

(membership includes  
monthly subscription)

# The Digital Viking



## Twin Cities

PC USER GROUP

NEWSLETTER

Minneapolis & St. Paul, Minnesota USA • Vol. 43 No.1 • August 2022

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

**August 2022**

[Membership Info ..... 2](#)

[SLR Lens Evolution](#)

[Find Out if Your SLR](#)

[Lenses will work with](#)

[Digital SLR Body..... 3](#)

[Talk, Text, Data](#)

[How Much and for](#)

[How Much?..... 7](#)

[The Sunk Cost](#)

[Fallacy..... 10](#)

[SIG Information..... 13](#)

[TC/PC Calendar..... 14](#)

[Membership Application 15](#)

[Maps to Events ..... 16](#)

**General Meeting**  
**Tuesday, August 9, 2022**  
**7:00 PM**

**3 APCUG Mini Presentations**  
**Windows 10 Security Center,**  
**Updates, and Password Manager**  
**Presenter: Jere Minich**

**Via Zoom Only**

At this month's meeting, we will learn how Microsoft has taken the issues of security and malware detection and prevention more seriously and made significant changes to device security that is available to everyone, not just Enterprise users. Jere Minich will walk us through changing settings to make sure these security actions are turned on. He will also discuss password managers, their use and importance. This is critical information to know! 📄

---

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

---

**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](http://www.tcpc.com)**

Application form inside back cover

---

# The Digital Viking

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

**Disclaimer:** All opinions are those of the authors and do not necessarily represent the opinions of the TC/PC, its Board of Directors, Officers, or newsletter staff. TC/PC does not endorse, rate, or otherwise officially comment on products available; therefore, readers are cautioned to rely on the opinions presented herein exclusively at their own risk. The Digital Viking, its contributors, and staff assume no liability for damages arising out of the publication or non-publication of any advertisement, article, or other item. All refunds in full or in partial, for advertising, membership or any other item shall be at the sole discretion of the Twin Cities PC User Group Board of Directors.

## Advertising

Full page (7½ x 9½)	\$100.00
Two-thirds page (7½ x 6)	80.00
Half page (7½ x 4¾)	65.00
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. Place make checks payable to: Twin Cities PC User Group

## TC/PC 2022-2023 Board of Directors

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

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

<b>President</b> —Lee Kaphingst	leekap@comcast.net
<b>Vice President</b> —Curtiss Trout	ctrout@troutreach.com
<b>Secretary</b> - Sharon Walbran	sharon.walbran@gmail.com
<b>Treasurer</b> - Sharon Trout	strout@troutreach.com
<b>Newsletter Publisher</b> Sharon Walbran	952-925-2726 sharon.walbran@gmail.com
<b>Web Master</b> Curt Trout	ctrout@troutreach.com
Board Members:	
Steve Kuhlmeier	skuhlmeier@hotmail.com
Lon Ortner	612-824-4946 lon@csacomp.com
Lee Kaphingst	leekap@comcast.net
Jeannine Sloan	Ambassador for Friendship Village
Curtiss Trout	ctrout@troutreach.com
Sharon Trout	strout@troutreach.com
Jack Ungerleider	jack@jacku.com
Sharon Walbran	sharon.walbran@gmail.com

## 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

# SLR Lens Evolution

Find out if your film SLR lenses will work when attached to a modern digital SLR body

By John Krout, Presenter & Newsletter Contributor

Potomac Area Technology and Computer Society

[www.patacs.org](http://www.patacs.org)

At a recent PATACS meeting, we had an interesting discussion about film SLR lenses and the extent of their compatibility with modern digital Single Lens Reflex (SLR) cameras during my presentation on close-up and panorama photo techniques at the PATACS+OPCUG meeting on September 18, 2021. Later that day, I decided to describe what I know about SLR lens evolution. This information will help you figure out whether film SLR lenses you own now will work when attached to a digital SLR.

I will describe the evolution of lenses in four stages. This approach is strictly my own. I have no idea if SLR camera companies would consider this accurate or complete.

