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PC USER GROUP

NEWSLETTER

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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, May 11, 2021
7:00 PM

Pioneers of Tech: In Their Own Words

Via Zoom

At our May meeting we will watch and listen to some of the tech pioneers who made the Internet possible and who wrote programming languages like C++, Pascal, and JavaScript, discovered JSON, and standardized SQL for database management systems. They may not be familiar names nor are there usually bronze statues honoring them in national parks but they have had a profound influence on our daily lives and we should get to know them. They will tell us in their own words what motivated them, what problems they were trying to solve, and more. 🖥️

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

TC/PC is a Member of



24-Hour Information • www.tcpc.com
Application form inside back cover

The Digital Viking

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Newsletter Staff Editor Sharon Walbran

Windows Clipboard Secrets Revealed

By Bob Woods, Webmaster, Under the Computer Hood User Group

September 2020 issue, Drive Light

www.uchug.org, Webmasters (at) uchug.org

I am sure you have noted that while Microsoft eventually gets around to including free functionality accessories, the freebies often leave a bit to be desired. A shining example is the built-in clipboard. It's there to use, but until recently only gave you one shot and doesn't save anything between reboots. When having to do multiple copy/paste routines, many of us have turned to freeware or shareware to overcome the built-in clipboard limitations.

Several years ago, I purchased a license for the excellent clipboard extender Clipmate by Thornsoft (<http://thornsoft.com/>). Clipmate has many features including saved clipboard contents, editing of the clipboard contents, and the ability to create folders for different clipboard content. But it isn't free, costing \$35.00. However, there are times where I just need to do a few quick copy/paste inserts. On those occasions I will not launch Clipmate, just use the Windows clipboard.

Somewhere along the line, Microsoft has given the built-in clipboard a history lesson. The clipboard can now hold 25 items. That includes text, images, and content from browser pages. But the history functionality is not turned on by default. You must opt to add this feature. To do that hold the Windows key and tap your v key (a Windows hotkey combination). A onetime pop up will open asking permission to turn on the clipboard history. From then on when you do a Windows key + v key a clipboard pop-up window will open allowing you to select from contents in the clipboard. Each saved item will be in its own small window within the clipboard window. At the right of each window, the ellipsis (three dots) will allow you to delete a saved item, pin it which saves it even if you clear the clipboard or restart, and to clear all.

An article at

<https://techplugged.com/how-to-clear-clipboard-on-windows-10/> describes multiple ways of clearing the Windows clipboard.

I have found that just opening the clipboard pop up with Windows key + v key and selecting to clear all to be the easiest for me. However, if you only occasionally use the clipboard, you might forget the hotkey shortcut. Setting up one of the methods from the Tech Plugged article might work better for you.

A further update to clipboard functionality is in testing to be released in a future Windows update as discussed in an Infopackets article at

<http://www.infopackets.com/news/10797/windows-10-cut-and-paste-get-overhaul>



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Tech Travels 2020

By Greg Skalka, Under the Computer Hood User Group

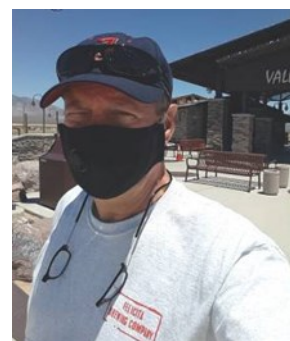
September 2020 issue, Drive Light

www.uchug.org, president (at) uchug.org

I've written before about using technology in my travels over the years. Each trip I take seems to reveal new travel-related devices and services and new ways the tech things I'm already using can enhance my journey. But this is 2020, the year dominated by COVID-19. Life has had to take on a "new normal," and so has travel. While limited by the pandemic, there are still opportunities (and sometimes necessary reasons) to get away, and technology can still help, sometimes with new twists.

My aunt, who lives outside Grand Junction, Colorado, was to celebrate her 50th wedding anniversary in June, and her children wanted to host a celebration for family and friends. They moved the celebration too early July, hoping the pandemic's effects would diminish, but if anything, there was a resurgence of the virus and an increase in social and business restrictions. My mom (her sister) had a hospital stay in late May and for health reasons had to give up any hopes of attending. As the oldest nephew or niece on the West Coast, I wanted to go to represent the family. I was looking forward to seeing my aunt and her family, cousins from Nebraska, and just getting away from the life-in-pandemic routine.

