

# >PC\_Update

April 2019





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April 2019

## The newsletter of

Melbourne PC User Group Inc.

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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

Ph (03) 9276 4088 [iHelp@melbpc.org.au](mailto:iHelp@melbpc.org.au)

[Live chat.](#)

<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 3<sup>rd</sup> April 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

## A needed change

PC Update has a history that reaches back to the very beginnings of our club. The first issue was March 1984, shortly after the club was established. At first it was mailed to all members in hard copy form – the concept of electronic distribution barely existed back then. Towards the end of the 90s the club had 12,000+ members who all received a mailed copy. For some years the magazine was professionally produced under contract, at a cost of several thousand dollars per month, with a similarly huge bill for postage. A team of volunteers would make a copy of the magazine online, on our website, although its primary format remained hard copy. That huge monthly cost became unsustainable as the dial-up bonanza came to an end and membership, and revenues, dwindled.



Today the masthead remains but the format is pdf, which lends itself to online distribution, printing and reading online. Printed copies have been available for a cost on top of membership dues. 13 members are currently signed up for those.

I have been producing PCU since the February 2018 issue, and I have decided it's time to quit. By the time you read this I will be in the USA for 5 weeks, and Hugh Macdonald has offered to stand in for me to produce the May edition. Hugh is also helping with the search for a software medium to simplify the mechanics of production. I am also pre-planning a trip in August-September time frame. Just as importantly, I want more time to focus on my hobbies and on a number of initiatives to take the club forward. So it's likely the August issue will be my last.

So now the search is on both for a new editor and for the software tools that will simplify production.

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## Our workshop

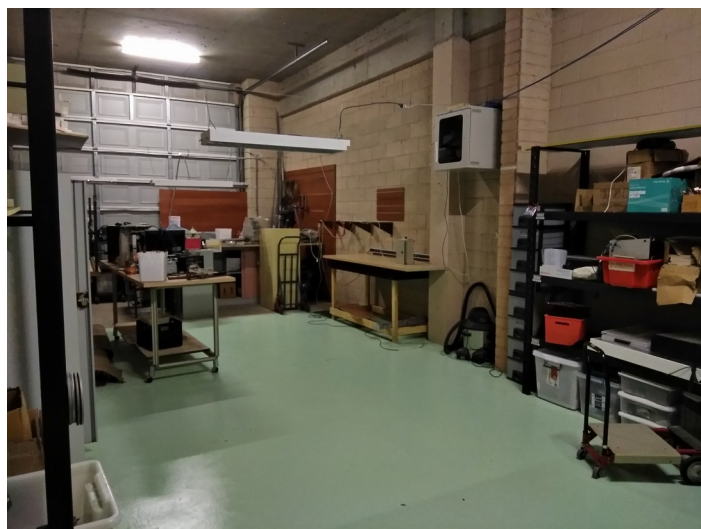
*Hugh Macdonald*

**Work is progressing at a nice rate on rejigging the “garage” workshop in the basement at Moorabbin. This will soon emerge as a well-equipped place for all members who want to “make stuff”. It will also be a big attraction for new, younger members and very likely instrumental in the long term survival of our club. These younger members are typified by those in the Science and Tech Projects SIG.**

On March 17th 2019, members of the Science and Tech Projects SIG toured the club’s workshop, where lots of progress is still under way to transform the area into a ‘maker space’ everyone in the club can be proud of and enjoy.

Flynn Howard, who is a qualified machinist and member of the SIG, gave us a rundown of two very useful machines that are located in the workshop. These are the lathe and the milling machine.

For the uninitiated, a lathe is a machine that rotates a workpiece about an axis of rotation to perform operations such as cutting, sanding, drilling, facing and turning. Flynn showed us the major parts of the lathe which are the headstock, bed, spindle and tailstock, as well as the all important safety switch. He explained that lathes can be used to make things such as



*The workshop has a newly painted floor, which has done a lot to brighten the space. Future improvements include much better lighting.*

watch parts and jewellery.

Next up was the milling machine, which Flynn explained can make almost anything, with the right tool attachment. In fact the best analogy he gave was that you could use a milling machine to make a lathe. Mills work by advancing cutters into a workpiece. They quite commonly operate on three axes. The other variables are the cutting head speed and the pressure.

All up it was a very interesting overview of the features and benefits of these two machines. Us members of the Science and Tech Projects SIG are looking forward to gaining proficiency with these machines and using them to make our own pieces, which we’ll no doubt marry with some Arduino or Raspberry Pi powered programming to make something pretty cool.

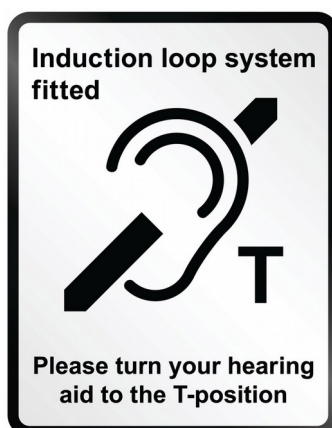
## Hearing loop for Moorabbin?

*Committee*

**The question has just arisen in Committee about maybe setting up a hearing loop in Moorabbin. There has also been a discussion on Yammer.**

A hearing loop is a “thing” that enables people with hearing aids to better hear whatever is being transmitted over the loudspeaker system. It works, of course, only for hearing aids that are equipped with a suitable receiver coil. Hearing loops are common in churches, theatres and other public meeting places.

So the question is, should Melb PC provide a hearing loop for members, so they can better enjoy the monthly meetings, where microphone use is fairly consistently en-



forced? It would not be a gigantic project, but also not totally trivial, and it would use up the efforts of dedicated volunteers who are already contributing to improve your club’s facilities.

**Committee would like to hear from you, very especially if you are a hearing aid user, and whether or not your aids have the receiver coil (not all do!) and whether you would benefit from this. Please email [committee@melbpc.org.au](mailto:committee@melbpc.org.au) if you would like to contribute to the conversation.**

# Casualties of Change

John Mackesy

*[From time to time we will take a trip in our time machine and locate an excerpt from a past edition of PC Update. The following is from November 2000, and particularly relevant to this month's monthly meeting guest speaker topic. - Ed]*

**"Australians are being told they will need to work smarter in the 21st Century. They will need to live smarter as well."**

**- Fiona Whitlock, "The Age", 17 Oct. 1992**

They'd been chatting, as people in pubs often do—you know, the casual, trivial issues blokes discuss in pubs, things like politics, the footy and Nicole Kidman's bum. Although it was cool and dim in the Alfred's front bar, the stranger was sweating, and fidgeting on his stool; his eyes were hidden behind dark glasses. Harry was intrigued—didn't seem like the type you'd find at the Alf.

"What d'you do for a crust, mate?" he'd wondered idly. The stranger steadied himself, gazed thoughtfully into the amber depths of his beer, then started to speak – but no words came. Raising his glass to his lips, he drank deeply.

"Ah, that's better, now I can talk. Well, it's kind of a long story, but what the hell, who's in a hurry? Used to work for Nissan, spent years there, on the assembly lines. I've worked on them all – 200B's, Bluebirds, Pintaras, Skylines, Pulsars, the lot."

He paused for a moment, as if in reflection.

