May 2023

PC MONITOR

Durham Personal Computer Users' Club Newsletter



DPCUC General Meeting

Our Club meets monthly on the second Thursday of each month.
All meetings are currently held using Zoom.

We hope some day in the future to be able to meet in person again.

Please visit the Club Web Page for all the latest links and information http://www.durhampc-usersclub.on.ca/

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Next Meeting

Protect Ourselves from Criminal Actions

by Constable Darryl Rice

On **ZOOM** – Thursday, May 11 2023, 7:00PM



- By Dan Delong

Chicken Coop Automatic Door

Set this automatic chicken coop door to open at dawn and close at dusk, or (with more expensive versions) any other times you wish, with a smart phone. A sensor prevents injury to fowl, should the door try to close on a hen. (Although not directly stated, this model should also sense an approaching bird, during daylight hours, and open up to permit access to roosts.) Predators



cannot open a closed door. [\$67.69 USD, also at <u>Amazon.ca</u> for \$80 CAD] The <u>deluxe version</u>, solar powered, with remote control and better anti-pinch mechanism, is \$170.00 CAD. Since few computer club members maintain a chicken coop, look for similar automatic smart doors for pets... offered in results from a browser search. Try the phrase, "automatic pet doors".

https://thenobe.com/product/automatic-chicken-coop-door/

ABB Terra Home EV Charger

This **EV home charger** appears to be of the **Class 2** variety, using **220 volt** current (giving about 30 miles for each hour of charging). Why is ABB Terra better? It prefers to take power from renewable sources, such as solar panels, when it can.

[The company slogan, "Charge Different" (sic) is grammatically incorrect, although lots of writers now follow this non-adverbial trend... "Drive Safe." "Eat healthy."]

ABB has installed about one million charging stations world wide, but does not yet have a presence in Canada. Here, at (https://pionpower.ca), you can see a Level 2 charger for \$530 CAD, also Grizzle (https://grizzl-e.com/product-category/canada/), or https://www.eaton.com/ca/en-gb/products/emobility/ev-charging-products.html), or a more costly one at MetroEV (https://www.metroev.ca/) where a 50% rebate may be possible (but no cost quote until you contact them).

https://e-mobility.abb.com/terra-home-charger/

Siemens Innovation

SIEMENS

Siemens is a vast international company, with fingers in many pies – all aimed at fulfilling their mandate to... "improve society". Often, this entails new manufacturing techniques that include computer programming and electronics design advancements. One such improvement can be found in an award winning way to test newly made micro-chips, to ensure reliability. It is called, "**Streaming Scan Network. or SSN**". The manufacturing of silicon chips requires many steps. A minor failure, at any step, may drop the value of a chip significantly, even if much of the remaining circuitry is behaving well. Those chips do not make it into the most demanding installations. Other topical Siemens research involves better X-rays, lighter weight car bodies, digital twin simulations, safer energy circuits, and empathic computing. Read more at the link.

https://www.siemens.com/global/en/company/innovation.html

Garmin Varia RTL Radar Tail Lights

Spotting vehicular traffic, closing in from the rear, while riding an e-bike, is achievable only by taking your eyes off the road for a head-turn or a mirror check. Garmin's radar tail lights, not only make the rider visible to oncoming cars, but warns the rider in several ways – a cell phone app, a Garmin watch, or other handlebar mounted Garmin hardware. One model, the **Varia RTL515**, runs on batteries, while the other, much lighter, **Varia eRTL615**, taps into the bike's battery.

https://www.garmin.com/en-CA/c/sports-fitness/cycling-bike-computers-bike-radar-power-meter-headlights/

Knitting a Huge Star Map

Australia's Sarah Spencer is a software engineer, not a knitter. However, she bought a 1970s automatic knitting machine, and later an 80s Brother knitting machine, for some clever hacking. Within six years of trial and error, she was able to "hack" into their 'operations' with Python, a Raspberry Pi, and a web interface, to have it knit a huge, **3x4 metre**, map of the night sky, complete with labels and a quote by Neil deGrasse. It now works like a networked printer, knitting any design she puts into the computer. Over several days, the knitting machine made this **15 kilogram** masterpiece. See it at the following link.