Planning Tech. As with everything in our modern lives, the Internet is the place to go for travel information. Online searching is the best way to get accurate and up-to-date information on health advisories where I would be traveling, any travel restrictions, what is open, what has been closed due to COVID, where to stay, how to get food, and how to travel. Google Maps gave me answers to questions about road trip options. Airline and travel site searches filled in the information on air travel options from San Diego. I began creating my typical travel Word documents, listing options, and costs, which would eventually be pared down to one travel Word doc that would be my master plan for the trip.



I originally felt I would fly, but soon found it was expensive, didn't save that much time, and carried a higher coronavirus exposure risk than driving. Flying to the small airport in Grand Junction provided few and inconvenient flight options and was too pricey. I looked at flying on Southwest to Denver, Salt Lake City, Las Vegas, and Albuquerque, and though some flights were quite low in cost, the rental car costs for the final leg to get to Grand Junction were surprisingly expensive. To have the shorted drive I would fly to Denver, but the cost to rent a car at that airport was almost three times the cost to rent a car locally and drive the entire way. Las Vegas had the best-combined air and rental costs but it seemed silly to fly there and then still be less than halfway to my destination. In the end, my wife's concern about my flying and possibly being exposed to the virus in airports and on the plane tipped the scale to driving. Note that my wife was too afraid to travel in any fashion, so I would be going alone.

Transport Tech. While the drive of 830 miles one way could be made in 12.5 hours per Google Maps, I felt a solo straight-through trip might be risky, and so chose to break it into two days of about 6 hours of driving each. This would mean leaving on Thursday morning, driving two days, staying for the celebration on Saturday, leaving Sunday morning, and driving two more days, with a return on Monday afternoon. I planned to stay in St. George, Utah on the way out, as that split the driving time pretty much in half. On the return trip, I stayed in Cedar City, Utah, which gave me a 5-hour drive Sunday and a 7.5-hour drive on Monday. I did this to stay in a different town on the way back (variety) and to have a shorter drive on Sunday so I could possibly attend a local church service that morning before heading back home.

Since I'd found the local car rental cost was so low (I highly recommend Costco Travel), I decided it was a better option than putting miles on one of my cars. The rental car would



be newer and if something did break along the way, I could just call Budget Car Rentals to get a new one and be on the road again. I got a 2019 Hyundai Elantra (intermediate class), and since I had space to bring anything I wanted (as compared to flying), I pretty much did. I brought two digital still cameras, a digital video camera, a laptop, and a Chromebook, as well as all the chargers and adapter cables to support them. After reviewing state

restrictions on the Internet, I brought my dashcam to record my trip. Since I was unsure about how easy it would be to get meals on the road during COVID times,

I also purchased an electric cooler to take in the car. The Wagan Tech 24 Liter Personal Fridge/Warmer I bought off Amazon uses the Peltier effect to transfer heat from one side of a special semiconductor device to the other when a current is applied. It runs on 12 Vdc, but I also purchased an AC to DC converter to run it in my hotel room. Placed on the floor of the back seat on the passenger side and plugged into one of the car's two 12V power ports, it kept my drinks and snacks plenty cold.



Car Tech. My rental car came with 20408 miles on it and lots of high-tech features my older cars lack, including a back-up camera, in-dash information system, USB port, blind-spot detection, and lane-keep assist. The USB port and in-dash display allowed me to put my MP3 music files on a USB thumb drive, plug it into the car USB port, and play them. This was great for when I couldn't find a good radio station to listen to (which was most of the time). In addition to the USB port, the front console had two 12V power ports, so I could use one to power my cooler and one to power my smartphone (with the 12V to USB adapter I brought). I also brought a vent-mount phone holder so I could easily see my phone for navigation.

The blind-spot detection (BSD) and lane keep assist (LKA) were useful safety features. BSD uses radar sensors at the rear corners of the car to detect objects in your blind spots (behind and in the lanes to the right and left). When a vehicle is in either of those locations, an indicator in the side mirror lights up. If you have your turn signal on to change lanes when a vehicle is in the blind spot, it also sounds a warning chime. BSD also works in

conjunction with the backup camera to provide a warning sound when something is behind or coming from either side when backing up, even when out of view of the camera.

The lane keep assist feature helps keep the driver from wandering unintentionally into an adjacent lane. It uses a camera in front of the rearview mirror to monitor your lane position. When your car starts going into the adjacent lane (and you don't have the turn signal on, indicating an intentional action), the car applies a steering correction to keep the car in the lane, as well as sounding a chime. I let go of the wheel on some curves and it steered the car on its own. It does sense when the driver is not providing steering inputs and chimes if you keep your hands off the wheel too long, however.

