>PC Update

April 2021

Publishing Information

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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 April 2021
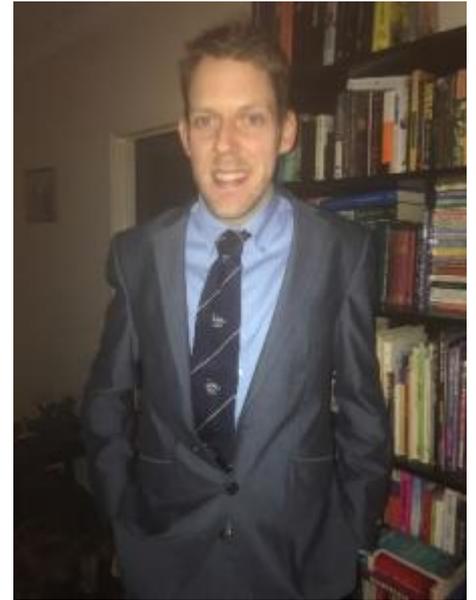
Hugh Macdonald

Pleasingly, life is beginning to return to normal at Melbourne PC User Group. Everytime I walk into the club these days (usually on the weekends) it is a hub of activity, often with members of the Microcontroller Workshop SIG working on their projects. There's also often Coder Dojo, which sees some of the youngest people in the club attending, and has returned to face to face mode this year.

We also had our first (almost) fully attended monthly meeting in nearly a year earlier this month. You'll find more details about that in other pages of this magazine, and see a few nice photos from George Skarbek, who also took this month's cover photo. We even had Lloyd Borrett, the club's founding member and namesake of the Borrett Room, turn up to the meeting.

This month the magazine deals with password managers, Chromebooks, stopping liquid damage to mobile phones and artificial intelligence. Frank O'Loughlin has also reviewed the ASCCA courses that are offered each month online via Zoom. If you'd like to learn some new computer skills have a look at what is on offer and try one. Also make sure you read Frank's review.

Enjoy the issue, and see you next month!

Presidential Musings April 2021

David Stonier-Gibson

Internet lounge equipment

As part of our refurbishing and de-cluttering the club rooms, we have moved all the Internet Lounge equipment into temporary storage. If you use any of the stuff there, please email me and let me know what you'd like retained (if you have not already done so). Please use this email link and subject line. Anything that's no longer in demand will be disposed of in a couple of weeks.

Demise of a SIG

I am sad to have to report that the Bayside SIG has been wound up. The church hall they were using was altered to the point where it no longer suited, and the conveners felt it a suitable time to step down. Thank you to Peter Carpenter and crew for your effort over the years.

Daytime monthly meetings

I have been mulling over the idea of daytime monthly meetings for quite some time. Covid pushed it to the back burner for a year! The thought behind it is that the more "senior" members may not want to come out at night, but would enjoy social get-togethers during daylight. I'm thinking something less structured, more social than the traditional night time monthly meetings, more along the lines of quizzes and entertaining videos. The whole idea is to get people enjoying each others' company and having a bit of lighthearted fun. If you have any comments or suggestions about this, just email me using using this email link and subject line.

WOW! projects

We are working to tart up the club rooms, and convert them from "nineties boring office" to "2020's exciting techno". The way I put it is that when someone comes into Moorabbin for the first time they should go "WOW!" and want to be part of it. To get to that we need lots of high visibility cool tech. We have made a start by hanging a long string of colour LEDs around the lounge, which will eventually be programmed for a range of cool lighting effects. However I am sure many members have the ability to create cool stuff. So if you have any ideas for gizmos you or a group of you could make, be it Jacob's Ladders or levitating globes, video games or interactive science displays, let me know. Any projects that are deemed suitable and have the right "WOW!" I will propose to the committee to finance the materials.

Monthly Meeting April 2021

The March 2021 Monthly Meeting was held in person and online on Wednesday 3rd March 2021, with over 40 members in attendance at Moorabbin and over 70 members in attendance via Zoom. This was the program for the evening:

Guest Speaker: Grant Petty
Topic: Empowering Creativity

Grant Petty

Grant, founder, and CEO of Blackmagic Design has become one of the world's leading innovators of creative video tech. His goal was – and still is today – to empower creativity by making film, television, streaming, and AV production equipment affordable for everyone. Because of Grant Petty, nearly every new film, TV show, commercial, music video, live concert you watch was created with a Blackmagic Design product.

Blackmagic Design, with more than 1,400 employees in seven countries, has tens of millions of customers around the world. This includes Oscar-winning cinematographers to 15-year-old students; and projects from Avatar and Star Wars: The Last Jedi, to Game of Thrones, the AFL, Elton John's end tour, and the Melbourne Symphony Orchestra.

Grant is not looking for just profits and openly refutes the thought that he should act like other businesses. He is focused on design and problem solving and has assembled world-leading software, hardware, R&D, industrial design, interface design, manufacturing and marketing, and focused them all on design and creativity.

He has also built a corporate culture that has turned every part of the company into an "invention factory." The creative process starts with identifying a problem and then reconceptualizing the entire way a product is made, sold, and used.

Grant has also taken his passion for problem fixing and design into the M&A space, acquiring seven companies, including Sydney's Fairlight Inc, and DaVinci, and brought each of these companies back from the dead. Since acquiring DaVinci, a company that was losing $1 million a month before being acquired to now being the most used professional post-production software in the world.

iHelp Online

In a similar vein to the Q&A segment that ran for many years at Moorabbin face to face monthly meetings, a member of the iHelp team will join the meeting each month to answer your technical questions.

This month it is Harry Lewis.

You are are invited to submit your questions to iHelp for responses during the meeting. Please send your questions by email to: ihelp-questions@melbpc.org.au to arrive by 6pm on Wednesday, 3 March.

Meeting Agenda

7.00pm sharp: Meeting opens. Host is Peter Bacon.

Guest Speaker: Grant Petty

Q & A with John Hall

President's Report with David Stonier-Gibson and SGM Life Membership Presentation to Harry Lewis

Fireside Chat with Stephen Zuluaga and Hugh Macdonald: Top Security Tips

iHelp Online: Harry Lewis and iHelp Team.

9.30pm (approx): Close.

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.

The photographs above were taken by George Skarbek.

In 2021 vow to start using a password manager

Kurt Jefferson, Editor, Central Kentucky Computer Society

I keep telling students in my CKCS classes that they need to start using a password manager. You should be using a password manager on your iPad, iPhone, Mac, Windows PC, and Linux PC. Seriously? Yes.

With a good password manager, you only need to remember one password. That's right. You don't need to remember the one you use when you buy from Amazon. And the password you use to pay your water bill. And the one you use to log into your bank account.

Password managers are apps that securely keep track of your passwords, allow you to create private notes, automatically log you into your password-protected websites, and more.

Some of the best include:

- 1Password
- Dashlane
- LastPass
- Keeper
- NordPass
- RoboForm
- Sticky Password
- bitwarden
- RememBer
- Enpass

If you're reluctant to use a password manager, wired.com says you've got company. "Password managers are vegetables of the Internet. We know they're good for us, but most of us are happier snacking on the password equivalent of junk food," writes Wired in an article headlined, "The Best Password Managers to Secure Your Digital Life."

As I read that I said to myself, "Ain't that the truth." I know plenty of really smart people who are committed to their habits, who are stubborn, and who simply cannot change. They don't use password managers. You probably know your web browser will save your passwords automatically for you. The website Tech Republic says this is a bad idea.

