not moving at anything close to that speed.

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References:

The Big Misconception About Electricity
https://www.youtube.com/watch?v=bHIhgxav9LY&list=RDCMUCHnyfMqiRRG1u-2MsSQLbXA&index=1

How Electricity Actually Works
https://www.youtube.com/watch?v=oI_X2cMHNe0&list=RDCMUCHnyfMqiRRG1u-2MsSQLbXA&index=2

The Big Misconception About Electricity
https://www.youtube.com/watch?v=bHIhgxav9LY&t=521s

So what is surprising about my answer, which I hinted at in the title of this article??

The Answers in *Italics* to the questions above (which I do believe are accurate and true responses) were all generated as my test of ChatGPT, not written by me.

Now do you understand the problem sweeping through high schools, colleges, and elsewhere? If I had tried to pass the above answers as my own, would any of you doubt me? I think not.

Portions of this article co-written by ChatGPT, Feb 13 Version. Free Research Preview.

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Windows Drivers – Some Experience Required

Bob Woods, Webmaster, Under the Computer Hood User Group
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webmasters ** uchug.org

Having retired after 20 years from the US Navy Submarine Service, I spent the next 22 years with Northrup Grumman in the IT department. I spent the first few years as a Windows desktop support technician and later as a server analyst keeping 120 Windows servers built, patched, and online. So, I am used to operating system issues and how to resolve most of the common problems.

I was recently reminded that what may be business as usual for me may not be easy for others. I recently replaced an Acer laptop with a newer unit. The Acer specs included a nice 14" touch screen, Intel i7 CPU, 12 GB of ram, a 250 GB solid-state drive, Wi-Fi, and Bluetooth. Wi-Fi was 802.11g, so it was only capable of the 2.4 GHz band, but I used a USB dongle to get the 5 GHz band for better wireless throughput. The OS was Windows 10, but it did not have the TPM 2.0 required for Windows 11. I decided to donate it to UCHUG for the 2022 Christmas Raffle.

To get it ready, I blew out the OS and installed a fresh copy of Windows 10 but did not configure it. It was at the point where you input a new user account and start the configuration. When you purchase a new PC or laptop, the manufacturer has already installed the correct drivers for the hardware. This ensures the purchaser has no issues straight out of the box. Over time you may even update the operating system to a new version. Since the drivers were already installed in the previous operating system, there should be a smooth transition to the new OS, with updates automatically applied to the drivers as needed. Easy peasy lemon squeezy.

However, what if you must completely blow out the OS and do a fresh installation? Chances are you will get the lemon squeezy without the easy part. This is because Microsoft cannot keep pace with the many manufacturers' hardware changes and drivers. Microsoft instead depends on the PC manufacturers to keep drivers for system hardware available online for download. Even going into the Windows device manager and clicking the automatic driver update option doesn't always get positive results. It sometimes requires going to support at Dell for Dell, Acer for Acer, HP for HP, etc., to get the drivers.

This was the case with the Acer. The new owners finished the installation, and Windows authenticated with Microsoft. But, there was an issue with Bluetooth not working. The Bluetooth chipset driver was either not installed or incorrect. The owners tried to resolve the issue but were unsuccessful. I received an email outlining the issue. I had not checked the Acer specs other than to note that the chipset was Broadcom. I sent an email response with a link to the Acer support site to download the driver. A few days later, I received word that they tried to download the driver, but nothing seemed to happen, and Bluetooth still didn't work.

I then started to check hardware specs and the format of the drivers on the Acer support site. Acer had used Intel and Broadcom chipsets for Wi-Fi and Bluetooth for the Acer V5 series laptops. I knew from the model specs that a Broadcom driver was required. I also found that the drivers were executable (.exe files) but stored in zip format. Unless extracted, the .exe file would not run properly. I sent another email about the correct driver to download and how to extract and run it. Not knowing the experience level of the owners, I also noted that the application Driver Easy (https://www.drivereasy.com/) might be an easier way to go. Microsoft recognizes Driver Easy as a safe and reliable way to update drivers. A free version will scan your drivers, list those out of date, missing, or not working, and download the correct drivers. With the free version of Driver Easy, a manual installation of the downloaded drivers is required. The site has a good set of instructions on manually installing the downloaded drivers (https://www.drivereasy.com/manual-update/). To get a completely automated update and installation experience requires purchasing the pro version for $29.95.

I forwarded that info to the owners to decide how they wanted to proceed. As of writing this article, I have not heard back if they were successful at getting the Bluetooth issue resolved. If they still have issues, I will give them some help.

