

>PC Update

July 2021



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Publishing Information



The newsletter of

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Please remember to always bring your membership card to meetings

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

Editorial July 2021

Hugh Macdonald

Welcome to another edition of PC Update.

On the computing front this month, I take a first look at Windows 11, David Stonier-Gibson explores the changing nature of computing and we look at Pegasus spyware.

On the non computing front we've got some fiction from George Wright and reflective piece from Heather Stonier-Gibson.

We also have a lot of our regular sections such as DOTW Winners, Yammer Highlights, the East SIG Report and Interesting Internet Flnds.

Thank you to all the contributors and enjoy!

From The President July 2021

David Stonier-Gibson

Moorabbin renovations: Can you help?

The process of upgrading and reconfiguring Moorabbin has been continuing, even during Covid. A small band of volunteers have worked on the Maker Room (was Training Room) and Lounge areas. The Borrett room is still a bit of a shambles, but we will be working through that, redeploying some of the decommissioned items from the lounge, and replacing others with more modern alternatives.

This will tie in with an idea we are developing for an equipment library. I initially labelled that “tool library” until I realised it can and should cover much more than tools. This is still very much a work in progress, and there is a lot to be done. Initial acquisitions are a camera drone from the Video SIG, a high spec electronic microscope, and a multimeter donated by a member. There will be a lot more when we have developed a policy and procedural framework.

In terms of upgrading our spaces at Moorabbin, the downstairs workshop is now in our sights. The club owns some nice workshop equipment down there, but the space needs to be organised and made into a more pleasant and safe environment. So, if you are able and willing to contribute with a paint brush or screwdriver, electrical work or some muscle, we'd like to know. Please, initially, contact Malin in the office on 9276 4000 or office@melbpc.org.au to register your interest in pitching in, and let her know the skills you can contribute. Nothing is likely to happen immediately, but a good first step is to know who is available to bring this about. It goes without saying that safety and access protocols are front of mind with this.

A Life Changing Monthly Meeting

Kevin Gray

Dear David,

This is a short note of thanks to the Melbourne PC User Group.

I've been a member for just on 30 years. One of my moves into a different vocation over my lifetime involved writing database programs. These were very successful mainly because of the assistance I received from the SIGs. I wrote programs for Law Offices, Hotels, The Alfred Hospital etc. Not so oddly enough if I look back at any of my programs now I have no idea how I did them. Time can be a nuisance. My biggest thank you to you and the Melbourne PC User Group is for the webinar you organised in February this year by Prof. Nathan Lawrentschuk. I not only viewed the webinar, I recorded it because I thought this could be valuable knowledge. Lo and behold a blood test in March showed a PSA (prostate specific antigen) of 46. The GP said he would refer me to a urologist. I said no you won't. I want a referral to Nathan Lawrentschuk. He said he hadn't heard of him. I responded by saying that Nathan was the only person I wished to see.

After MRIs, biopsies, PET scans and reinforcing orthopaedic surgery I have the full knowledge of my predicament i.e. advanced, metastatic prostate cancer. I am in a trial at Peter Mac for the latest treatment of this dreadful disease and the prognosis is extremely hopeful. My PSA has gone from a high of 56 to 1.69 last Tuesday (Jul 13).

In Nathan's presentation he quoted a statistic that if a man at the age of 40 had a PSA lower than 0.7 he would have a 99% chance of never suffering prostate cancer. My PSA at age 62 was 0.6. I mentioned that to Nathan and he said "you are just in the unlucky 1%". Bummer!

So David I know in my heart that you and the user group have substantially extended my life and most probably saved my life by organising that magnificent prostate cancer presentation.

THANK YOU!

Monthly Meeting July 2021

The June 2021 Monthly Meeting was held online on Wednesday 7th July 2021, with about 70 members in attendance via Zoom and another 20 at Moorabbin. This was the program for the evening:

Guest Speakers: Jennifer Daddow

Topic: Support Services fo Carers

Jennifer Daddow has worked in the Education Services team at Carers Victoria for 13 years, facilitating workshops for carers and service providers.

She is a skilled educator, facilitator and public speaker.

Jennifer has extensive experience working as community adult educator with a range of diverse groups in the community, welfare and health sectors. She has a

Masters' Degree in Health and is a qualified workplace trainer and assessor.

Meeting Agenda

Meeting begins at 7pm. MC is Peter Bacon.

Guest speaker: Jennifer Daddow

Interval: Drone footage from George Skarbek

George Skarbek: Factors to consider when purchasing a new monitor

Presidents Report: David Stonier-Gibson

iHelp Online with Bert Alesich. Please submit questions to ihelp-questions@melbpc.org.au before the segment.

Meeting concludes at 9pm. Informal iHelp Online will continue after the meeting.

If you missed out the first time and would like to view any of these presentations, you can do so at <http://services.melbpc.org.au/videos/>

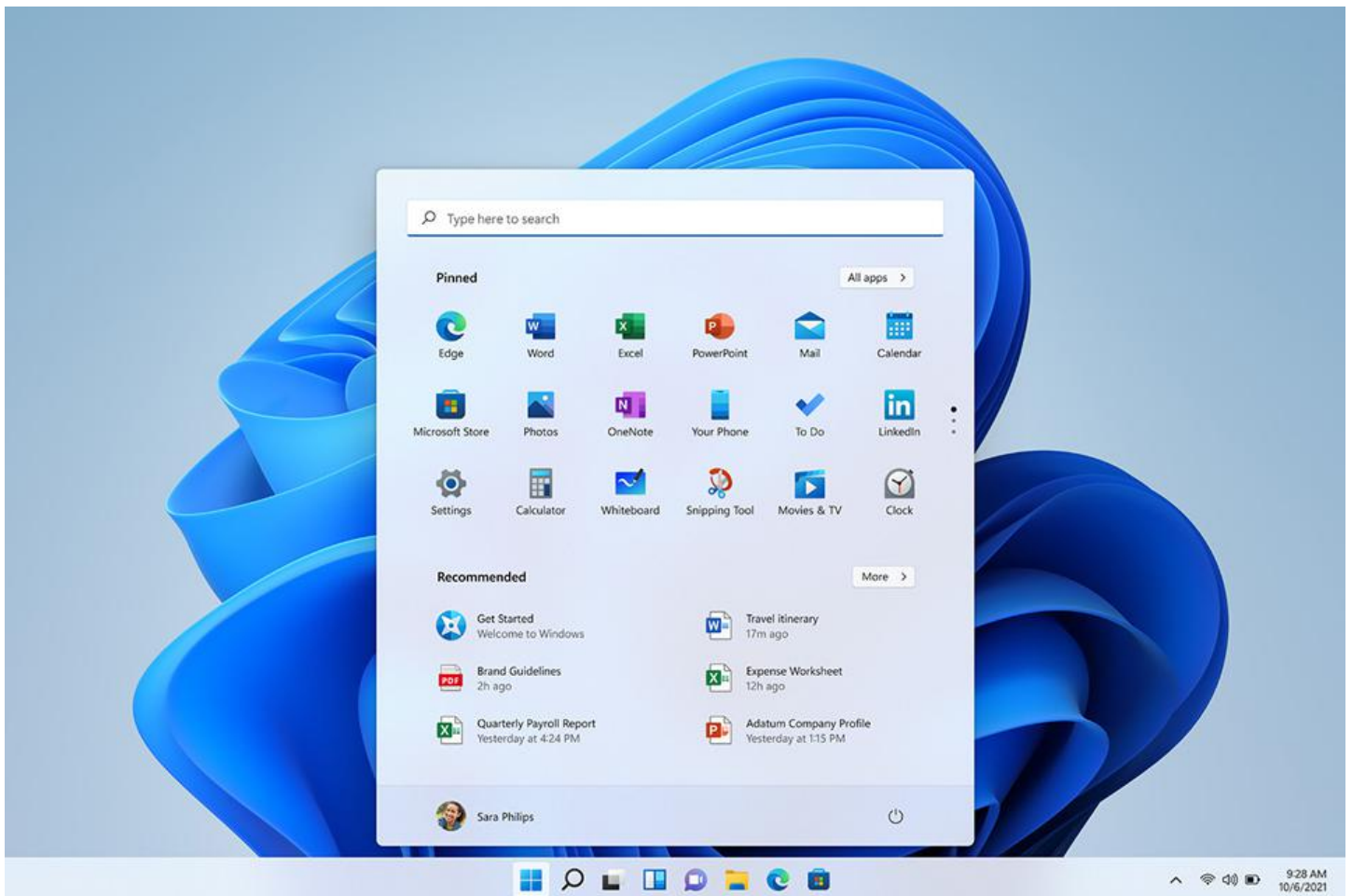
The username is videos and the password is drum286.

A Look Through Windows 11

Hugh Macdonald

On June 24 this year, Microsoft somewhat surprised everyone by announcing that a new version of Windows, called Windows 11, was coming. This was a surprise because after Windows 10 was released, Microsoft announced that it would be the last version of Windows, so it was assumed that the days where an entirely new Windows version dropped every few years were well and truly over.

Nevertheless, Windows 11 is here and it is expected that it will be officially released sometime in October. In order to see what all the fuss was about, I decided to install it on one of my computers and try it out. The computer I installed it on was a tenth generation Intel i7 with 16GB RAM and a 512GB NVMe SSD, so a fairly high end system.



