June 2017

PC MONITOR

Durham Personal Computer Users' Club Newsletter
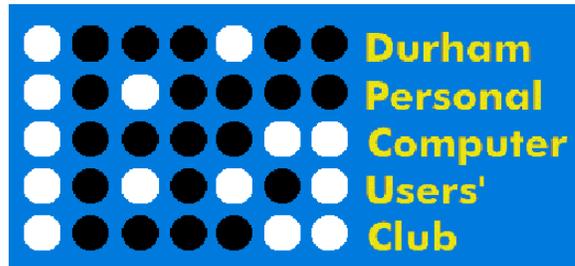
May Prize List

Glen Goslin	$16.00	Neil Petty	LED Flashlight
Linda Netton	$9.00	Lloyd Lindsay	USB LED Light
		Mike Roche	Magnifying Light
		John McRae	Tiny Screwdriver Kit

Please visit the Club Web Page for all the latest links and information

http://www.durhampc-usersclub.on.ca/

INSIDE THIS ISSUE

Next Meeting

The Global Semiconductor Industry: a Canadian Perspective

By Mike Alford
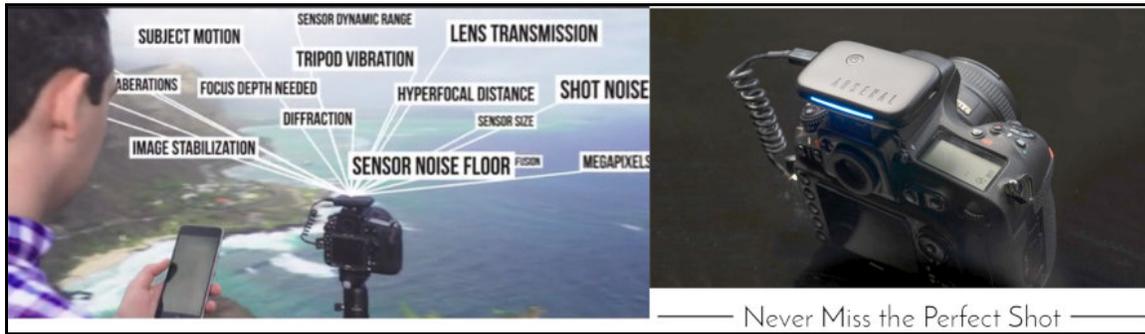
Faith United Church at 1778 Nash Road, Courtice

Thursday, June 8 2017   7:00PM

FYI
                                                        - By Dan Delong

Artificial Intelligence Coming to Cameras

Most of the big names in photography (Canon, Nikon, Fujica, and Sony) will be adding an optional AI feature set to both mirrored and mirror-less cameras. Professional photographers may consider this to be heresy. But who wants to let a chance for a better shot go by, just because you can't get to the controls quickly, even if you know where they are and what they do? AI can sense the need for a faster shutter (object is moving), or a need to close/open the aperture (distant/close object). AI can also take several quick shots at different apertures, to create a merged image that is sharp throughout the focal range. Also, AI can create better HDR (colour intense) images, with better stabilization protection from the slightest movements while mounted on a tripod. If the device is connected to an app on a smart phone, it can intelligently operate the camera to achieve better time lapse images, and operate the shutter for long exposures. So far, this kind of AI has been built into a hot shoe, add-on device, called the **Arsenal**, which will sell for about $300. https://www.kickstarter.com/projects/2092430307/arsenal-the-intelligent-camera-assistant-0

goTennas – extra cell phone radios

Walkie-talkies (Talkabout two-way radios) compete with cell phones for urban communication, but they are spotty over undulating terrain, or when on a hiking adventure in the wilderness. Walkie-talkies lack range, and they can't exchange any information not deliverable orally. GoTennas try to solve these problems by exempting the use of cell towers for communication between cell phones. GoTennas work in pairs, to exchange text messages and user locations whenever cell tower signals can't be reached, or when cell towers are overwhelmed with traffic. Furthermore, **goTenna** messages are private and encrypted, making such devices a favourite during political demonstrations. One pair costs $150 USD. https://www.gotenna.com/pages/gotenna

