OTTAWA
PC NEWS

Volume 40, Number 10 MERRY CHRISTMAS! December 2023

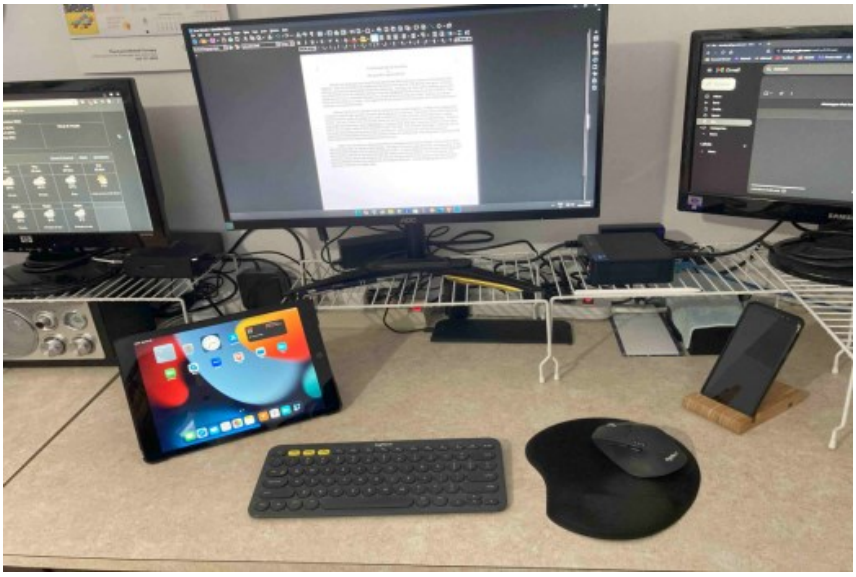
PRODUCT REVIEW

A Christmas Tail of Two Mice *or* Me and My Logitech M720

by Stewart Bruce

Not so very long ago our Good Friend and Scribe, Bob, reviewed a mouse *(see July 19 Q&A session, slides 29-47)* which pleased him mightily. This sturdy Rodent accomplished all tasks thrust upon it with aplomb and grace, shirking nothing and even exceeding Bob's hopes & aspirations. Nothing was beyond its abilities and much was expected for it to accomplish during a long and cheddared career as an Associate of Bob's. One detail was not to be overlooked though, not a small detail, not a big one either. Rather, an average detail but nonetheless, A TAIL! Bob approved of this feature of his Associate as he claimed increased endurance was gained thereby.

Over at Uncle Stew's, things were in somewhat of a similar situation. Things were cribbed and scribbled, clicked right and clicked left, scrolled and dragged, paged back, paged forward on and on. The sturdy rodent thus employed carried out these tasks as happily as a, well, cheesy rodent but, it had a bit more to do than Bob's mighty mouse. You see, Uncle Stew forced this mouse to operate across 3 platforms simultaneously. It had to leap frantically between a shiny Chrome box, a slippery little iPad and, clean the Windows at the same time! Yes, an agile rodent indeed and guess what? No Tail! One of those old things would just not do for such a demanding performance day in and day out. But the lack of a tail did not mean less endurance for this plucky fellow for he had been born with a Bluetooth which kept him connected to all three platforms as he leapt with abandon betwixt them.



There was one feature which perplexed the industrious little fellow, though. Down where most mice had their tails, he found a little dongle. Turning to his partner Qui Bored for an explanation, it was discovered this dongle was to help with Windows jobs. It seems platform identity was a fluid thing and most people preferred to just peek through the windows at other platforms. So, if our mouse ever wanted to rest his Bluetooth and just stay with the Windows machines, the dongle would help him flow between different devices as easily as he now hopped platforms. And good ol' Qui Bored would be right there with him on all three platforms no matter what.

Logitech M720 mouse @ $60 and Logitech K380 "Qui Bored" @ $50 (prices will vary)

What a Team, eh!

Inside this issue:

Next Meeting: WEDNESDAY, December 13th, 2023

Next Meeting

Wednesday, December 13, 2023

Efficient YouTube Viewing:
Tips & Shortcuts

Speaker: Bob Herres (OPCUG)

For over a decade, Bob has operated a very small YouTube channel that occasionally shares snippets of his adventures. Join him for valuable insights on maximizing your YouTube experience, from shortcuts to personalized lists. Don't miss this opportunity to elevate your viewing efficiency!

