

>PC Update

October/November 2023

Publishing Information 2
Editorial October November 2023 3
Club News October November 2023 4
6 Best Free Photoshop Alternatives 6
The Best Free Video Editing Software is Davinci Resolve 10
How to Trim, Cut, and Edit Videos on Android 13
An expert reviews the Government 7 year plan to boost Australia's cyber security Here are the key takeaways 18
Artificial intelligence is already in our hospitals 5 questions people want answered 21
A year of ChatGPT 5 ways the AI marvel has changed the world 24
What is LockBit, the cybercrime gang hacking some of the world's largest organisations 27
Can You Troubleshoot 30
Interesting Internet Finds Part 1 31
Interesting Internet Finds Part 2 33
East SIG Report September 2023 35
East SIG Report October 2023 48





The newsletter of

Melbourne PC User Group

Suite 26, Level 1, 479 Warrigal Road Moorabbin 3189

Office hours 9.30am – 4.30pm (Mon-Friday)

Email office@melbpc.org.au

ABN 43 196 519 351

Victorian Association Registration A0003293V

Editor Hugh Macdonald (editorpc@melbpc.org.au)

Deputy Editor Malin Robertsson (office@melbpc.org.au)

Technical Editors Roger Brown, Kevin Martin, Dennis Parsons, Malcolm Miles

Proof Readers Harry Lewis, Tim McQueen, Paul Woolard

Librarians Malin Robertsson (office@melbpc.org.au), Choy Lai (cplai@melbpc.org.au)

Committee Hugh Macdonald (President), Stephen Zuluaga (Vice-President), Aidan Kelly (Secretary), Peter McConnachie (Treasurer), Rob Brown, Stewart Gruneklee, Harry Lewis (committee@melbpc.org.au)

Melbourne PC User Group Inc. is a member of the Association of Personal Computer User Groups

iHelp – Get the help you need with your computer, Ph: (03) 9276 4088,

Email: ihelp@melbpc.org.au, Online Support Request

Online membership form

Responsibility for content in this newsletter lies with individually named authors

Please remember to always bring your membership card to meetings

SIG Listings and up to date calendar are available on our homepage

Editorial October/November 2023

Hugh Macdonald

Firstly, apologies for this issue being a combined October/November 2023 issue, and there being no stand alone October 2023 issue. I have attempted to make up for it by making this a bumper issue, with lots of extra articles for your reading enjoyment. But this brings me to my first point.

Member Help Wanted

It hasn't been too often that the President is also the editor of PC Update. I never intended to do both concurrently. I handed over to another member at the start of my first presidential term. They unfortunately could not continue editing PC Update, so rather than place production of it in jeopardy, I took back over.

For a while it was ok, but it is now getting to be too much work to do both and I cannot continue to do both. It's obviously more important to continue on as President, so I'm asking anyone reading this, with the slightest bit of interest and experience in magazine production, to step forward and take it off my hands.

You don't have to write any articles, you can source them all from elsewhere. There are members who offer to write articles, and particularly if you propose topics on Spaces then you will get submissions for articles. If you can operate a word processor such as Microsoft Word or LibreOffice, then you have the tools you need to edit PC Update.

This will be my second last issue as editor. If no one steps forward to edit it after that, then I'm not sure what will happen to PC Update.

If you enjoy the magazine and care about its future, then please seriously consider offering to be editor for a while.

This month's topic

This month's two topics are Video Editing and Photography. There is a review of Da Vinci Resolve (the best free video editor available) and an article on free alternatives to Photoshop. Please enjoy.

Happy Reading!

Club News October/November 2023

Hugh Macdonald

In no particular order this month...

New Commitee Members
A big thank you again to our new committee members that joined us after the Annual General Meeting. This was Kirsten Greed as Secretary and Mick Adams as a general committee member. We still have four committee vacancies however, and we need them filled as soon as possible. So if you've never volunteered for the club before (or even if you have), please step forward and help with the governance and management of your club.

CNC Project
The CNC Router project, very ably led by Rob Brown, is going along nicely. The majority of the parts for the machine have now been selected and purchased, and the team is very close to beginning assembly of the machine. Obviously they will soon start slowing down over the Christmas period, but if you are interested in this project and haven't been involved until now, it's never too late. Contact Rob Brown or myself for details.

2023 Club Open Day
The 2023 Open Day was very successful, with well over 200 people coming through the doors for the day. There were some great member projects on display, showcasing the varied and impressive abilities of members of the club. There were also talks by visiting students from St Margarets Berwick Grammar School, and we thank them for their attendance. All in all, the feedback I received was that everyone really enjoyed the day. A big thank you to some of the principal organisers who helped me in Rob Brown, Aidan Kelly and Stephen Zuluaga, the rest of the committee for their support, and all the members who exhibited on the day. Owing to the success, we definitely plan to repeat it in 2024.



Photo by George Skarbek

Volunteer of the Month
Congratulations to Dave Simpson, who is our volunteer of the month for December 2023. Dave does stirling work as the convenor of iHelp, and spends many hours volunteering his time to help members. Over half of our members use iHelp throughout the year, so it is an essential service that we offer. Without Dave we could not offer it half as well, so a big thank you goes to him for his efforts.

APCUG Photography Competition
Congratulations to George Skarbek, who placed third in the Association of PC User Groups (APCUG) Photography Competition in for his photograph of Almond Blossoms. I'm sure you'll agree it's a very well composed and beautiful photograph.



See you at the club in December!

6 Best Free Photoshop Alternatives

Tim Brookes

You shouldn't need to spend Adobe money to edit images and photos. Fortunately, free alternatives exist that can help you complete basic image editing operations, process RAW photos, and more.

GIMP

The GNU Image Manipulation Program better known as GIMP has long been the go-to Photoshop alternative for Linux users. But you don't need to use Linux to take advantage of GIMP since the software is available for macOS and Windows too. You can grab GIMP from the Downloads page or use a package manager like Flatpak for Linux or Mac equivalent Homebrew. GIMP is even available on the Windows Store.

There's a bit of a learning curve to GIMP if you're coming from Photoshop, and things don't always "just work" as you'd expect them to. Thankfully you can resort to GIMP's plentiful help documentation and tutorials to get up to speed. The app includes a familiar set of tools and a UI to match so that you can use layers, masks, brushes, tools, and even filters to edit your images.

This makes GIMP ideal for editing photos, designing elements from scratch for design purposes, creating original artwork, or converting hand-drawn images to digital paintings. The app also supports a variety of programming options and a library of plugins (which you can browse using the plugin browser under the "Help" menu).

GIMP is a great replacement for older versions of Photoshop, though it lacks many of the generative, content-aware, and AI-powered tools of the latest releases. If you put the time into learning how it works, it's an excellent Photoshop alternative.

Paint.NET

Paint.NET is a solid free image and photo editor for Windows that makes a great alternative to Photoshop. You can think of Paint.NET as a turbocharged version of the default Paint app that's included with Windows. The app is powered by the Microsoft .NET 7 framework, dependencies that are taken care of with a single app install.

The app features an intuitive and customizable interface, layers (but no masks), a familiar array of tools, and tabs for quickly switching between files. There's support for pressure-sensitive pens and drawing tablets (touchscreen too), an array of effects (like Photoshop's filters), and all the basic tools you need. Paint.NET is highly optimized so you won't be waiting around for things to happen.

Core to the Paint.NET experience is an active community and busy forum. This is where you can browse through hundreds of plugins and tutorials, get help with a specific problem, share your creations, and stay up to date with app development.

Paint.NET is a fast and easy-to-use image editor that all Windows users should have installed. The app is free to download from the Paint.NET website but be aware that the version featured in the Microsoft store is a premium app.

Apple Photos

Apple Photos is a photo editor and organizer that comes installed on Mac, iPhone, and iPad. Though the interface differs between these versions, the base feature set is the same. Unlike Photoshop, which is great for creating artwork, using brushes, adding layers, drawing with a tablet, and other creative art tasks, Apple Photos is limited to photo editing.

Fortunately, there's a rich suite of photo editing options available. You can use Apple Photos to edit both RAW and standard lossy images, and the app can be used on a local library or be used to sync your photos across devices with iCloud Photo Library.

Basic editing tools are divided into two categories: Light (including Exposure, Shadows, Highlights, Contrast, and so on) and Color (Saturation, Vibrance, and Cast). You can also use the app to edit monochrome images, touch-up blemishes with the Retouch tool, remove red-eye, adjust the white balance, add sharpening, fix or add vignetting, and more.

You can also use a set of advanced editing tools to adjust the curves of an image, view the histogram of a photo, reduce noise, and perform selective color edits. All of these operations are non-destructive, which means you can hit the "Reset Adjustments" button at any time to get back to your original image. You can also copy the edits from one photo and apply them to another (or multiple), and see before and after previews of any changes you make.

On top of this there are the sort of instant filters and auto enhancement tools you'd expect from a (primarily) mobile photo editor, plus a cropping tool that includes a variety of aspect ratios, perspective correction, and straightening tools.

Windows 11 Photos

Just like Apple Photos, Windows Photos is another pack-in photo editor that foregoes some of the more creative aspects of Photoshop (like art creation) but includes everything you'd need for basic photo editing. Windows Photos integrates with OneDrive and even iCloud Photos so that you can edit photos from connected devices right within Microsoft's desktop OS.

The app can be used to open standard lossy image files and RAW photos with the aid of the Raw Image Extension from the Microsoft Store. Edits are divided by Light (Exposure, Contrast, Highlights, and so on) and Color (Saturation, Warmth, and Tint) for basic edits. Images can be cropped, mirrored, rotated, and straightened too.

There's also a selection of instant filters designed to give you specific looks and an auto-enhance option that attempts to fix your images for you. You can use the Spot Fix tool to repair blemishes, but there's no red-eye removal. On top of this, there are a few markup options like a highlighter and drawing pen for scribbling your thoughts.

Non-destructive edits let you reset your changes at any point, and you can easily save your image as a copy or overwrite the original.

Pixlr

Pixlr is available in two versions: Pixlr X which is designed for quick creative design projects (like posters, flyers, and social posts), and Pixlr E which is a fully-fledged image editor that lives in your browser. If you're looking for something with which to replace Photoshop, you're probably looking for Pixlr E. Pixlr offers a decent free option (hence its inclusion on this list), but you'll need to pay for a subscription starting at $1.99 per month to unlock its full functionality.

Pixlr E looks just like Photoshop when starting a new project or opening an existing image. You'll see a full list of tools down the left-hand side of the screen (including favorites like rectangular and lasso selection, dodge/burn, and clone), and Photoshop mainstays like an image overview, layer selection, and history overlay to the right of the screen. You can work with layers and masks just like you can in Photoshop.

There's even a menu bar that works much in the same way as Photoshop at the top of the screen, with filters, layer operations, image adjustments, selection tools, and a workflow designed specifically for making animations. Pixlr includes a huge range of templates to get you started, and some new AI-powered tools for removing backgrounds, and image generation.

The free version of Pixlr includes limited access to some tools, only three saves, no mobile support, limits on canvas size, and is supported by advertisements. Despite this, it's still a feature-rich tool and for quick edits you might not bump into too many restrictions. It's also a very cheap alternative to Photoshop if you like what's on offer and want to pay to unlock more.

Sumopaint and Sumophoto

Like Pixlr, Sumopaint and Sumophoto have compelling free options but are ultimately paid products. The apps are available as part of the Sumo Creative Suite. The apps are free to use, and paying for a subscription comes with access to the whole package (including a video editor called Sumovideo, development environment Sumocode, and many more).

Though they are two separate apps, Sumopaint and Sumphoto together make a fairly feature-complete Photoshop alternative. Sumopaint is a creative tool that includes support for layers, brushes (and custom brushes), shapes, text, and some image manipulation tools like smudge and adjustment brushes.

Sumophoto is a photo editor with a decent number of adjustment parameters that work similarly to Apple Photos. You can adjust exposure, contrast, highlights, and so on though more powerful features like curves and a histogram are missing. There are some one-click filters included, and you can resize, crop, straighten, and mirror or rotate your photo too.

You can use the free versions of Sumopaint and Sumophoto in your browser, with access to most app features. Paying for a Pro upgrade at $4 per month lets you download apps for offline use though these are effectively web apps that run locally, rather than native software like Photoshop or GIMP.

Consider Investing in a Paid Alternative

If these tools come up short but you don't fancy shelling out for a pricey Photoshop subscription, you might want to consider a cheaper paid Photoshop alternative.

These tools are often available for a modest investment, with many available under a standard lifetime license rather than a subscription model.

This article has been reproduced with permission from How To Geek.

The Best Free Video Editing Software is DaVinci Resolve

Tim Brookes

Free video editors are typically short on the powerful features that Adobe and Apple charge hundreds of dollars for, but DaVinci Resolve is different. The entry-level version of Blackmagic Design's video suite is packed with features, making it the only free video editor you'll ever need.

What is DaVinci Resolve?

DaVinci Resolve is a complete video editing and processing suite, with a generous free option. It's commonly used in the production of feature films (like Start Wars: The Last Jedi), television programming (like The Walking Dead), and other media including advertising and music production.

There are two versions of the software: DaVinci Resolve (free), and DaVinci Resolve Studio ($295). Both versions are available for Windows, macOS, and Linux, plus there is a free iPad version available plus an upgraded version for $94.99. You can use the free version of DaVinci Resolve to edit video on a timeline, cut up video and audio, colour grade your footage, apply visual effects, master audio, and render and share your project.

The software was initially developed in 2004 by da Vinci Systems which was later acquired by Blackmagic Design in 2009. Blackmagic Design is known for its professional cameras and editing consoles, with a DaVinci Resolve Studio license often included with such purchases.

Why DaVinci Resolve is the Best Free Video Editor

DaVinci Resolve is a professional video editing product that incorporates many of the features found in pricey apps like Adobe Premiere and Apple's Final Cut Pro. You may find that you never require more advanced features than what DaVinci Resolve gives you in the free version, especially if you're just starting your video production journey.

DaVinci Resolve is a complete video solution, though it does things a little differently from the competition. This is evident in the app's layout, which uses different tabulated workspaces for different functions. Along the bottom of the app you will find seven different workspaces:

•Media: A media browser for previewing and importing media including videos, photos, and audio.
•Cut: A cutting desk for fast turnarounds.

•Edit: A complete non-linear editor with a standard timeline view, multitrack layout, and drag-and-drop approachability.
•Fusion: For adding visual effects like blur, motion graphics, 3D camera tracking, and more.
•Color: Color-correct your projects using color wheels and curves.
•Fairlight: Post-production audio mastering tools which Blackmagic Design compares to a standalone digital audio workstation (DAW).
•Deliver: Export and render projects, either individually or by adding them to a queue and rendering whenever you're ready.
•
This might sound like a lot, but you don't need to use all of what DaVinci Resolve has to offer. If you're only interested in editing videos, you can spend your time dragging and dropping clips into the Cut or Edit workspaces, then head to Deliver to render your project when you're done.

The Cut page is a feature that's relatively unique to DaVinci Resolve that is aimed at speeding up your edit. It allows you to work efficiently with a full bin of footage, jump around the project timeline faster, and work with multi-camera footage by syncing. It uses a simplified layout with a single monitor for both timeline and footage.
The Edit page will be more familiar to anyone who has used a non-linear video editor in the past. It's better suited to multiple monitor setups and features a busier interface with elements like transitions and titles taking up more of the screen. You can easily switch between the two, laying down a rough cut in the Cut workspace and then refining it and making changes in the Edit workspace.

The tools on offer in the Color, Fusion, and Fairlight sections of DaVinci Resolve are there if you need them, but you can ignore them if all you want to do is to cut together footage. If you're progressing from a simpler video editor like iMovie or Windows' hidden video editor, probably want more power in terms of raw editing and Resolve has it in bags.