Why you should never allow your web browser to save your passwords shows others can see your passwords. The article describes step–by–step procedures that someone can use to view your saved passwords in Google Chrome, Firefox, and Safari browsers.

The article concludes: "Don't allow your browser to save your passwords. None of them. Not one. If you do, those passwords are vulnerable. All someone has to do is have access to your computer (remote or physical) and, unless you use Safari or the Master Password feature in Firefox, those passwords are available for anyone to see. If you absolutely must have your browser store your passwords, and you're not using macOS, make sure to use Firefox and enable the Master Password feature. Use Chrome at the peril of your passwords. In place of having your web browser store your passwords, make use of a password manager."

If you use a Mac, you might avoid using Apple's built-in keychain system and opt instead for a password manager. Glenn Fleishman, who writes about security issues for Macworld, gets into the details and digs deeper into this if you're interested.

The website Tom's Guide spoke with several digital–security experts. While some are not fond of password managers, plenty of others use them, trust them, and rely on them.

Cybernews writes, "You really should use a password manager. Yes, they have their flaws and vulnerabilities. But it's still better than re-using the same weak passwords and writing them down as a note on your smartphone that becomes a playground for your kids after work."

Chromebook Update

Jeff Wilkinson, President, Sun City Summerlin Computer Club

I have become more interested in Chromebooks as an alternative for our club members who need to replace an outdated desktop or laptop computer. Many, if not most, of these users don't need the features of today's typical laptops and since so many of the tasks are accomplished online without the need for local storage, a Chromebook becomes a very attractive option. With a Chromebook and a free Google account; email, web browsing, video streaming and a host of Android applications are available.

In addition to its comparatively low cost, a Chromebook offers a useful synergy with Android phones and applications along with light weight and long battery life. The complete Google Suite of Cloud applications is available free and offers a useful alternative to Office software suites.

Another attraction is the ability to repurpose outdated laptops with the installation of Google's Neverware CloudReady software. The free Home version listed as being "useful for Tinkerers, Parents and Students, and Other Humans Ready for a better OS" was right up my alley. I successfully converted two old laptops that were not upgradable to the current Windows operating system. Both worked well although they had some limitations. With a new HP Chromebook I was able to make use of all the latest features of the Chromebook operating system including one of the latest updates for scanning. By simply logging into my Google account with my Gmail address and password I had all my browsing bookmarks, photos and Gmail available to me.

So, when I saw a recent news report about the tracking of Chromebook users it raised some concern. As has been discussed before, an inquiry about a specific product or service, more often than not, results in the sudden appearance of ads for that product or service or similar products in many of your search results, popups on YouTube views, social media pages and emails. The gist of the new report I saw was the concern for the profiling of Chromebook users and the use of the collected information to target market to that user. The main way of collecting the metrics used to target market are cookies that are ostensibly used to "customize" your web experience. While a "do not track" setting is available in the Chrome and Edge browsers, be aware of this official Google statement "Most websites and web services, including Google's, don't change their behavior when they receive a Do Not Track request". Chrome doesn't provide details of which websites and web services respect Do Not Track requests and how websites interpret them. Do Not Track is not available on iPhones or iPads.

Does it work? Not very well … seems every time I search for anything, I get pop ups and ads for that or similar items for days. Of course, the data collection is true of virtually all the so-called free software in which your usage data is the real product. So be aware, while Chromebooks offer an attractive alternative to a Windows or IOS laptop they tightly integrate with Google in ways you may not realize.

https://www.usatoday.com/videos/tech/2018/09/25/-google-chrome-tracking-you/37935707/

https://clark.com/technology/google-chrome-do-not-track/

https://www.pcmag.com/how-to/how-to-get-google-to-quit-tracking-you

https://www.wired.com/story/google-tracks-you-privacy/

https://9to5google.com/2020/02/06/google-chrome-x-client-data-tracking/

https://lifehacker.com/what-data-of-mine-does-chrome-send-to-google-5763452

ASCCA Online Courses

Frank O'Loughlin

Last Monday I participated in an online course on Gimp photo editor. I haven't been game to try this previously as my memory is quite poor and I find it hard to remember much from courses. My motivation for trying this course is seeing what people can do with photos that aren't up to scratch and need some touching up to make them look presentable.

It was a 3-hour course on the basics of adding a layer to a photo and making alterations to the original photo. The presenter Gene Martin also presented the course I did last year on Photo albums. Gene methodically took us through the process of Levels in Gimp and some tools to use to make alterations.

I found it a bit hard to keep up with the information but as Gene showed us how to use the Gimp manual, I have been practicing mainly using the manual as I've already forgotten a lot of the topics covered in the class.

I won't go into any more detail about the course, but I'll attach a photo that my wife took a couple of years ago (yes she's a Cats supporter) of a decorated lounge room window with the Azalea bush covering some of the window. I have used the clone tool to paint out the Azalea bush from the window to give an example of cloning out unwanted objects in a photo.

Before Gimp manipulation photo

After Gimp Manipulation with Clone

It's a very basic attempt at cloning as you and our readers will see, however, my main objective in writing this report for PC Update which I know goes out to all members is to say I found the ASCCA courses I have attended very useful and would certainly encourage other members to take them if there's something that they would like to learn. My challenge now will be to remember to practice with other features of Gimp (there's virtually unlimited features) Gimp is a free similar version of what most people know of Photoshop.

David Stonier-Gibson has been alerting members of these courses in both PC Update and Yammer which I see as another example of the club's motto of Members Helping Members. The various SIGs offer members help with demos and information and this is another example of how the club benefits its members.

Interesting Internet Finds April 2021

Steve Costello

Proxy Vs. VPN: When To Use A Proxy Server And When To Use A VPN?

https://www.digitalcitizen.life/when-use-proxy-and-when-use-vpn/

Have you heard about Proxies and VPNs. Do you know the differences, or when you should use which and why? Check out this post to learn more.

How To Configure Your Mouse For Comfort

https://www.makeuseof.com/how-configure-mouse-comfort/

With all the online classes and conferences, more and more people are using their mice for longer periods. If you don't already know how to make your mouse use comfortable, check out this post, and follow the advice.

7 Zoom Tests To Perform Before Your Next Meeting

https://www.online-tech-tips.com/computer-tips/7-zoom-tests-to-perform-before-your-next-meeting/

I have been doing a lot of Zoom meetings, and there have been times things just didn't go right. Now, after reading this I check these things out at least a half-hour before the meeting starts.

I'm Tired of Windows, So What Next?

https://askbobrankin.com/im_tired_of_windows_so_what_next.html

Bob Rankin explains some options for you if you are tired of putting up with Microsoft Windows.

Less Common Reasons Your Computer May Slow Down

https://askleo.com/less-common-reasons-your-computer-may-slow-down/

Most of us know the common reasons our computers slow down. Leo Notenboom covers some of the more uncommon reasons in this post.

How To Check If Your Android Smartphone Has RCS

https://www.howtogeek.com/702461/how-to-check-if-you-have-rcs/

If you have been hearing about RCS, and wonder if it is available for you on your Android, check out this post from HowToGeek.

Phone wet and will not turn on? Here is how to deal with water damage

Ritesh Chugh, *CQUniversity Australia*

If you've ever gotten your phone wet in the rain, dropped it in water or spilt liquid over it, you're not alone. One study suggests 25% of smartphone users have damaged their smartphone with water or some other kind of liquid.

Liquid penetrating a smartphone can affect the device in several ways. It could lead to:

- blurry photos, if moisture gets trapped in the camera lens
- muffled audio, or no audio
- liquid droplets under the screen
- an inability to charge
- the rusting of internal parts, or
- a total end to all functionality.