My impressions of Windows 11 so far are fairly positive. Firstly the upgrade from Windows 10 to Windows 11 was one of the smoothest between versions of Windows I have ever done. It didn't take much more than 20 minutes between hitting upgrade in Windows 10 and booting into Windows 11 for the first time. The most obvious change on first boot was the new interface that Windows 11 is debuting with. The traditional start menu in the very left hand corner of the screen is gone (although you can move it back there) and everything is centred. The start menu itself, compared to the Windows 10 version, has been simplified significantly. The live tiles have been retired, and in the top half are the applications you choose to keep pinned there, and in the bottom half are recently accessed files and recently installed applications. In the bottom right corner of the start menu is the power button to shutdown, restart or sleep the computer.

The other obvious changes are the rounded corners on all windows, the redesigned and simplified notification area in the bottom right corner and the new widgets area (which replaces the pop up news and weather section that has recently appeared in Windows 10). I do find the look more aesthetically

pleasing with the rounded corners, and the sections mentioned do a good job of simplifying and hiding away things that are usually only used occasionally.

A less obvious but possibly more momentous change that Windows 11 brings is a major upgrade to the Microsoft Store. In Windows 10, only certain kinds of applications known as Universal Windows Platform (UWP) were welcome in the store. Most major developers therefore did not bother. In Windows 11, any application written for Windows is welcome in the store. In the background Microsoft has developed a package manager (like Linux distributions have) called WinGet which enables the easy installation and uninstallation of any application. So the Window Store is now a front end for WinGet, contains many more applications than it did under Windows 10, and is faster to download and install than previously. So at last it may be useful, and may usher in a new way for people to get applications for their computers.

The biggest question that people usually have about new versions of Windows is whether their existing systems will support it. At this stage it seems as though you'll need an eighth generation Intel Core processor (or AMD equivalent) or later to run Windows 11. This move by Microsoft is causing some controversy and may be revised before the final version is released.

If you want to try it out yourself, it's quite easy to do. From Windows 10, go into Settings, go to Update and Security, and choose the Windows Insider Program section from the left hand sidebar. Enroll your computer in the program and for the moment you need to choose the Dev channel (A build of Windows 11 will soon be coming to the Beta channel).

Overall I think Windows 11 will be a good upgrade for a number of reasons. It's a nice visual refresh of the Windows interface that simplifies things for the most part. If the Microsoft Store becomes a legitimate way of installing the majority of applications that users need, that will be a major breakthrough. So far it seems as though updates in Windows 11 will be smaller and therefore quicker to apply and less disruptive. I'll have a look at the final version when it comes out in October, and I'm sure I'll have more to say about it then.

Whither hobby computing?

David Stonier-Gibson

The world is changing rapidly, not least of all in the realm of computing. Computing today is vastly different to what it was when Melb PC was established 37 years ago, with terms like The Cloud, The Edge, AI, Machine Learning and Quantum Computing, not to mention tablets, smartphones and home assistants. Far from being mysterious machines in air conditioned fortresses, computers are now embedded in almost every gadget, appliance or tool we use every day.

When I started my engineering studies in Perth in 1967, we had a first semester subject "Slide rule 101". In second semester we got "Computer programming 102", and I started to discover the joys of Fortran IV, punched cards, fan-fold paper, a 5 day turnaround cycle resulting in "102 syntax errors detected - 10K core used", all using a room sized computer nestled behind an uninviting glass wall and tended by stern faced acolytes in white dust coats.

By the mid-70s I had developed a sophisticated industrial instrument, using a microprocessor (16 bit, clocked at 2MHz) and programmed with a floating package I wrote myself, for Mount Newman Mining. I still have a clipping of a write-up of it by a young Alan Kohler, describing the wonder of "a computer half the size of a matchbox".

National Mines 17/11/75

Mid-air device to measure Newman ore

by Alan Kohler

Two years ago the Mt Newman Mining iron ore company asked a Perth electronic company if it would be possible to measure the flowrate of ore in mid-air, using nucleonics.

What the company claims is the first nucleonic flow rate system in the world is now being installed at Mt Newman — due largely to the backing of the Pilbara iron miner and the invention of a tiny computer in America.

Development of the system cost Mt Newman \$62,000, but it will apparently result in an output increase of around two per cent, with consequent savings running into millions of dollars.

Rights to the invention have now reverted back to Pretron Electronics — the company which worked on the system — through a nominal sum transaction, and negotiations are now in progress for sales to other industries such as cement, grains and a wide variety of mining companies.

The standard system, which is programmed according to the application costs about \$7,000, with options taking the cost to \$12,000.

Essentially the system consists of two density gauges on each side of a free falling, constant profile curtain of material.

A stream of nuclear particles passing through the material constantly measures its density, which is then transmitted to a central processing unit.

Until recently this was manually computed with the width of the falling material to give the flow rate in terms of weight.

The information will now be fed into a micro-processor, a computer about half the size of a matchbox, which has been previously programmed for the particular application.

The source for the density sensors is caesium 137, which has a life of about five years.

It would have been possible to increase the life of the unit to 33 years, but according to Pretron, workers would have exposed themselves to harmful radiation while cleaning the ore bins.

Pretron says that because of the nature of the system, patents were not available, although world design rights have been taken out. The company also has the rights to supply replacement caesium 137.

The main advantage of the system is that stoppages due to clogged crushers and shutes is reduced to a minimum so that the flowrate can be increased closer to the critical level than with manual operation.

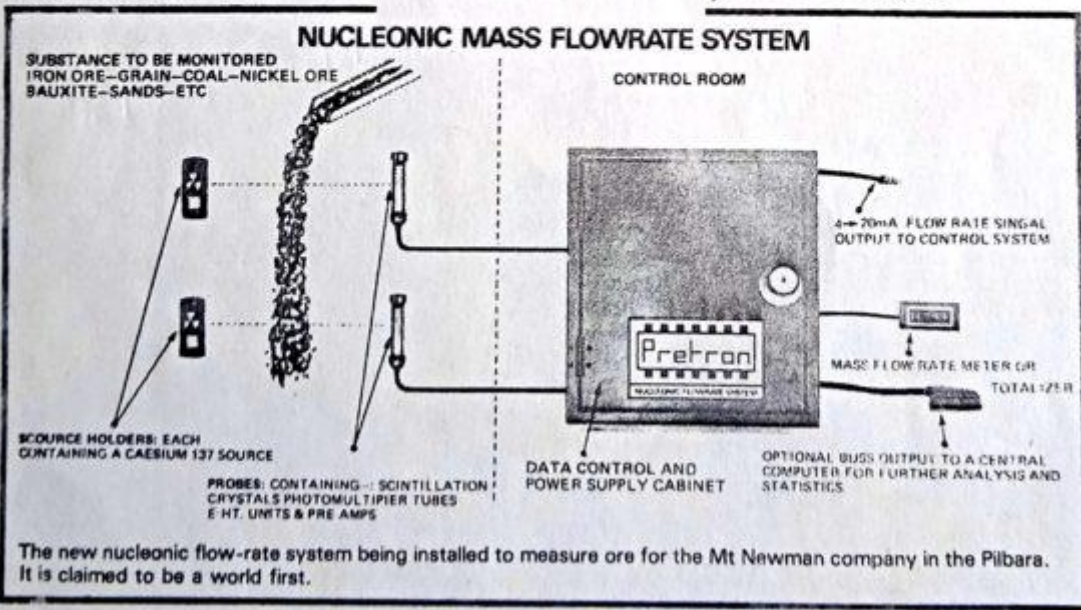
It is also suggested that disruptions to production in the Pilbara mines through industrial unrest has increased the mining company's desire for automation.

A sister development to the flowrate system is a nucleonic level switch.

This employs a low activity cobalt 60 or caesium 137 gamma source in specially protected containers outside the walls of an ore bin.

If there is no material in the tank the ray will be detected on the other side and the switch operated to either indicate or control the level of material.

Gamma rays, as distinct from conventional photo-electric cells are needed to penetrate the walls of the bin. Any instrument installed inside the bin would soon be destroyed.



That was before the days of word processors and spreadsheets. Around 1978 I was working, in my spare time, on a primitive word processor program, and I independently conceived the idea of a spreadsheet. I lacked the resources (initiative?) to follow through on the spreadsheet, and hence missed out on becoming a billionaire! Maybe?

Also in 1978 I bought myself a TRS80, an early consumer grade personal computer, and hence had one on one access to a computer at home as well as at work. The following year Apple got VisiCalc, the first spread sheet program, and sales of their personal computers rocketed on Wall Street.

Those were heady days for me, with Byte magazine, programming in BASIC as well as Z80 and 8085 assembler, and designing embedded microprocessor applications. I even got the opportunity to design my very own masked programmed chip for radio signalling. That had to be right first time, as the minimum order quantity was 5,000 chips!

The day the world changed

On August 12, 1981 IBM announced their PC, and small desktop *personal* computers became respectable; nobody was ever fired for buying IBM! Three years later our club was started by a group of tech geeks who came together around their shared passion for the IBM PC. They were so - dare I say emotionally - beholden to the IBM PC that their logo echoed the IBM logo. It was indeed a club for its time.