Hacked through Subtitles
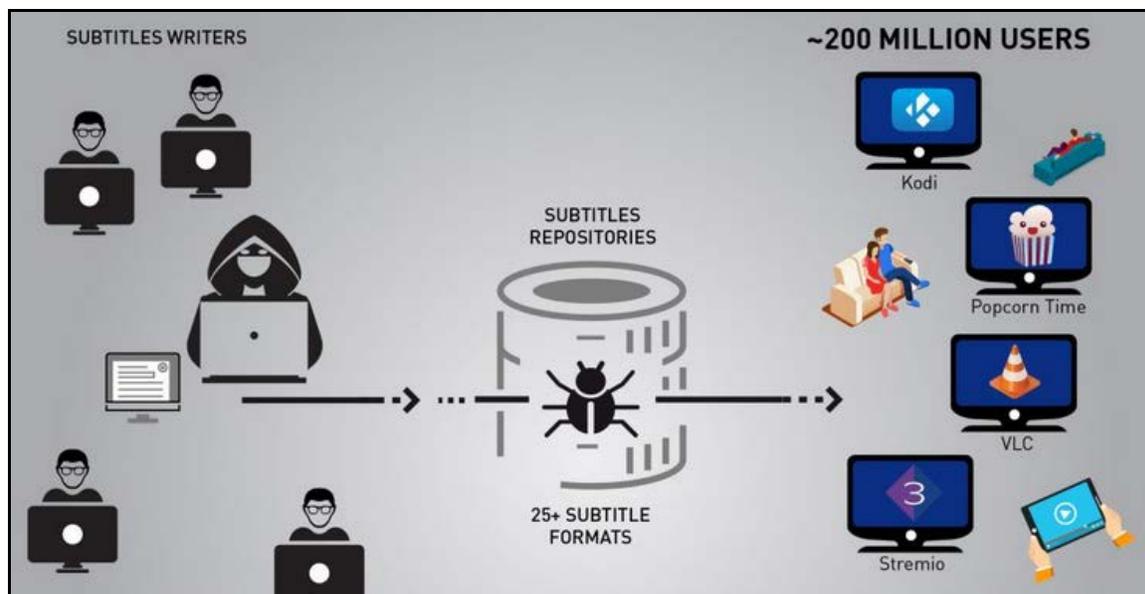
The enjoyment of mp3/4 music/video files is enhanced when you can read the lyrics as they scroll on the screen. The words for such caption-like appearances are contained in separate files - **.LRC**, for lyrics, and **.SRT** for subtitles in videos. Hackers have discovered that such companion files provide a 'wide open', backdoor to personal computers when media files are run in many of the most common media players. **Check Point**, an Israeli security company, has alerted software developers to this danger, most which have already dealt the problem. But, some users still run old player versions, or lesser known media players, that may no longer have support. The media players updated, for sure, are: **PopcornTime, Kodi, VLC, and Stremio**.

http://blog.checkpoint.com/2017/05/23/hacked-in-translation/

MU-MIMO means Multiple User, Multiple Input, and Multiple Output

To solve the slow down in Wi-Fi speed when many devices are competing for signal (a/b/g/n), some of the newer AC routers are now equipped with extra antennas and MU-MIMO technology, a protocol that can service more devices simultaneously on the ac protocol. However, all receiving devices must also contain technology complying with MU-MIMO standards to take advantage of MU-MIMO.

- Both MU-MIMO and non-MU-MIMO (SU-MIMO) devices operate faster because all devices on the network have less time to wait to get data from the Wi-Fi router.
- MU-MIMO technology increases the capacity and efficiency of your router, allowing it to handle more Wi-Fi-intensive activities such as streaming and gaming.

