



PATACS Posts

Newsletter of the Potomac Area Technology and Computer Society

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My turn...

Since our last visit, I have been traveling, traveling, traveling! Not quite as much as Johnny Cash's "I've been everywhere" song (<https://www.azlyrics.com/lyrics/johnnycash/ivebeeneverywhere.html>), but it kind of feels like it. Where you might ask? Poland, Brooklyn, and St. Paul, MN. The two trips in the US were to see family.



The trip to Poland was described in the June newsletter. It was quite something. We were "headquartered" in Krakow for two nights and Warsaw for five. We visited 3 concentration camps: Auschwitz-Birkenau, Treblinka, and Majdanek. I took somewhere between 800 and 1000 pictures. I selected and processed about 280 images within one week of returning home (a world record for me) for the teachers to use in their classes as they see fit.

I have yet more travel coming soon. In the most immediate future, mid-month, I will climb onto planes, the first a "puddle-jumper" from Dulles (IAD) to Newark (EWR) and then the star of the show, a Boeing 787 Dreamliner and fly, non-stop to Johannesburg, South Africa, on my way to Namibia for a photo trip that should have happened two years ago. It's about a 15-hour flight!

Our president, Paul Howard, has written an article on his experience of building a new desktop computer. Read about his experience below....

We lost a member of the Club's Board of Directors on June 17th, when Charles Throneburg died: <https://www.dignitymemorial.com/obituaries/falls-church-va/charles-throneburg-11337101>.

Because of some white space, I'll put in some photos.



©Henry S. Winokur

Zabriskie Point, Death Valley, CA. 2019
Canon 5D Mark IV, 1/160s,
f/8, ISO 200, 105mm,
EF24-105 f/4L IS USM

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Thank this issue’s proofreaders: Lorrin Garson, Steve Kalin, Jack McFadyen

Adventures in Acquiring a New Desktop Computer

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Sometimes, you’re due for a new computer. As Windows 7 approached its end of life in January ’20, I finally put a computer I’d assembled from parts in July of 2015 into service. Roger Fujii helped me overcome a Norton Security issue that kept me from upgrading to Windows 10, and he installed a 500GB solid-state drive as my boot drive. I also added RAM, bringing the machine to 16 Gigs. Quite speedy, it boots in less than 40 seconds, versus 4 or 5 minutes for the Win7 box, but...the Intel i-5 CPU is Gen 4, and won’t run Windows 11.

Earlier this year at one of our Saturday meetings, I paid my money, took my chances, and won a ‘build coupon’ generously donated by the Fairfax **Micro Center** store in a raffle—with proceeds benefitting the joint refreshment fund for our OPCUG/PATACS meetings. On Saturday, March 25th, off to the store I went, met manager Jeff Katz, and began the process with the salesman Jeff assigned to help me: William N. It was a good experience but next time, I’d do it on a weekday, to avoid the weekend crowds.

Well—the world has changed. The tower format I’ve been used to since my first PC clone in 1985—built by our friend and group member Dean Mires—has changed. You remember – drives in the front, power supply in the back? Over the years, case materials have changed to improve airflow for CPU cooling. My new ASUS Prime AP201 case’s exterior is mesh on all six sides, and it’s white (v. black). Rubber feet get it ¼” off the surface it’s sitting on—allowing two of the five fans to suck in cooling air from the bottom. Another reason for this case—it’s difficult to find a case with USB C and USB A ports on the front—and there’s no provision on any cases I recall from the selection day for optical drives – ‘bye DVDs! (Ed’s note: Not so fast! Cases that have space for optical drives are available, though sources might only be online.) And—wait for it—the power supply is located about mid-height at the front of this case and has a 5” fan. The 2 TB mechanical drive (like the fans mentioned earlier) sits on the bottom of the case. I installed it myself, learning about cable routing and other issues in the new case layout environment. And, it’s not oriented front to back, but side to side.