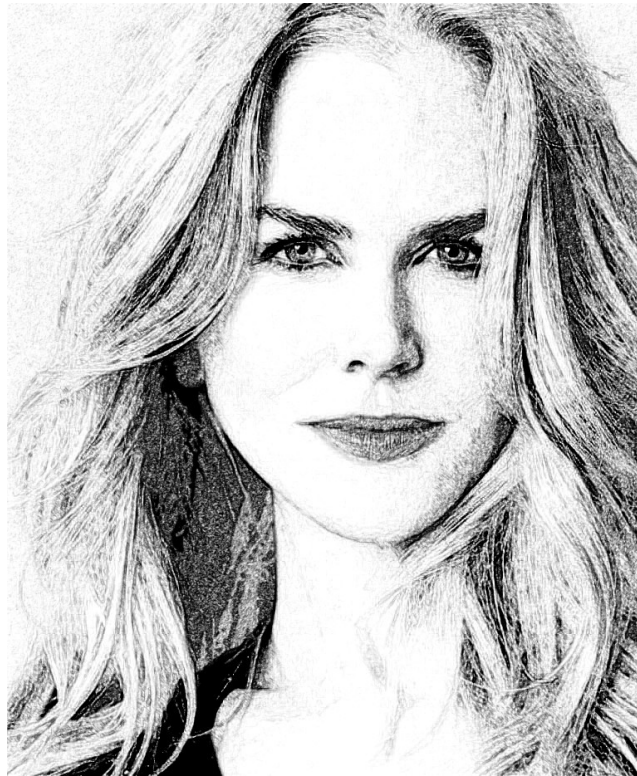
"Remember what Henry Ford said? 'The man who fits the wheel does not put the nuts on. The man who puts the nuts on does not tighten them' - well, I was the man who tightened them. I'd walk around the car with my air rattle gun, zap! zap! zap! until they were all done up. Then another car'd come along and zap! zap! zap! off I'd go. I was good at it, too, never missed a one."

As if to collect his thoughts, he paused again, taking another long draft from his dewy glass.

"One day, after years of doing that, I got to thinking. Where did the nuts come from? Were they made by blokes like me? Did those blokes watch TV, eat at Macca's and go to the pub? I looked around me, and realised I knew nothing! I was trapped in a morass of ignorance, and

it didn't look like there was any way out. But there was - they closed the bloody place down and there I was, out of a job! Best job I ever had, too. What could I do? No bastard would give me a go, so I was forced to return to study. Got me degree, and now I'm back in the bloody English Department, lecturing in 'Techniques of Literary Criticism.' It's soul-destroying, I'll tell you. I'd give anything to have me old job back."

Harry nodded sympathetically, reflecting wistfully on his days as a boner at the abattoirs, before the bottom fell out of the meat business.



"A man's gotta do what a man's gotta do, I guess. Take me— I used to be a boner, but what use is that today? None, that's what. Oh, I keep my hand in on the Sunday roast, but that's about it. I was just like you, had to find a new direction. I looked at various things, but all I could get into was Computer Science. Now they've got me hidden away re-searching teledildonics. It just isn't fair, that's what I say."

"Tele-dil-what?"

"Tele-dil-don-ics - haven't you heard? They say it'll be the new wave in computing. It's pretty straightforward, really, it's the simulation of sex at a distance, virtual reality sex, you know, like computer games - boring kid stuff. Makes me long to hold me

boning knives again. I still keep them sharp, y'know."

Above the bar, the dusty clock showed half-past three.

"Feel like another?" the stranger asked. Harry considered the idea, but decided against it.

"No, thanks, gotta get back to the grind. See you around."

Shaking his head in disbelief, the stranger watched him go. Teledildonics, indeed. What would Henry Ford have thought?



# April Monthly meeting

The April monthly meeting will be held Wednesday April 3 at 7pm.

## Guest Topic: The Future of Work

Our guest speaker this month is Tim Dunlop. The future of work is inseparable from the future of technology. Artificial intelligence, machine learning, 3D printing and other breakthroughs are changing the work we do and therefore changing our society in other ways too. In this talk, author Tim Dunlop will give an overview of these changes and discuss some of the key challenges that are likely to confront us over the next 20 years.

Tim Dunlop is the author of three books, all of which have won international recognition. He is regularly invited to speak with governments, businesses and other organisations, in Australia and overseas, offering insights into politics, the media and the future of work. His latest book is *The Future of Everything: Big, Audacious Ideas for a Better World*.



## Something new ....

After the break we are trying something new. Steve Zuluaga and Hugh Macdonald are both keen photographers but with very different approaches. They will have a public discussion about digital photography. Everyone will be welcome to join in.

## Meeting agenda

**Please note that the MC may alter the agenda at any time at his discretion.**

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 Tim Dunlop;
- Social break. We are continuing the "cafe style" layout;
- Raffle;
- We will hold a short forum discussion about possibly installing a hearing loop in the main meeting room.

- Q and A with George Skarbek;
- Steve Zuluaga and Hugh McDonald will have an open, informal chat about digital photography.;
- *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**



**The meeting is streamed live online at <http://tv.melbpc.org.au/>**

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](#).

## Quick tip

Here's a neat idea I picked up visiting friends for lunch recently. YouTube has a number of hour+ long clips with quiet music and gentle images. Perfect for the background at a "mature age" dinner party. Just search YouTube for "Romantic music". I even found one track that is over 9 hours long under "Sleep music". This is not the stuff to get your party swingin', but good as a background to conversation. Easy link:

[https://www.youtube.com/results?search\\_query=romantic+music](https://www.youtube.com/results?search_query=romantic+music)



Beautiful Romantic Music, Guitar  
Soothing Relaxation  
Beautiful romantic music and cello



Beautiful Romantic Music, Instrumental  
Soothing Relaxation

# The MicroMite – back to BASIC

David Stonier-Gibson

In February and March we had articles covering the two currently most popular microcontroller boards, the Arduino and the Raspberry Pi. These are very different despite their surface similarity. The Arduino is a *controller*, intended for applications like controlling an aquarium or a small robot. The Raspberry Pi is closer to a “proper computer”, complete with running an operating system. Horses for courses. This month I am going to describe a third product, the MicroMite, which is an Australian development we can feel proud of.

The MicroMite is the brainchild of Geoff Graham, a retired engineer in Perth. Strictly speaking it is not a product as such, but a firmware program. Geoff wrote a programming system called MMBasic that targets one particular line of PIC microcontroller chips (though it is open source and can be ported to other chips). But although Geoff does not sell a product, there are several others who sell both chips and boards. So there are several ways to get into MicroMite, depending on your skill level.

## The initial MicroMite experience.

With an Arduino you need to install the Arduino IDE (Integrated Development Environment) on your computer, write a “sketch” (Arduinese for program), compile it, download it to the board, and run it. The program itself needs quite a few lines of code just to say “Hello World”. So you will be using someone else’s example initially. Here’s the barest Arduino code:

```
void setup()
{
  Serial.begin(9600);
  Serial.println("Hello World!");
}
void loop()
{}
```

The MicroMite is a little different, in a good way. You connect to the board from your computer using a regular terminal emulator program such as TeraTerm, start the MicroMite and simply type:

```
Print "Hello World"
```

and the MicroMite will print the message on your computer screen.

You can now go ahead and type directly into the MicroMite something like:

```
Print 5 + 9
```

And it will come straight back with the answer

## How can this happen?

There is a huge difference between Arduino and MicroMite in how their programming languages work. Arduino uses a language, C/C++, that must be compiled, i.e. translated into a form the Arduino chip can use, in your computer, *before* it is downloaded to the board. The Mi-

croMite uses a language called BASIC. The translator is built into the MMBasic firmware and is called an interpreter. That is why you can type a line of BASIC code directly into the chip and have it executed immediately.

MMBasic also contains a program editor, so it is possible to develop a complete program with nothing more than a terminal emulator. Many members will recognise this from the days of Commodore, TRS80, GWBasic etc. In fact MMBasic was modelled on those early computers.