This fancy car technology did give me some concern on my second driving day. I was heading east on I-70, through a particularly scenic part of Utah, when I heard a chime. A little orange triangle with an exclamation point in it lit up on the dash and the center text display put up a message, but it was only up about 5 seconds so I missed reading all of it. It said to check something. The car was driving fine so I waited for the next exit and pulled off, but couldn't figure out how to display that message again. I turned off the car, got out, and walked around it, but saw nothing wrong. I got in and started the car, and the orange triangle was gone. After continuing down the road a while, it lit up again, and again I missed what to check. On the third time, I finally saw that it said to check the BSD system. I saw that the BSD system was now off, but since I didn't consider it mission-critical, I proceeded on. I'm not sure if it had a problem at elevation or with temperature, but with the intermittent operation it finally came back on for good on my last travel day.

Navigation Tech. I love Google Maps, but I don't trust it (or the GPS satellite system, for that matter), so I brought AAA state maps. I also downloaded off-line maps for all the areas I would be traveling through in Google Maps on my phone, in case I lost cell coverage.

I only had three navigation issues my entire trip, which is not too bad, considering how much I was using Google Maps. The first occurred only a few hours into my trip. I exited I-15 north of Pala in San Diego County to get some snacks out of my cooler and found Maps could not direct me back onto the freeway. Once I got on I-15, my position on the Maps display did not change though I was traveling north. I pulled off in Temecula and turned the phone off, then on. I'm not sure if it was the power cycle or perhaps I had run into a point where my phone could not see enough GPS satellites to determine its location, but that issue never happened again.

The second issue happened later that day. After leaving Las Vegas, Google Maps informed me there was a 30-minute delay ahead due to road construction; it looked to be near Mesquite, NV, which is on the border with Arizona. I resigned myself to a longer driving day than planned. As I approached Mesquite, however, Google informed me it had found an alternate route that eliminated most of the delay. I accepted the reroute, and it had me exit I-15 on the west side of town and travel through town north of the now barely crawling interstate traffic. A few other cars appeared to be routed with me. As we reached the east side of town Google directed me to get back on the now flowing interstate, but I found the

on-ramp was blocked with temporary barriers. Google apparently didn't know this. I decided to continue on the road I was on, which appeared to be a frontage road, with a few cars following me. At first, Google said to turn around, but finally said proceed. After winding around through a somewhat scenic drive along the Virgin River for about 15 minutes we came to an open I-15 on-ramp. I guess I just needed to have faith.

My third nav miscue occurred in Grand Junction. I had made it there only on low-cost Costco gas, filling up in Victorville, Henderson, and St. George. With no Costco in Grand Junction, I used my Gas Buddy app to find a low price fill-up - a Walmart gas station. It was 15 minutes away, in the direction I needed to go. When I got to the location Gas Buddy had transferred to Google Maps, however, I found I was in a high school parking lot. No gas there. As I turned and headed back the way I'd come, I saw a Walmart sign in the opposite direction that it had told me to turn. Not perfect directions, but close enough, I guess.

Lodging Tech. I stayed in Comfort Inns in St. George and Cedar City, UT, and in Grand Junction. In all locations, I had a minor issue with their free Wi-Fi. I could use my VPN when on my laptop, but not when using my Chromebook.

In all three places, the hotel Wi-Fi was not encrypted but required a password to be entered in a browser login page to access the service. This worked fine for both of my devices; I could then access the Internet. When I then turned on my VPN (I use Private Internet Access) on my Chromebook, I lost access to the web. Turning it off restored access. With my Windows laptop, turning on the VPN did not interrupt access. Fortunately, all activities requiring security (like email) were done through my laptop; I used the Chromebook only for general browsing. I have seen this before with the Chromebook, but I don't know if it is a problem with Chromebooks, the hotel internet provider (they might want to discourage VPN use), or my VPN provider.

Roadway Tech. I saw lots of online order fulfillment go by in my travels. Away from city traffic, it is easy to see that our tech companies are well represented on our Interstate highways. I saw lots of long Amazon "Smile" and Walmart trailers, and a lot more of the dual-trailer trucks we only occasionally see on San Diego freeways. I also saw quite a few of the triple-trailer trucks (mostly FedEx) we don't see; these were like mini-trains traveling on the highways.



