Member of apcug An International Association of Technology & Computer User Groups

OTTAWA PC NEWS

Volume 42, Number 7 September 2025

ARTICLE

Trading Up To Linux – Part 10

by Alan German

As I write the final part in this series of articles in early August, 2025, not a great deal has changed with regards to the projected end-of-life (EOL) for Windows 10 being October 14th. Microsoft stubbornly holds onto the stringent specifications for the range of CPU chips that are supported by Windows 11, and the requirement that a Trusted Platform Module (TPM 2.0) be available and enabled in order to upgrade to the latest version of the operating system.

The ironic nature of the October 14th date for Microsoft ending support for Windows 10, and possibly condemning millions of PC's to the electronic scrapheap, was pointed out by Chris Taylor at a recent Q&A session. EOL for Windows corresponds precisely with *International E-Waste Day*, an annual event organized by the WEEE Forum (https://weee-forum.org)!

However, one glimmer of optimism in this entire sad process is a move by Microsoft to enable users of Windows 10 to obtain one year of extended support at no cost. The original announcement of the Extended Security Updates (ESU) programme for Windows 10 offered only a single option, namely the purchase of one year of additional support for US $30. Recently, another announcement (Windows 10 Consumer Extended Security Updates (ESU) program) indicated that two further options will be made available, neither of which will have any monetary costs. One of the options is for users to synchronize their PC's settings on Microsoft's cloud storage. The second such option is to redeem 1000 Microsoft Reward points.

Note that the ESU programme is both specific and limited. There are several requirements that must be met in order to enrol in the programme when it becomes available in mid-August. Firstly, PC's must be running Windows 10 Version 22H2, i.e. the most recent feature release of the operating system, and the latest updates must be installed. Secondly, the enrollment process must be carried out using a Microsoft administration account. [Note that if only one Microsoft account is available then this will necessarily be an administration account.]

The option to synchronize the PC's settings involves using Windows Backup (*Settings* > *Accounts* > *Windows Backup*) to store the settings on Microsoft's cloud server. However, the simplest way to achieve this will be by using the ESU enrollment wizard when this becomes available. The process has been described in detail by Christopher Barnatt in the video Setting Up Windows 10 ESUs - For Free! on his *Explaining Computers* YouTube Channel. Specifically, he shows how to enrol in the ESU programme while sharing the minimum amount of information with Microsoft, and notes that the enrollment is maintained when switching back to the use of a local account to run Windows.

Many users will not realize that they have accumulated Microsoft Reward points. I checked the status of my reward points by logging in to https://rewards.bing.com using my Microsoft account and discovered that I already had 804 reward points, presumably from previously using Microsoft's Bing search engine. The website lists multiple ways of accumulating points such as conducting searches using Bing, looking up recipes, finding local restaurants, and undertaking various puzzles.

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Inside this issue:

Next Meeting: WEDNESDAY, September 10th, 2025

Next Meeting

Wednesday, September 10

Windows 10 EOL – What Next?

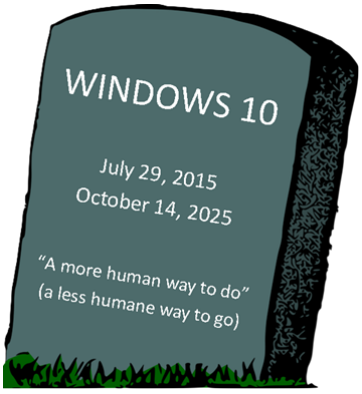
Speaker: Alan German, OPCUG

Windows 10 will reach End-of-Life, and hence the end of all support, on October 14, 2025. So, if you have a computer that is currently running Windows 10, what are you going to do?

In this presentation, we will discuss the various options, including carrying on using Windows 10, upgrading to Windows 11, and buying a new computer. However, there is another option. Move up to Linux. It's free, it's easy to use, and it works! We will take a look at Linux and see how it can be used, in conjunction with Windows 10, to keep older machines running for the foreseeable future.

This meeting will be via Zoom video conference.

Join us at https://tinyurl.com/opcug-meeting. The Zoom link will be live at 7:15 pm. The meeting will begin at 7:30 pm.



