



OTTAWA

PC NEWS

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ARTICLE

ISP Blocking

by Chris Taylor

Should an Internet Service Provider (ISP) block any of the traffic going between your computer and the Internet? As they say; its complicated.

Disclaimers: This is personal opinion. I am not speaking on behalf of the Ottawa PC Users' Group or anyone else. Your mileage may vary. Do not read while using heavy machinery. Do not fold, spindle or mutilate. May contain nuts. May be written by one.

Slippery slope?

On its face, some people might tend toward thinking it's fine for an ISP to block content that is illegal or malicious. But this begs the question; who decides what is illegal or malicious? If it's a commercial enterprise such as an ISP, that may be a problem.

Bell has been pushing to establish an anti-piracy agency with the responsibility of approving site blocking without court oversight. That makes me nervous. They want to be the judge and jury, with consumers being affected. Are they going to try to block things like pornography? Would they get to define what constitutes pornography? What about gambling sites that are not government-sanctioned online casinos? What about a white hat hacker site? And what if that site publishes proof-of-concept exploit code? What happens when the inevitable mistakes are made with site blocking?

Some ISPs have asserted that use of some services such as VPNs (which en-

hance privacy but also allow circumventing [geo-blocking](#)) constitutes theft. I think that position is far from being clearly and universally correct.

One of the problems with allowing an ISP to block traffic is that they are very opaque about exactly what they are doing and why. Ask yourself if they could possibly have ulterior motives.

Your responsibility

Even if you agree that you want malicious or illegal content blocked, consider the value of the blocking. I've had people tell me that they are not worried about the security of their Internet connection because their ISP is "taking care of security". Ouch – that's a dangerously naïve position to take!

This is your computer that you are trying to protect. Ultimately, you have to implement controls to protect it; anti-virus, firewall, patch management, and account & identity management.

On the other hand

I am a big fan of defence in depth, with multiple layers of security. If one layer fails, another may protect me. In the [November, 2018 issue](#) of the newsletter, I wrote *Security – It's all about layers*. In the [October, 2018 issue](#), I extolled the virtues of having your DNS server block access to malicious sites. But, pretty much every level of security can backfire. Quad9 may mis-categorise a web site as malicious and block me from getting to it. My anti-virus may have false positives and re-

move a benign program. A security patch for a program may introduce an unforeseen conflict.

How do these differ from having an ISP protect me by blocking content they have decided I shouldn't be permitted to access? I think it comes down to motives and control.

Motives

I am far more suspicious of the motives of ISPs than the motives of security organizations. Security companies providing products and services are trying to help you protect your computing devices. I don't recall them ever making moral judgements about what they block or allow.

I believe ISPs are making moral judgements or coming to conclusions that favour their own financial interests. When they block VPNs because they can be

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Next Meeting: **WEDNESDAY, November 11th, 2020**

Next Meeting

Wednesday, November 11, 2020

As has been the case since the onset of COVID-19, this meeting will be via Zoom teleconference (connection details below).

COMPUTERS AT WAR

Speaker: Bob Walker, OPCUG

In honour of the November OPCUG Meeting being on Remembrance Day, we'll look at how the development of early computers was brought about by World War Two. In particular we will be looking at the codebreakers of Bletchley Park like computer pioneers Alan Turing, Gordon Welchman, Tommy Flowers and Max Newman who developed Colossus, the world's first programmable, electronic, digital computer, and used it to break the German Enigma codes and shorten the war by two years. We'll also look at some of the other computer developments related to the war and how some of it led directly to the development of the Internet.

The Zoom link will be live at 7:20 pm.
Join us at <https://tinyurl.com/opcug-meeting>.

Those using the Zoom client will need to enter the following:
Meeting ID: **924 9556 0898**.
Password: **opcug**

Instructions for using Zoom are provided here:
<https://opcug.ca/wp-content/uploads/2020/06/Zoom-instructionsv2.pdf>

There will be a Q&A session after the regular meeting at approximately 9 pm on the same video conference.