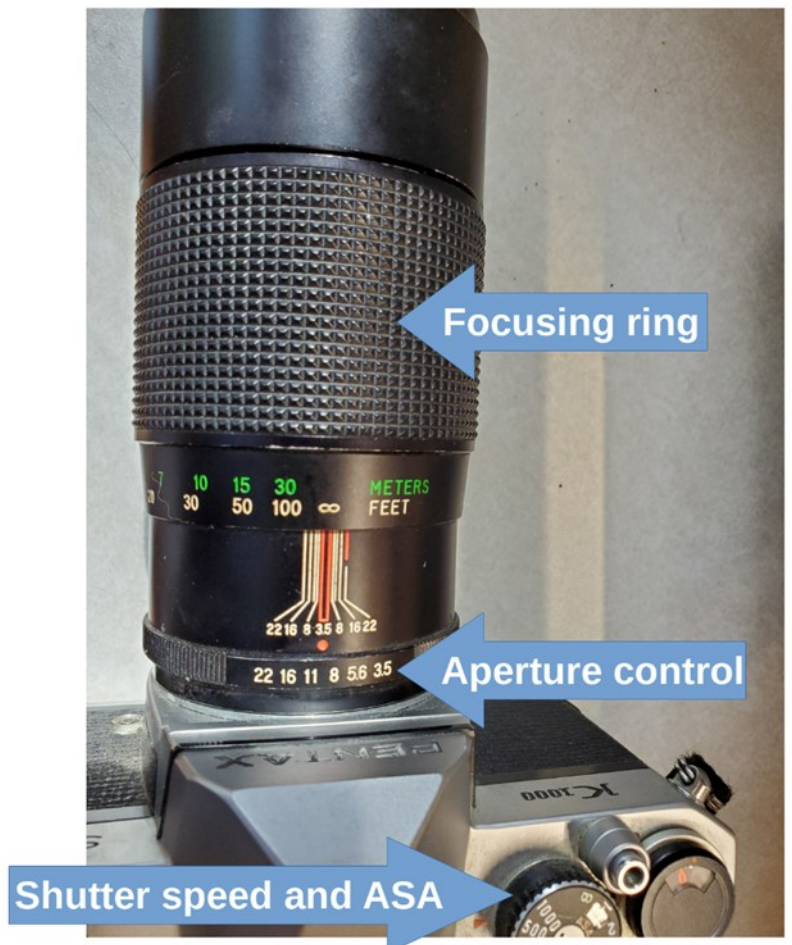
## STAGE 1: FULLY MANUAL

In 1971, I was given an Asahi Pentax 35mm film SLR when I graduated from high school. The SLR lens mount included simple mechanical features to interact with the SLR body. In addition, the lens had two user controls: one for aperture size, also known as f/stop, and a knurled ring around the lens for focusing.

An example in illustration 1 is a Vivitar K mount 200mm f/3.5 lens that I purchased in 1973 for my Pentax Spotmatic film SLR. I used that lens for 26 years. Now the lens resides on my Pentax K1000 35mm film SLR. I also own a 24mm lens and a 50mm lens, both Pentax brand.

On top of the SLR body, there were two concentric user control dials. One set the shutter speed, and the other set the film's sensitivity, then known as ASA.

We use the same scale for film sensitivity



now but call it ISO because the International Standards Organization (ISO) adopted the sensitivity scale originally adopted by the American Standards Association (ASA).

You can see the back end of that 200mm lens in **illustration 2**. It includes two mechanical features. The first, at the bottom, is an **Aperture Size tab** that is moved left or right in its slot arc when the photographer uses the lens control to adjust the aperture size. That tab enables the SLR to include the aperture size in its exposure calculations. The second is a spring-loaded **Stop-down lever** with a very useful purpose. It keeps the lens at the widest aperture size, f/3.5, so the photographer can aim and focus while seeing the brightest possible image through the SLR viewfinder.



