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

May 2022

General Meeting
**Tuesday, May 10, 2022
7:00 PM**

**How to Delete all Personal
Data from a PC
for Recycling**

Via Zoom Only

After hearing the question "How do I make sure I've cleaned off my hard drive so I can recycle it or give it to my relative?" come up at numerous meetings, I thought would be interesting to see what different experts (or self-proclaimed experts) on YouTube are suggesting to see what we can learn.

If you have ideas and techniques to add, please join in.

Note: Jack will be out of town but Curt Trout agreed to fill in so Tech Topics is still a "go" at 6pm.🖥

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

Tech Topics with Curt Trout via Zoom at 6pm before the General Meeting.

The Digital Viking

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Meets once or twice per year. All members welcome to attend.
Visit www.tcpc.com for meeting details.

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Keeping Records Helps Organize Computer Maintenance
By Gabe Goldberg, APCUG Advisor, Region 2
Director, PATACS and Washington Apple Pi
Gabe (at) gabegold.com

My background is enterprise computing, having worked in a high-tech company's data center and for a vendor selling software to organizations large/medium/small. So it's second nature to me -- a habit developed over my career -- to keep records of changes I make to computer hardware and software, even when it's my PC.

The change log is useful for many reasons, knowing:

- what hardware and software is installed (important for debugging, upgrading, and replacing the PC)

- when I changed something (important for tracking the origin of odd behavior)

- how to replicate desired settings in a new computer (to avoid struggling to remember everything I've done to tailor/customize software)

- what I've done from my infinite to-do list (to avoid worrying about what I might have forgotten)

- what's left on the list (this is a separate section of the log)

- what I've spent on the computer

- how other devices are maintained and configured (such as a separate section for router settings and firmware updates information)

It's easiest/best starting such a log when a new PC is bought or built, but it's worth creating one by catching up as much as possible on what's been done and maintaining it going forward. Making this a habit means it's simple and quick creating entries, and the log will be a helpful reference.

Here are sample entries for my Windows 10 system:

05/26/20 Install Firefox 76.0.1
05/26/20 Install Office 2019
05/26/20 Install Kedit 1.6.1
05/26/20 Install Belarc 9.5
05/26/20 Install Sysinternals Process Explorer 16.32
05/26/20 Install Thunderbird 68.8.1
05/26/20 Install Malwarebytes 4.1.0

08/16/20 Install CutePDF 4
08/16/20 Change Computer name to Gabes-Windows10-Deskt
08/16/20 Change User name to Gabe
08/16/20 Install Audacity 2.4.2
08/16/20 Install iCloud 13.3.59.0
09/06/20 Set Firefox browser.search.openintab --> True
09/06/20 Define local HPLJ printer

01/18/22 Set Kedit currbox on/on
01/18/22 Use Kedit Margins 2 72 -3
01/19/22 Install Firefox add-ins InFormEnter+, NoScript, Print Preview
01/19/22 Disable NoScript -- broke too many websites
01/20/22 Set Taskbar option to NOT show desktop when the cursor moves to lower right corner
01/20/22 Install Firefox add-ons, Privacy Badger, Adblock Plus, Ghostery, Don't Track Me Google
01/20/22 Set Kedit RecentFiles 25

🖥️

Logic Game Apps for Android and iPhones
By Dorothy Fitch, Editor, Green Bytes
GVR Computer Club
https://www.ccgvaz.org/

I seem to have become addicted to logic games on my Kindle (and sometimes my phone). I guess of all the possible addictions, this one would rank low in being troubling. However, these games can be time-consuming when I should be doing more productive things. So, I figure it might let me know if my mental faculties start to wane if I happen to notice.

How do I choose a logic game? I look for free games and read reviews. After downloading a game, I see how easy it is to learn to play it, whether it has a tutorial, and if there are either no ads or non-intrusive ones. These three games passed those tests. Beware, they can be addictive, and you may (as I did in one case) spend a tiny amount of cash to get more levels. However, because they are logic puzzles, you can generally play the same puzzle multiple times because you won't remember the layout or solution.