Bob Herres is a Windows enthusiast that loves to optimize digital experiences. When he's not soaring through the skies capturing videos with his drone, you may find him honing his virtual golf skills, teeing off on the digital golf greens.

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.

The above link includes the meeting ID and password. However, if you are prompted for the information, use:

Meeting ID: **924 9556 0898**

Password: **opcug**

Next Q&A Session

November 22

Members answer questions and share their insights and discoveries on computer issues in short presentations. Non-members are welcome to attend Q&A sessions and ask their own questions. There is no charge for this service.

Coming Up…

January 10

Fraud 101: Beware of Scammers
Speaker: Constable Sébastien Lemay (OPS)

Cst. Sébastien Lemay from the Ottawa Police Service will be giving a presentation on how to spot fraud attempts and what to do if you fall victim to a fraudster. Please invite others to attend this important presentation.

February 14

Using ChatGPT to program in Python
Speaker: Tom Trottier (OPCUG)

Follow Tom as he tries to cajole ChatGPT into creating a python program to combine chat and caption transcripts together by time. This will be Tom's first Python program.

March 13

Building a Website – No Coding Required!
Speaker: Alan German (OPCUG)

In this presentation we will see how to create a website from scratch and make our content available on the Internet, no HTML coding required

Upcoming OPL Presentations

Whoa, backup! Effective strategies for keeping your computer files safe, Tuesday, November 21, 2023, 6:00 PM – 8:00 PM, North Gloucester Branch

How to take better vacation photos, Thursday, November 23, 2023, 6:00 – 8:00 PM, Beaverbrook Branch

Keeping passwords safe, Monday, November 27, 2023, 6:00 – 8:00 PM, St. Laurent Branch

Protecting your PC, Wednesday, November 29, 2023, 2:00 – 4:00 PM, Ruth E. Dickinson Branch

Keeping passwords safe, Thursday, November 30, 2023, 6:00 – 8:00 PM, Beaverbrook Branch

Go to https://opcug.ca/opl-presentations/ for details

All scheduled regular monthly meetings, weekly Q&A sessions, and a link to OPCUG presentations at the OPL are posted on our website at https://opcug.ca/#upcoming. All events are via video conference until further notice.

2023 CALENDAR

Meetings	Date	Time and Venue
Regular Monthly Meeting	Wednesday, December 13th	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, November 22nd	Until further notice, Q&A sessions are no longer held after regular monthly meetings. Join us on all other Wednesdays for weekly Q&A.
Beer BOF (Wing SIG East)	Wednesday, December 13th	Enjoy a cold brew or other beverage in the comfort of your home during the video conference.

