



# PATACS Posts

Newsletter of the Potomac Area Technology and Computer Society- - -

June 2024, Volume 4

Page 1

## My turn.....

In another month it will be summer—meteorologically speaking! I find it interesting how the march of time doesn't stop. One day after another and pretty soon five *billion-plus* years have passed by. Mind-boggling, wouldn't you agree?



Just so you know: I write my comments here at the beginning of my editing process and modify them as the process progresses.

I hope you've been attending the meetings. With Zoom there's just no excuse not to. On-site location information is on the website for meetings in Fairfax (<https://patacs.org/fairfaxmeetings.html>) and Arlington (<https://patacs.org/arlingtonmeetings.html>). Sometimes I attend the Fairfax meeting in person—but coming from Maryland can be a problem—with continuing Beltway “improvements”. 😞 I always attend the *Arlington* meetings online. It's just too hard for me to get there by 7 PM.

At the most recent Saturday meeting (May 18<sup>th</sup>) the long program was from Lorrin Garson, who presented on AI (artificial intelligence). So far I'm underwhelmed by AI. What about you?

Since our last issue, I've been, as Willy Nelson sang, “on the road again”. I drove to the Boston area to attend a photo workshop around and on Martha's Vineyard. The main activity was photographing lighthouses *at night*. It was given by **National Parks At Night**. I've attended their workshops in the past, the most recent at our newest national park, New River Gorge in WV, in October 2023.

Shooting almost anything at night is much more fun than during the daytime, but it has only recently (with the advent of advanced digital cameras) become easy enough for amateurs to do. Most non-specialty-commercially available films simply didn't have the light sensitivity that today's digital cameras have. Shooting lighthouses at night is much more interesting than during the daytime because that's when they're working.

I'm editing this issue in late May so I can get it to Paul because, in early June, my wife and I are scheduled for a cruise around Scandinavia. On the way home, we'll stop in the UK to visit friends.

Safe travels wherever you'll be in the next few months...

Next printed issue: July, 2024

My turn.....1

Operating System and Hardware Specifications Needed for Troubleshooting . 2

Microsoft Windows 11 Copilot: how not to remove it..... 4

YouTube as a Knowledge Resource..... 8

Really, really deleting files ..... 11

Thank this issue’s proofreaders: Jon Bernstein, Barry DeMaio, Lorrin Garson

### Operating System and Hardware Specifications Needed for Troubleshooting

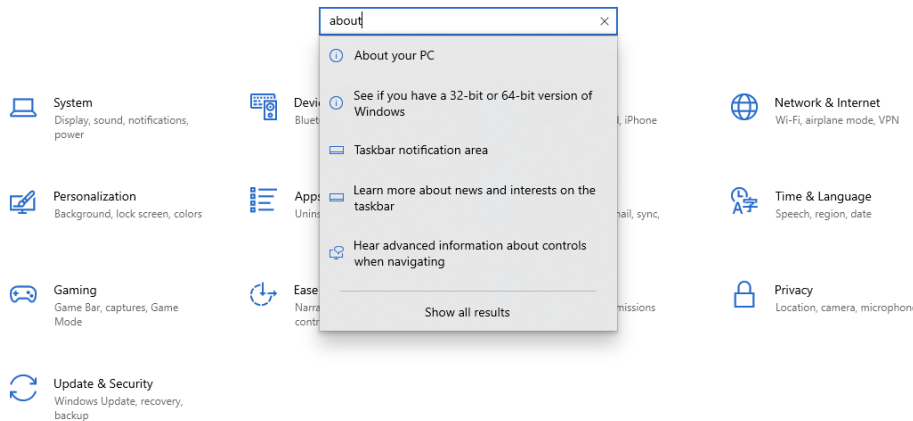
By Frank Fota, Director, Potomac Area Technology and Computer Society