I'd originally planned to get an Intel i-7 CPU, but decided to save \$340 and got an Intel i-5 13600K, 3.5 GHz 14 core processor instead for \$309. (*Ed: an i-5 is perfectly adequate for most users.*) The CPU cooler is a Noctua NH-U12S with a large radiator and a 5" fan! A Western Digital Black 2 TB solid-state drive (SSD) NVMe was the choice for the boot drive. As I discussed this build at a Society meeting in advance of the acquisition, Roger warned me about power supply reliability. With that criterion, I went for a 750-watt Corsair RM750X with a 7-year warranty. Memory is also Corsair—32GB (2 X 16 GB) DDR4-3200. Motherboard—Gigabyte B760M Gaming ('tho I don't) micro ATX, and ASUS Nvidia GeForce GT730, 2 GB Graphics card. The operating system is Windows 11 Pro.

The build total came to \$1312.44—after the \$200 build coupon was applied. I've been adding software to it as time permits. (*Ed: and keeping a list, hopefully.*) Installing it at my computer desk and transferring files will be a project I'm taking my time preparing for. Got any suggestions for doing file transfers? (*Ed: Why yes, of course. Copy all of the folders and files that you want to move to the new machine to an external USB 3.x SSD and it'll go a lot faster.*)

###

Tech Magazines, now Websites

By Dick Maybach, Brookdale Computer User Group

www.bcug.com

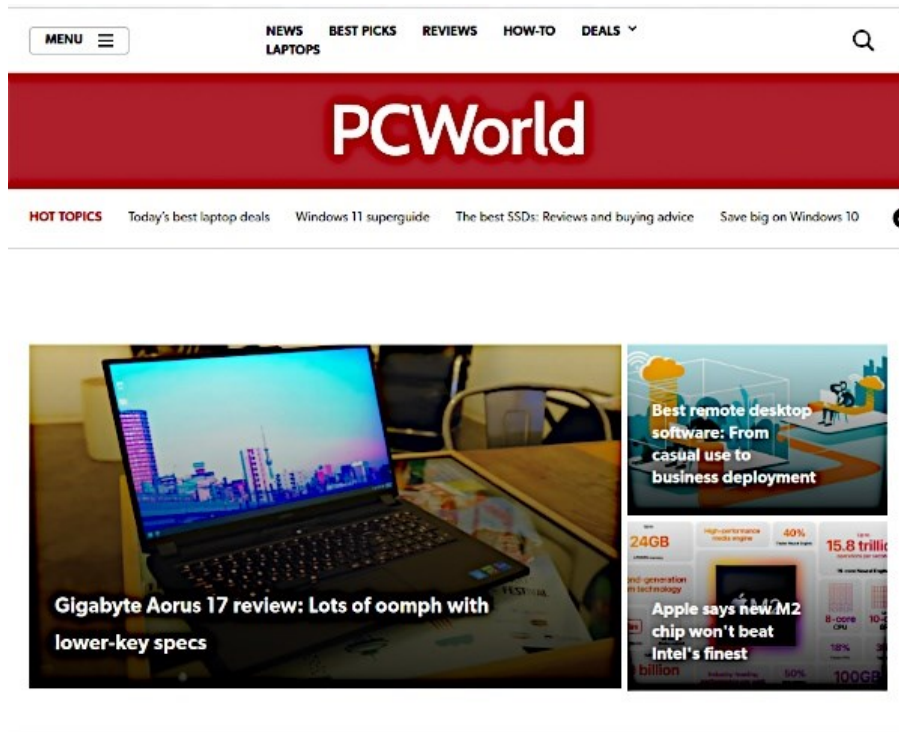
n2nd@att.net

When PCs arrived in the 80s, bookstores were full of hobbyist magazines, such as **PC Magazine**, **PC World**, and **Dr. Dobbs Journal**. Now, most PC users consider their devices to be appliances rather than hobby equipment, and magazines have disappeared. However, a few enthusiasts remain, as do publications that support them, but most now as websites. These are not where you go to find problem solutions but to learn about new developments and tutorials. Here are a few examples:

PC Magazine appeared once or twice a month in my mailbox, and I would read every page. It now is a website, <https://www.pcmag.com/>, that covers Macs and PCs.