While new phones are advertised as "water resistant", this doesn't mean they are waterproof, or totally immune to water. Water resistance just implies the device can handle *some* exposure to water before substantial damage occurs.

Samsung Australia has long-defended itself against claims it misrepresents the water resistance of its smartphones.

In 2019, the Australian Competition and Consumer Commission (ACCC) took Samsung to Federal Court, alleging false and misleading advertisements had led customers to believe their Galaxy phones would be suitable for:

> use in, or exposure to, all types of water (including, for example, oceans and swimming pools).

Samsung Australia subsequently denied warranty claims from customers for damage caused to phones by use in, or exposure to, liquid.

Similarly, last year Apple was fined €10 million (about A$15.5 million) by Italy's antitrust authority for misleading claims about the water resistance of its phones, and for not covering liquid damage under warranty, despite these claims.

How resistant is your phone?

The water resistance of phones is rated by an "Ingress Protection" code, commonly called an IP rating. Simply, an electrical device's IP rating refers to its effectiveness against intrusions from solids and liquids.

The rating includes two numbers. The first demonstrates protection against solids such as dust, while the second indicates resistance to liquids, specifically water.

A phone that has a rating of IP68 has a solid object protection of 6 (full protection from dust, dirt and sand) and a liquid protection of 8 (protected from immersion in water to a depth of more than one metre).

Although, for the latter, manufacturers are responsible for defining the exact depth and time.

The popular iPhone 12 and Samsung Galaxy S21 phones both have a rating of IP68. However, regarding exposure to water, the iPhone 12 has a permissible immersion depth of a maximum of 6m for 30 minutes, whereas the Galaxy 21's immersion limit is up to 1.5m, also for 30 minutes.

While IP ratings indicate the water-repellent nature of phones, taking most phones for a swim will land you in deep trouble. The salt content in oceans and swimming pools can corrode your device and cost you a hefty replacement.

Moreover, phone manufacturers carry out their IP testing in fresh water and Apple recommends devices not be submerged in liquids of any kind.

Luckily, water resistant phones are generally able to survive smaller liquid volumes, such as from a glass tipping over.

Checking for liquid damage

Exposure to water is something manufacturers have in mind when designing phones. Most Apple and Samsung phones come with a liquid contact/damage indicator strip located inside the SIM card tray.

This is used to check for liquid damage that may be causing a device to malfunction. An indicator strip that comes in contact with liquid loses its usual colour and becomes discoloured and smudgy.

A discoloured strip usually renders your phone ineligible for a standard manufacturer warranty.

If you have any of the more recent smartphones from Apple or Samsung, then your device will be able to detect liquid or moisture in its charging port and will warn you with an alert. This notification only goes away once the port is dry.

But what should you do if this dreadful pop-up presents itself?

Fixing a water-logged phone

Firstly, do not put your phone in a container of rice. It's a myth that rice helps in drying out your phone. Instead, follow these steps:

1. Turn off the device immediately and don't press any buttons.
2. If your phone is water resistant and you've spilt or submerged it in a liquid other than water, both Apple and Samsung recommend rinsing it off by submerging it in still tap water (but not under a running tap, which could cause damage).
3. Wipe the phone dry with paper towels or a soft cloth.
4. Gently shake the device to remove water from the charging ports,
   but avoid vigorous shaking as this could further spread the liquid inside.
5. Remove the SIM card.
6. Use a compressed aerosol air duster to blow the water out if you have one. Avoid using a hot blow dryer as the heat can wreck the rubber seals and damage the screen.
7. Dry out the phone (and especially the ports) in front of a fan.
8. Leave your phone in an airtight container full of silica gel packets (those small packets you get inside new shoes and bags), or another drying agent. These help absorb the moisture. *[Ed: These are available from Bunnings.]*
9. Do not charge the phone until you are certain it's dry. Charging a device with liquid still inside it, or in the ports, can cause further damage. Apple suggests waiting at least five hours once a phone appears dry before charging it (or until the alert disappears).

If the above steps don't help and you're still stuck with a seemingly dead device, don't try opening the phone yourself. You're better off taking it to a professional.

Ritesh Chugh, Senior Lecturer – Information Systems and Analysis, *CQUniversity Australia*

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Potential for harm: Microsoft to make US$22 billion worth of augmented reality headsets for US Army

Ben Egliston, *Queensland University of Technology* **and Marcus Carter,** *University of Sydney*

Microsoft has reportedly been awarded a ten year contract worth close to US$22 billion, to provide 120,000 military-grade augmented reality (AR) headsets to the US Army.

Popularised through mobile apps such as Pokémon Go and face filters on social media, AR technology is fundamentally about superimposing digital images over real-world environments.

The AR interface commissioned by the US military is referred to as an "Integrated Visual Augmentation System" (IVAS). It will use Microsoft's HoloLens headset technology as its base hardware.

As the Army's press release notes, the device will be used to coordinate soldiers and implement sensing technologies on the battlefield.

Features will supposedly include thermal sensors, machine learning (to create realistic training simulations) and a digital heads up display to enhance soldiers' "situational awareness".

The news follows Microsoft's previous announcement of a US$480 million military contract to develop and supply IVAS prototypes to the army in 2018.

Between this older contract, the new one, and Microsoft's $10b JEDI cloud computing contract for Azure, Microsoft is set to fortify its position as one of the highest value US defence contractors (alongside Amazon).

AR and warfare's relationship isn't new

AR interfaces first emerged in the 1960s with Ivan Sutherland's demonstration of the Sword of Damocles tracking system. This was developed in the Massachusetts Institute of Technology's Lincoln Laboratory, funded by the US Department of Defence.

The head-mounted display – the first of its kind – was pitched for use in simulating flight instruments and conditions.

American computer scientists Ivan Sutherland's Sword of Damocles was the first example of a head-mounted display (HMD).

Fast forward to the mid-80s and the Lincoln Lab produced American AR manufacturer Kopin. In 1990 this commercial company received a US$50 million contract from the Department of Defence to develop micro LCDs to be used in wearable computers for the infantry.

AR continues to see uptake today, in a trend which geographer Stephen Graham refers to as the "militarisation" of everyday life. And this is especially noticeable with technologies governing urban societies.

Technology firm Vuzix is one major player in the security and enterprise sector. As its annual report states, the company develops products for "governmental entity customers that primarily provide security and defence services, including police, fire fighters, EMTs, other first responders, and homeland and border security".

In one particularly troubling development, last year it was reported that ClearView AI's facial recognition software was being tested to run on Vuzix hardware.

This controversial company trains its artificial intelligence software on a dataset of more than three billion images from websites including YouTube, Facebook and Instagram. Its marriage with Vuzix points to a future where law enforcement officers use wearable AR with built-in facial recognition capbilites.

The use of AR to govern everyday life has also emerged during the COVID-19 pandemic (which we've detailed in this report). For example, companies such as Rokid and KC Wearables have developed wearable devices that purport to track the body temperatures of people in the view of the device's wearer.

What's so bad about Microsoft's AR?

We know little about the current prototyping and field testing of Microsoft's IVAS. But the interface raises the same concerns that surround other technologies designed to preemptively target and classify potential "threats" – such as drones.

This is what the current IVAS prototype looks like.
Microsoft

As the US Army's IVAS objectives read, key outcomes are to increase mobility, situational awareness and lethality – that is, deadliness on the battlefield. The document states:

> Soldier lethality will be vastly improved through cognitive training and advanced sensors, enabling squads to be the first to detect, decide and engage. Accelerated development of these capabilities is necessary to recover and maintain overmatch.