Some of the more powerful features you have access to include the ability to sync your footage and audio. This makes it easy to work with footage captured on multiple cameras since a feature called Source Overwrite can intelligently place your cuts into the timeline. You can use a similar feature under Clip > Auto Align Clips to sync off-camera audio with video you have shot based on waveform or timecode.
These might sound like complicated processes, but they're easy to use once you know how and way more powerful than the features you'll find in other free editors.

Master DaVinci Resolve to Get Ahead
The key to making the most of DaVinci Resolve is learning to use it. A great place to start is the Blackmagic Design training site. Run through the introductory videos to get an idea of how the software operates.

You should ideally have the app open and some sample footage ready to play around with while you learn. You can experiment with the different tools available, particularly common tools found on the Edit page like the Blade Edit Mode tool (for splicing clips) and Snapping tool (it looks like a magnet).

One of the best things you can do in any video editor is master the keyboard shortcuts. DaVinci Resolve Studio is compatible with a large range of editing consoles that are designed to make editing and color grading fast and effortless. In the free version, you can vastly speed up your workflow with keyboard shortcuts. You'll find these listed under the Keyboard Customization menu item.

If you're the sort of person who prefers to learn as they go, you might prefer to jump in and solve problems as you encounter them. Since DaVinci Resolve is the best free video editor you can get from a features standpoint, there is no shortage of content out there covering both the basics and more advanced operations.

There are abridged introductions to features and workspaces, which will get you up to speed in very little time. This probably isn't how the developers envisioned you would learn to use their video editor, but it's a perfectly valid way of doing so.

The Free Version of DaVinci Resolve Has Limitations

You get a lot for free with DaVinci Resolve, but the full edition comes with some clear advantages. This includes support for features like Magic Mask which makes it easy to isolate objects within a clip, proper HDR support, the ability to export at higher than 4K resolution or a frame rate of 60 frames per second, and a full range of ResolveFX visual effects.

On top of this, you'll get multiple GPU support when rendering, hardware-accelerated decode and encode of H.264 and H.265 (HEVC), and Blackmagic's Neural Engine which uses machine learning to speed up repetitive tasks.

These are features you might crave once you've become a proficient DaVinci Resolve video editor, at which point you might feel like coughing up the $295 required for entry.

Other Video Editors You Can Try

Apple’s iMovie is a solid free video editor, but it’s limited to Mac and iPhone. Microsoft Video Editor is included with Windows 11 and does a similar job. Both of these freebies lack the power of something on the level of DaVinci Resolve, though they make up for it by being user-friendly. YouTube’s video editor is similarly useful for quick edits.

If you’re willing to splash some cash, editors like Final Cut Pro (which is now on the iPad) and Adobe’s Premiere Pro are powerful tools that come with price tags to match. If you have a PC then be sure to check out our roundup of the best free video edting apps for Windows (of which DaVinci Resolve is our top pick).

Reproduced with permission from How To Geek.

How to Trim, Cut, and Edit Videos on Android

Joe Fedewa

A smartphone in your pocket all the time makes it easy to record impressive videos or simply record your screen. Historically, editing those videos on your Android phone hasn't been as easy, but that's not the case anymore. We'll show you how.

Like many things in the Android world, you have many options for editing videos. For the majority of people, the best option is the one already installed on your device. Google Photos is a popular app that has video editing capabilities, as does Samsung's stock Gallery app. We'll cover both.

How to Edit Videos on Android

Editing a video on an Android device is typically the same as editing a photo—open the video in Google Photos or the Samsung Gallery app and select the "Edit" button. From there, you'll have the ability to trim and cut the video.

How to Trim Videos with Google Photos

One of the best options for editing videos on any Android device is the Google Photos app. If you don't have it already, you can easily install it from the Google Play Store. To get started, open the app and select the video you'd like to trim or cut.

Tap the video to bring up the controls and tap the "Edit" icon.

You'll be greeted with a timeline view of the video with handles on both ends. Drag the handles to adjust the length of the video.

When you're happy with your edits, tap "Save Copy" to apply the changes.

That's all there is to it! The original video remains in its original unedited state.

How to Trim Videos with Samsung Gallery

Samsung Galaxy devices have a stock "Gallery" app with some surprisingly good editing tools. Find the app on your home screen or app drawer and open it.

Find the video you'd like to edit and select it.

Tap the pencil icon in the bottom bar to open the editing tools.

You'll see a timeline view of the video with handles on both ends. Use your finger to drag the handles to adjust the length of the video.

When you're done, tap "Save" in the top right to overwrite the video, or select "Save as Copy" from the three-dot menu in the bottom right.

You're all set! If you want to do some more serious editing, you'll probably want to use a computer.

How to Crop a Video on Android
You might think of cropping as only a tool for photos, but it's also possible to do with videos in nearly the exact same way with Google Photos or the Samsung Gallery app.

How to Crop Videos with Google Photos
If you don't already have Google Photos installed, download it from the Google Play Store. Open the app and select the video you want to crop.

Tap the screen to bring up the controls and select the "Edit" icon.

Switch over to the "Crop" tab in the bottom toolbar.

Now you have all the cropping tools you'd see in photos. Drag the corners to select the area you want to keep. You can also rotate and adjust the perspective of the video.

When you're ready to finish, tap "Save Copy" to apply the changes.

That's it! The original unedited video is still available in your gallery.

How to Crop Videos with Samsung Gallery
Samsung's stock "Gallery" app has nice video editing tools, including cropping. Find the app on your home screen or app drawer and open it.

Select the video you'd like to crop.

Tap the pencil icon in the bottom bar to open the editing tools.

Now select the crop icon in the toolbar.

Now you can crop the video just like you would a photo. Drag the grid to select the area you want to keep. You can also flip and rotate the video if you'd like.

When you're happy with your changes, tap "Save" in the top right to overwrite the video, or select "Save as Copy" from the three-dot menu in the bottom right.

That's all there is to it! Cropping videos is something that wasn't always this easy to do on smartphones, but that's thankfully been solved.

How to Rotate a Video on Android

If you accidentally record a video in the unintended orientation, you can easily rotate the video—just like you would with a photo—in Google Photos or the Samsung Gallery app.

How to Rotate Videos with Google Photos

Download and install the Google Photos app if you don't already have it installed on your Android device. Next, find the video that you'd like to rotate.

Next, tap the screen to bring up the controls—if they aren't already visible—and tap "Edit."

Switch over to the "Crop" tab in the bottom toolbar.

Now tap the rotate icon until the video is in your desired orientation. You can also drag your finger along the scale above the icon if you'd like more control over the rotation angle.

When you're done, tap "Save Copy." Google Photos won't let you overwrite the original video.

It's as simple as that—the new video will be saved in your gallery!

How to Rotate Videos with Samsung Gallery

The stock "Gallery" app on Samsung Galaxy devices has handy video editing tools, including the ability to rotate a video. First, find the app on your home screen or app drawer and open it.

Select the video you'd like to rotate.

Tap the pencil icon in the bottom bar to open the editing tools.

Now select the crop icon in the toolbar.

Now you can tap the rotate icon to rotate the video in 90-degree increments, or slide your finger across the scale at the bottom for more precise angles.

When you're done, tap "Save" in the top right to overwrite the video, or select "Save as Copy" from the three-dot menu in the bottom right.

This is a super simple way to correct those videos that weren't supposed to be shot in portrait mode, or vice versa. No extra apps required.

How to Compress a Video on Android

Unfortunately, it's not possible to compress videos with the built-in Gallery apps on the majority of Android devices. We'll need to use a third-party app to do it, and, sadly, many of the apps that can accomplish this are riddled with ads and in-app purchases.

We'll be using a free app called "Video Compressor-Video to MP4." While it does have ads, there are no in-app purchases and you only need to grant permission to access your media files. As of June 2023, it has over one million downloads and a 4.2/5 rating.

First, download the app from the Play Store and open it.

Next, tap the "Compress" button in the app.

You'll need to grant the app permission to access the files on your device. Tap "Allow."

Choose a video from the file browser.

Now you can choose the resolution of the video you'd like. The app shows the percentage of which the file size will be shrunk. Tap "Save" in the top right when you're ready.

Change the file name if you'd like and select "Compress" to continue.

The video will be compressed and you can tap "Done" when it's finished. You'll probably need to skip an ad first.

That's all there is to it! You can find the newly compressed video in your file manager under the "Video Compress and Convert" folder. This is a great trick for sending videos to other devices. The smaller file size allows for quicker transfers.

Best Android Video Editor Apps

Sometimes, the built-in tools and gallery apps aren't specialized enough to have all the video editing options you need. Thankfully, there are a handful of powerful video editing apps for Android to choose from.

KineMaster

KineMaster has been around for a long time, and it's still an excellent choice for video editing. It has many of the powerful video editing tools you might find on

a desktop-class app, such as multiple layers, chroma key, transitions, and audio filters. You can try it out for free, then it's $4.99 per month after the trial.
Download: KineMaster - Video Editor & Maker

PowerDirector

PowerDirector might be the best free video editing app for Android. It has plenty of high-end features, such as slow-motion support, color grading, chroma key, and keyframe animation. If you get tired of the ads and watermarks—or you want to be able to edit 4K video—you can upgrade for $5.99 per month.
Download: PowerDirector - Video Editor

You probably know the name "Adobe" if you do any sort of photo or video editing. Premiere Rush is the company's mobile video editing app—a lightweight spin-off of Adobe Premiere Pro. The simplified interface has a multi-track timeline with features such as color grading, text, transitions, and some simple motion graphic templates. Rush is included with an Adobe Creative Cloud subscription.
Download: Adobe Premiere Rush

This article has been reproduced with permission from How To Geek.

An expert reviews the government's 7-year plan to boost Australia's cyber security. Here are the key takeaways

David Tuffley, Senior Lecturer in Applied Ethics and Cybersecurity, Griffith University

After lengthy deliberation, the Australian government has released its 2023–2030 Cyber Security Strategy, which aims to make Australia one of the most cyber-secure nations in the world by 2030. It's a worthy goal, considering Australia was ranked as the fifth-most powerful cyber nation in a 2022 report by Harvard University's Kennedy School.

The strategy outlines a range of ways Australia can protect its people, businesses and organisations into the next decade. Importantly, it has come at a time when the country is reeling from a series of major cyber incidents, including the Medibank and Optus data breaches last year, a nationwide Optus blackout earlier this month, and the more recent closure of ports across the country due to a cyber breach.

Key takeaways

Among other things, the strategy aims to:

- protect critical infrastructure
- provide businesses and organisations with tools to bolster their cyber resilience, especially against ransomware attacks
- ensure businesses secure products and services to protect customers
- attract skilled migrants to establish a diverse cyber security workforce
- prioritise critical threats from the most sophisticated actors
- engage international partners to share threat intelligence and develop new capabilities
- expand cyber awareness programs to educate the public.

The government has dedicated $586.9 million to achieving these goals, on top of $2.3 billion committed to existing cyber initiatives, including the REDSPICE program aimed at enhancing the intelligence and cyber capabilities of the Australian Signals Directorate.

The most significant investment of $290.8 million will go towards protecting businesses and citizens. A further $143.6 million will be invested in strengthening critical infrastructure, including major telecommunications infrastructure.

By comparison, $9.4 million will be used to build a cyber threat sharing platform for the health sector, and only $4.8 million will go to establishing consumer standards for smart devices and software.

The strategy will also expand the Digital ID program, to "reduce the need for people to share sensitive personal information with the government and businesses to access services online" – but details on this were scant.

Plans to ‘break the ransomware business model’

The strategy notes ransomware is “one of the most disruptive cyber threats” in the world – and costs Australia’s economy up to $3 billion in damages each year. The government will make a “ransomware playbook” to help businesses respond to and bounce back from cyber extortion.

It will also work with industry to co-design a mandatory no-fault ransomware reporting scheme to encouraging reporting on ransom incidents. We know, based on past experiences with the Notifiable Data Breaches scheme, that businesses sometimes won’t report breaches for fear of public backlash. A no-liability reporting scheme could change this, and provide important data that will further bolster our defences against ransom attacks.

The strategy also “strongly discourages” making ransom payments. This makes sense, as these payments inevitably fuel the ransomware economy and fund criminals’ future attacks.

Controversially, however, Minister for Cyber Security Clare O’Neil has considered introducing a blanket ban on such payments at some time in the next few years.

This could have negative impacts. For instance, a business that legally can’t pay a ransom may not be able to recover stolen data, resulting in permanent data and financial loss. Attackers may also release the stolen data online out of spite. We saw this happen after last year’s Optus data breach.

There’s also a risk that announcing an impending ban could make Australia more attractive to criminals in the short term, as they may scramble to carry out as many attacks as possible before payments are made illegal. The impact of this would be lessened if businesses adopt a disciplined approach to regular data backups.

Smart devices and apps

Another strategic initiative will involve working with industry to establish a mandatory cyber security standard (in line with international standards) for consumer-grade smart devices sold in Australia.

The government will also introduce a voluntary cyber security labelling scheme for smart devices. Ideally, such a scheme would keep the public informed about the level of security on the many different devices they own. However, given it’s voluntary, it’s hard to say whether it will have a substantial impact.

Another voluntary code of practice will be introduced for app stores and app developers.

What are the challenges?

If it’s implemented well, the strategy could result in a substantial decrease in cyber crime, greater safety for the public and a thriving cyber sector.

Currently, businesses and individuals struggle with a lack of cyber awareness and skills. They don’t have the resources, nor the incentive, to invest in cyber security. This strategy could change that.

The greatest challenge is the complexity and diversity of cyber threats, which are constantly evolving. Today’s threats may not have crossed anyone’s mind a few year ago. This inherent unpredictability may render some of the assumptions in the strategy redundant in the coming years.

Then there are inevitable trade-offs that come with competing values such as privacy, security, innovation and regulation. For example, a project that strongly maintains the privacy of consumers may end up sacrificing transparency. Similarly, too much transparency can lead to security risks.

We'll need to innovate in the cyber security domain to stay ahead of criminals. But as we've seen in other areas of the tech sector, innovation that outruns regulation is often more harmful than helpful. Striking the balance is difficult.

Moreover, there's a noticeable lack of detail in many of the initiatives outlined in the strategy. This could make it difficult to measure its progress and impact as a high-level strategic document.

Success will depend on voluntary action and cooperation from stakeholders, which may not be enough to ensure compliance and accountability from some businesses and individuals.

Any shortcomings could be managed by making the strategy inclusive and consultative. If it caters to the needs of all, it may indeed become a successful seven-year plan.

Reproduced from The Conversation under a Creative Commons Licence.

Artificial intelligence is already in our hospitals. 5 questions people want answered

Stacy Carter,
Professor and Director, Australian Centre for Health Engagement, Evidence and Values, University of Wollongong

Emma Frost
PhD candidate, Australian Centre for Health Engagement, Evidence and Values, University of Wollongong

Farah Magrabi
Professor of Biomedical and Health Informatics at the Australian Institute of Health Innovation, Macquarie University

Yves Saint James Aquino
Research Fellow, Australian Centre for Health Engagement, Evidence and Values, University of Wollongong

Artificial intelligence (AI) is already being used in health care. AI can look for patterns in medical images to help diagnose disease. It can help predict who in a hospital ward might deteriorate. It can rapidly summarise medical research papers to help doctors stay up-to-date with the latest evidence.

These are examples of AI making or shaping decisions health professionals previously made. More applications are being developed.

But what do consumers think of using AI in health care? And how should their answers shape how it's used in the future?

What do consumers think?

AI systems are trained to look for patterns in large amounts of data. Based on these patterns, AI systems can make recommendations, suggest diagnoses, or initiate actions. They can potentially continually learn, becoming better at tasks over time.

If we draw together international evidence, including our own and that of others, it seems most consumers accept the potential value of AI in health care.

This value could include, for example, increasing the accuracy of diagnoses or improving access to care. At present, these are largely potential, rather than proven, benefits.

But consumers say their acceptance is conditional. They still have serious concerns.

1. Does the AI work?

A baseline expectation is AI tools should work well. Often, consumers say AI should be at least as good as a human doctor at the tasks it performs. They say we should not use AI if it will lead to more incorrect diagnoses or medical errors.