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

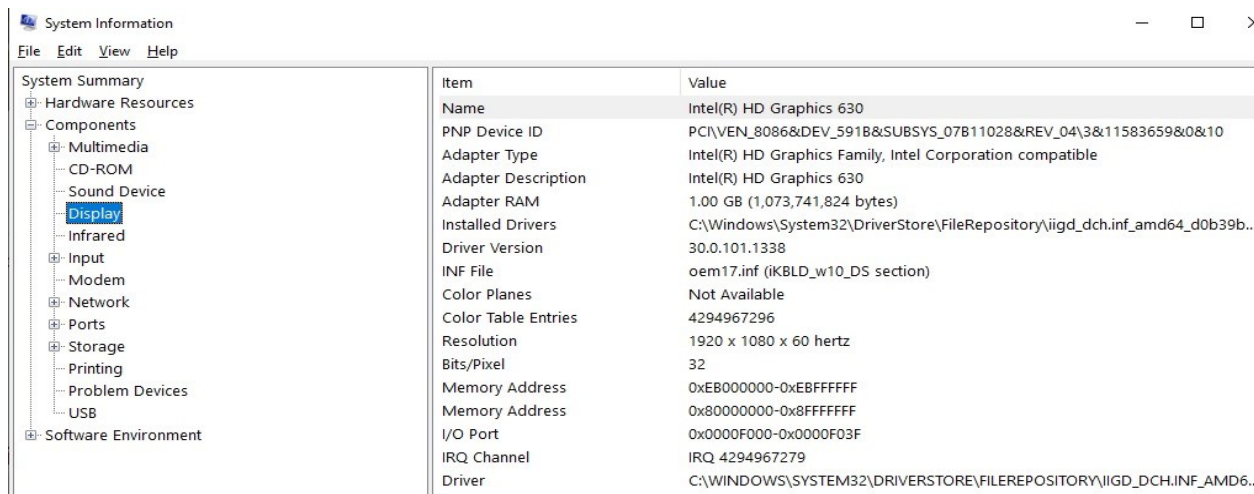
fotafm@gmail.com

When troubleshooting computer software and hardware issues, it’s helpful and sometimes necessary to obtain the computer specifications for the system you are troubleshooting. The specifications needed include but are not limited to the Operating System (OS) type (i.e., 64 or 32-bit), the OS version and current build number, the processor, the amount of installed memory (RAM), free storage space, and the graphics card. Obtaining this information does not require a third-party application but may require more than one step and differs depending on the OS.

In Windows 10, pressing the Windows key + I (i.e., **⊞** + I) will bring up the Settings window. Type “About” in the search bar and select “About your PC.”



To obtain graphics card(s) information, press the Windows key + R (i.e., **⊞** + R). This opens a Run box. Type “**msinfo32**” in the Run box and press Enter. A **System Information** box will pop up with several categories. Click on the + symbol next to “**Components**” and select “**Display.**” The adapter description and adapter RAM lines display the needed graphics card information in the right pane (below).



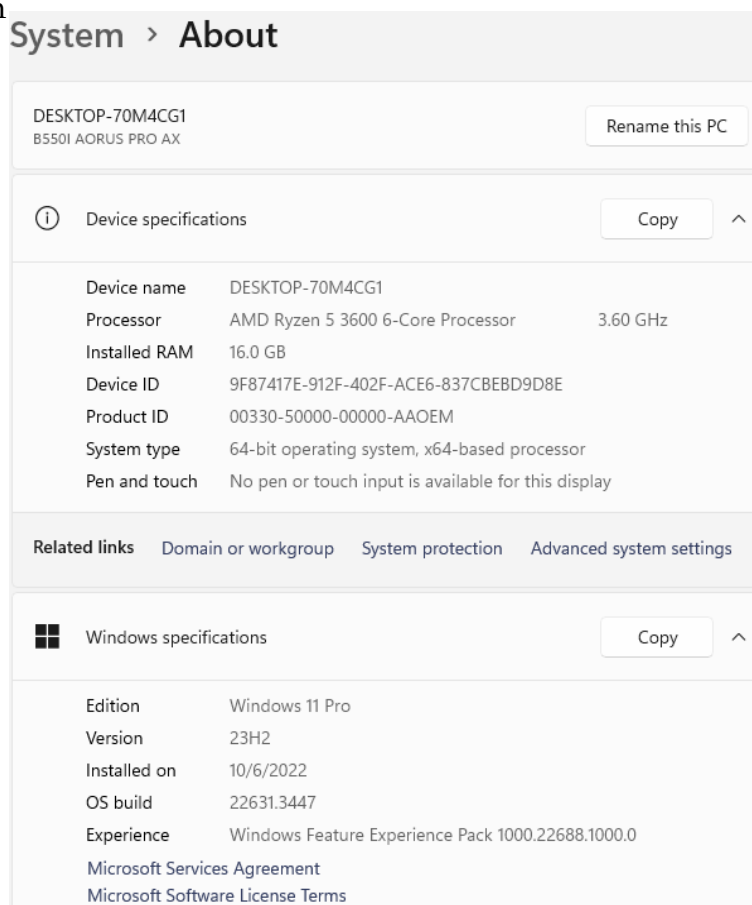
Cyn Mackley wrote about obtaining system information in Windows 11 in her most recent newsletter [Cyn's Tech Tips](#). “The easiest way to check your current version is to type Windows specifications into your search box and click on the results.” The search box is located within the Windows 11 taskbar.

Device and Windows specifications are provided. Graphics card information can be obtained by opening a Run box using **Windows** + R, typing “msinfo32,” and pressing Enter.

Available storage space can be found in both Windows 10 and Windows 11 by opening File Explorer and selecting “This PC.” In the image *below*, my Local Disk (C:) has 1.58 TB free of 1.7 TB.