Colossus Computer, Bletchley Park

Coming Up...

December 9, 2020
WiFi Offerings & What to Watch Out For
Speaker: Lawrence Patterson, OPCUG

January 13, 2021
Creating Your Own Blog and Website Using WordPress
Speakers: Alan German and Brigitte Lord, OPCUG

February 10, 2021
Electronic Processing Unit
Speaker: Deid Reimer, Victoria Pi Makers

March 10, 2021
[Keeping passwords safe](#)
Speaker: Chris Taylor, President, OPCUG
(topic details at <https://opcug.ca/events/keeping-passwords-safe/>)

April 14, 2021
Photobook Presentation
Speaker: Lynda Buske, OPCUG

All scheduled events, including regular monthly meetings, weekly Q&A sessions, and OPL presentations, are posted on our website at <http://opcug.ca/>. All events are via video conference until further notice.

2020 CALENDAR

Meetings	Date	Time and Venue
OPCUG General Meeting	Wednesday, November 11 th	7:30 pm via Zoom video conference: https://tinyurl.com/opcug-meeting For meeting details visit http://opcug.ca/#upcoming
Q&A Session	Wednesday, November 11 th	Immediately following the OPCUG General Meeting. (approx. 9 pm) on the same video conference.
Beer BOF (Wing SIG East)	Wednesday, November 11 th	Enjoy a cold brew or other beverage in the comfort of your home during the video conference.

ARTICLE

Changing browser security indicators *by Chris Taylor*

It can be hard to ensure you browse the web securely. I wrote recently about a number of free browser security extensions ([Safer web browsing](#)) that can help.

Although far from a panacea (see my article "[What does https really mean?](#)"), encryption is an important component of secure browsing. I used to advise people to watch for universal indicators;

Encrypted sessions:

- The URL begins with "https://" in the address bar
- There is a yellow lock

Non-encrypted sessions:

- The URL begins with "http://" (i.e. no "s") in the address bar
- There is no lock

It has since gotten more confusing, with browser manufacturers playing with colours, hiding the "http://" or "https://" prefix, adding "not secure", and more. I think this constant flux is making things less secure, especially for those not well versed in computer security, such as people who ask *you* for help.

As of my writing this article in July 2020, following are the ways the five major web browsers on Windows distinguish between encrypted and non-encrypted sessions. Who knows what they will look like tomorrow?

Another changing security indicator is how browsers handle [Extended Validation Certificates](#). Organizations can pony up extra time & money to have additional verification done by the Certificate Authority. In return, the browser would put the organization name in green next to the address;



This extra indicator helps assure me that I am on a legitimate site. As of my writing in July 2020, only Internet Explorer still shows the company name when an EV certificate is used. Google Chrome, Microsoft Edge, Mozilla Firefox and Opera no longer show this indicator. It looks like EV certificates are going the way of the dodo bird.



Encrypted sessions:

	Display https:// in URL	Other indicator	Click on lock
Google Chrome	No	Grey lock to left of URL	"Connection is secure"
Microsoft Edge	No	Grey lock to left of URL	"Connection is secure"
Microsoft Internet Explorer	Yes	Grey lock to right of URL, turns yellow if you hover over it	"This connection to the server is encrypted"
Mozilla Firefox	Yes	Grey lock to left of URL	"Connection secure" in green
Opera	No	Grey lock to left of URL	"Connection is secure"



Non-encrypted sessions:

	Display https:// in URL	Other indicator	Click on indicator
Google Chrome	No	Exclamation mark in a circle "Not secure" to left of URL	"Your connection to this site is not secure" in red
Microsoft Edge	No	Exclamation mark in a circle "Not secure" to left of URL	"Your connection to this site isn't secure" in red
Microsoft Internet Explorer	Yes	Nothing	
Mozilla Firefox	No	Lock to the left of URL with red diagonal line	"Connection not secure" in red
Opera	No	Grey triangle with exclamation mark to left of URL	"Your connection to this site is not secure" in red





Lawrence's Thoughts

Wi-Fi Part 2: How can you be sure what's on your network?

