

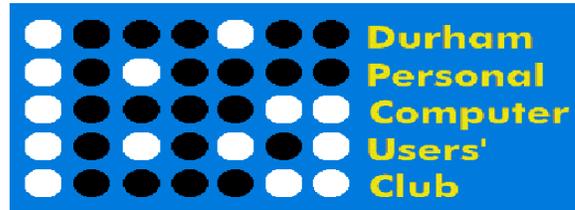
Oct 2022

# PC MONITOR

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Durham Personal Computer Users' Club Newsletter

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### Sept Prize List

Our Prize list is of course missing this month due to our inability to have a general meeting at the church.

Hope all are doing well and staying safe in this COVID infection time!

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**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

**Free and Open Source Software  
and Alternatives by John Kennedy**

**On ZOOM – Thursday, Oct 13 2022, 7:00PM**

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# FYI

- By Dan Delong

## The Sound of All Human Knowledge

Most Windows users recognize the unique boot-up sound marking each iteration of the MS operating system. Moreover, as adults, we recognize just about every product jingle from our childhood. But, what could be the universal audible sound logo for articles on Wikipedia. Until now, all hits on Wikipedia are silent (except for actually playing Wikimedia video/audio files). A contest is underway to employ a unique, universal sound to Wikipedia entries, when they show up in searches. Why is Wikipedia doing this? It is to help the hearing impaired recognize information coming from this trusted source.

[I have an idea for an entry, but I'm not disclosing it here.]

<https://soundlogo.wikimedia.org/>



## Bring On The Sounds

The P0-80 Record Factory is a teen/adult kit you can assemble, to both, play and record, 33 1/3, mono, vinyl, records. Six 5-inch blanks are included (holding 4 minutes per side) along with an adapter for larger 7-inch disks. This item has been so popular, it is currently sold out (at it's current price of \$150 USD). More may be on the way, should you wish to go one their notification list.

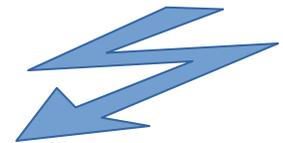
<https://teenage.engineering/store/po-80-record-factory/>



## Wi-Fi 6 and Wi-Fi 7

According to Wikipedia, over the decades, we have adopted some evolving, increasingly fast Wi-Fi standards, from a first introduction of 802.11 in 1997, to 802.11ax in 2020.

But one more – Wi-Fi 7 – is coming, at a near future date. (*As with all other adoptions, WiFi 7 will have backward compatibility*). WiFi 7 will be known as 802.11be, whereas Wi-Fi 6 and 6E is known as 802.11ax. Wi-Fi 7's speed will be 40000Mb/s, whereas Wi-Fi 6's speed is 600Mb/s, or up to the top speed of 6E, at 9608 Mb/s. If your router already handles Wi-Fi 5 or Wi-Fi 6, it is fairly future proof, with wireless speeds approaching a gigabit per second. However, should the need arise for even faster local network traffic, a new 6E router will likely have a couple of 2Gb/s ports. One of these routers, from Netgear, provides a 10Gb/s Ethernet port, which should suffice until you need one of their 40Gb/s routers. On the wireless side, these latest modems provide a significant advantage for most home set-ups; they can handle more simultaneously connected devices, including the ability to handle lots of streaming devices, while covering a larger floor area (an even wider area, using satellite devices).



[https://en.wikipedia.org/wiki/IEEE\\_802.11be](https://en.wikipedia.org/wiki/IEEE_802.11be)

## Teksavvy Buzz

As a Teksavvy customer, I am privy to their newsletter. This latest September issue covers a lot of territory, from the CRTC, to Bill C-11, to uncooperative Telcos (when it comes to subway and emergency services), to taxation, to to lack of competition and no teeth to enforce rules. The article also mentions an effort by our Six Nations to install their own high speed broadband system, and a certain toxic workplace situation.