Traveling in a COVID World. The coronavirus added new twists to my travels. I had to make sure I brought a supply of masks along with me. While safe in my car most of the day, I did have to venture out for food, gas, some sightseeing, and rest stops, as well as lodging each night. Used to the fairly restrictive rules of San Diego, I found adherence to that standard (especially mask-wearing) diminished the further east I went.

On the road in COVID times, I found it to be much easier to find food and drink than restrooms. Since they are now much more prevalent than gas stations, I used to think first of



stopping at a fast-food restaurant when relief away from home became necessary. Now, with no indoor dining, travelers must look elsewhere. I found this out within the first few hours of my trip. Since I would be gone five days, I finished up the milk, rather than have it spoil. Big mistake. By Temecula, I knew I'd need to make a restroom stop soon. By Riverside, I was getting desperate. When I saw a Jack In the Box off the freeway, I pulled off. While the dining room counter was available for ordering, dining in was not allowed, and the restrooms were blocked off from the public by stacks of chairs. Back in the car, I searched on Maps for a McDonald's - same result. I then recalled what my wife, who works for a company stocking their products in Home Depot stores, said about their restrooms. I found a Home Depot in Riverside and found the relief I needed. After that, I paid as much attention to my bladder as to my stomach.



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Thank Ben Franklin – For the Library, that is

By Phil Sorrentino, Contributing Writer, Sun City Summerlin Computer Club

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Ben Franklin is remembered for many things political and technical. I'll leave the politics to the history buffs, but on the technical side, he invented the Lightning rod, bifocal glasses, the Franklin Stove for home heating, and the odometer. And most important to us lately, he laid the groundwork for the public library system.

Libraries have changed a lot since Franklin's time, but the idea of a source of information or entertainment to be loaned out for free, to members, has endured for almost 300 years. Initially, books were probably the only things being loaned out, but nowadays the library loans out eBooks and audible books, as well as movie DVDs, music CDs, and TV shows, and the always popular classically bound books, many of which are mercifully in Large Print. Although initially and up to just a few years ago, a person had to visit the library to borrow an item, today we have computers, tablets, and phones that allow us to borrow an item without ever having to show up at the library. (However, you probably have to go once just to join the library and get a library card, though that, recently, may have even migrated to online activity.)



OverDrive Icon



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Today, most public libraries subscribe to a service called OverDrive to catalog and manage their electronic offerings. When you borrow an electronic item, you download a license file to your computer. The license file is an .acsm file type, for those of you interested in the details. So, borrowing an electronic item entails downloading the item's license file to your device and then using the appropriate reader/viewer/player to read/view or play the electronic item. And don't worry about returning the item because after the borrowing period ends, the item will automatically be returned to the library (No Late Fees, pretty neat, don't you think).

You can even return the item early if you finish it before the borrowing period ends; just look for a button to "Return" the book. Fortunately, all of the steps required to borrow and return an item are done for you by an app that you initially download to your device. Once it is downloaded, you then use it to borrow the electronic items. When you first use the app to connect you to your local Library system, you will establish an account with an account name (usually your library card number) and a password or PIN. This is now the account you will use to borrow electronic items. Two of these apps are Overdrive and Libby, both of which are used to borrow eBooks and audible books. Overdrive has been around for a while and allows you to borrow eBooks and audible books so you can then read them with a reader like the Kindle reader. Libby is newer. Not surprisingly, Libby is made by the same company that makes OverDrive - the OverDrive Company. Libby not only helps you borrow the item, but it provides a reading environment, so you can borrow and read eBooks or listen to audible books, all within Libby. (So, you don't need the Kindle reader if you use Libby.)

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Many of us may remember Hoopla, Fran & Ollie, or was that Kookla, Fran & Ollie. (Well, that probably gives away the fact that I grew up in the 1950s near New York City.) But the important point here is that Hoopla is a new free Streaming service being offered by many library systems, in particular the Hillsborough County Public Library Cooperative. (HCPLC). Many of us are probably familiar with borrowing eBooks and audible books from the library using Overdrive or Libby on our mobile devices (phones and tablets), but Hoopla goes a step beyond and provides free streaming of much of the library's video inventory. Hoopla is a cloud-based digital media platform that enables users to instantly borrow entertainment and educational material using the Hoopla app on a

tablet or smartphone. Think of Hoopla as pay-per-view or video streaming, where your public library is picking up the cost.