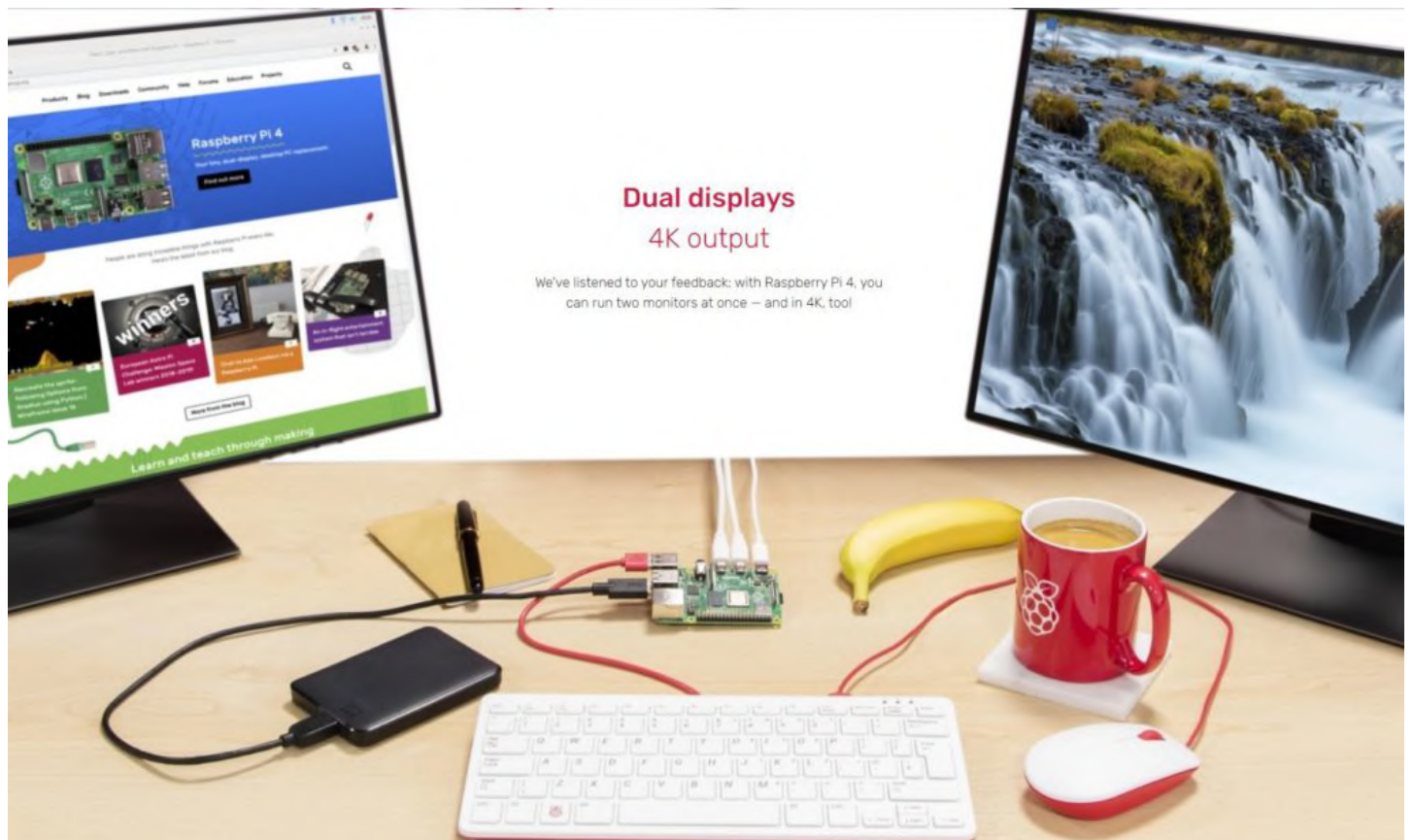
Much has changed since then. The trajectory of the desktop personal computer has been, in many ways, linear and evolutionary, rather than revolutionary. While the power and capacities of the desktop have increased exponentially: Speed 20,000 fold, memory 250,000 fold, storage 1,000,000 fold, a desktop computer today would be recognisable if you could take it back to 1984.

What a 1984 Melb PC member would not be able to wrap her head around is the Internet, smartphones, smart TVs, tablet computers, home assistants, handfuls of computer chips embedded in every car and in virtually every home appliance, and wrist watch telephones. Dick Tracy was pure fiction back then. Likewise with so many of the things we now take for granted and which present day tech geeks love to play with: Home automation, 3D printers, microcomputer controlled (CNC) machining, digital photography. Not to mention the electronics hobby transforming into something centred on \$10 boards with more power than an original IBM PC.

The future, 1930s style

So where is it all headed?

In my own field of industrial and machine controls, I am seeing not only the available processing power ballooning, I am also seeing a seismic change in the underlying programming methodologies. The idea that a machine controller had to be deterministically programmed for every conceivable circumstance is being replaced by neural networks, artificial intelligence, and non-deterministic machine learning, some in the Cloud, some at the Edge. Much of my professional expertise is being rendered obsolete. I am having trouble dragging my skills into the 2020s, and I must acknowledge being somewhat out of touch with the needs and interests of younger tech geeks. Conceivably the air conditioner of the future will learn how to make the optimum settings for its owner's lifestyle and desires, having left the factory with only a "basic education", and learn the rest on the job. (Fun fact: that's already happening!
<https://support.google.com/googlenest/answer/9247510?hl=en>).



In the hobby spaces, the modern day tech geek is using tiny products that for \$10 provide built in WiFi and Bluetooth, megabytes of memory and roughly 200x the speed of an original IBM PC. For \$5 he can get something more modest, but still sufficient to control a smart robot car made on his 3D printer. And for under \$100 he can buy a computer board capable of running a full operating system and driving two large displays.

What this means to me is that in the hobby space, just as in the wider world, computing has become a component embedded in other products, other interests, other hobbies.

The tech geeks of 1984 were focused on the desktop. Today's tech geeks are much more about embedding computing power in their other hobby products. What will tomorrow's tech geeks be seeking?

Footnote: I applied to the Guardian for permission to use their 2011 obituary of Daniel McCracken, author of the Fortran text book I had, and of many other language books. The Guardian wanted £200 for the rights. Links are free ...

<https://www.theguardian.com/technology/2011/aug/29/daniel-mccracken-obituary>

It's an interesting read, he was quite a guy.

I simply couldn't
LIVE without my
music with me
everywhere!
Thanks, Philco, for
your new **PORT-
O-SOUND CART!**



PHILCO

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How does the Pegasus spyware work, and is my phone at risk

Paul Haskell-Dowland, *Edith Cowan University* and Roberto Musotto, *Edith Cowan University*

A major journalistic investigation has found evidence of malicious software being used by governments around the world, including allegations of spying on prominent individuals.

From a list of more 50,000 phone numbers, journalists identified more than 1,000 people in 50 countries reportedly under surveillance using the Pegasus spyware. The software was developed by the Israeli company NSO Group and sold to government clients.

Among the reported targets of the spyware are journalists, politicians, government officials, chief executives and human rights activists.

Reports thus far allude to a surveillance effort reminiscent of an Orwellian nightmare, in which the spyware can capture keystrokes, intercept communications, track the device and use the camera and microphone to spy on the user.

How did they do it?

The Pegasus spyware can infect the phones of victims through a variety of mechanisms. Some approaches may involve an SMS or iMessage that provides a link to a website. If clicked, this link delivers malicious software that compromises the device.

Others use the more concerning “zero-click” attack where vulnerabilities in the iMessage service in iPhones allows for infection by simply receiving a message, and no user interaction is required.

The aim is to seize full control of the mobile device’s operating system, either by rooting (on Android devices) or jailbreaking (on Apple iOS devices).

Usually, rooting on an Android device is done by the user to install applications and games from non-supported app stores, or re-enable a functionality that was disabled by the manufacturer.

Similarly, a jailbreak can be deployed on Apple devices to allow the installation of apps not available on the Apple App Store, or to unlock the phone for use on alternative cellular networks. Many jailbreak approaches require the phone to be connected to a computer each time it’s turned on (referred to as a “tethered jailbreak”).

Rooting and jailbreaking both remove the security controls embedded in Android or iOS operating systems. They are typically a combination of configuration changes and a “hack” of core elements of the operating system to run modified code.

In the case of spyware, once a device is unlocked, the perpetrator can deploy further software to secure remote access to the device’s data and functions. This user is likely to remain completely unaware.

Most media reports on Pegasus relate to the compromise of Apple devices. The spyware infects Android devices too, but isn’t as effective as it relies on a rooting technique that isn’t 100% reliable. When the initial infection attempt fails, the spyware supposedly prompts the user to grant relevant permissions so it can be deployed effectively.

But aren't Apple devices more secure?

Apple devices are generally considered more secure than their Android equivalents, but neither type of device is 100% secure.

Apple applies a high level of control to the code of its operating system, as well as apps offered through its app store. This creates a closed-system often referred to as “security by obscurity”. Apple also exercises complete control over when updates are rolled out, which are then quickly adopted by users.

Apple devices are frequently updated to the latest iOS version via automatic patch installation. This helps improve security and also increases the value of finding a workable compromise to the latest iOS version, as the new one will be used on a large proportion of devices globally.

On the other hand, Android devices are based on open-source concepts, so hardware manufacturers can adapt the operating system to add additional features or optimise performance. We typically see a large number of Android devices running a variety of versions — inevitably resulting in some unpatched and insecure devices (which is advantageous for cybercriminals).

Ultimately, both platforms are vulnerable to compromise. The key factors are convenience and motivation. While developing an iOS malware tool requires greater investment in time, effort and money, having many devices running an identical environment means there is a greater chance of success at a significant scale.

While many Android devices will likely be vulnerable to compromise, the diversity of hardware and software makes it more difficult to deploy a single malicious tool to a wide user base.

How can I tell if I'm being monitored?

While the leak of more than 50,000 allegedly monitored phone numbers seems like a lot, it's unlikely the Pegasus spyware has been used to monitor anyone who isn't publicly prominent or politically active.

It is in the very nature of spyware to remain covert and undetected on a device. That said, there are mechanisms in place to show whether your device has been compromised.

The (relatively) easy way to determine this is to use the Amnesty International Mobile Verification Toolkit (MVT). This tool can run under either Linux or MacOS and can examine the files and configuration of your mobile device by analysing a backup taken from the phone.