Here are my favorite three:

Thermometer Puzzles
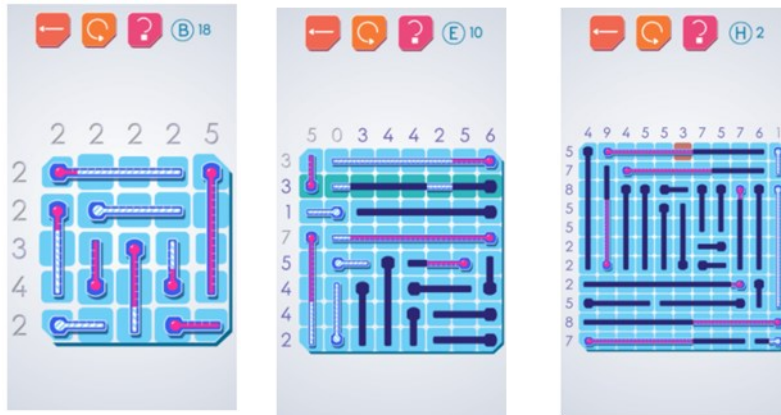**Download to your Kindle from Amazon.**
Download a version for your phone at the Play Store.
Download a version for your iPhone.
This puzzle comes with 260 games, but I'll confess to spending $5.99 for

---

another 900 games. Nevertheless, it offers a good tutorial and a handy "undo" option.

The object is to fill the thermometers with mercury to have the correct number of red squares as indicated by the labels at the top and left sides. Unfortunately, the mercury starts at the "bulb" end of a "tube" and can't reappear after an empty cell. The difficulty ranges from grid sizes of 4x4 to 11x11 (or 13x13 if you purchase all the levels).

Click to enlarge any of these images.

The puzzles are untimed, and you can get unlimited hints. A row or column highlighted in green shows where you can make a move (but doesn't tell you what to do). An orange box indicates an error.

The phone version for Android or iPhones is from the same manufacturer but is slightly different. For example, it sometimes omits numbers that tell you how much mercury you need, which is an interesting twist. However, it has loud and long ads to wait through. So I use it in a pinch.

Real Einstein's Riddle
Download from the Google Play Store to a Kindle or phone.
Learn how to play (video).
Download from the Apple Store.

This puzzle comes with 5000 puzzles and 15 daily challenges, all for free.

The goal is to follow clues, eliminate the impossible combinations (shown in brown), and keep the good ones (in green) by tapping icons in the grid at the lower left. Although the text clues are initially helpful (it is fun to play the game in a foreign language!), you will eventually use the background colors of the boxes as your guide.

The "How to Play" tutorial is excellent, and the video (link above) is good, although it doesn't show that you can hold down (long press) on an image to remove all other occurrences of it in that row. Start with the easy levels, and you'll soon want to try the

larger grids. You can save your position and later restore the puzzle to that point if you had to guess (which does happen in larger grids), and the path you initially took didn't work out.

Click to enlarge any of these images.

Sudoku

Download to your Kindle from Amazon.
Download to your Android phone at the Google Play Store.
Download to your iPhone from the Apple Store.

I probably don't have to introduce you to Sudoku. Although you put numbers into the grid (a different number from 1 to 9 in each row, column, and section), there is no math involved, just logic.

I like this particular version of Sudoku because there are no ads, there are unlimited puzzles, and many difficulty levels. In addition, you can add multiple numbers to each cell to aid in solving the more challenging ones. You can also save a game and complete it later.

I also use this version on my Android phone.

I recently read that the man credited with creating Sukodu and introducing it to the world has died. His story is here.

I hope you enjoy some of these puzzles as much as I do!

Gave Up My Mouse Long Ago and I'm Happy I Did
If You Hate Your Mouse, Try a Trackball Instead

By Kurt Jefferson, Editor, CKCS Newsletter
October 2022 Issue
https://ckcs.org/
lextown2 (at) gmail.com

The article in Gizmodo doesn't mince words with the headline: "With its big roly-poly ball and huge hand rest, the venerable trackball mouse looks like a holdover from 1996. Or maybe 1946 – that's the first time a trackball was used as an input device in a computer," writes Alex Cranz in his 2017 article.