The website covers more topics than its print predecessor and includes product, advice, and tech news reports. There is a search feature to help you find past articles. As with all websites, the content evolves continually, so if you see something interesting, you may wish to save the article or its URL. In addition, you can subscribe to special-topic newsletters (what's new, lab reports, tips, tricks, etc.), apparently at no cost.

PC World is also still alive and well, <https://www.pcworld.com/>.



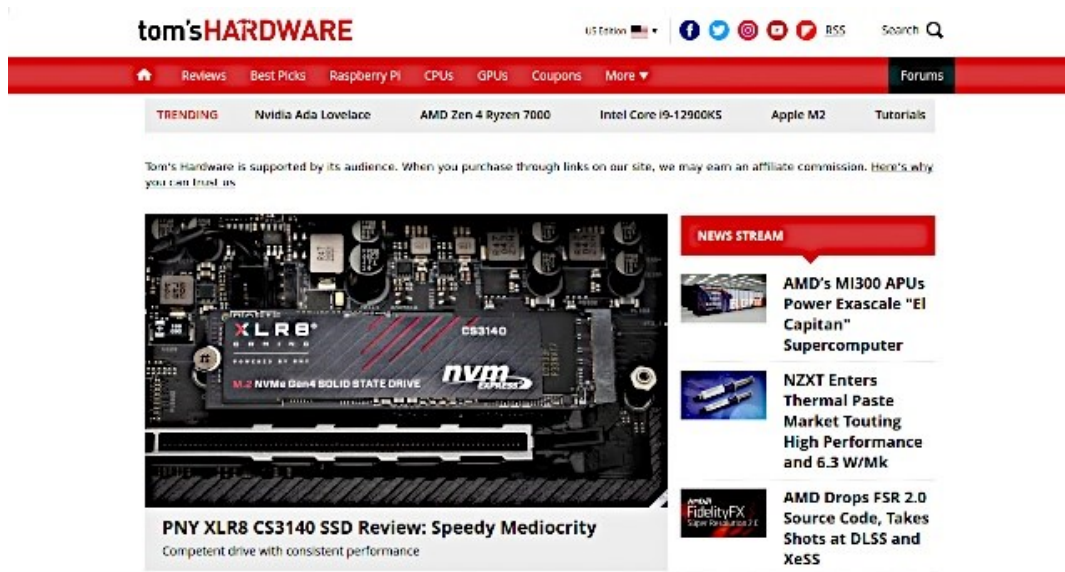
The topics are less wide-ranging than those on the **PC Magazine** site and are mainly limited to PCs. However, they also have free newsletters, and you can subscribe to their digital magazine for about \$20 per year to relive the print magazine experience.

Another old favorite was **ComputerWorld**, <https://www.computerworld.com/>.

They, too, have free newsletters on specific topics, and the site is searchable.



See **Tom's Hardware**, <https://www.tomshardware.com/>, for information on PC components. This never appeared in print and is formatted as a traditional website rather than a periodical.



You'll find detailed reviews of motherboards, CPUs, monitors, storage devices, other peripherals, and complete computers here. There are also tutorials on building and testing PCs and forums where you can ask questions and exchange

views. Although the name implies this is a one-person project, a sizable staff supports the site.

If you're looking for tutorials or help to solve PC problems, check **Computer Hope**, <https://www.computerhope.com/tips/index.htm>.

If you need information or help on specific topics, this may be a better site than the general-information ones above. In addition, its coverage includes Linux, while the first three above appear to be limited to Windows and Macs.