By Lawrence Patterson
lawrence@opcug.ca

Oh, the good old days, when anything on your network had to be physically wired. Having those cables lying on the floor or trying to feed them through the wall, trip hazards all over the place. Yet, you knew what was on your network and unless someone hacked your system, there was little chance of having some unknown device gaining access to your stuff. Now with the convenience of wireless and "Internet of Things" (or IOT) running our lives, what are the chances that you know of an unwanted lurker.

Fortunately, all is not lost, as we have a couple of reliable tools available to us to help understand what's happening, and at the least, point us in the right direction.

Let us start with your router. Yep, that thingy your Internet provider set you up with. Don't know how to access it? Now's the time to figure it out. Though I'll present an easier to use tool, it's important you be able to log in to the router and at the very least change the default password (google your router and follow the instructions). Next step is to review the master list of your connected devices using DHCP (or Dynamic Host Configuration Protocol) that is managed by your router.

Unfortunately, and you may be pleasantly surprised with a newer router, the information provided, such as in the example at right, provides some details in the "Name" column, but not much. As you can see, Desktop-66GLOCV or Windows Phone (swap that with Android or IOS – Apple label) may not give you much insight as to what is connected. It even gets better with IOT devices as your router may only provide a series of characters. Remember, this is your source / starting point.

ACTIVE DHCP CLIENT TABLE
 The table shows the assigned IP address, MAC address and time expired for each DHCP leased client.

Name	IP Address	MAC Address	Expiry	Type
android-7f6e653394d8bce	192.168.1.4	e8:2c:82:c7:23:d4	In 0 days 04:08:38	Automatic
DESKTOP-66GLOCV	192.168.1.3	48:45:20:f0:99:a1	Expired	Automatic
DESKTOP-72P2D6H	192.168.1.8	a0:d3:7a:c7:03:ee	In 0 days 23:25:22	Automatic
DESKTOP-1P9SCM3	192.168.1.10	18:3d:a2:e4:58:63	In 0 days 23:12:50	Automatic
android-54b656acfc8319	192.168.1.11	60:3a:ca:d2:11:b4	In 0 days 22:00:50	Automatic
Redmi 5 Redmi	192.168.1.6	ac:c1:0e:a5:da:d7	In 0 days 04:55:14	Automatic
Windows Phone	192.168.1.7	48:50:73:e2:52:8c	In 0 days 19:00:29	Automatic
rjsaurav	192.168.1.5	2c:33:7a:d7:de:2f	In 0 days 13:24:30	Automatic
PAPUKUMAR	192.168.1.12	b4:6d:83:2c:17:ad	In 0 days 09:54:34	Automatic
android-73c118ede058f505	192.168.1.9	a4:70:d6:87:0c:9c	In 0 days 21:07:24	Automatic

My favourite free tool has been, and after doing research for this article still is, FING / <https://www.fing.com/>. Before I go into its features, I wanted to state that the recent reviews are not kind; that said, it provides insight that others don't have (or don't have without paying). I appreciate that there are other tools, Windows & MAC based, though so far this is the best free one I've seen and it's available for Android, IOS and Windows.

FING, in its author's own words: "Get full visibility and intelligence of your connected world" by providing a back-end powered device listing (which is what I've used professionally for years), network information and Internet speed. The device details have proven to be 90% accurate and whenever I become aware of a device on the network, FING has given me the information to either quickly identify the hardware or given me further details so that I can narrow it down.

For this review I'm using the Android version of FING (the free version includes ads at the top) and the screen shots come from Google Play Store.

When you start the app, you'll come across the home screen, and by going to the Devices section, as per the example on the right, you'll immediately see a list of devices on your network. If you run it again, days or weeks later, it'll show devices that were previously listed allowing you to track changes in the devices connected.