Coming Up…

Wednesday, Aug 27
Next weekly Q&A session

Wednesday, 08 Oct
Wi-Fi Extenders, Wi-Fi Routers and Wi-Fi Mesh
(details to follow)
Speaker: Francis Chao, Tucson Computer Society

Wednesday, 12 Nov
Home Automation – An Introduction *(details to follow)*
Speaker: Bill James, Computer Club of Oklahoma City

Wednesday, 10 Dec
VoIP (Voice over Internet Protocol) *(details to follow)*
Speaker: Jeff Dubois, OPCUG

Visit https://opcug.ca/#upcoming to see all scheduled events.

OPCUG Presentations at the OPL:

Monday, 22 Sep, 6:00 pm - 8:00 pm
Protecting your PC (Chris Taylor)
Carlingwood Branch

Monday, 22 Sep, 6:30 pm - 8:30 pm
Windows 10 end-of-life – what's next? (Alan German)
Video Conference (must register)

Tuesday, 23 Sep, 2:30 pm - 4:30 pm
Artificial Intelligence (AI): fun and useful tips (Chris Taylor)
Ruth E. Dickinson Branch

Visit https://opcug.ca/mec-category/opl-presentations/ for the full list of presentations with links to the OPL.

2025 CALENDAR

Event	Date	Time and Venue
Next Monthly Meeting	Wednesday, September 10th	7:30 pm via Zoom video conference: **https://tinyurl.com/opcug-meeting** To see all scheduled events, visit https://opcug.ca/#upcoming
Next Q&A Session	Wednesday, August 27th	Q&A sessions are held every Wednesday except on monthly meeting nights. Join us most Wednesdays at 7:30 pm for weekly Q&A.
Next OPL Presentation	(see Upcoming Events)	Visit https://opcug.ca/mec-category/opl-presentations/ for the full list of our presentations with links to the OPL.

THROUGH THE LENS

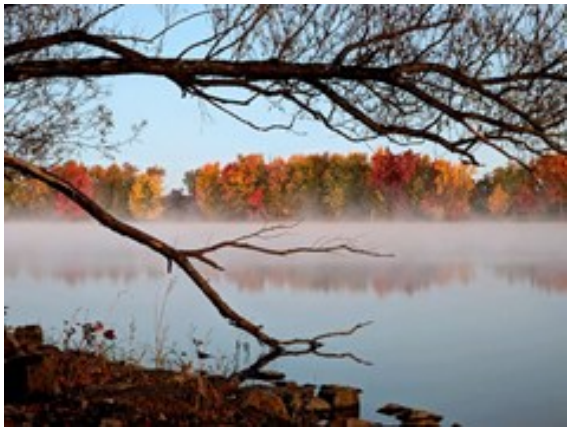
A guide to digital photography for computer enthusiasts. After the click of your camera, you're only half done!

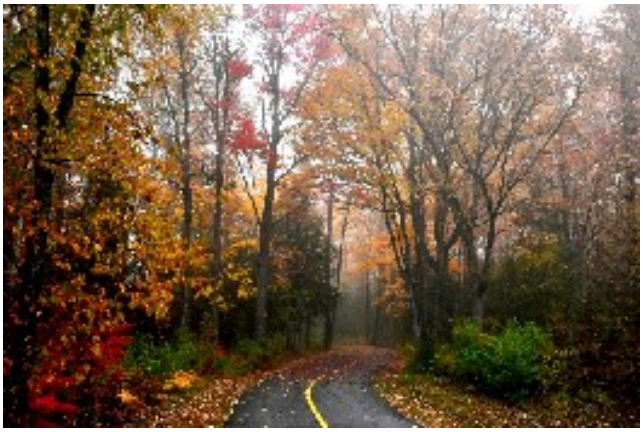
Tips for fall photography

by Lynda Buske

Autumn is by far my favourite time of the year for photography. There is just so much to capture! Last year was not atypical and I shot on Oct 17, Oct 18, Oct 19, Oct 20, Oct 21, Oct 24 …you get the idea! I just keep heading out and usually something photo-worthy appears.

One of the things I most look forward to is the presence of early morning mist caused by the air temperature dropping lower than the water temperature. It doesn't last long if it's a sunny day but well worth the early rise! And actually, it's not all that early during fall months compared to mid-summer.