Computer tips and tricks

Below is a listing of categories containing all computer tips and tricks available on Computer Hope. With these tips, users can increase their productivity on the computer and make their overall computer experience a lot more enjoyable.

General computer tips

- [Computer buying tips](#)
- [Computer cleaning tips](#)
- [Top 10 lists](#)
- [Miscellaneous tips](#)
- [Computer keyboard shortcuts](#)
- [All computer tips](#)
- [Computer questions and answers](#)

Visitors favorite tips

1. [Top 10 keyboard shortcuts everyone should know.](#)
2. [How to automatically repeat YouTube videos.](#)
3. [YouTube keyboard shortcuts.](#)
4. [Best websites to set and use as your homepage.](#)
5. [View two windows side-by-side using Smart Window.](#)

Full Circle Magazine, <http://fullcirclemagazine.org/>, is a 60 to 70-page monthly publication covering primarily Ubuntu Linux, although much of the material has a wider scope.

Unlike the sites discussed above, this magazine began publication in 2007 and continues today. You can read or download the issues online as PDFs or EPUB files. The monthly issues cover Ubuntu primarily.

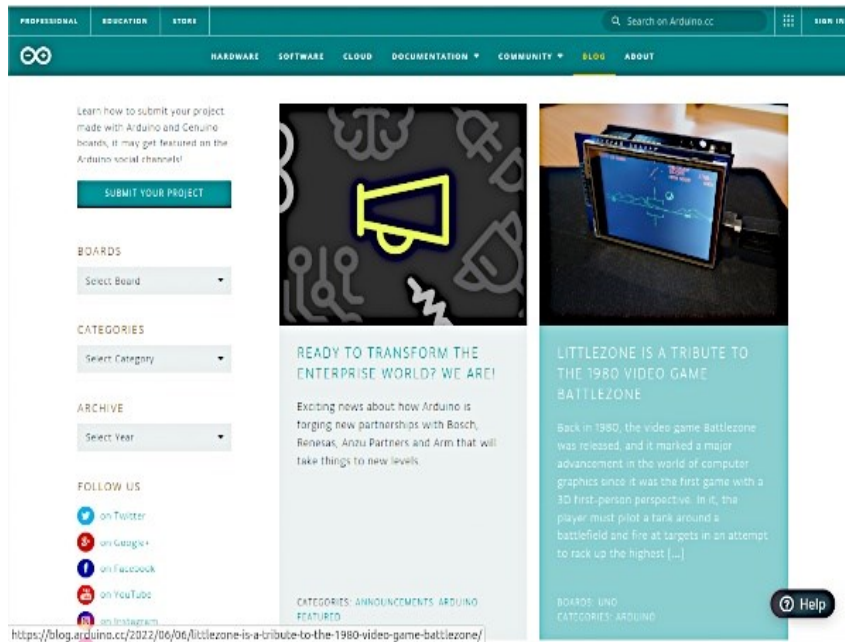
There are also special issues on such topics as the Python language and LibreOffice. But, like print magazines, once an issue is published, it doesn't change.



Raspberry Pi users have **MagPi**, <https://magpi.raspberrypi.com/>, a 100-page monthly, available as a download or in print.



The first issue was published in 2012. Like **Full Circle**, you can read and download the issues for free, although they request a donation. Many articles describe hardware and software projects, often with a link to step-by-step instructions. This is an essential resource if you are working with a Raspberry Pi.



Arduino users should check the blog on the **Arduino website**, <http://blog.arduino.cc/>.

This blog, not a magazine, is made of short articles describing Arduino projects with links to more complete descriptions. Since the content changes continually, you'll want to record the URLs of those that interest you.

This has been a sampling of some resources available to those interested in PCs, and many more may suit you better. With

the decline of printed publications, it's easy to use the Internet only to find solutions to specific problems, which can narrow our focus. However, in the early days of PCs, print magazines continually exposed us to new products and ideas, which websites like those discussed here can do today.

