

# >PC\_Update

March 2019



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March 2019

## The newsletter of

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

## iHelp: get the help you need with your computer

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<https://www.melbpc.org.au/ihelp/ihelp-remote-support/>

## [Membership application form online](#)

**Responsibility for content in this club newsletter lies with individually named authors.**

## Monthly Meeting Live Stream

Tune in here at 7.00pm on Wed 6<sup>th</sup> March to view the Monthly Meeting live over the Internet.

Test Transmission usually commences at around 6.30pm <http://tv.melbpc.org.au>



**Please remember to always bring your membership card to meetings.**

## Editorial

# Moving forward

Welcome to another issue of PC Update. I am pleased to note that there's been an uptick in the amount of member-contributed content. In addition to the faithful regulars like Paul Addis (Northern Suburbs Linux SIG), Neil Muller (East SIG), Dennis Parsons and Roger Brown (Yammer snippets), John Hall (Prez' report), Tim McQueen (books) and our librarian Clement Pratt, and our proofreaders, we have a ripper yarn from Merv Smith and a travelogue-cum-photography piece by Greg Eden. Not to mention the SIG list and Calendar which are the result of a huge amount of detailed and exacting work by John Hollow.



So PC Update is the result of contributions from many members for the benefit of all.

We also have an article "syndicated" from APCUG, but that's another story (pun intended).

But in this issue there is something additionally important: Open letters from three of our 4 executive committee members. John Hall (President) and Stewart Gruneklee (Treasurer) will not be re-nominating for Committee at the next AGM. Stephen Zuluaga will nominate to continue as Vice President. John and Stewart have served notice early in the cycle to allow plenty of time for other people to come forward who would like to continue the forward-looking work of the current committee.

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## Cover photo

# Photo competition winner

*David Stonier-Gibson*

**Back in September I ran a small item at the back of the magazine about the APCUG photo contest. This item I am putting at the front!**

The challenge was taken up by our very own George Skarbek, and he won! First prize with his photo "Meerkat on guard". The picture was taken at the zoo.

George tells me: "It was taken with a Sony RX10 IV, hand-held. ISO 400, 1/250 sec, F5.5 shooting on Aperture

priority (I shoot about 95% of photos in Aperture priority). The focal length was 370mm. The image stabilisation on this camera is excellent."

***Well done, George!***



## A good yarn (but true)

# The Button

*Merv Smith*

There was talk on Yammer the other day of how cars used to have little arms as a signalling device for turning. They remind me of when I was travelling and was working nearly 41 years ago in Alice Springs at the old Stuart Arms pub. I worked out the back in the drive-in bottle shop. This was an experience on its own. The bottle shop was basically a cage with a little trap door hole in the front drive way. The drivers would have to get out of the car to order and pick up the grog. All I did was serve and take the money. We were open until 11:00pm at night. A lot of walk-past trade was also done.

I was instructed that if I was ever in need of "assistance" (code for Bouncers), which was always possible but rarely seen, I had a little button under the front counter. I only had to push it and a little arm like the ones used in the old cars would drop down from a wooden box up in the corner in the office to send the message assistance needed where I was working on my own.



*Photographer Peter Forrest, Peter Forrest Collection, Northern Territory Library*

Things were always interesting. Brawls would occur in front of me safely ensconced in my cage. Police would arrive, paddy wagons would be filled and roar off into the night. They would also come by and have a chat or tell customers to go home etc. They ran a tight ship.

One night I was working away when this cowboy (station hand) obviously from way outback, having had his fill in the bar, wanted his take home carton of VB. And he didn't want to pay for it. Well that wasn't gonna happen on my watch! So a very animated argument took place. I soon realised that this young buck had probably fallen off his horse one time too many.

Well he done his top and to my utmost surprise he managed to somehow squeeze through the little space that the cartons would be passed through. The rest of the place was cage!

There was now two in this cage when there is supposed to be only one! Me!!

I had stepped back in disbelief that this was occurring and wanting to put some space in between me and

him.

This I thought was my chance, if I could get near it, to get to push the "panic reinforcements requested" button. Which was sort of difficult at this moment in time, as this rampaging lunatic was on one side of a display stand next to the button while I was on the other side wanting to get where he was

Singing out was useless. It was a quiet night - no coppers to be seen. Never is when you want them.

Well, so we started to dance around this display stand in the middle of the cage. He moved around one way while I went the other. It started slowly as he progressed to try

and catch me, and I was moving around towards my signal button for reinforcements. Well I finally got to the side of the button and I pushed it. But he wasn't aware of any of this secret weapon stuff and was still threatening to do me serious harm. So after I pushed it, onwards we went, around the display him on one side, me on the other trying to quieten him down, but he was not having any of it. Then the dance started to quicken up. Around and around we went, each time me pressing this button wondering why no cavalry was arriving. I was pressing it harder and harder each time I rushed passed the damn button.

Eventually, without the reinforcements arriving and much to my relief, this angry cowboy in a flash slipped out through the little cage slot like he was made of jelly and was off.

Still no reinforcements. I was very p@\*\*ed off about that.

After closing that night. I went into the main bar to demand an explanation.

The pub was managed by a tough old hand.

I explained what had happened re our dance out the back. I started to describe how I pressed the button and asked what happened to the reinforcements that were meant to come to my rescue.

He started to laugh. I was really trying to see the funny side, but it eluded me. He explained the arm that drops down was in his office. Well I knew that. He then explained that to keep the arm down *I had to keep pressure on the button!*

He laughingly described how the little arm would have been going down THEN UP each time I pressed the button, so somebody had to see it down at the time I pressed it to know anything was amiss.

Nobody saw it, thus no assistance ever came.

Never did like those little arms again. :-)

Alice was an interesting place to live and work but I have no intentions of returning!

---

## Tiny computers

# The Raspberry Pi

*Dick Maybach*

**I introduced the Arduino last month. This month I'll do the same for the Raspberry Pi. Although the two are both small, inexpensive, single-board devices designed to aid people to learn computer technology, they provide much different experiences. Using the Arduino is like visiting one of our national parks; while you will learn new things, you stay in a familiar environment. In particular, you work on your home computer using your present operating system. Using the Pi is more like touring a foreign country on your own; you are in a new environment with much to learn to become comfortable. In particular, you are using Linux on a completely new PC, and rather than just using applications, much of the time you will be configuring the system, often from the command line. While the rewards of mastering the Pi are greater, so is the effort required to achieve them.**

The Raspberry Pi is a single-board computer requiring only a micro SD storage card, display, keyboard, and mouse for a complete desktop system. It normally runs under Linux, and the great majority of applications and activity are based on this operating system. (A smart-phone-like version of Windows has recently become available for



it, <https://developer.microsoft.com/en-us/windows/iot>. Like Linux, it is free, but is far less capable than either Linux or Windows 10 and has far fewer applications and much less activity. However, the download is free, so experimenting with it costs nothing. When you enter the Raspberry Pi world, you go back in time to the PC scene of

the 1980s. Instead of buying a complete computer, you get parts or kits and build what you want. Those who enjoyed that earlier time will be impressed with how much cheaper, smaller, and more capable the results are. The Pi is a complete computer with network access and applications that include

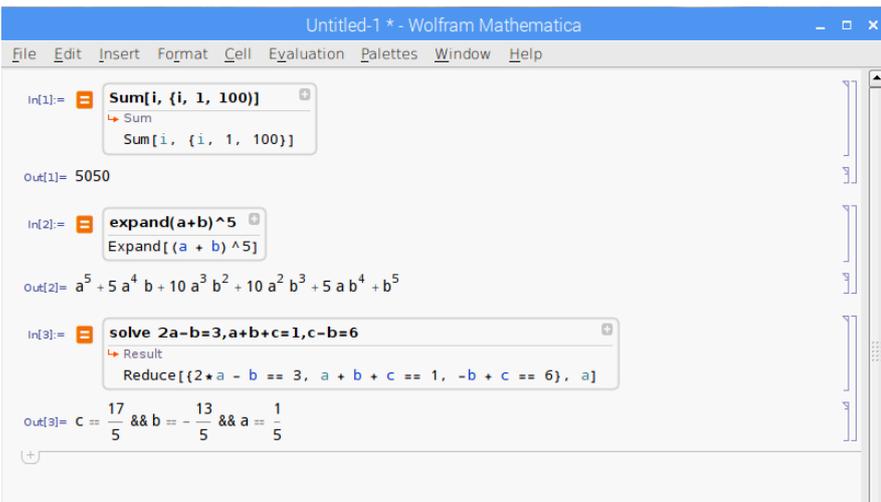
office suites, complex mathematical analysis, graphics, and software design, and you can do anything with it that you now do on your PC. However, it's much slower, so such tasks as complex photographic manipulation aren't practical.

The Pi project began February 2012 with a single model, but in the years since, has evolved into a family, both from the original organisation and independents. The Raspberry Pi organisation produces the following models.

```
login as: pi
pi@pi-serve:~$ ls -l
total 40
drwxr-xr-x 2 pi pi 4096 May 27 07:40 Desktop
drwxr-xr-x 6 pi pi 4096 Oct 2 22:23 Documents
drwxr-xr-x 2 pi pi 4096 Jul 3 18:00 Downloads
drwxr-xr-x 2 pi pi 4096 Jun 1 21:46 Music
drwxr-xr-x 4 pi pi 4096 Oct 2 14:27 oldconfigfiles
drwxr-xr-x 2 pi pi 4096 Jun 1 21:46 Pictures
drwxr-xr-x 2 pi pi 4096 Jun 1 21:46 Public
drwxr-xr-x 2 pi pi 4096 May 27 07:40 python_games
drwxr-xr-x 2 pi pi 4096 Jun 1 21:46 Templates
drwxr-xr-x 2 pi pi 4096 Jun 1 21:46 Videos
pi@pi-serve:~$ ls /
bin boot dev etc home lib lost+found media mnt opt proc root run sbin srv sys usr var
pi@pi-serve:~$
```

### Controlling a Pi Over a Network Using SSH

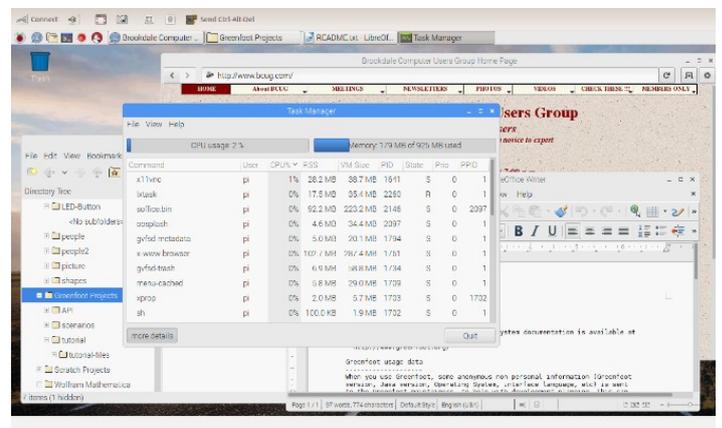
- The Pi Zero is the smallest lightest and cheapest. It's not suitable for use as a PC, but as a component. It features small size and low power consumption, but lacks the interface ports of the other models.
- The Pi 1 A+ is also intended for use as a component, although unlike the Zero it does have a full-sized USB and a HDMI port.
- The Pi 1 B+ includes several ports, including four USB, an HDMI, an Ethernet, and a multi-pin general-purpose one. This can function as a PC, although those below are considerably faster. It's been used for media centres, robotics, information displays, and in the International Space Station.
- The Pi 2 is similar to the 1 B+, but has a faster CPU. It's been used as a desktop PC, media center, web server, and gaming emulator.