While the analysis won't confirm or disprove whether a device is compromised, it detects “indicators of compromise” which can provide evidence of infection.

In particular, the tool can detect the presence of specific software (processes) running on the device, as well as a range of domains used as part of the global infrastructure supporting a spyware network.

What can I do to be better protected?

Unfortunately there is no current solution for the zero-click attack. There are, however, simple steps you can take to minimise your potential exposure — not only to Pegasus but to other malicious attacks too.

1) Only open links from known and trusted contacts and sources when using your device. Pegasus is

deployed to Apple devices through an iMessage link. And this is the same technique used by many cybercriminals for both malware distribution and less technical scams. The same advice applies to links sent via email or other messaging applications.

2) Make sure your device is updated with any relevant patches and upgrades. While having a standardised version of an operating system creates a stable base for attackers to target, it's still your best defence.

If you use Android, don't rely on notifications for new versions of the operating system. Check for the latest version yourself, as your device's manufacturer may not be providing updates.

3) Although it may sound obvious, you should limit physical access to your phone. Do this by enabling pin, finger or face-locking on the device. The eSafety Commissioner's website has a range of videos explaining how to configure your device securely.

4) Avoid public and free WiFi services (including hotels), especially when accessing sensitive information. The use of a VPN is a good solution when you need to use such networks.

5) Encrypt your device data and enable remote-wipe features where available. If your device is lost or stolen, you will have some reassurance your data can remain safe.

Correction: this article was changed to reflect reports iPhone users targeted with the Pegasus spyware seem to have been targeted specifically with zero-click attacks.

Paul Haskell-Dowland, Associate Dean (Computing and Security), *Edith Cowan University* and Roberto Musotto, Research fellow, *Edith Cowan University*

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QR scanning is important

David Stonier-Gibson

The Virus struck close to home today: It was in Coles at Southland, 10 minutes walk from home, last Monday. And I know my wife was in that very shop earlier this week. Fortunately she conscientiously scans in with her smart phone wherever she goes, so I know she'd get contacted if there was any overlap between her visit and the "case's". It turns out she was there on a different day. Phew!

I see a lot of people who have a cavalier approach to QR scanning when entering shops and cafes. Last week a group of about 8 people came into a Vietnamese restaurant where I was having lunch, walked straight past the QR code at the entrance and sat down. So I went to the front, took the framed QR and plonked it on their table saying "Here, let me help you".

So do I have a bit of a thing about this? Yes I do! I understand how important it is to you, me, our loved ones and the whole community. It appears from the few numbers I have seen that every person with the delta strain infects around 3 other people. It takes less of a chain reaction to make a nuclear bomb! Chain reactions in power reactors are controlled by inserting neutron absorbing control rods. Absent lockdowns and vaccinations, Covid chain reactions are controlled by quickly tracing through chains of infected people and isolating them. The faster and easier the contract tracing, the more likely it is to work. The more difficult the contact tracing the greater the chance of the contact tracers being overwhelmed, the infection going nuclear, and people dying.

It is a social duty of every individual to do their bit to assist the contact tracers.

If you have a smart phone and use "the app"

Case A: If you have scanned on entering a venue, and Covid is subsequently detected in that venue, the contact tracers will be able to contact you very quickly and get you to take a test. Early detection of Covid could save your life. It could also save your friends and family, because you have a greater chance of being in isolation while, and if, you are infectious.

Case B: You become a mystery case and are found to have Covid with no known source. If you have scanned in to all the places you visited in the last week, the contact tracers will be able to back track your movements and contact everyone who was in those places at the same time as you. That could save many lives.

By the way, do use the official app, not a general purpose QR scanner. It's made for the job, and much easier to use. It can also save the scanned code until you get home to your WiFi.

What if you don't have a suitable phone?

Some people don't have smartphones, or their phones are too old to run the Service Victoria scanner app (or any QR reader app). In that case there should be a paper log-in form provided by every venue, and you should use it.

Case C: You have filled in the paper form on entering a shop, and Covid is subsequently detected in that shop. That will allow you can be contacted and told to get tested and isolate. But it will take significantly longer, because every such contact has to be made manually.

Case D: If you become a mystery case and are found to have Covid with no known source, the only record

of your movements is in your head. How successful will contact tracers be in establishing all the public places you have been to in the last two weeks? With my memory these days I'd say Buckley's chance!

There is also provision for a venue to have a terminal with which a staff member can log you in. I have not actually seen that myself, but if it is done it would be as good as scanning with your own phone. Except, that is, for some idiots who give an incorrect phone number, thus sabotaging the entire process.

What if you have a suitable smart phone but don't use it for scanning?

In that case I would politely, but with an edge in my voice, urge you to take the effort to install the Services Victoria app and learn how to use it. If you look at Case C above, not using it increases your personal risk if you visit a hot spot. And Case D shows that you could be placing your whole community at risk if you get sick, source unknown.

The Services Victoria app works quite well. It was a bit rough at first, and I would suggest a couple of improvement in usability if they would listen to me, but it doesn't trip my very low tolerance threshold for ill-conceived software (the Fed's Covid Safe app certainly did, before I even tried it out - its basic premise is fatally flawed).

You can get the app here: <https://www.coronavirus.vic.gov.au/checking-in-qr-codes>

You can also keep an eye on hotspots here: <https://www.coronavirus.vic.gov.au/exposure-sites-map> Scroll down the page for a map. Make sure to hit refresh if you leave it open in a browser tab

And if you won't QR scan because it violates your privacy? I won't say what I think of that.



Why Darwin Survived

George Wright

Last year, unverified rumour says that North Korea's Supreme Leader ordered a nuclear strike on Darwin because he figured that Australia's response would at best, be with boomerangs. Unfortunately, the missile dropped into the Java Trench in Indonesian territory. It sank deep to the earth's mantle without exploding.

America's defence forces had prepared for the possibility of a nuclear strike by developing a missile-defence system controlled by a Pentagon super-computer.

But they overlooked one vital link—The Whitehouse. The President demanded power to initiate nuclear strikes himself. This required a computer link. Unfortunately there was no room for another modem in the computer room.

'*Fix it*', said the President. The instruction filtered down to Sparkie, who found an apparently vacant office next to the computer facilities and he drilled a hole one inch in diameter into both the common wall and into the computer box to enable a cable-link between a new modem and the motherboard of the computer. This size subsequently proved to be an over-estimate for the small-diameter cable supplied. No worries. He simply fitted it.

Living in that otherwise vacant office was Fred, a small brown mouse who subsequently explored Sparkie's large holes. Fred found the innards of the computer warm and safe, so he relocated.

Fred could curl up comfortably around a three-volt button-sized battery named CR2032. Although not powerful it had the capacity to keep the computer systems safe if there was a power disruption. If you want a technical explanation, Sparkie would tell you: '*it maintains the BIOS*'.

Unfortunately, just before the Supreme Leader ordered the missile launch, Fred accidentally dislodged CR2032 while scratching an itchy ear. Then the World Series Baseball Championship finished and everybody in Washington simultaneously went to the toilet causing a power outage. The BIOS failed along with the missile defence system.

Making Australia safe from nuclear attack were foiled by a mouse named Fred, a battery valued at fifty cents and American incontinence.

Lockdown

Heather Stonier-Gibson

This rain fits. It fits the dull, bleak swarm of Melbourne winter. It fits my growing bitterness and sits well with the anxiety that this time, it will be worse.

I live in a place without education. Yellow vests, tacky tattoos and dark eyes live all around me. The local supermarket carpark has old potholes, misplaced beer bottles and anger.

This writing, this time I'm taking from my kids, from moving house, from my own life is borne out of this mute rage from visiting there to buy the essentials. My lockdown pantry is terrible; prefab, packaged shit. Grab it and eat it stuff. I don't do daily walks. I've started smoking. Like most of us, the standards of daily living have slipped a bit to make room for our dogged perseverance.

I drive very slowly in the carpark at my supermarket. If someone cuts me off, I don't react. If the bawling of people with deranged hair cuts my walk, I don't react. I never engage in potential danger.

It seems though, that those who are the least imbued with the necessary knowledge to manage a pandemic are those who carry the greatest weapons against our efforts. Their hot, steaming bilge spewing out in protests, in stores to frightened assistants, in places where the elderly are trying to simply buy the paper, cuts through the managed calm with viral efficiency. It is more dangerous now than ever.

Through the calm procession of people trying to get home to kids, they fester themselves on all the things that protect us, breathing on our collective poise, the time we need to gather the information necessary just to go to the shops.

Many of us now dread going into crowded spaces. The planning and things we need are so new; wipes, sanitizer, masks....I never seem to remember the coin for the trolley anymore and quite frankly, a basketful is enough. The time to make choices, to choose nice cheese or select a decent loaf of crusty bread is gone. White bread, Cocoa Pops and like many of us, wine. I occasionally leave my kids in the car with iPads and ten-minute promises as they don't understand that right now, touching things could kill them or others.

I hear about the planned protest on the 24th of July and I wonder- how many of these vigilantes go home to young families or sick parents? Do they have a child with cystic fibrosis? Do they use their asthma preventer medication before they go? I feel like the people who attend these are the lone wolves, surrounded by their pack, calling us others sheep because we fear this disease. They themselves have zero insight into how hard this is. How could they? They're out, whilst we stay at home protecting our families.

My growing anger I'm sure is shared with others. Before it was frustration and bemusement, but now I feel angry. These people are killing our chances by infecting social media with cherry-picked anecdotes and memes. They use derision and contempt for not only this illness, but the families of those who are vulnerable. They call science a thing of profit, of agenda.