###

Making the Case for a Better Case

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If we have nice things, we should want to protect them. We all have a lot of things in our lives that we value and don't want to lose. Some are material things—homes, cars, furniture, investments, and personal items. Some of these are highly valued because they would be costly to replace, and some have great value only to us. Other things we value may not be material but are also treasured—health, happiness, relationships, and capabilities. Some of these valued items are essential and integral to our lives; others are just nice to have, enhancing our lives. Unfortunately, the more we have, the more we have to lose and the more things we need to take care of. The things we need and love can degrade or break, be lost, stolen, damaged, or destroyed. We can lose things through neglect, accidents, hostile acts by others, or our own lack of good judgment.

We all want to protect the nice things we have, but with so many possible risks and threats, it can be difficult, especially when we have so many things to protect. Sometimes it is not reasonably possible to protect against all threats to all our stuff. Depending on the value of something to us and the relative threats against it, we may want to consider insurance against its loss.

Insurance for our prized items can take two forms. One type is a protection against loss, while the other is compensation for loss. Our automobiles are often critical in our lives. They can also be a means of recreation and entertainment and a source of personal pride. Many bad things could happen to our vehicles, including theft, vandalism, damage in an accident, and mechanical failure. To ensure bad things don't happen, there are actions we can take and things we can buy to help prevent such losses. Parking in a private garage can help prevent thefts and damage that might occur when parked on the street. A friend always parks at the far end of a parking lot, away from other vehicles, to reduce the incidence of scratches and dings from other drivers. Investing in a car alarm system or a steering wheel locking device is often a good way to reduce the chances of theft. Regular vehicle maintenance is good insurance against breakdowns.

Unfortunately, it is difficult to eliminate all risks to your car while still using it. Since a car represents a significant asset for most people, most drivers purchase insurance against loss or damage. A reckless action or unintentional mistake while operating a vehicle could cause great injury or death to another, so most states require drivers to purchase liability insurance to pay for damages to others and to prevent the personal financial ruin of those at fault. In addition, insurance against the loss of our cars from accidents, fire, theft, and other damage may be warranted if the loss would be a significant cost to us. Carrying more than a liability policy may not make sense for an older, low-value car, but more coverage is prudent for a newer, more expensive vehicle. Even so, depending on the amount of damage and the car's current value, this kind of insurance may not repair your vehicle but only reimburse you for its current value.

Much of our technology is costly and important to our lives and often justifies some insurance against loss. Stores, either online or physical, often ask if I would like to purchase product replacement insurance for that TV or other electronic device I am buying. Sometimes this additional coverage may be useful, but it carries a cost. You may also have similar coverage from using a credit card for the purchase or from a homeowner's or renter's policy. Many personal electronic devices, such as computers and smartphones, are costly to repurchase and so important in our lives that their loss goes beyond money. Imagine losing your phone at a critical time; the loss can go considerably beyond the cost of a replacement device. Insurance you can buy could replace your device, but it wouldn't typically compensate for the loss of use or data.

The most prudent way to handle insurance is to buy only for what you can't afford to lose. For most of us, that extends to a home, car, some household items, jewelry, etc. Typically, insuring lower-cost items does not make sense. I only bought replacement insurance for my daughter's pricey iPhone when she was young, and I knew I'd be responsible for replacing it. To protect my own things, I prefer to ensure my continued use of them by being careful with them.

Smartphones are a valuable item, typically fairly expensive and risky to own. They go out in the world with us as our nearly constant companions and are subject to many dangers our home-bound electronic devices don't face. Our phones are susceptible to being dropped

and damaged, submerged in water, stolen, left behind, or lost. Many people have asked me how to dry out a phone; most were unsuccessful in recovering theirs. I've seen many people with cracked phone screens, indicating some accident or mistreatment. It seems rare for a phone to die of "natural causes" (a hardware failure); most seem to suffer an accident or other incident.