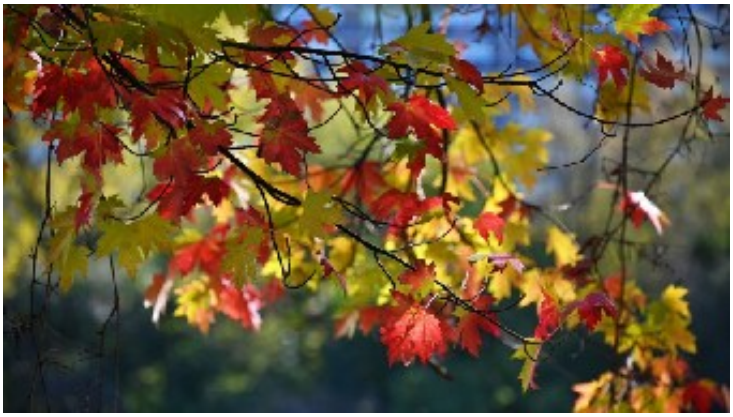




While I am not a bird photographer, there are many species that migrate through Ottawa in the fall. Even I can shoot geese as you don't need a super long lens or a fast exposure. They are big and flap relatively slowly. They are very verbal just before the sun rises and take off when it appears so you get lots of lead time to set up a birds-in-flight shot. I can often photograph multiple flocks in the same image as they are so numerous.

Of course, in this area of the world, the star of the show is the fall foliage! To help plan day excursions or especially longer stays, use the links below to determine when the colours are peaking in the various regions of Ontario and Quebec.

https://www.ontarioparks.ca/fallcolour
https://www.bonjourquebec.com/en-ca/explore/seasons/fall



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Fall photography *(Continued from previous page)*

There is lots of flora to photograph in the fall, such as asters and fungi. I especially love when the milkweed plants open up their seed pods to let them drift away. Morning frosts can make even dried-up leaves or blossoms look enchanting!

November tends to be underutilized by many photographers. While it doesn't have the stunning colours of October, there is still lots to photograph and some advantages. You have a greater chance of frost, late dawns and no leaves on the trees. The latter comes in handy when shooting long exposures at waterfalls or during blue hour. For example, during a 4 second exposure, leaves can often move but branches are not likely to budge unless the wind is very strong. That means everything in your photo will be in focus regardless of the exposure time. November trees can look lovely in a sunset image since the colours are not blocked by leaves. The branches just become nice sharp silhouetted shapes.

♦♦♦

*Read all of Lynda's articles **here**. See her **presentations** at the Ottawa Public Library (select **Lynda Buske** as **Organizer**).*

Quick Tip 75: refreshing a web page

by Chris Taylor

You might need to refresh a web page if it is not displaying properly. Additionally, although browsers and servers usually do a good job of making sure you have the latest content from the server, they do occasionally get confused and you continue to see old content.

There are several ways or refreshing a web page:

- click the refresh (or *reload*) button on the browser's toolbar
- place the cursor in the browser's address bar and press Enter
- press the F5 key

In all the above, the page will be reloaded from the web server. However, some elements such as scripts, images, and CSS stylesheets will be reloaded from the local disk cache, if present.

If you suspect the web page is still not correct, press Ctrl+F5. This will ignore the local cache and reload all content from the web server. Since there is no real downside to using Ctrl+F5 other than a little extra traffic, I recommend using Ctrl+F5 whenever you need to reload a webpage.

♦♦♦

The Artificial Intelligence Explosion, an ever-changing topic

By Jim Cerny, 1st Vice President (jimcerny123 (at) gmail.com) and Hewie Poplock, 2nd Vice President (hewiep (at) gmail.com) Sarasota Technology Users Group (https://thestug.org/)

Artificial intelligence (AI) is a term we've all encountered, and its impact is already evident in various sectors such as business, education, entertainment, art, manufacturing, research, and health care. However, this is just the beginning. The potential of AI to revolutionize our lives is immense, possibly surpassing the transformative effects of computers and electronics. Are you prepared for this future?