There are more than a few ways to obtain system information on an **Apple** computer including:

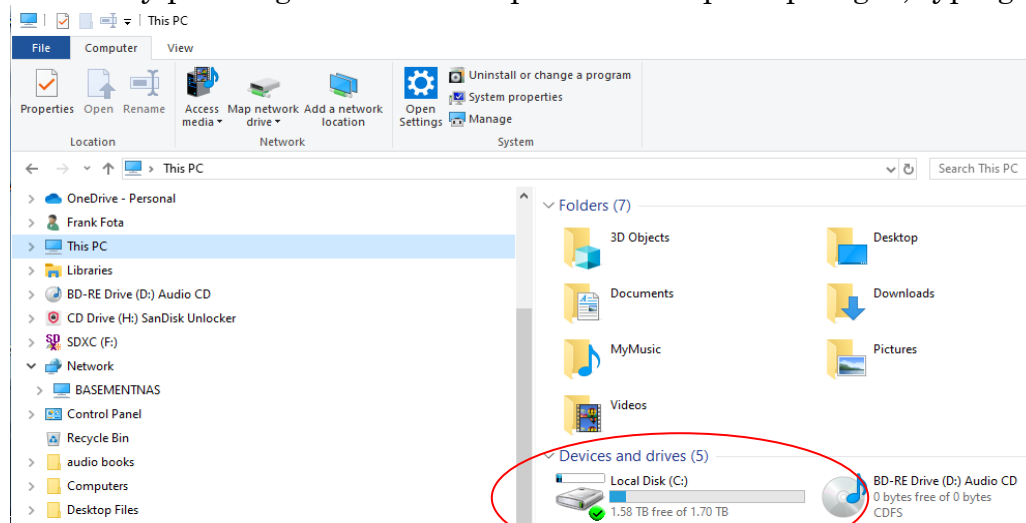
1. Press and hold the Option key, then select System Information from the Apple menu, or
2. Go to Finder > Applications > Utilities > System Information or



3. Use Spotlight Search by pressing Command + Space Bar to open Spotlight, typing System Information, pressing Return, or

4. Using the Launchpad to open System Information.

The methods used to obtain system information in Linux OS are



and

the

varied and 10 examples using the Linux terminal can be found in Aaron Kili's [TechMint](#) article "10 Commands to Collect System and Hardware Info in Linux."

###

### Microsoft Windows 11 Copilot: how not to remove it

by John Krout, Potomac Area Technology And Computer Society member

The horse's mouth: Copilot AI did not answer my *how-to-remove-it* question accurately or completely.

#### Introduction

Automatic installation of un-requested software is a behavior that I don't like.

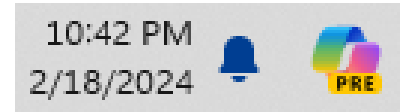
Microsoft forced a double whammy on my Windows 11 desktop computer on February 17<sup>th</sup>, 2024.

The February 17<sup>th</sup>, 2024 PATACS+OPCUG joint monthly meeting was Zoom-only. At about 3 PM during that meeting, Zoom froze on my computer, and a minute later it was obvious the entire computer was frozen. I turned it off and on. On restart, the computer installed a Windows 11 *operating system* update. The download of that update probably caused the initial freeze.

After about 10 minutes, I was able to rejoin the Zoom meeting.

After the meeting, I checked Settings and I found what I expected: long ago, I had used Settings to create a "*no updates*" time range of 9 AM to 2 AM daily. Microsoft led me to have faith in that setting, and then clearly ignored it.

One day after the meeting, I found an unfamiliar icon in the right end of my Windows 11 taskbar. You can see it in **illustration 1** (right). The icon is multi-colored on the right and includes the letters PRE.



**Illustration 1**

A click on the icon revealed a "preview" of Microsoft **Copilot**, their generative Artificial Intelligence (AI) brand. Either a left-click or right-click on the icon opened a tall thin dialog window, inviting me to ask a question.



**Illustration 2**

I also found a scalable Copilot logo graphic in the **C:\Windows** folder tree as in **illustration 2**.

Microsoft wants to beat its generative AI competitors to our desktops. The competitors include mega-firms such as Google, Adobe, Autodesk, and startups such as OpenAI.

### **Where does AI do its work?**

In a nutshell, today and for the indefinite future, AI will be executed on servers, not on your computer. Personal computers just don't have the hardware for storage and execution of generative AI.

Consider the following consequences of that situation.

First and foremost, those servers will capture and retain **EVERYTHING** you use AI to accomplish, and maybe a lot more (see third consequence). The owners of that AI service and servers will seek to monetize that valuable information about you.

Second, AI services won't be available everywhere, because the Internet is not yet available everywhere. Certainly not where cell towers are blocked by terrain or are overloaded. And laws may prohibit the use of generative AI in some locations, especially overseas.

Admittedly, the third consequence is speculative. Will Copilot be running behind the scenes, invisible to the user, to monitor use of non-Microsoft apps, to listen to conversations through microphones, to watch through webcams? Microsoft sees profit in such behaviors.

Will there be violations of privacy and unwarranted use of bandwidth that the user pays for?