I bought my first smartphone in 2017, and though it was relatively inexpensive (a Samsung Galaxy J3 Prime at \$150), I was still concerned that something would happen to it. I didn't take it away from home until I bought a case to protect it. As it turned out, I found the almost perfect case for it. It was just a no-brand case I bought from Amazon (about \$25), but it had all the characteristics I was looking for. It starts with a flexible silicon sheath that covers all sides but the screen and has a sizable lip above the screen surface to protect it. There is an opening for the camera lens, connector, and jacks in this cover; best of all, it is a bright fluorescent green color. It was one of the few cases I found of this type that was not just plain black. I sought out this bright coloring not for fashion but for utility. This bright coloring has saved me from accidentally leaving my phone in a dark restaurant booth or anywhere else I might not notice.

This near-perfect case had a hard black plastic piece that snaps on the back, providing a pop-out stand for the phone and additional corner protection. I've accidentally dropped the phone many times, and it has always survived. However, the screen was still vulnerable, so I sought a case with a holster. I have never figured out how people can carry their phones in their pants pockets. The phone seems too big to carry in a front pocket comfortably, and I'm likely to sit on it and break it in a back pocket. The holster can clip on the belt (or the front side pocket opening, where I prefer it) and carry the phone comfortably, with easy access. The phone (and the "permanent" part of the case) slides up and out of the holster; I soon mastered this quick-draw technique.

This case protected my phone so well that the phone suffered no damage or loss in the five years I actively used it. It survived many drops and falls, and I was fortunately careful when handling it (and myself) near water. The only flaw in the case was that it protected my phone so well that it could not survive as long. The holster was the least durable part. I broke the belt clip off a few times (the first time getting into a car with it clipped to my pants), and a hard plastic tab that holds the phone in broke once. The case survived the best; only once did the black part have a tab break off. Maybe a much more expensive case could have survived the five years of phone use, but I found that buying about five of them worked as well. I just made sure I always had one or two on hand.

Last June, I decided my five-year-old phone was no longer sufficient, so I bought a Samsung Galaxy S22. I wanted a case exactly like the one I had for my J3, but I could not find one. There were some possible candidates, but none combined the heavy-duty protection holster

with slide-up phone removal, and a bright color element. Desperately needing something to protect my new and expensive (\$700) smartphone, I ordered the two most likely candidates from Amazon, one made by Tekcoo and one from Encased.

I first tried the **Tekcoo** case as it had bright green parts, but it seemed cheap (only \$10). None of its pieces were very flexible, so I was worried about damaging my phone by snapping it on. The things that really killed me were the integral screen protector that obscured the screen a bit and the holster, which had the phone removed on the long edge rather than the short edge.



Encased DuraClip

The **Encased DuraClip** case was one of several I considered from this company. At \$18, it seemed much higher in quality and had the kind of holster I wanted, but it was all black and offered much less protection than I wanted. The case was relatively thin, rigid plastic, and fit fine, but it offered minimal protection for the top of the phone and none on the bottom. It was almost flush with the screen surface and offered little protection. I immediately needed something to use, so I kept the Encased case and returned the Tekcoo to Amazon.

I was still not thrilled about the protection the Encased DuraClip case offered. I considered another from the same company but after a couple of weeks decided to try another brand on Amazon, **MOTIVE**. Their Bunker series case was much more robust and only \$20. The part that made me pause was that the phone was held in the holster by a spring clip rather than sliding in from the top, but I soon got used to that. The MOTIVE case gives much more protection on all sides, with reinforced corners and a thick lip around the screen and the camera. It advertises that it allows the use of a screen protector, so I also bought one that a friend with an S22 recommended, but I have yet to install it. I found this case was far better for protection than the Encase, but since I used the Encased case for several weeks, I didn't feel right about returning it and kept it as a spare.