RESET Wired to +V directly or via 10K resist	1	28	ANALOG POWER (+2.3 to +3.6V)
DIGITAL   INT   ANALOG	2	27	ANALOG GROUND
SPI OUT   DIGITAL   INT   ANALOG	3	26	ANALOG   DIGITAL   PWM 2A
PWM 1A   DIGITAL   INT   ANALOG	4	25	ANALOG   DIGITAL   SPI CLOCK
PWM 1B   DIGITAL   INT   ANALOG	5	24	ANALOG   DIGITAL   PWM 2B
PWM 1C   DIGITAL   INT   ANALOG	6	23	ANALOG   DIGITAL
COM1: ENABLE   DIGITAL   INT   ANALOG	7	22	DIGITAL   5V   COM1: RECEIVE
GROUND	8	21	DIGITAL   5V   COM1: TRANSMIT
COM2: TRANSMIT   INT   DIGITAL	9	20	47µF TANT CAPACITOR (+)
COM2: RECEIVE   INT   DIGITAL	10	19	GROUND
CONSOLE Tx (DATA OUT)	11	18	DIGITAL   5V   COUNT   I²C DATA
CONSOLE Rx (DATA IN)	12	17	DIGITAL   5V   COUNT   I²C CLOCK
POWER (+2.3 to +3.6V)	13	16	DIGITAL   5V   COUNT   WAKEUP   IR
SPI IN   5V   DIGITAL	14	15	DIGITAL   5V   COUNT

*Many of the chip pins are configurable, and the language provides a lot of specialised drivers*

## But there’s more!

If MMBasic was just another TRS80 BASIC, it would be pretty drab by modern standards. But it goes very much further.

MMBasic supports a number of modern features:

- Structures like Do ... While, Select Case;
- Named functions and subroutines with parameter lists;
- Static variables in functions (a feature I asked for and was granted);
- Local variables in functions;
- An extensive set of functions for directly manipulating hardware, such as digital I/O, analogue inputs, PWM, timers and much, much more;
- User interrupt service routines;
- Non-volatile storage;
- Customisable.

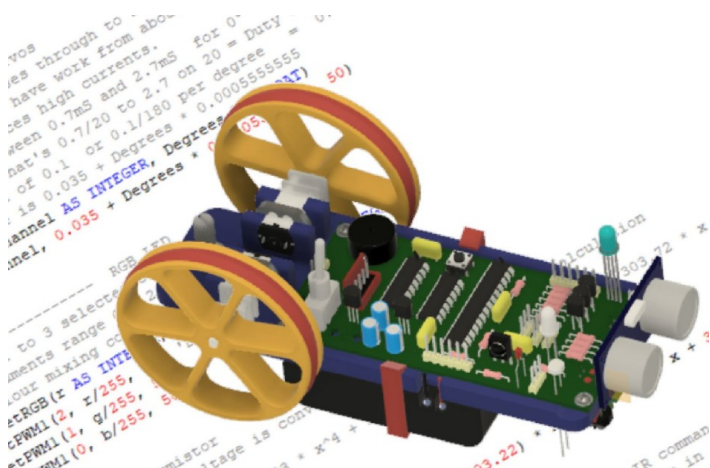
The language stops just short of supporting object oriented programming (OOP), which Arduino does have. I do

somewhat miss that, but for the majority of hobbyists OOP just messes with their brains anyhow. Because MMBasic is interpreted, not compiled, OOP would be next to impossible to implement.

### Customisable?

There are two ways in which MMBasic can be customised:

**C-functions** are a mechanism whereby a guru can write a new piece of functionality in C, say operating an ultrasonic ranging module, and then publish the pre-compiled code in ASCII/HEX format for incorporation into a user's program. Many advanced hardware functions get distributed this way.



*The RoboMite robot has a customised language that isolates the student/user from a lot of the gory details of motors and sensors.*

**The LIBRARY** is a mechanism whereby a non-guru like me can write specialised functions in BASIC and then hide them under the hood, shielding a subsequent user from the details. This is what I have done for the RoboMite program, effectively hiding some of the gory details of motor drive and steering and the mathematical complexity of converting thermistor readings to Celsius. Once the functions have been saved to the on-chip library they effectively become extensions to the language and are available whenever the chip is reset.

### Inputs and outputs (I/O)

The MicroMite is based on a 28-pin, 32-bit PIC chip in a breadboard compatible dual inline package, or on a 44-pin surface mount package that can be hand soldered, with care. The latter, provides more I/O though I have not used it. The chip runs off 3.3V (not 5V!) and some, not all, I/O pins are 5V tolerant. That means you can feed them 5V input levels. Many of the pins can be software configured for different purposes such as analogue input, PWM output, etc, and the full range of configurability is supported in MMBasic. As with any processor there are certain constraints you need to be aware of.

### Basic hardware “get it going”

The chips run off 3.3V, so you may need a regulator if you are using a breadboard. Programming is via serial data at 3.3V levels. That means you will either need a USB to 3.3V UART serial converter chip or adaptor, or a USB to serial cable. Suitable [generic cables](#) are available from eBay for a couple of dollars, so it hardly seems worthwhile to fiddle with adaptor boards or chips.

The chip has an internal oscillator and does not need an external crystal. It does, however, need one slightly special low ESR capacitor. Although the chip maker calls for a 47µF tantalum, the hobbyist experience is universally that a 10µF monolithic ceramic will work. You can get [these off AliExpress for \\$3 for 100 pieces](#).

### The MMEdit IDE

Although the editor built into MMBasic will get you going, it is a bit clunky. Jim Hiley in Tasmania has written an Integrated Development System (IDE) for the MicroMite called MMEdit. It provides editing with syntax highlighting, a debug mode and a terminal emulator for direct interaction with the chip.

### Variations on a theme

The MicroMite is not the only member of the family, indeed it was not even the first. It actually started out as a project in Silicon Chip magazine in 2011 with a design called MaxiMite. Subsequently there have been a Colour MaxiMite and a mini-MaxiMite. The MaxiMite and Colour MaxiMite are more computer-like, somewhat equivalent to TRS80 and Commodore computers (standalone boxes supporting a keyboard and display monitor with BASIC programming).

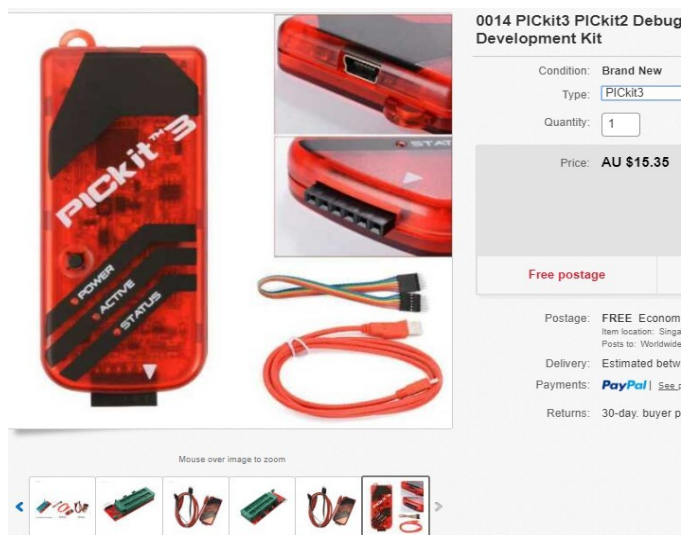
Further reading: [The MaxiMite Story](#) on Geoff Graham's website.

