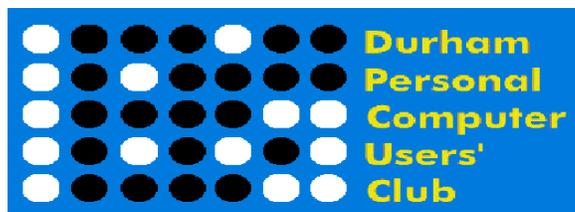**Feb 2022**

PC MONITOR

Durham Personal Computer Users' Club Newsletter

Jan 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!

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 Internet Archive

By Anne Delong

On ZOOM – Thursday, Feb 10 2022 7:00PM

FYI

- By Dan Delong

Metaverse AI Power

Figure 1 https://commons.wikimedia.org/wiki/File:Dutch_national_supercomputer_%22Huygens%22_-_8183833489.png

Ever wonder why Facebook is so welcoming of your photos & videos? Such content (now owned by Facebook) will become fodder for creating **Meta**, a virtual universe. This project is not without ethics, for Facebook claims their latest supercomputer, the hardware guts of **Meta**, will use only their/your content *(not content on other public platforms)* and AI, to fine tune this virtual environment and allowing for instantaneous translation of the many the languages used by human avatars during interactions inside Meta, while weeding out hate speech. Fear not. This extremely powerful **Facebook AI supercomputer** will not identify you via any content you've provided to Facebook over the years. Facebook just wants vast quantities of data for recognizing environmental parameters and languages. The hardware is currently running on about 6,000 GPUs, increasing to over 16,000 GPUs by year end.

The processing power of this supercomputer is staggering, handling data in the exabytes range (an **Exabyte** being about 36,000 years of HD video), at a rate of nearly **five exaFLOPs** per second (10 to the power of 18, floating point calculations per second). Since the United States government is also working on similar **Exascale** computing, other countries have likely preceded in this direction… more for military, forecasting, and propaganda purposes, than for fun and profit in a Metaverse. Exascale computing is reaching the neural capacity of the human brain, hence the rush of **The Human Brain Project** to follow such developments. This new supercomputer has also been a rush job for Facebook, struggling for chips during a shortage and for engineering expertise during a pandemic (*as the Engadget article explains*).

https://www.engadget.com/meta-ai-supercomputer-worlds-fastest-rsc-184644623.html

Google Foldable - Notepad

Notepad will likely be the name for Google's Pixel **foldable smart phone**, to be released worldwide, in steps, by the end of this year. As with Samsung's Galaxy Fold, the price will be hundreds of dollars more than similar, unfoldable, phones. Google will include an assistive Tensor chip in the Notepad.

https://9to5google.com/2022/01/24/google-pixel-notepad-foldable-price/

Panasonic Battery for Teslas

The drive to lower the cost of car batteries, while increasing power and range, has met with success. This new, larger, 4680 Lithium battery will increase driving range by 16%, while allowing the manufacturer (Tesla) to lower costs – this, after Panasonic invests over 700 million dollars in new manufacturing equipment. The actual size of each 4680 battery is larger than the one currently used in battery packs. [Note: The battery, like many flat disc batteries, is so named for its size – 46mm wide and 80mm long.] I assume fewer of these larger batteries will end up in each vehicle's battery pack.

https://www.teslarati.com/panasonic-tesla-4680-electric-vehicle-battery-production-investment/

Gadget Guard

When using spray cleaner, meant for eyeglasses, to clean electronic devices and monitor screens, I was never sure this was the proper thing to do, even after powering down and using a light spray on a microfiber cloth. **Gadget Guard** makes a safe spray – **Tech-Clean** – to clean surfaces of bacteria and viruses (including Covid) without degrading the manufacturer's anti-static and anti-fingerprint coating. Since the price for a 2oz. bottle is in USD, expect to pay more, plus extra, for shipping. The company also sells custom screen protectors and phone cases. *[I have not searched for a Canadian supplier.]*