 $\frac{https://www.theage.com.au/culture/art-and-design/she-hacked-an-old-knitting-machine-to-weave-the-universe-into-a-work-of-art-20220622-p5avpb.html$

Framework 16 Laptop

Framework's larger modular model further pushes owner customization to new levels, by opening up APIs for most computer modules; like keyboards, numpads, audio ports, USB, Wireless, and even the internal graphics and SSD hardware (now up to 16TB storage). Orders will soon be taken, for delivery by the end of 2023, as specs and software for some modules are still in flux. Frameworks makes computers that should last longer because most of the constituent parts are hot swappable modules. The owning experience is a little like ordering a car in the old days, offering a myriad of options for engine power, transmissions, wheels, and



interiors, as well as colour schemes. Framework is a little different, in that it can deliver those options at any time in the future, as upgrades. Tweakers might enjoy the ability to download open software for managing modules, from Git Hub. [Short Video]

https://frame.work/ca/en/laptop-16

Sony ELF-SR2

This 27-inch, 4K monitor contains a camera, with a high speed Gen 2 vision sensor that tracks the eyes of a single viewer, then creates **3-D imaging without the need for special glasses**. The screen is best viewed at a distance between a half metre and a metre. This is the second **Spacial Reality Display** model made by Sony, both requiring software written with Unity, DirectX, Unreal Engine or Open GL, running in several



formats (FBX, OBJ, GLTF, and STL). At a cost of \$5000 USD, for the SR2, such displays are meant for certain, higher level, clientele, like architects, auto designers, and medical trainees. Sony recommends the following computer specifications: - "Computer required with a recommended CPU of Intel i5-6 core or faster; and a graphics card with a PassMark - G3D Mark score of 18,000 or higher. (GeForce RTX2070 SUPER equivalent). PC memory size of 16GB or larger and SSD storage is required. Windows 10 (64-bit) and Windows 11 (64-bit) are supported." https://pro.sony/en_CA/products/spatial-reality-displays/elf-sr2

EasyDNS Newsletter

I've previously mentioned "Axis of Easy", the EasyDNS Newsletter, written by owner Mark Jeftovic, concerning all the latest online security issues, censorship, and government intrusions. It reads like a Readers' Digest (material written in plan language and condensed) but for a deeper look into internet fundamentals. It's always a good read, from an expert in the field. Mark's latest issue covers Facebook censorship, Twitter, spying, critical security flaws in major software and routers, and a misadventure in Mark's last issue with ChatGPT. It caused a lot of trouble. [EasyDNS is a Canadian web hosting service, domain registrar, and e-mail provider, focusing on reliability and security.] https://mc.easydns.com/email/view/6448505309467748670567

ACER eBike

Everybody seems to be getting into the electric bicycle business, even ACER. The **Acer's ebii** is a little different from most other e-bikes, starting with the front wheel motor, rear radar sensing, no gears on a toothed rubber drive belt, no handlebar display screen, or soft suspension. Nor does this 16 Kg bike fold, as do some other commuter bikes. Acer classes its bike as "intelligent", in that it learns how you travel and where you travel, providing just the right motor assist needed for a comfortable trip. It does this through your smart phone, which is placed in a holder during your ride, using apps from Acer, and the GPS in the phone, to plan and record your trips via the phone's LTE connection. Walking away from the bike, with your phone in hand, causes the bike to enter "**Lock Mode**", via Blue-tooth, not only turning off the motor but also alerting you if someone tries to move it. [Now, I don't understand how the GPS can tell you where



the bike is, after it is stolen, once it moves out of Blue-tooth range.] The price (\$2200 USD) is a little higher than the competition. The battery charges in about 2.5 hours and can also be used to run a computer or charge a cell phone. https://www.acer.com/ebii/us-en/index.html

Eeva Washer and Dryer-in-one

At only about three feet tall and less than two feet wide, this combo washer\dryer is suitable for RVs and small apartments, with no need for a water hook-up or exhaust vent pipe. Each 7lb max load (about two days worth of clothes) uses about 10 litres of water from a removable internal tank. The maker recommends using their environmentally friendly detergent pods, so that waster water remains harmless. A touch display controls three activities: - wash and dry, wash only, or dry only (for fluffing up). Energy costs might be a little higher for this 110 volt appliance, which is similar to the \$1500, 110 volt GE washer\dryer combo (criticized for long drying times). A web app helps keep track of energy usage and all other costs involved. This product is not yet on the market, but a \$20 USD refundable payment will hold your spot. https://www.indiegogo.com/projects/eeva-2-in-1-laundry-solution [This start-up fund is now well financed, so it should be a 'GO'.]