The objectives are framed around soldiers' efficiency, coordination and safety. This is similar to the usual framing of other predictive sensing technologies, including facial recognition.

The reality, however, is there would be potentially disastrous outcomes if such a system were to misidentify a target. In a 2019 CNN interview, Microsoft CEO Satya Nadella tried to play down concerns.

"We made a principled decision that we're not going to withhold technology from institutions that we have elected in democracies to protect the freedoms we enjoy," he said. His statement failed to acknowledge the potential risk which may result from the military's use of AR.

Not child's play

Following Microsoft's initial IVAS contract in 2018, Microsoft employees wrote a letter to company executives opposing the use of AR for warfare.

While the letter itself was ineffectual, the recent rise of collective worker resistance in Silicon Valley shows promise. More strikes and walkouts in response to unethical developments could help push back against big tech's self-serving visions of the future.

Similar to virtual reality, AR has so far enjoyed cover from critique by being taken as a benign gaming or entertainment technology.

The latest IVAS contract is an urgent reminder that developments in this technology should be taken seriously. And its potential for harm must not be downplayed.

Ben Egliston, Postdoctoral research fellow, Digital Media Research Centre, *Queensland University of Technology* and Marcus Carter, Senior Lecturer in Digital Cultures, SOAR Fellow., *University of Sydney*

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DOTW Winners March 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.

March winners were:

• Queensland Department of Child Safety for the totally inadequate sanctioning of its staff after a sad case of a child death where the Deputy Coroner said the handling of the case "was a failure in nearly every possible way by the relevant employees of the department" and that the employees involved should have been dismissed or heavily demoted.

• In a special "local talent" edition – JUMPING JUDY (well she ain't jumping just at the moment!) for letting her POLTERGEIST off the hook to shove DANIEL down the stairs!! Why couldn't she have sent it after SCOMO instead?!!

• NSW Police Commissioner Mick Fuller who this week suggested that the issue of consent to sexual relations be addressed by the use of a smartphone app to record consent. No smartphone no sex?

• The Bolt and Latham duo for comments on Sky News about a British university spending around $40,000 on a statue of "global warming extremist" Greta Thunberg.

Thanks to all participants.

East SIG Report March 2021

Neil Muller

Host Dave Botherway opened the March meeting again presented via Zoom. After welcoming members, the meeting commenced with **George Skarbek** presenting Q&A.

With no questions forthcoming, George proceeded to give the first presentation of the night. The presentation, "What New Monitor to Buy?" covers the process George went through when selecting his current computer monitor.

For those wishing to replace an old HD 24 or 27-inch monitor, then bigger is usually better. A larger monitor will significantly improve your productivity. Two documents are easily viewed side by side and scrolling is reduced if working on a large spreadsheet. For those interested in photography, a larger screen enables more detail of a photo to be displayed. In addition, when using editing software such as Photoshop or Lightroom, more tools are visible, which again reduces the need for scrolling.

Figure1 – Wide screen monitor displaying multiple apps.

There are some disadvantages of larger screens. The screen will need more room on a desk and if the screen is too large you may find it tiring from moving your head from side to side. Larger screens are also more expensive.

Screen resolution is probably the most important factors to consider. When George selected his current monitor his first thought was to opt for a monitor with 4K (3840 x 2160 pixel) resolution. When viewing a 4K monitor prior to purchase, he found the small font size in Windows Explorer and other menus too small

for his eyesight. He therefore selected a 32-inch monitor with 2560 x 1440 resolution. This monitor roughly equates to 3K resolution and was "very noticeably better" than his full HD monitor. Now after 3 years use, George still has no regrets that the purchase was the correct one.

To obtain the best image quality the monitor needs to be viewed at its native resolution. George noted that if he reduced the resolution of a 4K monitor to 2560 x 1440 resolution, (i.e. the resolution of the monitor he purchased), the resulting image would not be displayed as clearly. George therefore recommended viewing monitors before purchase and let your eyes decide what resolution is best for you.

If the monitor is to be used for photography, colour Gamut or the monitor's ability to replicate the RGB colour sent from the graphics card, is another important factor to consider. The standard for RGB space is shown as sRGB and should typically be at 99%. If the specifications for a monitor have sRGB below 99% or does not record a sRGB score, it should be avoided if being used for photography.

For those not interested in photography, frame rate and refresh rate may be more important factors to consider. Refresh rate is the number of times a monitor's display is refreshed and is expressed as hertz or Hz. 60Hz is a minimum value for normal use. For users interested in gaming, a high frame rate or frames per second (fps) is important. The frame rate is determined by the graphics card and CPU. For photography and watching videos, 30 fps is satisfactory.

Often a monitor will be purchased to connect to a Laptop computer. If a laptop with a 1920 x 1080 (full HD) pixel resolution is connected to say a 4K monitor, the upscaled image will still be the same HD image. The quality of that image will depend to some extent on the ability for that monitor to upscale the image well. When using an external monitor with a laptop, the best results are achieved when the screens resolution is the same as that of the laptop's screen. George reiterated the point that you will **not** have a 4K image on the large monitor, when the laptop outputs only 1920 x 1080.

Figure2 – Laptop to Monitor connection

Another point to consider is the cable connectors needed to connect a laptop to a new monitor. If the laptop has only a VGA output, be aware that many new monitors do not support VGA. You may need to purchase an adapter or special cable for a new monitor with only HDMI ports. George warned that some monitors do not come with cables.

Once a new monitor is purchased, you'll find the old monitor makes an excellent second screen. The connections from the computer's graphics card or on-board graphics, to the monitor will limit the resolution. Even a monitor with only a low-resolution VGA output will still make a significant improvement to productivity as Mrs Skarbek will vouch. If using 2 monitors, you'll find it almost impossible to have colours matching unless the monitors at are the same brand and model.

George's presentation will be made available on the East SIG website for those wanting the full coverage of this topic.

In a second and shorter presentation George outlined his recent experience using a very cheap WiFi extender. George found the WiFi signal to a new installation of micro invertors to existing solar panels at his house were regularly dropping out. As the reconnection of the WiFi signal required a complicated and timely process, George investigated using a WiFi extender to solve the problem. A search of JB HiFi and Officeworks found WiFi extenders started in price from $80 up to $280 plus. A search from Amazon found a sub $15, 2.4 GHz WiFi extender that George felt was worth trying. It was ordered late one day and arrived the next.

Super Boost WiFi, Amazer-T WiFi Range Extender | Up to 300Mbps |Repeater, WiFi Signal Booster, Access Point | Easy Set-Up | 2.4G Network...
★★★½☆ ⌄ 74
$14⁹⁵

Versus

Netgear EX3700 Wireless AC750 Range Extender - Wall Plug
$80.00

Figure 3 – Cheap WiFi versus Expensive WiFi extenders

The WiFi extender first needed to be set up to ensure it was amplifying the correct signal and not that of a neighbour. To do this George plugged the WiFi extender into an ethernet port. When it identified itself correctly, George then configured it to give it the same SSID, station identifier and password as his existing WiFi.

After minor installation problems requiring reading of the manual, the WiFi signal connected and gave a 42,000 times signal strength improvement over the original signal. In his presentation George displayed screen captures from WiFi Analyzer of before and after the install, along with other tabulations he used to verify the connection. As the original WiFi signal was so weak, final graphs presented showed there were still gaps in the received signal. However, these gaps did not affect the connection to the micro invertors. In conclusion, a super cheap device was all that was needed to solve George's problem.