*Wolfram Mathematica in action: calculating a sum of integers, expanding an expression, and solving a set of three algebraic equations. There is much more to this tool, including plotting and Calculus.*

- The Pi 3 is currently the most capable of the family, with the fastest clock speed, the most RAM, the best all-round feature set, including Wi-Fi and Bluetooth. It does consume more power, but it does make a credible PC, although one that is slower than current standards.

When you begin using a Raspberry Pi, you will need to equip it with a mouse, keyboard, and display, and this is surely how you should begin. Alternatively, you could connect it to your network and operate from your PC, which means the Pi doesn't need a display, keyboard, or mouse. You control it either in command-line mode using the secure shell protocol (SSH) or using a remote desktop application to access the graphical interface. My experience is that getting these set up requires some experimentation, so you should wait until you become comfortable with the Pi before you try either.



### Controlling a Pi Over a Network via Remote Desktop.

This is a window on my desktop PC; the Pi is across the room and connected by a LAN. Screen 2 is a remote-desktop window on my desktop PC showing the Pi's graphical interface, with three open applications, Web browser, file manager, task manager, and word processor. Normally, you wouldn't put this much load on such a small machine, but I did it here to make the point that it is a complete (although slow) PC.

The Raspberrian operating system, a variant of Linux, includes the symbolic mathematics program Wolfram Mathematica

**The author: Dick Maybach is a member of Brookdale Computer Users' Group, New Jersey, a fellow member club of APCUG. This article was first published in the September 2017 issue of BUG Bytes**

## Capturing the Northern Lights

*Greg Eden*

I have always had a yearning, even as a child, to travel to the ends of the earth to see the Aurora Borealis. So in November and December 2017 I set off with my wife and two other friends to go to Norway. We spent a lot of time researching the options, the places, the costs and I also spent a lot of time reading how to photograph the aurora. As it turns out not quite enough time researching the photography, but I will get to that.

The trip was also a general holiday, and although some might balk at going to Scandinavia in the cold dark months we all embraced the opportunity. Uncrowded museums and cheaper hotels. Woo Hoo. Then there is the four hours of pale twilight that passes for daytime and twenty hours of darkness. We had all been there before for twenty four hours of light and that was easy to deal with. You simply close the curtains at 10pm and go to sleep in the dark. But the other way around really messes with the body's rhythms. When it is dark at 2.30pm by the time 7pm rolls around all you want to do is go to sleep. It took a good ten days when we got back to Melbourne to feel normal again.

We booked a coastal voyage on Hurtigruten. We booked through Bentours here in Melbourne. Hurtigruten has a fleet of ships/ferries that run up and down the Norwegian coast. They carry freight, the mail, cars and of course tourists. Think Princess of Tasmania rather than a cruise ship. We flew into Oslo with Emirates then after two days we took the train to Bergen to join the cruise. The train wends its way across snow covered mountains and is a very spectacular journey by itself. The plan was to take the boat to Kirkenes in the north of Norway, near the Russian border, then another boat back to Tromso. From Tromso we were to jump ship and hire a car to drive to Kiruna in Sweden. The plan mostly worked. This put us under the Auroral Oval for about 7 days. What is the Auroral Oval? The aurora zone or oval is, to quote Wikipedia "Most auroras occur in a band known as the "auroral zone", which is typically 3° to 6° wide in latitude and between 10° and 20° from the geomagnetic poles". Thus it is easy to see auroras in Norway as we went as far as 71° North, but much harder in Tasmania as Tasmania is a long way from the south Magnetic Pole.

Did we see the aurora? Yes we did! And it was spectacular. At times it swirled around above our heads in greens and yellows and blues and reds. We also experienced the Polar Night while sailing on the Barents Sea.

How do you photograph the aurora? That is more complex. You cannot just point a phone at the sky. You need a long exposure and high ISO settings to capture a good shot. We chose to do most of our viewing from a boat. A moving boat. How do you stop the stars from smearing in the photos? I had a cheap-ish mirrorless camera with in-

terchangeable lenses. A Canon M10. I purchased an F2.0 22mm prime lens and practised at home using manual settings and photographing stars. I was ready. I also purchased a tripod. The lens uses focus by wire when you



manually focus, not the old style focus ring. Electronic focus without any range markings. Turn the focus ring until the stars are sharp and it is focussed on infinity. Great no problems. Except in the dark at minus 12 degrees on a bouncing ship it is so easy to knock it out of focus without even realising. I took about 800 photos and some of them were OK. But a lot were blurry. A lot of duds for a few wins.

We left the ship and drove down the coast of Norway to Narvik thinking that was it for the aurora, unless the weather cleared on land. I checked the weather and our plan had a big hole in it. The road to Kiruna was now under two metres of snow. We had to return the car and book the train. Then at the last moment the train was cancelled due to the weather in Sweden. We were stuck in Narvik so I used an app on my phone to book us into the Scandic Narvik. Around 10pm the sky cleared and we had a spectacular auroral show in a place where we would never have planned to go. Our hotel room was on the eighth floor with large windows. We could just sit and watch the show in the warmth. And go to the rooftop bar for a few more shots.

That was it, we then went to Sweden on the Arctic Circle Train, another spectacular journey across the snow covered arctic wilderness. The rest of the holiday was non auroral.

I had a sense of accomplishment, but also a sense that I could have done better. It gnawed at my subconscious. Then my 23 year old daughter said that she would really

really like to go and see the aurora and her uni year ended at the end of October. My wife had already used up her holidays for the year and was not in a position to go again. I am retired, so why not? This time I was going to be better prepared. The journey was planned for November 2018. The Canon M10 did the right thing and up and died. The Norse gods were taking care of me! We booked an Internet airfare through "I know the pilot" which then sent us to Flyfare. We had a return airfare with Qatar and KLM to Amsterdam for \$979, with a free leg Amsterdam to Copenhagen. Then I booked a Hurtigruten trip directly on the Norwegian site (using Google Translate) and knocked \$400 each off the cost of booking here through an agent. It was a little tricky as Hurtigruten always assumed we were Norwegian. Lucky the world has Google Translate! A few more cheap flights were purchased with SAS for linking flights. My daughter had only recently returned from a stint at

Sonys before and had spare batteries and an external charger already. Cold flattens batteries fast so a few spares are essential. After reading a lot of posts on various Facebook groups I purchased a Samyang F2.0/12mm wide angle fully manual lens. Proper old style manual focus with a scale. A cheap Sony push button wired remote was also purchased to avoid jerking the camera when the shutter button was pressed. I practised by taking Milky Way shots. I then sat and pondered my shots from the first voyage. To avoid star smearing you had to think about the geometry. By taking photos in front of the ship, or behind, you can reduce smearing because you are going directly to or from the stars in a straight line, not across the stars as you do if you photograph from the side. The auroras in Norway are bright so a 1 sec exposure is enough. In Tasmania you need 15 secs. I found through trial and error that an ISO setting of 2500 was a good balance between compensat-



The University of Groningen in The Netherlands so a visit there was part of the journey. Plus Iceland with Iceland Air and a few days in Stockholm, Copenhagen and Aarhus. Everything booked on the net using direct airline bookings, plus Booking.com and my Scandic Hotel membership.

First step was to get a new camera. I was not about to spend \$2000 for a camera to use for a few nights. I wanted a camera that would do what I wanted and a camera I will continue to use. I decided to buy a Sony a6000. I have had

ing for the dark verses introducing noise into the photo. This trip was a little different and we only had four days under the auroral oval. Two of those days were wasted due to the weather, but for one and a half nights the heavens put on a speccy show. This time the majority of the shots were in focus and the stars sharp. Building on the knowledge from the first trip, plus better gear and unsurprisingly I had much better results. Also the Sony is a way better camera. I also have an old Sony a5100 which I handed to my daughter. I purchased her a \$95 "7artisans"

manual lens. F1.8/25mm wide angle, made in China and very cheap, plus a \$25 tripod. I explained all I knew about auroras, stars and so on. She managed to take hundreds of very good shots and now she reckons she is a way better aurora photographer than me, especially as she had cheap hand me down equipment. We went to Iceland and failed to see the sky at all. It rained the whole time. We did see many terrestrial wonders, but no land based auroras.



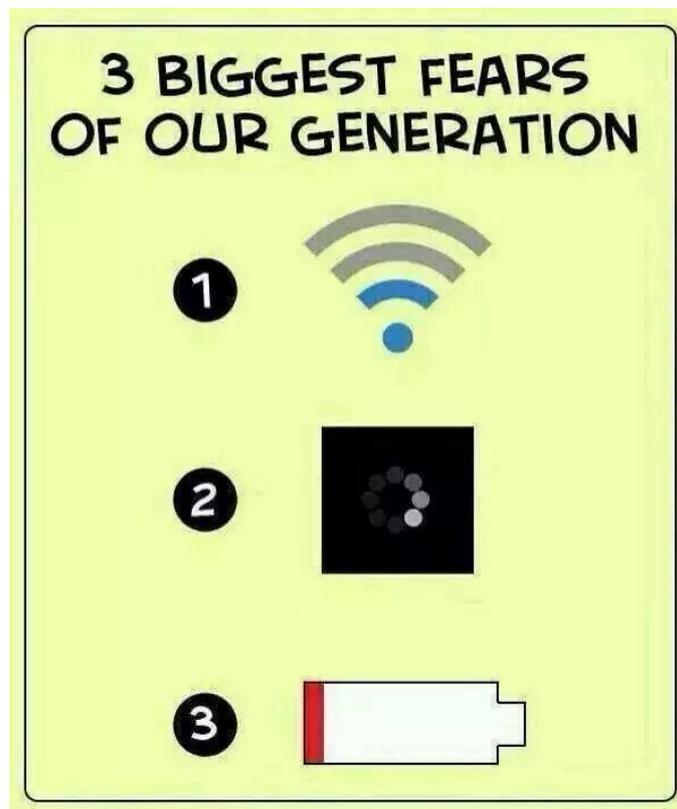
*Taken on a mobile phone, an LG-G6!*

I could go on about processing the RAW camera files using

a Linux computer and Raw-therapy plus The GIMP software but that is probably boring to most of you.