https://www.gadgetguard.com/tech-clean-screen-cleaner.html

Covid Quick Tests Explained - by the Wall Street Journal

This YouTube video aims to examine the differences between various rapid tests, the cost per test, and the speed with which results can be expected. The faster and more sophisticated tests use special electronic hardware, expensive cartridges, and might make use of a smart phone app to convey results. In summary, the PCR **molecular** tests appear to indicate positivity sooner yet may yield false positives in late stages of the infection, while **antigen** tests can give false negatives in the early stages of infection and are more likely not to give false positives in the last stages of infection. *Whether or not all of these tests are available in Canada, I do not know.*

https://www.youtube.com/watch?v=ML5uVTBdQuE

Right to Repair

Toolkits from **Princess Auto** and **Canada Computers** can only assist a DIY fixer so much (or a Professional for that matter). *For example, our electric kettle failed recently. Without a specially tipped screw driver, I could not reveal the kettle's innards, and I still broke one of the cleverly hidden plastic retaining tabs.*

Appliances, electronics, farm equipment, and cars, have long been built with weak points, intentional or not. Despite planned obsolescence, repair manuals and parts could be '**got**' in past times. *Here's another example. Expensive John Deere machinery contains terms of use that forbid owners from fixing (or modifying) electronically controlled systems. [A car mechanic I know also has a few words to say about Nissan.]*

Fortunately, national governments are getting involved in this costly and wasteful practice, by passing laws and executive orders. In Canada, **Bill C-272** passed second reading, unanimously. In the United States, the President has expanded his recent **executive order,** which includes "**Right to Repair**" sections. **Microsoft** and **Apple** have moved in this direction, regarding hardware they sell, voluntarily. In the near future, we may be able to open up our **owned devices,** and, at a bare minimum, replace the battery. Building longevity into all consumer products is better for the environment and our pocket books.

Appliances of old may have been power hungry, but they were built to last. *I appreciated being told, by an honest sales person, that purchase of a new large appliance might last only 15 years.* For a third example: - Our complex, high efficiency gas furnace, installed in 2017 *(under the insistence of Intact Insurance)* will likely need replacing in 2032, along with annual maintenance fees totalling about $2000.00 over the span of fifteen years. The previous furnace (although less efficient) vented through the chimney, and lasted forty years, with only cheap air filter changes. F*inally, our 1995 GMC van can be fixed, as long as the parts needed are related to safety. Forget fixing rear air conditioning - a luxury item already included in the used vehicle purchase… or a new grill, after hitting a deer.*

https://www.repair.org/blog/2021/6/3/a-canadian-right-to-repair-bill-sees-330-0-vote-as-measure-clears-key-hurdle
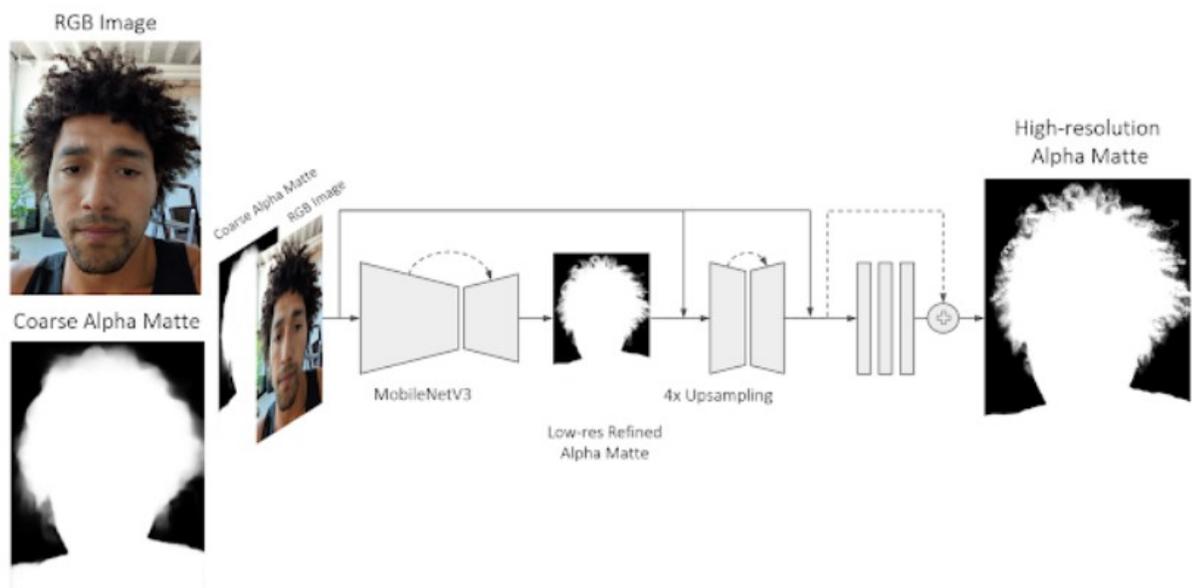
Free Update to Windows 11 – It worked!