If your laptop is a few years old, it may not be compliant. However, inserting a wireless dongle (such as the Linksys Max Stream USB dongle) into one of the fast USB ports, adds MU-MIMO to the device. Expect to pay a significant premium for this newest technology. Linksys models are now in the $200 CDN range, and are available from Canada Computers and other retailers. TP-Link has a new tri-band model costing well over $400 CDN. It has two 5 GHZ bands and one 2.4 GHZ band. I assume my 5Mbps DLS connection is too slow to take advantage of MU-MIMO, but I have the router anyway. http://www.linksys.com/us/r/resource-center/what-is-mu-mimo/

Acer Swift 7 - with MU-MIMO

This very thin and light 13.3-inch, 1920x1080px, Acer laptop claims 3X faster Wi-Fi when connected to a MU-MIMO router, long with Gorilla Glass toughening, and the Windows 10 Hello sign-in system (no password), based on voice recognition. Memory is solid state, at 512GB, with 8GB of RAM. The Core i7 processor is only 1.30 GHz, but using lower power allows for 9 hours duration when running on battery. The Acer Swift 7 is so thin (9.98 mm or 0.39 inches) that it compares to the dimensions of the duo-tang folders of my high-school days. Once again, the latest hardware comes with a premium price of well over $1000, although the Core i5 256 GB version is a few hundred dollars less. https://www.acer.com/ac/en/US/content/models/laptops/swift7

Brinno remote cameras

When I first read the ad about a peephole camera, from **Brinno**, backed with a small screen to show who is on the other side of the door, I thought, – "How is this better than a simple, traditional, wide angle lens inserted in the door?" Staples Canada must see some value in it, for Staples sells this model for just under $150 CDN. (Judge it for yourself.) Looking at the camera from the outside, it looks like a traditional peephole lens. On the inside, it is much bigger, consisting of a battery operated camera, triggered to take photos when it senses nearby motion. The screen lets the home owner review all of the past approaches to the door. Two AA batteries should last for about 6,000 triggers (6 months estimate). The Brinno main web page lists a number of other remote camera options, including weather proof, time lapse cameras. http://brinno.com/

Facebook – now into mindreading

Facebook's Building 8 (in Menlo Park, California), now concentrates on building hardware to read brain activity for purposes like, speaking or texting your thoughts via computer, before you actually speak them. The devices currently undergoing testing are not implanted in the scalp, but could be a skull cap, perhaps, or headband, that is able sense the part of the brain getting ready to communicate (or release) thoughts. Although one aim is to eventually reach a typing/speaking speed of 100 words per minute, just by thought alone, to date, lab work has yielded about 8 words per minute. Facebook researchers have also discovered that meaningful sound need not be understood through ears alone; human skin can also make meaning from vibrations sent from the thoughts of another person, with those thoughts originating from what the other person is seeing with their own eyes. This new discovery – sound transfer of thoughts to skin - may develop into a **new language**, both for those who can see and hear and those who cannot. However, Facebook's first motive for this line of research has been to improve Augmented Reality learning and gaming. The 'brain reading team' works under a tight timeline, of just 2 years, in which to develop and commercialize this hardware. I also learned that Facebook is hiring, 38 positions worldwide, and 5 positions here in Canada (for non-programmer roles) at the MaRS building in Toronto.

