

Bits of Bytes

Newsletter of the Pikes Peak Computer Application Society, Colorado Springs, CO

Volume XLII

November 2022

Issue 11



Veterans Day
11 November

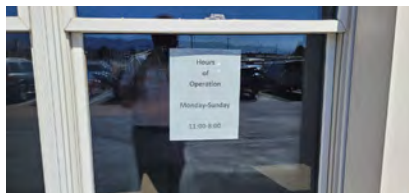
The Prez Sez

by Cary Quinn,
President,
P*PCompAS

Our November presentation is scheduled for 10 am. If time permits after the business meeting and Around the Room, we may also try a quick sig on program ideas for 2023.

Breakfast Update:

The Golden Corral at Waynoka Rd is now open and very busy. Unfortunately for our group, they do not appear to be open at 8 am at this time for breakfast. I will try to give an update on this at the meeting. Hopefully, GC hours will change as they are able to fill staffing. ☺



Hours: 11 am–8:00 pm, Mon-Sun



Senior Breakfast: \$11.49



**Senior Early Bird Special, 2–4 pm
Mon–Fri, \$9.99**

Next P*PCompAS meeting: Saturday, 5 November 2022

Judy Taylour from APCUG will present “Social Media for Seniors” at 10 am.

Meeting Minutes

by Greg Lenihan,
P*PCompAS Secretary

President Cary Quinn opened the 1 October 2022 membership meeting at 9:00 am. David George made the coffee and Cary Quinn brought doughnuts and some vanilla cake. A \$1 donation is requested from members for doughnuts and coffee. A motion was made to approve the minutes in the newsletter and the motion passed.

OFFICER REPORTS

President Cary Quinn said the presentation today would be by John Krout on removing Android bloatware.

Secretary/Newsletter Editor Greg Lenihan announced the next newsletter deadline is 22 October. Last month there was a question as to how many were using Windows 11. Cary says he brought in a laptop running Windows 11 as a virtual machine if anyone wanted to see it.

Treasurer Toni Logan stated our savings account grew by another 12 cents and currently is at \$2833.00. Checking stands at \$21.74 for a combined total of \$2854.74.

Membership Chair Ann Titus had nothing to report.

Librarian Paul Godfrey had nothing to report.

APCUG Rep/Webmaster Joe Nuvolini had nothing to report.

BOD Chair Ann Titus had nothing to report, but may be calling a Zoom meeting in the near future.

OLD BUSINESS

Cary Quinn said he is still looking into a microphone solution for our meetings. He wants to see if the APCUG has a solution.

Discussion continued on forming a committee to find officers for next year. Still no volunteers. Toni Logan says we can always nominate people on the day of the election without a committee. Ann Titus planned to meet with the Board about programs.

We have talked about getting a screen in the meeting room. Paul Godfrey says his church installed digital screens and has two motorized screens for sale. They are three meters by two meters. Joe Nuvolini said he would contact our church to see if they are interested.

A discussion continued on last month's postponement of the decision to raise the coffee/donut price from \$1 to \$2. A motion was made to fund monthly shortfalls for the purchaser from the coffee fund. The motion passed.

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P*PCompAS

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Officers

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Secretary: Greg Lenihan
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Treasurer: Antoinette Logan
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Staff

APCUG Rep/Webmaster: Joe Nuvolini

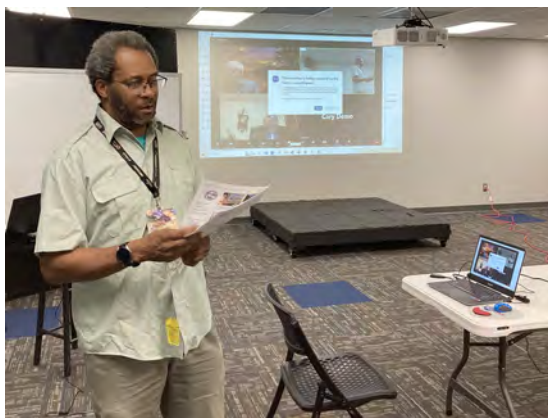
Barista: David George
Drawings: Cary Quinn
Editor: Greg Lenihan
Librarian: Paul Godfrey
Membership: Ann Titus