2. Who's responsible if AI gets it wrong?

Consumers also worry that if AI systems generate decisions – such as diagnoses or treatment plans – without human input, it may be unclear who is responsible for errors. So people often want clinicians to remain responsible for the final decisions, and for protecting patients from harms.

3. Will AI make health care less fair?

If health services are already discriminatory, AI systems can learn these patterns from data and repeat or worsen the discrimination. So AI used in health care can make health inequities worse. In our studies consumers said this is not OK.

4. Will AI dehumanise health care?

Consumers are concerned AI will take the "human" elements out of health care, consistently saying AI tools should support rather than replace doctors. Often, this is because AI is perceived to lack important human traits, such as empathy. Consumers say the communication skills, care and touch of a health professional are especially important when feeling vulnerable.

5. Will AI de-skill our health workers?

Consumers value human clinicians and their expertise. In our research with women about AI in breast screening, women were concerned about the potential effect on radiologists' skills and expertise. Women saw this expertise as a precious shared resource: too much dependence on AI tools, and this resource might be lost.

Consumers and communities need a say

The Australian health-care system cannot focus only on the technical elements of AI tools. Social and ethical considerations, including high-quality engagement with consumers and communities, are essential to shape AI use in health care.

Communities need opportunities to develop digital health literacy: digital skills to access reliable, trustworthy health information, services and resources.

Respectful engagement with Aboriginal and Torres Strait Islander communities must be central. This includes upholding Indigenous data sovereignty, which the Australian Institute of Aboriginal and Torres Strait Islander Studies describes as:

> the right of Indigenous peoples to govern the collection, ownership and application of data about Indigenous communities, peoples, lands, and resources.

This includes any use of data to create AI.

Respectful engagement with Aboriginal and Torres Strait Islander communities is vital. Thurtell/GettyImages

This critically important consumer and community engagement needs to take place before managers design (more) AI into health systems, before regulators create guidance for how AI should and shouldn't be used, and before clinicians consider buying a new AI tool for their practice.

We're making some progress. Earlier this year, we ran a citizens' jury on AI in health care. We supported 30 diverse Australians, from every state and territory, to spend three weeks learning about AI in health care, and developing recommendations for policymakers.

Their recommendations, which will be published in an upcoming issue of the Medical Journal of Australia, have informed a recently released national roadmap for using AI in health care.

That's not all

Health professionals also need to be upskilled and supported to use AI in health care. They need to learn to be critical users of digital health tools, including understanding their pros and cons.

Our analysis of safety events reported to the Food and Drug Administration shows the most serious harms reported to the US regulator came not from a faulty device, but from the way consumers and clinicians used the device.

We also need to consider when health professionals should tell patients an AI tool is being used in their care, and when health workers should seek informed consent for that use.

Lastly, people involved in every stage of developing and using AI need to get accustomed to asking themselves: do consumers and communities agree this is a justified use of AI?

Only then will we have the AI-enabled health-care system consumers actually want.

Reproduced from The Conversation under a Creative Commons licence.

A year of ChatGPT: 5 ways the AI marvel has changed the world

Toby Welsh, Professor of AI, Research Group Leader, UNSW Sydney

OpenAI's artificial intelligence (AI) chatbot ChatGPT was unleashed onto an unsuspecting public exactly one year ago.

It quickly became the fastest-growing app ever, in the hands of 100 million users by the end of the second month. Today, it's available to more than a billion people via Microsoft's Bing search, Skype and Snapchat – and OpenAI is predicted to collect more than US$1 billion in annual revenue.

We've never seen a technology roll out so quickly before. It took about a decade or so before most people started using the web. But this time the plumbing was already in place.

As a result, ChatGPT's impact has gone way beyond writing poems about Carol's retirement in the style of Shakespeare. It has given many people a taste of our AI-powered future. Here are five ways this technology has changed the world.

1. AI safety

ChatGPT forced governments around the world to wise up to the idea that AI poses significant challenges – not just economic challenges, but also societal and existential challenges.

United States President Joe Biden catapulted the US to the forefront of AI regulations with a presidential executive order that establishes new standards for AI safety and security. It looks to improve equity and civil rights, while also promoting innovation and competition, and American leadership in AI.

Soon after, the United Kingdom held the first ever intergovernmental AI Safety Summit in Bletchley Park – the place where the computer was born in World War II to crack the German Enigma code.

And more recently, the European Union has appeared to be sacrificing its early lead in regulating AI, as it struggled to adapt its AI Act with potential threats posed by frontier models such as ChatGPT.

Although Australia continues to languish towards the back of the pack in terms of regulation and investment, nations around the world are increasingly directing their money, time and attention towards addressing this issue which, five years ago, didn't cross most people's minds.

2. Job security

Before ChatGPT, it was perhaps car workers and other blue collar workers who most feared the arrival of robots. ChatGPT and other generative AI tools have changed this conversation.

White collar workers such as graphic designers and lawyers have now also started to worry for their jobs. One recent study of an online job marketplace found earnings for writing and editing jobs have fallen more than 10% since ChatGPT was launched. The gig economy might be the canary in this coalmine.

There's huge uncertainty whether more jobs get destroyed by AI than created. But one thing is now certain: AI will be hugely disruptive in how we work.

3. Death of the essay

The education sector reacted with some hostility to ChatGPT's arrival, with many schools and education authorities issuing immediate bans over its use. If ChatGPT can write essays, what will happen to homework?

Of course, we don't ask people to write essays because there's a shortage of them, or even because many jobs require this. We ask them to write essays because it demands research skills, improves communication skills, critical thinking and domain knowledge. No matter what ChatGPT offers, these skills will still be needed, even if we spend less time developing them.

And it isn't only school children cheating with AI. Earlier this year, a US judge fined two lawyers and a law firm US$5,000 for a court filing written with ChatGPT that included made-up legal citations.

I imagine these are growing pains. Education is an area in which AI has much to offer. Large language models such as ChatGPT can, for example, be fine-tuned into excellent Socratic tutors. And intelligent tutoring systems can be infinitely patient when generating precisely targeted revision questions.

4. Copyright chaos

This one is personal. Authors around the world were outraged to discover that many large language models such as ChatGPT were trained on hundreds of thousands of books, downloaded from the web without their consent.

The reason AI models can converse fluently about everything from AI to zoology is because they're trained on books about everything from AI to zoology. And the books about AI include my own copyrighted books about AI.

The irony isn't lost on me that an AI professor's books about AI are controversially being used to train AI. Multiple class action suits are now in play in the US to determine if this is a violation of copyright laws.

Users of ChatGPT have even pointed out examples where chatbots have generated entire chunks of text, verbatim, taken from copyrighted books.

5. Misinformation and disinformation

In the short term, one challenge which worries me most is the use of generative AI tools such as ChatGPT to create misinformation and disinformation.

This concern goes beyond synthetic text, to deepfake audio and videos that are indistinguishable from real ones. A bank has already been robbed using AI-generated cloned voices.

Elections also now appear threatened. Deepfakes played an unfortunate role in the 2023 Slovak parliamentary election campaign. Two days prior to the election, a fake audio clip about electoral fraud that allegedly featured a well-known journalist from an independent news platform and the chairman of the Progressive Slovakia party reached thousands of social media users. Commentators have suggested such fake content could have a material impact on election outcomes.

According to The Economist, more than four billion people will be asked to vote in various elections next year. What happens in such elections when we combine the reach of social media to with the power and persuasion of AI-generated fake content? Will it unleash a wave of misinformation and disinformation onto our already fragile democracies?

It's hard to predict what will unfold next year. But if 2023 is anything to go by, I suggest we buckle up.

This article has been reproduced from The Conversation under a Creative Commons licence.

What is LockBit, the cybercrime gang hacking some of the world's largest organisations?

Jennifer Medbury
Lecturer in Intelligence and Security, Edith Cowan University

Paul Haskell-Dowland
Professor of Cyber Security Practice, Edith Cowan University

While ransomware incidents have been occurring for more than 30 years, only in the last decade has the term "ransomware" appeared regularly in popular media. Ransomware is a type of malicious software that blocks access to computer systems or encrypts files until a ransom is paid.

Cybercriminal gangs have adopted ransomware as a get-rich-quick scheme. Now, in the era of "ransomware as a service", this has become a prolific and highly profitable tactic. Providing ransomware as a service means groups benefit from affiliate schemes where commission is paid for successful ransom demands.

Although only one of the many gangs operating, LockBit has been increasingly visible, with several high-profile victims recently appearing on the group's website.

So what is LockBit? Who has fallen victim to them? And how can we protect ourselves from them?

What, or who, is LockBit?

To make things confusing, the term LockBit refers to both the malicious software (malware) and to the group that created it.

LockBit first gained attention in 2019. It's a form of malware deliberately designed to be secretly deployed inside organisations, to find valuable data and steal it.

But rather than simply stealing the data, LockBit is a form of ransomware. Once the data has been copied, it is encrypted, rendering it inaccessible to the legitimate users. This data is then held to ransom – pay up, or you'll never see your data again.

To add further incentive for the victim, if the ransom is not paid, they are threatened with publication of the stolen data (often described as double extortion). This threat is reinforced with a countdown timer on LockBit's blog on the dark web.

Little is known about the LockBit group. Based on their website, the group doesn't have a specific political allegiance. Unlike some other groups, they also don't limit the number of affiliates:

> We are located in the Netherlands, completely apolitical and only interested in money. We always have an unlimited amount of affiliates, enough space for all professionals. It does not matter what country you live in, what types of language you speak, what age you are, what religion you believe in, anyone on the planet can work with us at any time of the year.

Notably, LockBit have rules for their affiliates. Examples of forbidden targets (victims) include:

- critical infrastructure
- institutions where damage to the files could lead to death (such as hospitals)
- post-Soviet countries such as Armenia, Belarus, Estonia, Georgia, Kazakhstan, Kyrgyzstan, Latvia, Lithuania, Moldova, Russia, Tajikistan, Turkmenistan, Ukraine and Uzbekistan.

Other ransomware providers have also claimed they won't target institutions like hospitals – but this doesn't guarantee victim immunity. Earlier this year a Canadian hospital was a victim of LockBit, triggering the group behind LockBit to post an apology, offer free decryption tools and allegedly expel the affiliate who hacked the hospital.

While rules may be in place, there is always potential for rogue users to target forbidden organisations.

The final rule in the list above is an interesting exception. According to the group, these countries are off limits because a high proportion of the group's members were "born and grew up in the Soviet Union", despite now being "located in the Netherlands".

Who's been hacked by LockBit?

High-profile victims include the United Kingdom's Royal Mail and Ministry of Defence, and Japanese cycling component manufacturer Shimano. Data stolen from aerospace company Boeing was leaked just this week after the company refused to pay ransom to LockBit.

LockBit's website on the dark web is used to publish stolen data if the ransom is not paid. Screenshot sourced by authors.

While not yet confirmed, the recent ransomware incident experienced by the Industrial and Commercial Bank of China has been claimed by LockBit.

Since appearing on the cybercrime scene, LockBit has been linked to almost 2,000 victims in the United States alone.

From the list of victims seen below, LockBit is clearly being used in a scatter-gun approach, with a wide variety of victims. This is not a series of planned, targeted attacks. Instead, it shows LockBit software is being used by a diverse range of criminals in a service model.

LockBit's blog on the dark web provides a showroom for public shaming of their victims. Screenshot sourced by authors.

How we can protect ourselves

In recent years, ransomware as a service (RaaS for short) has become popular.

Just as organisations use software-as-a-service providers – such as licensing for office tools like Microsoft 365, or accounting software for payroll – malicious services are providing tools for cybercriminals.

Ransomware as a service enables an inexperienced criminal to deliver a ransomware campaign to multiple targets quickly and efficiently – often at minimal cost and usually on a profit-sharing basis.

The RaaS platform handles the malware management, data extraction, victim negotiation and payment handling, effectively outsourcing criminal activities.

The process is so well developed, such groups even provide guidelines on how to become an affiliate, and what benefits one will gain. With a 20% commission of the ransom being paid to LockBit, this system can generate significant revenue for the group – including the deposit of 1 Bitcoin (approximately A$58,000) required from new users.

While ransomware is a growing concern around the globe, good cybersecurity practices can help. Updating and patching our systems, good password and account management, network monitoring and reacting to unusual activity can all help to minimise the likelihood of any compromise – or at least limit its extent.

For now, whether or not to pay a ransom is a matter of preference and ethics for each organisation. But if we can make it more difficult to get in, criminal groups will simply shift to easier targets.

This article is reproduced from The Conversation under a Creative Commons licence.

Can You Trouble-Shoot?

George Wright

I've come to conclude that the trouble with computers is the frequency.

But what does this mean? I am referring to the frequencies: prevalence, repetition, constancy, amount, incidence, periodicity, persistence, regularity, abundance, beat, density, distribution, density, occurrence, and sheer intrusion into our lives.

The Latin word from which we have derived the term 'frequency' is *frequens* which means 'crowded'.

Computers are full, over-packed with emails, apps, spreadsheets, algorithms, and anything else that anybody, anywhere, anyhow wants to stuff into your so-called private box of goodies you have carefully programmed for your personal use so that any focus on empirical issues is distracted. The simple task of allowing your mind to peacefully drift into realms of fantasy and celebration of life dissipates.

Instead we spend our days deliberating on tasks such as deciding on whether or not to delete things that may or may not be important. Perhaps one day somebody will invent a facility relating to the Latin word *oportunus* which means 'suitable, advantageous, fit, favourable…'

Ah yes, it's good to retain the ability to day-dream.

Perhaps, perhaps...perhaps. I know my abilities are limited. But perhaps you have the ability to change the *frequens* of the computer to the *oportunus*?

Interesting Internet Finds

Steve Costello

In the course of going through the more than 300 RSS feeds, I often run across things that I think might be of interest to other user group members. The following are some items I found interesting during April 2023.

New Privacy Tool: Mullvad Browser
https://firewallsdontstopdragons.com/new-privacy-tool-mullvad-browser/

I currently use Google Chrome, Firefox, Tor, and Vivaldi browsers, depending upon the level of privacy and identity hiding needed. Still, I found this post about the Mullvad browser interesting.

Still Using Windows 10 21H2? Time To Upgrade
https://www.computerworld.com/article/3692869/still-using-windows-10-21h2-time-to-upgrade.html

For those using Windows 10, this is a must-read article. It gives the reasons you should upgrade to 22H2 and some reasons you might not have already. (Note: Both my Windows 10 machines are using 22H2.)

Top 10 Ways To Turn Flashlight On And Off In Android
https://www.online-tech-tips.com/smartphones/top-10-ways-to-turn-flashlight-on-and-off-in-android/

Just the day after I read this post, my wife asked me if there was a way to get a shortcut to turn the flashlight on and off for her Samsung Galaxy S3. Luckily, I remembered reading this, and now she has a flashlight shortcut on her lock screen. If you use an Android phone or tablet, check out this post.

What Can You Do With The USB Port On Your Router?
https://www.howtogeek.com/791384/what-can-you-do-with-the-usb-port-on-your-router/

I had never thought about the USB port on a router until I read this post. Unfortunately, my router does not even have a USB port. But I have a neighbor with a 2 TB drive setup on his router for sharing files and backing up his travel laptop.

What's My IP Address And How To Find It
https://www.thewindowsclub.com/whats-my-ip-address-and-how-to-find-it

You might not know your IP address or even need to know right now. Even if that is

the case, you should know how to find it, so this post might come in handy someday.

What's The (Number) Added To Some Of My Downloads?
https://askleo.com/whats-the-number-added-to-some-of-my-downloads/

This is one of those things that come up from time to time. When it happens to me, I usually know what it is and why it happens, but not everyone knows about this. If you are one of those that don't know, check out this post.

****
This work by Steve Costello is licensed under a Creative Commons Attribution 4.0 International License.

Interesting Internet Finds

Steve Costello

While going through more than 300 RSS feeds, I often encounter things that might interest other user group members.