<https://emails.teksavvy.com/teksavvy-buzz-newsletter-september-29-2022-edition>

## Clarington Technical Services

Rob Waite, with an office in the main Library, handles much of Clarington's technical needs. He, and his team, updated public wireless to *Wi-Fi 5 (802.11 a/b/g/n/ac WAVE 2, handling 2.4Ghz and 5Ghz frequencies*. In his note, he wrote, "Also, we have 15



[\*loanable Wi-Fi hotspots\*](#) which are available for members to checkout for up to 3 weeks at a time. The hotspots run on the Rogers network and will work anywhere there is Rogers cellular coverage. They are incredibly popular."

Clarington's urban areas include Courtice, Bowmanville, Newcastle, Newtonville, Leskard, Kirby, Kendal, Orono, Hampton, Taunton, and Hayden.

## Stable Coins



Stable coins (there are about 200 of them) are a form of digital currency pegged to the value of another currency.

For example, the EURS is a digital token pegged to the Euro. If the purchasing power of the Euro changes, so does the EURS value. Bitcoin, on the other hand, is valued at its buy price, which is constantly changing, up and down, like the stock market. Circle is one of the newer tokens, pegged to the US dollar, a currency that seems to be doing well, even in these inflationary times. USDC is another such stable coin, trusted and with a good track record of stability, matched to the USD.

*[Personally, I do not participate in any cryptos, mainly on principal, due to the extremely high consumption of electrical energy currently demanded by authentication and accounting systems.]*

<https://www.blockdata.tech/markets/use-cases/stablecoins>

## Kindle Scribe – in time for Christmas

Shipping November 30<sup>th</sup>, in Canada, this latest paper-white reader from Amazon, with the largest screen yet (10.2 inches at 300ppi) will include a premium stylus for hand-writing notes onto book pages or creating handwritten journals. Although Scribe is not water proofing, it does have automatic page orientation, long battery life and comfortable screen lighting colours, including tungsten yellow. The included WiFi 5 (also 2.4) connection is for downloading e-books and for emailing attachments. Amazon limits note making onto book pages to only the books it sells. However, it will import and export a wide variety of commonly used file formats. Using the premium stylus feels like writing on paper, according to Kindle's product developer, and the stylus requires no battery or charging.



[Scribe is only one of many new products from Amazon...]

<https://www.cnbc.com/2022/09/28/live-amazon-announces-new-echos-fire-tv-and-more-gadgets.html>]

<https://www.amazon.ca/dp/B09BSQ8PRD>

## Google's Stadia - Closing Down

Stadia is a cloud-based, high-resolution, streaming, subscription service for Gamers, using their proprietary hand-held controller. New purchases, of game and hardware, have been closed down; but, Google is now releasing six, new, free, games to Pro users, and will fully refund those who invested in Stadia games and hardware through their store. January 18, 2023 marks the end of Stadia.

<https://9to5google.com/>

## Google's AI for Chest Radiology

Radiologists are typically responsible for finding anomalies in chest X-rays. Specialists, in this line of work are becoming hard to find, and not all interpretations of the same X-rays will be in agreement. Since billions of X-rays are now viewable as digital images, why not let machine learning have a crack at a sub-set of these records? Google researchers wanted to go the extra mile, and reduce the size of the dataset required for machine learning (not just by restricting analysis to chest X-rays) and to make such analysis perform reliably on lower level hardware.

<https://ai.googleblog.com/2022/07/simplified-transfer-learning-for-chest.html>

## Alpha by Freewrite

Start with a laptop, then take away the screen, speakers, and operating system. What do you have? - a portable typewriter (almost). *I believe this device is most suited for creative writers, perhaps essay writers, also.* These are the people who can make use of a distraction-free device, and are able to touch type while in a free flow of their thoughts, whenever and wherever inspiration strikes. Alpha can hold nearly one million "pages" and requires recharging via USB-C for every 100 hours of usage. Depending on the font sized chosen, the view window displays either 4 or 6 lines of text, on a non-glare LCD screen.



<https://www.indiegogo.com/projects/freewrite-alpha-distraction-free-writing-anywhere#/>

## ICE – Image Composite Editor -free

ICE is the best image stitching software I've ever used. Originally a Microsoft Research project, Version 2 has added the ability to make panoramas from a video, and can also fill in the ragged edges with predictive content. It can make a 360 panorama, taken in staggered overlapping photos, and create an overhead view. This project is no longer in development. Playing this [short video](#) will explain it all.