When the photographer pushes the shutter button, the SLR body moves that lever to one side, and that movement forces the lens to reduce the aperture size to the aperture size control setting. When the shutter closes, the SLR body releases that lever and the spring forces the lens to revert to its widest aperture. A button battery powered the SLR body light meter.

## STAGE 2: AUTO EXPOSURE

The next enhancement in lens design was the introduction of **auto-exposure**. I believe this enhancement came along in the 1980s. Instead of a lens dial for manual control of aperture settings, the lenses designed for auto exposure had a **motor-driven aperture**. The SLR body, containing the light meter, would use the lens motor to set the aperture size so that, with the shutter speed and sensitivity settings, the aperture would correctly expose for the scene in front of the lens. Of course, the motor was powered by a battery in the camera. Batteries in cameras began to grow. Mechanical features were removed from lens mounts, and electrical contacts were added to lens mounts, so the camera could send power to the aperture motor and control the motor. Aperture size control moved from the lens to the SLR body.

Lens price went up due to the aperture motor included in each lens. In addition, SLR batteries became bigger and more costly to power the lens motor.

## STAGE 3: AUTOFOCUS

The next significant change in lens design came when **auto-focus** was introduced. Lenses changed again. Manual focus was accomplished by rotating another lens dial, which moved a lens element back and forth with the lens body. The automatic focus was

achieved by adding yet another motor in the lens, this time to move back and forth that same lens element for focusing, along with control circuits in the SLR to figure out what position of that lens element maximized sharp focus. Of course, that motor in the lens required more electrical contacts in the lens mount to enable the camera to reposition that lens element to find the best focus.

Most of the logic circuits do that automatic focus work by maximizing contrast.

Lens price went up again because of the automatic focus motor placed in each lens. And SLR batteries became bigger still.

#### STAGE 4: ZOOM

I am unsure when optical zoom lenses are available for 35mm film SLRs. It is possible that Stages 3 and 4 happened at about the same time. First, **camcorder makers** figured out how to add zoom to camcorder lenses. When I bought a VHS-C Panasonic Palmcorder in 1993, most camcorders sold in the US had a zoom lens. Like Canon, some camcorder makers also made SLRs and soon figured out how to add zoom to SLR lenses.

That optical zoom feature did not add another motor to the lenses, but it did add another manual control dial on lenses and more internal lens elements to move back and forth. Also, since zoom affects the focal length and therefore f/stop, the lens had to communicate focal length to the SLR for exposure purposes.



The lenses got bigger, and prices went up again.

You can see an example of a Canon EF lens mount in **illustration 3**. Notice the gold electrical contacts at the bottom. The lens mount has no moving mechanical features. However, manual focus is still possible, and a switch labeled AF/MF (or A/M) on the lens allows the photographer to disable automatic focus.

#### HOW DOES THIS INFO HELP YOU?

If you own a film SLR and lenses for that film SLR, will those lenses be compatible with a digital SLR body? Stage 3 and Stage 4 lenses are likely to be compatible; those lenses that include both auto-exposure and auto-focus. You have some hope for using Stage 2 lenses, those that include auto-exposure, though you will have to continue focusing manually while using those lenses.

The quickest way to test the compatibility is to take your camera and lenses to a camera

store and ask the staff to tell you if your lenses will work on a modern digital SLR. Here are examples from my own experience.

I bought two Canon lenses for my new Canon Elan IIe 35mm film SLR in 1999. Those lenses had been designed in the 1990s using a Canon lens mount designed for auto control of both exposure and focus. The mount is known in the US by the letter EF. Both were zoom lenses, so they can be called Stage 4 lenses. Since my Canon digital SLRs include the same lens mount, I use the same lenses on my Canon digital SLRs.

Would my Pentax K mount Stage 1 lenses work on a modern Pentax digital SLR? No, those lenses lack both the motor-driven aperture control and the motor-driven lens element for auto-focus and lack the electrical contacts for both motors. The Pentax lens mount compatible with modern Pentax digital SLRs is called KAF4.

How about Stage 2 lenses? It depends on whether the electrical contacts are precisely in the same place and the same shape and size in Stage 3 and 4 lenses for the same lens mount. Take the lenses to a camera store and ask.

