



PATACS Posts

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My turn.....

We have just returned from a visit to family and friends in the Minneapolis, MN area and then a 14-day cruise on the Great Lakes aboard the Viking *Polaris*, one of their *expedition* ships. More on the trip in a minute.



One of the first things I do after returning from a trip is start my computer. Then I found my Dell UltraPro 24" monitor was dead. It's the second monitor attached to my computer. In doing some research about it, I realized it was *nineteen* years old! I don't know if that's a record, but the thing must have been powered up for around 45 out of 52 weeks per year for nineteen years! I bought a new one—again a Dell, but a 27" to match my NEC 27"—only to find out that my computer's video card can't drive it. Oh well, I'll use a MSI 24" until I get my new computer in another few months, and then I *will* be able use the new Dell!

Back to our trip: A Viking *expedition* ship is a bit smaller—both in length and beam—than Viking's other ocean-going ships. The big difference is that the *expedition* ships only carry 368 passengers v. the ocean ships—which carry between 930 and 1000, depending on the particular ship's age. The rear area of an *expedition* ship contains a "hangar" where all of what I call "the toys" are stored and launched from.

What kinds of "toys"? Two **Special Operations Boats**. What are they? My description of a SOB is a "twenty-passenger jet ski". There are also six to eight 8-passenger Zodiac inflatable boats, powered by 500cc diesel (!) *outboard* engines, plus two small submarines (!!), plus a shop to repair the "toys", plus storage for hundreds of pairs of knee-high boots, because the expedition ships go to both the Arctic and the Antarctic. Plus other stuff I can't remember. The *Polaris* will be headed to the Antarctic in early October. If one wants to be in the Antarctic, one should go when it's summertime at the bottom of the world, which means during our winter.

The trip started in Minneapolis where we visited friends and family. Then we drove to Duluth, MN, got on the ship and ended in Toronto, Ontario (Ont.), Canada. My wife is from Duluth, but until a few weeks ago, she had never seen Duluth from the lake. Now she can't say that! We visited all five of the lakes. We crossed into Canada at least three times, but because we flew home, we had to take our passports (instead of a Passport Card). We stopped in at various small towns including Thunder Bay, Ont., and Mackinac Island, MI. And some big towns, too: Detroit, Cleveland, and finally, Toronto.

We did go to Niagara Falls. The last time *I* was there, I was about eight! You can tell which side the boats started from, because the folks who come from the USA side are all wearing **blue** ponchos and the folks from the Canadian side are all, you guessed it, wearing **red**! And yes, I did take my camera with me. It survived and still works, though I admit it

was partially covered by my red poncho once we got close to the falls. Without that poncho (blue or red) it would have been like standing in pouring rain—much like what has been happening over the past few weeks here in the DC area! A couple of pictures are on pages 14 and 15.

We're headed to the UK for the first two and a half weeks of August. First to visit friends and then to take in Scotland, where we've never been before.

Next printed issue: September 2025

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The Need for Data Storage: Comparing External Disk Drives

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

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As digital media quality improves, file sizes continue to grow. The need for reliable data storage has never been greater. Photos, music, and videos now occupy significantly more space than they did just a decade ago, driven by advances in resolution, file format, and consumer demand for high-quality media.

Media Type	Typical File Size (2015)	Typical File Size (2025)	Main Growth Drivers
Photos	2–4 MB	6–15+ MB	Higher resolution, RAW formats
Digital Music	3–10 MB (MP3)	3–50+ MB (Hi-Res/FLAC)	Lossless, hi-res audio adoption
Videos	1–2 GB/hour (HD)	7–15+ GB/hour (4K/8K)	4K/8K, HDR, higher frame rates

With this rapid increase in data generation, consumers need dependable storage solutions for both primary files and backups. External disk drives remain essential for expanding

storage, safeguarding important data, and transferring large files. Choosing the right drive can simplify data management and enhance security, especially for novice users.

Types of External Disk Drives

Hard Disk Drives (HDDs)

- Use traditional spinning disks,
- Offer large capacities at low cost,
- Slower than SSDs but reliable for backups and archiving,
- Heavier and less resistant to shocks.