Photo: Kurt Jefferson

Logitech ERGO M575 Wireless Trackball
Stapler
Logitech M570 Trackball Mouse
Kensington Pro Fit Ergo Vertical Trackball Mouse
Kensington Expert Mouse Wireless Trackball

He asserts the waning popularity of the lowly trackball after more of us began using the mouse and then the trackpad. Cranz adds, "But here's the thing: The trackball is still good. Not just good—the trackball is great. So great that Logitech is introducing its first trackball in many years is a cause for celebration—even if I have some issues with my new favorite input device."

So, in 2017, Switzerland–based Logitech introduced its first new trackball in years. Guess what? The MX Ergo was a major hit. And sales are still climbing. Last fall, Logitech reported a 26% increase in mice and trackball sales. (Logitech sells plenty of mice – but it's also discovering many people insist on trackballs instead.)

Then, last October, Logitech introduced yet another trackball: the Ergo M575. The user can connect to a desktop or laptop, Mac or PC via a USB interface with a small transceiver or Bluetooth. It will also connect to an iPad using the Bluetooth option.

As more of us began working and teaching school from home in 2020 because of the pandemic, more of us are actively ditching our mice. (Plenty of us are still working and teaching from home via Zoom and other software.)

> *Make Tech Easier explains why trackballs are better for you: "More workers are aware of the health risks and problems associated with long periods of sitting daily. It's supremely unhealthy, and many companies have made a serious effort to help modern office workers reduce the risks of desk-bound work.*

While standing up will help your health, more ergonomic input devices can protect you from an RSI or repetitive strain injury.

These injuries are caused by repeatedly straining your body in the same way, over and over again. These injuries can cause numbness, tingling, and pain, and they won't go away until you stop the stressor.

Trackball mice can be a blessing for workers suffering from a wrist-based RSI or carpal tunnel. The benefit comes from the trackball's stable position. While you move your wrist and arm to manipulate a traditional mouse, you only need to move your fingers to use a trackball. If you use a wrist rest with your trackball, your wrist will be at a healthier angle. This frees it from the strain associated with sliding your mouse around. Because your hand stays in one place, your arm and wrist won't be strained by the constant back and forth movement of a mouse."

As *Popular Mechanics* wrote in June, "A trackball mouse is a great way to make endless mouse movement less strenuous." It's proven that trackballs reduce wrist stress and grip fatigue.

While the best–selling Logitech trackballs are thumb-operated, Kensington, which might be called the "king of trackballs," sells at least seven trackballs on its website, on Amazon, Newegg, and other online sellers.

Because of growing demand, Kensington has released several new trackballs in recent years, including the:
- Expert Mouse Wireless Trackball
- Pro Fit® Ergo Vertical Wireless Trackball (White & Black)
- Orbit® Fusion Wireless Trackball
- Wired Orbit® Trackball with Scroll Ring
- Orbit® Optical Trackball.

The popular Expert Mouse Wireless Trackball often tops the ratings when reviewers put trackballs through their paces. The Wirecutter (a review website purchased by The New York Times), trackballmouse.org, gadgetreviews.com, and iMore all praise that finger-operated device.

A Japanese trackball maker, Elecom, has also earned a steady but growing market share in the States. Elecom currently makes the only trackball especially designed for left-handed users. It's the Elecom M–XT4DRBK model. (Read about it here at amazon.com).

Popular Mechanic's website tells what to look for as you decide whether or not to opt for the benefits of a trackball.

💻

Recycling a PC
By Dick Maybach, Brookdale Computer User Group
www.bcug.com, n2nd (at) att.net

There are two issues to address when you decide to discard an old PC (1) finding somebody who wants it and (2) removing your data from it. The first is more difficult for older units, but not impossible; our local Goodwill was delighted to get an XP-era desktop with a keyboard and mouse but no display. I had replaced Windows XP with a current version of Linux to make it Internet-safe. I wouldn't have been comfortable donating a machine with an operating system that couldn't be kept current.