In time, of course, they will learn. The herd will thin out as they see the awful disease slink through Melbourne and into their homes. They will go quiet. In the meantime, though, this rain fits. It hides the sun and dampens nice things. We will get through this, we just need to drive with care.

Interesting Internet Finds

Steve Costello

PSA: Gmail Has Your Old Chat Logs From Google Talk (And Hangouts)

<https://www.howtogeek.com/711404/psa-gmail-has-your-old-chat-logs-from-google-talk-and-hangouts/>

Did you use Google Talk and or Hangouts? If so, your logs are still stored in your Google account and taking up space. Check out this post to learn how to access and delete them.

Megapixels Explained – Cyn Mackley

<https://cynmackley.com/2021/02/01/megapixels-explained/>

Do you wonder what megapixels are? Cyn Mackley provides an informative explanation of megapixels that is not too technical.

Google Meet Adds Green Room To Test Video And Audio Quality

<https://www.makeuseof.com/google-meet-video-audio-quality-test/>

I belong to a group that has started using Google Meet instead of Zoom for online meetings. When we first started there was a lot of time spent making sure our audio and video were working correctly. Recently, on the day of the February 2021 meeting, I saw this post. Using the information in this post, I checked out my audio and video, making sure everything was working correctly before the meeting.

How Often Should I Reboot My Computer?

<https://askleo.com/how-often-should-i-reboot-my-computer/>

Leo Notenboom answers this recurring question. As with most of his answers, there are pros and cons discussed. (Note: I leave my desktop on 24/7 unless there is a problem or software update. I turn off and unplug my laptops when they are not in use.)

Are VPNs Illegal?

<https://www.addictivetips.com/vpn/are-vpns-illegal/>

I know some users are concerned about the legality of VPNs. If you are one of them, check out this post. (I use a VPN whenever I connect to public wi-fi on my phone and other devices. I do this for safety and privacy, not to get around geographical restrictions.)

Google Storage Changes Coming In June

<https://davescomputertips.com/google-storage-changes-coming-in-june/>

Do you use Google's free storage? If you use Gmail, I am sure you do, whether you know it or not. This post has the information you need to be aware of about changes that have occurred June 1, 2021.

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DOTW Winners June 2021

Roger Brown

DOTW is a lighthearted look at some of the sillier events of the week. Don't take it too seriously and do pop over to Chit Chat and vote each week. Thanks to those of our members who occasionally 'feature' for taking the gentle humour in such good part.

June winners were:

- Aged care minister, Richard Colbeck who, after being nominated last week for his complete ignorance of the vaccine roll-out progress within aged care centres, now finds himself unable to explain why aged care workers are working at multiple sites
- Liberal MP Louise Staley and the Liberal party who this week issued a press release with a list of questions about how the premier, Daniel Andrews, broke his back. "Enough is enough, Daniel Andrews can't continue to get paid for a job he's not doing," Staley, said.
- Home Affairs Minister Karen Andrews who claims that the illness that saw a Tamil child removed from a detention centre for urgent medical treatment was reported inaccurately – for reasons undisclosed.
- Mining magnate and DOTW favourite Clive Palmer who has been bombarding letterboxes urging people not to get a COVID-19 vaccine and citing discredited figures on the number of deaths caused by the jabs.

Thanks to all participants, including those who feature in our supplementary LOSER award!!

East SIG Report June 2021

Neil Muller

Host Paul Woolard opened the June meeting, this month with all members back at home joining the meeting via Zoom. After a short introduction outlining his aborted travel plans, **George Skarbek** presented his normal Q&A segment.

Q. Windows has offered me update 21H1. Has anyone had any problems with this update and should I accept the offer to update my Windows 10?

A. I accepted the offer and had no problems with the update. I would answer yes, go ahead and install the update. I've found it stable and includes a number of worthwhile security updates.

Q. I'm interested in your use of RAM drives. My Samsung SSD has something called "rapid drive", which according to Samsung increases the speed by up to 8 times. Is that any better than a RAM drive? If I initiate "Rapid mode", the speed goes from 500 to 4 or 5 thousand.

A. The RAM drive on my laptop is about 9,000 and my now elderly AMD Ryzen PC is from memory, 12 to 14,000 MB/sec.

Q. To follow on from that question, you obviously would move the Temp file to a RAM drive, but what else would you recommend moving to a RAM drive? Would you install any programs on a RAM drive?

A. I use both Chrome and Firefox so I moved their temporary files to my RAM drive. Chrome creates temporary drives "like you wouldn't believe". After several sessions using Chrome, you would have many hundreds of MB's in several thousand files. To put Chrome on a RAM drive is difficult. I had to use an obscure DOS command to make a symbolic link so the application thinks its writing to the C drive. I have 16GB of RAM and have allocated 5 GB to a RAM drive. A SSD has a finite life and when you're writing to it continuously, as Chrome does, not only does it slow things down, it also shortens its life. By writing to the RAM drive, when you power the computer off all the temp files disappear. When I'm doing video editing or using Photoshop, I point all the temporary files to the RAM drive. Under preferences you can point all the temporary workspace to the RAM drive. Again, it's faster and saves wear and tear on the SSD. You only need to set this up once under preferences, and in future the application remembers where to store the temporary files. With Firefox you only need to do this once, but when Chrome updates, it sets the redirections back to the C-drive, so I use a batch file (.bat), to save typing in a long command line to set the Temp files back to the RAM drive.

Q. Do you turn your computer off on a daily basis?

A. Yes, every night. On the rare occasion I may forget.

Q. I had Office 365 through Melbourne PC. After the changeover to Google, I wanted to continue using Microsoft Office so took out a subscription to Office 365 family, under the same name and email address as I used through MelbPC. When I log into Microsoft, I have 2 accounts under the same name and with the same password. I now find I can't link my previously saved Excel and Word documents. When I try to open Word documents sent to me by email, I can only open it in WordPad. Any of my Excel files won't open at all. I've been given a number of solutions which I don't completely understand. Is there someone that I can call on to help? I'm reluctant to call Microsoft based on the experience others have mentioned when trying to get help from Microsoft.

A. I can't answer your question but can give you a little advice. If you click on a file and it doesn't open automatically with the Microsoft product, if you right click on the file and select "Open with", will that open

the document? (Member answered “No”).

I’ve found on the very rare occasions I’ve had to ring Microsoft, I found them very good. It will be a free call as it’s a product you own and relates to the installation of a Microsoft product. If the person you speak to can’t help ask to speak to their supervisor.

[John Hall] I endorse George’s comments. You most likely have a conflict between your original private MelbPC Microsoft account and your current Office 365 account. I believe the only way to resolve that conflict is for someone at Microsoft to stop you accessing the original works account.

Q. The MelbPC email address we now have with Google Drive, is that our current Google address?

A. [John Hall] Yes. You have created a Google account with your MelbPC address, but it has a different password.

[George] One advantage with your Google account, is that it lets you backup to Google Drive automatically and it’s free up to a certain limit. It’s worth looking at Google drive and the automatic backup option. It’s very good and relatively easy to setup

Q. I use Firefox for my YouTube channel and recently signed out of Firefox by accident. When trying to sign back in with my 4-digit password it was rejected, saying I had to use an 8-digit password with upper- and lower-case letters, numbers and special characters. I updated the password but instead of opening up my existing channel account, I was given a new account using the same channel name. I now find I can’t open the original account or add to the 200 videos. How do I go about contacting YouTube to correct this, as they don’t have any email address I can find?

A. “I’ll tell you how, with great difficulty”. Maybe try ringing them as you indicated you have a phone number to ring.

Following Q&A, **Trevor Hudson** played a video he’d prepared and uploaded to YouTube titled “How to Convert Text to Speech”. In this video Trevor uses Google Cloud to read text with a chosen voice, speed and pitch. He then showed how to use a Google Chrome Extension to save the recorded speech as an audio file in mp3 format. Rather than use his own voice in the video, Trevor uses a selection of voices from some of those available. One of the voices available and used was an Australian male voice. Trevor found using a speed setting of 0.85 and pitch of 0.00 worked best for his audience.