Many people see the AI revolution as bringing huge benefits. If you have been using a search engine on the internet to get information you want or need, AI can do more by providing intelligent results to your searches. Try using the following free AI internet sites and seeing the results of your inquiries:

- ChatGPT (https://chat.openai.com/) - Chatbot from OpenAI that can have natural conversations and generate human-like text on various topics.
- DALL-E 2 (https://openai.com/index/dall-e-2/) - AI image generator from OpenAI that creates images from text descriptions.
- Hugging Face Spaces (https://huggingface.co/spaces) - Platform to build, train, and deploy machine learning models, mainly focused on natural language processing.
- Perplexity (https://www.perplexity.ai/) The answer to any question.
- Anthropic Claude (https://claude.ai/chat/) - Conversational AI assistant trained to be helpful, harmless, and honest.
- Gemini (https://gemini.google.com/) is a conversational AI chatbot from Google. It is meant to function similarly to ChatGPT, with the biggest difference being that Google's service pulls its information from the web.
- Co-Pilot from Microsoft. An AI-powered digital assistant that aims to provide personalized assistance to users for a range of tasks and activities. Copilot is integrated with Microsoft Edge. https://www.microsoft.com/en-us/edge/
- Leonardo (https://leonardo.ai) is a generative AI platform that empowers users to effortlessly generate captivating images and artwork.
- NightCafe (https://creator.nightcafe.studio/). Create unique artworks in seconds using the power of Artificial Intelligence.

Since AI is going to affect almost every area of life on this planet, how is AI going to affect you, and how are you going to handle it? The STUG organization has some experienced AI users who will help guide STUG in helping our members understand and use AI. No matter what your life interest is, AI will affect it. You can start by asking Google or an AI website something like "How will AI affect art?" or "How will AI help with my investments?" or "How do I use AI to create a photo?" Yes, AI already affects all areas of your life, even if you do not realize it. You can watch many videos to learn more about all aspects of AI.

Creative AI can write stories, create works of art, and amaze us. Humans may review what AI has created, "touch it up," or add pieces later. As an example, AI is already affecting those who make their living writing by doing most of the work.

AI technology impacts many industries, transforming how they operate and interact with customers and employees. Here are some sectors that are being heavily affected by AI:

- Marketing: AI can predict what customers might want to buy. It helps companies show customers suitable ads.
- Retail: AI helps keep track of inventory and can recommend products that each customer might like. Some stores even have robot helpers that can answer customer questions.
- Insurance: AI can quickly process claims and detect fraud to help the company run smoothly.
- Banking/Finance: Banks use AI chatbots and virtual assistants to make banking more accessible for customers. AI also watches for fake charges on your account.
- Education: AI tutors can adapt to each student and help them learn at their own pace. It can grade papers and free up time for teachers.
- Healthcare: AI is making significant advancements in healthcare, from diagnosing diseases and analyzing medical images to drug discovery and personalized medicine. It has the potential to improve patient outcomes and streamline healthcare processes.

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AI *(Continued from previous page)*

- Manufacturing: AI is integrated into manufacturing processes to optimize production, improve quality control, and enable predictive maintenance. It is revolutionizing the way products are designed, produced, and delivered.

These are just a few examples of industries that AI is heavily impacting. However, it's important to note that AI is a rapidly evolving field, and its impact is not limited to these industries alone. AI can potentially disrupt and transform other sectors, such as transportation, agriculture, energy, etc.

There are also downsides to AI. Many jobs will be affected, and people must adapt to different situations. For example, when steam trains went to diesel, firemen were no longer needed—and now there are no train cabooses either!

Perhaps a good AI concept summary example could be in the area of law. An AI "lawyer" would have all the knowledge of previous similar court cases and create a perfect prosecution or defensive argument. The judge and jury would have to make the decision. But what if AI makes the decision itself? Would that not be better than any human judge?

Can you imagine more of what AI will do? It staggers my human intelligence!

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THE ROAD TO UNICODE (Part 1)

By Joel Ewing, President, Bella Vista Computer Club
Bits & Bytes, July 2024
https://bvcomputerclub.org
president (at) bvcomputerclub.org

Background

A "glyph" is a symbolic figure or a character. The most commonly used glyphs in English are the upper- and lower-case Latin letters, A-Z, a-z, the Arabic digits 0-9, a variety of punctuation marks, and various special symbols such as the percent sign used in business. A "font" is a collection of glyphs of a specific style and size.