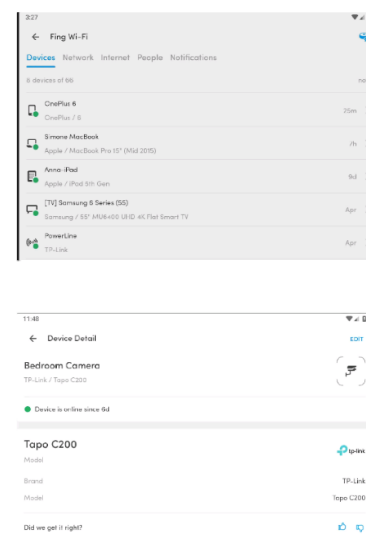
The list will include the category of device, IP address, manufacturer and either the type of device or, if it's unknown, the MAC address (the 1st 3 octets can be googled for further information).

If you select one of the devices, as seen on the right, further details will be provided, including the model, family and operating system.

If you use Fing to keep track of your devices, be aware that it may lose the listing, and such you should export or manually track the devices separate from Fing.

Ok, what happens if you have just an IP address on your router or scanning program and no other information? Your next step is to physically turn off devices until it's not showing up on scans and note the differences. It can take some time to figure it all out.

Take care.



THROUGH THE LENS

Shoot for the Stars – Apps for photographing celestial bodies

by Lynda Buske

With the restrictions on travel, I have embraced photography closer to home. It is never boring even when returning to old haunts because the light, the season and the plants are constantly changing. For my dawn and sunset shots, it is particularly helpful to know where the sun/moon are going to rise/set and at what time.

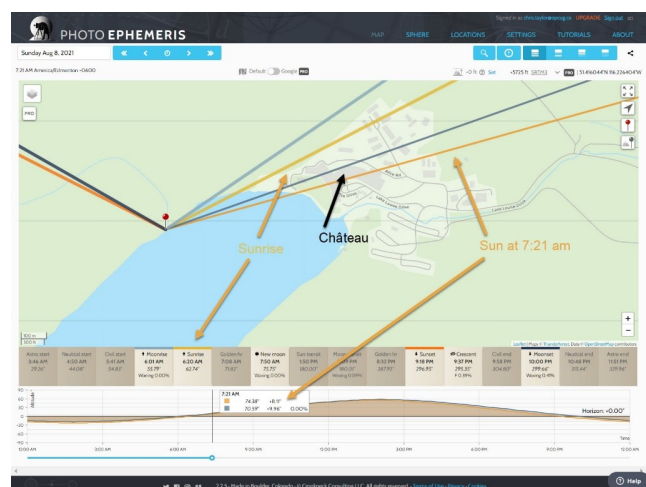
What if you are more adventurous and want to get a shot of the milky way diagonally across the sky above your cottage at the lake? What if you are dreaming of future travel and want to get a spectacular shot of the sun setting at Lake Louise next August 8th?

There are many free and premium web-based and phone or tablet apps to help photographers plan shots in relation to celestial bodies. Two well respected examples are below.

The Photographer's Ephemeris (<https://www.photoephemeris.com/>) is a free web-based app that also has a premium version available with additional features (\$40/year). They also have a phone app (Android and iOS) available for \$4 which gives you a few more features such as meteor and milky way tracking.