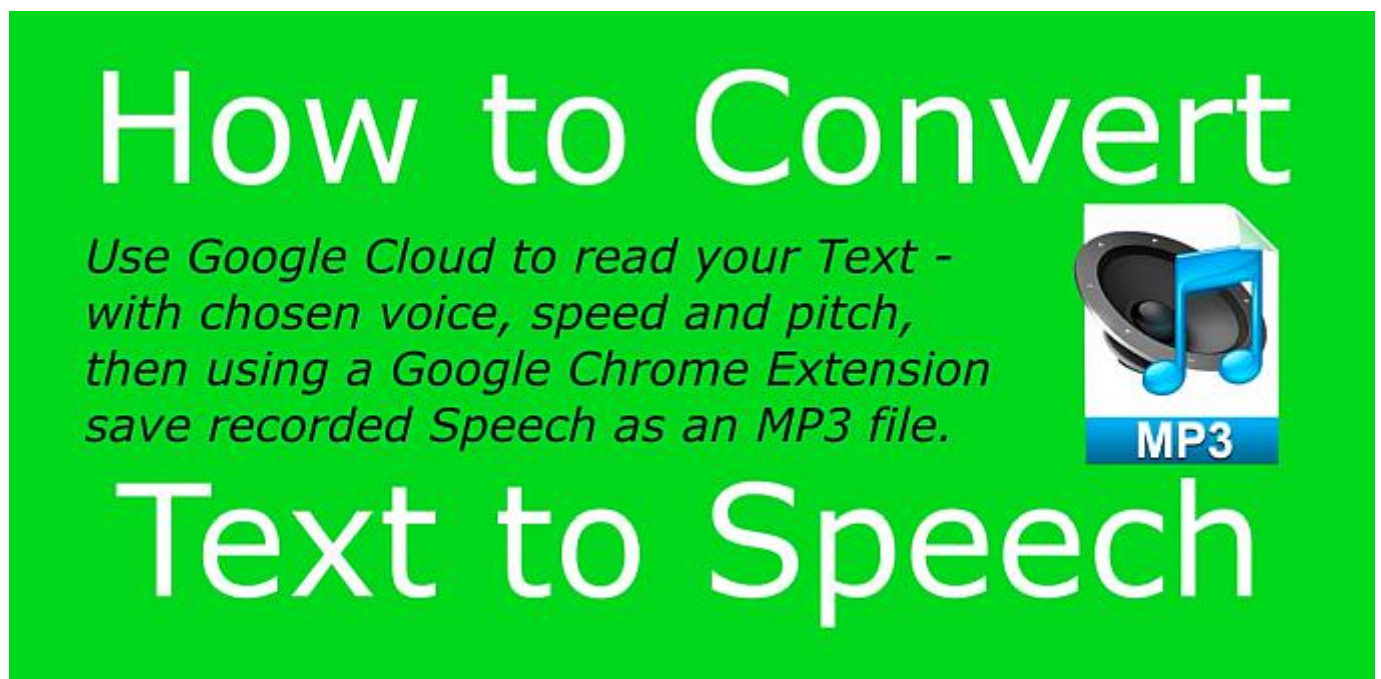


Figure 1 – Trevor’s YouTube video opening screen.

The text to speech service is free from Google for the first 1 million WaveNet characters used each month.

According to Google, “A WaveNet generates speech that sounds more natural than other text-to-speech systems. It synthesizes speech with more human-like emphasis and inflection on syllables, phonemes, and words. On average, a WaveNet produces speech audio that people prefer over other text-to-speech technologies”

To access Google Cloud Text-to-Speech, type “<https://cloud.google.com/text-to-speech>” in your browser’s URL bar. In the video Trevor used Chrome, however I found the service works just as well in Firefox. The first step is to paste text into the “Text to Speech” box under “Demo”. Next select Language, Speed and Pitch. To finish press “Speak it” then tick the “I’m not a robot” box to hear your text read.

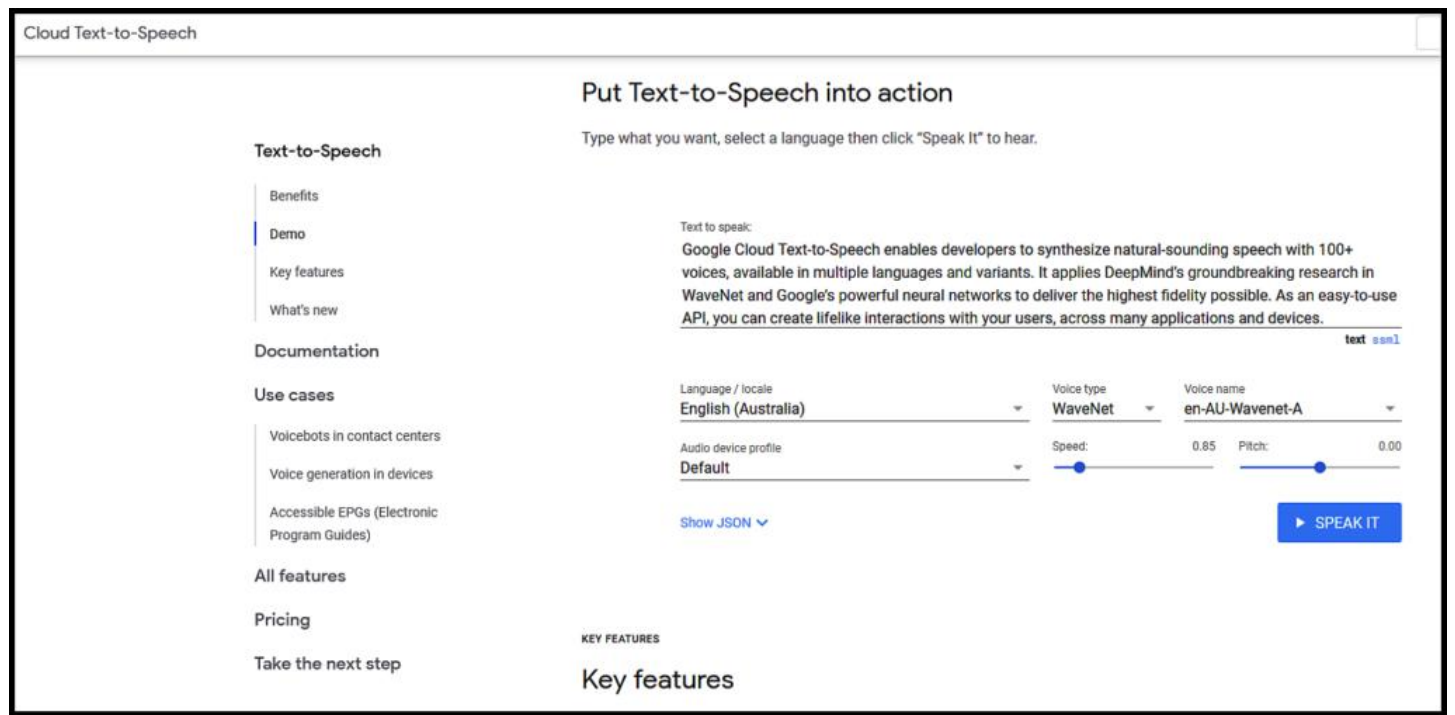


Figure 2 – Google Cloud, Text to Speech Window

After having the text read satisfactorily, Trevor’s video shows how to add the Chrome extension, “Audio Capture”, to the Chrome browser. The “Audio Capture” extension records the spoken text to an mp3 audio file. Trevor’s video can be found at <https://www.youtube.com/watch?v=-A92GJ9qnE>.

Paul Woolard gave the next presentation, titled “Handy Resources for System Maintenance”. Paul is a regular reader of websites Make Tech Easier at www.maketecheasier.com, and Make Use Of, at www.makeuseof.com. To encourage members to view these websites, Paul’s presentation highlighted some of the recent articles he thought would be of interest to MelbPC members. The presentation was not intended to be a tutorial, but simply one to list the headings and provide a link to the articles.

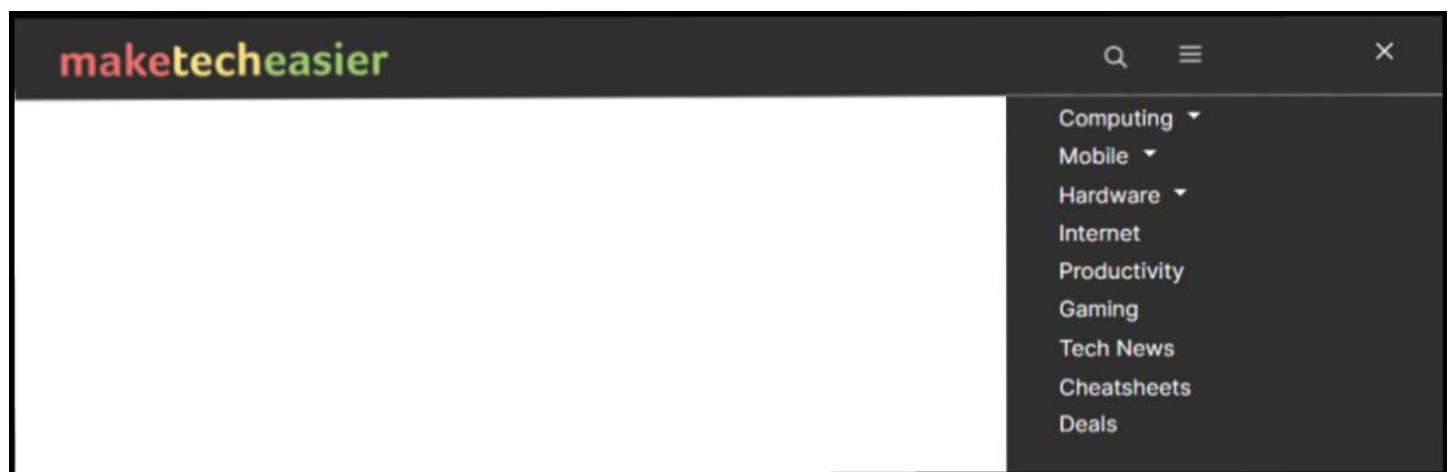


Figure 3 – Make Tech Easier website header

The following list of topics are those Paul highlighted from the Make Tech Easier website:

- How to Create a Windows 10 Recovery Drive
Reference: <https://tinyurl.com/626b6aef>
- How to Use Rufus to Create a Bootable Flash Drive
Reference: <https://tinyurl.com/v8s24k>
- Six Ways to Check Hard Disk Health in Windows 10
Reference: <https://tinyurl.com/x8jjh8wd>
- How to Increase the Maximum Volume in Windows 10
Reference: <https://tinyurl.com/3bndk5dn>
- How to Recover Your Windows Product Key
Reference: <https://tinyurl.com/2jxhvdvb>
- Windows 10 Keyboard Shortcuts Cheat sheet
Reference: <https://tinyurl.com/3hnpzvkf>