In documents prepared by hand, the number of glyphs and fonts used in a document were only restricted by the skill of the writer. When mechanized ways of printing became common in the 15th century and beyond, the maximum number of supported glyphs and fonts was restricted by economics and the technology limits of the time. People of my age who learned how to use a typewriter were accustomed to being limited to two fonts, Pica and Elite, and a maximum of about 80 distinct characters. In certain types of documents, it was not uncommon to have to write in some special symbols by hand. To efficiently deal with foreign languages requiring a different alphabet required typewriters with a font customized for that language.

Electro-mechanical teleprinters developed in the late 19th century to automate telegraphy were restricted to upper case letters and digits. Although very slow by today's standards, their successors were used by some early digital computers as a keyboard input device, as a printing device for output, and for their ability as a storage device to punch and read paper tape.

In the late 1940s IBM began to produce punched-card based accounting machines that could do "high-speed" printing of up to 18,000 characters / minute. This speed, which was revolutionary at the time, was achieved by printing an entire line of 120 characters in parallel with a separate printing hammer for each column, at a speed of up to 150 lines per minute, and was made feasible by limiting the device to 48 unique characters: the uppercase characters, digits, and 12 special characters considered essential to business at the time. That "line printer" became the basis for line printers used on IBM's first commercial digital computers in the 1950s, and lack of practical dual case printers was no doubt one of the reasons early digital computers only supported uppercase letters. By the late 1960s dual case print support was available, but at a significant penalty in both print speed and quality. Businesses only used dual case for high-volume, computer-printed documents when it could be cost-justified, which in some cases wasn't until cheap PC-based laser printers became practical as mainframe printers in the 21st century.

Digital Computers and Character Codesets

Digital computers only work with numeric values internally, so how can they deal with alphabet characters and other symbols? Lady Ada Lovelace, a mathematician who worked with Charles Babbage's Analytical Engine design in the 19th century 100 years before the construction of practical general purpose digital computers, explained how. Computers would work with non numeric characters and symbols by using numbers to represent them.

A character codeset allows a computer to represent text by defining a specific mapping between numeric values and specific symbols or glyphs. In the early days of digital computers, it was not unusual for different computer manufacturers to to create their own unique character codeset, or to even have different codesets used by different computers from the same manufacturer. This made sharing data between different types of compute systems a problem.

Computers that stored values as decimal digits would use two digits to represent a character or symbol, giving a possible maximum of 100 different characters; although not all values were defined. Computers that stored values as binary digits initially used 6 bits, representing at most 64 unique characters or symbols. Depending on the context in which that data was used, it was also necessary to assign code values to a "space", and to various control functions like tab, newline, backspace, etc. A limit of 64 values was insufficient to represent both upper and lowercase letters, numbers, and the special characters need by business, so only uppercase letters were supported.

By 1970 it was clear that digital computers using binary-based storage were more cost-effective than decimal-based designs, and also that 8 bits should be the minimum used to represent characters, providing up to 256 unique values. Unfortunately, by then the computing world had evolved into two competing families of codes: those based on IBM's

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Road to Unicode *(Continued from previous page)*

EBCDIC[1] code that had evolved from their punched-card technology and was widely used on IBM mainframes, and the 8-bit ANSI[2] codes that contained the 7-bit ASCII[3] code standard as its first 128 characters and was used on most other computer platforms such as Unix, and eventually on Linux, and Windows. Both of these code families had many variants in order to support foreign language requirements and special symbols that weren't included by default, creating a hodgepodge of incompatible codes that complicated storage, processing, and display of character data in a global economy.

The issue of codeset confusion couldn't be resolved within the constraints of 8-bit character codes. It would be two decades before hardware costs and processing speeds attained levels where serious consideration would be give to the implementation of larger codesets as a solution.

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[1] Extended Binary-Coded Decimal Interchange Code

[2] American National Standards Institute

[3] American Standard Code for Information Interchange

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*Read Part 2 next month: "**Unicode To The Rescue**"*

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Nominations for OPCUG Board for 2026

Once a year, the OPCUG holds elections for the 9-member Board of Directors. We are once again coming up to this annual event.