PRODUCT REVIEW

Qt Creator – An IDE for C++

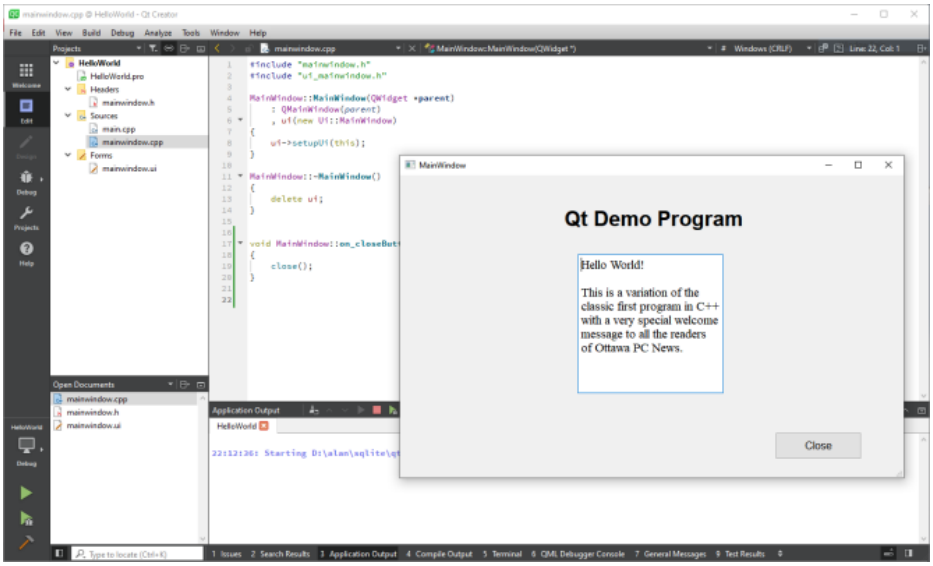
by Alan German

As with many programming languages, while it's possible to get started using C++ with just a text editor and a compiler, life is simpler if you use an Integrated Development Environment (IDE). Qt Creator is one such IDE which has the benefit of having an open-source version that provides a simple yet powerful development platform.

Interestingly, Qt is apparently pronounced as "cute" rather than Q-t, although you may only run into this if you watch video tutorials. It's also worth noting that Qt Creator is primarily a commercial product that has its roots in the open- source community. In consequence, there are many on-line help files and video tutorials available that allow non-professional programmers to make use of the open-source version. The software is also cross-platform, with versions for Windows, Linux and macOS. For this article we will focus on the Windows version of Qt Creator.

Downloading the Windows version of Qt for open-source use (https://www.qt.io/download-qt-installer-oss) provides an executable file. Running the installer requires setting up a Qt account. There is no charge for this; however, I was subsequently contacted by E-mail by an agent who was clearly under the impression that my "company" might need information about the GPL and commercial licensing requirements of the software. Perhaps this was because I used my opcug.ca mail address to register. In any case, there are licensing issues that need to be considered if you are planning to distribute software that you develop using the Qt platform.

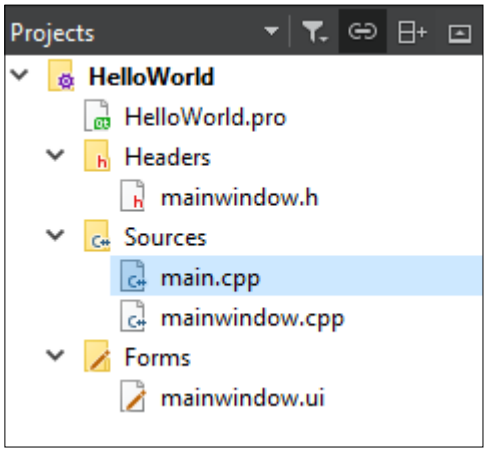
Running Qt Creator produces a typical multi-window programming environment as shown in the screenshot. There is a directory tree on the left side allowing navigation through a project's files and folders. The main window is an editor where code can be reviewed and modified. Note the tabs along the bottom edge of the window. Selecting 3. Application Output is necessary to display a program's output when the code is compiled and run. There are also various program controls down the left edge of the window, including the green triangle that can be used to run a program, and a regular File-Edit-View menu across the top edge of the window.



C++ and Qt Creator make it fairly easy to develop software with a GUI interface. The screen shot shows the output of a demonstration program which is a variation of the classic hello-world application. Note the main elements, the program's title, a text box, and a control button that can be used to close the running program.

To develop this program, we select Create Project from Qt's main screen. This brings up a selection window where we can choose between various types of project, each of which has a number of subsidiary selections. We will choose Application (Qt) and a Qt Widgets Application. This will create a main window (in which we can arrange various design elements), C++ source code files, and the header files required for the project.

We give the project the name HelloWorld and browse for a folder (D:\HelloWorld) in which to store the project files. In the remaining screens we can leave the project parameters at their defaults so that we employ qmake to build an executable program, use MainWindow as the class, don't enable translation, and use the MinGW 64-bit kit (Minimal GNU compiler for Windows) as the compiler. All of these components are part of the installed version of Qt Creator and are handled automatically by the software.



The project now consists of a number of files and folders which are displayed in the directory tree. If we run the program code at this point, the GUI output window is displayed but it is blank. We need to add some content to the mainwindow.ui form.

