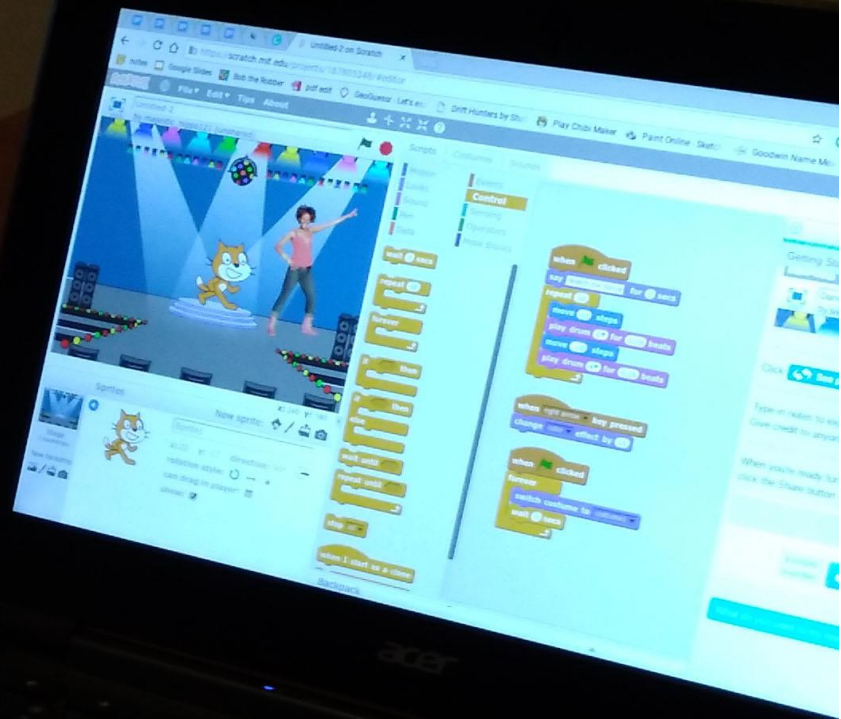# >PC_Update

April 2018

Inspiring the next generation of programmers.

Graphical drag and drop programming makes "coding" accessible even to young kids. Full story page 3

MELB PC USER GROUP

>PC_Update

Membership application form online

iHelp – get the help you need with your computer
Ph (03) 9276 4088 iHelp@melbpc.org.au
Live chat.
Prepare yourself for remote iHelp by installing TeamViewer

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

Monthly Meeting Live Stream
Tune in here at 7.00pm on Wed 7th of March to view the Monthly Meeting live over the Internet. Test Transmission usually commences at around 6.30pm   http://tv.melbpc.org.au

Stop press: What type of Internet connection do you use at home? Please take the survey! https://www.yammer.com/melbpc.org.au/threads/1037427240

Editorial

"Code" is a 4-letter word!

It has become very much the "in" thing to refer to computer programming, especially when trying to appeal to kids, as "coding". I personally dislike that term. To me it implies that writing a program is a simple matter of sitting down and typing in a few computer commands, and all will be well in the world.

To me, equating programming with coding is no different to equating cabinetmaking with sawing. Coding is one of the last steps in a workflow that involves problem definition, specification, program design, data structure design, *coding* and debugging. All these often in a repeated loop that gradually iterates towards an acceptable solution. Or am I just a grouchy old fogy? Tell me what you think.

Obits and editorial policy

We all feel saddened when a fellow member dies, and there is an understandable urge to memorialise that person. The other day I was offered an obituary for a recently deceased member. After consultation with Committee I decided not to run it. The reason is in no way disrespect for the departed, but quite simply that with an ageing membership this could far too easily become a rather morbid publication if we did an obit for every member who dies. So the rule of thumb is Honorary Life Members and others who have made extraordinary contributions to our club.

In this issue

Cover story: Inspiring young programmers

David Stonier-Gibson

There have been several programming languages over the years that were designed specifically for teaching purposes, languages that aimed to let students get results quickly, with a minimum number of formalities to comply with.