Tekcoo Case



Motive vs Encased

I really like the MOTIVE case, though it is all black and easier to accidentally misplace. I have considered marking it somehow, perhaps with bright paint, but have not yet been motivated. I've dropped it a few times, and the phone has survived just fine. After using the MOTIVE case for several months, I decided to play the game I played with my J3 phone and bought another as a spare. Just in case (pun intended).



Motive Case



Motive Deconstructed

###

Windows 10 & 11 - Differences in Security, Features, and Looks

By Phil Sorrentino, Secretary, and APCUG Rep, Sun City Center Computer Club

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We know Windows 10 is not the last version; maybe Windows 11 will be, but I'm not taking any bets. Technology is constantly changing and usually improving. To say that this is the last of some technology would seem to say that this will be the end of that technology. But Desktop Operating Systems don't seem to be ending, at least not in the foreseeable future. So desktop/laptop computers need software to provide control of, and organization, to the underlying computer hardware. Of course, that doesn't mean it has to be Windows; it could be MacOS, ChromeOS, Linux, Android, or even some yet-to-be-released Operating System that no one has ever heard of. But for my money and my lifetime, I think it will still be Windows. So it probably pays to review and possibly embrace the changes leading to the differences between Windows 10 and 11.



In a nutshell, the differences are in a few specific areas like minimum hardware requirements, taskbar placement, the shape of the corners of windows, the looks and sounds of activities, the included apps, and the CPUs it can run on. (A table showing many differences is included at the end of the article.) The performance differences in Windows 11 are pretty much under the hood and come down to how Windows 11 handles system processes that you usually only see when you open Task Manager. According to Microsoft, Windows 11 does a lot of work in memory management to favor the app windows you have open and running in the foreground. Initially, Windows 11 required you to log in to a Microsoft account. Microsoft indicated that offered benefits such as improved security, better integration with Microsoft's cloud services, and synchronization between one's computers. Early adopters provided negative feedback to Microsoft on this requirement, and they removed the need to log in to a Microsoft account, so now you can just set up a local account.

Many things in Windows 11 look different, but many perceived differences are not in the functionality provided but where to go to find the functionality. Once you get there, you find that it works just the way it did in Windows 10. You'll probably notice one minor difference, "Command Prompt" is now "Windows Terminal." Features in Windows 11 now look more like apps, though they have not really changed what they do or how they do it. There is a button on the Start screen, right above the "Pinned Apps" called "All apps," a term from the mobile device world. Some things are very much the same; right-click the start button in either OS, and you'll find a similar list of features (though Mobility Center is now added to the Windows 11 list). If you use the Action Center, you will notice it is not on the taskbar. The **Winkey+A** keyboard shortcut will provide similar information without notifications. Notifications can be found in Settings-System. Control Panel is still around; search for it using the "Search" field on the taskbar, which leads you to the "Quick Assist" window. When you open the Control Panel App, you will see just what you remember from Windows 10, minus Administrative Tools, but plus Windows Mobility Center and Windows Tools. And oh, if you feel that you will be happier with the start button on the left, go to Settings-Personalization-Taskbar and click on "Taskbar behaviors" and finally pull down the arrow next to "Center" and choose "Left" as the Taskbar alignment.

Possibly, the main difference between Windows 10 and Windows 11 is security. Windows 11 requires a PC that's capable of Secure Boot, which prevents malware from attacking the boot process. (You don't have to enable Secure Boot, but the PC must support it. It seems inevitable that it will soon have to be enabled.) And your PC must have a Trusted Platform Module (TPM) version 2.0 hardware chip to manage cryptographic keys and protect your PC's OS and firmware. TPM is usually a dedicated chip on a motherboard that provides hardware encryption for features like *BitLocker* and Windows *Hello*. Without these two security components, Secure Boot and TPM, you will probably have to stay with Windows 10. The concept of a Trusted Platform Module goes back around 20 years, and PCs have had them since 2005. Microsoft's BitLocker, a whole-drive encryption system, relies on the TPM hardware to manage and protect its cryptographic keys. Windows Hello face recognition also makes use of TPM