This is easily done just by double-clicking on the name of the form. This opens the Design window where we can add design elements, such as a

(Continued on page 5)

THROUGH THE LENS

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

Getting ready for winter photography!

by Lynda Buske

While winter photography might take a bit more prep time in terms of what to wear, it is well worth the effort to take advantage of a completely different environment from summer. I thoroughly enjoy taking photos during (if safe) and after a snow/ice storm as well as rivers just as they are freezing or breaking apart.

There are definitely some advantages to shooting in the winter, especially in the Ottawa area. We get lots of crisp sunny days with pristine snow and not much slush. The sun is low throughout the day so you don't have to avoid noon hour photography. If you do want to catch the sunrise, it is later than in the summer months (no mosquitos!) and the sunset might well be before dinner!

You may want to consider some additional items for your kit to make winter photography easier. For instance, I use gloves that have fabric only halfway up my fingers for easy button pushing, but they also have a Velcro flap to go over all the fingers to keep them warm when I don't need the dexterity.

If you are standing around waiting for the sunrise or long exposures, feet can get cold so I recommend heavy socks with a high wool content. I save them for photography as wool does not wear as well as synthetic fibres and at around $20-$30 a pair, I don't want to be buying them often. Any winter photographer would welcome these as a Christmas gift!

In terms of camera gear, I recommend a lens hood to prevent flares and to keep falling snowflakes off your lens. You may wish to get special feet for your tripod for better grip on ice and snow. As well, a polarizing filter can really help with the intense glare/reflection of sun on white snow.

For shooting a scene that is mostly snow, your camera will assume it is an overly bright object and may try to underexpose it. If your camera has a *Snow scene* mode, by all means use that setting (just don't forget to take it off after). My preference is to make sure the camera is not on *Auto* and then choose P, A, Tv/S, or M. In any of these shooting modes, I can slightly over expose my image with the EV adjust. It usually is a button with two triangles on the back of the camera. Set the scale to +1 over the baseline of zero.

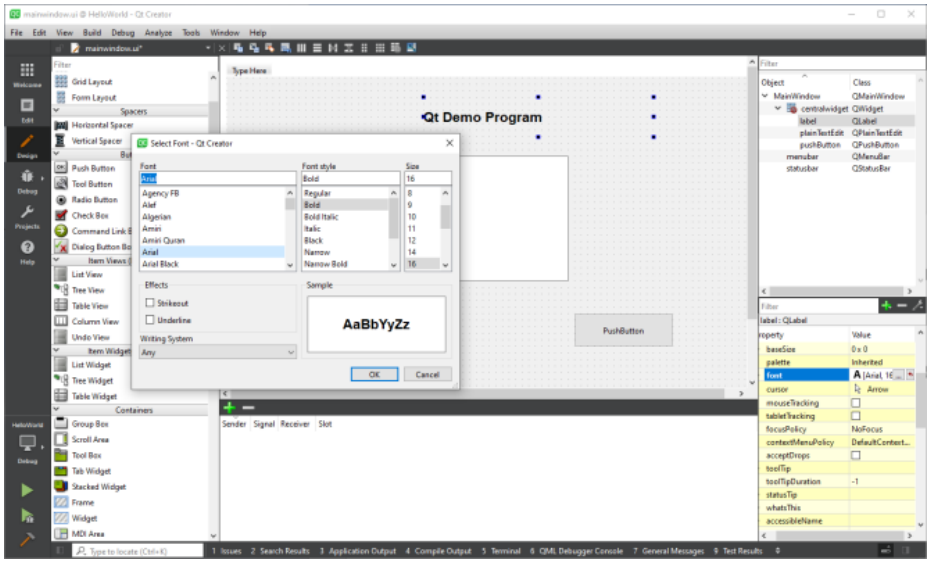
If you are shooting a scene that has a lot of trees or other objects along with the snow, then your camera may meter on those and you will find your snow over-exposed. In this instance set your EV adjust to -1. If it appears a bit too dark when viewing on your computer, you can lighten with photo editing software (https://opcug.ca/Photography/UsingMasksInPhotoEditingSoftware.pdf).

When you are done for the day, you may have to modify your summertime routine in order to protect your camera. Let your camera come to room temperature in the camera bag before unloading images, recharging the battery, cleaning the lens, etc. This will prevent condensation from forming and entering the interior of your camera.

