

# The Digital Viking



**Twin Cities**

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*

**August 2023**

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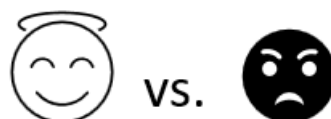
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**General Meeting**  
**Tuesday, August 8, 2023**  
**7:00 PM**

**AI Continued: How to Protect  
Your Data and More**

**Via Zoom Only**

At our August meeting we will view some tips and tricks, via Youtube videos, for ensuring your data doesn't get included in AI training by the major search engines or, for that matter, by your bank or credit card companies. We will also hear from some experts in the field about why we should be embracing AI, courtesy of Ted Talks. AI Friend or Foe?



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**Note:** All TC/PC Meetings and SIG Groups will be virtual until further notice. Visit [tcpc.com](http://tcpc.com) for info.

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

TC/PC is a  
Member of



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**24-Hour Information • [www.tcpc.com](http://www.tcpc.com)**  
Application form inside back cover

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# The Digital Viking

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Full page (7½ x 9½)	\$100.00
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One-third page (7½ x 3)	50.00
Quarter page (3½ x 4¾)	40.00
Member Bus. Card (2 x 3½)	10.00

Multiple insertion discounts available.

Contact Sharon Walbran at: SQWalbran@yahoo.com

Deadline for ad placement is the 1<sup>st</sup> of the month prior to publication. All rates are per issue and for digital or camera-ready ads. Typesetting and other services are extra and must be requested in advance of submission deadlines.

Payment must accompany order unless other arrangements are made in advance. Please make checks payable to: **Twin Cities PC User Group**

## TC/PC 2023-2024 Board of Directors

Meets once or twice per year. All members welcome to attend.

Visit [www.tcpc.com](http://www.tcpc.com) for meeting details.

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## TC/PC Member Benefits

Product previews  
and demonstrations

Special Interest Groups  
Monthly Newsletter

Discounts on products  
and services

Contests and prizes

## Business Member Benefits

All of the above PLUS:

FREE ½ page ad on  
payment of each renewal

20% discount on all ads  
Placed in the *Digital  
Viking* Newsletter

Up to 5 newsletters mailed to  
your site  
(only a nominal cost for each  
additional 5 mailed)

## Newsletter Staff Editor Sharon Walbran

# Popular Email App Undergoes Major Overhaul With Complete Redesign Due in 2023

By Kurt Jefferson, Editor, Central Kentucky Computer Society

<https://ckcs.org/>

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Hate your email app?



Consider switching. One option is Thunderbird, a major player that's been around for years. However, it's now undergoing a major redesign since it was first created nearly 20 years ago.

Version 102 is introducing folder colors, new icons, a revamped address book, and more. Developers say this is just the beginning.

They plan to introduce a greatly "modernized" Thunderbird in 2023 with version 114.

It's already one of the most popular email apps in the world – with more than 20 million users running it on Macs, Windows, and Linux computers. An Android version is in the works, and developers are eyeing the possibility of a version for iOS.

Thunderbird is free, but if you use the app on a regular basis, developers ask you to donate here: <https://give.thunderbird.net/en-US/>

It's an open-source app for managing email, calendar, news feeds, newsgroups, and a chat feed.

TechRadar says Thunderbird offers "one of the best sets of features you'll find in an email client." All Things Newz writes,

"Mozilla Thunderbird is having a resurgence right now, armed with an expanded team of developers and a plan to take over the email world (including Android)."

Thunderbird began 19 years ago when the Mozilla Foundation – known for its Firefox browser – introduced Thunderbird's predecessor.

In 2012, Mozilla announced it was no longer making Thunderbird a priority and stopped ongoing development.

An all-volunteer council met in Toronto and decided there was enough demand to keep Thunderbird alive and add features users requested.

In 2020, a new wholly owned subsidiary called MZLA Technologies Corporation assumed project leadership.

Fast forward to 2022, and headlines proclaim:

***The Thunderbird Mail Client Will Be Full of New Features This Year***

***Here's How Mozilla Thunderbird is Making a Comeback in 2022***

## ***Mozilla Thunderbird Will Receive a Major Update With Version 102***

Because Thunderbird is open-source software, it's developed, tested, and supported largely by dedicated volunteers.