The first such language I used was FOCAL, an easily learned language that ran on the Digital Equipment Corporation PDP8 family of minicomputers in the late 1960s. While FOCAL was arguably not specifically intended as a learning language, it certainly lowered the bar sufficiently to allow neophytes and casual user to get useful results.

The big one in that era, however, was BASIC, for Beginner's All-purpose Symbolic Instruction Code, designed at Dartmouth College in 1964. BASIC is still around today, albeit in highly advanced versions, some of which are anything but suitable for beginners. The RoboMite robot we are using in the upcoming Robotics Exploration Workshop uses an advanced BASIC.

Another notable teaching language is Logo, from the Greek logos meaning word or "thought". Logo is especially famous for its turtle graphics, which allows a user to draw complex geometric shapes on the computer screen, or with a mechanical turtle fitted with a pen. What is less know is that Logo is also a very sophisticated language in the mould of LISP (but lacking Lots of Irritating Small Parentheses).

The notable thing about Logo with turtle graphics, which became very popular in schools in the 80s and 90s, was that textual code typed into the computer resulted in a graphical output. Then, in 2003, researchers at M.I.T. introduced a new language, a

A simple Scratch program. Scratch actually incorporates Turtle graphics, but expands it

descendent of LOGO called Scratch. In Scratch the user constructs a program by dragging function blocks from a pallet and joining them together. Most function blocks have an associated properties dialogue screen. There is no doubt that Scratch

lowers the bar for kids as young as 8, though I believe it will be a burden rather than a benefit once the student wants to write complex programs. Scratch is available for the popular microcontroller boards Raspberry Pi and Arduino, as well as for tablets and PCs.

When we first started out on the robotics workshop idea, we aimed to use Scratch and a commercially

```
57  '------------------- RGB LED
58  ' Set 1 to 3 selected colours
59  ' Arguments range 0 - 255 to reflect common
60  ' colour mixing convention
61  SUB SetRGB(r AS INTEGER, g AS INTEGER, b AS
62    SetPWM1(2, r/255, 50) 'Board wiring swaps
63    SetPWM1(1, g/255, 50)
64    SetPWM1(0, b/255, 50)
65  END SUB
```

A snippet of MMBasic code. This is actually a tiny bit of what I am putting "under the hood" of the RoboMite to insulate our students from some of the residual hardware complexities in MMBasic.

available wheeled robot. Two things changed our minds:

1. The robot that uses Scratch was rather pricey (~$150) and I could make one for well under half, with a lot more educational features.
2. A STEM teacher persuaded us that kids these days are well and truly over Scratch by the time they hit their teen years, and we wanted to aim at 12-13-year-olds who could absorb fairly sophisticated learning about electronics and sensors, etc. So a text based "real" language would be preferable to a twee graphical language.

Given I was to make my own robot, the obvious language choice became a BASIC variant called MMBasic, which comes with two bonuses: A member works for the company that makes the chips MMBasic runs on, and MMBasic is an Australian innovation.

Oh, yes, the cover photo: One of my numerous granddaughters playing with Scratch. No connection to the RoboMite lurking in the background!

Note: *App Inventor is another teaching language, a derivative of. App Inventor is discussed in the SIG report for Northern Suburbs Linux SIG.*
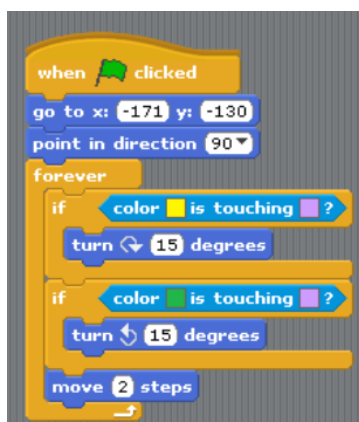
Ten Questions

Graham Hurford

Each month we will ask a club member ten questions. Seven will be constant — every member will be asked the same seven questions. Three more questions will be asked and these three will differ from person to person, month to month. This is not meant to be a psychological profile but just a fun way to get to know someone. Questions can be answered in any way the members wishes to. I am counting the driverless car question as one question. No correspondence will be entered into.