Read as PDF at https://opcug.ca/digital-photography/. Visit https://opcug.ca/opl-presentations/ to see Lynda's OPL presentations.

Qt Creator *(Continued from page 3)*

Label, a Plain Text Edit box, and a Push Button, to the main window area. Various attributes for each of the design elements can be changed using the options available in the right sidebar of the design window. So, we can add "Qt Demo Program" to the label as our program's title, enter the "Hello World!" text into the Plain Text Edit box, and change the text on the Push Button to read "Close".



Note that simply labelling the Push Button as "Close" doesn't do anything to have this action occur when the button is pressed while the program is running. To achieve this end, we need to take note of the content of the lower-central portion of the design window where we see Sender | Signal | Receiver | Slot displayed.

C++ is an object-oriented language and uses the concept of one object sending a message to a second object, with the second object then taking some form of action. The process of signals and slots is a cornerstone of Qt and is the basis for its event handling. In the present case, the user clicking a control button is an event which creates a signal. The receiver of the signal is a slot, which takes the form of a section of C++ code that will instruct the program to stop.

To create the signal/slot process, we right-click on the Push Button, select Go to slot in the pop-up menu, and choose the signal labelled QAbstract Button clicked(). This takes us to the program editing window with the file mainwindow.cpp already loaded and a code snippet for on_pushButton_clicked displayed. The code that we wish to have activated is quite simple - close(); - which we add between the curly brackets, making the completed function:

```
void MainWindow::on_pushButton_clicked()
{
   close();
}
```

The result of this section of code is fairly evident. When, in the main program window, the user clicks the Close button, control is transferred to the on_pushButton_clicked function and the close command cause the program to terminate.

Our Hello World program is a very simple example of GUI programming using C++ and Qt Creator. However, there are a number of features of the software which may not be intuitive and are worthy of note. In particular, Qt Creator has two build modes, Debug and Release. Essentially the debug mode creates a larger executable file since this version contains many hooks that are used in the debugging process. When a program has been thoroughly debugged, it can be built as a release version which is considerably smaller.

By default, Qt creates multiple folders to separate the initial project files and the output files. For example, our simple program creates the folder D:\HelloWorld\HelloWorld which contains the main project file, HelloWorld.pro, the C++ source code files, and the associated headers. In addition, the folder D:\HelloWorld\build-HelloWorld-MinGW64-bit-Debug contains various make, object, and executable files.

The initial debugging process is very useful, especially for beginners in C++ programming. For example, if we had missed entering the final semi-colon in the close(); command, this line in the editor would be followed by a line, highlighted in red, indicating Expected ';' after expression (fix available). This error message is preceded by a small lightbulb icon. Clicking on this icon applies the fix and inserts the required semi-colon at the end of the command. However, the system is much more powerful than this as the Debug menu option allows the insertion of breakpoints in the code. When the running program hits a breakpoint, execution pauses, and a number of parameters are displayed. For example, this can include the values of certain variables, such as counters and computed results, allowing the programmer to verify their validity at a specific point in the program.

To re-open a project, we can use the Open Project button on Qt Creator's welcome screen. This requires browsing to the project folder and opening the file HelloWorld.pro. Alternatively, selecting the Projects button on the welcome screen displays a list of recently used projects in which, for our purposes, the HelloWorld project will be the first entry.

The Windows version of Qt Creator has a set of tutorials built in. For example, selecting Tutorials - Creating a Qt Widget Based Application from the welcome screen provides assistance on building an application very similar to our HelloWorld program. In addition,

(Continued on next page)

Qt Creator *(Continued from previous page)*

the Examples button provides access to a number of projects, including a calculator, a document viewer, and a media player. And, as noted previously, there are many similar resources available on-line.

Running the debug version of our Hello World program produces an executable file, HelloWorld.exe, with a size of 1.6 MB. In contrast, the release version of the program, produced using the same source code, is a mere 28 KB. However, the availability of a smaller executable is not the end of the release story. Attempting to run this stand-alone program on another computer will almost certainly fail with a number of errors messages to the effect that various files are unavailable, e.g. Qt6Core.dll was not found. The problem is that the installed version of Qt Creator has the required dynamic link libraries (DLL) available whereas other users' computers may not. This is where consideration needs to be given to how to package a release version of the newly-developed program and the consequent licensing implications. However, I leave such considerations to would-be software developers/distributors.