Look for a retail price around \$1000 USD

https://prelaunch.com/projects/eeva-eeva-revolutionary-2-in-1-compact-washer-and-drye

Synthesia – talking heads, non of them real

"Synthetic" means *substitute*, *imitator*, even *faker*. In this case the imitator is a human-like presenter, speaking whatever text it has been given, in any of the 120 languages available, including accents. You've probably met them already, in support chat boxes, giving sales pitches or tutorials... and, perhaps, reading the news on television. Choose from among dozens of avatars (fake people) who can be situated in front of various backgrounds (along with supporting graphical elements) appearing even more real when camera motion is automatically applied to the scene. Paid users can make use of extensive video editing features, supplemented by a content library. Try it for free. A sample is video in the link (below) explaining it well. https://www.synthesia.io/

Baracoda Bathroom Mirror by CareOS

A mirror in the bathroom is normal, but one with a camera!? This one, the <u>Artemis Connected Mirror</u>, seems okay because it is pretty smart. It stores data locally, and comes with a camera block. A high resolution camera assesses your hair and skin for health conditions and can recognize unusual changes requiring medical checks, or it can recommend cosmetics and hair styles. For a full run-down, in a video, check https://youtu.be/J906_YlxlvA https://thegadgetflow.com/portfolio/baracoda-bmirror-by-careos-smart-bathroom-mirror-helps-improve-your-health-routines/">https://thegadgetflow.com/portfolio/baracoda-bmirror-by-careos-smart-bathroom-mirror-helps-improve-your-health-routines/

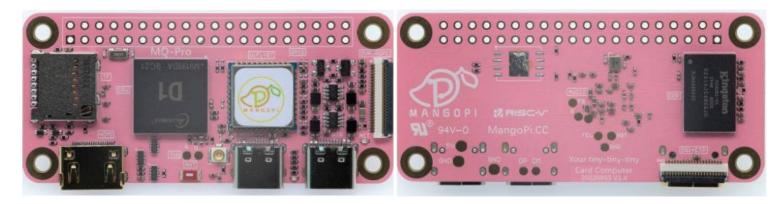
Netgear Nighthawk Tri-Band WiFi 7 Router, 19Gbps, 10 Gig Ports

Should you own devices capable of WiFi 6 performance, or future proofing for the soon to be released, faster, WiFi 7 band, it may be time to look into a new router. A new router need not be as powerful or expensive as this latest **Netgear Nighthawk** router, nor will it improve your internet speed, but it will increase in-house wireless speed between capable modern devices, as well as the level of wireless security. If you now have an all-in-one box (modem\ wireless router combo) from an ISP, it will be necessary to turn off its wireless, in favour of using the new router's wireless signals. Configuration is either by a web interface, built into new routers, or by way of a phone app on first power-up.



https://www.netgear.com/home/wifi/routers/rs700/

MangoPi – and it's pink



This pink coloured PCB (perf board) is simply to distinguish the MangoPi 'single board computer' (SBC) from the Raspberry Pi. However, it is unique in many other ways as well. MangoPi uses a single D1 Risk V chip for processing, including video. Peripheral ports are updated, along with one dedicated to a camera hook-up. For an excellent unboxing and user report, the **YouTube video from Learning Computers**, provides a complete description of features, including its low price.

https://mangopi.org/

Pilips Ultra Efficient LED bulbs

When LED bulb prices dropped, many of these lower consuming lights were installed in homes, especially where lights remained powered on for long periods. Some of those early LED bulbs did not meet longevity or safety claims. However, these latest Philips Ultra bulbs may have solved such issues entirely. It has always been true, that LED bulbs use 80-90 percent less electricity for an equivalent amount of incandescent light. Philips Ultra Efficient LED bulbs will last up to 22 years (about 50,000 hours), and come in powers equivalent to 60 watts, 65 watts and 100 watts, in addition to three temperature hues. They are available on **Amazon.ca** for \$34.18 a pair (60 watts equivalent).