This month we talk to respected member and iHelp guy, David Simpson

Q: For how long have you been a member of Melb PC?

A: Hard to remember. Years ago, I used to get programs from the BBS. A programmer friend I had working for me was a member & he convinced me to join cos he told me Melb PC was not for profit group. My m/ship number has only 4 digits & I guess I joined around the early/mid 90's?

Q: You are stranded on a deserted island. It has no electrical power. What three things would you want to have with you?

A: A bible, a knife and a portable pedal or similar powered transceiver.

Q: If you could make one rule that we all must obey, what would it be?

A: Do unto others as you would have them do unto you.

Q: Can you recite a poem?

A: Not really, hang on: The boy stood on the burning deck.

Q: What morals should we program into intelligent machines?

A: Rule no. 1 Do no harm to any Human.

Q: What's the greatest invention of your lifetime?

A: Tough question. I think the development of the microprocessor is up there. So many devices and inventions rely on microprocessors to function, that seems to me to be a fair choice.

Q: Should a driverless car kill its passenger to save five strangers? A driverless car is on a two-way road lined with trees when five children suddenly step out into traffic. The car has three choices: to hit the children, to hit oncoming traffic or to hit a tree. The first risks five lives, the second risks two, and the third risks one. What should the car be programmed to choose? Should it try to save its passenger, or should it save the most lives? Would you be willing to get in a car knowing it might choose to kill you? What if you and your child were in the car, would you get in then? And should every car have the same rules, or should you be able to pay more for a car that would save you?

A: I think the car should protect its passengers, as rule number one. Other possibilities are chance and 'should not happen' if everyone behaves according to the rules. I would expect this to be the standard for all driverless vehicles.

Q: If not here, where would you like to be?

A: Heaven

Q: When was your happiest memory?

A: My wedding day.

Q: If you could take a year off from working, what would you do?

A: Very hard question because each time I think of something I'm happy doing, I realise another person would call that: work. So I don't see many alternatives. Perhaps: drinking cold beer in a shady spot in Nth QLD. through the use of crowds and new structured analytic techniques.

This month's meeting
Wed 4th April 7pm at Moorabbin

This month's guest speaker is Tim van Gelder from Melbourne Uni. He will be outlining the SWARM project, which seeks to develop a software platform and associated methods for harnessing many minds to reasoning about complex problems. Sort of crowd sourcing intelligent thinking!

How to save electricity costs

George Skarbek

When I organised for the installation of the 5.1 kw Solar Panels at Melb PC at the end of last year, the estimated electricity savings were going to be just over $1,000 pa. After the first two months I looked at the results and was pleasantly surprised to see that we had only exported a fraction of one percent of the generation. This is very good as using your own generation is more cost effective than selling it at a lower price to the grid. The current Feed-in-Tariff is 11.3 cents/kwh and we were paying 15.1 cents/kwh to buy power

In early March the new electricity bill went from $509 to $1,636. Admittedly our usage went up a bit over summer. The main reason is that the cost of electricity has more than doubled since that last bill.

Our rooftop solar installation, saving $2,000 p.a.
Photo: Brian Davis

The good news is that our annual saving due to solar panels will now be $2,000 which results in a payback period of under three years. The bad news is that the server room would be costing us $10,000 annually because of the power used there.

I was able to dramatically reduce this cost as you will see from the examples below.

I can show you how to save electricity costs

To find the best deal, both for my house electricity bill and now for Melb PC I use the Government site:

https://compare.switchon.vic.gov.au/

and I upload 12 months of the actual half-hourly readings. These can be downloaded from your supplier of power from their appropriate login page, not from your retailer. My supplier for both home and for Melb PC in Moorabbin, is United Energy.

To obtain this data all you need is a complementary account with them,

that will give you hourly to annual graphic data of your use and electricity exports, if applicable. Alternatively, you can ask them to mail that file to you. After uploading it you will receive, typically within seconds, a list of up to 200 plans and then just select the cheapest. You can also upload your last bill to this Switchon site to obtain a better result as it will show you what you would pay for the full year with your current provider, at the new rates.