A screenshot of the MMEdit IDE window. The window title is "MM Edit" and the file path is "E:\OneDrive - Melbourne...". The menu bar includes "File", "Edit", "Connect", "Macro", "Program", "Advanced", "Font", "View", "BookMarks", and "Help". The toolbar contains icons for file operations and editing. The code editor shows the following BASIC code:

```
203
204
205 FUNCTION FindTapedEdge() AS INTEGER
206 'Return true if edge found, false if 1
207 SetMove 1
208 DO WHILE NOT OffTable() AND ( GetIR() =
209     YellowLight
210     PAUSE 10
211     NoLight
212     PAUSE 50
213 LOOP
214 SetMove 0
215 FindTapedEdge = OffTable()
216 END FUNCTION
217
218
219 SUB BackOff(T AS INTEGER) 'Reverse a bit
```



## How to start out with a blank chip



With a bit of googling you will soon find ready made MicroMite boards to explore, and that may be the best way to get started. But if you want to get a bit more down and dirty and work at the chip level, maybe in a solderless breadboard, then you can buy either chips with the MMBasic pre-programmed, or completely empty chips that you flash the MMBasic interpreter into yourself. For the latter you can invest \$15-20 in a PicKit3 clone from eBay or AliExpress – or if you are a Melb PC member ask

me about the club's!

## So are there any downside?

As I said at the start, it's horses for courses. The MicroMite would be a very comfortable introduction into the world of microcontrollers if you came up through the era when BASIC was all the go for hobbyists, from TRS80 in the 70s to Basic Stamp in the 90s. You will feel right at home with MMBasic. If OTOH you are more into C/C++ the Arduino may be a better fit. But beyond that there are a few other considerations:

- Arduino has without doubt a much larger support community and many more libraries. OTOH in my experience the MicroMite community has a much bigger percentage of people who actually know what they are talking about;
- The interpreter architecture makes MicroMite slower. I have not attempted to create any benchmarks but all things being equal an interpreted language will run slower than a compiled language. That said, the MicroMite runs at 48MHz compared to 20MHz, and the processor chops 32 bits at a time versus 8, and it has 32-bit hardware multiply and divide.

## Conclusion

**The MicroMite may be an easier path into small controller projects than Arduino for people who grew up with BASIC as their language of choice.**

## Everything Apple - What's in it for you?

**Running for 7 years now, the Everything Apple SIG is a joint venture between MelbPC and AUSOM Inc. The first meeting was held on 10 April 2012.**

Whether you want to switch from Windows to Apple, use both operating systems or simply learn more about the new iPhone or iPad.

If you have just bought or are considering buying some Apple hardware, the Everything Apple SIG will have something for you. There is something for EVERYONE - iOS, macOS, watchOS, etc. The emphasis is on Apple devices (Apple Macs, iPad, iPhone, iPod, Apple TV – and maybe even the Apple Watch) and helping you as a PC user understand and appreciate the Apple environment.

Do you need assistance with Apple products? If you are new to the Mac, iPad, iPhone or perhaps use a PC and need to know more about Apple products then this is the group for you. We have answers to any Apple-related question at any level.

Some recent topics covered by the group include:

- Apple operating system updates;
- Backing up Macs and iOS devices;
- Configuring and comparing new Macs;
- and Anti-virus and Malware apps.



For more information see:

<https://www.melbpc.org.au/signs/everything-apple-sig/>

Email Sam Fiumara [samwhyite@gmail.com](mailto:samwhyite@gmail.com) (Melb PC) or Peter Emery (AUSOM Inc) [everything-apple@ausom.net.au](mailto:everything-apple@ausom.net.au)

**The SIG is held on the third Tuesday of the Month, 2:00pm-4:00pm, Melbourne PC Headquarters, Level 1, 479 Warrigal Road, Moorabbin.**



# President's Report March 2019

*John Hall*

**As I announced at the last Main Monthly Meeting – after having spent 6 years in total on the Committee (3 in the early 2000's and now over the past 3 years) I have decided to retire from the Committee to concentrate more on the main interest that I joined Melbourne PC for over 20 years ago – Video Production.**

I am still committed to helping the Melbourne PC User Group to grow and prosper so I am contributing to the running of Melbourne PC Group and the Melbourne Computer Club by continuing in my roles a SIG Leader/Co-convenor for the Raspberry Pi and Ripper Hardware SIGs in Mount Waverley and by setting up the new Video Production Group in Moorabbin in February this year.

In fact – for the Video Production Group I am trying to “lead the way” in the development of the “CiviEVENT” module of the CiviCRM System (which I Project Managed and implemented when I was Vice-President).

(If the Committee can persuade every SIG Group to adopt CiviEVENTS for the scheduling and promotion of their SIG Meetings then the monthly Calendar of SIG Meetings, plus the description of the upcoming SIG Meetings on our Web Site can be automatically created from the CiviCRM Database – thereby reducing the manual workload considerably).

Whilst it has been traditional for the Vice-President to take over as President, this will not be the case this time because Stephen Zuluaga still has a full time job, but he has agreed to stay on as Vice-President and will provide very valuable assistance to the incoming President.

Therefore, we would like to hear from anybody who has the Club's best interest at heart and feels that they could take on the role of President from November 2019 onwards.

The President's job is nowhere near as demanding as it was when I took over. You may recall that within 3 month's of taking over I was summoned to appear before the Fair Work Commission to address a claim of mistreatment by our previous Office Manager.

That dispute was closed around a year ago and we do not expect to hear anything further in this matter.

We were also losing about \$100,000 per annum due to Office costs and the Optus Mobile arrangement which was

running at a loss.

I met with Optus and terminated the Optus Mobile Contract but made sure in those negotiations that those Members who had Optus Mobile Plans through us were not disadvantaged during the process.

We also reduced the Office Costs by implementing the CiviCRM System – which allows Members to “self-subscribe” – thereby reducing the Office Workload considerably.

We have also introduced the “Melbourne Computer Club” as a new entity within our Group in order to attract new Members and as a result – this last month, we stemmed the tide of declining Membership by recruiting more new Members than non-renewing Members.

The result of this is that our February 2019 Year to Date income is above budget by \$11,560 and our expenses are below budget by \$28,179 resulting in a surplus of \$19,954

(Taking Depreciation etc. into account our net position (as per the Feb 2019 Accounts) is a small loss of \$46)!!!

Given that we own our Moorabbin Premises outright and still have \$484,335 on term deposit in the Bank – we are still a very viable organisation and any incoming President will have a very strong and young team on the Committee to help us to continue to grow the Club and improve the benefits to our members.

If you would like to consider taking on the role of President – please feel free to contact me at [johnhall@melbpc.org.au](mailto:johnhall@melbpc.org.au) and I will be happy to answer any further questions that you might have.



# Northern Suburbs Linux SIG – March 2019

Paul Addis

The Linux News session was quite different to that of previous months. Nick Vespo described the process he used to create a media server for his network.

The base is an older machine with a small footprint that is powered by an AMD dual core processor. The wish was to “keep things simple”. The chosen OS was Ubuntu 16.04 Long Term Support because Ubuntu 18.04 could not be run on the machine. The existing hard disk was 156GB, with a 2TB disk for media.



*The screenshot above shows the Xfce Desktop with a vertical panel on the left hand side plus a hideable horizontal bar at the bottom of the screen.*

The server version of Ubuntu was installed, with LVM to keep things simple. Packages added include: SAMBA, LAMP and SSH on the standard system. Synaptic was also installed to allow for the install of additional packages, such as Conky. The chosen backup program was Backintime, and this was installed on the server. The choice was influenced by the support for NTFS in Backintime.