https://www.lighting.philips.ca/consumer/led-lights/eco-friendly-led-light

Cell Phone Boosters

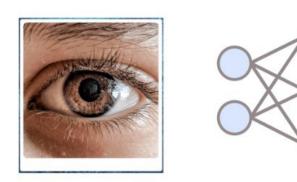
As your distance from a the Bell/Telus/Rogers/Other cell tower increases, your phone needs to increase its own reception power in order to achieve a reliable connection. In rural areas, boosters can often help. Cell phone boosters vary widely in cost, quality and power. As the name suggests, booster kits can pickup signal from a tower and retransmit it for better reception by nearby cell phones. Mobile boosters, for cars and trucks, are even more expensive. Home/Cottage units range from \$300 to \$2000, depending on sensitivity, power, and floor area coverage [and for bands handling (3G 4G and LTE 5G)]. Brand names include weBoost, SmoothTalker, HiBoost, Cel-Fi and Amazboost. Installation involves mounting a directional weatherproof antenna as high as practicable, aiming it toward the nearest cell tower (aided by apps on your phone), running coax inside the building (to/through a powered receiver/amplifier) to a transmitter antenna (inside the building). [Sometimes the receiver/amplifier and transmitter are all one device.] The one I use recommends a separation distance of 'vertical' 50 feet between the outside receiver antenna and the inside transmitter antenna, to prevent overlapping cell signals that may penetrate from sources other than the transmitting boost antenna. [My installation seems to work okay, with about a 30 foot 'horizontal' and 20 foot 'vertical' separation, as long as the phone is kept near the boost transmitter. Zoom meetings and browsing are possible this way, but game playing or movie watching is limited. The nearest tower was quite far away (about 7.5km), carrying both Bell/Rogers and, possibly, Telus transmitters. These boosters will handle all Canadian carriers. [It's time for me to check for any closer, newly installed, towers. The only failures experienced to date: - pointing the receiver badly, and a failed power supply for the amplifier.] I should add, that most cell phone can be turned into a Wi-Fi access point, allowing a computer to function wirelessly from the phone's signal, while on a booster.

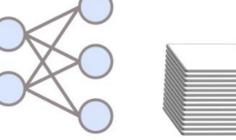
Mouth Pad, like a mouse pad, for quadriplegics

Just imagine what it would be like if the only muscles still working were for throat, tongue, jaw, eyes and breathing. Any device helping to cope with fulfilling life's desires would be valued highly. The "mouth pad" fits like a mouth guard, while still allowing speech. It has a touch sensitive area on the roof of the mouth, controlling cursor movement, similar to a wet glide pad. Pressing hard with the tongue causes a left click, while sucking-in causes a right click. This is not the only assistive device for those with limited movement, but it is the latest.

 $\underline{https://interestingengineering.com/innovation/mouth-bluetooth-mouse-quadriplegics-control-computers}$

Google Research – Eye photos assess medical condition







This research looks at eye photos, first with the aim to find diabetic biomarkers. It may lead to finding biomarkers for many other medical conditions.

https://ai.googleblog.com/2023/03/detecting-novel-systemic-biomarkers-in.html

DPCUC President's Notes

by Peter Camilleri

Well it's Spring even if the appropriate weather has yet to arrive. May is the time the club votes for the people who will be participating in the running of the club. Last year, partly as a result of my inexperience in the role of President and partly from being steamrolled by the flow of time, we had no elections.

This year I hope to do better. In previous months I have been extolling the virtues of stepping up and being active in the club. Sitting back and just watching has got to be getting old folks! Remember, the Director at Large position has no set limit on the number of people and allows participation in the club *without set duties*.

As for the balance of the May meeting, you will NOT want to miss this speaker! The topic is "How to protect ourselves from criminal actions" presented by Constable Darryl Rice.

I for one look forward to learning some new things. I hope to see you all in the zoom meeting!

OK; So one year ago I wrote:

"Finally, in the wide world, I cannot believe that this insane war continues into it's third month as the people of Ukraine fight bravely to save their country. As before, we can only hope and pray that sanity is restored soon, but the toll in human suffering continues unabated."

A year passes and nothing has changed. It feels so futile but all I can still say is "Pray for Peace".

Peter Camilleri, President DPCUC.

Linux in the News

by Alex Morrison



Upscaler: Upscale and Enhance Images

Upscaler is a free and open-source GUI GTK4 software that uses sophisticated AI models to enhance images by guessing what the details could be.