Dave Botherway followed with his ongoing series on "Making more use of Zoom", this time using self-select breakout rooms. Breakout Sessions (where the host allocates rooms) have been around for a while, but recently a new feature has been added. It is now possible for attendees to select which room they wish to go to – based on a chosen topic.

From Zoom version 5.3 on:

- Attendees can select which room they wish to attend
- Topics are pre-defined, but can be added before a break out occurs.
- Attendees can see who is in various rooms and can move between rooms
- Each room needs a "leader" to control discussion
- The host can set time limits and reminders
- The host can broadcast messages to all rooms

Figure 4 below is taken from Dave's presentation and shows the various screens users will see when using Zoom Breakout Rooms. The first graphic shows the new "Breakout Rooms" icon on the hosts toolbar. This icon is only displayed on the hosts toolbar if "Breakout Rooms" have been setup by the host to use in the session.
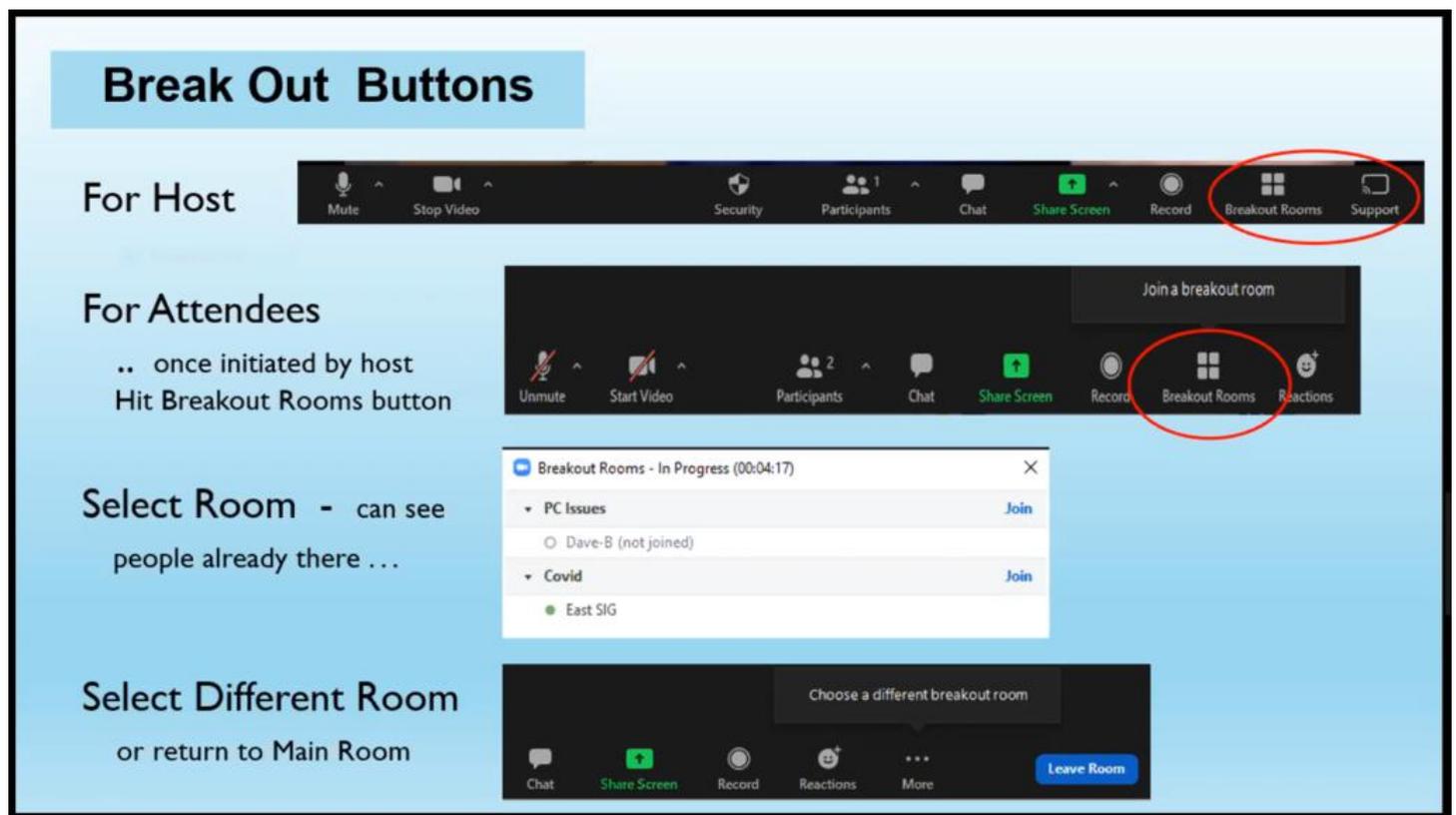

Figure 4 – Breakout Rooms Buttons

Only when the host initiates Breakout Rooms will the "Breakout Rooms" icon appear on the attendee's toolbar. They will then be invited to "Join a breakout room" by clicking the "Breakout Rooms" icon. The second graphic shows the icon on the right side of the attendee's toolbar.

After selecting to join a breakout room, attendees see the panel shown in the third graphic. Here they select "Join" opposite the room of their choice.

The fourth graphic displays a "Leave Room" icon on the attendee's toolbar which appears after they've entered a breakout room. Here they have the option to "Choose a different breakout room" by selecting the "Leave Room" button. When leaving the room, attendees are returned to the screen shown in the third graphic.

To demonstrate breakout rooms, Dave played a short video to show breakout rooms in use, (https://www.youtube.com/watch?v=C5s9AN4nt6w) after which attendees had 10 minutes to try breakout rooms themselves. This proved very successful and is likely to be used at future meetings.

As a follow-on from last month's presentation on "Simple Tab Groups" in Firefox, Tony Froster gave the next presentation on "Reorganization of the Favourites Bar to Folders" and "Using the Collections Tab in Microsoft Edge".

Using Folders on the Favourites Bar in the Edge Browser.

The first topic of this presentation outlines Tony's experience changing the Favourites Bar in Microsoft Edge from individual favourite icons, to folders containing multiple favourites. (The term favourites is used by Microsoft and is synonymous with the term bookmarks used in other browsers.)

Figure 5 – Folders shown on Tony's Favourites Bar

Adding folders to the Favourites Bar has been around since the days of Microsoft Internet Explorer, but is a feature Tony has only been using for the last 12 months when his favourites became more difficult to find. Replacing individual bookmarks or favourites with folders is available in other Chromium browsers (Chrome, Opera etc.) and also in Firefox.

The default setting in Microsoft Edge is to have the Favourites Bar displayed. For installations where this isn't the case, Tony showed how to make the Favourites Bar visible. This is done by clicking on the 3 dots at the top right corner of Edge and select "Settings". When the settings page opens select "Appearance" and against "Show favourites Bar" select "Always". The Favourites Bar will now be visible.