The following are some items I found interesting during November 2022.

Why Do Batteries Lose Charge When You Aren't Using Them?

https://www.howtogeek.com/842269/why-do-batteries-lose-charge-when-you-arent-using-them/

Check out this post to learn why batteries lose charge even when unused.

Monitor The Chat... Or Don't Use It

https://www.speakschmeak.com/2022/11/monitor-chat-or-dont-use-it.html

This one is for those who do presentations online. I have attended many meetings on Zoom, and other online platforms, where nobody monitors the chat; it irritates me when this happens. If you are not going to monitor the chat or have someone else monitor it, don't even enable it.

How To Swap Out Your Wi-Fi Router Without Disconnecting All Your Smart Home Devices

https://www.theverge.com/23453354/keep-smart-home-devices-online-replace-wifi-router-how-to

If you are upgrading your Wi-Fi router or thinking about it, check out this post first to avoid potential problems.

Shaky Photos? You're Holding Your Smartphone Wrong. Try This.

https://www.zdnet.com/article/shaky-photos-youre-holding-your-smartphone-wrong/

If you are like me, you take most photos with your smartphone instead of a camera. However, once I read this post, I started using my hands to hold the smartphone as described, which works.

New Send To Kindle Webpage Can Send EPUBs And Documents To Kindles

https://blog.the-ebook-reader.com/2022/11/17/new-send-to-kindle-webpage-can-send-epubs-and-documents-to-kindles/

The desktop apps still don't support EPUbs as yet. I have been using the webpage referenced in this post, which works well. It is much easier than opening my email to send the EPUB.

Why You Should Consider Using DuckDuckGo As Your Search Engine

https://www.makeuseof.com/why-consider-duckduckgo/

I use DuckDuckGo as my default search engine in all my browsers and the DuckDuckGo browser app on my Android devices. Check out this post to learn why you should be doing the same.

How to Fix Your Smart TV Problems Without Buying a New TV

https://www.techhive.com/article/1382183/how-to-fix-your-smart-tv-problems.html

Is your smart TV an older model? Is the smart TV operating system not getting updated or having problems? If you answered yes to these questions, check out this post before trashing it and buying a new one.

****

This work by Steve Costello is licensed under a Creative Commons Attribution 4.0 International License.

East SIG Report – September 2023

Neil Muller

After welcoming members to the September meeting of East SIG, host Dave Botherway outlined the nights agenda below:

Presentation 1: **Q&A** with George Skarbek
Presentation 2: **Linux Mint Tutorials** by Trevor Hudson
Presentation 3: **Tips and Tricks** by Peter Carpenter
Presentation 4: **Cleansing a PC before handover** by George Skarbek

Q&A by George Skarbek.

Question 1: When I'm finished my computing for the day, I've been in the habit of using Sleep mode rather than shutting the computer down. I have 3 discs attached to my computer, but these are on a different power point, so obviously keep running. I was of the belief that the hard discs shouldn't be turned off regularly, so I've left them running. Have you got any advice on this procedure?

Answer 1: I would recommend you switch the discs off. Especially for rotating discs, as the bearings and head actuator have a finite life. I turn mine off simply to save wear and tear on the bearings rather than having then running over night unnecessarily. Turning the discs off will also save you a small amount of electricity over their 5-year life. If you're not using them, or running things in the background overnight, my recommendation is switch them off. It will prolong the life of your hard drive and save a little bit of money in the process.

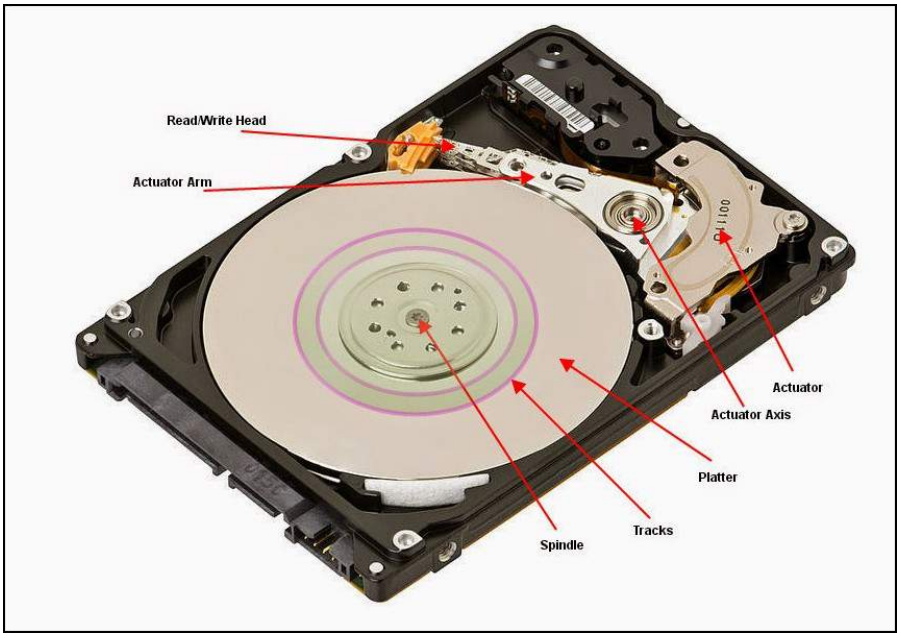


Figure 1 – SATA Hard Drive internal components

Question 2: I have 3 discs inside my computer, comprising of 2 SSDs and a rotating hard drive. Would you advocate turning the PC off overnight or using Sleep mode?

Answer 2: The disc life with SSDs is quite different to rotating discs, as you don't have any wear and tear, but I would still recommend turning your PC off. I can't see what you gain from leaving it on overnight. Leaving the PC in Sleep mode overnight only saves you a few seconds when you turn your computer on at startup. When your laptop is in sleep mode, the RAM retains information about open programs and data. If a hacker gained access to your laptop, they can use this retained information to their advantage in what is known as a "cold boot attack."

[During sleep mode, only your PC's RAM requires power to stay functional. Since other elements such as the screen, processor, and hard drive are turned off, your PC requires very little power to operate.]



Figure 2 – Sleep mode

Question 3: There is a school of thought that you should leave a computer on all the time, especially those with rotating hard drives, so the PC stays at the ambient temperature. Whereas if you turn it off, it cools down so when you turn it on the next day, it has to heat up again. The fluctuation in temperature is an argument for leaving a PC on. I turn mine off as I don't believe the argument, but what is your view?

Answer 3: I don't believe the ambient temperature argument either. When you're at home the ambient temperature shouldn't drop any more than 10 degrees at the most, so you're not going to get much differential heating in that range.

Question 4: A friend bought a laptop with an SSD and after about 17 months the SSD died. Although it was out of the 12-month warrantee, he complained to ASUS saying it would be expected that the warrantee for the SSD should be longer, as SSDs are more reliable. He asked for a new SSD, but ASUS refused, so he went out and bought a new one. What is the reasonable life of an SSD? There are no moving parts so what would break down?

Answer 4: The individual cells of an SSD have a finite life and are not like magnetic media that wears down slowly. The cell in an SSD gets charged one way then another, as it moves from a zero to one and back again. Doing that consistently causes the cells to wear. The Mean Time Between Failures (MTBF) is generally over a million hours. It doesn't mean the SSD will last that long, as that figure is an average, where some will die sooner others last longer. I believe the useful life for an SSD is around 8 years.

Programs that are very aggressive with writing to an SSD is the main cause of cells wearing.

Question 5: I have Windows 11 on my machine and I've been looking to rationalise my apps. I have an app called "Windows Assessment and Deployment Get Windows 10". The app is 7 Gigabytes in size so do I need it?

Answer 5: My gut feeling is you don't want it. I have no intention to upgrade my Windows 10 to 11 personally. Windows 11 has a few extra nice features, but quite a few things require an extra one or two clicks and are buried.
[Dave Botherway] I would support deleting that app, particularly for anything that big. I'd copy it out and then back it up. I'd then delete the app from Windows 11 and see what happens.

Linux Mint Tutorials by Trevor Hudson

As a recent convert to Linux, Trevor Hudson presented two short videos he prepared to help new Linux users. These and other videos that he plans to add in the future can be found on his YouTube Channel "Linux Mint 1080 Tutorials".

The first video which is titled "Hide Linux Screen Icons", outlines how to hide screen icons and the Linux Mint watermark from the desktop.
The video can be found at https://www.youtube.com/watch?v=tQjHbXAO9LQ

The second video is titled "Delete Linux Desktop Icons", outlines 2 methods to delete desktop icons in Linux Mint.
This video can be viewed at https://www.youtube.com/watch?v=PCBwT102vIA

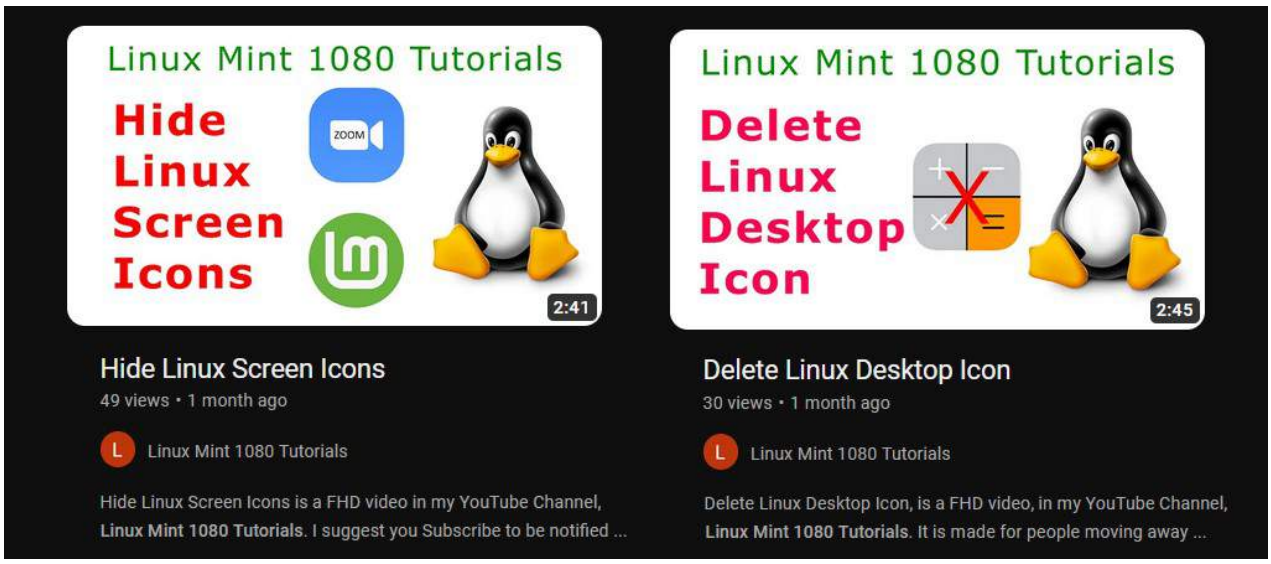


Figure 3 – Linux Mint 1080 Tutorials

Tips and Tricks by Peter Carpenter

In this presentation, Peter Carpenter outlined how he extended the life of a keyboard and phone using clever low-cost solutions.

Peter's standard keyboard had a broken front leg, but even with the legs folded up, the keyboard rocked when used on an uneven surface. Peter felt if the forward-facing legs of the keyboard were soft legs, that might solve the problem of the keyboard rocking. To test his theory, Peter used adhesive to attach 2 square pieces of foam to the base of the keyboard as shown in figure 4. The foam raised the front of the keyboard and prevented the keyboard from rocking when used on an uneven surface. This trick extended the life of a perfectly good keyboard with this clever low-cost solution.



Figure 4 – Peter's computer keyboard repair.

When Peter's wife's iPhone 7 would only charge intermittently, Peter believed cleaning the charging socket on the iPhone might solve the problem. Using a bright light and tooth pick, Peter was able to carefully clear accumulated material from the charging socket on the iPhone. Then using some "Electrical Clean and Lube" on a fine flat artist's brush, he carefully cleaned the connectors within the charging socket.



When the charging cable was again connected to the iPhone, charging worked perfectly and was no longer intermittent. Peter used a brush to apply the "Electrical Clean and Lube", as it's unwise to spray isopropyl alcohol straight onto the socket. If the liquid had found its way inside and onto internal components it could have damage them.

Figure 5 – Peter's iPhone 7 cleaning utensils.

Peters' moral was if something fails, don't give up on it, try to repair it first.

Cleansing a Windows computer before handover by George Skarbek

In this presentation George Skarbek explains how to clean personnel information from a Windows computer before it's ready for donation or sale. The easiest solution to clean a Windows PC is to put it back to its factory settings. However, this option would wipe all data and any software installed, other than the Windows operating system. In his presentation however, George demonstrated how to remove all personal data, but retain existing software such as MS Office etc for use by the new owner, using only applications within Windows.

Pre cleaning issues

The owner of an ASUS laptop running Windows 10 had asked George if he could remove all personnel information from the computer, prior to it being donated. The PC had become so slow to respond to commands, it was unusable. George referred to it as almost "dead", as it was that slow.

Before cleaning of personnel data from the computer could commence, two problems had to be solved:

1. The Administer password was unknown and needed to be identified.
2. A rogue program had found its way onto the computer, slowing it to a crawl. This malware needed to be found and removed in order for the computer to be usable.

Identifying and removing the rogue malware

Initially George was unsure what was causing the computer to run slow. His first step was to open "Task Manager" and select the "Startup" tab, (Figure 6) where he disabled all programs except the virus checker. This procedure stopped programs loading into RAM unnecessarily, but did not delete them from the computer.

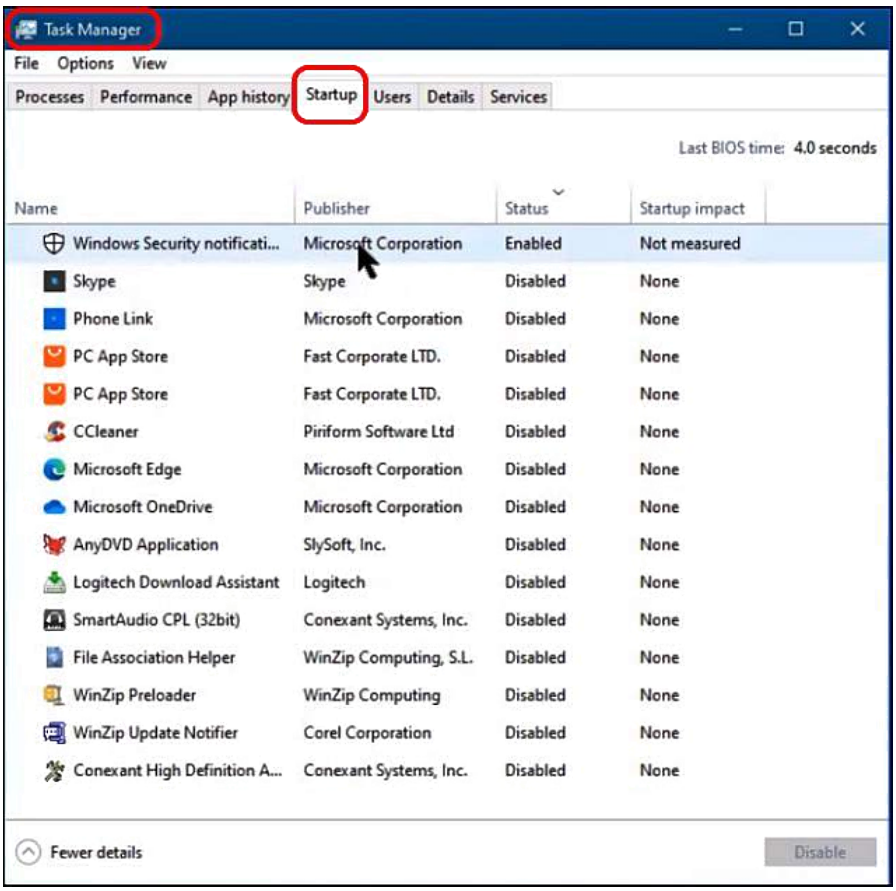


Figure 6 – Windows Startup

On rebooting the computer there was no change, and the computer was still running as slow as before. The malware was continuously paging data to the hard drive, causing the PC to slow to a crawl. This indicated the malware was not in startup.