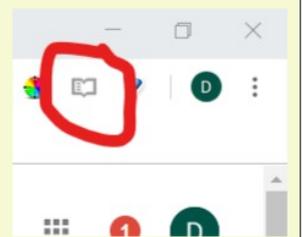
BUT - I still have not had a proper opportunity to take aurora photos on dry land. Brighter shots using longer exposures. Settings that are impossible on a moving ship. My wife wants to go to Iceland. Hmm, here we go again. I will try for a week in Tromso later this year or early next. I

have all the warm clothes, the camera gear and the practice. It would seem a waste not to go again!



## Browser tip: reader view

Sick of flashing buttons, noisy ads and annoying pop-up in your browser? Most major browser now have a "Reader View". I have it in Chrome by way of a plug-in. [A quick google](#) reveals that FireFox and Edge have it as well. When you invoke it the page you are on gets reformatted to a simple, uncluttered text you can just read without distractions.



## March Monthly meeting

The next monthly meeting will be held on Wednesday 6<sup>th</sup> March, 7pm at Moorabbin. We have an interesting guest speaker lined up for you, as well as one of our own members with a DIY project that should appeal to many.

### Guest topic: William Tutte

Professor Graham Farr will tell us the fascinating story of William (Bill) Tutte (1917-2002).

Tutte became a research mathematician while still an undergraduate at Cambridge in the late 1930s, broke the toughest Nazi codes while at Bletchley Park in the Second World War, and became one of the greatest mathematicians of the 20th century. His wartime work sparked the secret construction of Colossus, one of the first-ever computers, and saved countless lives. After the war, he led the development of the mathematics of networks, known as Graph Theory. His work was usually inspired by pure curiosity or entertaining puzzles, but has been applied in domains as diverse as electrical circuits, statistical physics and information visualisation. This talk tells the story of Tutte's life, mathematics and code-breaking to a broad audience.

**Graham Farr** is a Professor in the Faculty of Information Technology, Monash University. He is co-convenor of the Discrete Mathematics Research Group and leads Computer History Tours of Melbourne, a day-long tour that combines walking and tram travel to visit a selection of places in Melbourne with links to the history of computing



### Meeting agenda

6:45 Registration with new trial QR system. Buy your raffle tickets!

- 7:00 *sharp*. Meeting start, MC is Peter Bacon
- President's report, John Hall
- Guest speaker Graham Farr;
- Social break. We are continuing the "cafe style" layout;
- Raffle;
- John Swale: Special announcement about committee

- Q and A with George Skarbek;
- Former club treasurer and secretary Geoff Keenan will tell us about the NAS (Network Attached Storage) he has built at home, which provides 18TB of instantly available space to the devices in his house;
- *What's New?* with George Skarbek. An interesting roundup of computer and technology news from around the world;
- 9:30: Close.

**Please remember your membership card or a photo of the QR code on your phone**



Don't forget, directly after the meeting WAFFLE SIG at Fong's Chinese restaurant in Bentleigh. This is a totally social gathering where you can enjoy a snack, a full meal or just a cup of coffee. Sketch maps at the meeting or use [Google Maps](#).

# Open letters from Committee executives

The following two open letters have been received from President John Hall and Vice President Stephen Zuluaga (one letter) and from Treasurer Stewart Gruneklee. They are important in as much as they affect the future of our club going forward. In summary, John and Stewart do not intend to stand for Committee next year, and Steve will nominate for Vice President. That means we need to identify suitable successors to carry on the work of the committee.

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## A changing team with a steady vision

*Melbourne PC User Group was founded in 1984 with a view to help members get value out of the power of personal computing. In 2019, personal computing has evolved to include many different forms of technology. Our Club is still focussed on helping members get value from their computer technology, no matter how novel that technology might have seemed when looked at through the lens of the club's early days. What "computer technology" is will differ for each member, but our joint focus toward being a community of enthusiasts whose pursuits are enhanced by computers is the same. The way we use computers has changed dramatically, but despite all these changes, our focus on building and maintaining a strong and prosperous club has not changed from when Lloyd Borrett founded our club.*

*We bring different skill sets, experience, approaches and attributes to our work in the club. Despite these differences, we share the same goals, to help our club stay healthy in terms of the governance of its management and to be able to chase and build upon the blue sky ideas that can inspire our existing and future members.*

*In the February 2019 committee meeting, John Hall announced that at the end of his term he would not be continuing with his role as President or within the committee. He has long wanted to spend more time with his passion in producing video and would love to get back into working on exciting new projects with his Video SIG.*

*In the same meeting, Stephen Zuluaga indicated that he would be glad to offer his time and input as Vice President for a subsequent term.*

*Both of us have a genuine keenness to help the club identify who the next President might be so that working relationships can be developed and ultimately, the club can undertake a smooth transition of key leadership roles.*

*The club has in past years had some significant challenges to its health and stability, the work led by John Hall is an important reason why our club is as healthy today as it is.*

*There are also many others who have put in significant efforts to help clean up problems within the club and those who wish to help lead the club forward from this point have a much easier job in being able to focus on positive growth activities thanks to the work of recent club leadership.*

*This joint letter is our invitation to you, the club members to help us start a conversation about what we can do next to help build our club into an even stronger position with even better sustainability than it has today.*

*We must acknowledge that there are many different views held about the committee and its current and past members. Whatever those views are, we encourage anyone who has an idea or vision of what the club or the committee needs to do or be, to come forward, help us understand that idea, how it can help the club, then help us make it into reality.*

*If you or another member you know of has any interest to work with us, in any capacity, please let us know. We want to take this invitation to you all, publicly because we believe in the value of being transparent, and publicly invite you to discuss how we might be able to work together.*

*Regards,*

*John Hall & Stephen Zuluaga*

**Stewart's letter on the next page ...**

## A letter from the Treasurer

*The treasurer's job over the past year and four months has been for me a rewarding one as I retired from a business background and the role allowed me to exercise some of those previous skills and to also learn some new skills. However, like all good things it cannot continue because I plan to do more caravan travels in 2020 and that would not be compatible with keeping the treasurer's role rolling along. This message then is about seeking a replacement treasurer for the 2020 year. To that end I can report that when I first took up the role in November 2017 we were transitioning from the old QuickBooks system to the newer QuickBooks Online system with a host of attendant issues. These issues have all been solved and the newer system is accurate, efficient and a pleasure to use. It also has a reduced number of accounts in use and the BAS reporting is very simple.*

*The efforts of many of our members to improve the club particularly through marketing, new SIGs and the implementation of the CiviCRM membership management system, has had a positive flow-on effect to our financial position. This means that after many years of consistently large operating losses, we are hovering near a break-even point. Further, to aid a new treasurer, a comprehensive set of procedures of all things related to our bookkeeping has been produced and I will be available for up to five months to assist a new treasurer to become familiar with the duties. The actual time spent on the job equates to about 2-5 days per month depending on circumstances. The only prerequisites are an understanding of bookkeeping or basic accounting, scrupulous honesty and an enjoyment of life. If you think you could fill the role, I am happy to answer any questions you may have.*

Regards,

Stewart Gruneklee

## Library Additions

*Clemens Pratt*

**Since my last report, I have acquired the following ebooks, copies of which have been placed in the Library folder on PC1 in the internet lounge at Moorabbin. The full list of ebooks we have collected is placed at the bottom of the BOOK LIST also in the Library folder, and also on the website.**

Direct access to ebooks from the library page of our website is no longer available. Any member who has difficulty visiting the club premises in Moorabbin is welcome to email me to receive a .pdf version of any chosen title.

A Practical Introduction to 3D Game Development	2014	6,238KB	252 pages	Jaffal, Y.
Java 14 Development of applications with Java FX	2018	6,302KB	179 pages	Klausen, P.
Structured Programming with C++	2015	2,270KB	246 pages	Bäckman, K.

I have not bought any hard copy books for some time: I welcome suggestions, but I have found that few hard copy books are being published.

### eBay bargain?

[A friend in Perth sent me this - Ed]

Bought a 2TB USB3 hard drive on Ebay. It copied painfully slowly so after exploring options including changing the cable and various PC settings I reformatted it from Fat32 to NTFS. No worries all looked normal.

Then it couldn't be detected, well it was detected in the BIOS, not windows 10. Hmmm

I went to ebay and applied for a refund for a defective product. I got it within the day. I then pulled the unit apart. A lump of aluminium and some electronics to mimic a HD. Ebay have been notified.

Learned a lot about HD management including USB management!



# President's Report February 2019

*John Hall*

## *What do our Members want from our Club ?*

If you do not read Yammer regularly then you would not have seen the question that was posed by our Vice President Stephen Zuluaga – which was:-

*“What will we tackle next after our current round of projects in the club are complete?”*

(To see the full conversation please click on the following link – you may need to sign in to our Members area first):-

<https://www.yammer.com/melbpc.org.au/#/Threads/show?threadId=14452591157248>

Sean Clarke – who is a long serving Volunteer who looks after the Servers and other “behind the scenes” equipment at Moorabbin says in that Yammer post:-

*“I have seen more progress in getting things done In the past 2-3 years around the Club than I have in a long time. The difference made by an enlightened and functional committee has been remarkable.”*

I too am very pleased with the progress that our \*teams have made in the areas of Monthly Meeting Video Streaming, improvements in the stability of the internal Systems at Moorabbin and the recent introduction of the Bar Code scanning equipment to read the QR Codes on our Membership badges for people attending Meetings in Moorabbin.

However, the question still remains – “What do the Members who do not attend events at Moorabbin want from our Club”?

(If you do not want to sign in to Yammer to post your replies you can write to me at [President@melbpc.org.au](mailto:President@melbpc.org.au) and I promise that I will do my best to address all of your ideas).

## *Teamwork*

As some of you may be aware, I took over as the Convenor of the Video Group in 1999 – and now 20 years later – I have again taken over as Convenor of the same Video Group!!!

The reason that I took over in 1999 was because the SIG Leader Albert Vanzet was retiring, and although I had only been a Member for a short time I did not want that Group to disappear.

Now – I have taken over the Group from last year's SIG Leader – Richard Balsillie – for the same reason.

This highlights a major problem that we have in our Club – the dependency on one or two individuals (like Sean Clarke) to support the needs of our members and when that Member “retires” there is no-one to carry on their good work

Fortunately, when setting up the new Video Group I have been able to assemble a team of very experienced Videographers to run that SIG whilst I am on holiday etc. and to help spread the workload that is associated with preparing demonstrations etc.

Similarly, within our Committee – I am very fortunate to have a most capable Vice-President Stephen Zuluaga who deputised for me at last month's Main Monthly Meeting and did a great job in my absence.