To add a folder to the Favourites bar, right click on the Favourites Bar and select "Add Folder" from the dialogue box that opens. Refer Figure 6. Next name the folder and click "Save". A minor disadvantage using folders is the folder icon cannot be changed. Whereas favourite icons generally are unique and easily recognised, multiple folders all have the same icon. Tony finds using folders far outweighs this minor disadvantage as his favourites are now more organised and easier to access.
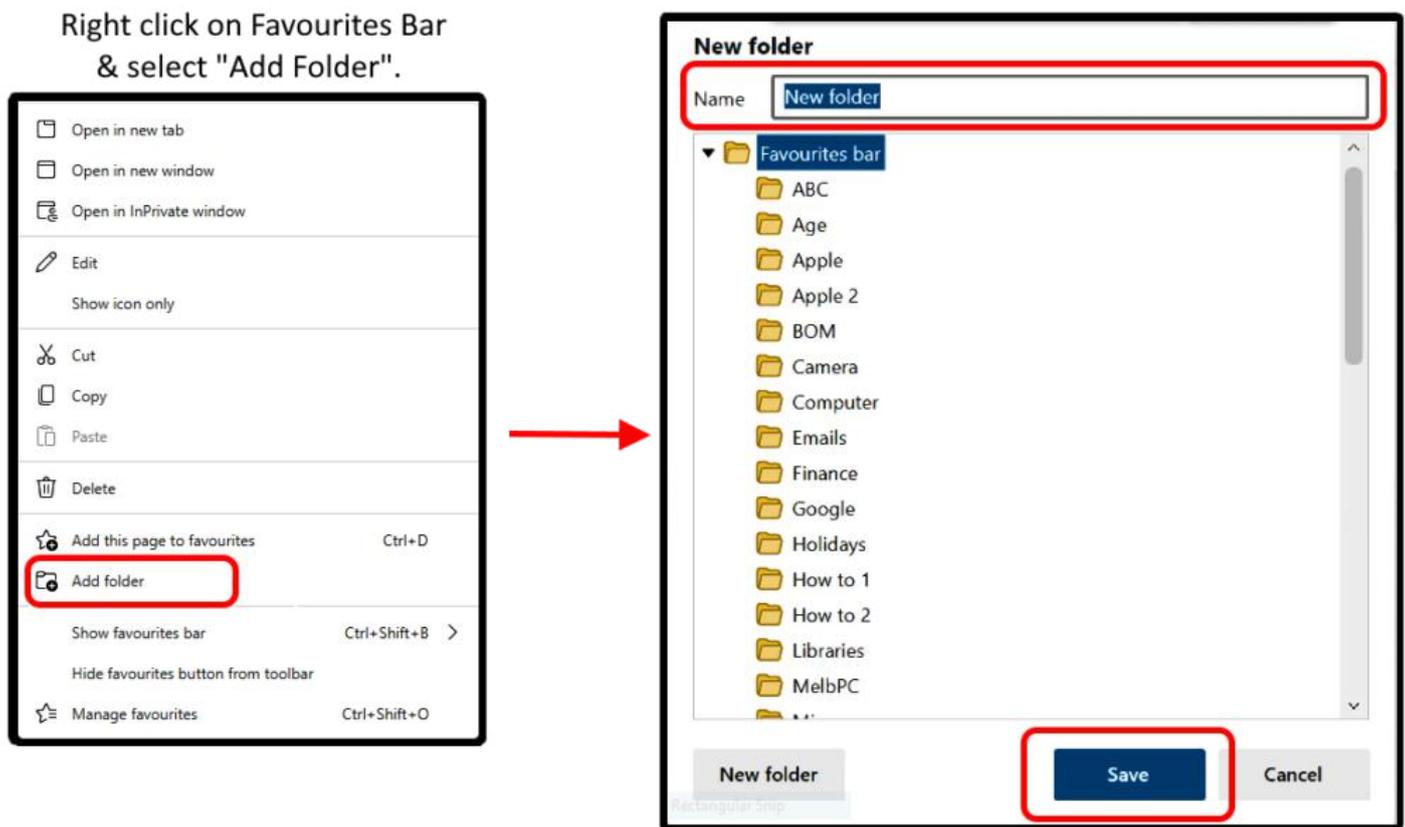
Figure 6 – "Add folder" to Favourites Bar Dialogue boxes

Favourites previously saved, either on the Favourites Bar or in the Favourites menu, can be dragged into the new folder you created on the Favourites Bar. The position of any favourites or folders on the Favourites Bar can also be dragged into your preferred position.

Adding a favourite to a folder on the Favourites Bar is the same process as saving an individual favourite. Open the website you want to add, click on the star at the right end of the URL bar and save to the required folder. Favourites within a folder can be rearranged by dragging or sorted alphabetically. Sub folders can also be created within folders on the Favourites Bar. Tony followed by demonstrating all the above actions.

Figure 7 below depicts how favourites are displayed and can be selected from Tony's BOM folder on his Favourites Bar.
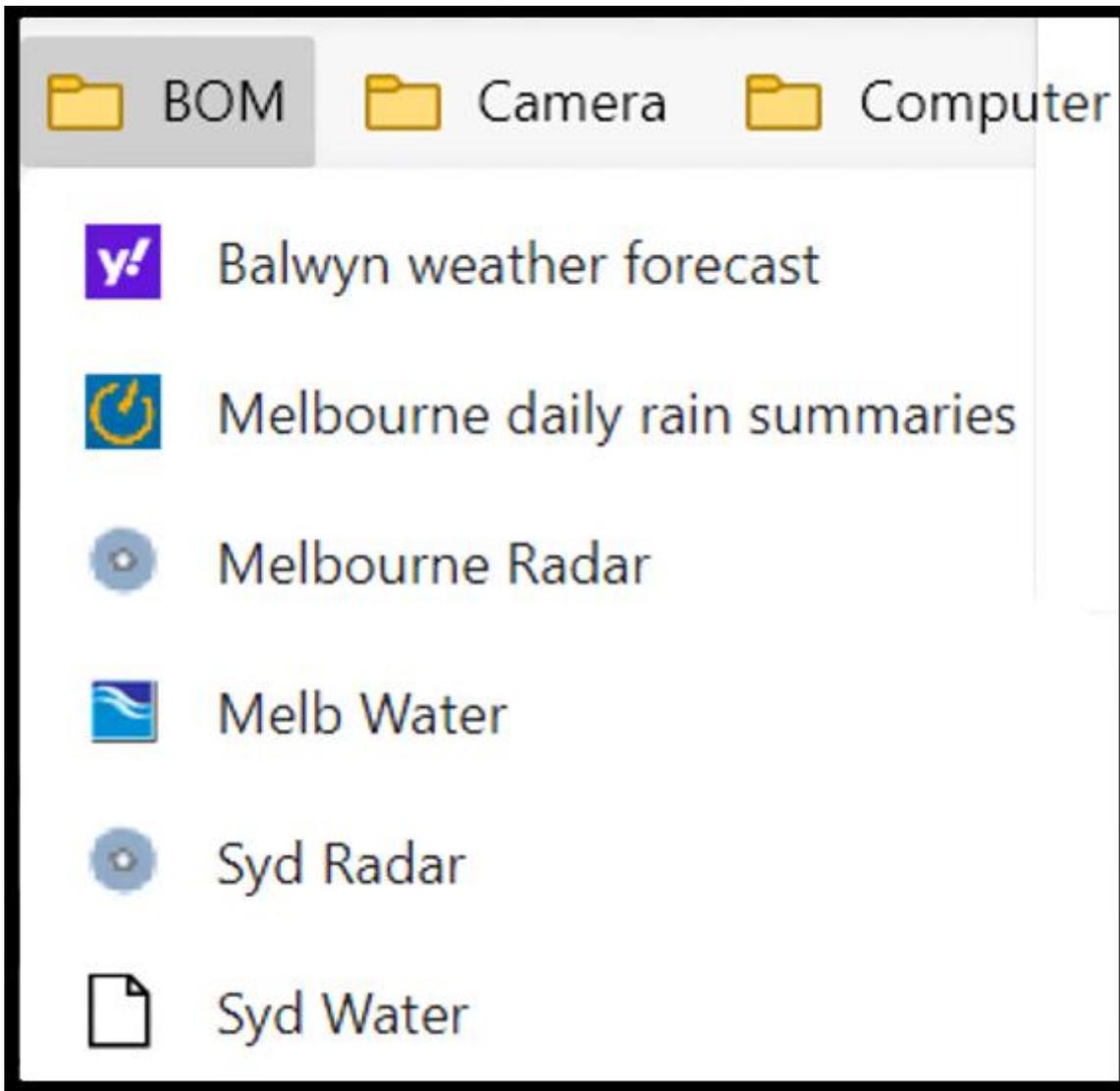
Figure 7 – BOM Folder Favourites

A tip that might be useful to others is the way Tony records the Zoom links to SIG meetings. Tony created a "MelbPC Zoom" folder on the Favourites Bar containing the favourites (Zoom links) to the various SIGs he attends via Zoom. Now there's no more searching for the email with the meeting link.