<https://www.microsoft.com/en-us/research/project/image-composite-editor/>

## The State of Facial Reconstruction

To emulate facial expressions, computer vision has to, first, plot many more points than the 68 points commonly needed for facial recognition. Hollywood movies have become so good at this process that fine facial movements can be created for an actor's face without the actor being present at all. These computer recreations ignore eye glasses, beards, and ethnic features. This video demonstrates the latest in expressive facial reconstruction.

<https://youtu.be/M8NNytHysVg?t=3>

## Mobileye

Those interested in self-driving vehicles may wish to visit this the Intel company subsidiary, which has already spent a few decades developing the technological elements needed for computer vision based driving decisions currently used by several major manufacturers (except Tesla). Mobileye achieves all this at a lower cost by employing only cameras, maps, and their Eye-Q system on a chip. This company originated in Israel in 1999, and was acquired by Intel in 2017.

<https://www.mobileye.com/>

## Yondr – for cellphone free enjoyment

Schools and theatres that use the Yondr system free themselves from annoying/distracting ringtones,; these are generally sound alerts originating from student or patron phones. Yondr is not a signal jamming system, but works effectively by requiring those who must use their phone during a session, or those who receive a vibrating alert, to exit to an area where phone use is permitted. All they have to do is bring their phone (now locked inside a secure pouch) to the “phones allowed” area and wave it near an unlocking device.

<https://www.veryondr.com/faq>

## VR Aids Memory

University of Maryland researchers, employing the latest VR headsets, found that test subjects increased retention of images located throughout the virtual environment. [*That environment is termed, “A Virtual Memory Palace”, because the virtual floors and walls looked like the inside rooms of a luxurious palace.*] Hanging on those walls were head shots/photos of well known people. After a period of time, the test subjects, all of whom were comfortable with computers and using a mouse/monitor



combination, were presented with the same scene, but with all of the pictures replaced by numbers. The task facing them – match as many numbers with the names of the people in the now absent photos. Memory improved by almost 9% for those using the VR headset over those who did the same task using the mouse/monitor system.

<https://today.umd.edu/can-learning-virtual-reality-enhance-memory-3f558bab-22b6-4571-bd50-bc7fcca1fedd>

## Nano Shrinkage

Major research foundations are developing tiny structures for medical monitoring, electronics, and more. The first efforts in this direction involved printing onto thin, clear, polymer sheets that contracted to their relaxed size when heated, reducing the size of the printed surface exponentially. This study (*linked below*) carries the shrinking phenomenon much further, in that shrinkage of some polymers can create tiny wrinkles, where the size and orientation of these 3D wrinkles is controllable, creating channels for chemical conduits, and for tiny stamping moulds, similar to those used to manufacture car body panels (but at a nanobot-scale). Medical diagnostics and treatment may soon be achieved in real-time and remotely, using small, nano-shrunk monitoring devices, as well as for drug delivery.

<https://www.nature.com/articles/s41378-021-00312-8>

## VR and 5G to Transform Surgery

At the MaRS (“incubator”) Innovation Hub, in Toronto, remote surgical training is underway, in a *Try-it-before-you-buy-it*, Augmented VR setting, made possible by 5G fast Internet and unique equipment being developed in nearby facilities. An aspiring surgeon in training, at any location on the planet, can be guided in their first attempt by a master surgeon, who looks over their shoulder while they try out virtual surgical tools (and on a virtual patient). Later, when the real patient is on the table, the surgical team will be able to highlight that patient’s organs, bones, and nerves based on scans and using oral commands, thereby increasing the accuracy of the operation, by finding the target organs and avoiding peripheral damage. The Toronto Star recently covered this topic...[ <https://www.thestar.com/business/mars/2022/09/29/the-virtual-cutting-edge-how-augmented-reality-is-poised-to-transform-surgery.html>