As a learning tool, and even as a development platform for applications to be used locally, Qt Creator offers a comprehensive and powerful programming environment. The software has its quirks, and C++ itself may exhibit a fairly steep learning curve for users unfamiliar with object-oriented programing. Nevertheless, the open-source version of the software is free to use and there is a wide variety of assistance readily available online. So, if you want to become a C++ programmer, Qt Creator is a good way to get started.

Bottom Line

Qt Creator (Open Source and Commercial)
Version 6.5.2
Qt Group, Helsinki, Finland
https://www.qt.io/product/development-tools

Nominations for OPCUG Board for 2024

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.

We currently have two vacant positions: Meeting Coordinator and Public Relations. The most pressing position is Meeting Coordinator. If you like our monthly meetings, please participate in the nomination process (you can nominate yourself!).

If you want more information about what is involved, please contact me or any current or past Board member. Names are listed on the back page of this newsletter and on the web site at https://opcug.ca/executives/.

Nominations can be submitted by sending an email to: nominations@opcug.ca.

Nominations must be received by midnight, December 31, 2023.

Please get involved. Help the OPCUG continue in its role of *Users helping users*.

Bob Herres
Election Chair, 2024
Bob.Herres@opcug.ca

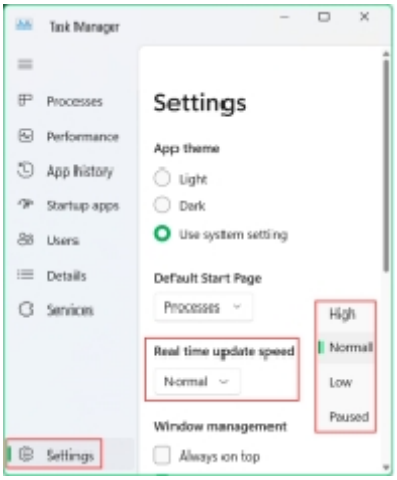
Quick Tip 58: Task Manager's update speed

by Chris Taylor

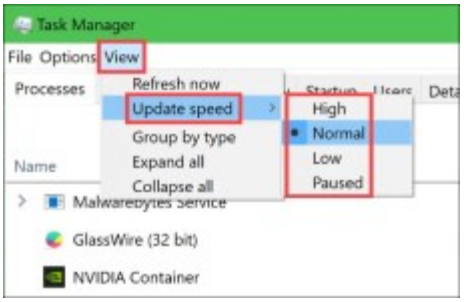
Task Manager—a great tool built into Windows—provides a lot of performance metrics. Whenever I have performance issues, Task Manager is my first stop to find out if a program is using too much CPU, the disk is overburdened with reads or writes, memory is fully used (causing very slow disk swapping), etc. To run Task Manager, press Ctrl+Shift+Esc or right-click a blank area on the Taskbar and choose *Task Manager*.

A double-edged sword with Task Manager is that it's updated frequently—by default every second. On the one hand, this is helpful to catch transient issues. On the other hand, having the list of processes jump around a lot can make it hard to get an overall understanding of what processes are doing.

In Windows 11, you can change the update speed by clicking *Settings*, *Real time update speed*, then choosing *High* (update twice per second), the default *Normal* (update once per second), *Low* (update once every 4 seconds), or *Paused*.



In Windows 10, click the *View* menu and choose *Update speed*.



The quickest way to temporarily pause updates is to hold down the Ctrl key. You can still click on tabs, columns, etc. to view different parameters while the Ctrl key is held down. When you release the Ctrl key, updating resumes.

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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). Deadline for submissions is three Sundays before the next General Meeting.

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. OCTranspo 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/)

Meetings are 7:30–9:00 p.m. followed by a Q&A Session until 10 p.m.

OPCUG Membership Fees:	$20 per year
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Director w/o Portfolio		
Karen Wallace-Graner	**karenwg@opcug.ca**	

Q&A HAS GONE ON-LINE! WEEKLY!

Because of the pandemic, the OPCUG is 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**).