One of the features that sets it apart from most other email apps is the ability to customize Thunderbird through extensions and themes – similar to the Firefox web browser.

TechRadar concludes, "Thunderbird is a desktop email client we can recommend all day. It offers an extensive feature set for users despite being free. Because it's open source, there's an endless number of customizations for the platform, which sets it apart from the competition. The main drawback is that it's pretty difficult to use, making it best suited for technical users."

<https://www.techradar.com/reviews/mozilla-thunderbird>

If you've never tried Thunderbird, you might want to give it a chance.

You can download Thunderbird for Mac, Windows and Linux at [www.thunderbird.net](http://www.thunderbird.net).

Version 102 (released in late June) supports Windows 7 or later, macOS 10.2 or later, and most Linux distributions that have GTK+ 3.14 or higher.

If you're already running Thunderbird version 91.12.0, you can upgrade to version 102:

**Mac:** Click on Thunderbird in your menu bar. Click on "About Thunderbird" in the drop-down menu. A box will open on your screen allowing you to update and restart Thunderbird. If you're running a version older than 91.12.0, you need to replace your current version by downloading version 102 and install it from the [www.thunderbird.net](http://www.thunderbird.net) website.

**Windows:** Click on Thunderbird in your menu bar and select "About Thunderbird." The About Thunderbird window will open and start downloading the latest version. If you're running a version older than 91.12.0, you need to replace your current version by downloading version 102 and install it from the [www.thunderbird.net](http://www.thunderbird.net) website.

**Linux:** Open the "About Thunderbird" box from the Help menu or click on the small (i) icon next to the version number in the main window and upgrade to 102. If you're running a version older than 91.12.0, you need to replace your current version by downloading version 102 and install it from the [www.thunderbird.net](http://www.thunderbird.net) website.

As I type this, Thunderbird has now been updated to version 102.4.1. Look for more incremental updates before versions 103, 104, and especially version 114 arrive next year.

Thunderbird 102 details:

<https://blog.thunderbird.net/2022/06/thunderbird-102-released-a-serious-upgrade-to-your-communication/>



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# Like or Subscribe – What do they do?

Jim Cerny, 1<sup>st</sup> VP, Education Chair, and Forums Coordinator  
Sarasota Technology Users Group  
<https://thestug.org/>  
jimcerny123 \*\* gmail.com

[My super thanks to Hewie Poplock, 2<sup>nd</sup> VP & Yahoo Forum Coordinator, for helping me with this article.]

You're browsing the internet, maybe viewing some videos, and you always seem to see the words "Like" or "Subscribe" on your screen. Have you wondered what they do?

As a basic overview, let's take YouTube as an example of a video app (and many others) offering these options. You are happily enjoying some videos, and on almost every screen or video, they will ask you to "Like" and/or "Subscribe" by clicking your mouse on that word on the screen.

If you click on "Like," you will be, in a way, thanking the creator of that video, and the owner will get a "like" point that will tell them how many viewers liked it. The creator can use the total numbers for their own use or share with a possible "sponsor" who may pay the creator to advertise on their videos. Clicking on "Like" does not share anything from you or your computer; clicking is safe. "Liking" a video on YouTube is a way for viewers to show their support and appreciation for the content created by the YouTube creator. It sends a positive signal to YouTube's algorithm, which can help increase the video's visibility to other potential viewers. As more viewers like a video, YouTube's algorithm may rank the video higher in search results, recommendations, and other platform areas.

If you click on "Subscribe," you are telling the creator that you want to be notified when they create more videos. If and when they are, you will be notified of the new video, and, in the case of YouTube, their channel will be put in your "Subscriptions" area. In this case, they do know how to communicate with you through that app, so in a way, they have your computer's address. When you subscribe to a YouTube channel, you become a follower of that channel and receive updates whenever new videos are uploaded. Here are some things that happen when you subscribe to a YouTube channel:

You get notified about new videos: Once you subscribe to a channel, you will receive notifications in your YouTube app or home page whenever the creator uploads a new video. This way, you don't have to keep checking the channel for new content.

You can access subscribed channels easily: By subscribing to a channel, you can quickly find it in your subscription feed or the "Subscriptions" tab on your homepage. This allows you to keep up with your favorite channels.