HDDs are best for affordable, high-capacity backups.

Solid State Drives (SSDs)

- Use flash memory with no moving parts,
- Significantly faster for reading and writing files,
- More durable and portable,
- Higher cost per gigabyte, but prices have decreased.

SSDs are ideal for those who prioritize speed, portability, and durability—especially for travel or frequent use.

Top External Drives Under \$150

Drive	Type	Capacity Options	Typical Price	Max Speed	Warranty	Portability	Notable Features
Seagate Expansion	HDD	2TB–5TB+	\$70– \$100	~120 MB/s	1 yr	Low	High capacity, low cost
WD My Passport	HDD	1TB–5TB	\$60– \$125	~120 MB/s	3 yrs	High	Compact, reliable
WD Elements Portable	HDD	1TB–4TB	\$65– \$100	~120 MB/s	2 yrs	High	Plug-and-play, great value
Samsung T7	SSD	500GB– 2TB	\$100– \$150	~1,050 MB/s	3 yrs	Very High	Fast, secure, rugged
Kingston XS1000	SSD	1TB–2TB	\$75– \$120	~1,000 MB/s	3 yrs	Very High	Ultra-compact, fast
SanDisk Extreme Portable	SSD	1TB–2TB	\$130– \$220	~1,050 MB/s	3 yrs	High	Rugged, water/dust resistant

Best for Capacity and Value

- *Seagate Expansion (HDD)*: 2TB for about \$70, 5TB for about \$100. Excellent for storing large photos, videos, and document collections.

- *WD My Passport (HDD)*: 5TB for about \$125. Compact, USB-powered, and reliable with a three-year warranty.
- *WD Elements Portable (HDD)*: 2TB for about \$65, 4TB for about \$100. Highly rated for value and reliability, with a simple setup.

Best for Speed and Portability

- *Samsung T7 (SSD)*: 1TB for about \$100–\$120. Ultra-fast, compact, and features hardware encryption.
- *Kingston XS1000 (SSD)*: 2TB for about \$120. Extremely small and fast, ideal for travel.
- *SanDisk Extreme Portable SSD*: 1TB for about \$130. Rugged, water and dust resistant (IP65), though some users report reliability concerns—check the warranty and create redundant backups.

What to Consider When Choosing

- **Compatibility**: Most drives are compatible with Windows and Mac, but check for included cables (USB-A, USB-C) and potential reformatting requirements.
- **Portability**: SSDs are lighter and more durable, ideal for frequent travel.
- **Backup Features**: Some drives include backup software, while others rely on your computer's tools.
- **Security**: Drives like the Samsung T7 offer hardware encryption for secure storage of sensitive data.
- **Warranty**: Longer warranties (2–3 years) offer added peace of mind.

Recommendations by Need

- **Photo/Video Storage**: Consider a high-capacity hard drive (HDD), such as the Seagate Expansion or WD My Passport, for affordable archiving.
- **Travel and Portability**: Consider an SSD such as the Samsung T7 or Kingston XS1000 for durability and speed on the go.
- **Backup and Security**: Select drives with robust warranties and backup features, such as the WD My Passport Ultra. Always keep at least two copies of your critical files and consider cloud backup for extra protection.

Conclusions

For those seeking the best external disk drives under \$150, your choice depends on your priorities:

- **Best for Storage**: Seagate Expansion and WD My Passport provide the most space for your money.
- **Best for Speed and Portability**: Samsung T7 and Kingston XS1000 SSDs are fast, durable, and easy to carry.
- **Best All-Around**: The WD Elements Portable strikes a balance between price, reliability, and ease of use.

Regardless of your choice, regularly back up your essential data and consider your specific needs—whether it's archiving family memories, traveling, or simply expanding your computer's storage. Today's external drives make reliable, affordable storage accessible for everyone.