Home Energy – on demand
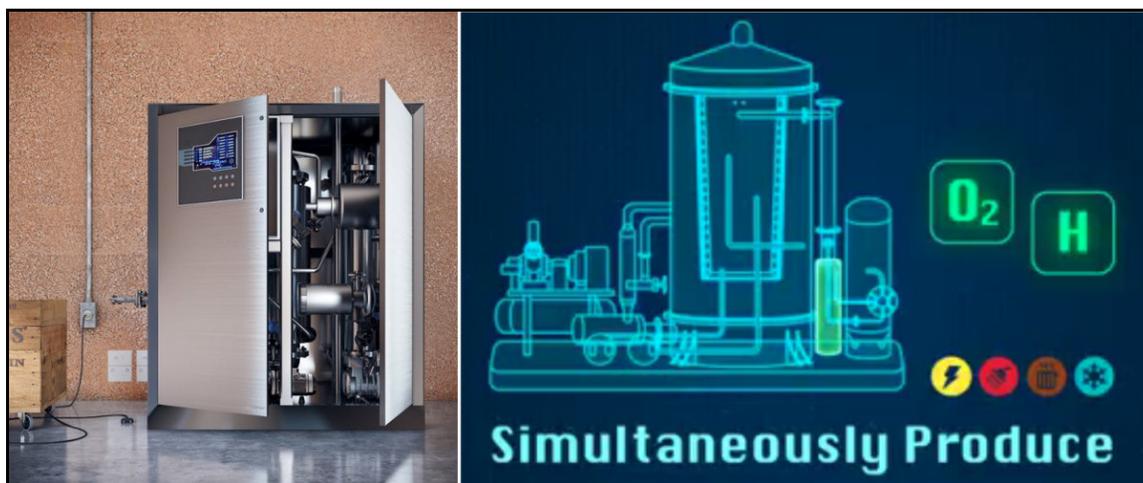
Newcastle University, in Australia, is one of the parties involved in developing a refrigerator-sized unit for outputting about **24KwH per day** – which is enough for a single home. If the unit had to produce electricity all the time, it would need almost continuous energy input via wind, solar, grid electricity, or natural gas to heat reactor chamber. But, since the system can also store energy (heat and chemical energy) for later controlled release when needed, as well as send waste heat to the home's heating system (along with the production of oxygen gas, and hydrogen gas) such homes can run almost completely off-grid (off of the electrical grid, that is). The developers of this system feel it will pay for itself in about one and one half years, and still be cheaper than Tesla's Power Wall.
http://newatlas.com/energy-on-demand-redox-home-electricity-generation-storage-system/49568/

Prynt – 30 second printer for smart phones

Slide an iPhone or a Samsung Galaxy into this printer's adapter, load the device with 40 sheets of sticky-backed printer paper ($20 USD), then point and shoot while holding focus on the subject for 5 or 6 seconds. The reason for staying on the subject for a few more seconds… Prynt also records a short video of the event on the smart phone. After printing, just focus the camera onto the print itself, and the pre-recorded short video will run on the smart phone screen. [Augmented reality in action] If the photo had been given away to someone as a keepsake, I assume they'll be able to run the same video that accompanied the original printed photo - that is, if using the same **Prynt app** to view it and while connected to the Internet. Amazon sells Prynt for $140 USD. If you wish to print other images (not taken by the camera), just located them, wherever they are stored (or found on the Web), and send them to the printer's app. https://www.prynt.co/

Kiwano K01

A fat-wheeled, single person, scooter *(costing twice as much as my first 90cc Honda Trail bike)* has arrived. At a speed of up to 20 mph, the **Kiwano** can travel up to 20 miles on a charge. Control is similar to the Segway – just lean, left, right, forward and back. Still, this is not the kind of transportation an elderly person would choose, despite the added security of a stem with handgrip controls and a shock absorbing suspension. Kiwano requires good balance and the ability to jump off and run a few steps without suffering a face plant. The battery fully charges in one hour. If that runs out, the 35 pound weight must be dragged or carried. Kiwano can also be driven with an Android or iOS app on a phone, perhaps to send it to a storage location in the office. The retail price is $800 USD. http://newatlas.com/kiwano-k01-self-balancing-monowheel-electric-scooter/49705/

Sub-Pixels are now colour tuneable

Current display screen use filters, or on/off switches, to display the full range of colours using three sub-pixels of red, blue, and green. A recent development shows that the sub-pixels themselves can be charged is a way that makes single sub-pixel run through the gamut of colours, thus removing the need for separate sub-pixels. Screens of the near future will have much greater detail per inch. https://today.ucf.edu/ucf-research-bring-drastically-higher-resolution-phone-tv/

Sudoku   for June 2017   **by Alex Morrison**

A Challenging Puzzle this month!

Sudoku

The game board on the left was produced using **Sudokuki** on PCLinuxOS 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 puzzle send an email to me and I will send you the solution.