Committees

Audio: A.J. Whelen
Hospitality: Vacant
Programs: Vacant
Publicity: Vacant
Nominating: Vacant

Board of Directors

Ann Titus
Harvey McMinn
Joe Nuvolini (for Jeff Towne)
A.J. Whelen
John Pearce



President Cary Quinn at the October meeting.



Members present at the October meeting.



Digerati at the October breakfast. (Picture by Cary Quinn)

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Meeting Minutes (Cont. from page 1)

NEW BUSINESS

Golden Corral announced they would open again around mid-October. Our October breakfast will be at Perkins, but several volunteered to check the new price that would be charged for Saturday brunches.

ANNOUNCEMENTS

The next social breakfast meeting will be Saturday, 15 October, at Perkins, starting at 8:00 am.

Our next membership meeting is Saturday, 5 November.

AROUND THE ROOM (Occurred after the presentation)

Cary Quinn said before getting rid of programs on your phone, consider doing a backup. Paul Godfrey asked if Smartswitch saves text messages, and Cary said it did. John Pearce said Smartswitch does not download every data file. Some he has to back up separately.

John Pearce bought a pre-configured HP laptop during a Labor Day sale. He wanted Windows 11 Pro but got Home. Cary Quinn said there are websites that offer discount licenses for a good price. So far John is not a fan of Windows 11.

AJ Whelan asked if Mike Lindell of My Pillow fame had his phone backed up.

Harvey McMinn asked for advice on mesh routers and using them with Starlink. Cary suggested Starlink forums and there is also a travel guy on YouTube that uses Starlink. Cary has a friend in a SciFi groups that has this setup, and Cary will ask him.

Ann Titus questioned Cary on his progress on getting a microphone solution so that Zoom attendees can hear with better

volume and quality. Cary welcomed suggestions.

Toni Logan recounted her painful experience trying to change an account name with Verizon. It has taken months. Toni also asked if she need to purchase a service if using a Ring doorbell. If you want recording and some other features, you will probably have to pay extra. Some said they don't record because it comes on when every car passes by. Warren Hill said to point the camera so that pixels don't show the road, and the camera will not come on.

Paul asked if anyone uses an app for blasting text messages to numerous people. John Pearce mentioned an app called GroupMe, but everyone has to be using the app. Paul also said he got a text from what looked like his pastor, but Paul recognized it as spam, however, it used his name and phone number.

DRAWING

John Linder brought in three flat-screen monitors. Cary Quinn had raffle tickets in his car, but a decision was made to wait until next month to hold a drawing.

PRESENTATION

John Krout, an APCUG presenter from the Potomac Area Technology and Computer Society, Inc. (patacs.org), talked on "How to Remove Android Bloatware." He was in Arlington County and getting some remnants of hurricane Ian. He said a good weather site for satellite images was www.ssec.wisc.edu. He gave a short presentation on reading QR codes with Android and iOS. After his presentation, he said we were welcome to Zoom into presentations by his group, after first getting a guest pass by e-mailing ffxmtg@patacs.org. ☺

My Tech Support House Call

By Bob Rankin, <http://askbobrankin.com>, published through the APCUG

I received a call from a friend, who was seeing random freeze-ups, the dreaded 'Blue Screen,' and some other problems on her computer. So I popped in to see what I could do to cure this pestiferous PC. Come along for this tech support house call, and learn the tools and techniques I use to diagnose problems like these...

Paging Doctor Bob... Doctor Bob...