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My Smartphone, My Friend

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I got my first smartphone, a low-cost (\$150) Samsung Galaxy J3, in 2017. It was not that powerful, and I was a bit apprehensive about this new device, so I used it mostly for phone calls, texts, and select apps. I saved web browsing and email for my computers and laptops as the phone screen seemed too small. As I warmed up to it, I found it essential for navigation (with Google Maps). Having a camera handy, as poor as it was compared to my Panasonic Lumix digital camera, became another feature I used constantly. As time passed, I added more apps but was selective about what I chose to install. I had no time for games and no use for social media, but I used several smart home apps to control the various devices I bought. I refused to do banking or conduct any financial transactions on the phone, preferring the relative security of a computer for any online banking or shopping.

Every business had a smartphone app to promote, but I only installed a few that I thought were safe and offered compelling benefits worth the risks. One of the riskiest apps I use is Google Maps, as I have found over the years that it has been tracking me, even when the app is not running.

However, its benefits are so compelling that I've made that bargain with the Google devil and accept being tracked in exchange for its navigation capabilities. Having every store and sandwich shop app seems like a foolish risk that is usually not worth it. I don't want Google to also know what I'm going to do in the future and whom I associate with, so I refuse to use a calendar app on my phone or computer.

One app I do accept is the Southwest Airlines app, as it is so much handier than checking in for flights online with a computer. The Southwest app finally drove me in 2022 to buy a new smartphone, as their app developer stopped supporting my old phone. I bought a Samsung Galaxy S22 and am hopefully spending real money (\$700) to buy more performance and tech longevity.

As with my first Samsung, I bought myself a very rugged case for my S22 to allay my fears of damaging the phone. With the belt clip front, the phone is fully enclosed when I carry it. I use magnetic USB adapters and charging cables to protect the phone's USB type C connector from excessive wear. I mostly charge my phone from a battery pack in a fast-charge mode and now use settings in the phone to limit charging to 85% of capacity most of the time, to extend battery life.

Over time I've found my use of the phone has only increased. With the higher resolution camera of the S22, I find I'm using it much more and my dedicated digital cameras much less often. Last fall the number of prescription drugs I needed to take increased, and some came with restrictions I had to follow; I found the smart phone to be very useful in medication management. One medication required it be taken at least two hours after eating and at least one hour before eating; I found the best time to take it was immediately upon waking (I don't believe I do any sleep-eating). The problem is that I normally get up early and leave the house for work in less than an hour; this meant I often had to wait around a bit before eating breakfast and going to work.

I found my smartphone could be very useful in helping me manage this. The first thing I do when I get up is take the medication. I note the time on my phone and write that time into a document on the phone (for reference, should I get confused). I then set an alarm on the phone to melodically go off in an hour, showing when I may eat breakfast. I often have to wait a little, but even though the time I get up can vary, this system keeps me from eating too soon after the meds. I have another medication I must take with food at dinner; another alarm set for a nominal dinner time each day helps remind me. I also take another medication once a week on a specific day, so another alarm on my phone reminds me of that.

The breakfast alarm could also be done using Alexa, but my talking to set it could be more disturbing to my sleeping wife. The other alarms on my phone can remind me even if I have gone out for dinner.

I used to wake up to a plug-in, battery-backed-up alarm clock at my bedside. It is more a wake-up alarm of last resort, as I typically wake up before it goes off. I always kept my

phone in another room at night as I didn't want to be awakened by late-night spam calls. When we remodeled our bathroom last fall, we had to temporarily move into our guest bedroom. I didn't want to change my alarm clock, so I just used my smartphone alarm (which I do when I travel). I got used to it, and since there were no overnight spam calls, I've kept using my phone as my alarm clock since moving back into our bedroom.

My phone is also a convenient memory aid; I keep many lists on it in the Samsung Notes app. In addition to shopping lists, it has many pieces of information that I don't want to have to keep looking up. Printer cartridge part numbers, oil filters, and oil types for cars are easy to look up on my phone when I'm in the store.

Sometimes, when I get an idea for a newsletter column, I write down a few notes on my phone. I can keep an inventory of my mom's supplies on my phone, which can be easily updated when I visit her assisted living facility, and then needed items can be ordered when I get home.

Text messages are also a convenient way to keep track of information and events that can be referenced later.