### **ADAPT OLD LENS TO A NEW MOUNT?**

I seem to recall seeing advertisements for lens mount adapters. Adapters might, for instance, enable the use of an auto-everything Canon EF lens on Canon SLRs with later lens mounts, such as a Canon M or R series SLR. There is even a third-party lens mount adapter for "attaching" a Canon lens to a smartphone, essentially putting the lens in front of the smartphone lens. But unfortunately, that adapter is almost as expensive as a Canon EF lens.

Suppose you have Stage 2 lenses, and you find out those no longer work on digital SLRs. There may be adapters for attaching Stage 2 lenses to a digital SLR, but of course, auto-focus would not be possible. You would still have to focus the lens manually. For many photographers, including my son, that is the preferred focusing method anyway. If you want to look for such an adapter, keep in mind that Google is your friend. And expect the adapter to be expensive.

### **ABOUT STICKER SHOCK FOR STAGE 4 LENSES**

Let's assume that you are forced to buy modern Stage 3 or Stage 4 lenses for a digital SLR body. This is because lenses do not wear out from repeated use, unlike a shutter in a digital SLR body.

Consider buying **used** lenses. These generally cost less than new lenses. Some local camera stores buy and sell used lenses. The big New York City online stores buy and sell used lenses. I use Craigslist to find used lenses; those often sell for less than the price at stores.

First of all, find out how much a new version of the same lens costs, the retail price. If you meet directly with an individual lens seller or go to a local camera store, you can inspect the used lens and determine if there are scuffs or scratches, especially on the glass and the lens mount. Then, of course, you can try it out on your digital SLR body too. Absent evidence of rough handling and failure to work while attached to the SLR body, the lens is probably worth buying if the price is 30% to 70% below retail.

I have put my favorite Canon lens through some rough situations occasionally. I have broken it three times. Every time, I have found the same lens for sale locally on Craigslist, inspected the lens for sale, and purchased it for far less than the new-lens cost. Keep in mind that sellers on Craigslist expect to be paid in cash.

ABOUT THE AUTHOR: John Krout is a retired software engineer who has been writing about creative uses of personal computers since the early 1980s. Now he also writes about tablets, smartphones, and digital cameras. He lives in Arlington, Virginia, with his son, many computers and digital cameras, and too many cats. 🐱

[Go to Page 1](#)

---

## Talk, Texts, Data – How much, and for how much?

By Phil Sorrentino, By Phil Sorrentino, Newsletter Contributor, Sarasota Technology Users Group

[www.thestug.org](http://www.thestug.org)

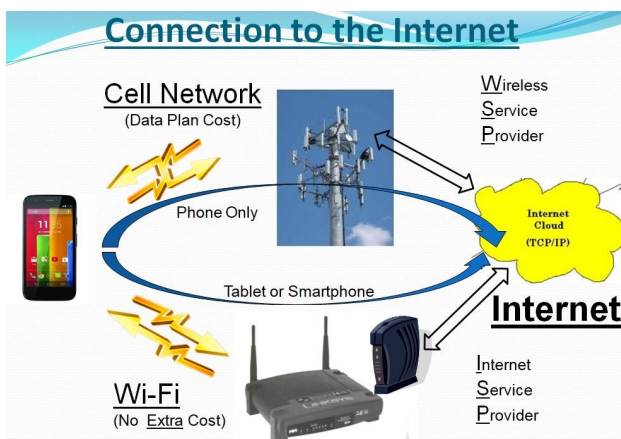
[philsorr \(at\) yahoo.com](mailto:philsorr(at)yahoo.com)