Like many others in our computer club, I upgraded toWin11 from Win10 after *"Update and Security"* suggested that my laptop met the requirements. **Downloading** took about 20 minutes, on wireless, at about 30Mbps. **Installation** took longer, just shy of 55 minutes on a Core i7 with lots of RAM and a solid state drive. The next day, another update arrived… just for **.NET 3.5** – requiring a restart.

Not every feature of Win10 Pro will survive the upgrade, but Microsoft explains the after effects of this upgrade quite well, near the end of this web page: - https://www.microsoft.com/en-ca/windows/windows-11-specifications At first blush, **I like it**, without thoroughly testing all of the software titles previously installed on Windows 10. Expect more changes in Win11 this month, when the first major update to Win11 is released. For example **Notepad** and **Media Player** will be improved, along with **The Microsoft Store**; - *[It will be more inviting to merchants and customers, and many Android apps will run natively on Win11.]* "**Teams**" has worked well for me, but sharing screens will soon become even easier. Greater controls, over separating **work focus** and **play time,** can be scheduled for home or school work. Now, if only the chip supply situation gets better, new computers might be more affordable. Even so, Microsoft reports 340 million PC deliveries over the last year.

https://blogs.windows.com/windowsexperience/2022/01/26/a-new-era-of-the-pc/

Google Research Improves Selfies

Those of us using online video conferencing platforms lately have probably noticed some participants were able to change their background image, without using a green screen. These alternate backgrounds can be anything, really – *vacation photos, fake offices, movie scenes, and one more – the fuzzed background effect.* The result may not be perfect. Sometimes the person's image breaks down around the edges. Hair is the hardest part to handle for this **alpha matte process**, separating the parts of the image that are supposed to be retained in foreground, form the virtual (or, possibly, the real) background. Selfies, taken with a new Google Pixel 6 (in high resolution) should improve under findings from this research, such that various hair styles, and the tiny wisps of single hairs, are retained in the final portrait. The link (*below*) contains many examples. Now, if video gets the same level of accuracy, these alternate backgrounds will be totally convincing.

Accurate Alpha Matting for Portrait Mode Selfies on Pixel 6

Andromeda – The OS We Never Knew About!

Those who enjoy comparing car designs (especially the Classics) have probably viewed images of some of the old, yet futuristic, prototypes, which never made it into production. The same is true for modern electronic devices, and the operating systems built into them. **Andromeda**, an OS not likely seen running on any device outside of a few Microsoft workers, is one such example.
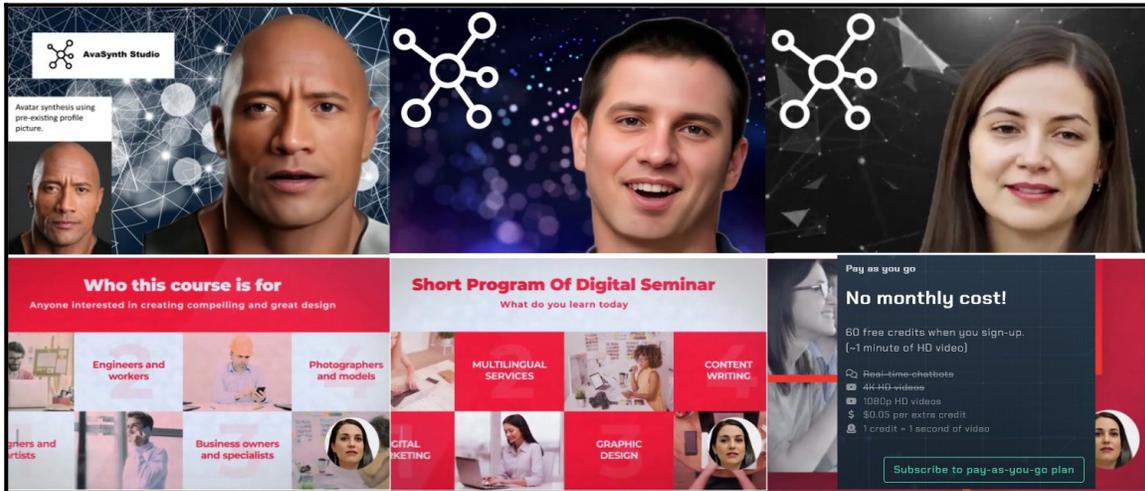
Here's a tantalizing quote from the article (linked below).