My siblings have a text chain that we have used over the last few years to disseminate information about our elderly parents. It is easy to look in that text chain to see the events significant to my dad's passing, when my mom had medical issues, and how things have changed over time. Now that I'm overseeing my mom's care, my text reports to my siblings are a good record.

Communication is a primary function of the smartphone, though how well it works often depends on the capabilities at the other end of the link. My mom has a "senior-oriented" smartphone but only uses it for phone calls. She can't send or receive text messages or photos connected to them.

My wife found a great gift for my mom this last Christmas. It is a photo frame with an added capability. Its display cycles through the photos in its memory, but its Wi-Fi connection can add pictures to the frame. My siblings and other relatives can send photos to the frame from anywhere using a smartphone app. My brother even wrote a short note, took a picture of it, and sent it as a kind of text message.

I'm constantly finding new ways to use my smartphone. With new ways to use it being developed all the time, it continues to become a closer friend.

###

Backup Tools and Procedures

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

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It's been a few years since I've written about tools and procedures for backing up your computer. With the growing popularity of smartphones and tablets, the need for backup has expanded to include those devices and traditional Windows, Macintosh, and Linux PCs. I can't stress enough how important it is to make regular backup copies of your data files and of your computer's entire drive. The backup landscape has changed somewhat, so it seemed a good time for an update.

What is Backing Up?

Backing up means accurately copying some or all of the data and software stored on your computer's storage drive. The copy is commonly stored on some type of external storage device that is not generally connected to your computer. The external device may be a USB hard drive or flash drive, a removable rack-mount hard drive, a folder or partition on another computer on your in-house network, or a server elsewhere on the Internet such as Dropbox, Microsoft's OneDrive, or Google Drive. A personal backup solution may include some or all of the above.

Why Back Up?

The reason to make backups is that (putting it politely) ***BAD STUFF HAPPENS!*** Computer equipment is highly reliable and may run for years without failing, but sooner or later, storage devices fail. (Ed.'s note: *everything* breaks.) More commonly, accidents (drops and spills, turning off the PC's power, power failures and power surges, and so forth) happen, causing a device to fail. A vast array of malicious software waits for any opportunity to attack, damage, or lock up saved data. There's also a fundamental human error – accidentally deleting a file or a folder.

Without a safe backup copy, data saved on your computer may be irretrievably lost. For example, consider digital photos, videos, music, and financial / tax records. Also, if you had to start over with a new, blank hard drive, it would be relatively easy to reinstall Windows, Linux, or MacOS, but what about all the other programs, settings, and all your data?

Full Disk Backup – Cloning and Imaging

A **clone** of a hard drive is a **complete copy** to another hard drive. All information needed to boot and run the computer and all the programs, settings, and data are written on the backup hard drive. A clone fills up all the backup hard drive; only ONE clone can be written to the backup drive. To **restore** after the computer's internal hard drive has failed or been corrupted, one can either clone from the backup drive to the computer's (possibly new) internal drive or remove the failed drive and install the backup drive in its place. Cloning back should be the first choice on a laptop or all-in-one computer, provided the internal drive hasn't failed. Removing and replacing a laptop's internal drive is a challenging task.

An **Image** of a drive is a complete copy written to a single compressed file on **another device**. The compressed image file doesn't typically use as much space as the original data; only the actual space is backed up. Keeping several image files on a single external storage device is usually possible. As with a clone, the image file contains all the information needed to boot

and run the PC, along with all the programs and data. However, the image file is not itself, bootable.

A bootable recovery disk (CD, DVD, or flash drive) is required to restore either a clone or an image file. All the primary backup tools include a tool to create bootable recovery media.

Popular Full Disk Backup Tools for Desktop Computers

There are several well-known software tools for backing up the hard drives of desktop PCs and Macs.

Acronis Cyber Protect Home (2023)

- <https://www.acronis.com/en-us/> or <https://ugr7.com/>
 - Integrated suite of backup, anti-virus, and ransomware protection.
 - Excellent for backing up entire hard drives or partitions.
 - Makes both "clones" and "images."
 - Can "mount" a backup image as a logical drive.
 - Can make bootable "Rescue Media" for both backup and restore.
 - It can also back up individual files and folders.
 - Single PC essential subscription lists at \$50 / year, family pack of 3 about \$80 / year
- There are premium offerings, including cloud storage.
User Group Relations (Gene Barlow) prices are 50% lower. <https://ugr7.com/>

CASPER by Future Systems Software

- <https://www.fssdev.com/products/casper/>
- Makes "images".
- Features bootable images.
- The single system price is about \$60; a family pack of 5 for \$80.
- Has a 30-day free trial.