According to Tony having folders on the Favourites Bar has "revolutionised" how he uses his browser and favourites. Where previously it was difficult to find favourites from long lists that stretched down multiple pages, now favourites are more organised and easier and quicker to access.

Using the Collections Tab in Microsoft Edge
The second topic in Tony's presentation related to managing tabs in Microsoft Edge. The pre-Chromium version of Edge had a feature called "set aside", where Tony was able to hide and later restore open tabs. He found this very useful in a similar way to hiding tabs in Firefox using Simple Tab Groups.

With the arrival of the new Chromium based version of Edge (now bundled with Windows 10), the ability to hide tabs was removed. To get back some of the lost productivity from the removal of this feature, Tony demonstrated two techniques he hoped would help. The first was to set Edge to "continue where you left off". This helped by loading all the tabs you had open when Edge was last closed. This was not very successful in replacing the ability to hide tabs, but helped in a minor way. A second technique Tony adopted was to use the Task View Timeline in Windows 10. Task View enables you to scroll through a

timeline of activities you performed over the last 30 days, including web pages viewed.

Setting Edge to open where you left off and using the Task View Timeline still did not replace the ability to hide tabs. When Microsoft introduced a new feature called "Collections", that changed everything for Tony. "Collections" allows users to set aside multiple open tabs in the Chromium based Edge browser. These collections of tabs will not be lost if you close Edge or shut down the computer.

To start a new collection, left click the "Collections" icon located in top right-hand corner of the Edge browser window. Select "Start new collection" then select "Name new collection". From here you can select "Add current page" or "Add all tabs to new collection". When tabs are added to a new collection, they appear in a vertical panel on the right-hand side of the browser window, as seen in Figure 8. When wanting to open a single tab from a collection or a whole tab collection, this is performed again via the "Collections" icon. Click on the 3 dots and click "Open all". This will open the collection in a new opening of Edge.
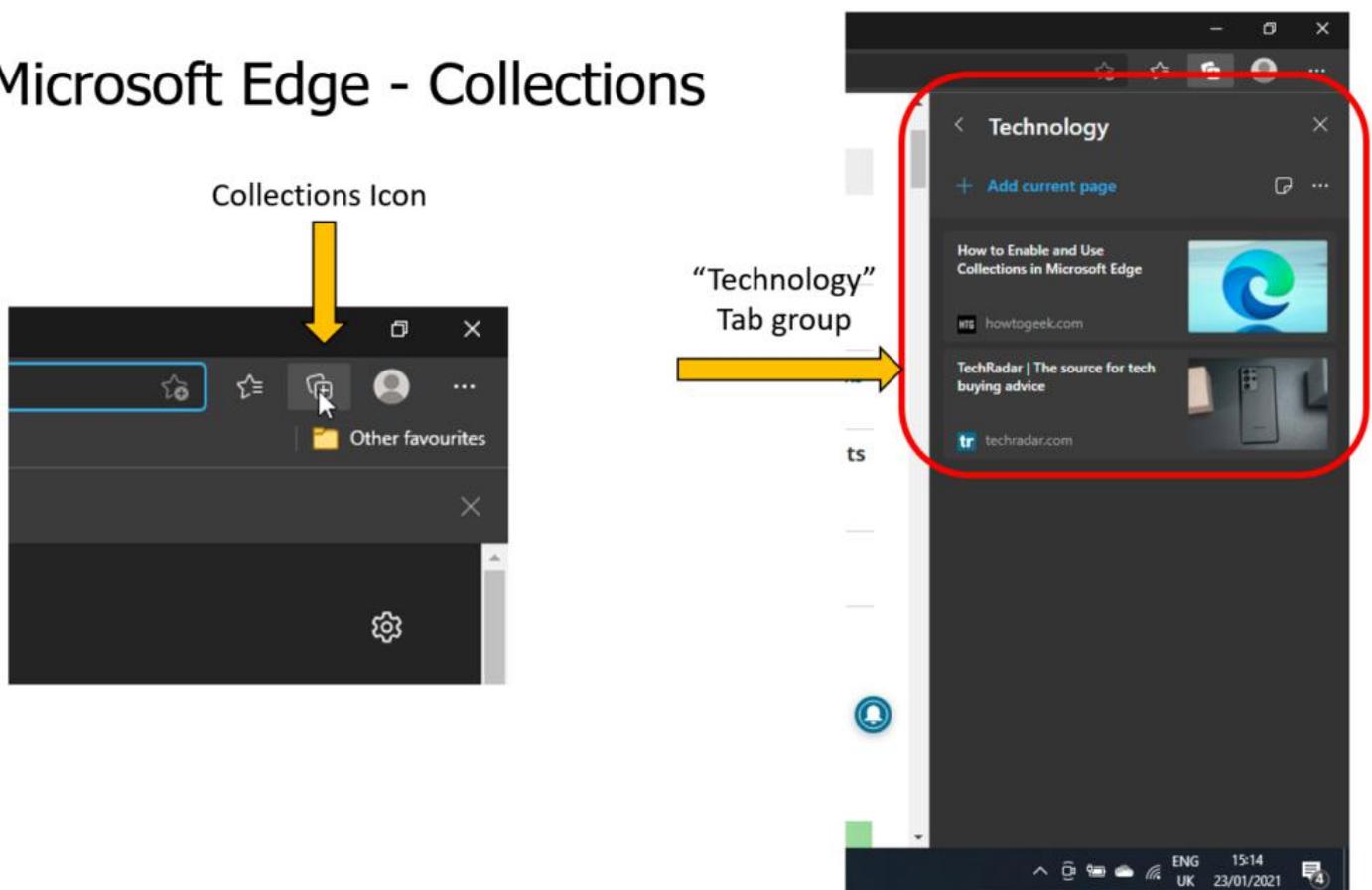