Clonezilla Live 3.1 Released With Memtest86+ 6.10, Improved RAID Support

Clonezilla Live 3.1 introduces two new tools: dvtm (dynamic virtual terminal manager) and dtach, which emulates the detach feature of a screen.

<u>TUXEDO InfinityBook Pro 14 Gen8 Linux Ultrabook Is Now Available for Pre-Order</u>

0 Comments

TUXEDO Computers unveils the TUXEDO InfinityBook Pro 14 Gen8 Linux-powered notebook with a bigger battery, 12th Gen Intel Core CPU, up to 64GB DDR5 RAM, up to 4TB SSD storage, and TUXEDO OS 2.0.

Ardour 7.4 Open-Source DAW Released with Support for MIDI Subgroup Busses O Comments

Ardour 7.4 open-source digital audio workstation is now available for download with MIDI subgroup busses, a volume control to the clip picker, 5.1 to stereo downmix, an option to use a neutral color for new tracks and busses, and more.

GNOME 44 Lands With Major New Features

The latest version of the popular Linux desktop has some major improvements. When will users get their hands on it? It depends on their distro.

Vanilla OS Makes Major Shift from Ubuntu to Debian

Ubuntu's changes have left a sour taste in some Linux users' mouths. Can Vanilla OS satisfy their sweet tooth with an unstable Debian version?

EDITORS NOTE: I encourage all to click the headings in this article or copy and paste the hyperlink in the heading to read the full articles!

Linux -Kismet

By Alex Morrison

I introduced our Linux group last night to an interesting WiFi program called kismet.

Kismet is used by hackers [both white hat and black hat] but is a great tool to identify all WiFi devices and users in the area of your home network.

You are also able to see if anyone is attacking your network.

Most Linux systems offer kismet in their respective package managers.

After installing kismet you should **open a konsole as roo**t and type cd /etc/kismet followed by ls and you will see the contents of the kismet folder.

Then type the name of your choice of text editor [I like nano] to open kismet.conf

This is what the first two commands show

```
[root@localhost kismet]# cd /etc/kismet
[root@localhost kismet]# ls
Kismet-20230504-17-16-01-1.kismet kismet_80211.conf kismet_httpd.conf
Kismet-20230504-17-50-42-1.kismet kismet_alerts.conf kismet_logging.conf
Kismet-20230504-18-21-12-1.kismet kismet.conf kismet_memory.conf
Kismet-20230504-23-18-15-1.kismet kismet_filter.conf kismet_uav.conf
[root@localhost kismet]# nano kismet.conf
```

Here is the file being edited. Remove the # at the front of the source= line and type your WiFi card name. Mine is wlan0. You find the card name by typing ifconfig in a konsole.

```
# See the README for more information how to define sources: sources take the
# form of:
# source=interface:options
# For example to capture from a Wi-Fi interface in Linux you could specify:
source=wlan0
# or to specify a custom name,
# source=wlan0:name=ath9k
# Sources may be defined in the config file or on the command line via the
# '-c' option. Sources may also be defined live via the WebUI.
Kismet does not pre-define any sources, permanent sources can be added here
                            ^W Where Is
                                           K Cut
  Help
                Write Out
                                                           Execute
                                                                         Location
  Fxit
                Read File
                            A) Renlace
                                                           Just i fv
                                                                         Go To Line
```

The next step is to save the file by pressing CTRL+o to save then CTRL + x to exit nano.

Now as root run these three command in succession.

```
[root@localhost alex]# ifconfig wlan0 down
[root@localhost alex]# iw wlan0 set monitor none
[root@localhost alex]# ifconfig wlan0 up
[root@localhost alex]# ■
```

This turns your WiFi card off
This sets the WiFi card to monitor mode
This turns the WiFi card on