## My first interactive generative AI experience

You can see my dialog with Copilot below. *My input* is identified as “You”. I added italics to clarify the two major sub-headings in the generative AI answer.

As you will see below the dialog, the answer turned out to be not at all complete. Perhaps I should have asked how to remove the Copilot preview *from my computer*. Perhaps I should be glad that the AI could not read my mind.

**You:**

how to remove the Copilot preview

**Copilot:**

Certainly! If you'd like to remove the Copilot preview from your Windows 11 taskbar, there are a couple of options:

*Remove Copilot from Taskbar (Temporary):*

This method will hide the Copilot icon from your taskbar without completely disabling it.

Follow these steps:

Open the Settings app (you can search for it in the Start menu).

Click on Personalization.

Scroll down and select Taskbar.

Toggle off the Copilot option.

*Disable Copilot Completely (Permanent):*

If you want to permanently disable Copilot, follow these steps:

Click on Start and search for **gpedit** to open the Group Policy Editor.

In the left-hand panel, navigate to User Configuration > Administrative Templates > Windows Components > Windows Copilot.

Double-click on Turn off Windows Copilot in the right-hand panel.

Click Enabled, then click Apply and OK.

Remember that if you ever want to enable Copilot again, you can follow the same steps and choose “Not configured” or “Disabled” instead of “Enabled” in the last step.

That's it! If you need further assistance with Windows, feel free to ask. 😊

<end of dialog>

I did try the permanent removal option. I ran into a problem: **gpedit** was not found on my Windows 11 computer. I searched on the Windows Store and did not find it there. It appears to be part of Windows 11 Pro only. I am disappointed that Copilot did not say so. (Ed.'s note: the Group Policy editor—gpedit—is natively, only part of Windows Pro. Specifying what version—Home or Pro—of Windows one is using helps get the right answers whether using AI- or non-AI searches.)

I searched the Web and found a page of scripts for installing **gpedit**, one each for Windows 10 and 11. When it finished, I started **gpedit** by typing **gpedit.msc** in the search field.

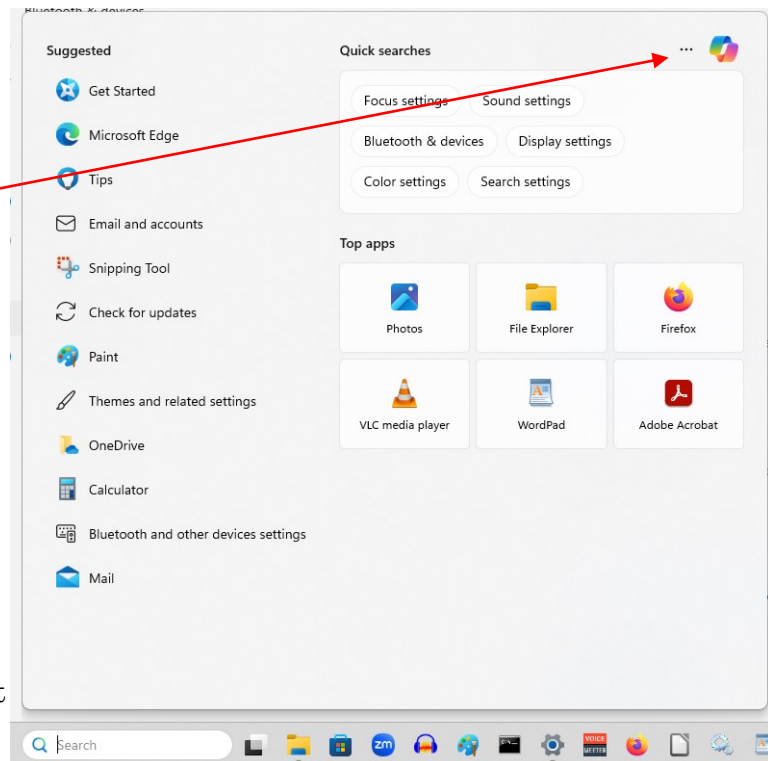
Using the remaining instructions, I completed the steps. Alas, the icon remained active, so a restart was required, also not mentioned by Copilot. After restarting, the icon was no longer on the taskbar.

### Copilot is also found elsewhere on the computer

A day later, I found the Copilot icon in another place, the popup that appears when the Search field in the taskbar is clicked. You can see that icon in the upper right corner of **illustration 3**. The icon does *not* contain the letters PRE.

And yes, that icon is active. The use of **gpedit** to disable Copilot, in the way described by Copilot, did not remove or disable the icon.

I didn't include the URL for **gpedit** installation scripts in this article, because the use of **GPEDIT** did not accomplish the removal of the Copilot icon everywhere other than on the right end of the taskbar.



**Illustration 3**

More Web research followed. I found a page on which a registry edit was described to disable Copilot. I tried that method, but it didn't work for me.