Hoopla is a website (Server) and app (Client for mobile devices) that allows you to borrow movies, TV (shows & episodes), and Music selections. The website is hoopladigital.com and the App looks like this:



All streaming services are vying for your time and most are also after your money, but Hoopla is free. Hoopla is more like a library than a “blockbuster” store (for those of you who can remember that far back). All you need is a library card and you can get an account. Once you have an account, you can borrow movies, TV shows, music CDs, eBooks, audible books, and comics (cartoons). When you borrow these items, like borrowing items from any library there are some restrictions. Libraries have different limits, so check with your particular library system. Libraries may limit the number of items borrowed per month, or the amount of time you may have access to the item. HCPLC allows you to borrow 20 movies per month. When you borrow a movie, you can have it for up to 3 days. CDs borrowed via Hoopla are good for 7 days and audiobooks are good for 21 days. A quick look at HCPLC revealed over 12 thousand movie titles, over 2 thousand TV show episodes, over 45 thousand CD titles, over 180 thousand eBooks, over 51 thousand audible book titles, and over 10 thousand comics (cartoons) listed. With that much free streaming from the library, you may not need all those costly streaming subscriptions, though I doubt if Hoopla will replace any of the popular streaming sites like Netflix or Amazon. It is probably just a free adjunct, but if funds are tight it may just be a good free alternative.



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Wi-Fi 6 – What happened to b, g, n, ac?

By Phil Sorrentino, Contributing Writer, Sun City Center Computer Club

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Ever since Wi-Fi appeared way back around 2005, the Wi-Fi version has been described by a letter because of the letter reference used in the 802.11 Local Area Network standard. Initially, there were 802.11a and 802.11b. Most of us became familiar with the “b” version because this version used the 2.4 GHz frequency band which had better coverage than the “a” version that used the 5 GHz frequency band. (Today many Wi-Fi routers provide networks at both 2.4 and 5 GHz.) So, until recently the version of the standard has been used as the version for the Wi-Fi router product. When there was only a and b, that was easy enough, but as time went on, faster and more capable standards were developed and each had a new designation, and now the standards are using multiple letters for the designation like ac, and ax (the latest).



To simplify the designation for products, the Wi-Fi Alliance (the group responsible for certifying Wi-Fi products) decided to use numbers to designate the version. The newest standard 802.11ax is to be known as Wi-Fi 6. Earlier versions will be called Wi-Fi 5 (previously ac) and Wi-Fi 4 (previously n), but you will probably never see those designations in practice. This may initially cause some confusion but eventually, it should be a simpler way of determining Wi-Fi product capabilities. Eventually, we'll all know exactly what the 6 in Wi-Fi 6 indicates; well, at least as well as we know what the “n” indicates in the n version of Wi-Fi.

Unlike many of the earlier Wi-Fi updates, Wi-Fi 6 is not just an increase in speed, it also provides the groundwork for future improvements that will ensure that Wi-Fi speeds continue to increase in the future. Wi-Fi 6 is just starting to arrive this year. There is a good possibility that it will be in your next smartphone or laptop. At some time in 2021, new Wi-Fi 6 routers will start to include 6E which will be the use of a new 6 GHz frequency band (I guess the E indicates an extension into the 6 GHz band).



So, what is Wi-Fi 6? Wi-Fi 6 is just the next generation of the Local Area Network standard that will do the same thing past Wi-Fi standards have done - it will connect your many devices to the internet, but it will do that at faster speeds, and it will introduce new, faster and more efficient technologies into the router. Wi-Fi provides the critical link between our Client Apps and the internet Servers (remember Client-Server Technology?). Much of the improvements with Wi-Fi 6 are aimed at handling the demands of the Internet of Things (IoT). (In fact, very small networks might not even notice much of an improvement. A single Wi-Fi 6 device connected to a Wi-Fi 6 router may only be slightly faster than a single Wi-Fi 5 device connected to a Wi-Fi 5 router.) Another benefit of Wi-Fi 6 will be the fact that all Wi-Fi 6 certified devices will include WPA3, a new, stronger, Security Protocol that improves on WPA2 making it harder for hackers to infiltrate a network.

Many of our homes now have many devices that need to be connected to the internet. Think about it, there are smart bulbs, smart plugs, smart assistants (Alexa comes to mind), indoor and outdoor cameras (Ring doorbell camera comes to mind), door or garage locks, smart thermostats, door or garage door magnetic sensors, as well as laptops, desktops, smartphones, streaming devices (Amazon fire stick comes to mind), and tablets. The last time I

had to change the password on my router, I had to change it in 23 devices before I was finished, though the number for an average house today is about nine. (I have seen predictions that the average home in the future may have up to 50 devices.)