> *"I'm told the external cameras on Andromeda were a **12MP** main shooter, and a monochrome lens, which, when paired together, enabled unique Mixed Reality experiences that the company was planning to push with this device. A user could **scan a 3D object** with Andromeda and view it in the real world on a **HoloLens 2**, for example."*

To my way of thinking, as owner of a still functioning Windows cell phone, finishing this project for inclusion on a dual screen Duo device looks very promising. Should Microsoft decide to veer away from Android, at some point in the future, we may see a production Duo device with these features. The article indicates that some of the newer modular code design elements of Andromeda (and other contemporary projects) have made it into parts of Windows 11, allowing Microsoft to deprecate some legacy code.

https://www.windowscentral.com/surface-duo-andromeda-windows-core-os

AvaSynth Studio– Canadian Kickstarter

Would you like to have an acquaintance read you a bedtime story? Would you like that person to be your mom, or your dad, or a movie star, or **yourself**? All is possible, with this Montreal developer's **AvaSynth Studio**. The idea here is to create realistic avatars, speaking text naturally, using a male or female voice (**yours too**) matched to the lip movements that are layered onto a portrait (or one of the pre-designed 3-D templates available). To get started, AvaSynth offers a one minute free sample from material you provide. The project needs to get $7,500 in 'free' funding before mid-March. Kickstarter prices ($5 to $250) for early adopters are quite reasonable.
Features: -

1. Super simple text-to-video generator
2. Multiple language support
3. Custom backgrounds using images, videos, or both.
4. Free music & background templates
5. Upload your own voice, background and music

https://www.kickstarter.com/projects/690874079/avasynth-unique-photo-realistic-hd-avatars-and-videos

ARROW – the Perfect Name for a Canadian Car

Already in prototype development, the **Arrow EV** is, possibly, on its way into production, and, eventually, for sale to Canadians – all, with backing from the Canadian Auto Parts Manufacturers, the federal government, and the Ontario and Quebec provincial governments. American auto plants once dotted these provinces, making cars with fine build quality, but at a higher price than those overseas *(and some other areas with low wages, like American states lacking unions and social benefits)*. The home base for our computer club is also home to a huge, temporarily mothballed, GM plant, which is preparing to assemble battery powered trucks. We also host a university with expertise in automobile design and manufacture. The **Toronto Star** article (*below*) shows a photo of the Arrow, looking almost as sleek as the original Canadian Arrow jet plane from the 50s. The Arrow EV may end up to be the **People's Car (Volkswagen) for Canada**, but it will not be as cheap or as simply engineered, as the most popular mass marketed automobile, the Ford Model T.

https://www.thestar.com/business/2022/01/28/new-prototype-designs-unveiled-for-project-arrow-the-first-all-canadian-electric-vehicle.html?rf

DPCUC President's Notes   by Peter Camilleri

I start this month's message on a sad note when I must announce that our program director Fred Fernbach is stepping away from his duties to focus on his business responsibilities. Fred has devoted five years to the club in his roles as club president and program director. He has always been a strong contributor adding many useful ideas and interesting questions to our discussions. I wish him well in his new pursuits and hope he will be able to show up to the general meetings when he has the time. Fred, you will be missed by us all.

Meanwhile, the Windows 11 saga continues. True to form, Microsoft is quietly using it's (mandatory) update service to download the Windows 11 upgrade without asking permission. Further, the default setting is to *install* that upgrade when it is ready. One day, a software "patch" needs to be added and then some hours later, surprise! You've got Windows 11!