Long-time readers will already know the terrible secret that I'm neither a medical doctor nor a Ph.D. I got the "Doctor Bob" handle while working at IBM, because I was always helping people fix whatever was wrong with their computers. I accepted the nickname, and thought it was funny, because there was a weatherman named "Doctor Bob" who was a popular on-air personality at WABC radio back in the 1970s. Word somehow got out that he wasn't a real meteorologist, and he was fired.

So the moral of that short story is that you should be leery of anyone who calls himself Doctor Bob. I do have a degree in Computer Science, though, and over 35 years of experience in the fields of Programming, Technical Writing and Assorted Geekery, if that helps to rebuild your confidence in me. But for now, let's return to the details of the damsel in digital distress...

My neighbor and her husband are parents of five young children. (Already I knew that Bad Things can happen to a computer with five kids clicking anything that moves.) She asked me for a referral to a computer repair shop, because of the frequent freeze-ups, ill-timed

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House Call (Continued from page 3)



intrusions from Safe Mode, the bothersome Blue Screen of Death, and her pesky printer. I knew they had little money to spare, and the Geek Squad (or similar fixit services) would probably want to extract at least \$150 for their efforts. So I popped in at lunch time, hoping that I could make things right with a few tools from my bag of tricks.

The first thing I did was install Speccy, to check for overheating problems. A computer that's running hot can be the cause of seemingly random system shutdowns and freezes. (I used to recommend SpeedFan, but that website is filled with so many [deceptive download links](#), that I no longer send people there.) Speccy informed me that all of the components were operating at normal temperatures, so I didn't bother to open the system unit and inspect for dust. See [What's Going On Inside Your PC?](#) to learn more about Speccy and another free diagnostic program you should know about.

Next, I decided to do a malware scan. This computer running Windows already had an up-to-date version of AVG Free Edition, but no protection is perfect. (See [PC Matic Gets a Zero!](#) for my current favorite anti-virus software.) My go-to favorite for quick on-demand malware scanning is [MalwareBytes](#). I downloaded the free version of this utility and ran a scan, which reported that nothing malicious was found.

At this point, it seemed appropriate to run some hardware diagnostics, but my memory was failing me. (Don't you love horrible puns?) A quick search on AskBobRankin.com Windows repair and recovery tools inspired me to run CHKDSK to scan for hard drive errors, the Windows Memory Diagnostic Tool to check for flaky RAM chips, and the Windows Startup Repair tool. None of them found any problems, or suggested any additional action. I checked my list of [Free Tech Support Tools](#), and it didn't seem like any of those were needed here.

As a final measure, I decided to run PrivaZer, the awesome free disk optimizer, registry cleaner and privacy enhancer that I reviewed a while back. (See [Clean and Sanitize Your PC With PrivaZer](#) to learn more.) And voila! In the process of running all these scans and tests, I had restarted the computer several times, and everything seemed to be working fine. No freeze-ups, no Safe Mode, no Blue Screen, and no viruses. It's possible that putting the system through all these paces somehow magically solved the problem. It's also true that computers instinctively fear me, and tend to behave better when I give them a stern look. Anyway, I declared Victory to my friend, and Hooray for free software tools.

And then I remembered that I hadn't fixed the non-working printer problem. My friend had already tried the Windows troubleshooter, and learned that the printer device driver software had somehow gone missing. She had even gone to the Canon website, and downloaded what promised to be the solution. I was impressed at her efforts. But the process of getting this insubordinate inkjet back to good turned out to be very nerdy and obscure. After wading through

a stream of unhelpful websites, wizards and workarounds, I finally got the printer re-installed and working. The story is too long and horrible to repeat here. If I had to do it again, I'd have run over to Best Buy and bought them a new printer. There's just no way a non-techy Joe or Jane would EVER figure this out, and that's a shame. Maybe that's why God put me here. :-)

What is a Solid State Drive (SSD) and Do I Need One?

by Jason Fitzpatrick, reprinted with permission from [HowToGeek.com](#)

Original article at: <https://www.howtogeek.com/howto/45359/htg-explains-whats-a-solid-state-drive-and-what-do-i-need-to-know/>

Solid State Drives (SSDs) are the lightning fast counterpart to the traditional hard drive with moving parts. But are they a good match for you? Read on as we demystify SSDs.