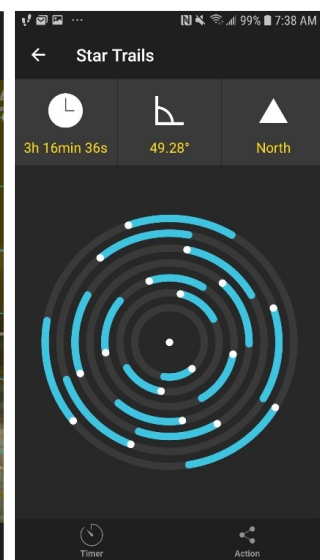
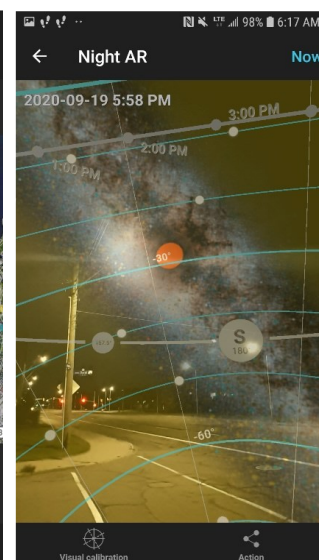
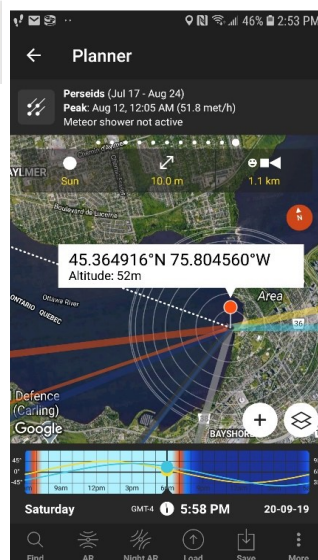
This app lets you choose any position on earth, on any day. It will show you celestial details such as the direction and time of sunrise, sunset, moonrise, moonset, etc. You can also see the direction and altitude of the sun and moon at any time on any day.

As an example, you could use The Photographer's Ephemeris to plan a photograph of the sun rising over the Fairmont Château Lake Louise when you plan to be there August 8, 2021. Wander down the trail on the north edge of the lake and position yourself at the red pushpin. The sun will rise at 6:20 just to the north of the hotel and at 7:20, it will be 8 degrees above the horizon directly over the hotel.



PhotoPills (<https://www.photopills.com/>) can do even more but is available only on Android and iOS phones and tablets. The cost of \$14 CDN provides you with a moon calendar, meteor shower tracker, depth of field calculator, exposure equivalents with filters, and hyperfocal distance calculator. It even has a function that shows how long star trails will be for any given exposure time (e.g. screen shot below shows estimate of 3 ¼ hours) or the maximum exposure time to ensure stars are pinpoints rather than streaks.

The PhotoPills app has an added feature called “augmented reality” that enables you to see the celestial overlays through your phone’s camera. The photo below shows that when aiming your phone camera on the street where you live, the app can show, for instance, the position of the milky way at that moment or at any date and time in the future. It’s also going to give you the position of other celestial objects such as the moon.



Bottom Line:

The Photographer's Ephemeris (<https://www.photoephemeris.com/>) Free web based, premium available, \$4 for iOS or Android

PhotoPills (<https://www.photopills.com/>) - \$14 for iOS or Android

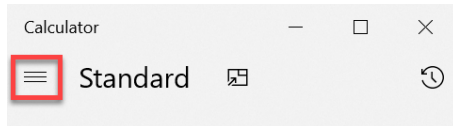
This article is also in PDF format on the OPCUG website (<https://opcug.ca/digital-photography/>).

CHRIS TAYLOR'S QUICK TIPS

Quick Tip 09: Windows Calculator

The best descriptions I read for the built-in Windows apps is *reasonably usable to truly pathetic*. I find the *Weather* app to be very good. Every person I know who has used the *Mail* app found it to be dreadful. Calculator has some nifty features that elevate it to *truly useful* status.

If you always used Calculator in its default configuration, you're missing everything that makes it truly great.



Click the hamburger menu to choose different calculators. *Scientific* gives more functions. *Date calculation* lets you find the difference between any two dates or add/subtract from a date. There are conversion calculators for currency, volume, length, weight, speed, power, angles and more.

The icon to the right of the hamburger menu keeps Calculator on top of all other windows. Great to always have a calculator available. Click the icon on the right for the history of previous calculations. To use the results of a calculation elsewhere, press Ctrl-C to copy it to the clipboard.