Your first step in selling a PC or giving it to a charity or a friend is to figure out what it is. For Windows 10, type "settings" in the search window, then go to Settings, to System, and finally to About to see the window is shown in Figure 1. (For the remainder of this article, I'll shorten such commands to "settings" > Settings > System > About.)
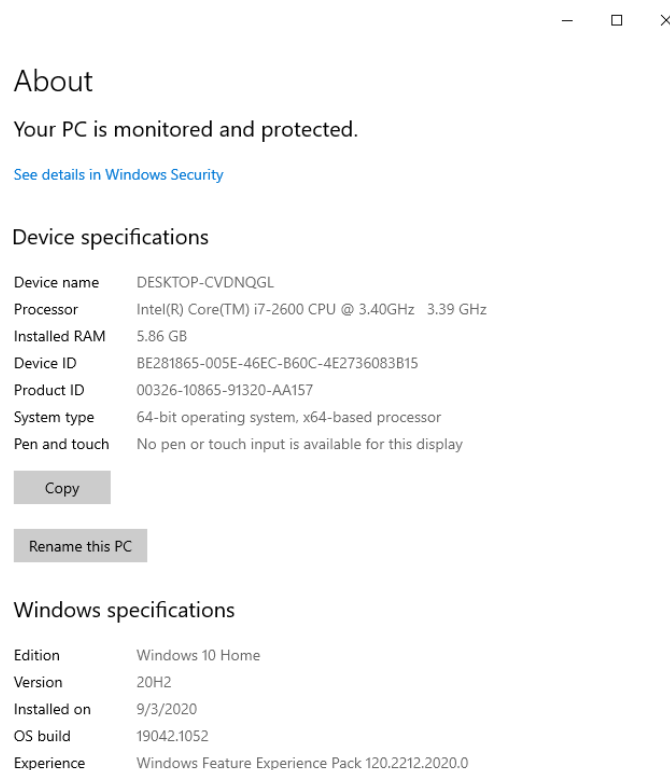
Figure 1. Windows 10 Device Specifications Screen.

Similar procedures work for other versions of Windows, see https://www.tenforums.com/tutorials/132836-check-what-processor-cpu-windows-pc.html. A key item here is whether the hardware is 32 or 64 bit. Although Microsoft still supports 32-bit processors, they are obsolete, and most Linux versions require 64-bit processors. Another key item is the version of Windows. You do nobody a favor by giving them a PC with an obsolete operating system, as it isn't safe to use on the Internet. The traditional remedy is to replace the OS with Linux,

but it may take some searching to find one for a 32-bit CPU.

An alternative to the Windows tool is a live USB drive such as PartedMagic, available at https://partedmagic.com/ for $13, Figure 2. Unfortunately, you must be careful, as it's sold only as a subscription, and if you don't cancel it within three months, your credit card will be billed another $13. I'm disappointed that the supplier has decided to take this approach. If you choose to go ahead, be sure to download both the current version (which runs only on 64-bit machines) and the old one, pmagic_2020_05_20.iso (which runs on 32-bit machines and all the 64-bit ones I've tried). Figure 2 is a screenshot of the latter.
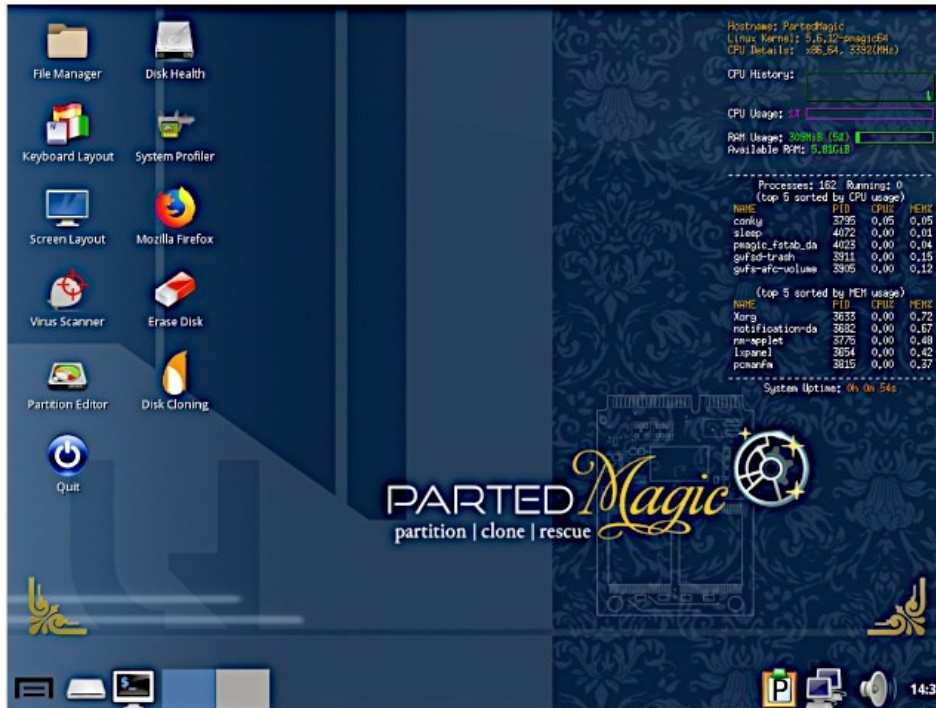