The last few years have seen a marked increase in the availability of SSDs. They've also shown a dramatic decrease in price, even though they're still costlier than traditional drives per gigabyte of storage. What is an SSD? In what ways do you benefit the most from paying the premium for an SSD? What, if anything, do you need to do differently with an SSD? Read on as we cut through haze surrounding Solid State Drives.

What Is a Solid State Drive?

This might be hard to believe, but Solid State Drives are actually fairly old technology. SSDs have been around for decades in various forms. The earliest were RAM-based and were so cost-prohibitive as to make appearances only in ultra high-end and super computers. In the 1990s, Flash-based SSDs made an appearance but were still far too expensive for the

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consumer market and made hardly a blip outside of specialized computing circles. Throughout the 2000s, the price of flash memory continued to fall, and by the end of the decade, consumer Solid State Drives were making inroads in the personal computer market.

So what exactly is a Solid State Drive? First let's go over what a traditional Hard Disk Drive (HDD) is. An HDD is, at its most simple, a set of metal platters coated with a ferromagnetic material. Those platters spin on a spindle (much like a record spins on a turn table). The surface of the magnetic platters is written to by a tiny little mechanical arm (the actuator arm) with a very fine tip (the head). Data is stored by changing the polarity of the magnetic bits on the surface of the platters. It is, of course, quite a bit more complicated than that, but suffice to say that the analogy of an automatic record player arm seeking out a track on a record is not far flung from the actuator arm and head of a HDD seeking out data. When you want to write or read data from a magnetic HDD, the platters spin, the head seeks, and the data is located. It's as much a mechanical process as it is a digital one.

Solid State Drives, by contrast, have no moving parts. Although the scale is different and the size of the storage significantly larger, an SSD shares so much more in common with a simple, portable flash drive than it does with a mechanical HDD (and certainly far more than it ever would with a record player!). The vast majority of SSDs on the market are of the NAND variety, a type of non-volatile memory that doesn't require electricity to maintain data storage capacity (unlike the RAM in your computer, which loses its stored data as soon as the power goes off). NAND memory also provides a significant increase in speed over mechanical hard drives, as the time wasted spinning up and seeking is removed from the equation.

NVMe vs. SATA SSDs

There are two types of SSDs you'll frequently see in the consumer market: [NVMe SSDs](#) and SATA SSDs. They store data in much the same way, but the way they interface with your computer is quite different, and those differences have led to enormous speed differences.

SATA SSDs use [SATA 3](#) to interface with your computer. They have a maximum theoretical speed of about 600 megabytes per second. They connect to your motherboard via a SATA port.

NVMe SSDs use the PCI Express (PCIe)

interface to exchange information with your computer. There are multiple versions of the PCIe interface out there, but at the time of writing, PCIe 4.0 interfaces are the most common. Some PCIe 4.0 NVMe drives have read speeds of very nearly 7 gigabytes per second — more than ten times faster than SATA 3. Most NVMe SSDs out there utilize a special [M.2 slot](#) to connect to your computer, but some of them use a conventional [PCIe port](#).

RELATED: [Why Are the PCI Express Ports on My Motherboard Different Sizes? x16, x8, x4, and x1 Explained](#)

Newer PCIe standards, like PCIe 5.0, are even faster — historically, each new standard has doubled the speed of the previous generation. That means you could very reasonably expect a PCIe 5.0 SSD to have transfer speeds of 13, 14, or even 15 gigabytes per second.