Macrium Reflect 8 Home

- <https://www.macrium.com/products/home>
- The free version has been discontinued but continues to work on Windows 10 and 11; you can subscribe to the "Home" edition for an annual fee of \$49.99 or buy a one-year license for \$70 (no support after the first year). They offer a 30-day free trial.
- Can back up entire hard drive or partitions.
- Makes both "clones" or "images."
- Can "mount" a backup image as a logical drive.
- Can make bootable "Rescue Media" for both backup and restore.

EaseUS ToDo Backup FREE

- <https://www.easeus.com/backup-software/tb-free.html>
- See feature comparison.
- Makes "images". You can "boot" from an image.
- You can upgrade to a fuller-featured "Home" edition for \$39.99 annually, one-year free upgrade, or a "Lifetime Upgrades" edition for \$79.95.

I tried using EaseUS ToDo Backup to back up my C: drive to a USB 3 external 7200 RPM hard drive. It required 52 min to back up 300 GB of data. The resultant image size was 184.5 GB. A substantial number of MP4 files on the C: drive had already been compressed.

Windows 11 Backup FREE (built-in to Windows 10 and 11)

- This backup tool is reached via:
Control Panel > All Control Panel Items > Backup and Restore (Windows 7) (Ed.'s note: or go to the search box and type "windows backup".)
- You can use it to back up key library folders or "Create a system image." Once there, you can add additional drives or partitions to the basic C: drive partition set.
- I set it up and let it run to make an image of my C: drive (300 GB of data). It ran for 92 minutes. The final image file size was 300 GB; there was NO compression.

Macrium Reflect Free Edition has been my favorite of the above offerings. It's fast, easy to use, and does everything I need for whole disk backup. And the price was right! However, I'm presently evaluating free and paid alternatives. Here's a link to a good article listing some free backup software tools: <https://www.techradar.com/best/best-free-backup-software>.

I'm disenchanted with the built-in Windows 10/11 backup noted above. It's too slow, and the images aren't compressed. I'm also disenchanted that Acronis and Macrium will use an annual subscription model. EaseUS ToDo Backup Free edition looks promising as a replacement for the Macrium Reflect 8 Free edition.

File Backup Tools

Full disk backups are great, but users don't typically run them daily because they take time, and the backup drive has to be retrieved and connected to the computer. This creates a risk that data files that change may not be accurately reflected in the backup. Consider your saved email and contacts, financial and accounting files, and other documents and spreadsheets you may be working on.

Windows File History or MacOS Time Machine

One approach is to use an automated file backup tool that scans a designated set of folders at some specified time interval (say every hour). It makes a copy of any new or changed files to a backup storage device such as a flash drive, external hard drive, or a shared folder on another computer. I use File History, checking once an hour, to supplement full disk backups for specific key file folders.

Windows File Explorer or MacOS File Manager / Finder

For simple one-shot backups you can still use the built-in file manager programs to select a set of files and copy them to an external drive, or network-shared folder.

Cloud Backup Tools

There are many free and paid cloud backup services. Most of these include an automatic sync tool that copies files from your computer to your private space on the cloud server. Here are some of the free ones:

Google Cloud (Google Drive) - *FREE*

- <https://drive.google.com/drive/u/0/my-drive>
- Requires a Google / Gmail account
- 15-17 GB of free cloud storage
- **Install Google Backup and Sync** app (Windows)
- Use Settings to specify a set of folders to be monitored and backed up to the Google Cloud whenever a change is detected (very similar to Windows File History)

Microsoft OneDrive - **FREE**

- <https://onedrive.live.com/about/en-us/>
- Requires a Microsoft Account
- 5 GB free (more if you've had a Microsoft ID for a long time). If you're subscribed to Microsoft 365 (the Office suite), you get 1 TB per license user for the Personal edition, up to 6 TB for the Family edition.
- Syncs from a OneDrive folder on your PC or device to your OneDrive cloud storage.