I opened **Windows Settings** and used **search** to find references to Copilot in **Settings**. None were found. The same not-found result happened in the Windows Control Panel.

### Is Removal from a computer possible?

My online research also turned up a Microsoft forum page on the topic of removing Copilot. A Microsoft rep posted an answer repeating the **gpedit** technique and reiterated a familiar refrain: **Copilot is now a part of the Windows 11 OS and *cannot be removed***.

Microsoft sang that same song in court years ago, about an earlier version of Windows and the Internet Explorer (IE) web browser. Microsoft claimed IE could not be removed without seriously harming the Windows OS. An outside expert demonstrated in court how to remove IE without impacting Windows. In short, someone at Microsoft may have believed that the company made IE removal from Windows impossible, but they were proven wrong.

Microsoft may have learned much since then, but so have outside experts who use critical thinking skills to test and challenge Microsoft's claims. Perhaps the story of Copilot removal is just beginning?

Microsoft has demonstrated that it is willing to install what they consider to be the latest Microsoft killer app, **without giving its Windows customers a choice either before or after the installation**. Giving customers a choice might limit Microsoft's profit potential.

That lack of a choice for customers shows that Microsoft does not treat customers with respect.

###

## YouTube as a Knowledge Resource

By Tom Burt, Vice-President, Sun City Summerlin Computer Club

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**YouTube** ([www.youtube.com](http://www.youtube.com)) is Google's online platform for user-created videos. Over the years, users have posted an amazing collection of videos, which grows larger daily. YouTube is my "go-to" resource when I'm looking for arcane bits of knowledge—especially "how-to" examples. This month, we'll look at a few examples of YouTube videos that quickly convey helpful knowledge in an audiovisual format.

### Example 1 – Adjust the Brakes on a Walker

Take, for instance, my 4-wheeled rollator walker. It has brakes for the rear wheels that need tightening every couple of years. I turned to YouTube, entered the phrase "how to adjust brakes on a drive rollator" into the search window, and immediately found several helpful videos. After watching a few to ensure I had all the necessary information, I made the adjustment using just some pliers.



### Example 2 – Replace the Hard Drive in an HP Laptop with a Solid-State Drive

Among the various computers in Casa de Burt is a 2014 vintage HP Pavilion laptop that originally came with Windows 8. Its disk drive is a 500 GB 5400 RPM hard drive. Its CPU is an AMD A8, and it has 4 G bytes of RAM. I upgraded the operating system to Windows 10 in early 2016.

After that upgrade, this laptop became so slow it was almost unusable for about 15 minutes after booting, even with software tuning to minimize Microsoft’s “instrumentation.” After booting, Windows 10 launches a variety of scans of the hard drive, all running simultaneously, that fight each other and overwhelm the system. While this happened, it often took Windows over a minute to respond to a mouse click.

The Computer Club experienced this same effect with laptops in our training lab. The club’s volunteer maintenance team eventually mitigated the problem by installing solid-state drives in those laptops. However, the procedure is complex and requires careful handling and sequencing of the steps to disassemble and reassemble the laptop.