There is a way to find and disable this automatic upgrade. It can be found in Update and Security in Settings panel. To avoid unwanted surprises, you might want to look into that.

Further, on the topic of damages and liability, chip makers are generally protected against liability from security flaws in their product, but not always. It seems that Intel knew about the Meltdown and Spectre defects in its chips a full year before they fessed up. During that time they sold many millions of devices that they knew would need performance robbing fixes. This could be seen as selling chips that were known to not meet specifications. That could be seen as fraud and Judge Michael Simon, of the US District Court of Oregon has agreed, allowing a class action lawsuit against Intel and its partners, to proceed.

It will be most interesting to see where both Microsoft and Intel end up.

Peter Camilleri, President DPCUC.

Linux – Media Conversion   By Alex Morrison

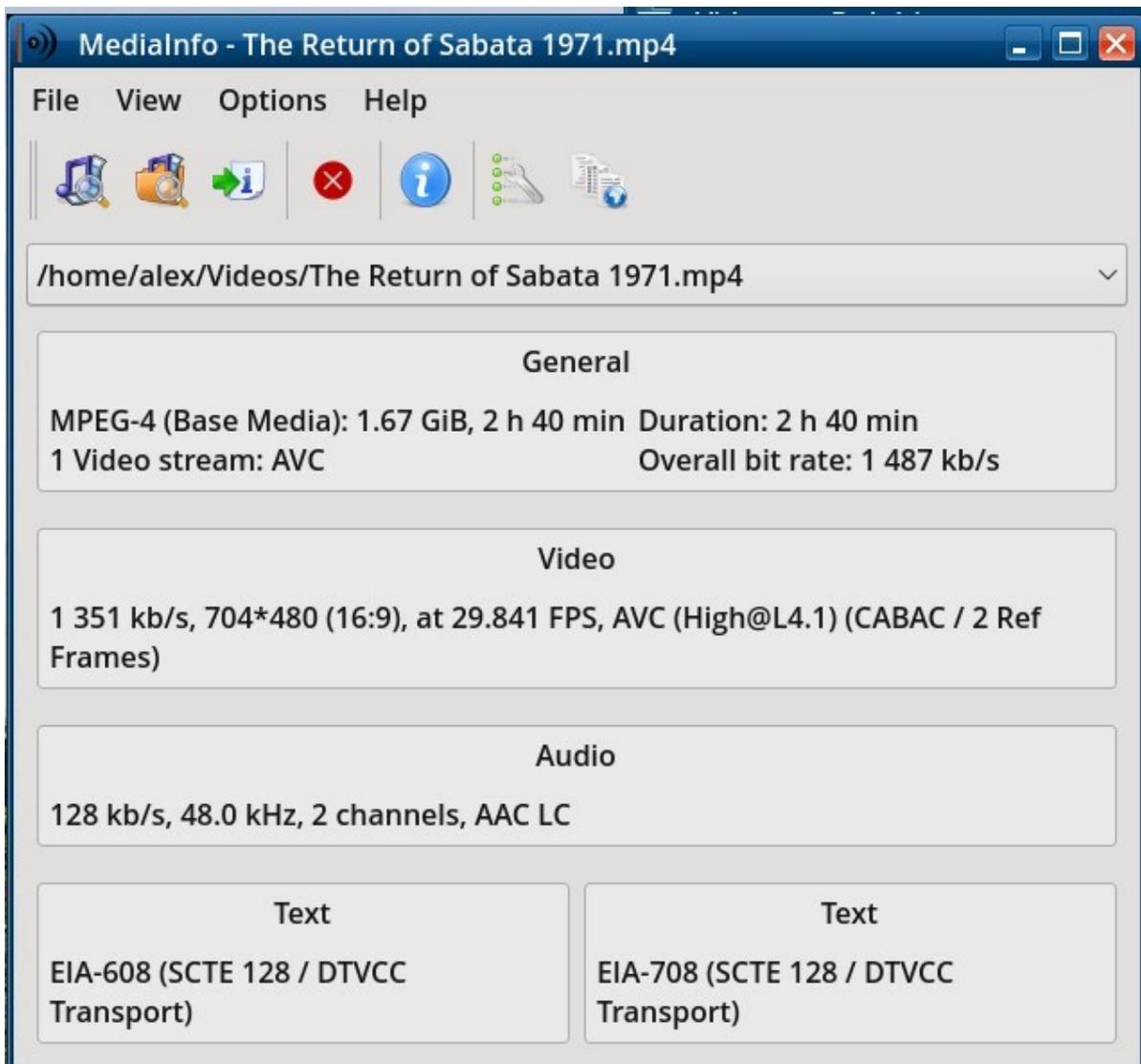This is a short intro to simple media conversion.