Apple iCloud – **FREE**

- www.apple.com/icloud
- Requires an Apple ID (Account)
- 5 GB free, can add more space for a fee
- Built into all Apple devices, can install an App for Windows
- Syncs across all your devices

What About My Smart Phone or Tablet?

Many computer users now rely on a mobile device as their primary computer for communication, news, and entertainment, taking photos and video clips, and recording sound. What are the options for backing up mobile devices?

Android Phones and Tablets

If you have a Google account and have configured your device to link to it, you get quite a lot of automatic backup of files to your Google Drive cloud space. You will want to be connected to a WiFi router when this happens, or your Android device may use up a lot of your monthly data allotment.

You can also connect your Android device via a USB cable to your desktop computer and use the Windows File Manager or MacOS Finder to copy files from the mobile device to a folder on the desktop computer. You can also copy files from the desktop computer to the Android mobile device.

To fully back up all your Android device's data, you can purchase and install third-party backup apps. Try a search for **Android Full Backup** to see what's available.

Apple Phones and Tablets

If you have an Apple ID, all your devices, including iPhone, iPad, Mac, and Apple Watch, already have built-in iCloud support and will back up data files to your iCloud private storage space on Apple's servers. If you have several Apple devices, a concern is using up

your free 5GB allocation; you may have to buy extra space to cover backups from all your devices.

You can connect your iPhone or iPad to your PC or Mac via a USB cable and then use Apple's iTunes program to synchronize various file types between your mobile device and your desktop computer. This isn't quite as general as what Android offers, but it takes care of many file types. iTunes also provides an easy way to fully back up all the data on your Apple mobile device into a file on your desktop computer.

Having the iCloud backup enabled on your mobile device is a good idea. This takes care of frequently changing files. Use the iTunes full backup occasionally to ensure ALL your devices' files are backed up.

With these backups in place, if your phone or tablet is damaged, destroyed, or gets lost, you can replace the phone or tablet with relative ease, restore all your saved data files, and be back in business pretty quickly.

###

Default Apps: Where and What are they?

By Phil Sorrentino, Secretary & Newsletter Contributor (submission date unknown)

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Default Apps is a choice in the *Apps section* of the *Settings menu*. (Ed's note: a default app is the app that is started by clicking on a particular file.) To get there in Windows 10, click the Start button, then click "Settings," then "Apps," and finally, "Default apps." This is where you can choose what apps (programs) will be used for certain types of files. Windows 10 and Windows 11 both have this feature, but the screens look a bit different (Ed's note: in Win11, the easy way to get there is to go to search and start to type "default apps". Win11 found it after "def..."). It looks like Windows 10 scratches the surface of this feature, and Windows 11 expands on it. But as an example, let's first look at the more straight-forward Windows 10 screens. Let's look at one of these choices, probably familiar to most computer users, "photo viewer" (the fourth item on my list in the *Default apps* section). Below the choice "photo viewer" is the icon and the name of an app. In my case, it is "Photo Gallery." By default, this app will be used when the user attempts to open a photo file type, like a .jpg file.

Microsoft's Windows Photo Gallery icon:



Just a bit of background. Many file types (described by "extensions" which are the letters in the filename after the ending period(.)) have been defined, and many are commonly used daily. <https://fileinfo.com/> maintains a searchable database that contains over 10,000 file extensions. The extension is created by the app that creates the file—and is automatically appended to the file when it is saved. The extension identifies the file type to Windows.