PCIe 5.0-ready devices recently started making their way into the consumer market with the release of Intel's 12th generation processors and their corresponding motherboards, and AMD's new Ryzen 7000 series processors will all support PCIe 5.0 as well, so look for PCIe 5.0 NVMe SSDs sometime in 2022 or early 2023.

And PCIe 5.0 isn't the end. We know that the [PCIe 6.0 standard will double the speed of PCI Express](#), and SSDs are sure to take advantage of that. Just don't count on buying one any time before 2024 at the earliest.

Comparing Solid State Drives to Traditional Hard Drives

It's all well and good to have a handle on how SSDs work, it's more helpful to compare them to the traditional hard drives you've been using for years now. Let's look at a few key differences in a point-by-point comparison.

Spin-up Time: SSDs have no spin up time, since the drive has no moving parts. HDDs have

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SSDs (Continued from page 5)

varying spin up times — usually a few seconds — when you hear a click-whirrrrr for a moment or two when booting your computer or accessing an infrequently-used drive.

Data Access Time and Latency: SSDs are lighting fast and generally seek on an order of 80–100 times faster than HDDs. By skipping the mechanical spin and seek routine, SSDs access data almost instantly wherever it is on the disk. HDDs are hampered by the physical movement of the armature and the spinning of the platters.

Noise: SSDs are silent; no moving parts means no noise. HDDs range from pretty-darn-quiet to very-clumsy-click-beetle levels of sound.

Reliability: Individual manufacturing issues aside (bad drives, firmware issues, etc.), SSD drives come out ahead in the physical reliability department. The vast majority of HDD failures are a result of mechanical failure. At some point, after tens of thousands of hours of operation, a mechanical drive will simply wear out. In terms of read/write life, however, HDDs win (there is no write limit on a magnetic disk, you can change the polarity and indefinite number of times).

Conversely, SSDs have a finite number of write cycles. This limited-write-cycle issue is much trumpeted by people decrying SSDs, but the reality is that the average computer user would be hard pressed to hit the ceiling of read-write cycles on an SSD. Modern SSDs like the Samsung EVO 850 (one of the more popular SSD lines), for example, can handle hundreds of TiBs of data written over a few decades of use — more use than most people will put a drive to.

Additionally, SSD drives have a pretty neat-o feature; when the sectors of the NAND modules reach the end of their write-cycle, they become read only. The drive then reads the data from the failed sector and rewrites it to a new portion of the disk. This typically gives you plenty of time to backup your data and procure a new drive.

Power Consumption: SSD drives consume 30–60% less energy than traditional HDDs. Saving an odd 6 or 10 watts here and there doesn't seem like a lot, but over the course of a year or two on a heavily used machine, it adds up.

Cost: SSD are not as cheap as HDDs. As of the updating of this article (Summer 2022), traditional HDD prices have fallen to less than a nickel per GB of data. On sale, they can be had for less than two cents per gigabyte! That's astonishingly cheap by historical standards. SSDs are much cheaper than even in the past

few years. Depending on the size and model, expect to pay anywhere between \$0.7–\$0.15 per GB (again as of Summer 2022) for a SATA SSD. NVMe SSDs that use PCIe 4.0 tend to be a bit pricier — they run anywhere between \$0.10–\$0.20 per gigabyte. While still more expensive than HDDs, picking up an SSD for use as your main drive is hardly exorbitant.

One thing to note is that the price of SSDs tends to rise more dramatically at higher capacities. For this reason, a lot of people pick up a smaller SSD to use as a system drive (where Windows and many apps and games are installed), along with a bigger, less expensive HDD for file storage.

The Care and Feeding of a Solid State Drive



In so far as running your operating system, saving data, and interacting with your computer goes, the only differences you'll really notice while running a SSD drive are the increase in speed and the decrease in noise. When it comes to taking care of your drive, however, there are a few rules of critical importance.

RELATED: [Do I Really Need to Defrag My PC?](#)

Don't defragment your drive.