**MaRS**

<https://www.marsdd.com/video/teaching-surgeons-through-virtual-reality/>

## Government vs Government

What does Cyber Warfare look like? We, the general public, probably see none of it. But, a recent incident, related to Taiwan's spat with China over visitations by Western democratic emissaries, has emerged. Li-hsin Angel Liu, a representative of the Taiwanese government in Vancouver, had her Facebook account hacked, making it look like she approved of a Hong Kong Economic and Trade Office event in Toronto. She avows not to know the person who caused the "like" on her Facebook account. Changing her password appears to have stopped further hacks. At the same time, Taiwanese government websites were forced offline by DDoS attacks, originating from Chinese IP addresses. One of the British tabloids ran an article suggesting Russia's next undersea sabotage move may be the cutting of Atlantic cables, causing huge economic fallout on both sides of the ocean. I doubt Musk's Starlink satellite system would be able to take up the slack, in such a scenario.

## LG Makes a New 42-inch Flex-curve TV/Monitor

As the first of its kind, this continuously variable curved, or flat, TV/monitor will be expensive. LG has thrown everything into it, not just the variable curvature. It has a fast refresh (0.1 second), is brightness adjustable/boostable, is colour perfect, is OLED, including a screen that is height and tilt adjustable. Missing from a lot of thin televisions and monitors, these days, is a strong audio system. This one has two 40 watt speakers in the base. The advertising for this product indicates a one-button switch between computer and TV modes (like a KVR switch) allowing the same mouse and keyboard to be plugged into it and the computer at the same time. On the wireless side, you'll find Wi-Fi 6.

<https://www.lg.com/uk/tvs/lgoledflex>



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## Free Linux Wallpaper



## DPCUC President's Notes

It is with great sadness that I must report that club member Farncomb (Farny) Le Gresley passed away this September at the age of 96. Farny was a regular attendee to the club's Zoom meetings and he will be missed by all of us and his wife, four daughters, 22 grandchildren, and 10 great grandchildren.

Our efforts to return to in-person meeting continue to struggle. The latest hurdle seems to be an outbreak of Covid-19 at the church where we normally meet. We will continue to work toward restoring "normal" club meetings when it is possible. In the mean time we will have to make do with remote Zoom meetings.

In other news, it seems that changes in the world of cryptocurrency now mean that it is no longer feasible to mine Ethereum currency with a graphics processor (GPU). Hopefully this means that all the high performance video cards will no longer be snapped up by miners and a raft of used cards should flood the market. This should spell more reasonable prices hopefully soon.

Finally, the madness in Russia continues as the war against Ukraine shows no sign of ending. To be clear, this is not a case of two sides to blame. If Russia stops fighting, the war ends. If Ukraine stops fighting, Ukraine ends.

Please, pray for peace.

Peter Camilleri, President DPCUC.



## Linux in the News

by Alex Morrison

### [Wireshark 4.0 Released as World's Most Popular Network Protocol Analyzer](#) [0 Comments](#)

Wireshark 4.0 open-source network protocol analyzer is now available for download. This major release comes with support for new protocols, as well as many other changes.

### [Linux Mint 21.1 "Vera" to Arrive on Christmas with Improved Driver Manager, New ISO Verifier](#) [1 Comment](#)

The upcoming Linux Mint 21.1 "Vera" operating system is planned for Christmas 2022 with improved Driver Manager and Software Sources, new ISO verification tool, and more.

### [Plasma Mobile Gear 22.09 Is Out for Your Phone and Tablet with a New Default Homescreen](#) [0 Comments](#)

Plasma Mobile Gear 22.09 is now available for phones and tablets with updated apps, a new Homescreen, and many other improvements.

### [Regardless of your motherboard's manufacturer, a single command line tool makes it simple to find your hardware's manufacturer, model, and more in Linux.](#)

- [Full story](#)
- [Read more](#)
- [0 threads and 0 posts](#)

### [Fedora and openSUSE Are Dropping Support for Some Video Codecs](#)

- [Linuxiac.com](#); By Bobby Borisov (Posted by [bobolin](#) on Oct 5, 2022 7:32 PM EDT)
- Story Type: [News Story](#); Groups: [Fedora](#), [Multimedia](#), [SUSE](#)

Fedora and openSUSE are removing H.264, H.265, and VC-1 VA-API video codecs support from Mesa to avoid potential license issues.