I have been doing this for many years and saved a few hundred dollars every time I change. The reason for this is that some retailers have special deals to sign you up and then after some months the price goes up, often significantly, and usually without notification. This has happened to me.

Below is the result of the cost of power for a full year with the current prices for Melb PC. By doing nothing,

Seeking a better deal for Moorabbin. $7000 p.a. saved with an hour's work!

Your Current Energy Offer edit			Offers sorted by discounted price ⓘ	
No conditional discounts $1,630	$1,140 /year		Show only the top offer for each retailer	

ENERGY RETAILERS	FEATURES	CONTRACT	EST. PRICES (inc. GST)	RESET RESULT

BEST PRICE why this offer?

Retailer		Features	Contract	Estimate	Price
☑ GloBird Energy ID: GLO65502MR view offer		🔲	NO Lock-in Contract Exit fee: $0	Estimate includes solar credit of $110 No conditional discounts $850	$850 /year
☑ Momentum Energy ID: MOM66618MR view offer		💼📈	NO Lock-in Contract Exit fee: $0	Estimate includes solar credit of $110 No conditional discounts $860	$860 /year
☐ GloBird Energy ID: GLO65493MR view offer		⏰	NO Lock-in Contract Exit fee: $0	Estimate includes solar credit of $110 No conditional discounts $1,390	$870 /year
☐ tango Tango Energy Pt... ID: TAN66120MR view offer			NO Lock-in Contract Exit fee: $0	Estimate includes solar credit of $110 No conditional discounts $950	$900 /year
☐ GloBird Energy ID: GLO65887MR view offer		⏰	NO Lock-in Contract Exit fee: $0	Estimate includes solar credit of $110 No conditional discounts $1,440	$900 /year
☐ GloBird Energy ID: GLO65473MR view offer		⏰	NO Lock-in Contract Exit fee: $0	Estimate includes solar credit of $110 No conditional discounts $1,440	$900 /year
☐ GloBird Energy ID: GLO67016MR view offer		🔲💼	NO Lock-in Contract Exit fee: $0	Estimate includes solar credit of $110 No conditional discounts $910	$910 /year
☐ GloBird Energy ID: GLO65507MR view offer		🔲	NO Lock-in Contract Exit fee: $0	Estimate includes solar credit of $110 No conditional discounts $910	$910 /year
☐ Alinta Energy ID: ALI64219MR view offer		⏰	NO Lock-in Contract Exit fee: $0	Estimate includes solar credit of $110 No conditional discounts $1,430	$940 /year

$270 saving on my home electricity bill.

just continue paying the bill (Lazy Tax) with the same usage, we would lose $7,150 each year.

By spending about one hour and switching, I saved Melb PC over $7k pa.

Adjacent is the result of my home bill which arrived in early March. You will see that what was the best deal less than 6 month ago is no longer the best and I can save $290 pa by switching. This table shows the first seven cheapest deals based on our actual usage. The 20th cheapest was $1,300 pa or $470 worse than the best. See my results below. The day after my new high bill arrived, I switched.

Folks, shop around! The savings are there regardless of whether you have solar panels or not.

Don't pay the Lazy Tax! Shop around whenever your bill increases. Don't stop after finding a good deal on your electricity bill. When your house and contents policy comes up or when your car insurance policy comes up for renewal, shop around at least once every two years. You should be able to save a few hundred more dollars.

The Melb PC Web Development Group

David Hatton & George Skarbeck.

Our website is getting quite old. It is not very attractive to any potential new members who may stumble into it.

There is a small team that is working to improve our website and consequently the image of our group. On the to-do list are fixing any broken links, removing obsolete content, and generally improving the look and feel as this currently reflects badly on our organisation.

We have very recently been able to set up a development website to allow the Web Development Group to try out any significant changes to make sure they work correctly before changing our production website. We have also recently engaged a web hosting company to carry out the system administration tasks required for our development and production systems, making life a little easier for our own system admins.