You support the creator: Subscribing to a channel shows the creator that you appreciate their content and want to see more. It can encourage them to continue making videos and improve their content.

You can interact with the community: When you subscribe to a channel, you become part of the creator's community of fans.

You can engage with other viewers by commenting on videos and participating in discussions, which can be a fun and rewarding experience.

You may also see a bell symbol or icon that will notify you with an audible tone when a new video is available in your subscription list. You may turn off this tone option if you wish.

You can customize these notifications based on your preferences and the app you are using.

You can "Unsubscribe" or "delete" your subscriptions by clicking on the "unsubscribe" menu option in the app. On YouTube, go to your subscriptions, and to the right of each one are three dots in a vertical line – click on those dots to open the menu and click on "unsubscribe."

It does not appear that clicking "like" or "subscribe" would lead to a problem for you or your computer. The video creator does not know who likes or dislikes a video, but they are notified of your user name if you subscribe. They are not notified when you unsubscribe.

So go ahead and enjoy whatever you like to view, and click "Like" or "Subscribe" if you want to encourage the creator of such videos. 🖥️

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## Internet Security – Once over easy, with Hash

By Phil Sorrentino, Secretary, and APCUG Rep

Sun City Center Computer Club, FL

<https://www.scccomputerclub.org/>

philsorr \*\* yahoo.com

The Internet is essential to so many things we do, like shopping, investing, and banking, that you may have wondered how secure the Internet is. And additionally, how secure is my private information during an Internet transaction? And now that we're thinking about it, how is the Internet made secure? If knowing a little about how the Internet is kept secure is interesting, read on; if not, jump to the next article.

The Internet provides essential communications between tens of millions of people and has become an essential tool for commerce; therefore, security has become a tremendously important issue. Internet security has many facets, ranging from keeping communications private to protecting passwords and guaranteeing secure commerce transactions and payments.

Computers are an integral part of the Internet, and when it comes to computers, security is a concern on many different levels. There is physical security that keeps your computer hardware from being stolen. There is software security that keeps people out of our private files. There is "malware" security that keeps your computer software from being infected with viruses, spyware, worms, and the like. And finally, there is "network" security that keeps private data protected as it goes from one computer (or client) to another computer (or server) on the Internet. These security concerns are important, but the subject here is network security. Network Security is implemented by applying cryptography to messages sent on the Internet.

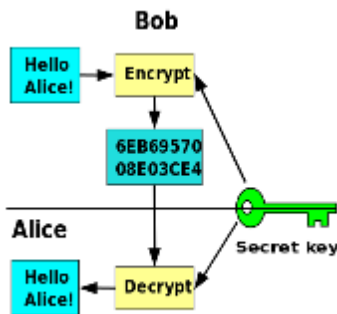


Remember the "s" in "https://" and the little lock icon on the browser when you go to a "secure" website? Well, cryptography is behind all that security. Cryptography is used to secure telephone, Internet, and email communications (as well as to protect software and other digital property). Cryptography is nearly as old as written language itself. It was invented to address the age-old question: How can I communicate with my friend so that no one else listening will know what was

shared? Cryptography becomes necessary when communicating private information over a public or "un-trusted" medium, such as the Internet. Typically, you can be sure that the message you send over the Internet will get to the destination you expect, but you cannot guarantee that intermediaries (computers along the way) will not be able to see and/or read your message if it is not protected. With a collection of not-so-expensive equipment and a good deal of knowledge, a message on the Internet can be intercepted (sniffed), and if it is "plain text," it can be read. For mundane email messages, this is not much of a concern; for messages that contain private information, such as personal information such as bank account or social security numbers, this could be an invitation for Identity Theft.

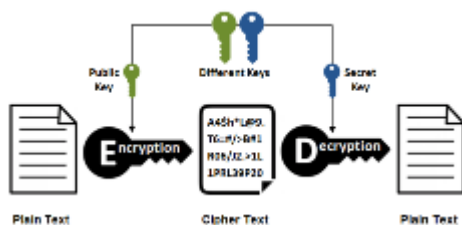
To get a bit technical here (here's the once over, with hash), we need to address the following four security concerns to guarantee messages are secure on the Internet. 1) *Privacy*: Ensuring that no one can read the message except the intended receiver. 2) *Integrity*: Assuring the receiving party that the received message has not been altered from the original. 3) *Authentication*: The process of proving one's identity. 4) *Non-repudiation*: A mechanism to prove that the expected sender sent this message.