The next step was to again open “Task Manager” and from the “Performance” tab, click the link on the bottom of that window to open the “Resource Monitor”. (Figure 7)

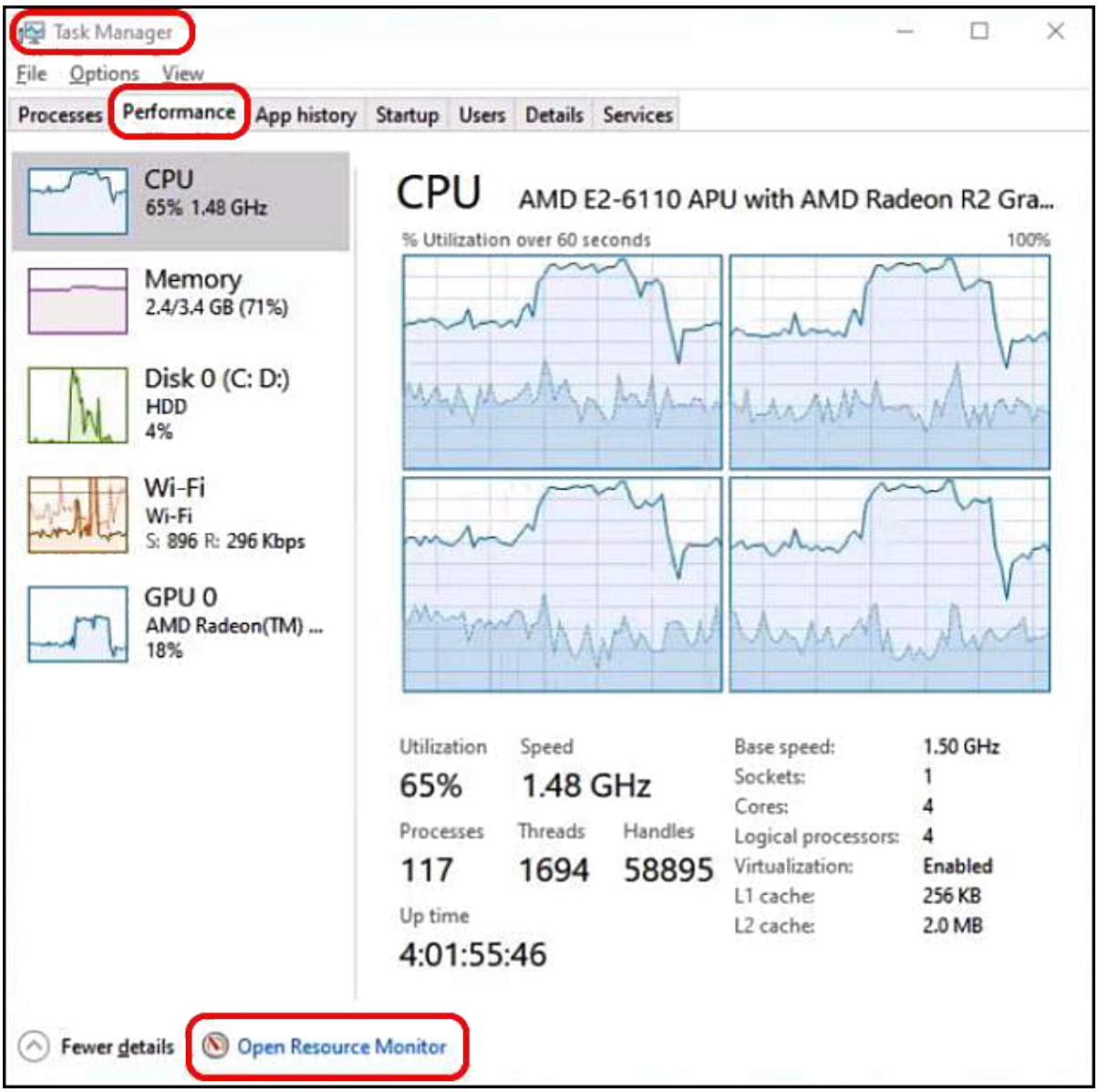


Figure 7 – Windows Task Manager

In “Resource Monitor” George selected the “Overview” tab to view the “Disk” panel, to see what was writing to the disk. Here he clicked the “total bytes written” column, to see which apps were writing the most data to the hard drive. (Figure 8)

As that failed to identify the culprit, next view the “Memory” panel in “Resource Monitor” and the select the column header for “Hard Faults/sec”. (Figure 8) This helped George identify the malware, as the app had a “Hard Faults/sec” reading over 100. Generally, a reading under 10 is the usual maximum found in that column.

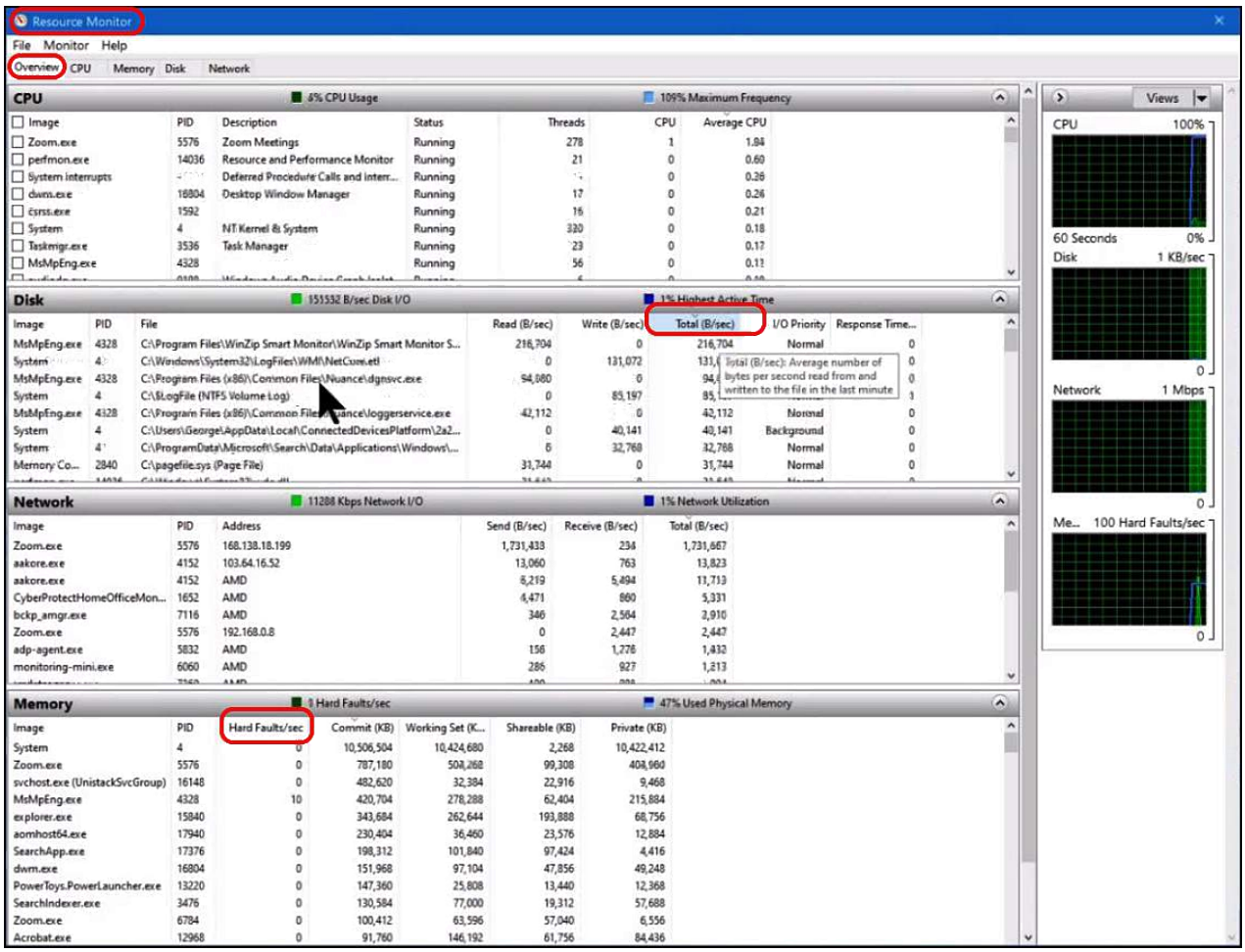


Figure 8 – Windows Resource Monitor

Two instances of a program called DSOne.exe (the second with a similar name) were found to be running constantly, 100% of the time. The laptop had 4GB of memory and 3.9GB was used up paging data back and forth from the hard drive to RAM. This process occurs as programs can only run from memory.

George eventually removed the 2 apps using IObit Uninstaller, when the Windows uninstaller was unable to remove them.

Identifying the administrator password

Like many Window users, the original owner of the laptop set the computer to open without a password. This was achieved from the “Run” command and typing “control userpassword2” (Figure 9).

In the “User Accounts” window that opens, untick the box labelled “Users must enter a user name and password to use this computer”. This now meant the computer loaded Windows on bootup, not needing a password to start. (Note: If the command “control userpassword2” is run when the box is unticked, George found the command doesn’t run).

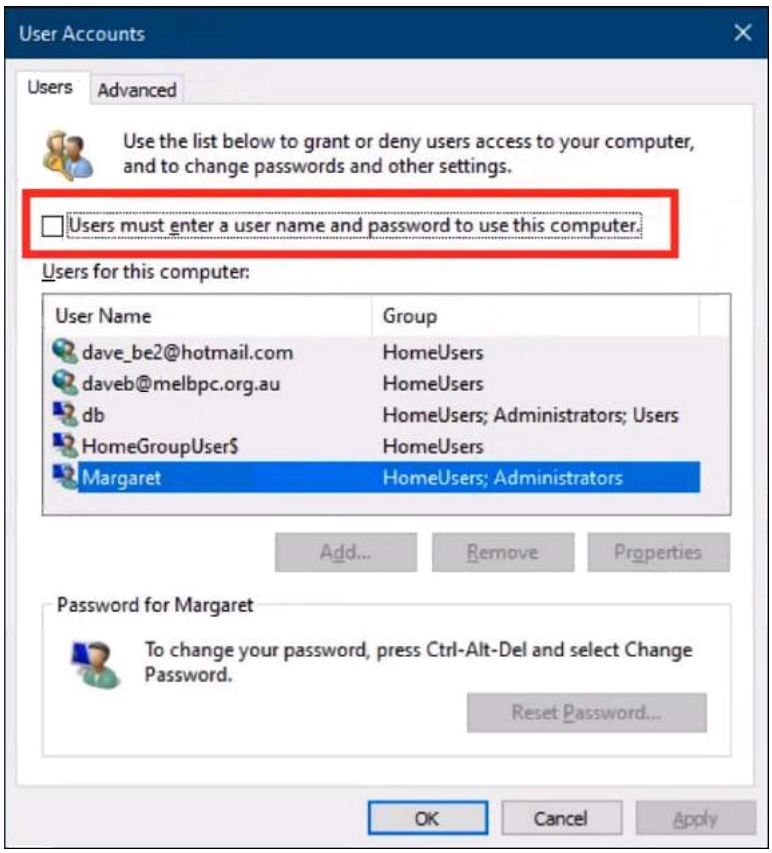


Figure 9 – User Accounts

As the original owner didn't remember the password they used 6 years ago, George set about creating a new user with admin privileges. He did this by using the Password app from Hiren's BootCD, to remove the passwords and then created a new user.

How to boot up your system with Hiren's Boot CD
In order to boot from the Hiren's Bootable USB stick, you need to set the USB as the first boot device from BIOS settings. Here are the steps:

1. Power On your computer and then press "F1" or "F2" or "F10" or "DEL" to enter BIOS (CMOS) setup utility.
(The method to enter into BIOS Settings depends on the computer manufacturer).

2. When you enter the BIOS menu, go to the "Advanced BIOS Features" menu and find the "Boot Order" setting.

3. In the "Boot Order" setting, set the USB-HDD as a first boot device.

4. Save and exit from BIOS settings.

The link to view a video that explains using Hiren's BootCD is at:
https://www.youtube.com/watch?v=p3l5aM2hPXI

When creating a new user in Windows, you will be asked “Is it a family member”? Answer “No”, then it will ask “Is it a friend”? When asked to put in the friend email address, answer “I don’t know” or enter no@thankyou.com or aa@bb.com, the latter as suggested by audience members.

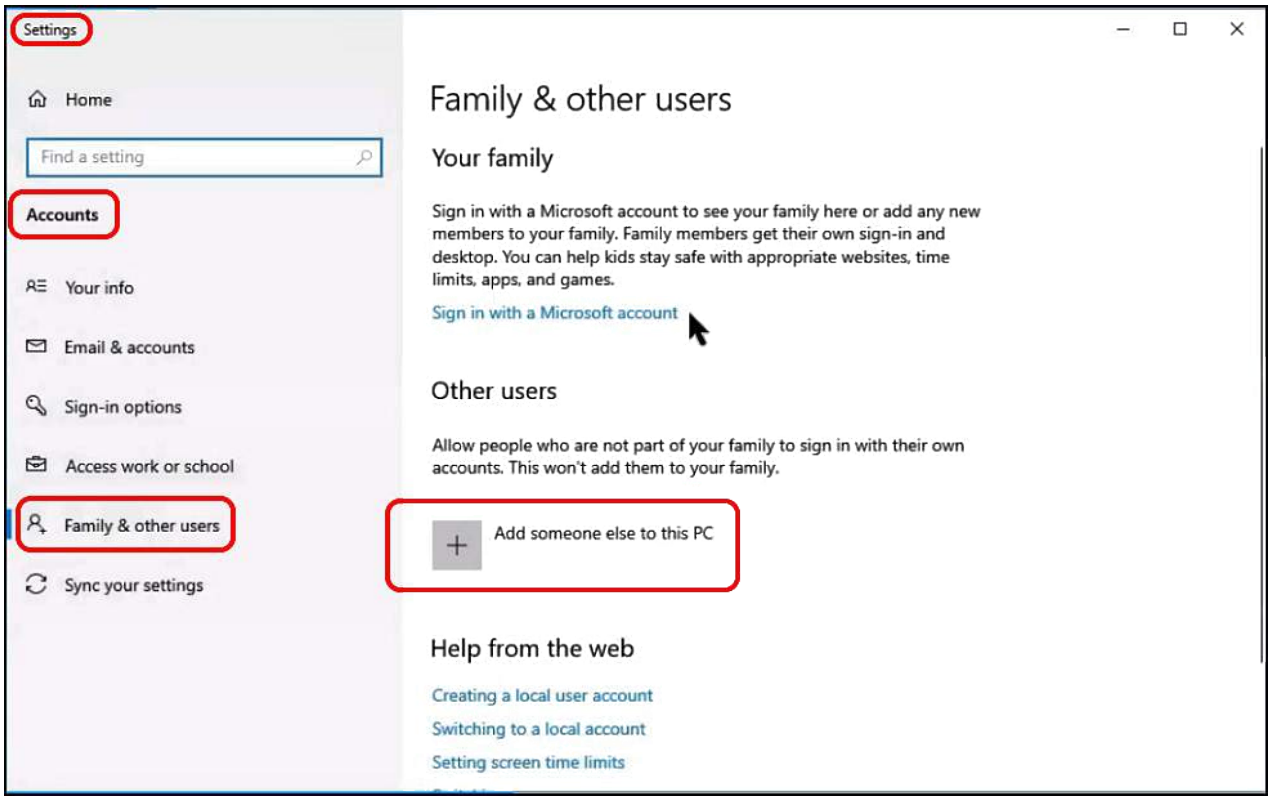


Figure 10 – Creating a New Administrator User

Eventually you will be given the option to create a new user and asked 3 questions. These questions could be “What city were you born in?”, answer “a”, then “What school did you go to?” answer “a” again, then “What was you first pets name?” and answer “a” again. Occasionally Windows may ask you to verify yourself. Answering with a lower case “a”, makes it easier to remember. Once your new admin user is created you will be able to delete other users from the computer.