One of the historical problems has been that there has been no Web Master and for many years a number of members have been working on different parts of the website. For some time, John Hollow has been the main contributor and worker on our web pages, and we thank him for his many contributions.

Web development group members hard at work. Around the table, clockwise from left: Kelvin Cording, David Hatton, John Swale, Stewart Gruneklee, Paul Woolard and - behind the camera - George Skarbek

Understandably, John has decided that he needs to wind down his website work to a saner level, and so we needed to encourage someone to take on the supervision of maintenance and development of our website content. David Hatton has now accepted this role

Photography: Size does matter, Part 1

David Stonier-Gibson

A slightly more technically advanced topic this month: Sensor size.

When buying a digital camera, the main headline specification everyone looks at seems to be megapixel count - 6Mpx, 12Mpx, 18Mpx, 24Mpx. (The other one is zoom range, but that will have to wait for another time).

The image sensor is the bit that takes the place of film; it converts the light intensity at millions of points in the image into electrical signals. It is also the most expensive part of the camera. The cost of an image sensor, hence the price of a camera, is strongly dependent on the dimensions in square millimetres of the sensor. How many pixels are fitted onto the sensor has only a secondary effect on cost. But the quality of the image will depend on the size of the individual pixels. We all understand that the more pixels the more detail the sensor can capture, which is a Good Thing. But there is an opposing consideration: The camera lens focusses an image onto the sensor. The pixels in the sensor convert light intensities in different parts of the scene into proportional electric currents. A small pixel will generate a smaller current for a given light intensity than will a large pixel (that's why the solar panels on houses are large, so they can produce a lot of current). Unfortunately, the electronics surrounding the pixel will generate unwanted random currents called noise - that's an immutable fact of physics. The amount of noise is independent of the size of the pixel (the electronics, amplifiers etc, exist independent of the sensor). So the smaller the pixel the more significant the noise. And the less light the more significant the noise. In a camera, noise translates to graininess in the image.

Back to overall sensor size: For a given sensor size, fewer pixels will mean larger pixels and relatively less noise. Alternatively, for a given pixel count, the larger

Taken in 2004 with my Canon 300D entry level DSLR camera sporting a 6Mpx sensor. An A3 print adorns his Mum;'s wall, and it would easily stand enlarging to A2 and beyond.

the sensor the lower the noise (and the dearer the camera). Clearly there is a design trade-off between pixel count and noise performance; large pixel counts may be impressive in advertisements, but they are not the be all and end all.

Should you worry about this? It depends on what you are after. If you will only ever be publishing your pictures on social media or making small 10x15cm prints, it won't matter. But if you want to make large canvas prints to decorate a wall, or take photos in low light conditions without using a flash, it will matter.

The sensors in phone cameras are invariably small; there is just not space for a large sensor and the larger lens that must follow. The sensors in DSLR cameras are much larger, a DSLR will generally produce pictures capable of more enlargement, and work better in low light level conditions.

Next month I will reveal when a small sensor will produce *better* pictures*!*

Image completely RAW, out of the camera. He now wears size 15 shoes!

The month on Yammer

Dennis Parsons and Roger Brown

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://yammer.com/melbpc.org.au/ and log in.

Group: Computing

Useful tip: next time you're flying with a digital boarding pass take a screenshot while in WiFi or data coverage so it's available at all times, even in flight mode. No more panicked last-minute hunting for coverage!

https://www.yammer.com/melbpc.org.au/#/Threads/show?threadId=1052140306

Group: Computing

Tim had to reinstall Win10 and his freshly reinstalled scanning software could no longer find his 10 year old Epson scanner. After we failed to solve Tim's woes his son came to the rescue and suggested using the inbuilt scanner app! If only we'd known such a thing exists. Now we do.

https://www.yammer.com/melbpc.org.au/#/Threads/show?threadId=1054426496

Group: NBN Questions and Comments

Survey: Thanks to everyone who participated in the Melb PC Yammer NBN survey. Thus far we've had 80 responses which is great! I haven't included the two responses claiming "tin cans & string" in the final

results despite wet string being ADSL capable technology, but have included the single dial-up

response. Clearly we still have a long way to go with NBN installations as only 1/3 of us have an NBN connection. Interestingly HFC (hybrid fibre coax) has a 50% share of the NBN connections, despite the recent pause in installations.

https://www.yammer.com/melbpc.org.au/#/Threads/show?threadId=1037427240

DOTW, a weekly feature in the Chit chat group

DOTW is a light-hearted 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.