I record a few TV shows from my antenna that are on TV at times when I am unable to watch. [overnight as an example].

I recorded an old western movie recently called 'The Return of Sabata 1971'.

If I want to save the video on my hard drive or a storage media I need to consider how much space it will take.

Over a period of time I might have a number of files recorded and storage space is important.

I use a program called mediainfo to get details about the recorded file. Below is the image of the mediainfo result.

Looking at the info in the image above I see the original file is 1.67 gig in size. In order to shrink the file prior to storing it I convert with a command line script.

```
ffmpeg -i 'The Return of Sabata 1971.mp4' -c:a copy -c:v libx265 'The Return of Sabata 1971'.mkv
```
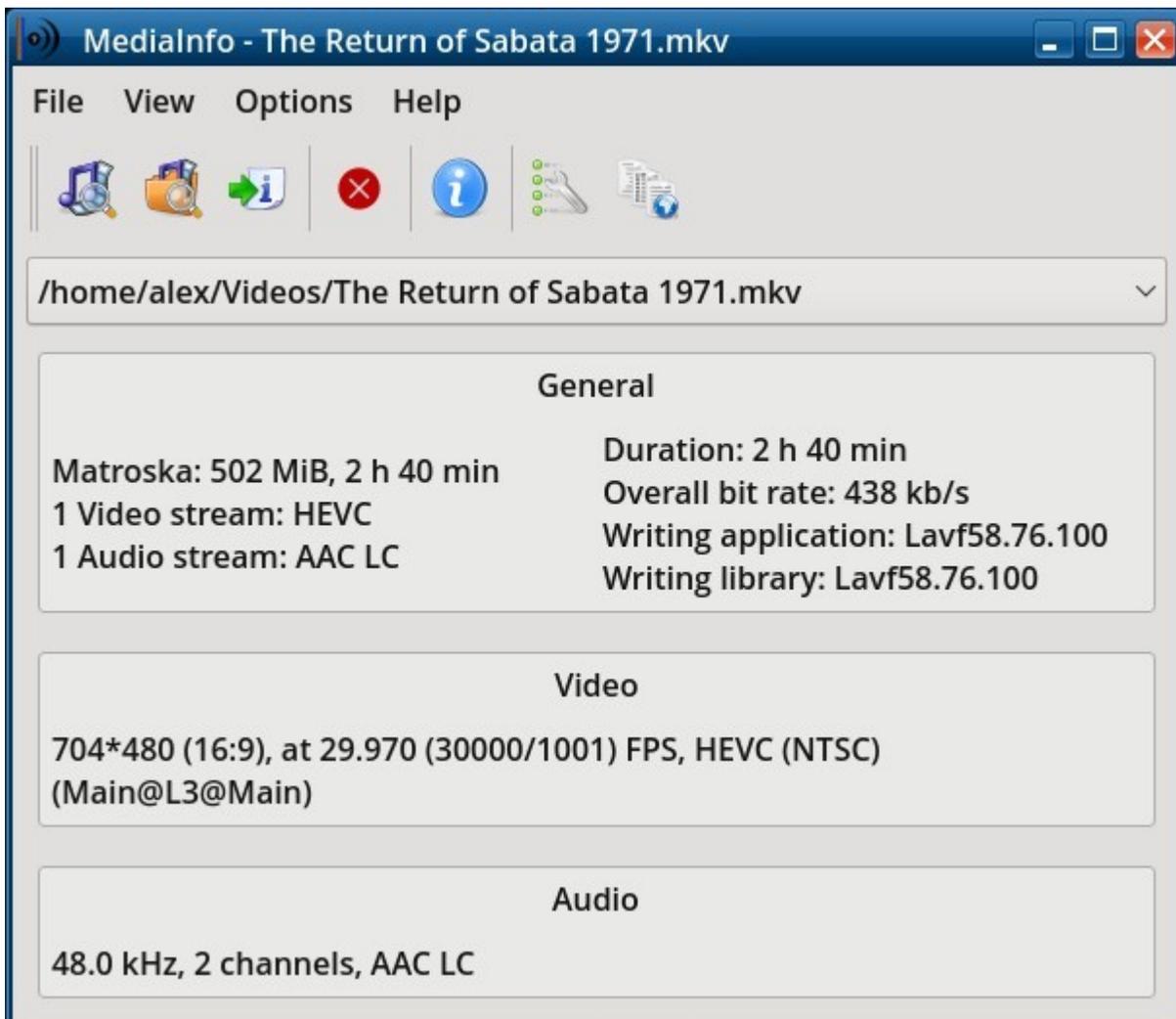
The resulting file is now an mkv file and the size is 592 meg. Almost 1/3 the original size.