Have fun! Alex

Linux in the News   **By Alex Morrison**

From: http://lxer.com/ & http://www.linuxtoday.com/ & http://www.linuxinsider.com/
http://www.topix.com/tech/linux

How To Configure SAMBA Server And Transfer Files Between Linux & Windows

- LinuxAndUbuntu.com; By Mohd Sohail (Posted by MohdSohail on May 28, 2017 9:09 PM EDT)
- Story Type: Reviews; Groups: Linux

If you are reading this article it means you have a network at home or office with Windows and Linux hosts or have created a virtual network using VirtualBox and need to send files between a Linux host to Windows. File transfer between Linux and Windows can be done using SAMBA which is an open source software suite that provides seamless file and print services to SMB/CIFS clients, allowing interoperability between Unix/Linux based system and Windows-based system.

- Full story
- Read more
- 0 threads and 0 posts

Feren OS Could Be the Best-Looking Desktop on the Market

- Linux.com; By Jack Wallen (Posted by bob on May 28, 2017 6:52 AM EDT)
- Story Type: News Story; Groups: Distributions, Linux

Imagine taking Linux Mint, placing the Cinnamon desktop on it and then theming it to not only to serve as a perfect drop-in replacement for Windows 7 but to be one of the most beautiful Linux desktops you've seen in a long while. That's what Feren OS has managed -- and has done so with aplomb.

- Full story
- Read more
- 0 threads and 0 posts

What Internet-Connected War Might Look Like
May 10, 2017

A technician hurriedly slings his backpack over his shoulders, straps on his M9 pistol, and bolts out of the transport with his squad of commandos in a hail of gunfire. As soon as his team reaches the compound, he whips out a laptop and starts deploying a rootkit to the target server, bullets whizzing overhead all the while. Army Cyber Institute's recruits are training to do just that. [More...]

Peppermint 8 Linux OS Released, It's Based on Ubuntu 16.04.2 LTS with Linux 4.8

- Softpedia; By Marius Nestor (Posted by hanuca on May 28, 2017 6:46 PM EDT)
- Story Type: News Story; Groups: Distributions, Ubuntu

Mark Greaves of the Peppermint development team was proud to announce today the release and immediate availability of the Peppermint 8 GNU/Linux distribution.

- Full story
- Read more
- 0 threads and 0 posts

Arduino projects to upgrade your car
(May 26, 2017, 14:00) (0 talkbacks)

The Arduino microcontroller opens doors for auto hobbyists and tinkerers.

5 myths busted: Using open source in higher education
(May 26, 2017, 15:00) (0 talkbacks)

 opensource.com: How a PhD student finished his degree in fine arts using Linux.

# Linux Software   Qwinff   by Alex Morrison

There are times when you might want to have a video file converted to another format. Perhaps you might wish to play the video on a media device restricted to only a few select formats. Perhaps you may wish to play a video on a Phone or other mobile device that also may be limited to only a few media formats.

On Linux we have several ways to convert video files to other formats. Qwinff is one of the easiest conversion tools we might use.