[Defragmentation](#) is useless on a SSD, and it decreases the lifespan. Defragmentation is a technique that brings the pieces of files closer together and optimizes their placement on the platters of HDDs to decrease the seek time and the wear and tear on the disk. SSDs have no platters and have a nearly instantaneous seek time. All defragging them does is chew up more of your write cycles. By default, defragmentation is disabled for SSDs in Windows.

Turn off Indexing Services: If your OS rocks any sort of search-supplementation tool like an [Indexing Service](#) (Windows does), turn it off. The read time is so fast on SSDs that you don't really need to build a file index and the actual process of indexing the drive and writing the index is slow on SSDs.

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SSDs (Continued from page 6)

RELATED: [How to Check if TRIM Is Enabled for Your SSD \(and Enable It if It Isn't\)](#)

Your OS should support TRIM. The [TRIM command](#) allows your OS to communicate with your SSD drive and tell it which blocks are no longer in use (and are thus clear for wiping). Without the TRIM command taking care of some housekeeping on your SSD, the performance will rapidly degrade. Modern versions of Windows (7 and up), macOS (10.6.6 and up), and most Linux implementations (Linux Kernel 2.6.33+), support the TRIM command. While registry hacks and supplementary programs exist for modifying earlier OS versions like Windows XP to semi-support the TRIM command, there is no native support. Your SSD should be paired with a modern OS for maximum performance.

Leave a portion of the disk empty. Check the specs for your drive for specifics. Most manufacturers recommend keeping 10–20% of the drive empty. This empty space is there to assist the leveling algorithms (they redistribute the data across the NAND modules to minimize the total wear on the drive and ensure a long life and optimum drive performance). Too little space and the leveling algorithms work over time and prematurely wear on the drive.

Store media on a second drive: Until SSDs drop radically in price and are cost competitive with regular hard drives, it makes no sense to store your massive media files on your expensive SSD. If you're storing multiple TB of data, pick up a large traditional HDD to use as secondary drive if possible.

Invest in RAM: Compared to the cost of SSDs, RAM is cheap. The more RAM you have, the fewer writes-to-disk you'll have on your SSD. You'll extend the life of your pricey SSD by ensuring your system has adequate RAM installed.

Is a Solid State Drive for Me?



At this point, you've got a history lesson, a point-by-point comparison, and some tips for keeping your SSD in tip-top shape, but is an SSD for you? Check all that apply and get ready to bust out your credit card:

- **You want nearly instant boot times:** You can go from a cold boot to browsing the web in a matter of seconds with an SSD; the same window is often minutes with a traditional HDD.
- **You want extremely fast access for general applications and gaming:** We've said it many times already but SSDs are blistering fast. You'll see a dramatic speed boost to anything that requires loading from disk. This means, starting apps and games, loading big files, and loading new levels within a game all go much faster.
- **You want a quieter and less power-hungry computer:** As highlighted above, SSDs are silent and use significantly less power.
- **You're able to use two drives; one for your OS and one for your media:** Unless you're storing just a handful of family pictures and a CD rip or two, you'll need a more affordable traditional HDD to store your big files.
- **You're willing to pay extra for the benefits of rocking an SSD:** SSDs are cheaper than they've ever been and are by no means outside the reach of even budget systems. But, they do still cost more than traditional SSDs.

If you're buying storage for a boot drive, the answer is unequivocally yes. You need an SSD. The real debate there is whether or not you need an NVMe SSD or a SATA SSD. The price of NVMe drives has fallen dramatically in the last few years, and they can often be purchased at about the same price as SATA SSDs.

If you're buying to expand your storage rather than run a boot drive, and your checklist looks more full than empty and paying a bit extra is no big deal, then congratulations — it looks like an SSD is in your future. ☺



3 Creepy Lists That Show Everything Google Knows About You

by Serena O'Sullivan at Komando.com (tip from 10/15/22)

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You might think of Big Tech companies as untouchable giants that are far removed from your everyday life. In reality, these companies want to get close and personal with you. Google is an especially ardent admirer, which is why you might want to discover all the things Google knows about you.