We encourage all members to consider running for a board position or getting involved in some other manner in the operations of the OPCUG.

If you want more information about what is involved, please talk to me or any current or past Board member. Names are listed in the Newsletter and on the web site.

Nominations can be submitted via email to Lynda Buske, Election Chair, at nominations2026@opcug.ca.

Nominations must be received by midnight, December 31, 2025.

Please get involved. Please help the OPCUG continue in its role of *Users Helping Users*!

Lynda Buske
Election Chair

Linux *(Continued from page 1)*

There are, therefore, multiple ways to accumulate the 1000 points required to enrol in the ESU programme prior to the EOL date. At the time I was researching this method, a special offer provided 500 reward points for downloading the Bing app to my smartphone and conducting searches using the app on two separate days. In consequence, I now have over 1300 reward points and can use these to enrol in the ESU programme when it becomes available.

While the ESU programme provides extended support for Windows 10, it should be noted that this is only for twelve months following EOL. Should nothing change in the meantime, users in the ESU programme will once again be subject to loss of support for Windows 10 in October, 2026. In addition, the ESU programme will only provide security patches for the operating system. There will not be any feature updates, bug fixes, and no technical support will be provided by Microsoft.

For individuals whose computers are not capable of having Windows 11 installed, all of the options outlined in Part 1 of this series remain available. This includes my preference of *Trading Up To Linux*! Indeed, the entire point of this series of articles has been to provide the information necessary for Windows users to try Linux ahead of the EOL deadline.

Notably, we have seen how to obtain a Linux distro, create a live-USB, and use this bootable drive to ensure that Linux will run without any issues on a specific computer. Subsequently, we reviewed how to install Linux on a computer's hard drive in dual-boot mode so as to have the capability to select either Windows or Linux at boot time. We also looked at how to update Linux, customize the system, install software that was not bundled with the original distro, and how to potentially run many Windows programs inside the Linux operating system.

When you read this, there will still be time before EOL on October 14th to investigate the use of Linux. However, the option to enroll in the ESU programme will provide an additional year for such activities for anyone who has yet to explore the capabilities of Linux. I sincerely hope that the suite of articles in this series are sufficient to get you started on the journey!

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OTTAWA PC NEWS

Ottawa PC News is the newsletter of the Ottawa PC Users' Group (OPCUG), and is published monthly except in July and August. The opinions expressed in this newsletter may not necessarily represent the views of the club or its members.

Member participation is encouraged. If you would like to contribute an article to Ottawa PC News, please submit it to the newsletter editor (contact info below).

To receive the monthly newsletter by email, send an email to:
opcug-newsletter+subscribe@googlegroups.com (leave subject and body fields blank)
You do **not** need to create a Gmail or Google Groups account.

To subscribe to other OPCUG Google Groups member services, go to:
https://opcug.ca/google-groups-how-to/

Group Meetings

OPCUG meets on the second Wednesday in the month, except July and August, at the Riverside United Church, 3191 Riverside Drive, Ottawa. Parking is free at the church. OC-Transpo bus #90 stops nearby. Details at https://opcug.ca/venue/.

NOTE: Until further notice, all our events are via video conference.
Details at https://opcug.ca/venue/.

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Stewart Bruce	**privacy-opcug@opcug.ca**	
Special Events Coordinator		
Bob Herres	**bob.herres@opcug.ca**	
Director w/o Portfolio		
Karen Wallace-Graner	**karenwg@opcug.ca**	

Q&A IS ON-LINE! Weekly!

Since the pandemic, the OPCUG has been holding weekly Q&A sessions in Zoom video-conferences.

Join us every Wednesday (except on regular monthly meeting nights) at 7:30 pm to discuss computer issues. Questions (and answers) on any computer-related issue are welcome. Or, do you have a favourite computer program or topic that you would like to share with the group? Send your questions, answers, or the details of what you would like to share to: SuggestionBox@opcug.ca

Everyone is welcome to attend Q&A sessions and to ask questions about their specific computer-related problems. Join us at: https://tinyurl.com/opcug-meeting (if you use the Zoom client, the meeting ID is **924 9556 0898** and the password is **opcug**).