Recent winners of this prestigious award have been:

DOTW, our monthly review of the sillier events of each week, continues to be its nonsensical self. Winners since the last edition of PC Update have been:

- Employment Minister Michaelia Cash for her extraordinary threat to a Senate committee she would "name every young woman in Mr Shorten's office of which rumours in this place abound".
- SafeWorkSA, for its decision that the murder of nurse Gayle Woodford was not linked to the night-time on-call work she was tasked with.
- Peter Dutton for his suggestion that visas be offered to *white* South African farmers who he claims to be facing violence and land seizures at home.
- Staff at the Perth Myer outlet who assumed the worst and called security when they observed a young aboriginal customer temporarily left unattended by another sales assistant.

Regrettably, your worthy magazine editor failed in his efforts to achieve the lofty status of DOTW winner this month. Better luck next month David. [D'oh! -Ed]

A dictionary at your fingertips (Google tip)

David Stonier-Gibson

Are you sometimes unsure of the meaning of a word, or the spelling, or looking for an antonym (opposite)? Google to the rescue! Just type in the word preceded by 'dictionary:', like this (on one line): -

```
dictionary: antidisestablishmentarianism
```

Go ahead, give it a try! You may also discover something interesting about that word, something I didn't know until I wrote this little piece!

You can also use the "command" 'synonym:' or 'antonym:' to home in on words with a similar or opposite meaning.

Reports

• President's Report March 2018

John Hall, President

Fair Work Commission, Allianz Insurance and Workcover

At the Fair Work Commission on the 8th of February Dianne Vogt was given until the 23rd of March to produce details of the claim that she was making at that time that we owed her $9000 in back payments. We stated that we thought it was only $1885 based on figures provided by Bill Ford. The Commissioner then asked Frank Maher and myself whether we would settle for $2000 in order to close the matter. We agreed to this and the Commissioner offered this to Ms Vogt who abjectly rejected it. On the 8th of March we received some documents from Ms Vogt via the Commissioner claiming that we owed her $31,000 in Annual and Long Service leave entitlements. We refute this claim and have engaged the Victorian Chamber of Commerce and Industry (VCCI) to assist us in this matter.

The Melbourne Computer Club

David Stonier-Gibson has requested that we set up a new Web Site for the Melbourne Computer Club. I have created the Web Hosting domain for this site on the Amazon Web Server in Sydney and have passed the details on to Stephen Zuluaga so that he can set the site up in time to support David's RoboMite Project.

The Melbourne PC User Group Web Site

Our previous Developer, Majestic Systems, have disbanded their Web Development Team and after thoroughly researching the skills needed we have engaged a CiviCRM Specialist Organisation, Audienceware, to support and maintain our Production Web Site. Audienceware have successfully moved our main web site from a Majestic owned site to our own (Melb PC owned) Amazon Web Server over the past weekend (24th/25th of March) and will be embarking on some enhancements to our Web Site over the coming months. However, the main content of our site will continue to be contributed by our Volunteer Team (led by George Skarbek) and if you feel that you can assist in updating the content of this site (which will require WordPress skills) please feel free to contact myself or George to discuss this.

Our Statement of Purpose

The purposes of the Association are to conduct, on a non-profit basis, activities to help members learn and use systems and devices using various technologies, especially computing, software, and communications technology (including the Internet, personal computers & devices), to achieve the following outcomes:

- Advancing computer literacy;
- Advancing education and the exchange of ideas;
- Keeping members up to date on developments in computer and information technology and helping members to exchange information;
- Representing members in public debate in areas of interest including law reform proposals;
- Engaging with similar organisations; and
- Carrying out activities that benefit the Association

SIG Reports

SIGs are our Special Interest Groups. Some SIGs are based on shared interest, such as video editing, or genealogy; others are locality based, such a Mornington Peninsula or Casey. Some SIGs chose to submit reports of their meetings to this newsletter, while others run their own websites for member information.