There are, in general, three types of cryptographic schemes typically used to accomplish these goals: Secret-key cryptography, Public-key cryptography, and Hash functions, each of which can be researched in great detail by doing a Google search on the subject and settling in for some rigorous mathematics and explanations.



## Secret-key Cryptography

However, here is a brief summary. Secret-key cryptography, sometimes called symmetric cryptography because the sender and receiver use the same key, is the more traditional form of cryptography where the (same) key is used to encrypt and decrypt a message.



## Public-key cryptography

On the other hand, public-key cryptography uses algorithms to create two asymmetric keys, a public, and a private key. (Unlike secret-key cryptography, it does not require a secure initial exchange of secret keys to both sender and receiver.) The asymmetric keys are a mathematically related key pair: a secret private key and a published public key. These keys protect a message by

creating an encrypted message using the public key, which can be decrypted only by using the private key, providing "privacy," the first security concern.

Hash functions are mathematical transformations used to irreversibly encrypt data, meaning that the Hash results cannot be reversed to recover the original message. Hash functions are well-suited for ensuring data "integrity," the second security concern, because any change made to the contents of a message will result in the receiver calculating a different hash value than the one sent by the sender. Since it is doubtful that two different messages will yield the same hash value, data *integrity* is ensured to a high degree of confidence.

"Authentication," the third security concern, is accomplished in nearly all modern computer systems using passwords that authenticate users attempting to access computer resources. For security reasons, passwords are not typically kept on a server in plaintext. Hash functions are commonly used to convert passwords to an irreversible data pattern. When you type in your password, a Hash function converts it to a data pattern and compares it to the data pattern previously stored for your password. Your password is never stored on your machine or your server's machine; only the hash function results are stored. There is no way of going backward from the Hash function data pattern to the password (remember, the Hash function is irreversible). So now you know how the passwords are protected and why when you forget a password, the server can't tell you what it was; they can only reset it to a new password.



### Digital Signature

The fourth security concern, "non-repudiation," ensures the message was sent from the expected sender. This is accomplished by a digital signature which ensures that the sender cannot deny the authenticity of its signature or later deny sending the message. A digital signature is created using the private key of an asymmetric key pair. The signature can be verified by the corresponding public key of the asymmetric key pair, thus proving that the document was "electronically signed" by the private key owner, thus guaranteeing the message's source. So with all of these four concerns met my take, it



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# Save Money, Buy Your Own Wi-Fi Gear

By Kurt Jefferson, Editor, Central Kentucky Computer Society

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Prices are slowly coming down, but it still pays to economize.

One of the best ways to save money is by not paying your Internet provider to lease their equipment. Instead, if you have cable Internet, you may use the company's Wi-Fi router and cable modem – typically, one unit resembles a big black block.

You could be paying \$120, \$130, or more each year for your ISPs (Internet Service Providers) gear when you could put that money to better use by buying your own equipment.

Buying your own cable modem and Wi-Fi router could pay for itself in a year or less. However, if you rely on fiber optic service instead of the Internet from your cable TV company, you still need a Wi-Fi router. And, again, you can save money by buying your own.

You will probably have to use the small white box provided by the fiber optic Internet company (that box is called the optical connection node and allows for high-speed Internet connections.)

That box is typically provided through your monthly Internet fee. But you don't need to use the company's Wi-Fi router. Of course, you need to install your own equipment – or find a friend, relative, or someone who knows about technology – to do it.

If you have cable Internet, you need to notify the cable company that you are installing your own cable modem – and they have to switch it on from their end once it's connected. (Most cable companies use the term "provision" to add your cable modem to their network.

If you have a cordless landline phone with a signal provided by the Internet, remember your phone won't work during the transition, and you'll need to use a cell phone to call the cable company.)

In addition, you'll need to call your cable company to return their equipment. More and more cable firms are not allowing customers to return company-owned equipment to their stores.

Instead, you'll probably be asked to ship the equipment back to the cable company. It's free, but it's an extra step you'll need to take to avoid being charged for failing to return the gear.