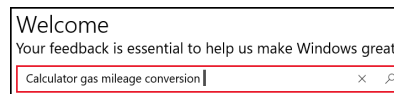
In the *what were they thinking?* category, why doesn't Calculator follow the Windows colour scheme? Its title bar is always plain white, meaning I can't tell at a glance if it has the focus. Hint: See Quick Tip 10.

Quick Tip 10: Feedback Hub

Even Microsoft would (probably) admit that Windows isn't perfect. All *users* are certain it isn't perfect. What can you do about it? You can switch to an operating system that works more to your liking. You can silently accept Windows is not working as you want it to. You can grumble to yourself or others.

Or you can provide feedback to Microsoft in the hope that, if Microsoft knows what bugs you about Windows, they will fix it.

Click Start and type *Feedback*. Click on *Feedback Hub* in the results. Type in your problem or suggestion. This will list similar feedback already reported.



If others have reported the same issue, *Upvote* and optionally leave a comment. Upvoting carries more weight than submitting new feedback.



If you don't find anything similar, click *Add new feedback* and fill in the form.

+ Add new feedback

The Windows Insider program has advice on *How to provide effective feedback* at <https://insider.windows.com/en-us/how-to-feedback/>

Technical Solutions 2020

There was very limited response to the web survey requesting input into the proposal to run specific video-conferences on a number of computer-related issues. As a result, the Board of Directors has opted not to go ahead with this activity in this format. Nevertheless, the most popular topics, and the additional topics suggested through the survey, will be accommodated in our programme of regular monthly meetings and weekly Q&A sessions.

The most popular topic among those suggested in the survey was *Sharing photos for free on the web*. This will be the subject of a future club meeting. Three additional topics were suggested by survey respondents, namely (1) *Scanners, preferably 2D not 1D, for fast 1S scans*, (2) *Using Amazon Alexa or Google Assistant*, and (3) *How to choose security software (PC & smartphone)*. There is an opportunity for individuals to provide information on any of the latter topics in the form of a "Share" at our Q&A sessions. If you would like to make such a contribution, please contact us at: SuggestionBox@opcug.ca

The other questions in the survey related to timing of video-conferences. Overall there was a slight preference for Monday or Wednesday, with Thursday and Friday being the least popular. By contrast, there was a clear preference for evenings with the vast majority of respondents preferring a 7:00 p.m. or later starting time.

Nominations for OPCUG Board 2021

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 on the [back page](#) of this newsletter and on the web site at <https://opcug.ca/executives/>.

Nominations can be submitted to **Bob Herres**, Election Chair, by sending an email to nominations@opcug.ca.

Nominations must be received by midnight, December 31, 2020.

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

Bob Herres
Election Chair, 2021

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 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. OTranspo bus #90 stops nearby. Details at <https://opcug.ca/venue/>.
(NOTE: Due to COVID-19 safety guidelines, all our events are via video conference until further notice. 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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ISP Blocking *(Continued from page 1)*

used to evade geo-blocks and therefore constitute “theft”, they are not doing it to protect my computer or prevent me from being sued. I believe they are doing it to protect the value of someone else’s services; often their own.

Control

Security products and services normally give you a considerable level of control over how they operate, including the ability to over-ride their actions. If Quad9 blocks my access to something, I can bypass it. I can white-list something in my anti-virus program or firewall. I am in control, and that is important to me.

Conclusions?

I encourage all to think about the implications of ISPs blocking traffic. They are not likely to give up their advocacy work trying to be the arbiter of what you can and can’t access.



Reduce, Reuse, Recycle

Bring your old computer books, software, hardware, and paraphernalia you want to GIVE AWAY to the General Meetings, and leave them at the table near the auditorium’s entrance. Please limit magazines to publication dates under two years.

You may TAKE AWAY any items of use to you.

Any items left over at the end of the meeting have to be taken back home by those who brought them in.