Figure 8 – Microsoft Edge, Collections

Vertical Tabs

Recently a new feature in Edge gives users the option to arrange tabs vertically on the left side of the browser window, instead of along the top of the screen. This feature is activated from an icon on the top left corner shown in Figure 9 and is located where the "set aside" icon was in the pre-Chromium-based version of Edge.
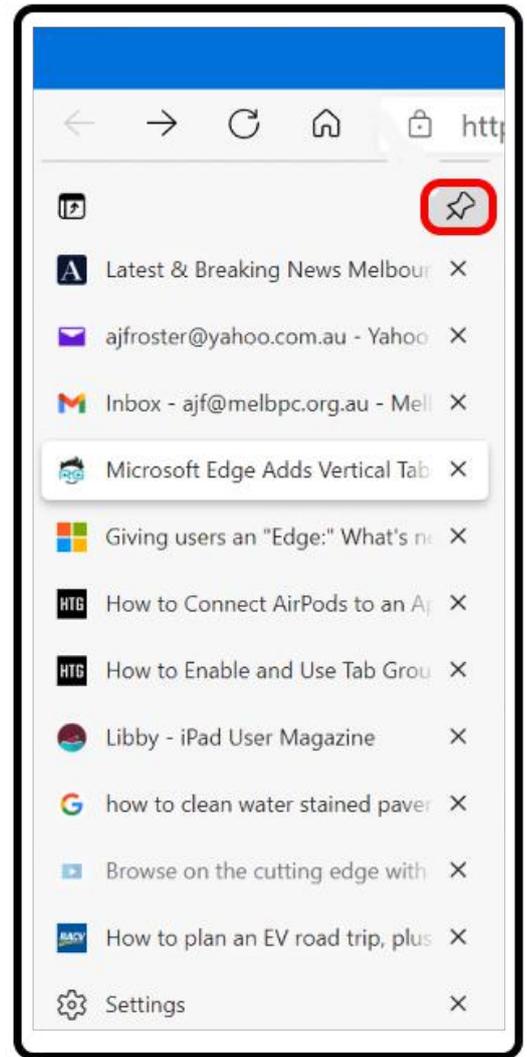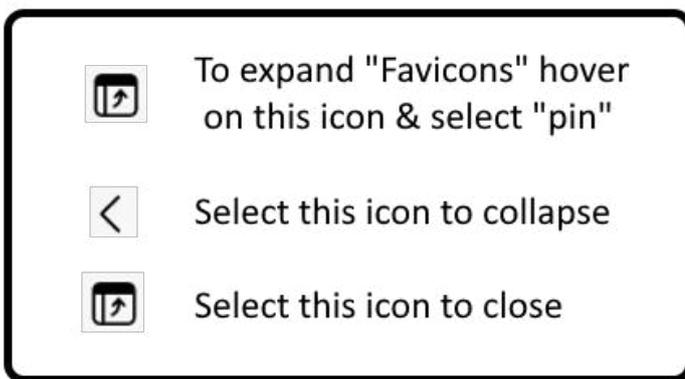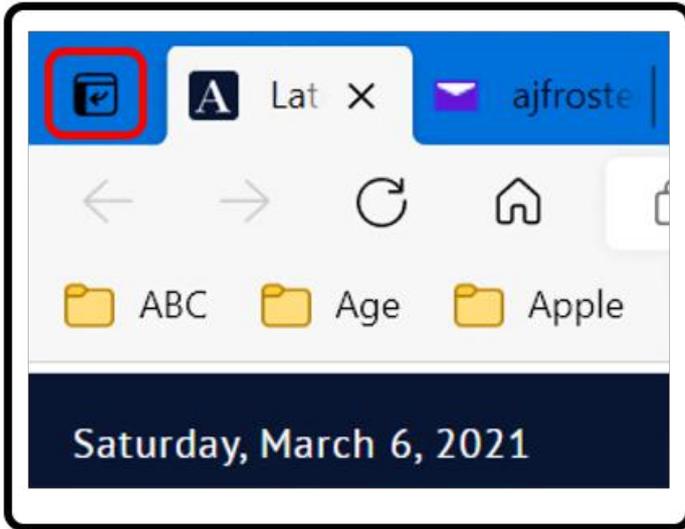
Figure 9 – "Turn on vertical tabs" icons   Figure 10 – Pin tabs vertically

When selecting vertical tabs, the panel that opens is shown in Figure 10. This panel displays vertical icons for each webpage, along with a brief description of the webpage. The panel can be pinned permanently or collapsed as required. As this is a very recent Edge feature, Tony went on to show how Edge can be updated to the latest version. To conclude, Tony gave a live presentation showing both how to set up a new collection and to display vertical tabs.

At last month's Zoom meeting Dave Botherway discussed the future format of East SIG Meetings for the current year. A poll was taken at that meeting, with around two-thirds preferring Zoom meetings over COVID-19 restricted face to face meetings. The situation has changed somewhat with the likelihood of Whitehorse Council easing their COVID-19 requirements for meetings, a successful test of Breakout Rooms and current testing of hybrid meetings. To gauge the feeling of members, the committee felt it needed to run an updated poll. A Zoom poll titled "What is your preferred meeting format and why?" was run by Dave, with Zoom again being the preferred option.

The meeting concluded with informal discussions between audience members. Items from the meeting and audio quality issues were the major topics discussed.

Yammer Highlights March 2021

Dennis Parsons

Windows 10

Merv, our loud and proud purple dinosaur (if you see his Yammer profile pic you'll understand), has been on a rather steep learning curve with using a new Nokia C3 Android phone as a 4G hotspot for his Win10 laptop. He had been using an old Lumia Windows Phone which was only 3G capable and tethered by a USB cable.

His previous 3G connection had been so slow that it appears Windows had never managed to update so the first thing that happened was the 4G connection got bogged down with a big download, which inspired Merv to discover how to set a connection as metered or consume his entire monthly data allocation in an afternoon. He was briefly sidelined by looking for a "cellular" connection because he was, after all, using a mobile phone but we explained his laptop was using a WiFi connection to the phone hotspot, so that's what had to be set as metered.

<https://www.yammer.com/melbpc.org.au/#/Threads/show?threadId=1156822719045632>

Some users worry about Windows updates being flawed and would prefer to delay them for a bit so any bugs get ironed out. While this can be achieved by setting the connection as "metered" it is not without a downside or two – OneDrive will no longer automatically synchronise files and it won't prevent critical updates being downloaded.

The reality is problematic updates aren't that common and most users don't have the knowledge to judge whether an update will affect them or not, nor when it's safe to apply. Yes, you may be affected one day but there's an excellent chance you never will be.

Fair enough to restrict downloads if you have a connection with a limited amount of data, in which case make sure you regularly avail yourself of a fast unlimited connection to download updates. Otherwise ignore the FUD (fear, uncertainty and doubt) that is the stock in trade of some writers and let your system download the updates when offered.

<https://www.yammer.com/melbpc.org.au/#/Threads/show?threadId=1160425852813312>

Linux Chat

Any operating system can be more than a little daunting if you have to venture from the comfortable point and click GUI world into the hunt and peck world of the command line to repair a broken system – it's unfamiliar and you're naturally worried you might do more harm.

Frank had managed to bork the filesystem of his Linux Mint system while fiddling with booting from a Chromebook USB – it was failing to boot and giving error messages including "/dev/sda1 contains a file system with errors, check forced" and "The root filesystem on /dev/sda1 requires a manual fsck".

We were able to guide him through the process of using a bootable Linux USB to run Gparted to confirm the identity of the partition to work on and then run fsck to repair the filesystem with the issues. By posting screenshots Frank made it easy for us to see what was going on, so we could quickly correct any misunderstandings he had and we got him back up and running in short order.

<https://www.yammer.com/melbpc.org.au/#/Threads/show?threadId=1120911303352320>

Phones

Life wasn't meant to be easy! I'm sure Merv was thinking that while he was trying to get his 4G data connection working. This was what he had to contend with before the events described in the Windows 10 section above.

Having to deal with Android for the first time is hard enough but throw in having to troubleshoot a data connection not working makes for a really tough challenge. We made a stack of suggestions and helped him get started with using the phone, none of which helped get his data flowing though.

Several phone calls to the Kogan support line and a good deal of dogged determination finally solved the data problem – the APN details had an issue despite them appearing correct and after being guided through manually creating new settings Merv was online.

All I can say is he's persistent!

<https://www.yammer.com/melbpc.org.au/#/Threads/show?threadId=1124824342503424>