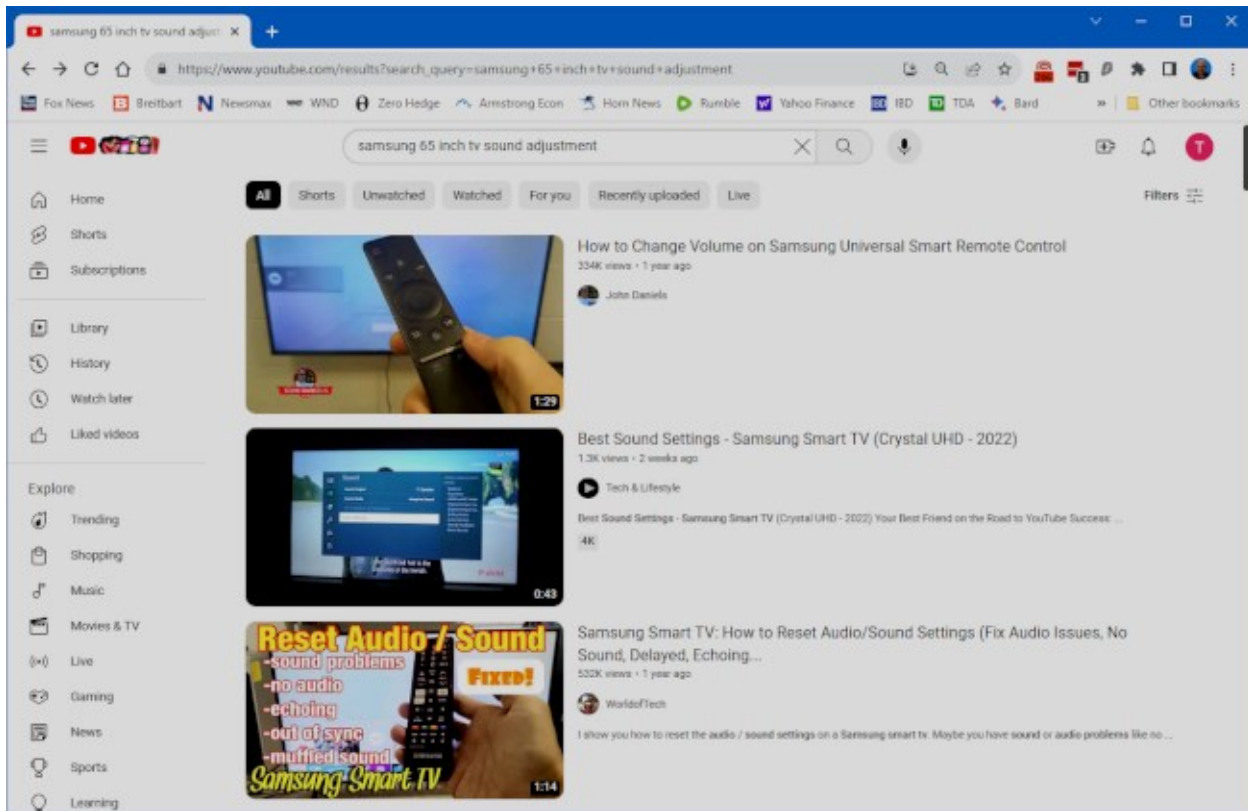
I decided to look into what it would take to upgrade to a solid-state drive on my HP laptop. I browsed YouTube and entered the search phrase: “**replace hard drive on hp pavilion 17z laptop**”. YouTube offered me a selection of similar searches, one of which I picked. I got an excellent selection of hits on “step-by-step” videos that detailed the procedure. I played a few of these to get a sense of how complex the upgrade would be. Ultimately, I decided to pass on the upgrade, not because I felt I couldn’t do it, but because, even after upgrading the laptop with a new SSD, the rest of the system components were over eight years old. (Ed’s note: it’s not new that Win10 doesn’t do well in less than 8GB of RAM.) The other hardware specs (CPU, RAM, chipset) would not be compatible with Windows 11. I concluded that installing Linux Mint on that laptop in place of Windows 10 would be better.

This was an example of YouTube helping me decide *not* to do something.

### Example 3 – Adjusting the Sound Settings on My Samsung Smart TV

A few months ago, I “cut the cord,” abandoning DirecTV in favor of streaming YouTube TV, Paramount+ (CBS), Amazon Prime Video and its companion FreeVee, the free tier of Peacock TV (NBC), and Samsung’s own 100+ channel free streaming TV service. The video quality of these services has been excellent, and I’ve got more content available than I could ever watch. One frustration, however, has been that the sound level varies a lot between the various services. I must frequently adjust the TV volume depending on which service I’m currently streaming.

I decided to see what YouTube could tell me. I opened YouTube and entered the search phrase: “**samsung 65 inch tv sound adjustment**”. I got several useful hits, as shown below. The middle video showed an advanced setting for Adaptive Sound, which I needed.