This is the very simple looking start screen.
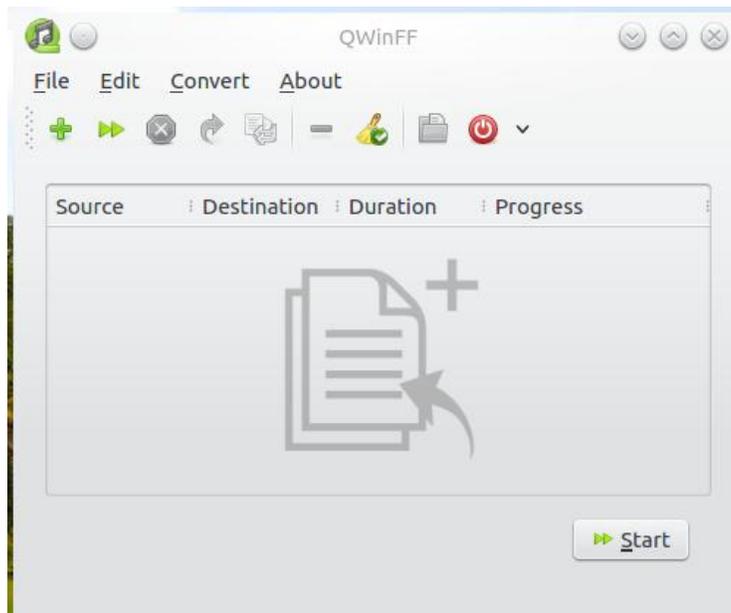
All we need do is select File and Add or click the + sign to begin selecting a video file for conversion. Here I have selected a mp4 video file.
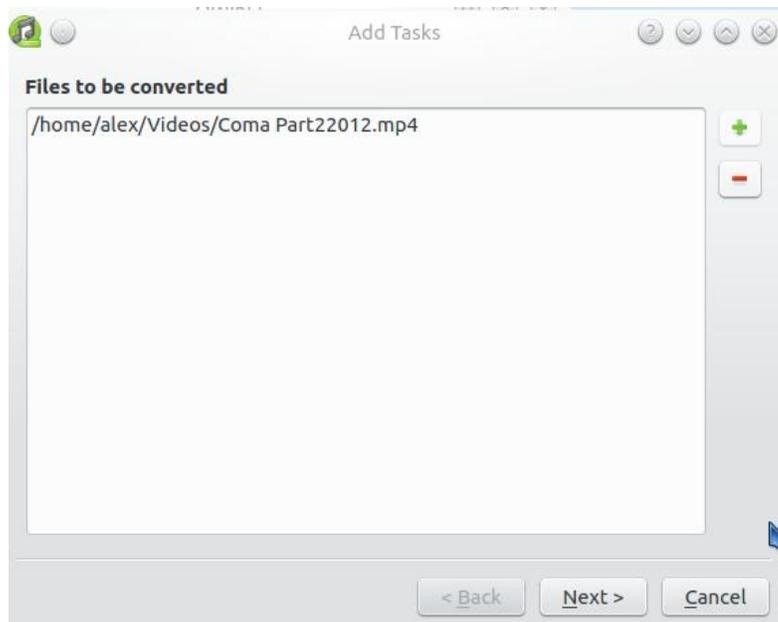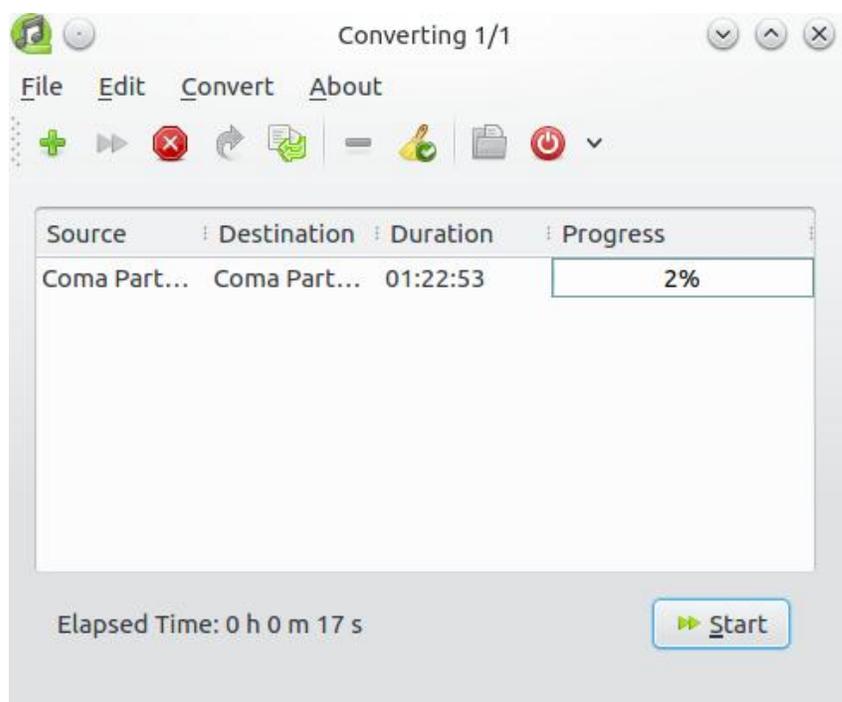
Click to Next to get to the following screen