support. Microsoft's documentation advises that any modern PC probably has a TPM and that any PC less than five years old most likely has the latest version of the TPM hardware, 2.0. TPM is critical to security. It validates hardware and software components, so no one can tamper with your PC. It stores important cryptographic keys and supplies ultra-secure cryptographic functions to Windows and many applications. All this considered, it looks like a major difference is that Windows 11 provides improved computer security. (Ed: there are problems installing Win11 on machines without TPM 2.0. See this article: <https://www.tomsguide.com/news/does-windows-11-require-tpm-20-we-have-good-news-and-bad-news>.)

As an aside, Apple's OSs have had security baked into them from the start. The mobile OS, iOS, is even more locked down than the desktop MacOS. Windows, on the other hand, is still in the process of locking down many system vulnerabilities. By requiring Secure Boot and a TPM 2.0 chip, Windows 11 will eliminate a whole class of malware attacks that gain control over the computer by subverting the Windows boot process or getting into the system before bootup. Unfortunately, some older PCs will be left behind in making the jump to a more secure Windows 11, but Microsoft has said that it will maintain Windows 10 for at least the next two years. Hopefully, the increased security will be worth the inconvenience and cost of upgrading to Windows 11.

<u>Feature</u>	<u>Windows 10</u>	<u>Windows 11</u>
Release date	2015	2021
Minimum hardware	2GB Ram, 32GB Storage	4GB Ram, 64GB Storage
Trusted Platform Module	1.2	2.0
Can run Android Apps	No	Yes
Start Menu	On the Left	Default in the Center or the left
End of Life	Oct. 2025	???
Snap Layouts	Minimal	Improved and easy to use
Virtual Desktops	Task View	Improved–Similar to Mac
Taskbar–Location	Top, bottom, side	Bottom, center (or left)
Taskbar–open apps	All the same	Wide bar–app with focus
Windows	Sharp corners	Rounded corners–Softer look
Sounds	Yes	Muted–Light/Dark modes differ
Action Center	Yes	Changed
File Explorer	Yes	Improved
Browser Included	Internet Explorer, Edge	Edge
Snipping Tool	And Snip & Sketch	Only Updated Snipping Tool
Tablet mode	A Choice	Automatic when keyboard removed
Tablet Gestures	Yes	Multi-finger gestures added
Touch, Pen, Voice Input	Yes	Improved
Widgets	Yes	Improved –Slideout screen
32-bit version of OS	Yes	Not available

Feature Updates	Twice a year	Once a year
Startup Menu	Large Live Tiles	Grid of app icons
On-Line Communications	Skype	Teams
Cortana Setup	Included	Eliminated

###

One of your editor’s favorite photos from last Spring’s (2022) photo trip to Portugal, is this one of **the Luis I Bridge** over the Douro River. It carries both the subway and pedestrian traffic. It was taken from the south end. The Douro River empties into the Atlantic Ocean, about 7 miles to the west.

Canon R5, 1.3s, f/8, ISO 500, 24mm, RF 24-105 f/4 L IS USM lens.



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First Class

AFFIX
FIRST
CLASS
POSTAGE

TEMP-RETURN SERVICE REQUESTED



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

1 st Wednesday	7:00 - 9 PM	Arlington General Meeting	Hybrid
3 rd Monday	7:00 - 9 PM	Board of Directors Meeting	Zoom
3 rd Saturday	12:45 - 3:30 PM	Fairfax General Meeting	Hybrid
4 th Wednesday	7:00 - 9 PM	Technology & PC Help Desk	Hybrid
Arlington Meet: 5711 S. 4 th 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

PATACS Event Information
Messages may be left at 703-370-7649
Website: <https://www.patacs.org>

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