Maybe you thought Google wouldn't know your age, gender, marital status or hobbies. Actually, it collects a ton of personal data so it can serve you ads you want to click on — and ads are far and away the biggest money-maker for Google. [Tap or click here to stop ads from following you online.](#)

If you want to know all the things Google knows about you, read on. Here are three lists showing some of the data Google collects.

1. Google knows everywhere you've been

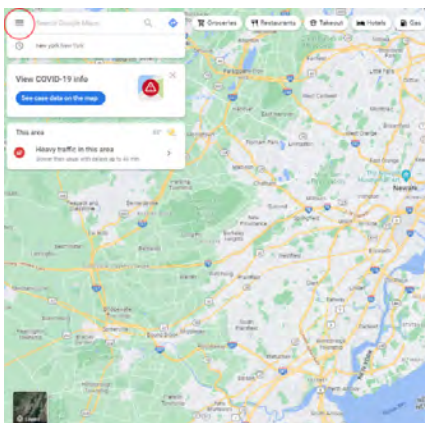
Google Maps knows all the countries, cities and attractions you've visited. If you have Location History enabled on your Google account, you can see your Google Maps Timeline.

This feature lets you see exactly where you traveled in the past, from towns and countries to attractions and restaurants. You can even filter by specific days. For example, if you vaguely remember a restaurant you visited last May, you can search your timeline to rediscover it.

You can check your timeline on the Google Maps website and the mobile app.

How to check your Google Maps Timeline on a computer

- Log into your Google account and head to the Google Maps website.
- Then, click the hamburger menu in the top-left corner.



Note the circled hamburger menu if you haven't heard the term before.

- Now that the entire side menu is open, click **Your Timeline**.

Then, select **Your Places > Visited**. Now you can rediscover old places in the [Google Maps Timeline](#)!

How to check your Google Maps Timeline on your iPhone or Android

- Open the Google Maps app.
- Tap your profile or initials. Then, select **Your Timeline**.

From there, you can swipe to explore or select certain days. You can even learn about places you visited by tapping the tabs at the top of the screen, like **Places**, **Cities** or **World**.

How to pause Location History

On your iPhone or iPad, [open the Google Maps Timeline](#). Tap **Settings > Pause Location History**.

On your Android, open Google Maps, tap on your profile or initial and select **Your Timeline > More > Settings and privacy**. Tap **Location History is off**.

If you're on a computer, go to [Timeline](#), click **Settings > Pause Location History**.

2. Check Google Photos to see everything Google knows about you

Google tracks and records your every move, including the location data of photos you have taken. Check your Google Photos settings to see what the company knows about your traveling habits, the places you visit and how long you were there.

To make a long story short, location tracking in the Google Photos app comes down to metadata. This refers to the hidden data embedded within the pictures you take. If you don't turn off location tracking for images, your photos reveal where you stood when you took them.

You can also use this to your advantage, like seeing an old photo and thinking, "I'd love to go there again." If you can't remember where you took old pictures, your metadata holds the answers. [Tap or click here to find out where you took a picture.](#)

Whether or not you want to turn off location tracking, you should first see all the data Google

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Creepy Lists (Continued from page 8)

Photos has collected. Here are two ways to check Google Photos and see everything Google knows about you:

How to check Google Photos on the app

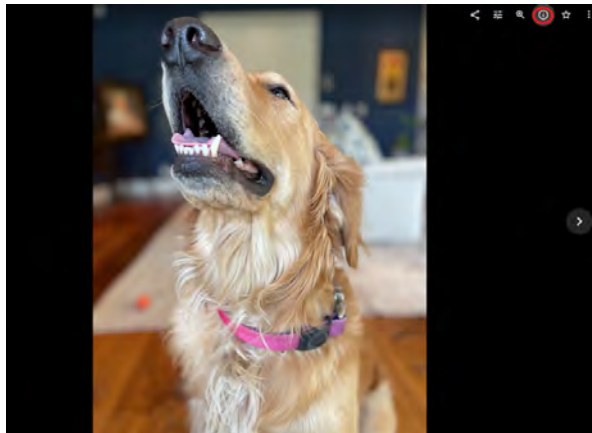
- Open the **Google Photos** app.
- In the bottom bar, tap **Search**.
- Under the **Places** section, tap **View All**.