Figure 2. PartedMagic Home Screen.

The information you need appears in the third line of text in the top right corner of the desktop, "CPU Details: x86_64, 3392 MHz" here. You can see more details by selecting the System Profiler icon on the desktop or bottom left icon, then System Information and exploring the Hardware Lister.

Is your PC worth recycling? A 64-bit one certainly is, and a 32-bit one maybe, if it isn't too old. One with Windows XP, a cathode-ray-tube display, and legacy accessory ports (PS-2 for its keyboard and mouse and VGA for display) is probably ready for the landfill, but do check with a local charity. With a solid-state display and USB ports, a more modern one is more likely to be usable. Windows 10 supports 32-bit machines for now, although there are signs that this may end. You can still find a few Linux distributions that do, https://www.makeuseof.com/linux-distros-with-32-bit-support/, even though most require 64 bits.

You should remove all your data before selling your old PC, giving it away, or disposing of

it. Deleting files isn't enough, as these are easily recovered. They must be wiped; that is, over-written with unrelated data. This is especially convenient with recent versions of Windows, https://www.pcmag.com/how-to/how-to-wipe-your-hard-drive. For Windows 10, type "settings" > Settings> Update & Security > Recovery > Get started (under Reset this PC) to see Figure 3.
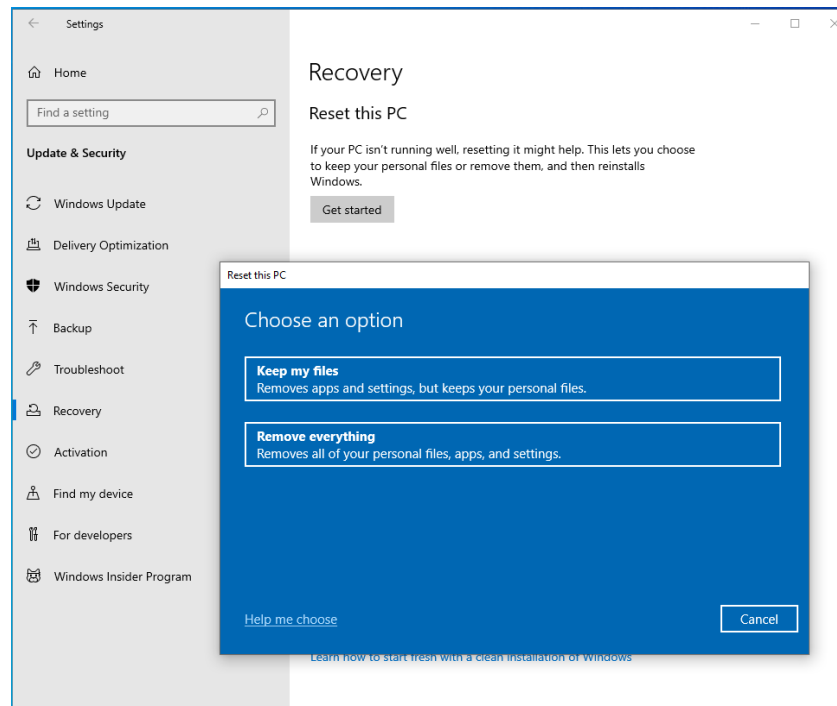

Figure 3. Windows 10 Reset Screen.