The backup strategy was to make two copies of the daily backup and one copy of the weekly backup. Backintime supports both incremental and full backups, and can recognise the disks used for daily or weekly. The back-end program used by Backintime is rsync, and the backups are stored as files and folders, unlike other programs such as Deja-Dup - the Ubuntu default backup program.

Ubuntu desktop was installed on a separate machine. The media server seems to be working successfully and quietly, providing Nick with a needed additional facility at low cost while keeping things simple.

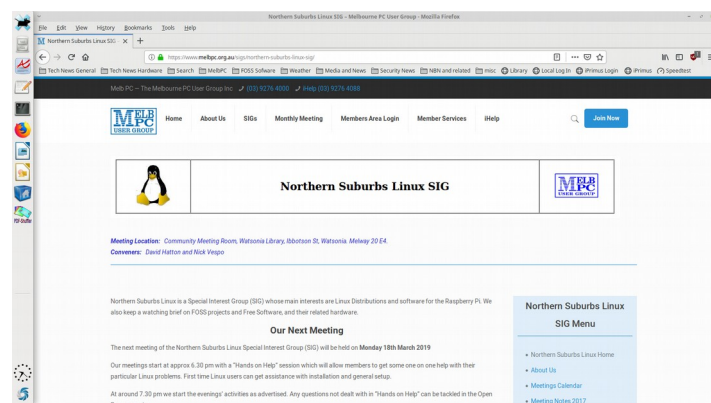
The Open Forum started with a recommendation from David Hatton that we should look at the podcast/blog from Red Hat titled Open Source Heroes. This was followed by a question about whether Python 2 or 3 is recommended. Apparently both are in use and maintained. The weight of opinion favoured Python 3 because it was developed more recently. It was pointed out that

the Raspberry Pi make extensive use of Python.

Mention was made of X2go, a remote desktop facility that enables a user to log in to a Linux system using a browser. The session finished with a long discussion of the National Broadband Network (NBN). Almost everyone had an opinion about it, but far fewer had any experience with it.

After the social break – a highlight of the evening for some attendees, the main session of the evening was presented by David Hatton. It was one of his popular Random Bytes presentations. Three short topics were covered.

The first was about the XFCE desktop and the ability to increase the vertical room for a window to display. Most laptop machines have an aspect ratio of 16:9 and many are limited to 1366 x 768 or similar. With a desktop bar at the bottom that must be shown, a window may miss some important information unless it can be scrolled. XFCE allows settings to hide the desktop bar when a window is maximised, thus gaining the extra vertical space that could be valuable.



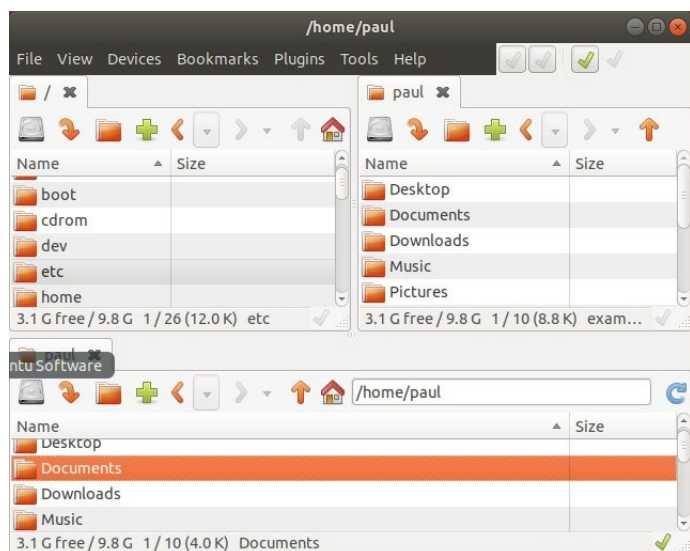
*Here we see the same desktop as shown above with the Firefox web browser running in a full screen window – the browser window has covered the horizontal bar to gain more vertical space.*

The second topic was SpaceFM, a multi-pane file manager that supports up to four panes, and tabs within the panes. SpaceFM aims to provide a stable, capable file manager with significant customisation capabilities. Capabilities include copying or moving files or directories between windows, showing file lists or icons, or thumbnails (for images and videos), configurable drag and drop and clipboard functions. Network support includes mount nfs, ftp, smb, and ssh.

Spacefm is available in the repositories of many Linux dis-



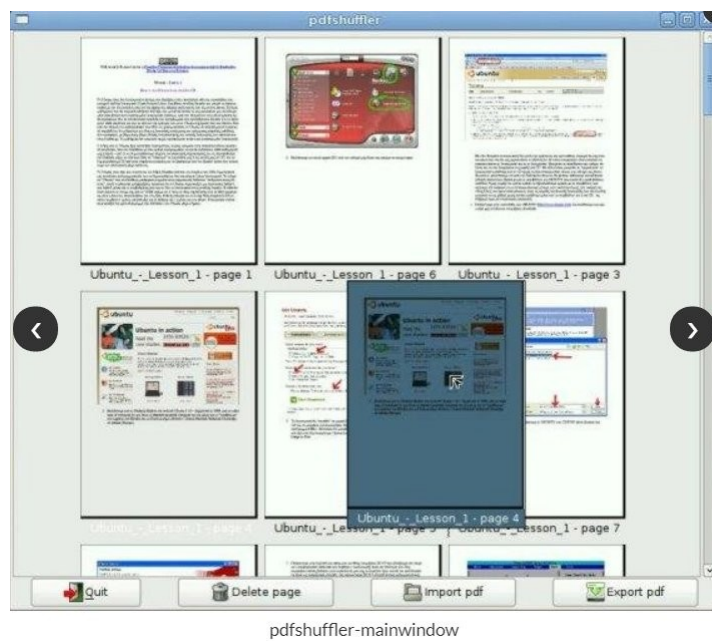
tributions. It is certainly worth evaluating by many of us for home use.



*Spacefm with three panes open*

The third (and final) item was about pdfshuffler, a simple edit facility for .pdf files. It falls short when compared with the more complete editors also available, because it is limited to cropping pages and re-ordering pages in a .pdf document. It includes the ability to export a page or group

of pages to a new file. These simple facilities can be very useful when handling larger .pdf files. It should be noted that page numbers in the file are not adjusted by the program when the pages are re-ordered. The illustration shows a file with a page in course of being moved.



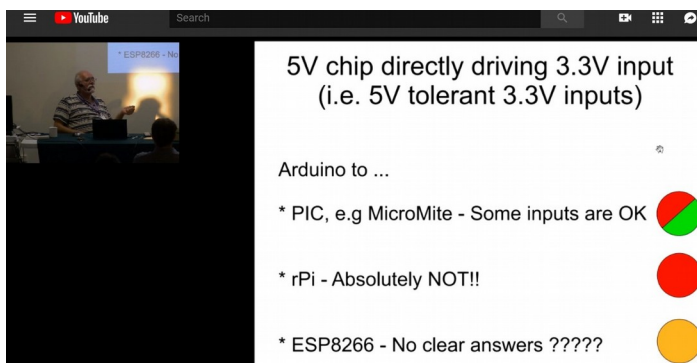
## Making SIG videos

*David Stonier-Gibson*

The last couple of months in the Microcontroller SIG we have been exploring making a video using the recently installed fixed mount, remotely steerable camera and the new recording computer.

In the March meeting Bill Donlon got a fairly clean video capture off the projector screen, with the presenter (coincidentally, me) in an inset picture. The presenter's voice was recorded off a headset microphone, and a hand-held microphone was used for audience questions. The recording was subsequently edited down by Stephanie Lancaster under the tutelage of the club's video veteran Roger Wragg.