• East SIG report, March 2018

Neil Muller

The March meeting commenced with Q&A conducted by George Skarbek. M.C. Paul Woolard arrives late with the projector.

Q: As you've recommended previously, I used the DOS command line tool "Cipher.exe" to write zeros and ones over personal data that I deleted. If I did a Format C, can I get back into Cipher to run it again?

A: What Cipher does is write binary zeros and ones in random patterns to all the empty space on a drive. Cipher can also be used to encrypt or decrypt data on NTFS drives. When you delete a file in Windows, a lower-case sigma is written in front of the file name. Anyone with a reasonable knowledge would be able to retrieve 98% of such deleted data. That's the reason you would use Cipher to write over that deleted data. To write over the unused portions of your C drive type "cipher /w:c"

Q: I did have a question, but I've now solved it myself but thought it might be of interest to others. Unbeknownst to me, Microsoft installed an app called "Films & TV" on my computer and as a result I could no longer view my videos. I've now changed all the default program settings back to VLC media player and everything is now working fine again.

A: Another option is to uninstall the Microsoft app. Windows won't do it but the free programs "iobit uninstaller" or "cCleaner" probably will. Both programs will also clean up any leftover registry entries. If you look around, you'll probably find other programs you don't need so uninstall those as well. When you do your backups, they will take longer, and the backup will be bigger with those unwanted programs included. The free version of cCleaner should be fine as the paid Professional version will give you features you probably won't need.

Q: Does anyone have any information on free software that will transcribe recorded speech to text? As I didn't have a microphone I recorded the speech on my phone.

A: I tried a free program some years ago and it was so bad that I uninstalled it straight away. "Dragon Dictate" is very good program but it is not free. The current version requires very little training, say 2 to 3 minutes compared to the 30 minutes plus that was needed 5 years ago. "Dragon Dictate" has around 95% accuracy which is outstanding for the little training needed. That equates to about 10 misspelt words per page.

Phrases like "He too went to the woods to chop some wood because he wanted to have more wood" will test how good a program is. The software has to determine which to (to/too/two) and which wood (wood/would) to use as these words sound identical. These words are easy for a human to interpret, but a program will have to do a lot of analysis to get it right.

Audience member Neil Muller noted that Windows 10 includes speech recognition and that would be worth trying if you're using Windows 10. George commented that 5 years ago the Windows program was terrible, but the Windows 10 speech recognition program is definitely worth trying. For about 10 years Windows has had a speech recognition program but never advertise it. I understand why they were reluctant to advertise it, but if you have Windows 10 give it a go. You will find a link to "Speech Recognition" listed in the Control Panel.

Windows 10 includes speech recognition

Q: I've recently seen advertisements for Oppo mobile phones. Have you heard anything about these?

A: Yes I've seen some surprisingly good reviews on Oppo phones. Price is about mid-range but features are very close to top of the range of other brands that cost hundreds of dollars more. It has a

very good processor and a good camera. George then asked if anyone else had any comments. Audience member David King indicated that he knows someone with an Oppo phone. "It is one of those with a very big screen and it works very well. I was most impressed by it."

Q: When my computer boot up it displays a message about a program called Mosaic and that WinSplit will not use these hotkeys. What is Mosaic and should I uninstall it?

A: Mosaic is the name of one of the first browsers that appeared around the time of Windows 95 so it's unlikely to be that. It should be safe to uninstall Mosaic so look under "Programs & Features" and uninstall it from there. No one in the audience was able to assist any further.