The "Remove everything" option will sanitize your PC but leave Windows 10 installed. Although similar options are available in older Windows versions, they are less useful since these are no longer supported. In such cases, my choice would be to wipe the disk of everything and install Linux, which results in an operable PC. But, of course, the operating system is immaterial for those who want to surf the Internet and exchange e -mail.

Disk wiping utilities are common, and one is included in PartedMagic, mentioned above. First, select Disk Cleaning on PartedMagic's home screen as shown in Figure 2, then select the Block Wiping tab to see Figure 43. (The options under the Secure Erase tab use utilities included on many hard disks.) I prefer Nwipe, a clone of DBAN, https://tiptopsecurity.com/how-to-securely-wipe-your-hard-drive-with-dban-erase-your-data-for-good/ and available separately.

Figure 4. PartedMagic Disk Eraser Windows.

The wipe process will probably take several hours, but it takes no supervision, so you can start it and walk away. If the process fails, the safe remedy is to remove the disk and physically destroy it by taking it to the curb and using a hammer. Do this even if your machine is headed for a landfill. You may be tempted to omit it, thinking you have nothing to hide. However, if you've ever used the PC to access the Internet, it has your browsing history, with the sites you've visited and perhaps their passwords, if you've used it for e-mail, it has your messages, and if you've used it to prepare your taxes, it has your old returns. How would you feel if such data were displayed on a website? By the way, that your PC isn't operable doesn't mean its disk can't be read. In this case, the only safe option is to remove the disk, give it the hammer treatment, and discard the PC separately.

Even though it requires some effort, PC recycling is worthwhile. One that you consider too old and slow to be useful can be valuable to a person or organization that doesn't have one.

Modern cell phones also contain sensitive data, which should be deleted before being discarded or traded in. Follow this procedure for Android phones. Start the Settings app, then System > Advanced > Reset Options > Erase all data (factory reset) and follow the instructions. You will have to answer several "Are you sure?" questions, and the process will take several minutes. This isn't long enough for a secure delete process, and I suspect that a determined hacker could recover the data, but at least it's protected from casual ones.

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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.

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

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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

May

Sun	Mon	Tues	Wed	Thu	Fri	Sat
1	2	3	4	5	6	7
8	9	10 7pm General Mtg Delete personal data from HD 6pm Tech Topics	11	12	13	14
15	16	17	18	19	20	21 Microsoft Office SIG (including Access) 9am-Noon
22	23	24	25	26	27	28
29	30	31	1	2	3	4

May

Sun	Mon	Tues	Wed	Thu	Fri	Sat
5	6	7	8	9	10	11 Linux on Saturday 9am-Noon
12	13	14 7pm General Mtg TBA 6pm Tech Topics	15	16	17	18 Microsoft Office SIG (including Access) 9am-Noon
19	20	21	22	23	24	25
26	27	28	29	30		

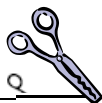# You have just read an issue of The Digital Viking.

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.)

5/22

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

Full name_____

Company name_____

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❍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

I'm signing up for:

❍ Individual/Family Membership ($18)
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If an existing member your # _____
Make checks payable to:
Twin Cities PC User Group
341 County Rd C2 W
Roseville, MN 55113

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:

Administrative Use Only   Rec'd_____ Chk#_____

May 10, 2022
7:00 pm
General Meeting

How to Delete All Personal Data from a PC For Recycling

Via Zoom Only

Twin Cities
PC USER GROUP

341 County Rd C2 W
Roseville, MN 55113

FIRST CLASS MAIL