Figure 11 – New Administrator creation

Once the 2 major hurdles of removing the malware and creating a new user with Administrator privileges were overcome, the laptop became quite usable and George could proceed with the clean-up of the laptop.

Cleanup Procedure

George explained how, using only the software that comes with Windows to remove all personal data, while keeping existing software applications intact for the next user. Georges steps are underlined below.

1. Delete all user docs and personal files
   File Explorer can be used to delete data initially.

2. Format all data drives. Do NOT use quick Format
   If data is kept on a separate drive or partition from the Windows operating system, format the drive. Make sure the "Quick Format" option is not selected as a full format is needed to ensure data cannot be retrieved. Figure 12.

   Quick Format just wipes the directory and the File Allocation Table (FAT). All data remains on the hard drive and can be retrieved by someone using third-party Recovery software.

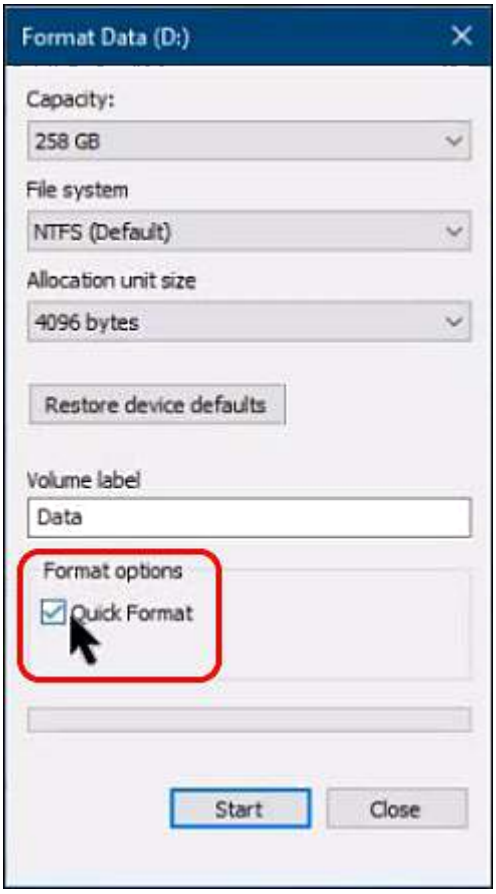


Figure 12 – Format Data Drive

3. Create a new Administrator user - use a simple name such as User and password
   This step is detailed above.

4. Delete all mail account profiles via Control Panel, Mail
   To delete other users mail accounts in this step requires a user with administrative privileges. Deleting Microsoft Outlook mail is fairly easy. From the "Control Panel" select "Mail (Microsoft Outlook)", which opens the "Mail Setup - Outlook" window. (Figure 13)
   Select "Email Accounts" to open the "Account Settings" window and delete all the accounts from the list.
   The "Mail" icon will only appear in Control Panel if the user uses MS Outlook as their mail client.

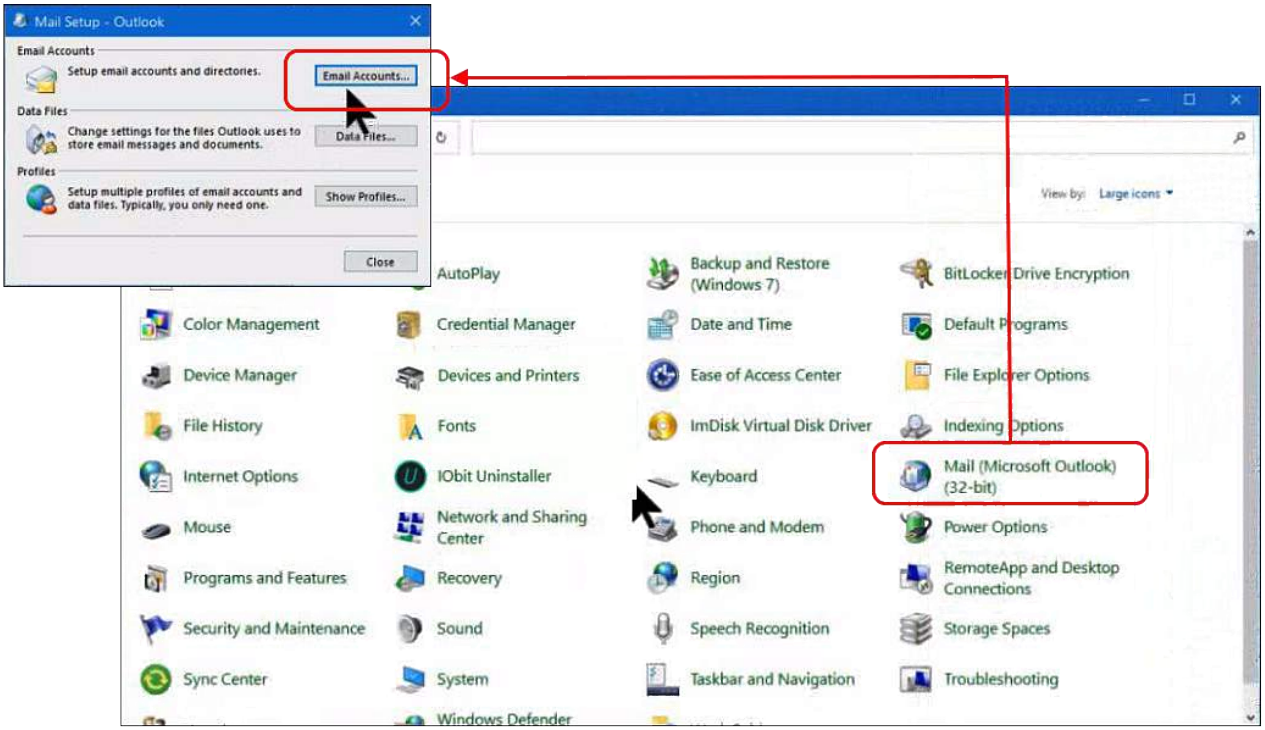


Figure 13 – Mail Accounts - Outlook

5. Delete all mail account databases such as *.pst and / or *.ost
   Once all email accounts in step 4 have been deleted, select the "Data Files" button and delete all the data files from the list and select "Close"

6. Delete all other user accounts AND their data

7. Delete all user accounts - Control Panel, User Accounts and all their data
   Open Control Panel and Select "User Accounts"

8. Delete all saved passwords & bookmarks in ALL browsers
   In all browsers select "Settings" and look for Passwords.
   Again, you will need the Windows Administrator password (i.e. the password used to start the computer) to be able to look at everyone's browser passwords and delete them.

In Firefox you will need to look at Settings Privacy & Security Logins and Passwords.

User profiles for Thunderbird can be found in the Thunderbird Profile folder. The default location for profiles in Windows is**:** C:\Users\UserName\AppData\Roaming\Thunderbird\Profiles.

9. <u>Delete all passwords in Credential Manager</u>
   Passwords are also stored in "Credential Manager". From "Control Panel" select "Credential Manager" and displayed are 2 lists of passwords for "Web Credentials" and "Windows Credentials". (Figure 14). As noted previously, these can be deleted but the Windows login password is required before this is possible.

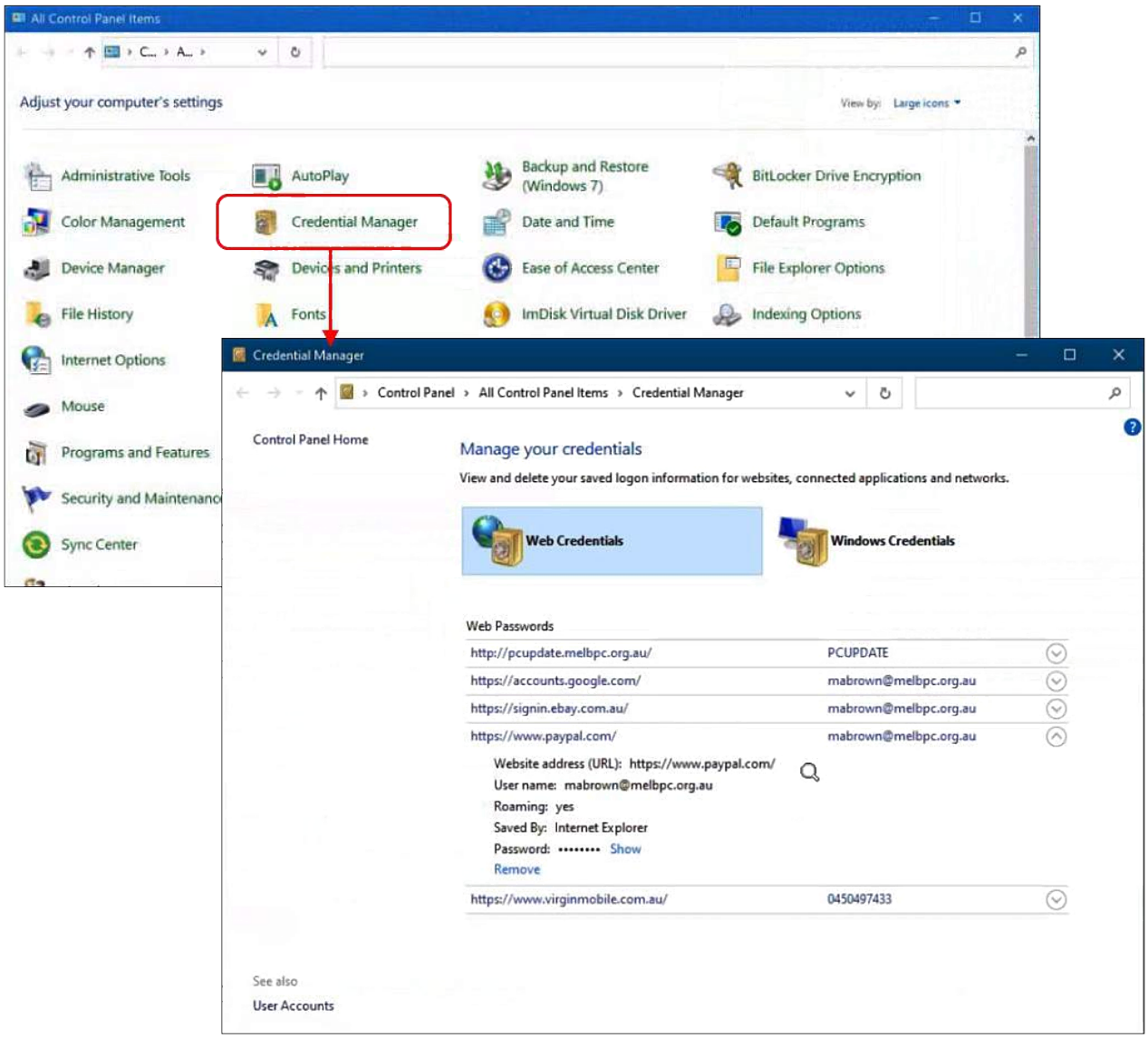


Figure 14 – Credential Manager

10. <u>Finally defrag all drives to reduce the very tiny chance of some data being recovered</u>

11. <u>Now the computer is ready to be donated</u>

East SIG Report – October 2023

Neil Muller

After welcoming members to the October meeting of East SIG, host Frank Maher outlined the nights agenda below:

Presentation 1: **Q&A** with George Skarbek
Presentation 2: **How to separate a subject from the background** by Stewart Bedford
Presentation 3: **Upgrading a small M.2 SSD to a larger one** by Peter Carpenter
Presentation 4: **New Tools on the ScamWatch Website** by Dave Botherway
Presentation 5: **Windows 10, Windows 11 and beyond** by Dave Botherway

Q&A by George Skarbek.

Question 1: I have a folder containing photos with over 100 subfolders. I'd like to update my backup of this folder to reflect only the changes, rather than the whole folder. Can you suggest a way to do this?

Answer 1: You can do that with one line in DOS, using the xcopy command. I use xcopy to copy only new or changed file in DOS using this command. It's not necessary to log on as administrator and it will work across a network.

1. Open the DOS box by pressing Windows key and R, then type cmd & press "enter"
2. Then use the CD (Change Directory) command to go to the folder you need to copy files from.
3. Next enter the drive where you want the updated files, say J: for drive J and the folder
4. Ensure you are in the desired folder
5. Finally type:
   xcopy C:\photos*.* J:\photos\ /s /d /y to copy all the new or updated files

   Source options /s /d /y act as follows
   /s Copies folders and subfolders except for empty ones.
   /d Copies files only if the date is newer or the file doesn't exist
   /y Overwrites existing older files with newer files without prompting you each time

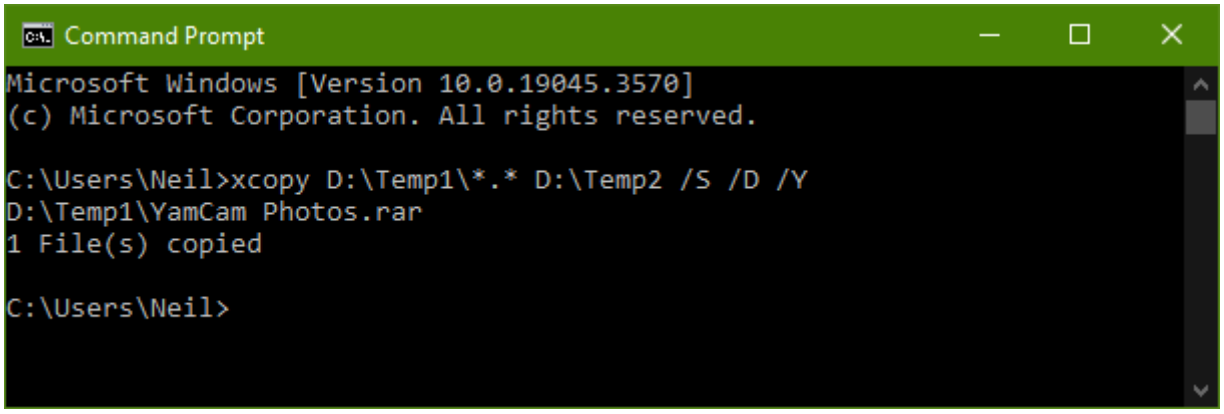


Figure 1 – Windows xcopy command

[Dave Botherway] I use a program called FreeFileSync to copy emails from a laptop to a desktop. It also works across a network.]

FreeFileSync is a folder comparison and synchronization software that creates and manages backup copies of all your important files. Instead of copying every file every time, FreeFileSync determines the differences between a source and a target folder and transfers only the minimum amount of data needed



Figure 2 – FreeFileSync

Question 2: I'm finding my C drive is becoming full of programs and I'm running out of storage space. Is there a method or program I can use to move or run programs from other than the C drive?

Answer 2: Firstly, I'd run a program like cCleaner to clean out all the junk files. In Windows 10 or 11, I'd then go to Settings System Storage Temp Folders and clean them out. That should get rid of a few Gigabytes, which should help a little.

You might try uninstalling a large program from your C drive, as many programs have an advanced option that will allow you to install a large portion of them on a drive other than C. Make sure that you have the installation media and serial numbers for them prior to uninstalling any such programs.

Try cleaning the C drive up first, but also look for old programs you no longer use and delete them. You can also uninstall files that come with Windows, such as Xbox if you don't use them.

A further option is to change the "Environment Variable" from loading Temp files on drive C. Create a folder on J drive called temp. Go into Setting and search for "environment" and change 2 "Environment Variables" to point to another drive. The first "Environment Variable" to change is shown in Figure 3 below with blue highlight.