- [Full story](#)
- [Read more](#)
- [0 threads and 0 posts](#)



# Linux – hdparm

By Alex Morrison

Hdparm is a command in Linux with which most users lack knowledge.

How I discovered it was when I saw a YouTube video showing how to test the speed of USB, Sata or SSD drives.

The hdparm command needs to be preceded by sudo on some Linux systems. Others need to log in as root user to execute the command correctly.

Before running the command it is best to run ---- lsblk -S

The image below shows what appears on my system

I have a single hard drive [sda] and two USB drives [sdb and sdc]. Also sr0 is my optical drive [DVD]

NAME	HCTL	TYPE	VENDOR	MODEL	REV	SERIAL
sda	0:0:0:0	disk	ATA	WDC WD20EZAZ-00GGJB0	0A80	WD-WXA2A50CKZ4X
sdb	5:0:0:0	disk	Kingsto	DataTraveler 3.0	PMAP	60A44C42669ABEC1BB533B16
sdc	6:0:0:0	disk	Philips	USB Flash Drive	PMAP	07009995F33DF629
sr0	2:0:0:0	rom	hp	hp DVD A DS8A8SH	KHD4	657225067144

Now when I run the hdparm command [in this manner ---- hdparm -t /dev/sda] --- I see the results shown below.

**/dev/sda:**  
Timing buffered disk reads: 466 MB in 3.02 seconds = 154.36 MB/sec

**/dev/sdb:**  
Timing buffered disk reads: 132 MB in 3.01 seconds = 43.85 MB/sec

**/dev/sdc:**  
Timing buffered disk reads: 284 MB in 3.02 seconds = 94.08 MB/sec

The higher speed of the test on sda is because it is an internal sata drive.

Notice the two USB drives have different transfer speeds.

The hdparm command has a few other options that might be dangerous if misused.

The command allows you to set Sata and IDE drive parameters.

Hdparm can aid in forensic analysis of drives by providing information on the following.

- 1 - Identification information
- 2 - Host protected area [HPA]
- 3 - Security options

Running this command to get Information --> hdparm -I /dev/sda/ | less

I get the info below [the | less options is to pause after a full screen of output when using an internal drive]

A lot of information comes from internal drives.

```
ATA device, with non-removable media
  Model Number:      WDC WD20EZAZ-00GGJB0
  Serial Number:     WD-WXA2A50CKZ4X
  Firmware Revision: 80.00A80
  Transport:         Serial, SATA 1.0a, SATA II Extensions, SATA Rev 2.5, SATA Rev 2.6, SATA Rev 3.0
Standards:
  Used: unknown (minor revision code 0x006d)
  Supported: 10 9 8 7 6 5
  Likely used: 10
Configuration:
  Logical          max      current
  cylinders        16383  0
  heads            16      0
  sectors/track    63      0
  --
  LBA user addressable sectors: 268435455
  LBA48 user addressable sectors: 3907029168
  Logical Sector size:          512 bytes
  Physical Sector size:         4096 bytes
  Logical Sector-0 offset:      0 bytes
  device size with M = 1024*1024: 1907729 MBytes
  device size with M = 1000*1000: 2000398 MBytes (2000 GB)
  cache/buffer size = unknown
  Form Factor: 3.5 inch
  Nominal Media Rotation Rate: 5400
Capabilities:
  LBA, IORDY(can be disabled)
  Queue depth: 32
  Standby timer values: spec'd by Standard, with device specific minimum
  R/W multiple sector transfer: Max = 16 Current = 16
  DMA: mdma0 mdma1 mdma2 udma0 udma1 udma2 udma3 udma4 udma5 *udma6
  Cycle time: min=120ns recommended=120ns
  PIO: pio0 pio1 pio2 pio3 pio4
  Cycle time: no flow control=120ns IORDY flow control=120ns
Commands/features:
  Enabled Supported:
  * SMART feature set
  Security Mode feature set
  * Power Management feature set
  * Write cache
```

I only showed the Information section not HPA or Security. I leave the other info for the adventurous to discover. A good source of information on the hdparm command is found by searching YouTube. Also just typing --> man hdparm will generate a lot of help.