As you probably know by now, along with a smartphone comes a phone plan. This plan defines how you will be charged, by your Wireless provider, for using your phone. Some of the more popular Wireless providers are AT&T, Verizon, & T-Mobile, because those three companies own the three major wireless networks in this country. In addition to those three, there are resellers like Consumer Cellular, Mint Mobile, Ting, and Boost Mobile. (A reseller is an organization that sells wireless services under its own name but uses the networks of other service providers, for example, Ting uses T-Mobile.) If you have a “completely unlimited” plan, that is, no limits on the number of talk minutes, texts, and especially data, the rest of this article is just academic because you pay one price no matter how or how much you use your phone, but if you don’t have a completely unlimited plan, this may be interesting. Many plans that sound like (completely) unlimited plans are unlimited talk and text with typically a very large Data allotment, but not complete data. (A completely unlimited plan for a single phone may be around \$70/month, but less if you have multiple lines. For example, I have seen an unlimited plan advertised as \$37.50/month each for two lines; that’s \$75/month for two unlimited lines.)

**“Talk”** time is the number of minutes you can use your phone for voice cellular phone calls. This would be the time you spend on your phone talking to people who are using smartphones, flip phones, or even home phones. Phone calls are from phone to phone, so you need a phone number for the phone call recipient. Phone calls typically go via the cellular phone network (cell phone towers), though you may be able to use wi-fi calling under certain conditions. Talk minutes are relatively inexpensive; they are almost free with most plans. If you want a plan with only talk minutes, they can currently be had for around \$20/month with unlimited minutes or about \$15/month with around 250 minutes. Talk used to be the whole reason for having and using a phone, but now there are many more uses for the smartphone.

**“Texts”** is the number of typically short typed-in messages that are sent immediately to the phone number you have chosen from your contact list. Texts (text messages) can only be sent from one phone to another, so you need a phone number to be the recipient of the text message. (Smartphone, Flip phone, probably not a home phone.) Texts typically go via the cellular phone network (cell phone towers) but can go via wi-fi if you are in the vicinity of a wi-fi router. (Note: Data is used for attachments to texts.) Texts have become a fairly common way to keep in touch with people because of their instant messaging nature. A text is immediately sent to the recipient, giving him the message and the ability to answer immediately or at a future time.

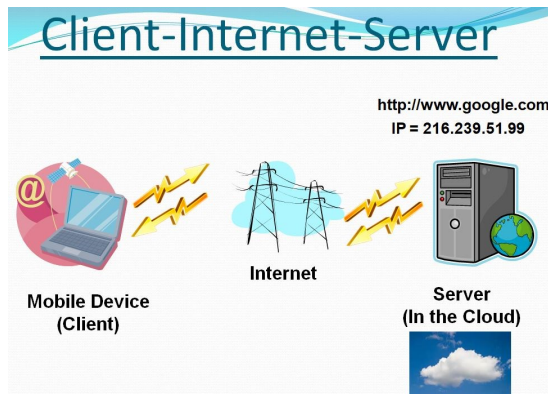
**“Data”** is the amount of “data” that is transmitted over the cellular phone network (cell phone towers). Data allotments typically come in GigaByte or half GigaByte increments (some may even be in hundreds of MegaBytes). Data allotments may be on a per-line basis, or with some plans, the data can be shared among a group of phones in a so-called family plan. When you are out and about, even traveling in your car, all the data transmitted to and from your phone is charged against your monthly data allotment. Fortunately, when you are not out and about and you are in the vicinity of a wi-fi router, the data that gets transmitted is not charged against your monthly data allotment. (You have already paid the Internet Service Provider for the use of the wi-fi as part of your monthly Internet bill.)



Data may be transmitted from your phone by any widget or open App. (Keep in mind that widgets are open as long as your phone is not powered off. Fortunately, most



widgets use very little data.) Many Apps need a constant flow of data to keep their information current; Maps and Waze are two apps that come to mind. All of the Apps on your phone are designed to be the Client in the Client-Server computing model. These Apps can only do their job when connected to their server. (The internet provides the connection via cell phone towers or wi-fi.)