Now you can see the entire location history. You can even use the map to browse photos by place.

You can also check location data on your computer. But it won't be as comprehensive as what you see on your smartphone app. Nevertheless, here's how to track down location data on Google Photos from a Mac or PC:

How to check Google Photos on your computer

- First, go to photos.google.com.
- Then, tap on a specific image and click the **Info** button.



Can't find it? The Info button is circled in red.

If you want to stop Google Photos from tracking your location data, we've got you covered.

How to turn it off

- First, open **Google Photos**.
- In the top right-hand corner, click **Settings**.
- Select the **Sharing** tab.
- Tap or click the slider that says **Hide photo location data**.

3. Your ad interests reflect almost everything Google knows about you

Ad personalization is a huge deal on Google. It bases this information on a few different factors, like:

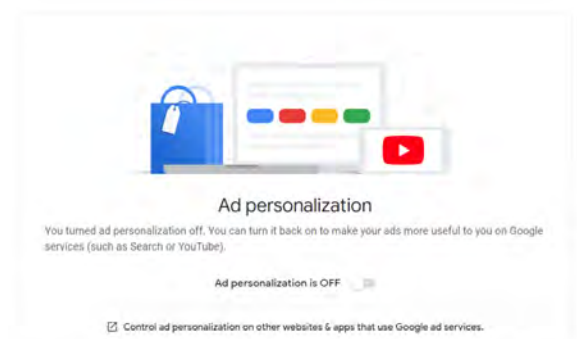
- The personal information you voluntarily added to your Google Account.
- Advertiser data from Google partners.
- Google's algorithms (which are surprisingly adept at guessing what you like).

If you have Ad Personalization enabled, you can see what Google knows about you based on search history, browsing data and more. It's not always 100% accurate, but it can get pretty close.

To check it out, go to your [Google account](#), tap or click **Privacy & personalization**. In the **Ad settings** sections, tap or click **Ad personalization** to see the profile Google made based on your internet habits.

How to turn off Ad personalization

It's pretty easy if you're on a desktop computer. Head to the [Ad Settings page](#) and slide the toggle under **Ad personalization** to the left to turn it off. Here's what your screen should look like:



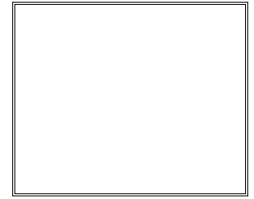
The ad personalization page can be found at: <https://adssettings.google.com/authenticated>

You'll still get ads, of course. But they won't be tailored to your interests. ☺

Tip: Screen Record with Xbox Game Bar

The Xbox Game Bar is one of Windows 10's most powerful [secret weapons](#). It's designed for gamers, but anyone can use its features, including a handy [screen recording tool](#). To use it, press Windows+G to open the Game Bar. In the main Game Bar menu, click the small "Capture" icon (which looks like a camera). In the "Capture" window, use the record button (a small circle in a button) to start recording your screen. Click "Stop Recording" when you're done. You'll find the video file in your Videos folder. ☺

P*PCompAS Newsletter
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Coming Events:

Next Membership Meeting: 5 November beginning at 9 am (see directions below)

Next Breakfast Meeting: 19 November @ 8:00 am, Perkins, 3295 E. Platte Ave.

Newsletter Deadline: 19 November

Check out our Web page at: <http://ppcompas.apcug.org>