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Use StoryGraph to Find the Books You Want to Read

By Kurt Jefferson, Editor, Central Kentucky Computer Society
https://ckcs.org/
lextown2 ** gmail.com

If you’re constantly searching for a good book, you might want to check out a new app called StoryGraph. It’s a competitor to Amazon-owned Goodreads. https://www.thestorygraph.com

StoryGraph’s slogan: Because life’s too short for a book you’re not in the mood for.

StoryGraph is available through the Mac App Store, for Windows PCs, through the App Store for Apple’s Mobile devices, and via Google Play for Android devices. You can also log into the website and use it instead of the app.

Desktop App details for Mac and Windows

(Mac version available through the Mac App Store;)
https://webcatalog.io/apps/the-storygraph/

iOS and iPad OS details (download through the App Store)
https://apps.apple.com/us/app/storygraph-reading-tracker/id1570489264

Android App details (download through Google Play)
https://play.google.com/store/apps/details?id=com.thestorygraph.thestorygraph&gl=US

StoryGraph tracks your reading and helps you choose your next book based on your mood, favorite topics, and themes.

One of the neatest features is seeing how your reading changes over time and using the StoryGraph app or website to help you pick better books. StoryGraph will show you a graph revealing the number of books you've read, the number of pages, the "moods" of books, how fast you read the book, and other interesting facts.

9to5Mac's Lauren Rosenberg began using StoryGraph after she was frustrated with the Goodreads App and its limited functionality:

As a devoted reader and someone who has been a member of the Goodreads community since 2013, I have found myself consistently frustrated with the app, especially in recent years, for everything that Goodreads doesn't do and doesn't offer. Aside from the fact that the app has barely updated since its inception – making for an antiquated user experience – some palpable misses would help me better understand what kind of reader I am and, perhaps, what type of reader I want to be. It's within this space that The StoryGraph shines.

Rosenberg adds:

In addition to taking its user wants into the app's development, The StoryGraph also gives much -needed space to independent authors. Cofounder Rob Frelow:
Suppose today you're interested in a dark murder mystery set deep in the woods featuring a kidnapping, and tomorrow you're in the mood for an emotional but funny romantic comedy set in a big city. In that case, you can find that on The StoryGraph.

You aren't stuck by your old ratings or past preferences. You won't see any 'promoted' books, which indie authors can typically never afford. You have complete control.
She adds that StoryGraph allows you to:

- Rate, review, and track books
- Engage in a "Buddy Read" with someone in your community
- Keep a reading journal
- Enter book giveaways
- Set reading goals by the number of books, pages, or hours
- Browse book recommendations by mood, pace, type, or page number
- View personalized analytics

Read the full 9to5Mac article:
https://9to5mac.com/2022/11/21/finally-a-formidable-response-to-amazon-owned-goodreads-introducing-the-storygraph/

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Special Interest Groups (SIGs)

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

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.

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..

March

April

SUN	MON	TUES	WED	THU	FRI	SAT
					1	2
3	4	5	6	7	8	9 Linux on Saturday SIG 9am—Noon
10	11	12 7pm General Mtg TBA 6pm Tech Topics	13	14	15	16 MS Office SIG (includes Access) 9am—Noon
17	18	19	20	21	22	23
24	25	26	27	28	29	30
31	1	2	3	4	5	6
7	8	9 7pm General Mtg TBA 6pm Tech Topics	10	11	12	13 Linux on Saturday SIG 9am—Noon
14	15	16	17	18	19	20 MS Office SIG (includes Access) 9am—Noon
21	22	23	24	25	26	27
28	29	30				

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Twin Cities PC USER GROUP

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.)

3/24

Here's the info for my TC/PC Membership:

Full name_____

Company name_____

Address_____

City_____ State_____ Zip_____

❍Home ❍Business ❍Change address: ❍Perm. ❍Temp. 'til _____

Home phone_____ Work phone_____

Online address(es) _____

Where did you hear about TC/PC? _____

❍ I DO NOT want any of my information disclosed.
❍ I DO NOT want to receive any mailings

Administrative Use Only Rec'd_____ Chk#_____

I'm signing up for:

❍ Individual/Family Membership ($18)
❍ Business Membership ($100)
If an existing member your # _____

Make checks payable to:

Twin Cities PC User Group
341 County Rd C2 W
Roseville, MN 55113

Or sign up on our website:

http://www.tcpc.com

❍ Check #_____ ❍ Bill me
❍ New member ❍ Renewal ❍ Prior member

I'm interested in:

❍ Training classes ❍ Volunteering
❍ Special Interest Groups: New User, Access, etc.
List here:

March 12, 2024
7:00 pm

General Meeting

How to Create a Trivia Quiz

Via Zoom Only

Twin Cities PC USER GROUP

341 County Rd C2 W
Roseville, MN 55113

FIRST CLASS MAIL