*The video group meeting was good, with 35 attendees registered on the new QR registration system*

I think that we need to establish many more TEAMS – especially in Moorabbin – and would like to hear from anyone who is interested in popular Subjects such as Genealogy or Photography who would like to become a Member of such a Team in Moorabbin.

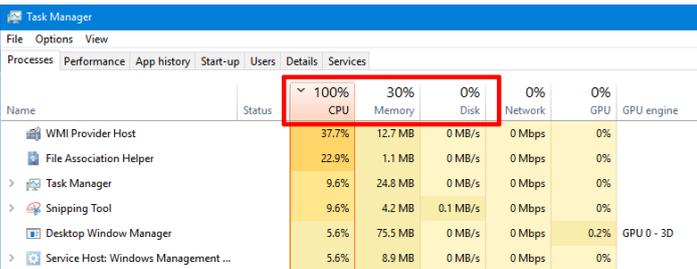
We have certainly made great improvements to our Club over the past 2-3 years – let us try to work together to make I even better in the future.

Looking forward to hearing your ideas.

Paul Woolard welcomed members back after the Christmas break for the first meeting of East SIG for 2019. The February meeting then commenced with George Skarbek conducting Q&A.

Q: All the icons on my Windows 10 desktop have disappeared. I found they still existed in a folder called Desktop so how can I get them back?

A: It would appear that you have clicked on a second desktop. Select Desktop 1 in “Task View” and all your icons should return.



Name	Status	100% CPU	30% Memory	0% Disk	0% Network	0% GPU	GPU engine
WMI Provider Host		37.7%	12.7 MB	0 MB/s	0 Mbps	0%	
File Association Helper		22.9%	1.1 MB	0 MB/s	0 Mbps	0%	
Task Manager		9.6%	24.8 MB	0 MB/s	0 Mbps	0%	
Snipping Tool		9.6%	4.2 MB	0.1 MB/s	0 Mbps	0%	
Desktop Window Manager		5.6%	75.5 MB	0 MB/s	0 Mbps	0.2%	GPU 0 - 3D
Service Host: Windows Management ...		5.6%	8.9 MB	0 MB/s	0 Mbps	0%	

### Task Manager Processes tab

Q: A friend uses “Messenger” when communicating back to Australia while overseas. Is this safe and how do you use it?

A: Messenger was a MicroSoft product but is now part of Facebook. I have no need for Messenger so I don’t use it. I use Skype which offers both a free and a paid version. In some cases your telco may be more economical than the paid version of Skype, so it’s worth checking if planning to use the paid version.

John Hall: To use Messenger go into Facebook and hover your mouse over the Messenger icon. I suggest you search “How to use Messenger” in YouTube to learn about the features you may need to use. Messenger is free anywhere you can get wireless.

Q: I have lost access to sound on my computer and am now using a USB sound card for sound. I notice that the cost of these USB sound card can vary from \$4 to \$400. Apart from price what is the difference between these?

A: I have tested both cheap and up market USB sound cards. To my ears the differences are hard to differentiate between a medium priced and high end sound card with average speakers. A friend purchased a \$12 sound card and is very happy with it. I would recommend not spending big on a USB sound card as the cheap ones can be very good.

Q: I worry about my privacy and the safety of my passwords when using Messenger on my mobile phone.

A: To improve safety I recommend you use different passwords. As for your privacy, it’s gone. Audience Member: I

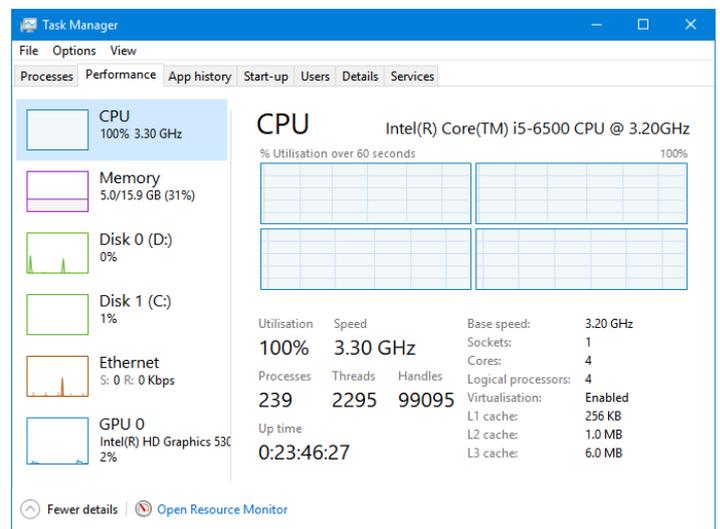
only use Messenger on my mobile phone for non-important chit chat. I use Messenger on my PC for more important calls as it can’t “follow you around”.

Following Q&A **George Skarbek** posed the question “My computer is running slowly, what can I do about it?” There are 3 main causes that can make your computer slow down.

- Running CPU intensive programs.
- Running out of system memory caused by having too many programs open at once.
- The hard disk running at 100%, most commonly caused by an antivirus program misbehaving.

To determine which of the above may be causing your computer to slow down you need to open “Task Manager”. There are various ways to open “Task manager”, but right clicking the Windows Start button and select Task manager from the list is as easy as any. The 3 areas to look at in “Task Manager” are CPU, Memory and Disk.

The next step is to click on the Performance tab to gain more detailed information on these 3 critical areas, CPU, Memory & Disk. Under the Performance tab is where the problem can usually be found.

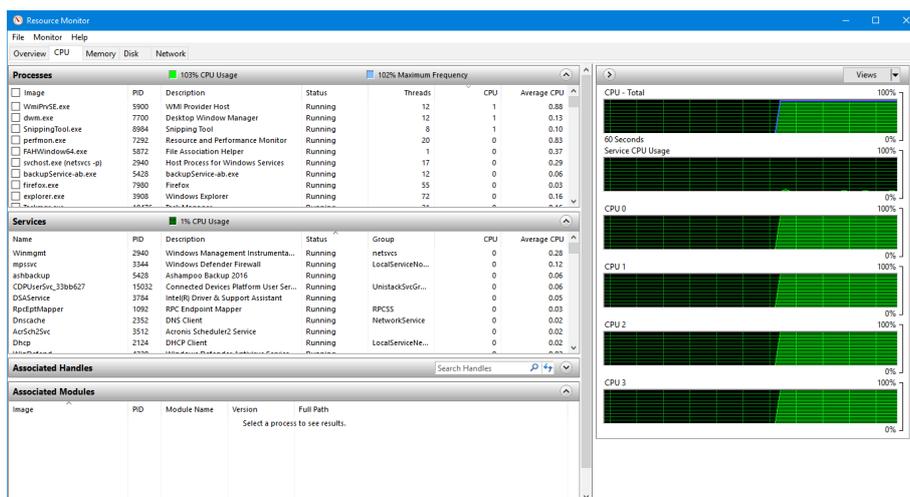


### Task Manager performance tab

In this instance the CPU is running at 100% usage. As the CPU is obviously causing the computer to slow down, the next step is to go to Resource Monitor, found by clicking the link on the bottom left of the Resource Manager performance window then look at the CPU.

In the “Resource Monitor” window above, select the CPU

tab to find the process causing the slowdown. In the screenshot WmiPrvSE.exe is causing high CPU usage. A Google search reveals many others are experiencing the same symptoms. Now that the culprit process has been discovered, further Google searches are needed to solve the issue. If the file is non-essential, right click on it and select “End Process”. The same approach applies if problems are found under the Memory or Disk tabs. In many cases a slowdown is caused by an antivirus program which has gone rogue and is scanning the whole drive, thus preventing other processes from starting.



Resource Monitor, CPU tab.

**(WMI Provider Host (WmiPrvSE.exe)** stands for Windows Management Instrumentation Provider Service. It’s an important service that applications cannot run without. If this process stops, many of the features in your PC will become useless. On top of all, you might not even receive error notifications.)

In addition to using Task Manager to fix problems, the following tips will also help speed up your computer. A program such as “DU Meter” or one of Dave’s favourites “Coolbeans”, can monitor if a large amount of data is being sent to outside sources via the internet. If this occurs the offending program needs to be identified and if necessary stopped. Such behaviour will also cause your computer to slowdown.

George also recommends and uses CCleaner on a regular basis to refresh Windows. He then uses Windows 10 tools under Settings Storage Free up Space Now, to remove from your hard drive unnecessary files, including temp files. George has found Windows will often find items CCleaner missed.

After a break, Stuart Bedford spoke on “Artificial Intelligence, Robots and the Future of Computers”. Stuart believes our generation (baby boomers and older) have an advantage over younger generations in that we know what was. Things such as phone books, pay phones, street directories, logarithmic tables, writing letters, using a dictionary, reel to reel tape, vinyl records, cassette tapes, Betamax, speaking on the phone to a human when requesting service, etc. have all but disappeared. In today’s world you can phone anywhere in the world, navigate anywhere with Google maps and find almost any information you want using the phone you carry with you. The younger generation is totally dependent on having this sort of in-

formation at their fingertips, whereas the older generation could get by without it when things break down.

As time moves on we won’t need to write, spell, read a map or learn anything. “Okay Google” will be the easy way to go, as we won’t need to remember anything. However if we don’t use our brain it will slow down and stop working.

In the middle ages the “Scribes” were the go-to people for information. Stuart believes we are now about to turn full circle due to smart phones and Google.

Today’s computers

are dumb, as they only do what’s instructed of them. Robots still need human intervention, even at a reduced level. However with artificial intelligence, the development of algorithms and machine learning developing so fast, we are now at the beginning of what is being called the 4th Industrial revolution.

Stuart then played 2 videos showing how robots have revolutionised product shipment in an Amazon warehouse and manufacturing in the car industry. A third video featured a new AI assistant called Google Duplex making phone calls to two businesses, one a hairdresser and a restaurant to make an appointment and book a reservation, show where we are headed. These videos show how computers and robots can aid humans and eliminate jobs.

Stuart believes any industries where jobs follow a set of rules are potential for AI. Manual or repetitive jobs will be the first under threat. Eventually computers will be able to review all options and select the best solution to a problem. Results will be very fast and have the knowledge of the world to base decisions on. Stuart provides an example of this where the Da Vinci machine performs a prostate operation unaided by a surgeon.

Stuart next showed a number of examples where computer generation has been used in movies to create actors that have been dead for over 20 years or change the facial features of one actor to look like another.

To conclude Stuart showed another video where a software program called Lyrebird can voice clone a person’s voice from a small sample of their voice. Donald Trump and Barak Obama were two examples given and appeared very realistic.

Stuart’s presentation has shown how things are now, where they are heading and what the future may look like.

# Northern Suburbs Linux SIG – February 2019

Paul Addis

The meeting was started with Linux News and the first item was a brief video walk-around of the first Raspberry Pi retail store. There was no indication where the store is located, but it is not likely that they are planning one for Federation Square to compete with the proposed Apple Store.