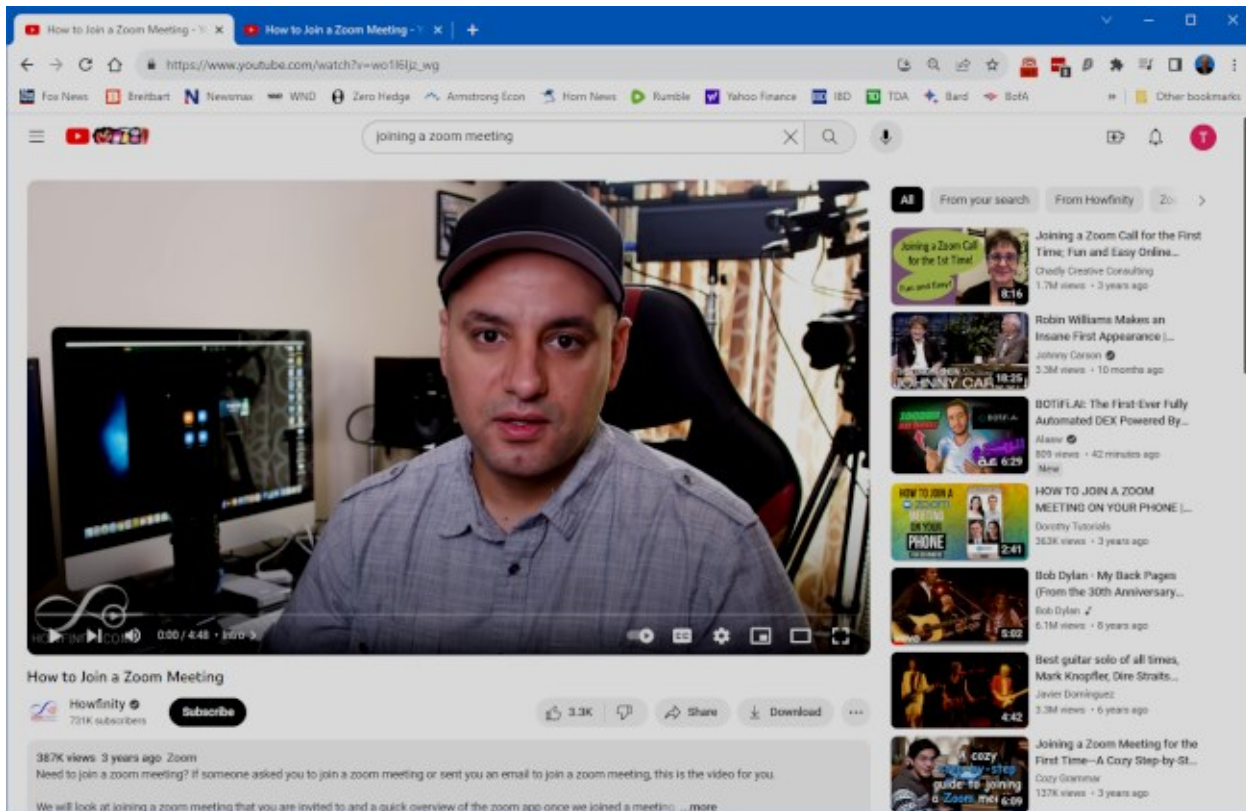


### Example 4 – Tutorial on Using Zoom

I do two monthly teaching sessions – one on investing and one on some technology topics of current interest, such as AI, networking, or photo editing. My preferred presentation venue is Zoom, which I can use to teach from my home office. Zoom works well, but one problem has been that some of our Sun City seniors have found getting Zoom to work, difficult. It would be nice to teach a class on using Zoom; however, teaching a class on Zoom via Zoom is a classic “Catch-22”. What to do?

I browsed to YouTube and entered the search phrase: “**joining a zoom meeting**”. I got several helpful video hits. Below is a screenshot of one of the videos.

(Ed.’s note: A special “thankyou” to **Bruce Rosen** for his kind and quick assistance when I had issues with the Table of Contents tool in Word365.)



The video was a simple tutorial focusing solely on how a novice user could join a Zoom video session. That is the only procedure my class attendees would need to attend my Zoom sessions. Once I had reviewed the video, I copied the URL of that video so that I could include it in my email notice of the meeting as a helpful tutorial aid for beginners.

## Closing Thoughts

The possibilities for finding online tutorials on YouTube are vast, all available for free. Alas, in this article, we've barely scratched the surface. A caveat is that, like all Internet content, there's no guarantee that it's up-to-date or even factually correct. The quality of videos can vary, and speakers make many with difficult-to-understand accents. Patience is the key to finding the gem that you are seeking.

(Ed.'s note: one way to find current content in any search—be it YouTube or your favorite search engine—is to mention the current year, such as "... in 2024".)

###

## Really, really deleting files

by Chris Taylor, President, Ottawa PC Users' Group, *Ontario, Canada*

<https://opcug.ca>

When you delete a file in Windows, the actual on-disk data is not removed. The file is usually moved to the Recycle Bin, where it can be easily recovered. Even if you empty the

Recycle Bin or bypass the Recycle Bin by holding down the **shift** key while deleting files, the data remains on disk. All that happens is the pointers to the file are removed, making the space available for new files.

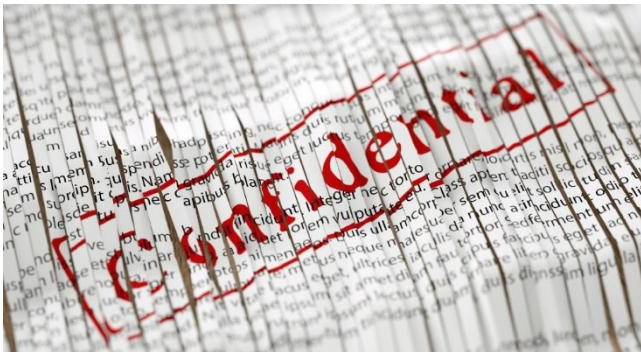
## Recovering deleted files

Utilities to recover deleted files date back to *Unerase* in the first version of the Norton Utilities in 1982. They continue to this day with dozens of free and commercial programs available for Windows, macOS, Linux, Android, and iOS.

If you are in a high-security situation, please ignore this article. It is intended for the average home or business user whose adversaries are not about to use [magnetic force microscope](#) techniques to recover data. If you are likely to have [CSIS](#) looking for your deleted data, you need to go well beyond what is recommended here.

## Making data unrecoverable

When you want to dispose of a storage device, you should ensure all sensitive data is deleted and *unrecoverable*. This can be achieved by physical destruction of the storage device: hard disk drive (HDD), solid-state drive (SSD), flash drive, etc., or—if you want the storage device to be reusable—by over-writing the data areas of the disk with random data, obliterating the original data.