Here I can click the drop down arrow for Convert to file settings.
I will click on AVI as the destination file format followed by clicking on the Finish button.
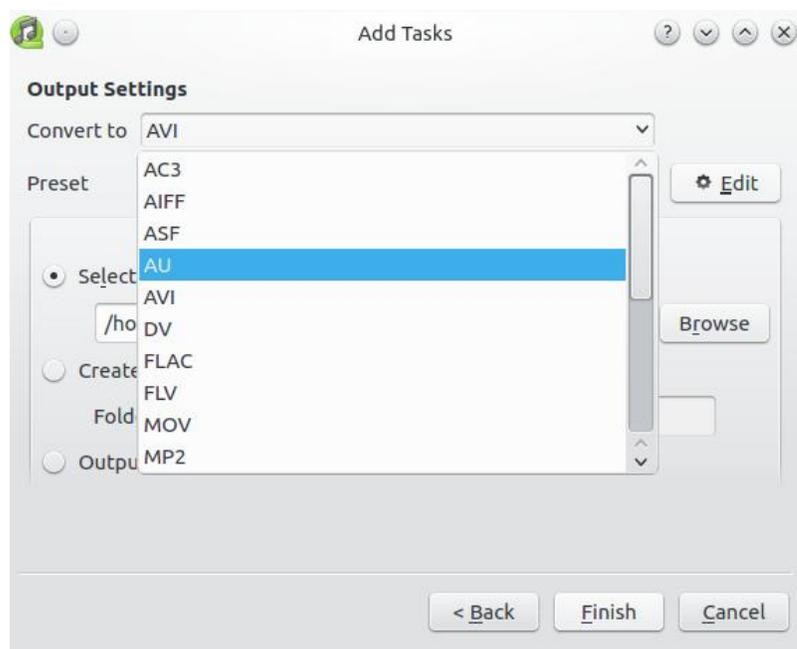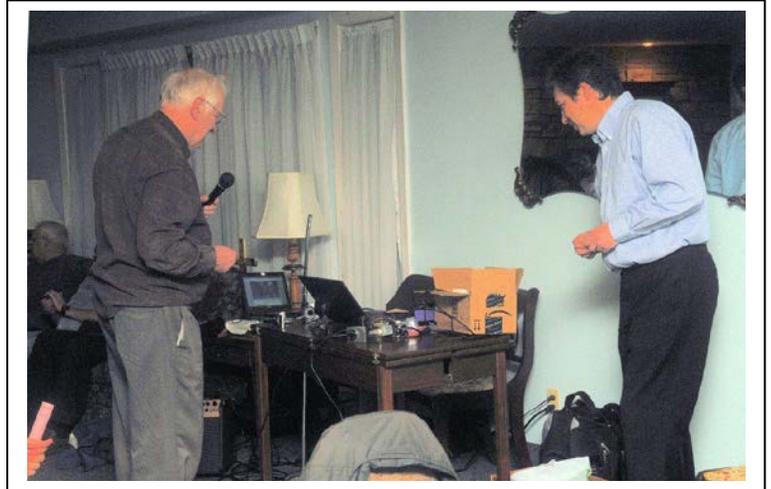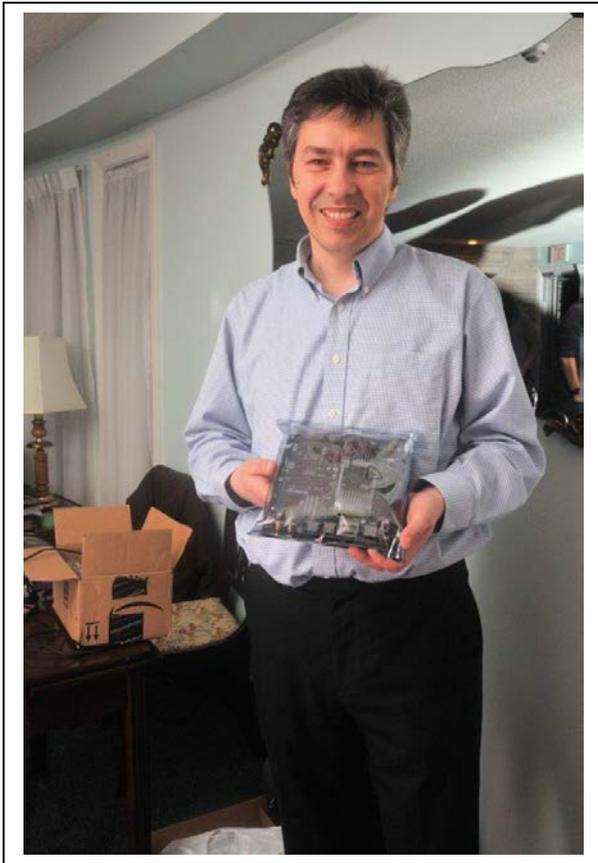
Here we see the conversion taking place and a progress % appears.