The purpose of this exercise was to explore how to *easily* be able to capture SIG presentations and edit them to a presentable form. The whole aim was a simple process that can be replicated across other SIGs, initially those using the main room at Moorabbin. Editing in particular can be hugely time-consuming, so it is very much a matter of keeping it simple and settling for something "good



enough", not a slick commercial looking product. So my suggestion to the editors was "chop off the rubbish at head and tail and graft on a title and some credits". There was no attempt at polishing the body of the footage, and it didn't get a credits lead-out. We have since developed an idea that would allow a bit of polishing the content as well.

The point of all this is that if we can capture useful SIG presentations and get them spread around online, they will become a resource that serves to attract new members as well as providing value to existing members.

I have uploaded the video to my old business YouTube account as a temporary home, and importantly shared it to a couple of Melb PC FaceBook pages and to at least one Australian Arduino group. You can watch it at <https://youtu.be/zaCOTQyO9qQ>. Comments are welcome.

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**

Climate change has proved a popular topic again this month with the school kids protest, coal and various adverse weather events featuring heavily. Greg posted a link mentioning the Swedish teenager who sparked the wide-spread student protests being nominated for the Nobel Peace Prize. We had a lively discussion with a somewhat sceptical member, but with most of us firmly convinced anthropogenic climate change is a real and rapidly occurring phenomena his was a lone voice.

<https://www.yammer.com/melbpc.org.au/#/Threads/show?threadId=60961653686272>

## **Computing**

Several members reported intermittently receiving this somewhat mysterious notification while using Yammer, "Due to organizational policies, you can't access this resource from this untrusted device", a warning message usually associated with managed devices issued to employees by an organisation, so not applicable to Melb PC members. Despite our best efforts it remains a mystery but is possibly related to Yammer glitching (as it is wont to do from time to time) and failing to refresh security credentials. Answers on a postcard? It could all come down to Merv being a very naughty boy!

There have been a few others such as "Please log out of Yammer and log in again. Sorry for the inconvenience" (which at least mentions Yammer) and "We'd love your feedback! We have just two questions for you". All a bit of a mystery.

<https://www.yammer.com/melbpc.org.au/#/Threads/show?threadId=55639711105024>

## **Windows 10**

I had fun and games updating a Lenovo Ideapad, a small fanless laptop with only a 32GB SSD. Win10 gracefully handled the update from 1703 to 1803 – due to the limited space I was prompted to insert extra storage (I used a 16GB flash drive) and the process worked well. Not so smooth with the update from 1803 to 1809 as it took half a dozen attempts before I finally worked out that contrary to the somewhat cryptic error messages Windows was providing the real cause of the problems was files left over from the first failed update attempt rather than a lack of space, despite using an amply larger than suggested flash drive.

<https://www.yammer.com/melbpc.org.au/#/Threads/show?threadId=50306139127808>

## **NBN Questions and Comments**

Judy finally took the plunge and signed up for an NBN connection. Initially her chosen provider told her it was ready to go but as they hadn't yet sent the modem that was a bit difficult. Fortunately the modem did arrive a couple of days later and with a little bit of help from another member Judy was up and running and getting a very respectable 48Mbps down and 24Mbps up on a FTTC connection. There's just one peculiar problem - every time the phone is called the time on the phone gets reset to UTC rather than local time. Manually changing it back to local time works fine until the phone rings again and back it goes to UTC. Very odd.

<https://www.yammer.com/melbpc.org.au/#/Threads/show?threadId=57069038804992>

## **Market Place**

Dave continues to post links to assorted ex-lease laptops, all-in-ones and small form factor PCs from Ozstock and other suppliers. Generally good value if you're looking for a quality replacement device at a reasonable price but you do have to get in fairly quickly as they're quite popular and sell out. Note the prices mentioned don't include freight.

<https://www.yammer.com/melbpc.org.au/#/Threads/show?threadId=65341932961792>

**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:

Yammer Chit Chat group leader Judy Bednar, for some awful Jewish jokes posted this week, and because it's about time she appeared on DOTW!!

Resources minister, Matt Canavan, for declaring "now" is the right time to build new coal-fired power stations,

Dr Kevin Donnelly, a conservative commentator and academic for describing students striking over climate change inaction as victims of "politically correct teaching" and "barely literate or numerate".



# What's New on Facebook

*Hugh Macdonald*

Every month the club's two Facebook pages, [Melbourne PC User Group](#) and [The Melbourne Computer Club](#) are an exciting source of information about the latest events that members are engaging. Here's what's been going on lately:

[February began with Professor James Harland presenting to the monthly meeting on his robotics work at RMIT University.](#) The meeting also saw [the rollout of the QR code reader](#), which was spearheaded by Robert Brown and Peter Boin, and [Stephen Zuluaga presented George Skarbek with the award for best photograph in the APCUG Digital Photography competition in the wildlife category.](#)

The month also saw the introduction of the new Video Production Group at Moorabbin, which was previously the Video Inner East Group held at Ashburton. [The first month's topic was on how to use DaVinci Resolve to restore old footage](#), and there'll be many more similar topics in the months to come.

The Tech Projects Group began a new topic, [which was to use old 3.5 inch floppy drives controlled by Arduinos to make music](#). This is something that numerous users on YouTube have attempted in the past, with the floppy drives producing tunes like the Imperial Death March from Star Wars and Toto's seminal 1980s pop track, Africa. It'll be interesting to see what piece the Tech Projects Group can produce.

There have also been changes afoot at the club with [Rob Brown, John Shirt, and Stephen Zuluaga, amongst other members, working hard to transform the club's workshop space into a large maker space that will attract new people into the club.](#)

The March monthly meeting featured another Professor, Graham Farr, giving members an account of the life of William (Bill) Tutte, who was a contemporary of Alan Turing at Bletchley Park in the UK during the Second World War. Tutte had many other achievements in his life, and lived out his days in Canada.

March also saw the second meeting of the Video Production Group, which featured more tips on free software for getting the most out of your videos. A highlight this time around was a discussion of Shotcut, which is a powerful open source video editor for Windows, Linux and Mac.

There was also the Science and Tech Project Group's first tour of the workshop. More about that is discussed elsewhere in these pages.

As you can see the Melbourne PC User Group and Melbourne Computer Club Facebook pages are a great source of news about our club and news and useful information from the Internet. If you haven't liked them already, please do so to get this information delivered straight to your timeline.

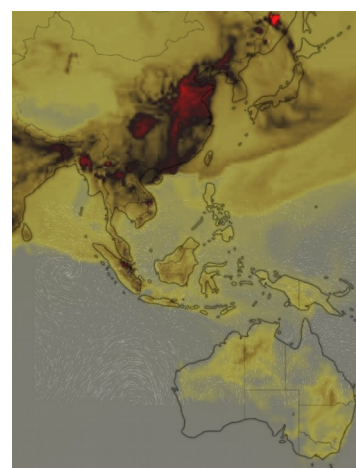
And if that's not enough for you, then you can always follow it for a good selection of IT based humour:



If you're a Group Convenor and would like your group featured on either of the Facebook pages, please send an email and accompanying photos to [hughm@melbpc.org.au](mailto:hughm@melbpc.org.au).

## For whom the wind blows

An interesting website recently: <https://www.windy.com> Windy.com provides a map of the whole world that you can set to display a wide range of atmospheric condition, defaulting naturally to wind speed and direction. I took a snapshot of carbon monoxide in our region. It speaks for itself.