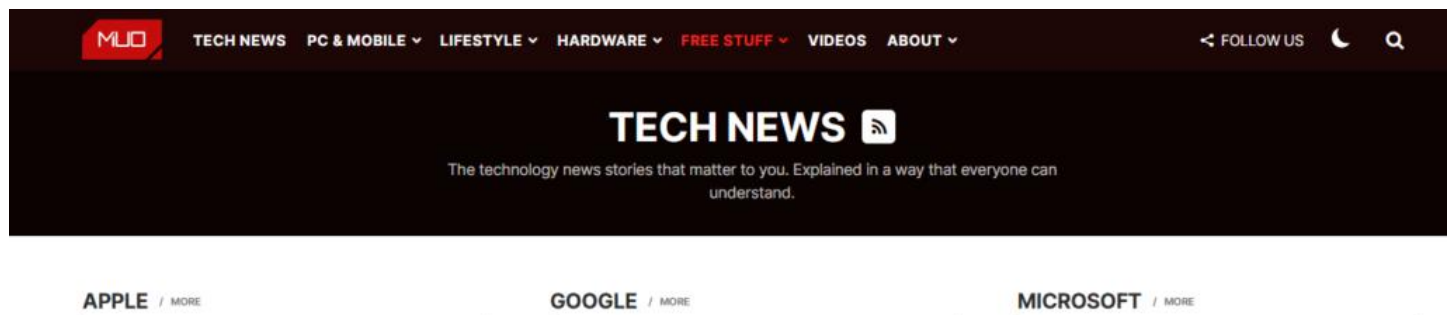


Figure 4 – Make Use Of website header

The following list is from the Make Use Of website:

- How to Hide Your Real Email Address
Reference: <https://tinyurl.com/4j5drhxz>
- Five Common Mistakes Slowing Down Your Windows PC (And What to Do Instead)
Reference: <https://tinyurl.com/52eymzhj>

The final presentation of the night was by **Dave Botherway** who looks under the bonnet of the Windows 10 utility, Task Manager. To find Task Manager click on the Windows Icon and start typing "Task... ". Task Manager should appear in the search box before you enter the fifth letter. Select Task Manager and press Enter to run the program. Alternatively use the keyboard shortcut Ctrl + Shift + Escape to bring up Task Manager.

For most users, when Task Manager is opened for the first time, a window opens showing programs currently running. (Figure 5) Selecting the “More details” arrow at the bottom of the window, displays a lot more details about what is going on. The tabulation in this enlarged table lists all the applications running. There are a number of headings in the Window, each of which Dave explained and I’ve summarised below.

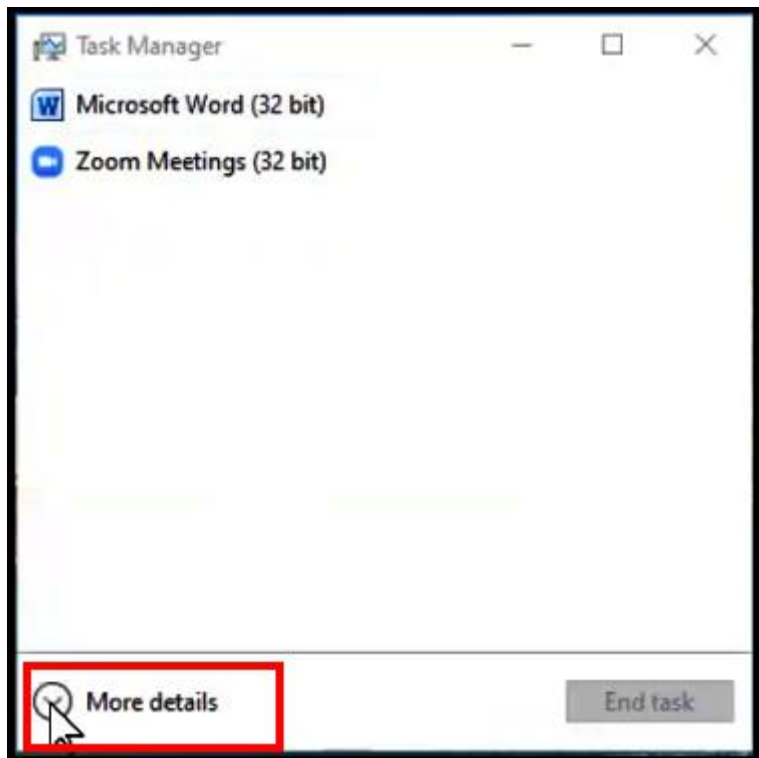


Figure 5 – Task Manager, Simple View.

Task Manager

Selecting the “**Processes**” heading shown in Figure 6 displays the information listed below, for each running program.

- “CPU” lists the percentage of processor use over all cores
- “Memory” lists the physical memory used by the running process
- “Disk” lists the total disk use over all cores
- “Network” lists network usage on the current primary network
- “GPU” lists the highest usage over all GPU engines.
- “Power usage” shows CPU, Disk and GPU impact on power consumption.
- “Power usage time” shows CPU, Disk and GPU impact on power consumption over time.

Clicking on one of the headings, for example Memory in Figure 6, updates the table and lists programs using the most memory in descending order.

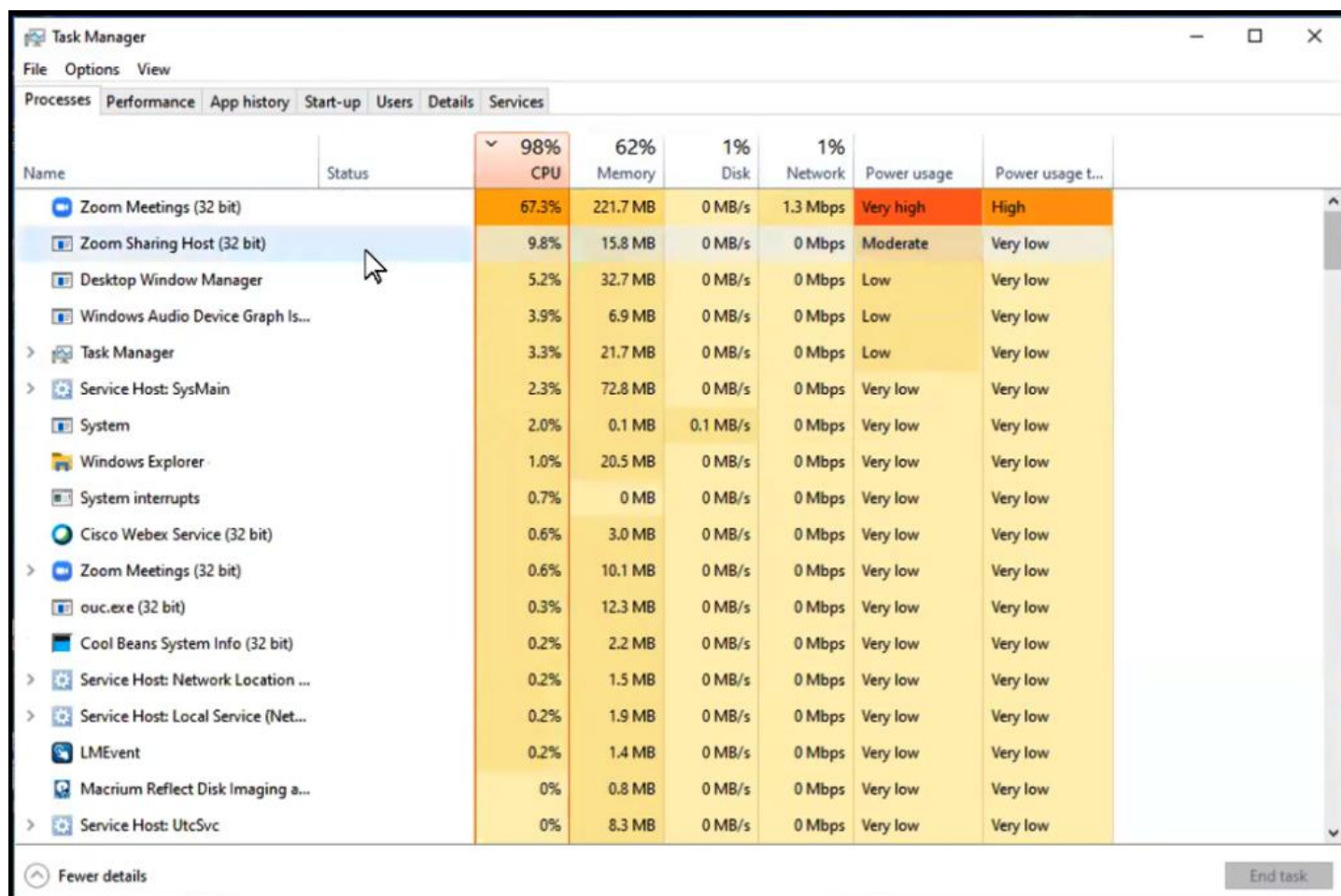


Figure 6 – Task Manager, “More Details” window

Selecting the “**Performance**” heading shows a graphical presentation of the percentage use of each of the following.

- “CPU” shows CPU activity
- “Memory” shows memory in use
- “Disk” shows the percentage of time the disk is processing read and write requests.
- “Ethernet” shows send and receive activity on this network
- “GPU” shows Graphic Processor Unit activity

To illustrate the above, Dave displayed graphs available under the Performance heading during a recent Windows update. The image below shows the graph of the WiFi signal. Note the smaller graphs to the left which show CPU at 100%, memory at 59% and Disk at 45% usage as the update progresses.