# Sudoku

Sept 2022

by Alex Morrison

**EASY**

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

## Sudoku

The game boards on this page were produced using **Sudokuki** on PCLinux 64 Bit running KDE 5 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**

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

**HARD**

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

**Details**

**BEGINNER**

**Co-ordinator: Ed Goudge**  
**Location: Call for Location**  
**Telephone: 905-926-9003**  
**Date: 3rd Thursday of month 7:00 PM**

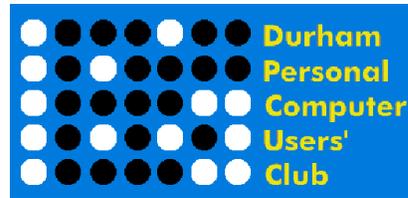
**LINUX**

**Durham Linux User Group**

**Co-ordinator: Ed Goudge**  
**Location: OSCC 43 John St W**  
**Telephone: 905-926-9003**  
**Date: 1st Thursday of month 7:00 PM**

**Digital Camera Group**

**Co-ordinator: Ed Goudge**  
**Location: Call for Location**  
**Telephone: 905-926-9003**  
**Date: 4<sup>th</sup> Thursday of month at 7:00PM**



**DPCUC  
EXECUTIVE**

**2021-2022**



<b>President</b>	<b>Peter Camilleri</b>	<a href="mailto:peter.c.camilleri@gmail.com">peter.c.camilleri@gmail.com</a>	289-928-1579
<b>Vice-President</b>	<b>Anne Delong</b>	<a href="mailto:annedelong@timetraces.com">annedelong@timetraces.com</a>	905-623-6975
<b>Secretary</b>	<b>Mark Hunter</b>	<a href="mailto:mark.s.hunter6605@gmail.com">mark.s.hunter6605@gmail.com</a>	905-924-2196
<b>Treasurer</b>	<b>Allan Francis</b>	<a href="mailto:alelaine@sympatico.ca">alelaine@sympatico.ca</a>	905-576-0481
<b>Membership</b>	<b>David Odynski</b>	<a href="mailto:odynskid@sympatico.ca">odynskid@sympatico.ca</a>	905-576-6325
<b>Librarian</b>	<b>Dan Delong</b>	<a href="mailto:dandelong@timetraces.com">dandelong@timetraces.com</a>	905-623-6975
<b>Program Director</b>	<b>TBA</b>		
<b>Advertising Director</b>	<b>TBA</b>		
<b>Newsletter Editor</b>	<b>Alex Morrison</b>	<a href="mailto:dpcuc@rogers.com">dpcuc@rogers.com</a>	905-579-1560
<b>Director at Large</b>	<b>David Swain</b>	<a href="mailto:david@swainracing.com">david@swainracing.com</a>	905-985-5201
<b>Director at Large</b>	<b>Bob Bell</b>	<a href="mailto:bob@rgbell.ca">bob@rgbell.ca</a>	905-571-6748
<b>Director at Large</b>	<b>Ed Goudge</b>	<a href="mailto:edgoudge@yahoo.com">edgoudge@yahoo.com</a>	905-926-9003

HOME PAGE --- <http://www.durhampc-usersclub.on.ca/>

**Newsletter  
Information**

PC Monitor is the official publication of the Durham Personal Computer Users' Club and is published monthly at Oshawa, Ontario. The DPCUC mailing address is PMB # 110, 27-1300 King St East, Oshawa, ON L1H8J4. The PC Monitor cannot be responsible for errors or inaccuracies in the content, although efforts will be made to publish information accurately.

The deadline for articles and information is 10 days following the monthly meeting. Late submissions may not be published due to tight schedules. Submit articles by email to the editor at [alexmorr@rogers.com](mailto:alexmorr@rogers.com). Articles should be submitted in Word Format using Times New Roman as the preferred Font.