If an App is not closed after it is used, it may still be transmitting data to, and receiving data from its server, even if you are not looking at one of its screens. So, if you don't have an unlimited plan, make sure you close any app you will not use. If you don't want to use any data at a given time, most phones can turn off the Data, typically in "Settings." Make sure you leave yourself a reminder to turn Data back on afterward. (With the Data turned off, you will still be able to make and receive voice calls and probably texts, though you will probably not be able to receive attachments, like pictures, to texts.) Data is really what makes the smartphone so useful and versatile. Data makes the smartphone a personal digital assistant with endless uses, gives you access to enormous databases, and provides answers almost instantaneously.

As you can see from the amount of information describing talk, texts, and data, the emphasis is on data. The cost of most plans is directly correlated to the amount of data; it almost seems that talk and texts are just about thrown in at no extra charge. It is the fact that your smartphone can interact with a much more capable server at the other end of the internet that gives your smartphone all of its various amazing capabilities. It is data that lets us check our email, consult our calendar, find the nearest Japanese restaurant, keep in touch with people, and research and purchase items on Amazon or many other retailers on the internet, all without us moving from the comfort of our homes, offices, or automobiles. 🖥️

[Go to Page 1](#)

# The Sunk Cost Fallacy

By David Kretchmar, Hardware Technician  
Sun City Summerlin Computer Club

<https://www.scsccl.com>

dkretch (at) gmail.com

In 2017, Richard Thaler, a professor at the University of Chicago, was awarded the Nobel Prize in Economic Sciences for his contributions to behavioral economics.



One of Thaler's main themes is that market-based economic models are incomplete; he is quoted as saying, "conventional economics assumes that people are highly-rational — super-rational— and unemotional; they can

calculate like a computer and have no self-control problems. But, in reality, we all are susceptible to a wide array of routine biases that can lead to an equally wide array of embarrassing blunders in education, personal finance, health care, mortgages and credit cards, happiness, and even the planet itself."

**One of the biggest factors that cause humans to make irrational decisions is known as the Sunk Cost Fallacy.**

A **sunk cost** is any cost that has already been paid and cannot be recovered. The sunk cost fallacy reasoning states that further investments or commitments are justified because the invested resources will be lost otherwise. Therefore, the sunk cost fallacy is a mistake in reasoning in which the sunk costs of an activity are considered when deciding whether to continue with the activity. This is also known as "throwing good money after bad."

The sunk cost mistake is often made for the worst possible reasons. People hate to admit that they have made a mistake and will go to great lengths to avoid that admission, even when they have ample evidence that not admitting a mistake will lead to even more significant losses. Politicians highly paid corporation executives, and others in the public eye do not like to admit they made poor decisions.

## The Concord Fallacy

The Concorde fallacy has routinely been cited as a perfect example of the sunk cost fallacy. The Concorde fallacy refers to both the British and French governments continued funding of the project even as they knew there was no economic case for the aircraft. They knew it was a commercial and environmental disaster, but political decisions made it impossible for either government to pull out.



I don't feel this example is cut and dried because of other factors such as possible harm to Anglo-French relations, the loss of tens of thousands of jobs when the world's economy was weak, and consideration of "national pride." What appears to be a perfect example of the sunk cost fallacy today, in retrospect, looked very different in 1972.

## **Other Examples**

On a much smaller personal scale, have you ever over-eaten at a buffet, even if the food was not very good, because you had already paid for "all you can eat"? Have you seen someone refuse to quit a slot machine because of all of the money they had already "invested" in it? Have you held on to an investment for much longer than you originally intended because you were reluctant to sell at a loss? All are examples of sunk costs and the false belief that non-recoverable expenditures have some value, leading to poor decisions.

## **The Old Computer**

In our everyday lives, the all too human tendency to place a value on something that has no value often leads to a poor decision. Some individuals use computers well



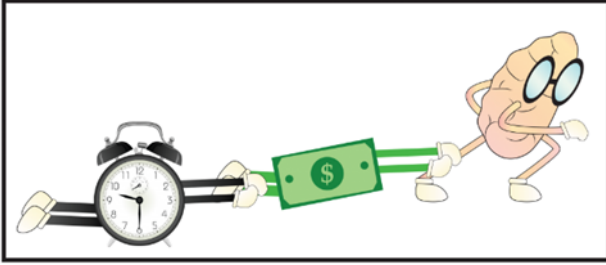
beyond their expected useful life, which is about six years. Some computers, especially if they were originally above-average systems, can provide good service for over six years. However, time takes its toll on electronics just like it does on people. Computers tend to get slower with age, and with age, computer users will get more and more "Not responding" popups and other annoyances.