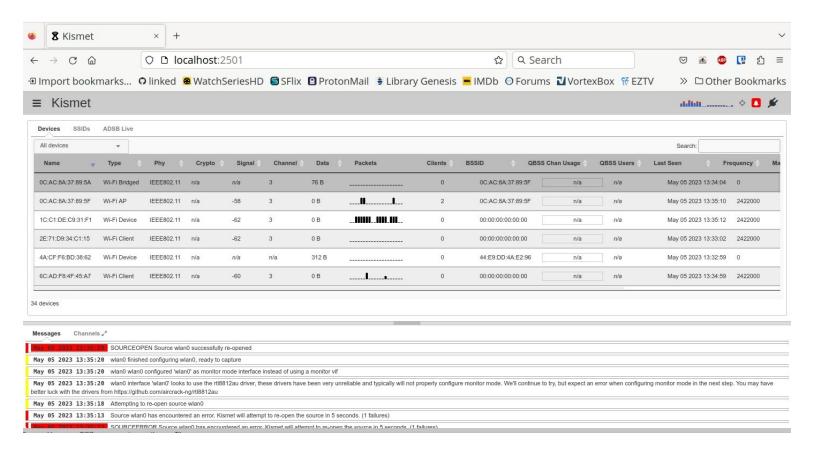
The monitor mode is used to scan all WiFi devices in range of your WiFi card. Modems, Routers, PC's, blue-tooth devices and with the correct antenna even overhead airplanes.

The program is only able to scan a lot of information about devices but not able to modify or attack any devices.

Now we start by typing kismet

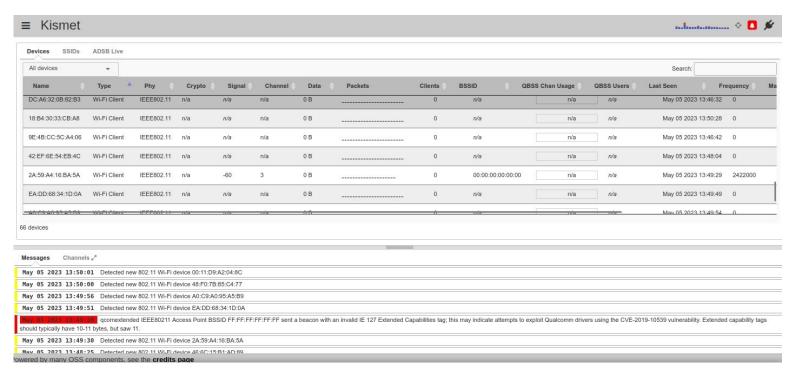
I won't show any info from konsole as the newer version of kismet allows connecting to kismet with a browser.

On my own desktop running kismet I type the address into the browser as localhost:2501



Choosing the three lines at the top left I can select a data source. As I just have my WiFi card [wlan0] and no other data source I just go to the drop down arrow beside All Devices and pick something to look at.

Here is a place to start when I select All Devices.



You can double click any device to see details about the device and drill down for client details. At this time of day there are few devices [modems or routers with people connected]. Also I don't want to reveal any info about my neighborhood networks.

Try the program for yourself and analyze your own network and the devices connected. You may even detect someone trying to connect to your home network who doesn't have permission to do so.

Remember this software only allows looking at devices and clients – you are not able to change anything!!!





Sudoku

Apr 2023

by Alex Morrison



EASY

	7	9	1		4			
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				3	2	7		
7	2				8	1	5	
8							4	
1						2	9	
	3	8						
			6			3		5
					1			

Sudoku

The game boards on this page were produced using **Sudokuki** on PCLinuxOS 64 Bit running KDE Plasma.

The objective is to fill in the missing numbers ensuring that every 3 X 3 grid has the numbers 1 through 9 with no repeats and every full column or row has the numbers 1 through 9 again with no repeats.

If you have troubles solving the puzzles send an email to me and I will send you the solution.

Have fun! Alex

MED

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	5				6		9)
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HARD

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			8			1			
	3				2				7
			1				6		8
			4						
		8	2	1	3			7	

IF you don't Like Sudoku puzzles – try these pages

https://www.boatloadpuzzles.com/playcrossword

http://www.freegames.net/puzzle-games.html

https://www.cryptograms.org/play.php

SPECIAL INTEREST GROUPS SIG's

Special Interest Groups are for members only.

SIG's are really free monthly seminars with question and answer sessions following the presentation(s)

Members of SIG's enjoy a feeling of community and share common goals and interests.

Most SIG's are informal and members who attend them set the agenda for the meeting based on their own needs.

New ideas for SIG groups are welcome.

Special Interest Groups

Durham Linux User Group

Coordinator: Ed Goudge

Our Linux group meet on the first Thursday of every month.

All meetings are currently held using Zoom.

We hope some day to meet again in person.



DPCUC EXECUTIVE

2022-2023

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HOME PAGE

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