**Late news: the Raspberry Pi retail store is located on the first floor of the Grand Arcade in Cambridge, U.K.**

The second item was about kernel releases 5.0 and 4.20. The first release candidate (RC1) of Kernel 5.0 has been released. A significant item is that VFS is not supported. The kernel version 4.20.1 is also available. There are file system changes in 4.20.1. The speaker did not explain how significant they are.

There are three bugs in systemd that allow local users to get root privileges. Systemd controls most services and is used by most Linux distributions - it is a large and centralised project that is supported by Red Hat. Fixes for two of the bugs were released in mid-January, and the remaining fix just after the video was created.

```
2019-02-01 09:37:25 startup archives unpack
2019-02-01 09:37:25 upgrade libapt-pkg5.0:amd64 1.6.6ubuntu0.1 1.6.8
2019-02-01 09:37:25 status triggers-pending libc-bin:amd64 2.27-3ubuntu1
2019-02-01 09:37:25 status half-configured libapt-pkg5.0:amd64 1.6.6ubuntu0.1
2019-02-01 09:37:25 status unpacked libapt-pkg5.0:amd64 1.6.6ubuntu0.1
2019-02-01 09:37:25 status half-installed libapt-pkg5.0:amd64 1.6.6ubuntu0.1
2019-02-01 09:37:26 status half-installed libapt-pkg5.0:amd64 1.6.6ubuntu0.1
2019-02-01 09:37:26 status unpacked libapt-pkg5.0:amd64 1.6.8
2019-02-01 09:37:26 status unpacked libapt-pkg5.0:amd64 1.6.8
2019-02-01 09:37:26 startup packages configure
2019-02-01 09:37:26 configure libapt-pkg5.0:amd64 1.6.8 <none>
2019-02-01 09:37:26 status unpacked libapt-pkg5.0:amd64 1.6.8
2019-02-01 09:37:26 status half-configured libapt-pkg5.0:amd64 1.6.8
2019-02-01 09:37:26 status installed libapt-pkg5.0:amd64 1.6.8
2019-02-01 09:37:26 startup archives unpack
2019-02-01 09:37:26 upgrade libapt-inst2.0:amd64 1.6.6ubuntu0.1 1.6.8
2019-02-01 09:37:26 status half-configured libapt-inst2.0:amd64 1.6.6ubuntu0.1
2019-02-01 09:37:26 status unpacked libapt-inst2.0:amd64 1.6.6ubuntu0.1
2019-02-01 09:37:26 status half-installed libapt-inst2.0:amd64 1.6.6ubuntu0.1
2019-02-01 09:37:26 status half-installed libapt-inst2.0:amd64 1.6.6ubuntu0.1
2019-02-01 09:37:26 status unpacked libapt-inst2.0:amd64 1.6.8
2019-02-01 09:37:26 status unpacked libapt-inst2.0:amd64 1.6.8
2019-02-01 09:37:26 startup packages configure
```

Log file

Some details were given on the upcoming release of Android (version Q). They include changes to the permissions system to improve security, and support for Android on big screens and foldables. The latter change may be just in time for the release of Samsung's S10 phone series that includes a foldable device.

The forum session started with a comment about Buttercup – a new password manager that is cross-platform: Linux, Mac OS and Windows. It may be an alternative to the widely-used KeePass, and is said to be simple to use.

Gibson Research (GRC) is developing a program called SQRL – pronounced “squirrel” - to implement a “Secure Quick Reliable Login” which can supersede traditional methods of website login. The project is moving towards an initial release. Lots more information at ...

<https://www.grc.com/sqrl/sqrl.htm>

A user of Mint version 19.1 could not get Wine working.

Apparently it is a problem related to version 3 of Wine. Changing to version 4 fixes the problem.

One of our SIG members (Rob Brown) has been appointed to the Melbourne PC Users Group committee, and gave an update on what is happening at the Moorabbin office. A major focus for the committee is to get more members into the group.

The committee is very aware that a relatively small core of members do the vast majority of work needed to keep the group functioning, and they are appealing for more members to volunteer their time and skills.

At the physical level, the audio system has been upgraded and the streaming of Monthly Meetings is now working well after some earlier hiccups. The basement of the building has been transformed from a storage space to a functioning workshop, with a lathe, a mill, and functional bench workspaces.

The latest membership cards have a QR code on them, and there is project under way to scan the code at meetings. This will supersede handwritten lists, and allow a link to the membership system to check for currency of membership.

After the social break the evening's main topic was presented by David Hatton.

## Are my updates done?

Ever had the experience of coming across an online report of a serious bug in a Linux package and wondered - "Have I got that updated?"

Some distros include a facility to show brief display of update history, but this doesn't always show the whole history. David took a look at how the update history is recorded, how to find out when a particular package was last updated and what was fixed.

For a specific example there is a series of podcasts titled “Security Now”, and Linux featured in a recent ‘cast because of the bugs in systemd mentioned earlier.

The usual response to a query about whether a machine is exposed is to “check your updates”.

To do this, the log file viewer can be used, which is found in the system tools menu. The log file viewer has the ability for the user to filter the output to find items related to a specific component, e.g. systemd. When looking at the

log file viewer, only relatively recent updates are recorded. David provided advice on how to find out more detail and over a longer period.

```
File Edit View Search Terminal Help
david@M92p:~$ grep " upgrade systemd" /var/log/dpkg.log
2019-02-06 15:24:33 upgrade systemd:amd64 237-3ubuntu10.11 237-3ubuntu10.12
2019-02-06 15:24:37 upgrade systemd-sysv:amd64 237-3ubuntu10.11 237-3ubuntu10.12
2019-02-19 11:45:17 upgrade systemd:amd64 237-3ubuntu10.12 237-3ubuntu10.13
2019-02-19 11:45:21 upgrade systemd-sysv:amd64 237-3ubuntu10.12 237-3ubuntu10.13
david@M92p:~$
```

### Homing in on systemd

First look at the dpkg data recorded in /var/log/dpkg.log using the terminal program. This log file records each action of the package update system. The information reordered looks like the screenshot on the previous page.

The terminal command

```
$ grep " upgrade" /var/log/dpkg.log
```

shows a list of items installed recently – note that “ marks are used to include a leading space in the search term.

To find out whether a specific package, say systemd, has recently been updated use the command

```
$ grep " upgrade systemd" /var/log/dpkg.log
```

This will result in something like that shown below

To look further back in time, there are additional files such as /var/log/dpkg.log.1. Log files created before dpkg.log and dpkg.log.1 are usually compressed by the system to

```
systemd (237-3ubuntu10.13) bionic-security; urgency=medium

* SECURITY UPDATE: denial of service via crafted dbus message
- debian/patches/CVE-2019-6454.patch: sd-bus: enforce a size limit for
  dbus paths, and don't allocate them on the stack
- debian/patches/sd-bus-if-we-receive-an-invalid-dbus-message-ignore-.patch:
  sd-bus: if we receive an invalid dbus message, ignore and proceed
- CVE-2019-6454

* Do not remove multiple spaces after identifier in syslog message
- add debian/patches/journal-do-not-remove-multiple-spaces-after-identifi.pa
tch

-- Chris Coulson <chris.coulson@canonical.com> Wed, 13 Feb 2019 21:32:34 +0000

systemd (237-3ubuntu10.12) bionic; urgency=medium

* d/p/resolve-enable-EDNS0-towards-the-127.0.0.53-stub-res.patch
  getaddrinfo() failures when fallback to dns tcp queries, so enable
  edns0 in resolv.conf (LP: #1811471)

[ Victor Tapia ]
* d/p/resolved-Increase-size-of-TCP-stub-replies.patch
:
```

```
upgrade systemd" var/log/dpkg.log.2.gz
```

The apt program can also show details of the changes, by using a command such as:

```
$ apt changelog systemd
```

reduce the space needed to store them. To find updates in the compressed files you will need to use the zgrep command, eg/.

```
$ zgrep --color " upgrade systemd" var/log/dpkg.log.2.gz
```

A sample of the type of results is shown adjacent.

It is also possible to search the Ubuntu website ubuntuupdates.org which retains a list of all updates to that system.

David's conclusion is that the information about updates is available in Linux, and can be seen down to a very detailed level.

Systemd: more information

A YouTube video about systemd is available for those interested. It is titled “The tragedy of systemd” and can be seen via:

[https://www.youtube.com/watch?v=o\\_Alw9bGogo](https://www.youtube.com/watch?v=o_Alw9bGogo)

## Books

### The future of Everything

*Tim McQueen*

Tim Dunlop is an author, writer (for the Guardian Australia amongst others) and academic. His first book was *The New Front Page: New Media and the Rise of the Audience*, while his second book, *Why the Future Is Workless*, examined the changing nature work as more and more jobs are automated. I found *The future of everything* to be a little utopian for my taste and decided against reviewing it. Here is a brief summary from the book's dust cover

We are in the middle of the greatest technological revolution in history. Its epicentre lies in Silicon Valley, but its impacts are felt in all corners of the earth. It could give all of us a better quality of life and new, more cooperative ways of living. Or it could further concentrate the world's wealth in the hands of a few. This book offers a bold vision for ensuring that we achieve the former. A world that is fairer, less violent and most radical of all, more joyous. Tim Dunlop spells out his ideas for reclaiming common ground

systematically, arguing the case for more public ownership of essential assets, more public space, a transparent media system and an education that prepares us for the future, not the past. His vision for improved democracies and societies is practical and realistic, grounded in knowledge of what we are doing well and what we must do better. He argues that we have the policy tools to make it happen — what we need is public and political will.

**Tim Dunlop will be our June guest speaker on “The Future of Work”**

Once upon a time there were newsgroups. Now we have Yammer, the online forum for Melb PC users. Within it are different groups for members with varying interests. It's also where you are likely to hear club news first. To access Yammer simply have your Melb PC login name (@melbpc.org.au email address) and password handy, click this link: <https://www.yammer.com/melbpc.org.au/> and log in

## **Chit Chat**

When he's not on the red cordial our very own Wotten Wodga, breeder of finest quality hand fed guard crocodiles and terror of Yammer transforms into mild mannered Roger, church organist extraordinaire! He posted a link to his performance of Gigout's Grand Choeur Dialogue played on his residence organ, which is well worth listening to. His website has many examples of other fine pieces and images of the residence organ.

We're keen to hear a fully loaded Wotten Wodga let off the leash with a truly maniacal rendition of Bach's Toccata and Fugue in D minor!

<https://www.yammer.com/melbpc.org.au/#/Threads/show?threadId=10241202274304>

## **Security, Scams and Phishing**

Scams, scams and more scams seems to be the order this month! We've had e-mail invoices from Apple, bank accounts being suspended, phone calls from the ATO, phone calls advising disconnection of your phone service is imminent due to the NBN so dial "1" for a technician, and yet more phone calls from "your Internet provider" advising they'd found something and were going to cut off your Internet. All totally fake of course.