Many of these file types are defined and used by specific software and are not often encountered by the average computer user. However, we usually use a few categories of file types in our daily computing lives so frequently that operating systems have identified some categories and provided specific folders for their use, such as documents, pictures, videos, and music. In the same order, you can think of these categories as text-based, image, video, and audio files. Now that some basic categories have been defined, we can see what file types might fit into these categories. Some common document file types are .docx, .xlsx, .pdf, .html, .odt, .pptx, .zip, and .txt. Likewise common image file types are .jpg, .jpeg, .jpe, .png, .tiff, .gif, .heic, and RAW. (Ed.'s note: RAW is a file type, but the extension for a RAW file is not "RAW", it's whatever the camera manufacturer assigns.) Common video file types are .mp4, .wmv, .avi, .mov, .flv, and .mkv. And finally, common music file types are .mp3, .ogg, .wma, .wav, .aac, and .flac. (If this doesn't make sense, you may not see the file type extension part of your file names. Windows defaults *not* to show extensions. To change this, in File Explorer, click the "View" tab and then put a checkmark into the "File name extensions" checkbox.) Additionally, there are categories for file types for specific uses like email, maps, and web browsers, which Windows puts into categories for convenience. For example, .msg, .pst, .edb, .ost, and .eml, are email file types. For map-oriented files, you may find .shp, .shx, .kml, .kmz, and .gpx. Some web browser-oriented file types are .html, .xps, .css, .asp, and .php.

Windows provides control over the application (or app) that will be called upon to open and/or process a file. When you try to open a file by double-clicking it, the default app associated with the double-clicked file type will be used. For example, if you try to open a photo document .jpg file type, for example, the default app (in my situation) Windows Photo Gallery will be used. There may be other apps on your computer that can also do the job. If you want to see what apps could do the job and maybe even change the default app, click the current default app, in my case, the "Photo Gallery" icon, and you will see a list of the other apps on your computer that can be used. When I clicked the "Photo Gallery" icon, I was presented with a "Choose an App" list that included "Photos," "Faststone Image Viewer," "Microsoft Office Picture Manager," "Movie Maker," "Paint," "Paint 3D" "Photoshop Elements 13 Editor", "Snip & Sketch," and "Look for an app in the Microsoft store." (Microsoft is always trying to provide or even sell solutions.) This list indicates the apps that could be set as the default app for photo files. The list on your computer may be shorter or longer depending on the apps you have installed. To change the default app to an app in the list, click the name of the app and the default will be changed. Notice that below the default apps choice is an option to "Choose default apps by file type." Clicking this allows you to set default app for every file type on your computer. My computer's list of file types is quite long, totaling around 500, going from .386 to .zpl. Changing these entries is probably unnecessary, at least not for the average user. However, if you have specific and maybe expensive software you want to use for certain file types, this would be the place to make that choice. (Ed.'s note: When software is installed, if file associations need to be changed for the software to work properly, the installer usually makes those changes.)

Windows 11 "Default apps" is similar but a little different. When you select Default apps (under Settings-apps) instead of a list of a few categories, like "mail," "maps," or "photo viewer," there is a list of all the apps on your computer. If you select an app, you will see a list of all the file types associated with the chosen app. At this point, you can change the "Default App" used for the selected file type. This is similar to the "Choose default apps by file type" in Windows 10. As such, in either version of the OS, there is an attempt to give the user complete control over what app is used by default when attempting to open a specific file type.

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The Viking Expedition ship Polaris at anchor in Lake Superior near Silver Islet.
@CanonR5_M2, 1/500th s, ISO 100, @CanonRF24-105 f/4 L IS USM, f/7.1, 24mm

And to answer the question, I was out on the water in either a Zodiac, a Special Ops Boat, or a tender. "Tenders" are also known as "life boats", but they are often used as gigantic water taxis, ferrying people from ship to shore when there is no place for the ship to dock. In case you were wondering, a ship is generally bigger and can *carry* a boat, but not the other way around.

Niagara Falls is on the next page. Nearing the base of Horseshoe Falls, which is in Canada, there are the **blue** ponchos on the ship from the USA on the left and the **red** ponchos from the ship from Canada on the right. Just so no one's confused!



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@CanonR5_M2, 1/500th s, ISO 125, @CanonRF24-105 f/4 L IS USM, f/11, 105mm

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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 (in Arlington)	Hybrid
Arlington Mtg: 5711 S. 4 th St., Arl. VA		Fairfax Mtg: 4210 Roberts Rd., Fairfax, VA	

Meetings are Hybrid or Zoom (as above)
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