# Special Interest Groups

Data Source: data-source for SIG-List

Updated: 25-Mar-2019 - 11:32

**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 - April-2019 meeting cancelled - Easter  
**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 - April-2019 meeting cancelled - Easter  
**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	<a href="mailto:east@melbpc.org.au">east@melbpc.org.au</a>
Location	Eley Park Community Centre, 87 Eley Rd, <b>Blackburn South</b> 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 - 12noon
Email	<a href="mailto:eastwsh@melbpc.org.au">eastwsh@melbpc.org.au</a>
Location	Wadham House, 52 Wadham Parade, <b>Mount Waverley</b> Melway:61.E12
Convenor(s)	Paul Woolard - 0417 566 209 <a href="mailto:pwoolard@melbpc.org.au">pwoolard@melbpc.org.au</a> 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	<a href="mailto:essendon@melbpc.org.au">essendon@melbpc.org.au</a>
Location	Nancye Kirchner Neighbourhood Centre, Doyle Street (corner Somerset St), <b>Avondale Heights</b> 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	<a href="mailto:essendon@melbpc.org.au">essendon@melbpc.org.au</a>
Location	Nancye Kirchner Neighbourhood Centre, Doyle Street (corner Somerset St), <b>Avondale Heights</b> Melway:27.D6
Convenor(s)	John Guegan - 9317 7114

## Essendon - Various topics

Date Jan	No Meeting
Feb-Nov	Third Fri - April-2019 meeting cancelled - Easter
Dec	Second Fri of month
Time	9:30am - 12noon
Email	<a href="mailto:essendon@melbpc.org.au">essendon@melbpc.org.au</a>
Location	Nancye Kirchner Neighbourhood Centre, Doyle Street (corner Somerset St), <b>Avondale Heights</b> 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	<a href="mailto:everything-apple@melbpc.org.au">everything-apple@melbpc.org.au</a>
Location	Melb PC HQ, Level 1, 479 Warrigal Rd, <b>Moorabbin</b> Melway:78.D8
Convenor(s)	Peter Emery <a href="mailto:everything-apple@ausom.net.au">everything-apple@ausom.net.au</a> Sam Fiumara

## Genealogy East

Date Jan	No Meeting
Feb-Nov	Third Sun - April-2019 meeting cancelled - Easter
Dec	Third Sun of month
Time	12:30pm - 2:30pm
Email	<a href="mailto:geneast@melbpc.org.au">geneast@melbpc.org.au</a>
Location	Vermont South Community Centre, 1 Karobran Drive, <b>Vermont South</b> 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, <b>Mount Waverley</b> Melway:61.E12
Convenor(s)	Kelvin Cording - 9438 1047 <a href="mailto:kcording@bigpond.net.au">kcording@bigpond.net.au</a> John Hall - 9803 2731 <a href="mailto:johnhall@melbpc.org.au">johnhall@melbpc.org.au</a>

## iHelp

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

## Investment Tools - WASINT

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

## Linux Workshop - Moorabbin

<b>Date Jan</b>	<b>In Recess</b>
<b>Feb-Nov</b>	<b>In Recess - seeking volunteer leaders</b>
<b>Dec</b>	<b>In Recess</b>
<b>Time</b>	
<b>Email</b>	<a href="mailto:linuxworkshop@melbpc.org.au">linuxworkshop@melbpc.org.au</a>
<b>Location</b>	Melb PC HQ, Level 1, 479 Warrigal Rd, <b>Moorabbin</b> Melway:78.D8
<b>Convenor(s)</b>	David Hatton

## MACE (Atari Computers)

<b>Date Jan</b>	<b>Third Sun - BBQ - check with Convener for location</b>
<b>Feb-Nov</b>	<b>Third Sun - inc. 21-Apr-2019 Easter Sun</b>
<b>Dec</b>	<b>Third Sun of month</b>
<b>Time</b>	10am - 2pm
<b>Email</b>	<a href="mailto:maceatari@gmail.com">maceatari@gmail.com</a>
<b>Location</b>	Melb PC HQ, Level 1, 479 Warrigal Rd, <b>Moorabbin</b> Melway:78.D8
<b>Convenor(s)</b>	Andrew Boschan <a href="mailto:andrewbosc@gmail.com">andrewbosc@gmail.com</a>

## Microcontroller

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

## Microcontroller Workshop

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

## Mornington Peninsula - General, Q&A

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

## Mornington Peninsula - Family History

<b>Date Jan</b>	<b>Third Mon of month</b>
<b>Feb-Nov</b>	<b>Third Mon of month</b>
<b>Dec</b>	<b>No Meeting</b>
<b>Time</b>	1:30pm - 4:30pm
<b>Email</b>	<a href="mailto:peninsula@melbpc.org.au">peninsula@melbpc.org.au</a>
<b>Location</b>	Mornington Community Information and Support Centre, 320 Main St, <b>Mornington</b> Melway:104.E12
<b>Convenor(s)</b>	Colin Ackehurst <a href="mailto:colin_a_ackehurst@bigpond.com">colin_a_ackehurst@bigpond.com</a>



## 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	<a href="mailto:peninsula@melbpc.org.au">peninsula@melbpc.org.au</a>
Location	Mornington Community Information and Support Centre, 320 Main St, <b>Mornington</b> Melway:104.E12
Convenor(s)	Colin Ackehurst <a href="mailto:colin_a_ackehurst@bigpond.com">colin_a_ackehurst@bigpond.com</a>

## Multimedia Home Entertainment

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

## Music

Date Jan	In Recess
Feb-Nov	In Recess - seeking volunteer leaders
Dec	In Recess
Time	
Location	Melb PC HQ, Level 1, 479 Warrigal Rd, <b>Moorabbin</b> Melway:78.D8

## 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	<a href="mailto:ne-android@melbpc.org.au">ne-android@melbpc.org.au</a>
Location	Hawdon Street Community Hall, 80 Hawdon Street, <b>Heidelberg</b> Melway:32.A4
Convenor(s)	Colin Lampshire 9857 5372 or 0413 640 408 <a href="mailto:lampshir@melbpc.org.au">lampshir@melbpc.org.au</a> 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	<a href="mailto:neday@melbpc.org.au">neday@melbpc.org.au</a>
Location	Hawdon Street Community Hall, 80 Hawdon Street, <b>Heidelberg</b> Melway:32.A4
Convenor(s)	Colin Lampshire 9857 5372 or 0413 640 408 <a href="mailto:lampshir@melbpc.org.au">lampshir@melbpc.org.au</a>

## North East Genealogy

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

## Northern Suburbs Linux

Date Jan	Third Mon of month
Feb-Nov	Third Mon of month
Dec	No Meeting
Time	7:30pm - 9:30pm
Email	<a href="mailto:nslig@melbpc.org.au">nslig@melbpc.org.au</a>
Location	Community Meeting Room, Watsonia Library, 4 Ibbotson St, <b>Watsonia</b> 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	<a href="mailto:kazkev@melbpc.org.au">kazkev@melbpc.org.au</a>
Location	Melb PC Yammer online forum
Convenor(s)	Kevin Martin Evening only - 5964 7627 or 0407 343 162

## Programming

Date Jan	In Recess
Feb-Nov	In Recess - seeking volunteer leaders
Dec	In Recess
Time	
Email	<a href="mailto:programming@melbpc.org.au">programming@melbpc.org.au</a>
Location	Melb PC HQ, Level 1, 479 Warrigal Rd, <b>Moorabbin</b> 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	<a href="mailto:raspi-moorabbin@melbpc.org.au">raspi-moorabbin@melbpc.org.au</a>
Location	Melb PC HQ, Level 1, 479 Warrigal Rd, <b>Moorabbin</b> Melway:78.D8
Convenor(s)	Mohan Gupta - 0421-214-081 Rob Brown - 0419 285 806