Jan received a registration renewal notice for her company name, except that it was from ASIC and was charging considerably more than the official fee (\$99 versus \$35). Kevin highlighted that the practice wasn't actually illegal as they were acting as a third party lodging service but charging handsomely for the privilege of using their totally unnecessary service in the hope of catching out the unwary. Roger mentioned a similar practice occurred with Internet domain names.

<https://www.yammer.com/melbpc.org.au/#/Threads/show?threadId=19323474108416>

## **Technology News**

Dennis posted a link about potential problems for users of older GPS units due to the way the system counts the number of weeks since GPS started. Every 1024 weeks the count rolls over from 1023 to zero and this could cause erroneous date indications. Navigation should be unaffected but any application that uses GPS as a time source such as a camera that geotags images may have issues

If possible update your device's firmware. The rollover is occurring on April 6th so mark it in your diary and be prepared for the unexpected. "My GPS didn't rollover properly" sounds like a great excuse when you're late? Maybe not.....

<https://www.yammer.com/melbpc.org.au/#/Threads/show?threadId=19645614309376>

## **NBN Question and Comments**

Steve reported on his successful transition to a HFC based NBN connection. He'd been a little apprehensive due to ambitious family expectations (reading too many horror stories seems to be a common theme among members making the change to NBN?) and was pleasantly surprised when the connection went without a hitch and was up and running shortly after the commissioning tech departed. The family was happy they didn't have to wait and Steve was happy with the excellent connection speed – 95Mbps down and 38Mbps up on a nominal 100/40 plan.

His phone connection was a bit more complicated as it was being ported to his new provider and took about a week.

James reported a similar experience – activation of the NBN Internet connection went smoothly but porting the phone number took time and some fiddling with modem settings to get working.

<https://www.yammer.com/melbpc.org.au/#/Threads/show?threadId=15173907308544>

## **DOTW, a weekly feature in the Chit chat group**

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.



Recent winners of the DOTW poll have been:

"Deadly" Dennis Parsons for going to the same school as Andrew Bolt and for actually admitting it in Chit Chat.

Your beloved Mag Editor DSG for the most ridiculous thread of the week - cable elevators said to work best with gold plated oxide free copper cables lubricated with snake oil!! **[I still have a few for sale, only \$350/pair - Ed]**

The 27-year-old driver who filmed himself hurling abuse at a pair of cyclists as they rode two abreast on on a main carriageway and he drove along a shared pedestrian/cyclist path next to them. Unfortunately the two cyclists were police officers....

Australia's embattled corporate industry watchdog ASIC for spending about \$100,000 on a new font and branding tweaks instead of actually doing its job

Our member "Mighty" Merv Smith, for confessing to actually BUYING the Herald Sun then forgetting to read it!!

# MARCH RAFFLE 2019

TICKETS: 1 = \$2, 3 = \$5



Tickets are available for purchase at the Monthly Meeting in Moorabbin.  
The draw will be during the meeting and winners must be present to collect, unless an arrangement is made.

## Google Chromecast 3rd Generation



- The Chromecast connects to your TV via the in-built HDMI port
- It utilises your existing home WiFi network to wirelessly connect to the internet and your devices.
- You can mirror your Android device or your Chrome browser directly on your TV.
- It's easy to control your Chromecast using supported apps on your smartphone, tablet or laptop.

## Targus 4 Port USB 3.0 Hub



- You can connect up to 4 USB devices at once.
- It simply plugs into an available USB port on your computer.
- The hub supports data transfer speeds of up to 480 Mbps.
- It draws power from your laptop which means no AC adaptor is required.

## SanDisk 32GB USB 3.0 Flash Drive



- This flash drive is simple to use, as you simply plug it in and it is ready to go.
- This flash drive is compatible with USB 2.0 ports.
- It has fast transfer speeds of up to 80 MB per second.

# Special Interest Groups

Data Source: data-source for SIG-List Updated: 26-Feb-2019 – 22:59 Amendments:

Please advise changes/corrections to: [calendar-admin@melbpc.org.au](mailto:calendar-admin@melbpc.org.au)

Recent changes are at: <http://www.melbpc.org.au/interest-groups-resources/sig-changes/>

## Access (database) and Excel

Date Jan No Meeting  
Feb-Nov Second Mon of month (inc. Public Holidays)  
Dec Second Mon of month  
Time 6:30pm - 8:30pm  
Email [access@melbpc.org.au](mailto:access@melbpc.org.au)  
Location Melb PC HQ, Level 1, 479 Warrigal Rd, Moorabbin Melway:78.D8  
Convenor(s) Craig Evans  
[craig\\_evans@racv.com.au](mailto:craig_evans@racv.com.au)

## Bayside

Date Jan Third Thu of month  
Feb-Nov Third Thu of month  
Dec Third Thu of month  
Time 10am - 12noon  
Email [bayside@melbpc.org.au](mailto:bayside@melbpc.org.au)  
Location St Stephens Church Hall, 111 North Road (cnr Cochrane St), Brighton Melway:67.F7  
Convenor(s) Peter Carpenter - 9596 3441  
Brian Fergie  
Les Johnston

## Beginners East (BEAST)

Date Jan No Meeting  
Feb-Nov Third Sun of month  
Dec Third Sun of month  
Time 10am - 12noon  
Email [beast@melbpc.org.au](mailto:beast@melbpc.org.au)  
Location Vermont South Community Centre, 1 Karobran Drive, Vermont South Melway:62.G7  
Convenor(s) Dave Botherway

## Casey

Date Jan No Meeting  
Feb-Nov Second Fri of month  
Dec Second Fri of month. (Christmas function - check location/time etc with Convenor)  
Time 1pm - 3:30pm  
Location Beaconsfield Neighbourhood Centre, 8 O'Neil Road, Beaconsfield Melway:214.A1  
Convenor(s) Phillip Rocke  
[philliprocke@optusnet.com.au](mailto:philliprocke@optusnet.com.au)  
Helen Ventura  
Ross Bradbury

## Communications

Date Jan No Meeting  
Feb-Nov Second Wed of month  
Dec Second Wed of month  
Time 7 - 9:30pm  
Email [phil@melbpc.org.au](mailto:phil@melbpc.org.au)  
Location Melb PC HQ, Level 1, 479 Warrigal Rd, Moorabbin Melway:78.D8  
Convenor(s) Phil Lew - 0418 567 019

## Digital Images

Date Jan No Meeting  
Feb-Nov Third Fri of month  
Dec No Meeting  
Time 10am - 12noon  
Location Wadham House, 52 Wadham Parade, Mount Waverley Melway:61.E12  
Convenor(s) Ian Bock - 9807 3701  
[bockey@melbpc.org.au](mailto:bockey@melbpc.org.au)  
George Skarbek

## East

Date Jan No Meeting  
Feb-Nov Second Thu of month  
Dec Second Thu of month (starts 6:30pm)  
Time 7:30pm - 9:30pm  
Email [east@melbpc.org.au](mailto:east@melbpc.org.au)  
Location Eley Park Community Centre, 87 Eley Rd, Blackburn South Melway:61.H5  
Convenor(s) Paul Woolard - 9877 1059  
Ian Dewhurst - 0438 480 500

## East Workshop

**Date Jan** No Meeting  
**Feb-Nov** Second Sun of month. NO meeting in  
**May - Mother's Day.**  
**Dec** Second Sun of month  
Time 10am - 2pm  
Email [eastwsh@melbpc.org.au](mailto:eastwsh@melbpc.org.au)  
Location Wadham House, 52 Wadham Parade,  
**Mount Waverley** Melway:61.E12  
Convenor(s) Paul Woolard - 0417 566 209  
[pwoolard@melbpc.org.au](mailto:pwoolard@melbpc.org.au)  
John Swale (3D printing)  
- 0417 530 766

## Essendon - Main meeting

**Date Jan** No Meeting  
**Feb-Nov** First Fri of month  
**Dec** No Meeting  
Time 9:30am - 12noon  
Email [essendon@melbpc.org.au](mailto:essendon@melbpc.org.au)  
Location Nancye Kirchner Neighbourhood  
Centre, Doyle Street (corner  
Somerset St),  
**Avondale Heights** Melway:27.D6  
Convenor(s) John Guegan - 9317 7114

## Essendon - Open Forum

**Date Jan** No Meeting  
**Feb-Nov** Second Fri of month  
**Dec** Second Fri of month. (Christmas  
Function, starts 10:30am)  
Time 9:30am - 12noon  
Email [essendon@melbpc.org.au](mailto:essendon@melbpc.org.au)  
Location Nancye Kirchner Neighbourhood  
Centre, Doyle Street (corner  
Somerset St),  
**Avondale Heights** Melway:27.D6  
Convenor(s) John Guegan - 9317 7114

## Essendon - Various topics

**Date Jan** No Meeting  
**Feb-Nov** Third Fri of month  
**Dec** Second Fri of month  
Time 9:30am - 12noon  
Email [essendon@melbpc.org.au](mailto:essendon@melbpc.org.au)  
Location Nancye Kirchner Neighbourhood  
Centre, Doyle Street (corner  
Somerset St),  
**Avondale Heights** Melway:27.D6  
Convenor(s) John Guegan - 9317 7114

## Everything Apple

**Date Jan** Third Tue of month  
**Feb-Nov** Third Tue of month  
**Dec** No Meeting  
Time 2pm - 4pm  
Email [everything-apple@melbpc.org.au](mailto:everything-apple@melbpc.org.au)  
Location Melb PC HQ, Level 1, 479 Warrigal Rd,  
**Moorabbin** Melway:78.D8  
Convenor(s) Peter Emery  
[everything-apple@ausom.net.au](mailto:everything-apple@ausom.net.au)  
Sam Fiumara

## Genealogy East

**Date Jan** No Meeting  
**Feb-Nov** Third Sun of month  
**Dec** Third Sun of month  
Time 12:30pm - 2:30pm  
Email [geneast@melbpc.org.au](mailto:geneast@melbpc.org.au)  
Location Vermont South Community Centre,  
1 Karobran Drive,  
**Vermont South** Melway:62.G7  
Convenor(s) Denis Street

## Hardware

**Date Jan** No Meeting  
**Feb-Nov** Second Fri of month  
**Dec** Second Fri of month  
Time 10am - 12noon  
Location Wadham House, 52 Wadham Parade,  
**Mount Waverley** Melway:61.E12  
Convenor(s) Kelvin Cording - 9438 1047  
[kcording@bigpond.net.au](mailto:kcording@bigpond.net.au)  
John Hall - 9803 2731  
[johnhall@melbpc.org.au](mailto:johnhall@melbpc.org.au)