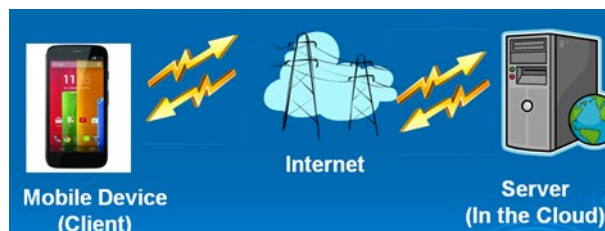
Wi-Fi 6 introduces some new technologies to help mitigate the issues that come from putting tens of Wi-Fi devices on a single network router. Wi-Fi 6 has been designed to handle many devices efficiently, by splitting up the available bandwidth so that many devices can be serviced simultaneously. Without getting into any technical detail, Wi-Fi 6 will let routers communicate with more devices at one time, let routers send data to multiple devices in the same broadcast, and let devices schedule check-ins with the router, all features that will allow more devices to be serviced. Where current routers might start to get overwhelmed by requests from a multitude of devices, Wi-Fi 6 routers will keep all those devices up to date with the data they need.

Without the improvements that Wi-Fi 6 will bring, the performance of your future network would slow down as you increased the number of devices on a given network. You may even want to use the fact that things may slow down with your old router to your benefit and wait till you notice your internet connection "seems to be a little slow" before you take the plunge into Wi-Fi 6.

To get Wi-Fi 6, you'll need to purchase a new Wi-Fi 6 router. Without a Wi-Fi 6 router, all the devices that may be Wi-Fi 6 compliant will not have any advantage. To take full advantage of Wi-Fi 6, all the devices connected to your Wi-Fi 6 router will have to be Wi-Fi 6 compliant. So, the improvements we get from having Wi-Fi 6 will probably only slowly be incorporated into our internet experience, but it eventually will be worthwhile. New devices will slowly appear with Wi-Fi 6 incorporated, but it will probably take a few years to get to the point where your whole network is compliant with the Wi-Fi 6 standard (and by that time we'll probably be talking about Wi-Fi 7).

Just a brief review of the new technologies. Two technologies are helping speed up Wi-Fi 6. One is "Multi-user, Multiple-input, Multiple-output" (MU-MIMO), which is already in use in some high-end routers and devices, which allows the router to communicate with multiple devices at the same time, rather than broadcasting to one device, and then the next, and then the next, etc. Current high-end MU-MIMO routers can communicate with four devices at a time, Wi-Fi 6 will increase this to 8. (You have probably seen routers that incorporate MIMO because it involves multiple antennas, which let the router talk to multiple devices at one time.)

The second technology is "Orthogonal Frequency Division Multiple Access" (OFDMA) which allows one transmission to deliver data to multiple devices at once. Both of these technologies are used to get more out of each transmission from your router to your devices. Most of the details of these technologies will probably never become too apparent to most of us, but we all will benefit from them in that we will be able to attach more and more devices to our router, without slowing it down, so we can enjoy the benefit of all the features provided by all of those wonderful internet servers.



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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.tpc.com

Board of Directors*

All members are welcome! Check www.tpc.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 Kuhlmeier 952/934-8492
skuhlmeier@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 Kuhlmeier 952/934-8492
skuhlmeier@hotmail.com

Directions to Summit Place for General Meetings:

Proceed to Eden Prairie Center Flying Cloud Drive . [Flying Cloud Drive runs along the West side of the Eden Prairie Center.] Once you have driven past Eden Prairie Center (on the left) along Flying Cloud Drive you will come to a stop light at Prairie Center Drive. The next intersection with a stop light and left turn lane is Fountain Place. Turn left at Fountain Place and go straight into the parking lot. Turn left again to the first covered entry way of Summit Place. There is plenty of parking in the large parking lot in front of the first Summit Place covered entry way. When you enter the door at the first covered entry way, ask to be directed to the Performance Room for the TC/PC meeting. For a map of more detailed directions and *info on Web SIG and Board meeting*, check the TC/PC website.

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.tpc.com

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

May

June

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

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You have just read an issue of The Digital Viking.

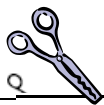
Would you like to receive this delivered directly to your email or business each month?

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.)



5/21

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

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

<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 11, 2021
7:00 pm
General Meeting

**Pioneers of Tech:
In their Own Words**

Via Zoom

More info: www.tcpc.com



341 County Rd C2 W
Roseville, MN 55113

FIRST CLASS MAIL