Rather than replace a computer, it is amazing how much slowness and other problems some users will endure. After a computer reaches a certain age, even significant upgrades, like replacing a mechanical hard drive with an SSD, will only delay the inevitable. Even after installing a new SSD, the system's other components are still old and nearing the end of their life. The wise course is for the user to bite the bullet and buy an adequate new computer.

## **Conclusions**

Any time you allow the sunk cost fallacy to influence decisions, you're going to make it harder and harder on yourself to let go in the future. So essentially, falling victim to sunk cost bias not only means you're making a poor decision now but increases the chance you'll continue to make a wrong decision in the future because, at that point, you'll be even more invested.

Are you spending time or money on something because of the time or money you already have invested? If so, I urge you to step back from what you're doing and evaluate the situation logically by asking yourself, "Is this the best use of my time or money at the present moment?"



This is a bigger problem than many of us realize, and it's negatively impacting our lives. Sunk cost fallacy leads to poor decisions, which leads to sub-optimal results, which leads to decreased long-term happiness. 🖥️

[Go to Page 1](#)

# 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](http://www.tpc.com)

## Board of Directors\*

All members are welcome! Check [www.tpc.com](http://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](mailto: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](mailto: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](mailto: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](mailto: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.tpc.com](http://www.tpc.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
31	1	2	3	4	5	6
7	8	9 7pm General Mtg Windows 10 Security, Updates 6pm Tech Topics	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30	31	1	2	3
4	5	6	7	8	9	10 Linux on Saturday SIG 9am—Noon
11	12	13 7pm General Mtg TBA 6pm Tech Topics	14	15	16	17 MS Office SIG (includes Access) 9am—Noon
18	19	20	21	22	23	24
25	26	27	28	29	30	

[Go to Page 1](#)



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

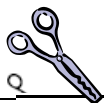
*Would you like to receive this delivered directly to your email or business each month?*

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.)



<b>Here's the info for my TC/PC Membership:</b>	<b>I'm signing up for:</b>	<b>8/22</b>
Full name _____	<input type="radio"/> Individual/Family Membership (\$18)	
Company name _____	<input type="radio"/> Business Membership (\$100)	
Address _____	If an existing member your # _____	
City _____ State _____ Zip _____	<b>Make checks payable to:</b>	
<input type="radio"/> Home <input type="radio"/> Business <input type="radio"/> Change address: <input type="radio"/> Perm. <input type="radio"/> Temp. 'til _____	<b>Twin Cities PC User Group</b>	
Home phone _____ Work phone _____	<b>341 County Rd C2 W</b>	
Online address(es) _____	<b>Roseville, MN 55113</b>	
Where did you hear about TC/PC? _____	<b><u><a href="http://www.tcpc.com">http://www.tcpc.com</a></u></b>	
<input type="radio"/> I DO NOT want any of my information disclosed.	<input type="radio"/> Check # _____ <input type="radio"/> Bill me	
<input type="radio"/> I DO NOT want to receive any mailings	<input type="radio"/> New member <input type="radio"/> Renewal <input type="radio"/> Prior member	
	I'm interested in:	
	<input type="radio"/> Training classes <input type="radio"/> Volunteering	
	<input type="radio"/> Special Interest Groups: New User, Access, etc.	
	List here:	
<b>Administrative Use Only</b> Rec'd _____ Chk# _____		

**August 9, 2022**  
**7:00 pm**  
**General Meeting**

**3 APCUG Mini Presentations:  
Windows 10 Security Center,  
Security Updates, Password Managers**

**Webinar**

**Via Zoom Only**



341 County Rd C2 W  
Roseville, MN 55113

***FIRST CLASS MAIL***