## iHelp

**Date Jan** Approximately 6 monthly  
**Feb-Nov** Approximately 6 monthly  
**Dec** Approximately 6 monthly  
Time 7pm - 9pm  
Email [ihelp@melbpc.org.au](mailto:ihelp@melbpc.org.au)  
Location Melb PC HQ, Level 1, 479 Warrigal Rd,  
**Moorabbin** Melway:78.D8  
Convenor(s) Dave Simpson - 9276 4095

## Investment Tools - WASINT

**Date Jan** No Meeting  
**Feb-Nov** Second Tue of month  
**Dec** Second Tue of month  
Time 10:30am - 12:30pm  
Email [wasint@melbpc.org.au](mailto:wasint@melbpc.org.au)  
Location Melb PC HQ, Level 1, 479 Warrigal Rd,  
**Moorabbin** Melway:78.D8  
Convenor(s) Richard Solly

## Linux Workshop - Moorabbin

**Date Jan** In Recess  
**Feb-Nov** In Recess  
**Dec** In Recess  
Time  
Email [linuxworkshop@melbpc.org.au](mailto:linuxworkshop@melbpc.org.au)  
Location Melb PC HQ, Level 1, 479 Warrigal Rd,  
**Moorabbin** Melway:78.D8  
Convenor(s) David Hatton

## MACE (Atari Computers)

**Date Jan** Third Sun - BBQ - check with  
Convenor for location  
**Feb-Nov** Third Sun of month  
**Dec** Third Sun of month  
Time 10am - 2pm  
Email [maceatari@gmail.com](mailto:maceatari@gmail.com)  
Location Melb PC HQ, Level 1, 479 Warrigal Rd,  
**Moorabbin** Melway:78.D8  
Convenor(s) Andrew Boschan  
[andrewbosch@gmail.com](mailto:andrewbosch@gmail.com)

## Microcontroller

**Date Jan** Second Wed of month  
**Feb-Nov** Second Wed of month  
**Dec** Second Wed of month  
Time 7pm - 9:30pm  
Email [microcontroller@melbpc.org.au](mailto:microcontroller@melbpc.org.au)  
Location Melb PC HQ, Level 1, 479 Warrigal Rd,  
**Moorabbin** Melway:78.D8  
Convenor(s) David Stonier-Gibson  
John Hollow - 0417 031 164  
Phil Lew - 0418 567 019

## Microcontroller Workshop

**Date Jan** Second & Fourth Sat of Jan.  
**Feb-Nov** Second & Fourth Sat of month.  
**Dec** Second & Fourth Sat of month.  
Time 12noon - 5pm  
Email [microcontroller-workshop@melbpc.org.au](mailto:microcontroller-workshop@melbpc.org.au)  
Location Melb PC HQ, Level 1, 479 Warrigal Rd,  
**Moorabbin** Melway:78.D8  
Convenor(s) John Shirt - 0409 568 267  
Rob Brown - 0419 285 806

## Mornington Peninsula - General, Q&A

**Date Jan** Third Mon of month  
**Feb-Nov** Third Mon of month  
**Dec** No Meeting  
Time 9:30am - 12noon  
Email [peninsula@melbpc.org.au](mailto:peninsula@melbpc.org.au)  
Location Mornington Community Information and  
Support Centre, 320 Main St,  
**Mornington** Melway:104.E12  
Convenor(s) Terry Said - 0427 750 327  
[dulnain@gmail.com](mailto:dulnain@gmail.com)  
Ian Thomson  
[iaroth@netspace.net.au](mailto:iaroth@netspace.net.au)  
Colin Ackehurst

## Mornington Peninsula - Family History

**Date Jan** Third Mon of month  
**Feb-Nov** Third Mon of month  
**Dec** No Meeting  
Time 1:30pm - 4:30pm  
Email [peninsula@melbpc.org.au](mailto:peninsula@melbpc.org.au)  
Location Mornington Community Information and  
Support Centre, 320 Main St,  
**Mornington** Melway:104.E12  
Convenor(s) Colin Ackehurst  
[colin\\_a\\_ackehurst@bigpond.com](mailto:colin_a_ackehurst@bigpond.com)

## Mornington Pen. Family History: Adv.DNA

**Date Jan** last Wed of month (5th Wed if there  
is one, otherwise 4th Wed)  
**Feb-Nov** last Wed of month (5th Wed if there  
is one, otherwise 4th Wed).  
**Dec** No Meeting  
Time 2pm - 4pm  
Email [peninsula@melbpc.org.au](mailto:peninsula@melbpc.org.au)  
Location Mornington Community Information and  
Support Centre, 320 Main St,  
**Mornington** Melway:104.E12  
Convenor(s) Colin Ackehurst  
[colin\\_a\\_ackehurst@bigpond.com](mailto:colin_a_ackehurst@bigpond.com)

## Multimedia Home Entertainment

**Date Jan** No Meeting  
**Feb-Nov** First Fri of month  
**Dec** First Fri of month  
Time 10am - 12noon  
Email [MHE@melbpc.org.au](mailto:MHE@melbpc.org.au)  
Location Wadham House, 52 Wadham Parade,  
**Mount Waverley** Melway:61.E12  
Convenor(s) David King  
Kelvin Cording

## Music

**Date Jan** No Meeting  
**Feb-Nov** Third Thu of month - confirm with  
Convenor if meeting is being held  
**Dec** No Meeting  
Time 7:30pm - 9:30pm  
Email [music@melbpc.org.au](mailto:music@melbpc.org.au)  
Location Melb PC HQ, Level 1, 479 Warrigal Rd,  
**Moorabbin** Melway:78.D8  
Convenor(s) Bill Sakell - 0430 566 422  
John Shirt - 0409 568 267

## North East Android

**Date Jan** No Meeting  
**Feb-Nov** Third Wed of month  
**Dec** Second Wed of Dec - join with North  
East Daytime SIG - end-of-year  
breakup  
Time 10am - 12noon  
Email [ne-android@melbpc.org.au](mailto:ne-android@melbpc.org.au)  
Location Hawdon Street Community Hall,  
80 Hawdon Street,  
**Heidelberg** Melway:32.A4  
Convenor(s) Colin Lampshire  
9857 5372 or 0413 640 408  
[lampshir@melbpc.org.au](mailto:lampshir@melbpc.org.au)  
Kelvin Cording - 9438 1047

## North East Daytime and Photography

**Date Jan** No Meeting  
**Feb-Nov** Second Wed of month  
**Dec** Second Wed of month  
Time 10am - 12noon  
Email [neday@melbpc.org.au](mailto:neday@melbpc.org.au)  
Location Hawdon Street Community Hall,  
80 Hawdon Street,  
**Heidelberg** Melway:32.A4  
Convenor(s) Colin Lampshire  
9857 5372 or 0413 640 408  
[lampshir@melbpc.org.au](mailto:lampshir@melbpc.org.au)

## North East Genealogy

**Date Jan** No Meeting  
**Feb-Nov** First Wed of month  
**Dec** First Wed of month  
Time 10am - 12noon  
Email [negen@melbpc.org.au](mailto:negen@melbpc.org.au)  
Location Hawdon Street Community Hall,  
80 Hawdon Street,  
**Heidelberg** Melway:32.A4  
Convenor(s) Lynn. Hammet  
[lynnhammet@gmail.com](mailto:lynnhammet@gmail.com)

## Northern Suburbs Linux

**Date Jan** Third Mon of month  
**Feb-Nov** Third Mon of month  
**Dec** No Meeting  
Time 7:30pm - 9:30pm  
Email [nslig@melbpc.org.au](mailto:nslig@melbpc.org.au)  
Location Community Meeting Room, Watsonia  
Library, 4 Ibbotson St,  
**Watsonia** Melway:20.E4  
Convenor(s) David Hatton  
Nick Vespo

## Online

**Date Jan** Available online at any time  
**Feb-Nov** Available online at any time  
**Dec** Available online at any time  
Time Available online at any time  
Email [kazkev@melbpc.org.au](mailto:kazkev@melbpc.org.au)  
Location Melb PC Yammer online forum  
Convenor(s) Kevin Martin  
Evening only - 5964 7627  
or 0407 343 162

## Programming

**Date Jan** Suspended, meet only on request.  
**Feb-Nov** Suspended, meet only on request.  
**Dec** Suspended, meet only on request.  
Time By arrangement  
Email [programming@melbpc.org.au](mailto:programming@melbpc.org.au)  
Location Melb PC HQ, Level 1, 479 Warrigal Rd,  
**Moorabbin** Melway:78.D8  
Convenor(s) John Viney

## Raspberry Pi - Moorabbin

**Date Jan** Second Sat of month  
**Feb-Nov** Second Sat of month  
**Dec** Second Sat of month  
Time 2pm - 4pm  
Email [raspi-moorabbin@melbpc.org.au](mailto:raspi-moorabbin@melbpc.org.au)  
Location Melb PC HQ, Level 1, 479 Warrigal Rd,  
**Moorabbin** Melway:78.D8  
Convenor(s) Mohan Gupta - 0421-214-081  
Rob Brown - 0419 285 806

## Raspberry Pi - Mt Waverley

**Date Jan** No meeting Jan-2019 (room booking)  
**Feb-Nov** Fourth Fri of month  
**Dec** No Meeting  
Time 10am - 12noon  
Email [raspi@melbpc.org.au](mailto:raspi@melbpc.org.au)  
Location Wadham House, 52 Wadham Parade,  
**Mount Waverley** Melway:61.E12  
Convenor(s) John Hall - 9803 2731  
[johnhall@melbpc.org.au](mailto:johnhall@melbpc.org.au)  
Lance Lloyd - 9884 5559  
[lancelloyd@melbpc.org.au](mailto:lancelloyd@melbpc.org.au)

## Sunbury Daytime - New Users

**Date Jan** No Meeting  
**Feb-Nov** First Thu of month  
**Dec** First Thu of month  
Time 9:30am - 12noon  
Email [sunburydaytime@gmail.com](mailto:sunburydaytime@gmail.com)  
Location Sunbury Senior Citizens Centre (back  
room), 8 O'Shanassy Street,  
**Sunbury** Melway:382.E4  
Convenor(s) Kevin Hale - 9740 5786

## Sunbury Daytime - Advanced

**Date Jan** No Meeting  
**Feb-Nov** Second Thu of month  
**Dec** Second Thu of month  
Time 9:30am - 12noon  
Email [sunburydaytime@gmail.com](mailto:sunburydaytime@gmail.com)  
Location Sunbury Senior Citizens Centre (back  
room), 8 O'Shanassy Street,  
**Sunbury** Melway:382.E4  
Convenor(s) Kevin Hale - 9740 5786