The video I selected was 1 hr 22 minutes in length and converted in about 10 minutes
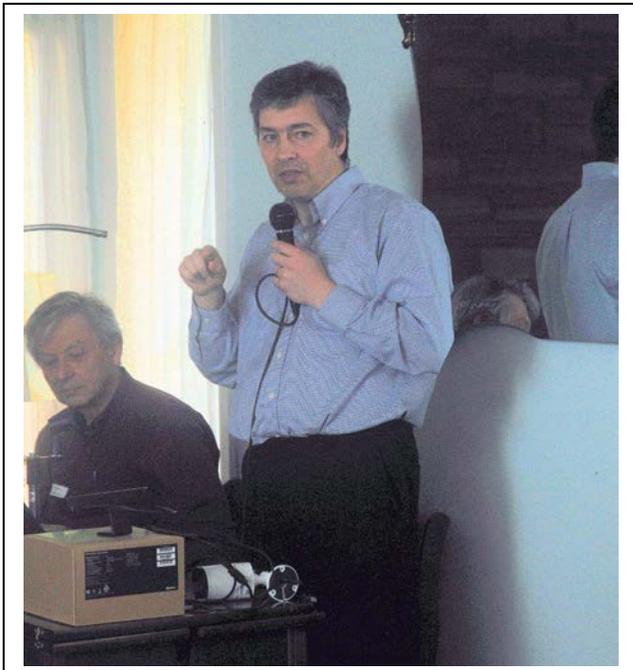
An easy to use and very powerful program!

Presentation Images [from May] by Farny LeGresley

Open Source Self Driving Cars Initiative

Presented by Marius Slavescue

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: Call for Location
Telephone: 905-926-9003
Date: 1st Thursday of month 7:30 PM

Digital Camera Group

Location: Call forLocation
Telephone: 905-926-9003
Date: 4th Thursday of each month at 7:30PM
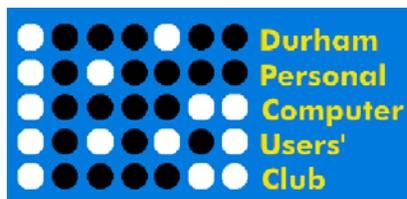
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2015-2016

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HOME PAGE   --- http://www.durhampc-usersclub.on.ca/
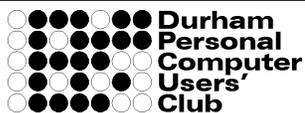
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PMB # 110, 27-1300 King St East,
Oshawa, ON L1H8J4.
The PC Monitor cannot be responsible for errors or inaccuracies in the content, although efforts will be made to publish information accurately.

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 alexmor@teksavvy.com Articles should be submitted in Word Format using Times New Roman as the preferred Font.