Some secure deletion programs boast of capabilities such as the [Gutmann algorithm](#), which overwrites all data with 35 passes. For the average computer user, I wouldn't worry beyond a single pass.

There are many programs available, both free and commercial, for secure data removal. The programs I list are not necessarily the best—they are simply programs that have been around quite a while (have stood the test of time), are free, and have been used successfully either by me or other members of OPCUG (Ed.'s note: not to be confused with OPCUG of Northern Virginia, USA).

***Be careful using secure deletion programs.*** By their very nature, there is **no** "undo" button! There are several levels of overwriting data: individual files, free space on the drive, and the entire disk.

## Individual files

If you just want to make a few files unrecoverable, there are programs that can target individual files or folders of files. One example is the free and open-source program **File Shredder** (<https://www.fileshreder.org/>). It is very simple and straightforward to use.

## Free space

Storage devices eventually end up with data in all locations on the device. The free space has data that was used for files that have since been deleted. You have no way of knowing what recoverable data might be there. Some programs can target free space and securely overwrite data there. **File Shredder** is one program that can wipe free space.

## Entire disks

If you want to securely delete all data on an entire storage device, **HDSHredder** (<https://www.miray-software.com/products/applications/hdshredder.html>) is available in free and commercial versions. The free version should be sufficient for the vast majority of users. The website details the additional capabilities in the commercial versions.

Another popular program for securely erasing all data on storage devices is the free and open-source **DBAN** (<https://sourceforge.net/projects/dban/>). **DBAN** was acquired by **Blancco** in 2012 and is no longer in development but remains popular. I recently had occasion to use **DBAN** to help a friend dispose of an old laptop, and it was quite easy to use **DBAN** to ensure the entire hard drive was securely wiped.

**DBAN** comes as a disk image (.ISO file), so you will need a program to create a bootable flash drive, CD, or DVD using the **DBAN** ISO file. Free options are available, such as Rufus (<https://rufus.ie/en/>), NCH Software's Express Burn (<https://www.nch.com.au/burn/index.html>), and Ashampoo Burning Studio Free (<https://www.ashampoo.com/en-us/burning-studio-free>). (Ed.'s note: **DBAN** is old and very slow. There are better choices in 2024.)

## Solid state drives

Due to the architecture of the technology, SSDs cannot be securely wiped in the same manner as HDDs. If you want to securely delete data from SSDs, check that the software you are using specifies that it works on SSDs. EaseUS has a free version of **Partition Manager** (<https://www.easeus.com/partition-manager-software/securely-erase-ssd-hdd.html>) that can securely erase SSDs.

Some SSD manufacturers provide special utilities to securely wipe their devices, such as Samsung's **Magician** (<https://semiconductor.samsung.com/consumer-storage/magician/>) or Crucial's **Storage Executive** (<https://www.crucial.com/support/storage-executive>). If the manufacturer of your SSD has a special utility for securely erasing their branded SSDs, that's the best option.

## Final words

Rather than destroying or securely wiping old storage devices, you might want to repurpose them for your use. Inexpensive drive enclosures are available: you can install your old storage device in one and then plug it into a USB port to use as an external drive.

While this article details effective means of securely removing data, if you can't be sure you have completely removed all sensitive files from your device, you might be better off destroying the device rather than disposing of it.

###



This one bears some explaining. In pre-digital terms, it was called a “composite”. In digital terms, it’s a stack. In this particular case, it’s a stack of 15(!) images that I took of the Gay Head Light on Martha’s Vineyard on a very foggy night and then combined into one image in Photoshop.

Photo by ©Henry S. Winokur

The exposure was made using my Canon R5 camera and a shutter speed of 1/15s, at f/4, and ISO 1600. The lens was a Canon RF 14-35 f/4 L IS USM lens, all on a tripod.

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# First Class

AFFIX  
FIRST  
CLASS  
POSTAGE

TEMP-RETURN SERVICE REQUESTED

## Meeting schedule (Zoom=Online Only, Hybrid=Online/In-person)

1 <sup>st</sup> Wednesday	7:00 - 9 PM	Arlington General Meeting	Hybrid
3 <sup>rd</sup> Monday	7:00 - 9 PM	Board of Directors Meeting	Zoom
3 <sup>rd</sup> Saturday	12:45 - 3:30 PM	Fairfax General Meeting	Hybrid
4 <sup>th</sup> Wednesday	7:00 - 9 PM	Technology & PC Help Desk	Hybrid
Arlington Meet: 5711 S. 4 <sup>th</sup> ST., Arl. VA		Fairfax Meet: 4210 Roberts RD., Fairfax, VA	

Meetings are Hybrid or Zoom (as above)  
Fairfax Health/Safety: <https://www.patacs.org/fairfaxattreqmts.html>  
Online Meeting Access Will Be Sent Via Email

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