## Raspberry Pi - Mt Waverley

Date Jan	Fourth Fri of month
Feb-Nov	Fourth Fri of month
Dec	No Meeting
Time	10am - 12noon
Email	<a href="mailto:raspi@melbpc.org.au">raspi@melbpc.org.au</a>
Location	Wadham House, 52 Wadham Parade, <b>Mount Waverley</b> Melway:61.E12
Convenor(s)	John Hall - 9803 2731 <a href="mailto:johnhall@melbpc.org.au">johnhall@melbpc.org.au</a> Lance Lloyd - 9884 5559 <a href="mailto:lancelloyd@melbpc.org.au">lancelloyd@melbpc.org.au</a>

## Science & Tech Projects

Date Jan	First & Third Sun of month
Feb-Nov	First & Third Sun of month - 21-Apr-2019 meeting cancelled - Easter
Dec	First Sun of Dec (no second meeting in Dec)
Time	1pm - 5pm
Email	<a href="mailto:tech-projects@melbpc.org.au">tech-projects@melbpc.org.au</a>
Location	Melb PC HQ, Level 1, 479 Warrigal Rd, <b>Moorabbin</b> Melway:78.D8
Convenor(s)	Stephen Zuluaga Dani Martin

## Sunbury Daytime - New Users

Date Jan	No Meeting
Feb-Nov	First Thu of month
Dec	First Thu of month
Time	9:30am - 12noon
Email	<a href="mailto:sunburydaytime@gmail.com">sunburydaytime@gmail.com</a>
Location	Sunbury Senior Citizens Centre (back room), 8 O'Shanassy Street, <b>Sunbury</b> 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	<a href="mailto:sunburydaytime@gmail.com">sunburydaytime@gmail.com</a>
Location	Sunbury Senior Citizens Centre (back room), 8 O'Shanassy Street, <b>Sunbury</b> 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	<a href="mailto:sunburydaytime@gmail.com">sunburydaytime@gmail.com</a>
Location	Sunbury Senior Citizens Centre (back room), 8 O'Shanassy Street, <b>Sunbury</b> 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. April-2019 meeting cancelled - Anzac Day
Dec	No Meeting
Time	9:30am - 12noon
Email	<a href="mailto:sunburydaytime@gmail.com">sunburydaytime@gmail.com</a>
Location	Sunbury Senior Citizens Centre (back room), 8 O'Shanassy Street, <b>Sunbury</b> Melway:382.E4
Convenor(s)	Kevin Hale - 9740 5786



## Video Production

Date Jan	No Meeting
Feb-Nov	Second Mon of month
Dec	Second Mon of month
Time	7pm - 9:30pm
Location	Melb PC HQ, Level 1, 479 Warrigal Rd, <b>Moorabbin</b> 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, <b>Moorabbin</b> 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, <b>Moorabbin</b> 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), <b>Bentleigh East</b> 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, <b>Moorabbin</b> 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, <b>Moorabbin</b> Melway:78.D8
Convenor(s)	Fleur Stephens - 0407 330 963

## Windows Plus

Date Jan	No Meeting
Feb-Nov	Third Sat - April-2019 meeting cancelled - Easter
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, <b>Moorabbin</b> Melway:78.D8
Convenor(s)	John Swale - 0417 530 766 Barry Stone

# April Calendar

<div>  <div> V2—updated—25-mar-2019 </div> </div> <h2>SIG &amp; Other Meetings — Apr-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>1</b>  	<b>2</b>  	<b>3</b> North East Genealogy SIG 80 Hawdon Street Heidelberg 10am - 12noon MONTHLY MEETING Melb PC HQ, Moorabbin 7pm - 9:30pm then Supper (WAFFLE) at Fonq's 9:35pm	<b>4</b> Sunbury Daytime SIG New Users 9:30am - 12noon	<b>5</b> Essendon SIG Main meeting Avondale Heights 9:30am - 12noon Multimedia Home Entertainment SIG Mount Waverley 10am - 12noon	<b>6</b>  
<b>7</b> Science & Tech Projects Group (previous name Tech Projects SIG) Moorabbin 1pm - 5pm	<b>8</b> Access (database) and Excel SIG Moorabbin 6:30pm - 8:30pm Video Production Group Moorabbin 7pm - 9:30pm	<b>9</b> Investment Tools - WASINT SIG Moorabbin 10:30am - 12:30pm	<b>10</b> Video Production - Sony SIG Moorabbin 10am - 12noon North East Daytime & Photography SIG Heidelberg 10am - 12noon Communications SIG Moorabbin 7pm - 9:30pm Microcontroller SIG Moorabbin 7pm - 9:30pm	<b>11</b> Sunbury Daytime SIG Advanced 9:30am - 12noon East SIG Blackburn South 7:30pm - 9:30pm	<b>12</b> Essendon SIG Open Forum Avondale Heights 9:30am - 12noon Hardware SIG Mount Waverley 10am - 12noon Casey SIG Beaconsfield 1pm - 3:30pm	<b>13</b> Microcontroller Workshop SIG Moorabbin 12noon - 5pm Raspberry Pi - Moorabbin SIG 2pm - 4pm
<b>14</b> East Workshop SIG Mount Waverley 10am - 12noon	<b>15</b> Mornington Peninsula SIG General inc Q&A Mornington 9:30am - 12noon Family History Mornington 1:30pm - 4:30pm Northern Suburbs Linux SIG Watsonia 7:30pm - 9:30pm	<b>16</b> Everything Apple SIG Moorabbin 2pm - 4pm Melb PC Committee Moorabbin 7pm	<b>17</b> North East Android SIG Heidelberg 10am - 12noon	<b>18</b> Sunbury Daytime SIG Main Meeting 9:30am - 12noon Bayside SIG Brighton 10am - 12noon Music SIG In Recess	<b>19</b> PUBLIC HOLIDAY Easter Essendon SIG Various topics. Avondale Heights Cancelled for Easter Digital Images SIG Including Photoshop Mount Waverley Cancelled for Easter PC Update - Articles Deadline	<b>20</b> PUBLIC HOLIDAY Windows Plus SIG Moorabbin 10am - 12noon Cancelled for Easter
<b>21</b> PUBLIC HOLIDAY Beginners East (BEAST) SIG Vermont South Cancelled for Easter MACE (Atari Computers) SIG Moorabbin 10am - 2pm Science & Tech Projects Group (previous name Tech Projects SIG) Moorabbin Cancelled for Easter Genealogy East SIG Vermont South Cancelled for Easter	<b>22</b> PUBLIC HOLIDAY	<b>23</b>  	<b>24</b> Video Production - Pinnacle SIG Moorabbin 10:00am - 12:30pm Mornington Peninsula SIG Family History - Advanced DNA (LAST Wed of month) Mornington 2pm - 4pm. PC Update - Reports deadline	<b>25</b> PUBLIC HOLIDAY - Anzac Day Sunbury Daytime SIG Maintenance & Linux (Fourth & fifth Thu of month) 9:30am - 12noon Cancelled - AnzacDay	<b>26</b> Raspberry Pi - Mt Waverley SIG 10am - 12noon	<b>27</b> Microcontroller Workshop SIG Moorabbin 12noon - 5pm
<b>28</b> Website Design SIG Tutorials Moorabbin 2pm - 4pm Troubleshooting Moorabbin 4pm - 6pm	<b>29</b>  	<b>30</b>  		<b>Changes</b> Please advise changes to: <a href="http://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>