The hevc codec used by the libx265 is a relatively new [last few years] codec that some TV systems and the odd operating system have trouble playing.

Most Linux systems support hevc or make support easily installable from the package manager.

The needed support program for the script to work is the free to install program called ffmpeg.

The new size using the script is 502 meg. Less than 1/3 the original size.

I tried a gui tool called handbrake to shrink the file as a test. Handbrake was a little slower.
The size created by handbrake using its default settings was 1.1 gig. Handbrake defaults use h264 not hevc [h265] so it is better suited for playing files on older TV's or Roku that do not support hevc [h265].

Sudoku   Feb 2022   by Alex Morrison

EASY

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

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

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

HARD

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

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

Linux in the News   **by Alex Morrison**

Latest Raspberry Pi OS Release Adds New Options to Its Configuration Tool, Many Bug Fixes
0 Comments

New Raspberry Pi OS release is now available for download with various improvements to the main configuration tool, as well as many other changes and bug fixes.

KDE Plasma 5.24 Will Be the Next LTS Release Receiving Support Until KDE Plasma 6

2 Comments

The upcoming KDE Plasma 5.24 desktop environment will be an LTS (Long-Term Support) release maintained until the KDE Plasma 6 series. The final release is expected on February 8th, 2022.

Juno Computers Launch Ubuntu-Powered Mars 15 Laptop with Up to AMD Ryzen 9, NVIDIA RTX 3070

0 Comments

Juno Computers launch the Mars 15 Linux-powered laptop with high-end AMD Ryzen processors and NVIDIA RTX graphics cards. The laptop comes pre-installed with Ubuntu 20.04 LTS.

Steam Deck to Launch Officially on February 25th, 2022

2 Comments

Valve announced today that their Steam Deck Linux-powered handheld gaming device will launch officially on February 25th, 2022.

Ubuntu Budgie Sets its Sights on Gamers
24.01.2022

The upcoming release of Ubuntu Budgie includes a few nifty features that should make the lives of gamers a bit easier.

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

Special Interest Groups

Details

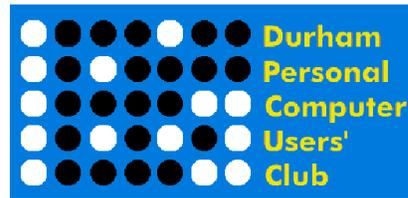|	
BEGINNER	Co-ordinator: Ed Goudge Location: Call for Location Telephone: 905-926-9003 Date: 3rd Thursday of month 7:00 PM
LINUX **Durham Linux User Group**	Co-ordinator: Ed Goudge Location: OSCC 43 John St W Telephone: 905-926-9003 Date: 1st Thursday of month 7:00 PM
Digital Camera Group	Co-ordinator: Ed Goudge Location: Call for Location Telephone: 905-926-9003 Date: 4th Thursday of each month at 7:00PM

Durham Personal Computer Users' Club

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2021-2022

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Durham Personal Computer Users' Club

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

Newsletter Information

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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.