## Sunbury Daytime - Main Meeting

**Date Jan** No Meeting  
**Feb-Nov** Third Thu of month  
**Dec** No Meeting  
Time 9:30am - 12noon  
Email [sunburydaytime@gmail.com](mailto:sunburydaytime@gmail.com)  
Location Sunbury Senior Citizens Centre (back  
room), 8 O'Shanassy Street,  
**Sunbury** Melway:382.E4  
Convenor(s) Kevin Hale - 9740 5786

## Sunbury Daytime - Maintenance & Linux

**Date Jan** No Meeting  
**Feb-Nov** Fourth Thu and Fifth Thu of month.  
**Dec** No Meeting  
Time 9:30am - 12noon  
Email [sunburydaytime@gmail.com](mailto:sunburydaytime@gmail.com)  
Location Sunbury Senior Citizens Centre (back  
room), 8 O'Shanassy Street,  
**Sunbury** Melway:382.E4  
Convenor(s) Kevin Hale - 9740 5786

## Tech Projects

**Date Jan** First & Third Sun of month  
**Feb-Nov** First & Third Sun of month  
**Dec** First Sun of Dec (no second meeting  
in Dec)  
Time 1pm - 5pm  
Email [tech-projects@melbpc.org.au](mailto:tech-projects@melbpc.org.au)  
Location Melb PC HQ, Level 1, 479 Warrigal Rd,  
**Moorabbin** Melway:78.D8  
Convenor(s) Stephen Zuluaga  
Dani Martin

## Video Inner East (NOW RENAMED Video Production)

**Date Jan** No Meeting  
**Feb-Nov** Second Mon of month. Note: move to  
**Moorabbin for 2019**  
**Dec** Second Mon of month  
Time 7:00pm - 9:30pm  
Location Melb PC HQ, Level 1, 479 Warrigal Rd,  
**Moorabbin** Melway:78.D8  
Convenor(s) John Hall - 9803 2731  
[johnhall@melbpc.org.au](mailto:johnhall@melbpc.org.au)

## Video Production (PREVIOUSLY Video Inner East)

Date Jan	No Meeting
Feb-Nov	Second Mon of month. Note: move to Moorabbin for 2019
Dec	Second Mon of month
Time	7:00pm - 9:30pm
Location	Melb PC HQ, Level 1, 479 Warrigal Rd, Moorabbin Melway:78.D8
Convenor(s)	John Hall - 9803 2731 <a href="mailto:johnhall@melbpc.org.au">johnhall@melbpc.org.au</a>

## Video Production - Pinnacle

Date Jan	No Meeting
Feb-Nov	Fourth Wed of month
Dec	No Meeting
Time	10:00am - 12:30pm
Location	Melb PC HQ, Level 1, 479 Warrigal Rd, Moorabbin Melway:78.D8
Convenor(s)	Wayne Spicer - (03) 5971 1617 <a href="mailto:spisawn@optusnet.com.au">spisawn@optusnet.com.au</a> Tony Pickup - 9878 0706 <a href="mailto:tonypick@melbpc.org.au">tonypick@melbpc.org.au</a>

## Video Production - Sony

Date Jan	Second Wed of month
Feb-Nov	Second Wed of month
Dec	Second Wed of month
Time	10am - 12noon
Location	Melb PC HQ, Level 1, 479 Warrigal Rd, Moorabbin Melway:78.D8
Convenor(s)	Roger Wragg <a href="mailto:rdwragg@fastmail.fm">rdwragg@fastmail.fm</a>

## WAFFLE - wine & fine food lovers event

Date Jan	No Meeting
Feb-Nov	First Wed of month
Dec	First Wed of month
Time	9:35pm (after the Monthly Meeting)
Email	<a href="mailto:phil@melbpc.org.au">phil@melbpc.org.au</a>
Location	Fong's Chinese Restaurant, 725 Centre Rd (cnr Francesco St), Bentleigh East Melway:77.J1
Convenor(s)	Phil Lew - 0418 567 019 Tom Rado - 0407 955 747 <a href="mailto:trado@melbpc.org.au">trado@melbpc.org.au</a>

## Website Design - Tutorials

Date Jan	No Meeting
Feb-Nov	Fourth Sun of month
Dec	No Meeting
Time	2pm - 4pm
Email	<a href="mailto:webdesign@melbpc.org.au">webdesign@melbpc.org.au</a>
Location	Melb PC HQ, Level 1, 479 Warrigal Rd, Moorabbin Melway:78.D8
Convenor(s)	Fleur Stephens - 0407 330 963

## Website Design - Troubleshooting

Date Jan	No Meeting
Feb-Nov	Fourth Sun of month
Dec	No Meeting
Time	4pm - 6pm
Email	<a href="mailto:webdesign@melbpc.org.au">webdesign@melbpc.org.au</a>
Location	Melb PC HQ, Level 1, 479 Warrigal Rd, Moorabbin Melway:78.D8
Convenor(s)	Fleur Stephens - 0407 330 963

## Windows Plus

Date Jan	No Meeting
Feb-Nov	Third Sat of month
Dec	No Meeting
Time	10am - 12noon
Email	<a href="mailto:winplus@melbpc.org.au">winplus@melbpc.org.au</a>
Location	Melb PC HQ, Level 1, 479 Warrigal Rd, Moorabbin Melway:78.D8
Convenor(s)	John Swale - 0417 530 766 Barry Stone

# Calendar March 2019

Note: The most up to date calendar will be online at <https://www.melbpc.org.au/>

 <span style="float: right;">V2—updated—26-feb-2019</span> <h2 style="text-align: center;">SIG &amp; Other Meetings — Mar-2019</h2>						
Sun	Mon	Tue	Wed	Thu	Fri	Sat
<b>Legend</b> SIG meeting at Melb PC HQ, Moorabbin. Non-Moorabbin meeting. Cancelled Meeting Changed Meeting To be confirmed	<b>Changes</b> Please advise changes to: <a href="mailto:calendar-admin@melbpc.org.au">calendar-admin@melbpc.org.au</a>		Other SIG (Special Interest Group) information: <a href="https://www.melbpc.org.au/sigs/about/">https://www.melbpc.org.au/sigs/about/</a> Recent Changes: <a href="https://www.melbpc.org.au/sigs/about/recent-changes/">https://www.melbpc.org.au/sigs/about/recent-changes/</a>	Have A Question Post it on Yammer Yammer: <a href="http://yammer.com/melbpc.org.au/">http://yammer.com/melbpc.org.au/</a>	<b>1</b> <b>Essendon SIG</b> Main meeting Avondale Heights 9:30am - 12noon <b>Multimedia Home Entertainment SIG</b> Mount Waverley 10am - 12noon	<b>2</b>
<b>3</b> <b>MeICC – Tech Projects SIG</b> Moorabbin 1pm - 5pm	<b>4</b>	<b>5</b>	<b>6</b> <b>North East Genealogy SIG</b> 80 Hawdon Street Heidelberg 10am - 12noon <b>MONTHLY MEETING</b> Melb PC HQ, Moorabbin 7pm – 9:30pm then Supper (WAFFLE) at Fong's 9:35pm	<b>7</b> <b>Sunbury Daytime SIG</b> New Users 9:30am - 12noon	<b>8</b> <b>Essendon SIG Open Forum</b> Avondale Heights 9:30am - 12noon <b>Hardware SIG</b> Mount Waverley 10am - 12noon <b>Casey SIG</b> Beaconsfield 1pm - 3:30pm	<b>9</b> <b>Microcontroller Workshop SIG</b> Moorabbin 12noon - 5pm <b>Raspberry Pi – Moorabbin SIG</b> 2pm - 4pm
<b>10</b> <b>East Workshop SIG</b> Mount Waverley 10am - 2pm	<b>11</b> <b>PUBLIC HOLIDAY</b> <b>Access (database) and Excel SIG</b> Moorabbin 6:30pm – 8:30pm <b>Video Production SIG</b> (formerly Video Inner East SIG) Moorabbin (formerly Ashburton) 7:30pm - 9:30pm	<b>12</b> <b>Investment Tools - WASINT SIG</b> Moorabbin 10:30am - 12:30pm	<b>13</b> <b>Video Production – Sony SIG</b> Moorabbin 10am - 12noon <b>North East Daytime &amp; Photography SIG</b> Heidelberg 10am - 12noon <b>Communications SIG</b> Moorabbin 7pm – 9:30pm <b>Microcontroller SIG</b> Moorabbin 7pm – 9:30pm	<b>14</b> <b>Sunbury Daytime SIG</b> Advanced 9:30am - 12noon <b>East SIG</b> Blackburn South 7:30pm - 9:30pm	<b>15</b> <b>Essendon SIG</b> Various topics. Avondale Heights 9:30am – 12noon <b>Digital Images SIG</b> Including Photoshop Mount Waverley 10am - 12noon	<b>16</b> <b>Windows Plus SIG</b> Moorabbin 10am - 12noon
<b>17</b> <b>Beginners East (BEAST) SIG</b> 10am – 12noon <b>MACE (Atari Computers) SIG</b> Moorabbin 10am - 2pm <b>MeICC – Tech Projects SIG</b> Moorabbin 1pm - 5pm <b>Genealogy East SIG</b> Vermont South 12:30pm - 2:30pm	<b>18</b> <b>Mornington Peninsula SIG</b> General inc Q&A Mornington 9:30am - 12noon Family History Mornington 1:30pm - 4:30pm <b>Northern Suburbs Linux SIG</b> Watsonia 7:30pm – 9:30pm	<b>19</b> <b>Everything Apple SIG</b> Moorabbin 2pm - 4pm <b>Melb PC Committee Moorabbin</b> 7pm	<b>20</b> <b>North East Android SIG</b> Heidelberg 10am – 12noon	<b>21</b> <b>Sunbury Daytime SIG</b> Main Meeting 9:30am - 12noon <b>Bayside SIG</b> Brighton 10am - 12noon <b>Music SIG</b> Moorabbin 7:30pm – 9:30pm Please confirm with Convener	<b>22</b> <b>Raspberry Pi - Mt Waverley SIG</b> 10am - 12noon <b>Casey SIG Workshop</b> Beaconsfield Discontinued <b>PC Update – Articles Deadline</b>	<b>23</b> <b>Microcontroller Workshop SIG</b> Moorabbin 12noon - 5pm
<b>24</b> <b>Website Design SIG</b> Tutorials Moorabbin 2pm - 4pm Troubleshooting Moorabbin 4pm - 6pm <b>PC Update – Reports deadline</b>	<b>25</b>	<b>26</b>	<b>27</b> <b>Video Production – Pinnacle SIG</b> Moorabbin 10:00am – 12:30pm <b>Mornington Peninsula SIG</b> Family History – Advanced DNA (LAST Wed of month) Mornington 2pm - 4pm.	<b>28</b> <b>Sunbury Daytime SIG</b> Maintenance & Linux (Fourth & fifth Thu of month) 9:30am - 12noon	<b>29</b>	<b>30</b>
<b>31</b>						