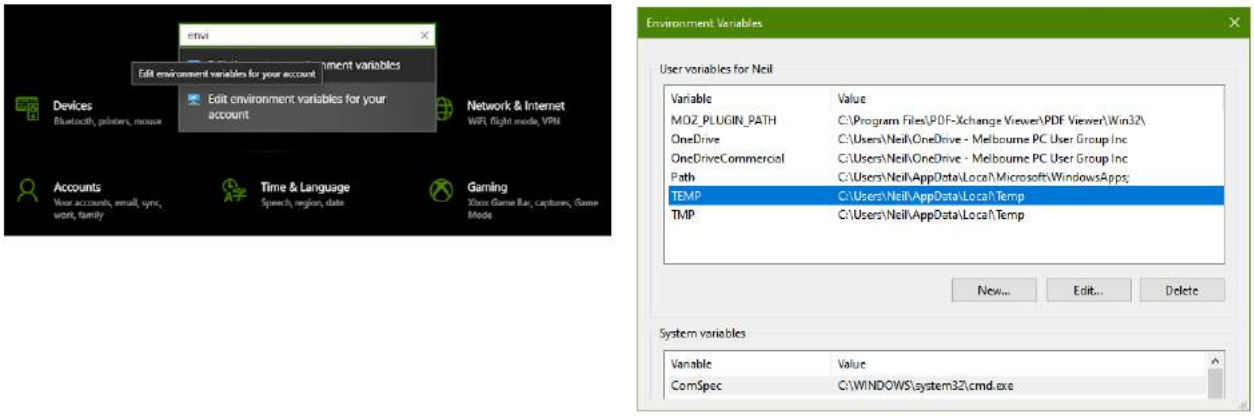


Figure 3 – Changes to "Environment Variables"

Question 3: If one morning you find your computer is slowing down, what instant action would you take?

Answer 3: I would go to Task Manager and select the Start Up tab. Disable any programs in your Start Up folder that you use once a week. These programs hold on to memory waiting for you to run the program. Disabling these programs does not uninstall them. This will stop all unnecessary files starting up that are not needed to start, at the same time as your computer starts. These programs slow down the start up and secondly use up your most valuable resource, your RAM. That change will have a significant improvement in how long your computer takes to start and also how quickly your programs run

How to separate a subject from the background by Stewart Bedford

Dave Botherway introduced the next presentation on separating subjects from image backgrounds. The video Dave played, created by Stewart Bedford a few years ago, can be found on the Melbourne Computer Club channel. Stewart demonstrates a straightforward technique to remove subjects from images and place them on new backgrounds. This is done using an alpha channel or transparency, a feature found in certain graphic formats.

Stewart demonstrated the removal of a computer laptop from its background using Pinta, a free open-source bitmap image editor, with a wide array of features. The image he used was a PNG (Portable Network Graphic) file format, because it supports transparency.

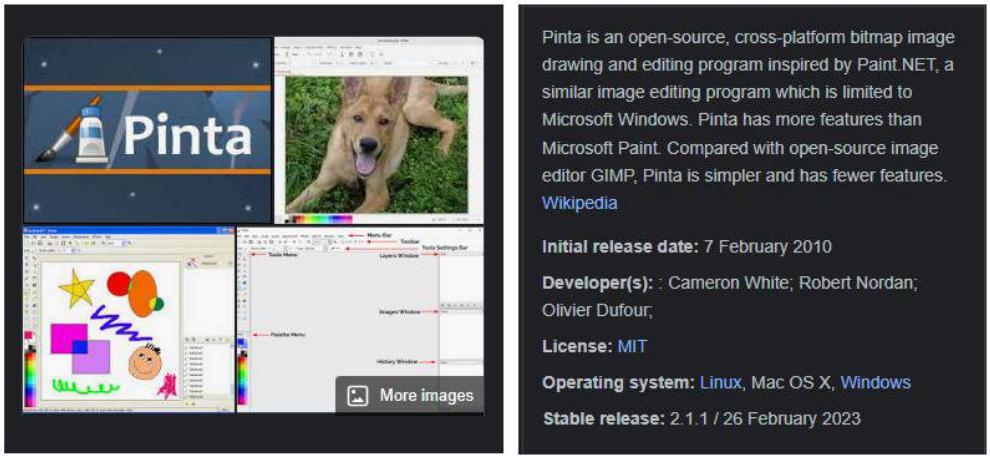


Figure 4 - Pinta

The process shown, involves cropping a square around the subject to extract it, saving this as a new image. This approach offers the dual advantages of reducing the file size for efficiency and eliminating any extraneous elements from the original image.

The "magic wand" tool is then used to select the area around the subject. Stewart specified that the tolerance needs to be set to ensure the area selected by the magic wand, does not encroach onto the area to be preserved. If this happens, set the tolerance to a lower value. Once the selection is made, pressing the delete key removes the background and makes the area transparent. This is represented by a checkerboard pattern. Refer Figure 5.

This technique works best when there's a clear distinction between the subject and the background. The final image is saved as a PNG with transparency and can be easily placed over other images, as Stewart demonstrated by resizing and rotating over an existing image.

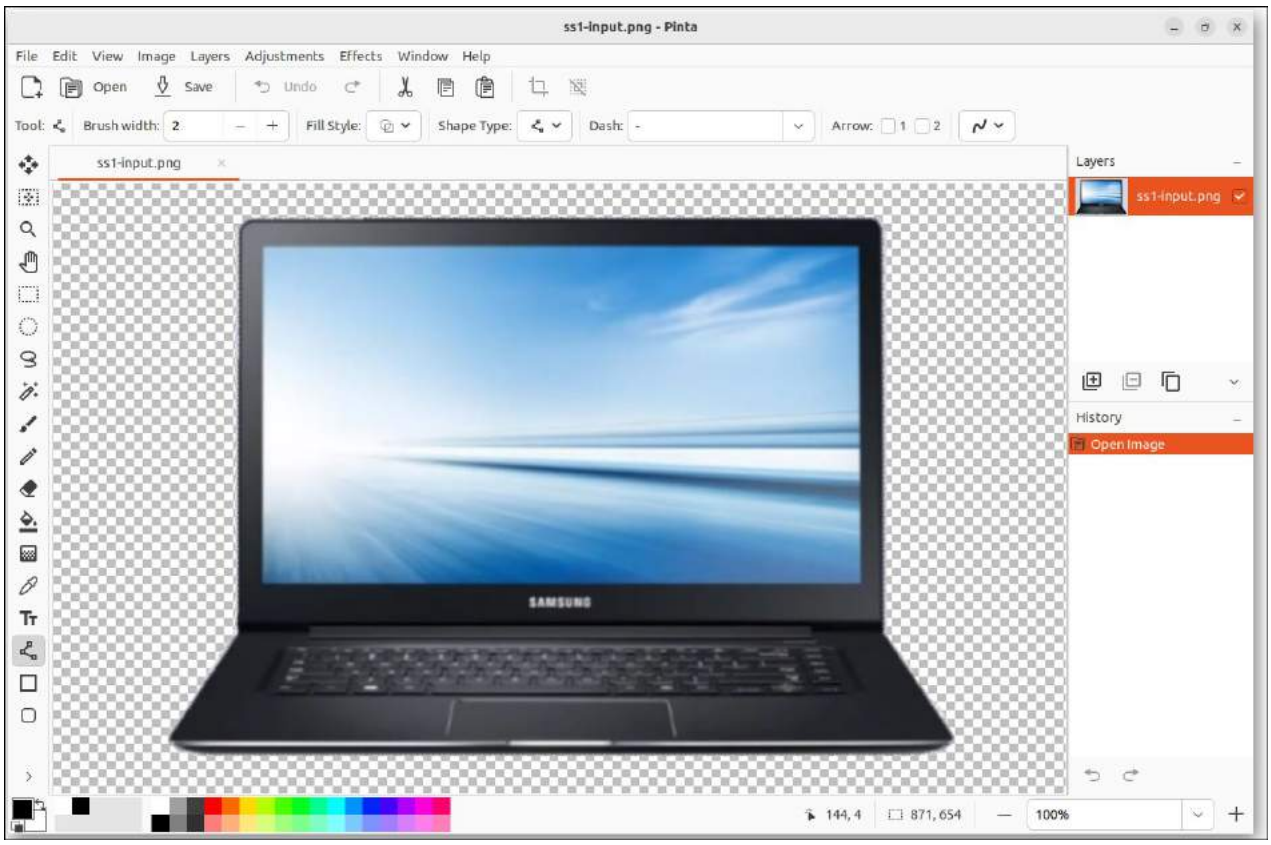


Figure 5 – Pinta User Interface

Upgrading a small M.2 SSD to a larger one by Peter Carpenter

In this presentation Peter Carpenter outlines the steps involve when he upgraded the C drive in his laptop from a small M.2 drive to a larger M.2 drive.

To set the stage for his upgrade, Peter outlined the evolution of solid-state storage, the changing form factors, their physical connectors and interfaces that have given huge advances in speed.

Original Solid-State Drives (SSDs) started out with a form factor that resembles a 2 ½ inch rotating hard drive and used the same SATA connection. These SSDs were followed by a different form factor called M.2 SSDs.

M.2 refers to the physical connector which is a slot on the motherboard. The M.2 SSDs reduced the physical size of the SSD, but gave no speed advantage. Refer Figure 6.



Figure 6 – SATA SSD

The M.2 connector can have different interfaces including USB, SATA & PCIe.

Regular SSDs and M.2 SSDs use flash memory, but to unlock their full potential new technology was needed in the form of M.2 NVMe. The older SATA 3.0 interface was designed for spinning hard drives, not SSDs. The M.2 NVMe SSDs use the lightning-fast PCI Express bus instead, which is much faster than SATA.

M.2 SSDs with NVM Express are roughly 5 times faster than SATA, reaching data transfer speeds of 3 Gigabytes per second. The actual speed can vary depending on your motherboard and which SSD hardware is used, but it's still gives a significant speed improvement.

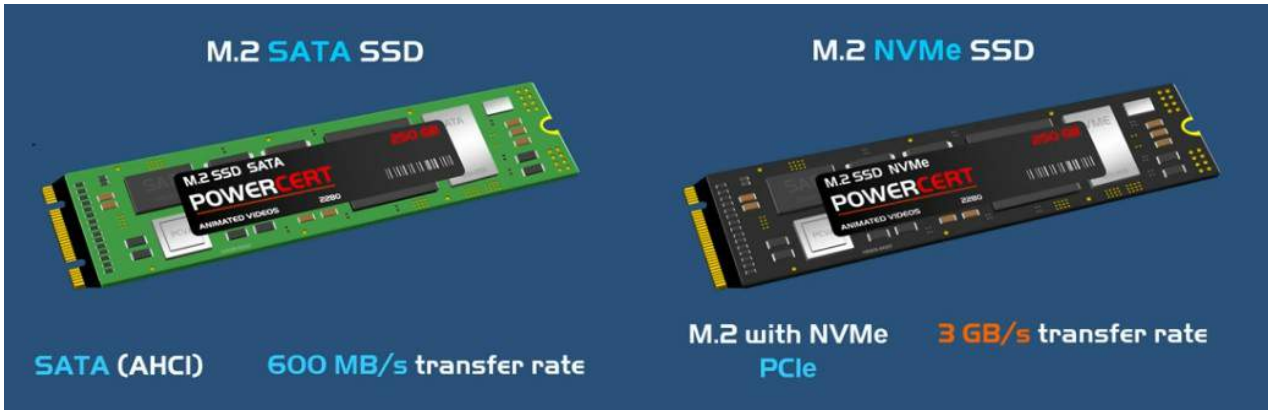


Figure 7 – SATA vs. NVMe SSDs
Reference https://www.youtube.com/watch?v=HvfIeTieXOI

NVMe, or Non-Volatile Memory Express, is a protocol specifically built for SSDs. It cuts down on CPU overhead, reduces latency, and boosts input and output operations per second and is incredibly fast.

Warning:

- M.2 SSDs connect to your motherboard's M.2 slot. You just slide them in, secure them with a screw, no extra cables are needed. But not all motherboards have M.2 slots, so check if your motherboard supports this technology before you make a purchase.

- It's also worth noting that not all M.2 SSDs use NVMe or the PCI Express bus; some use the slower SATA bus, offering no speed advantage over standard 2.5-inch SSDs. So, do your homework before you invest in new hardware.

Cloning an M.2 SSD

Planning

Using Windows File Manager, Peter ascertained his laptop C or Boot drive was running low on disk space. The C drive was a 120 GB M.2 SATA SSD with only 18 GB of free space available.

Step 1 Peter's research revealed the type of M.2 SSD card his laptop's motherboard required. A new 250 GB M.2 SATA SSD was then purchased from Centrecom for $120.

Also purchased from Centrecom, was an external M.2 card carrier for $20. The carrier would later be needed for the cloning process.

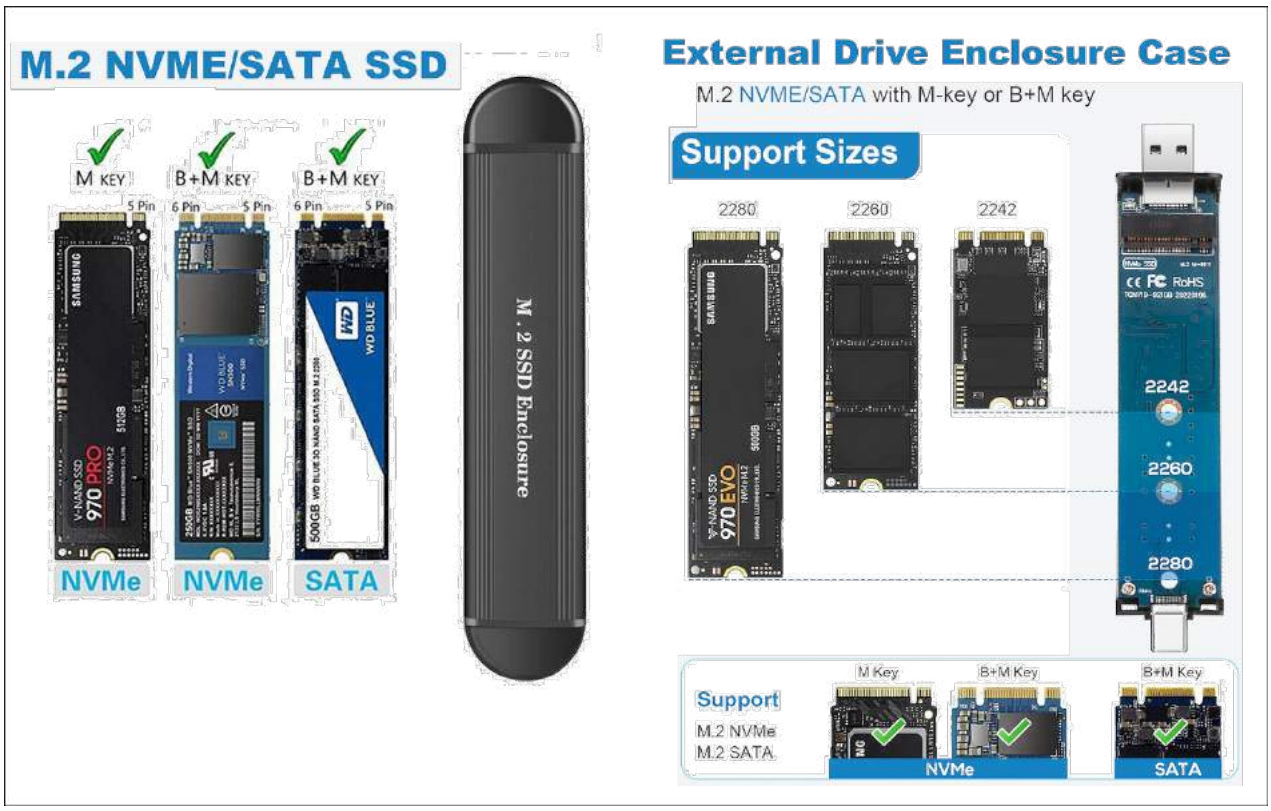


Figure 8 – SSD External Drive Enclosure & Different storage types & form factors.