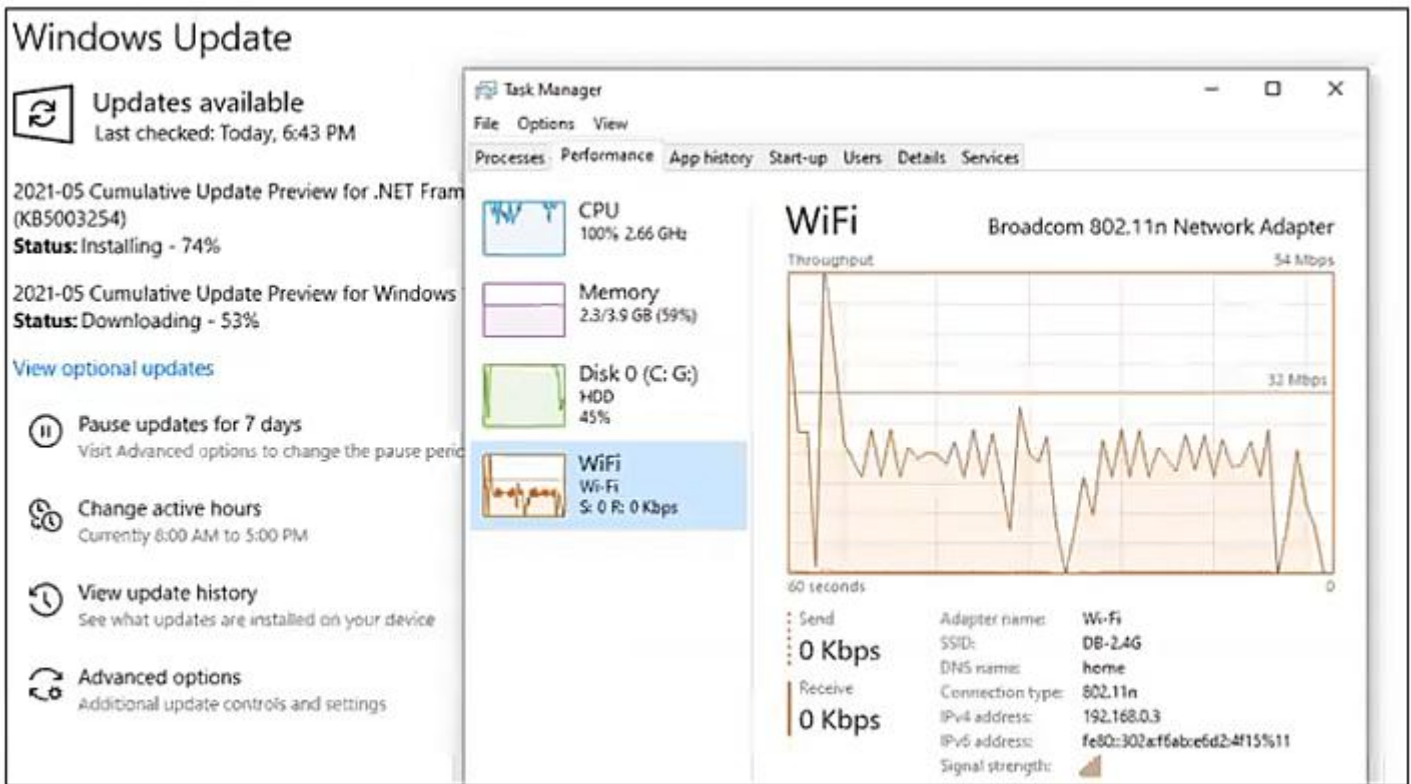


Figure 7 – Task Manager, Performance Option during a Windows Update

Selecting the **“App history”** heading displays resource usage for the various apps running on the computer.

- “CPU time” show the amount of time being spent by the CPU executing instructions,
- “Network” gives the amount of network activity including uploads and downloads,
- “Metered network” shows network activity over a metered network connection
- “Tiled updates total network usage for Window tile updates and notifications.

Selecting the **“Start-up”** heading shows a list of all the programs in the start-up list. Start-up programs run automatically in the background when a computer is started. Many Start-up programs are unnecessary, use memory needlessly and increase start-up time. For each start-up program the Publisher, Status and Start-up Impact is listed. To disable any unnecessary programs, right click on the program’s status and select “Disable”. Disabling a start-up program does not delete the program, but just stops it from running in the background continuously. In the past, an Adobe Reader update would always insert itself into the start-up list. Dave noted that in most cases everything in the start-up list can be disabled.

Selecting the **“Users”** heading shows which users are logged on. This can be useful if more than one person is logged on at a time to show each users PC’s CPU, Memory, Disk and Network utilisation.

Selecting the **“Details”** heading shows names and PID of programs, their status (i.e. whether running or Suspended), the username, CPU usage, memory being held and UAC virtualisation.

Selecting the **“Services”** heading shows the PID and description of the service, its status (i.e. whether the service is either Running or Stopped) and its Service group.

Resource Monitor

At the bottom of the “Performance” window is a link to “Resource Monitor”. The Resource Monitor displays CPU, memory, disk, and network information about individual software or services that may be running on your computer. Resource Monitor displays this information as a real time graph making it easy to see what resources each process is using.



Figure 8 – Link to Resource Monitor” from Task Manager’s Performance window

When Dave selected the “Disk” heading, the tabulation showed which processes were currently reading or writing to the disk. In the panel below Dave showed which files are being written to or being read. All this information is displayed in real time.

The current network activity was shown when Dave selected the Network heading. This can be very useful to determine why a PC may be running slow, which systems may be taking up the CPU, what processes are running the hard drive and even using the IO. When Zoom was running, Dave was able to show which IP address Zoom was going to.

Router Bottlenecks

To conclude the presentation, Dave played an entertaining YouTube video “Why does my Internet Connection Randomly Stop Working” at <https://tinyurl.com/3azws33t>.

Questions followed and the meeting concluded with informal discussions between audience members related to a question to George on a printer problem.

Yammer Highlights June 2021

Windows (formerly Windows 10*)

We were able to help Jan with a major learning experience this month – using a bootable Linux USB flash drive to recover files from a Windows computer with a failing hard drive that would no longer boot. While it's not strictly a Windows question, it is very relevant to anyone trying to recover files and demonstrates that lack of Linux experience is no impediment to using it for this process.

Jan mentioned she'd been trying to help a friend get her laptop running again without success and had suggested the friend take it to a shop to try to recover files using Linux. We suggested Jan would be capable of doing this herself to which her response was “gulp”, but with our encouragement and guidance she was able to achieve it.

Ubuntu provides an easy guide to downloading the disc image, creating the bootable flash drive or DVD and booting from it, so we were there mainly for getting her started, moral support and answering related questions. The hardest part is working out how to boot your computer from a USB drive as how you achieve it depends on the computer being used, the rest is just trepidation in using something unfamiliar.

It took a while, possibly due to the condition of the drive, but Jan was able to copy the desired files to an external drive, including 10 years worth of e-mails. It should be noted the friend did have back-ups of her personal data but it wasn't that recent so there were still many files that were at risk of being irretrievably lost.

Jan was happy with both the outcome and having learnt a useful skill, and her friend was delighted that her files were saved – a great example of the “members helping members” club ethos. She's even thinking of dual-booting her old laptop to have a further play with Ubuntu so I'm sure will be back with more questions.

<<https://www.yammer.com/melbpc.org.au/#/Threads/show?threadId=1290274370101248>>

Despite saying Windows 10 was going to be the last ever version of Windows Microsoft officially announced a new version, named Windows 11. There has been considerable consternation over the system requirements that are currently listed to install it – a MS account, TPM 2.0 and a processor from a very limited list.

It should be noted that Win11 is in beta and not due for release until October or November – it's thought the current restrictions will be eased somewhat for the actual release version but that's purely speculation and firm details are sparse. If you're keen to test there are ways and means to circumvent the restrictions – they require editing the registry so caution is required and running a Windows beta on your main system would definitely **not** be recommended.

<<https://www.yammer.com/melbpc.org.au/#/Threads/show?threadId=1268555922726912>>

* This group was originally created to provide a separate area to discuss the then new Windows 10 and has continued in that role, but with the recent announcement of Windows 11 it was decided that rather than create a new group we'd re-purpose this group to cover all versions of Windows.

Security, Scams and Phishing

The sorry tale of a netball club in SA being defrauded to the tune of \$150,000 by an e-mail claiming to be from a building contractor that provided fake bank account details provides a salutary lesson for all of us. Always verify bank account details before depositing substantial sums, don't just trust the e-mail details

provided. While this should be standard practice it's very worth the occasional reminder because it's oh so easy to get caught out by trusting an e-mail when you're expecting to receive one.

Likewise, don't trust any bank account sign-in links seen in e-mails. Always log in directly via your bank's website.

<<https://www.yammer.com/melbpc.org.au/#/Threads/show?threadId=1255931849588736>>

Computer Help

Helping a less than tech-savvy friend who allowed a "friendly" neighbour to obtain his router log in details has given Cedric a real headache. Said neighbour has been leaching the friend's data and causing him to run out only half-way through the month, and also seems to have accessed the smart TV and using it to stream dubious material.

Cedric had tried to change the router password, WiFi password and WiFi SSID (the connection name) but couldn't get them to save. He didn't really want to perform a factory reset unless it proved absolutely necessary so further efforts to get the changes to save were called for. Telstra didn't have a manual available online but Malcolm was able to provide a link to an unofficial guide that a user had put together and Cedric was then able to save the changes.

Rather than using WiFi to connect the smart TV Kevin (our resident cabler) also suggested using ethernet. It's not certain how the neighbour is connecting to the TV so trying to disable all wireless connections seems a sensible approach - it uses both WiFi and Bluetooth.

Hopefully that's cured the immediate problem of data leaching but I get the feeling Cedric's friend will have further issues for him to deal with in the future.

<<https://www.yammer.com/melbpc.org.au/#/Threads/show?threadId=1273242047619072>>