If you live in a larger home, you probably have dead spots where you cannot connect to the Internet. This is a widespread occurrence.

A mesh Wi-Fi network can solve that problem, and as prices drop, more folks are utilizing those to spread Internet signals throughout their homes and eliminate so-called dead zones. Finally, experts recommend replacing your Wi-Fi router every five years – at the least. Touch your router, and you'll notice it can get very warm.

The high temperatures generated by Wi-Fi routers wear the units out faster than you might think. If the company that made the router is no longer providing firmware updates – it usually means it's time to replace the router with a newer model. Firmware updates are software patches you download from the Internet.

These downloads include security updates that prevent hackers from breaking into your home network and stealing your data. Consumer Reports writes, "If no update has been available for months or years, the router is probably no longer being supported."

As a rule of thumb, a Netgear representative told us that consumers should consider replacing their router after three years. Representatives from Google and Linksys said a three-to-five-year window was appropriate. Amazon, which owns the popular Eero brand of routers, put the range at three to four years."

However, CR's own survey data indicates that one-fifth of consumers wait more than four years to replace their router. That's cutting it close.

"All of the data that we have shows that consumers hold onto their router for dear life and for as long as possible," says Richard Fisco, who oversees electronics testing for Consumer Reports.

Tech Gear Lab: How to Choose a Wi-Fi Router

<https://www.techgearlab.com/topics/small-and-home-office/best-Wi-Fi-router/buying-advice>

Lifewire's Nine Best Mesh Wi-Fi Network Systems For Full Coverage

<https://www.lifewire.com/best-mesh-wi-fi-network-systems-4139748>

Make Use Of: Seven Reasons Why You Should Replace Your ISP's Router

<https://www.makeuseof.com/tag/reasons-replace-isp-router/>

Tachus: Why You Should Use Your Own Router Instead of Your ISP's

<https://www.tachus.com/post/why-you-should-buy-your-own-router-instead-of-using-the-one-provided-by-your-isp>

Tech Gear Lab: Best Wi-Fi Router of 2022

<https://www.techgearlab.com/topics/small-and-home-office/best-Wi-Fi-router>

Tech Gear Lab: Best Wi-Fi Mesh Systems of 2022

<https://www.techgearlab.com/topics/small-and-home-office/best-Wi-Fi-mesh-system>

Consumer Reports: How To Tell When It's Time To Replace Your Router

<https://www.consumerreports.org/wireless-routers/how-to-tell-when-its-time-to-replace-your-router-a5475786635>



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# Time to Replace Your Computer? Do this first.

By Phil Sorrentino, Secretary, and APCUG Rep

Sun City Center Computer Club, FL

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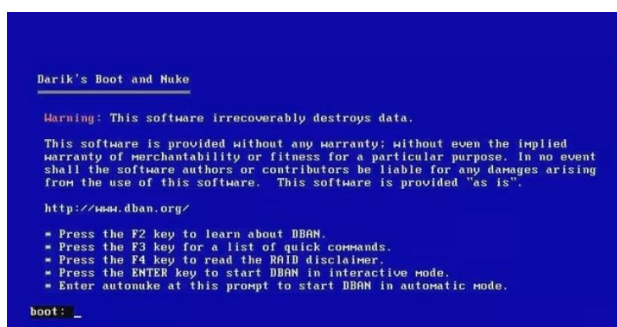
To most of us, replacing our computer is a double-edged sword. There is the joy of expecting to take advantage of newer, faster hardware and software, and then there's the challenge of the unknown, new features. This is especially true now because we have been using Windows 10 for a long time and our next computer will undoubtedly have Windows 11. Windows 11 was released in October 2021. All computers from typical manufacturers like Dell, HP, ASUS, Microsoft, Toshiba, Lenovo, etc., come with Windows 11. Windows 11 does have some new features, but most Windows 10 users should feel comfortable with Windows 11 once they find out where their favorite features are. They're all there, but the path to get to them is not always clear. Before you think about how to use the new computer, there is one last thing you should do with your old computer. And that is to ensure no personal information is on the old computer. You may be giving the computer to someone, or you may be donating the computer to a service that refurbishes computers for re-distribution, or you might take it to an e-waste facility. You don't want your private information to go to the new user. (As for donated computers, I can confidently say that all the Computer User Groups I have been associated with always wiped the hard drives before anything else was done. Hard drives are often not even useable, so they are removed and destroyed, usually with a hammer or drill.)