Step 2 Download disk cloning software. Peter selected Clonezilla, which is free open-source Disk Imagining and cloning software that has a good reputation. The Clonezilla software comes as a 420MB ISO file.

Step 3 Download Rufus software for writing the Clonezilla ISO onto a USB memory stick, needed later in the process.

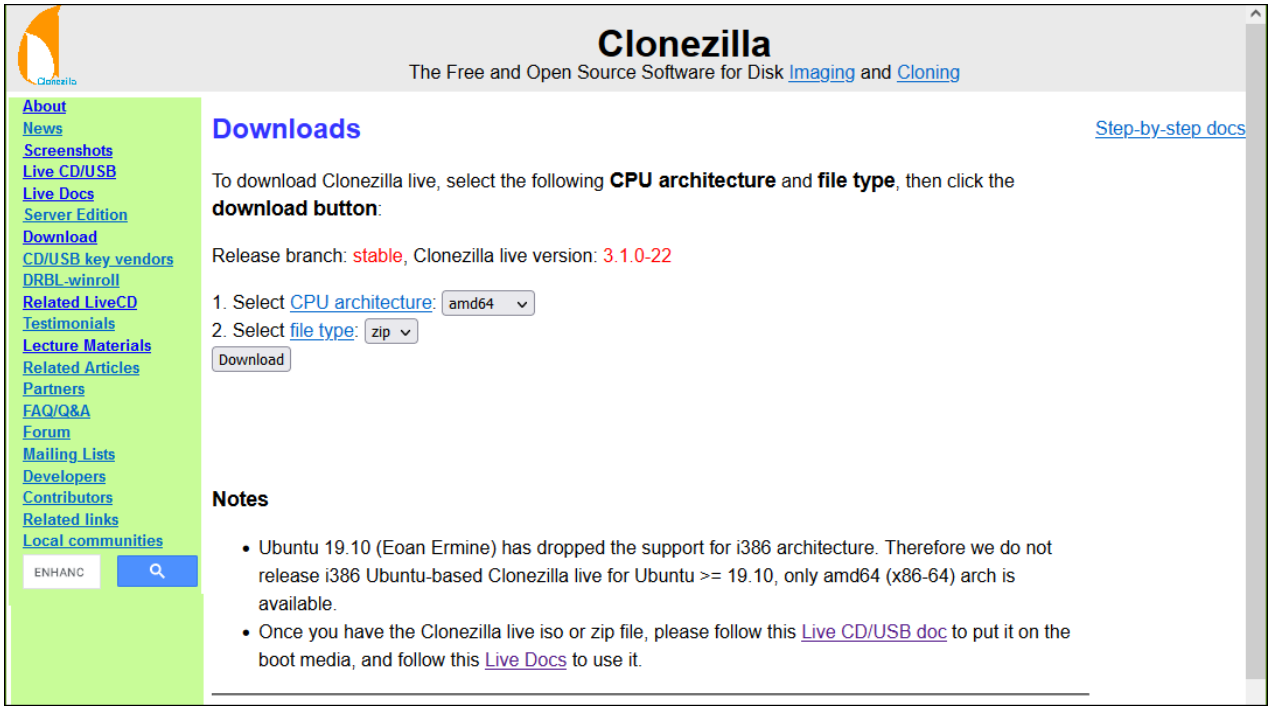


Figure 9 – Clonezilla Website

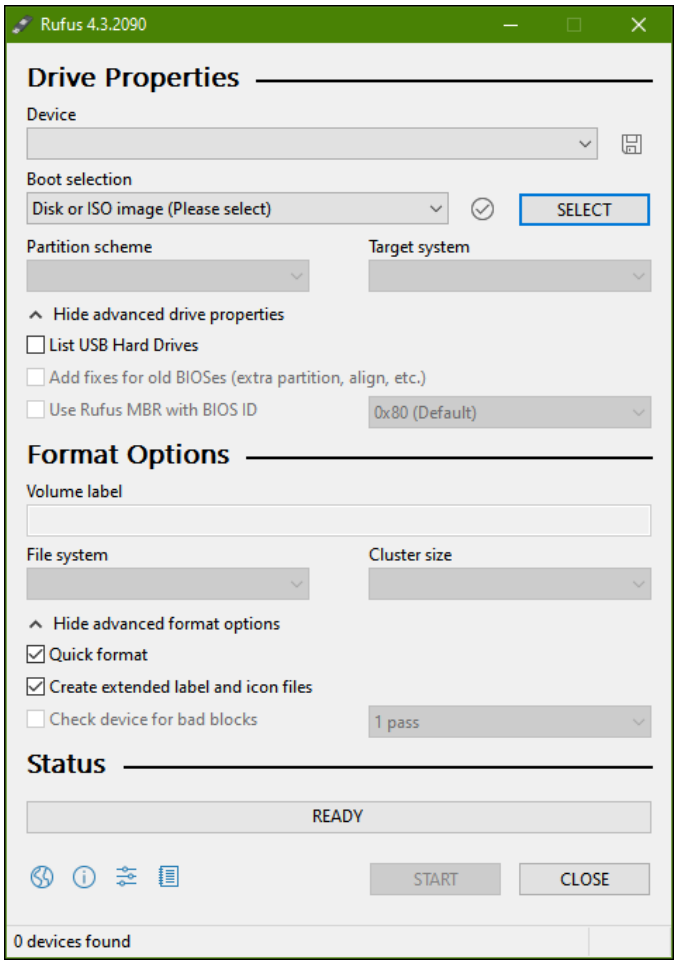


Figure 10 – Rufus User Interface

Cloning

Step 4 Ensure that the laptop will boot from USB as the first boot drive. This may require setting the boot order in the BIOS.

Step 5 Obtain a spare USB memory stick for use in step 6, to write the Clonezilla ISO software onto.

Step 6 Use Rufus to write the Clonezilla ISO file onto the spare USB memory stick. This process creates a bootable USB drive. The result is a Linux operating system that will boot and run Clonezilla automatically

Step 7 Insert the new 250GB M.2 SSD into the external M.2 enclosure purchased in step 1.

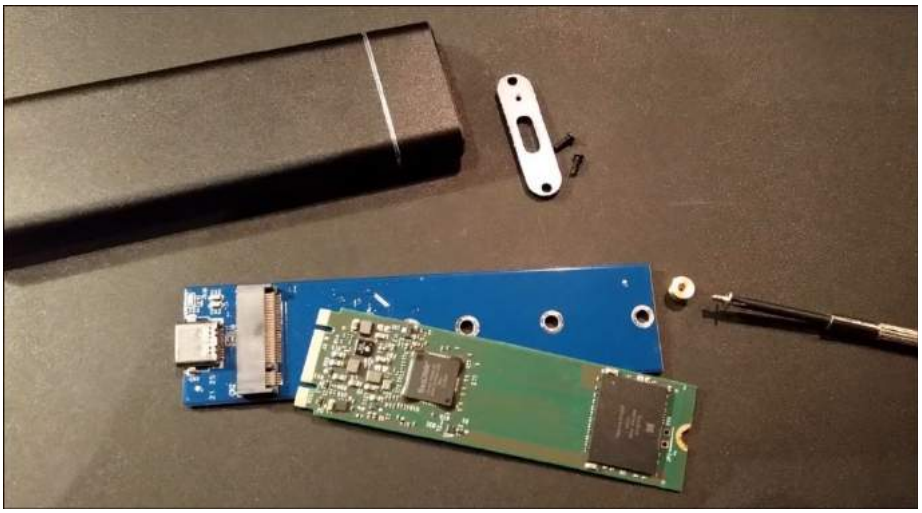


Figure 11 Peter's SSD External Enclosure

Step 8 Plug the Boot USB drive containing Clonezilla into one USB slot, and the external M.2 enclosure containing the new 250GB card into a second USB slot of the laptop.

Step 9 Power on the laptop. Clonezilla will start automatically, creating a cloned copy of the laptops current C or boot drive onto the new M.2 drive currently mounted in the external enclosure.
Selections in Clonezilla are via the keyboard controls rather than a mouse.

When running Clonezilla select "device-device". This option works directly from a disk or partition to a disk or partition.
Peter used the following options when offered:

- Expert Wizard "Expert mode: Choose your own options"
- Next select "disk_to_local_disk local_disk_to_local_disk_clone"
- Next select your Source disk (i.e 120GB M.2) & Target (i.e. 250GB M.2)
- Press Enter.
- When selecting parameters accept the defaults, plus select "-icds" which skips checking of the target disk. Peter found this option was needed and assumed as the 250GB was new, it was safe not to check the target drive.

- Finally select “Create Partition table proportionally” for the cloned drive to fill the entire 250GB drive.

Step 10 On completion of the cloning, power off the laptop and remove the USB memory stick and the external M.2 enclosure. Remove the 250GB M.2 SSD from its enclosure for inserting into the laptop.

Step 11 Open the back of the laptop by removing the retaining screws and swap out the 120GB M.2 SSD, with the new 250GB M.2 SSD.



Figure 12 -Installing the 250GB M.2 SSD into the Laptop

Step 12 Power on the laptop. When Window boots, Peter used the Windows Disk Management program to confirm the size of the new C drive was shown correctly.

Step 13 The old 120GB M.2 drive can be inserted into the external enclosure for use as a spare drive

New Tools on the ScamWatch Website by Dave Botherway

With October being Cyber Security month, Dave gave a brief overview of the latest tools available on the ScamWatch website. The government has made a significant financial investment to educate the public through the newly established ScamWatch website, which can be found at https://www.scamwatch.gov.au. Their aim is to make Australia a harder target for scammers. The website is designed with a user-friendly interface, offering quick and easy access to resources for identifying scams, providing guidance for those who have fallen victim to scams, and delivering news alerts about current trending scams.

In conclusion Dave emphasised that ScamWatch is an invaluable resource for staying informed about the evolving landscape of scams. He recommended members download the Little Black Book of Scams from the ScamWatch website. This is a crucial tool for individuals concerned about their online security.



Figure 13 – The Little Black Book of Scams

Windows 10, 11 and Beyond by Dave Botherway

With talk about a new Windows operating system on the horizon, Dave Botherway looked at the differences between the current OS's from Microsoft, Windows 10 and 11.

The main differences between Windows 10 and Windows 11 are:

Design
Windows 11 has a more modern and uncluttered design than Windows 10. It has rounded corners on windows, new app icons, and a centred Start menu and Taskbar.

Windows 10 has a more traditional and familiar design with sharp corners, old icons, and a left-aligned Start menu and Taskbar.

You can customize the appearance of both operating systems to some extent, but Windows 11 offers more options for themes, colours, and sounds.

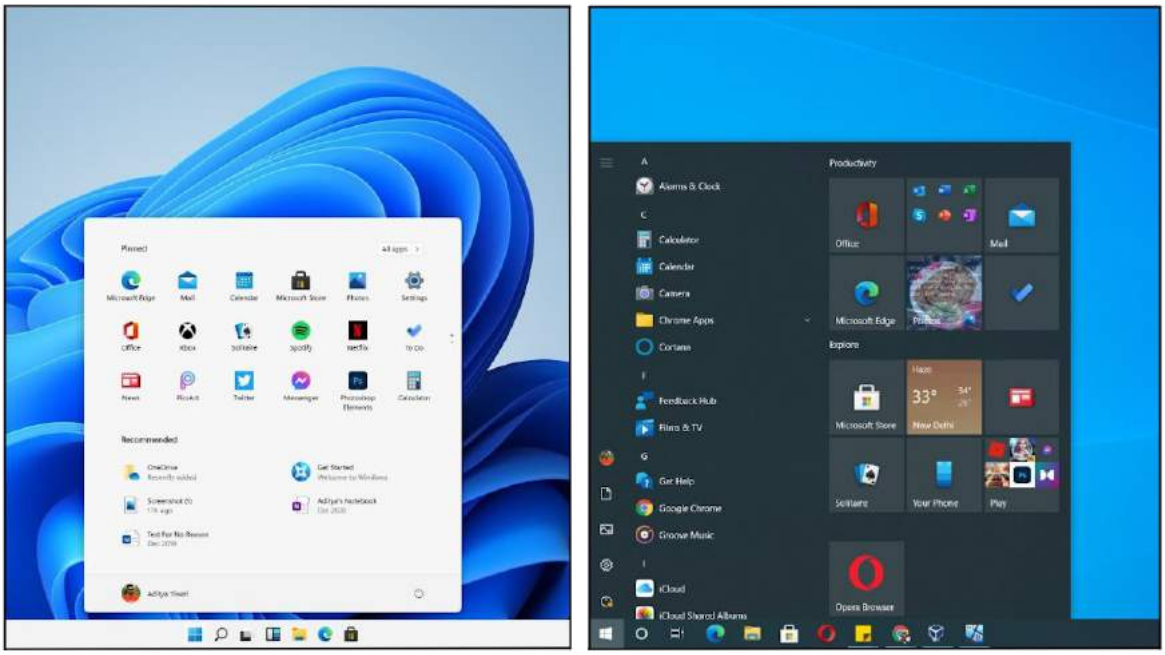


Figure 14 - Windows 11 Design versus Windows 10

Features
Windows 11 has some new features that Windows 10 does not have, such as support for Android apps, live captions for your browser, Focus mode, Snap layouts, Snap

groups, Widgets, and Teams integration. Windows 11 also has a redesigned Microsoft Store that allows more types of apps and software to be downloaded.

Windows 10 has some features that Windows 11 does not have, such as Timeline, Cortana, Tablet mode, and Live tiles.

Compatibility
Windows 11 has higher system requirements than Windows 10. It only runs on 64-bit PCs with a TPM 2.0 chip and UEFI firmware with Secure Boot capability.

Windows 10 can run on both 32- bit and 64-bit PCs with lower hardware specifications. Some older PCs that can run Windows 10, may not be able to upgrade to Windows 11. You can check if your PC can run Windows 11 by running Microsoft's free PC Health Check app.

Upgrade considerations
If you want to upgrade from Windows 10 to Windows 11 you need to consider the pros and cons of each operating system. Windows 11 offers a fresh and modern look, new features, and better security, but it may not work on some older PCs or support some older software.

Windows 10 offers a familiar and stable experience, wider compatibility, and longer support, but it may not have some of the latest innovations or enhancements. The choice is up to you and your preferences

Windows 11 23H2 Feature Update
Each year Microsoft releases a major feature update to Windows. The latest update to Windows 11 is 23 H2 and was released on 26th September. Rumours suggest this will be the final major feature update for Windows 11 before Windows 12 appears.

New features in 23H2 include:

- Changes in File Explorer
  - Addition of a Details button that displays file attributes, such as file type, size, location and date modified.
  - A Share button for sharing the file with people in your mail client
  - the addition of a Gallery for viewing photos, (needs MS account)
- New audio volume mixer,
- Windows Spotlight for daily desktop wallpaper images,
- Dynamic lighting effects in Settings Personalisation
- Passkey to replace passwords on some websites
- Updates to the Paint app with layers & remove background,
- Introduction of native 7-Zip and WinRAR support,
- Improvements to the Snipping Tool,
- Inclusion of an AI feature called "copilot". (needs MS account)
- Changes in taskbar behaviour,
- New Windows backup feature, (needs MS account)
- The ability to create and manage virtual machines.
- The addition of a VPN icon when connected to a VPN.

Some of these features require signing into a Microsoft account, which might not be suitable for users who prefer a local account.

Reference https://www.youtube.com/watch?v=DJFGVz95bTQ

George Skarbek commented that “there was nothing that leap out at him that would make him change from Windows 10 to 11”. George stated that the operating system is not as important as the software you run. “I have no intention to upgrade my Windows 10 to 11 personally. Windows 11 has a few extra nice features, but quite a few things require an extra one or two clicks and are buried.”