Just a brief technical discussion. By now, most computer users know that deleting a file does not actually remove the file from the computer, and with some basic software, the file can be read (as long as another file has not been written over it). The first byte of the file indicates whether it is deleted or not. This may have been done to make it very easy for the Operating System to delete files, so it doesn't take too much time, especially if you are trying to delete hundreds of files at a time. But this leaves the file on the drive intact, except for the fact that the first byte indicates it has been deleted. When the file is deleted, all of the data space is returned to the Operating System so it can use the space again when it needs space for a new file. Depending on what else is happening, the deleted file may be written over in the next few seconds, but it might remain intact or partially intact for a long time. Of course, if it contains personal information, that information is at risk.

In the past, it was more difficult to ensure you removed all your personal information because the functionality wasn't part of the Operating System. Instead, you had to use a separate software program developed specifically for writing useless data into all of the space originally occupied by data files. There are many of those programs available, one of which is called DBAN. But today, Windows 10 makes the job very easy because that functionality can be found in Settings' "Update and Security" section. First, choose the "Recovery" option, then "Get Started," and finally, select "Reset this PC." At that point, you will be presented with "Keep my files" and "Remove everything." "Keep my Files" Removes apps and settings but keeps your personal files; you don't want this choice. "Remove everything" Removes all your personal files, apps, and settings, which is what you want. Choosing "Remove everything" will write zeros into all of the space used by your files. Once zeros are written into a file's data space, that file will not be able to provide any indication of the original file contents. (The only slightly possible exception may be highly specialized hardware and software probably only owned by hard drive manufacturers and

executed only by some government agency.) So, for all intents and purposes, the data is gone. (Remember that only the C: drive was wiped clean of your personal data. If you have a second drive, as might be the case with a desktop with personal data, the data is still on the second drive.) As a bonus, Windows 10 will be re-installed. The computer should be operating just like it did when you originally got it, but without any of the apps you installed and, of course, without your personal information.

If, for some reason, you are not comfortable using Windows 10's "Reset this PC," there is always software like DBAN available. DBAN is short for Darik's Boot And Nuke. DBAN is Free Open-Source Data Wiping Software for Personal Use, as it says on its website, dban.org. As you can see from the website, DBAN has many features and options, probably more than the average user will need. You can also get DBAN from filehippo.com, a reasonably safe place to download software. DBAN works well, but it comes with a warning, as shown below, and a disclaimer that "the authors are not liable for any damages arising from the use of this software," which might frighten some potential users."



```
Darik's Boot and Nuke

Warning: This software irreversibly destroys data.

This software is provided without any warranty; without even the implied
warranty of merchantability or fitness for a particular purpose. In no event
shall the software authors or contributors be liable for any damages arising
from the use of this software. This software is provided "as is".

http://www.dban.org/

* Press the F2 key to learn about DBAN.
* Press the F3 key for a list of quick commands.
* Press the F4 key to read the RAID disclaimer.
* Press the ENTER key to start DBAN in interactive mode.
* Enter autonuke at this prompt to start DBAN in automatic mode.

boot: _
```

## DBAN's Warning

"DBAN has been designed for the home user, and although it is good at what it does, the interface is a little clunky" is a quote from the filehippo.com description, so unless you are a technically inclined user or very adventurous, this may not be for you. Use the Windows 10 "Reset this PC" functionality in that case.



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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.

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

Get SIG announcements!

Link from [www.tcp.com](http://www.tcp.com)

## Board of Directors\*

All members are welcome! Check  
[www.tcp.com](http://www.tcp.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 develop-  
ers 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 nuanc-  
es 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 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.tcp.com](http://www.tcp.com)

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

## August

## September

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

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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](http://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.)



8/23

### 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:4

☐ 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:

**Administrative Use Only** Rec'd \_\_\_\_\_ Chk# \_\_\_\_\_

**August 8, 2023  
7:00 pm  
General Meeting**

**AI Continued: How to Protect  
Your Data and More**

**Via Zoom Only**



341 County Rd C2 W  
Roseville, MN 55113

***FIRST CLASS MAIL***