Following Q&A George Skarbek demonstrated the free graphics program **FastStone Viewer**. George uses this program regularly because of its quick and easy editing of digital photographs. His knowledge of

FastStone viewer

this program was obvious from the many features he demonstrated. George also noted that FastStone Viewer will even edit RAW files from a number of camera makers. A 95 page manual is available for download if required.

First up George showed how to navigate the main program interface. Double clicking on an images thumbnail displays the image in full screen. At this point no toolbars or icons are evident on screen. To access the various menus the mouse cursor is moved to the various edges of the screen and the menu pops out.

After outlining some of the feature available in the various menus it was time to demonstrate the most common adjustments. According to George the most useful adjustment is the "Adjust Lighting" tool. This tool is identified by a sun icon and uses sliders to adjust Shadows & Highlights and Contrast & Saturation. It did wonders to some extremely underexposed images. A before and after button show the changes and these were dramatic. Other features demonstrated were, Straighten, Clone & Heal, Crop, Resize, Adjust Colour and Sharpen. From the Drawing Board menu (left side of the screen), shapes and text can be added to an image. Other useful tools available include batch rename and batch convert.

After the break **Brian Heywood** demonstrated a Sony Bluetooth speaker he purchased at Officeworks for $59. The Sony speaker, model SRS-XB10 is a small canister style speaker with good battery life (claimed to be 16 hours) and decent sound output for its small size. When demonstrated, the sound filled the large meeting hall and was distortion free. The Sony speaker's dimensions are 75φ x 90mm high. The speaker is powered by a rechargeable battery and is IPX5 rated as water-resistant.

The SRS-XB10 connects to a smartphone with One-touch NFC (near field communication), via a mini audio jack or micro USB port for charging. An interesting feature of this mono speaker is when linked with a second unit will create a stereo pair.

Following Brian's presentation guest speaker, **Stewart Bedford**, took us on "A Personal Journey" back to his childhood home using his Computer and the Internet. Using maps, photos and street view images from Google Earth, complemented by YouTube videos and internet searches, Stuart visited his childhood home in England (Stanway House) and routes taken on his long journey to school. This was a most interesting presentation and showed the power of what can be found on the internet.

Northern Suburbs Linux SIG – March 2018

Paul Addis

The Linux News for this meeting appeared, at first, to be about Microsoft and Windows 10. But it transpired that it is now possible to obtain certain Linux distributions from the Microsoft Store and install and run parts of Linux in a Windows environment. Specifically, once installed the user can open a Linux command window and use items such as bash, apt, ssh, git and a number of other commands.

The apparent change of Microsoft's attitude to Linux may be driven by developers' desire to use bash, which is regarded as being more powerful and useful than Microsoft's PowerShell. With Linux in widespread (and increasing) use on server machines, knowledge of, and familiarity with, bash is very useful to developers.

The installation, activation and use of Kali Linux was shown. Kali is widely used as a penetration testing tool, to ensure that networks are safe from hostile intruders.

Once the Linux system components are downloaded from the store, the Linux system can be installed via the Windows Sub-system Linux (WSL) component. Once the Linux system is installed it can be started and commands such as apt-get, cat and bash can be issued.

On the Kali web site, there is a video showing how to run a graphics environment - XFCE, specifically. So a user could be running a Linux graphical environment inside or parallel with a Windows one.

The Open Forum session continued a discussion of why Microsoft is much more Linux-friendly than it used to be. One suggested reason that Microsoft is supporting the use of Linux in this way is that their own developers feel the need for the power of bash, and because the use of Linux within their own organisation is expanding.

David Hatton posed the question to the group of "What should be the SIG's future direction: do we need to be more pro-active, rather than just meeting monthly to learn about and discuss what is happening in the Linux world?". That question will presumably be the subject of more discussion in the next and later meetings.

A question was asked about the availability of Linux-related journals in local newsagents. The consensus was that the sub-agents have only high-volume selling magazines. such as Woman's Day and New Idea, but the main newsagents do stock some Linux magazines (Eltham and Heidelberg were quoted). However, one should expect to pay up to $20 per copy, or up to $25 if the magazine was shipped via air mail, arriving up to six weeks earlier than the $20 version.
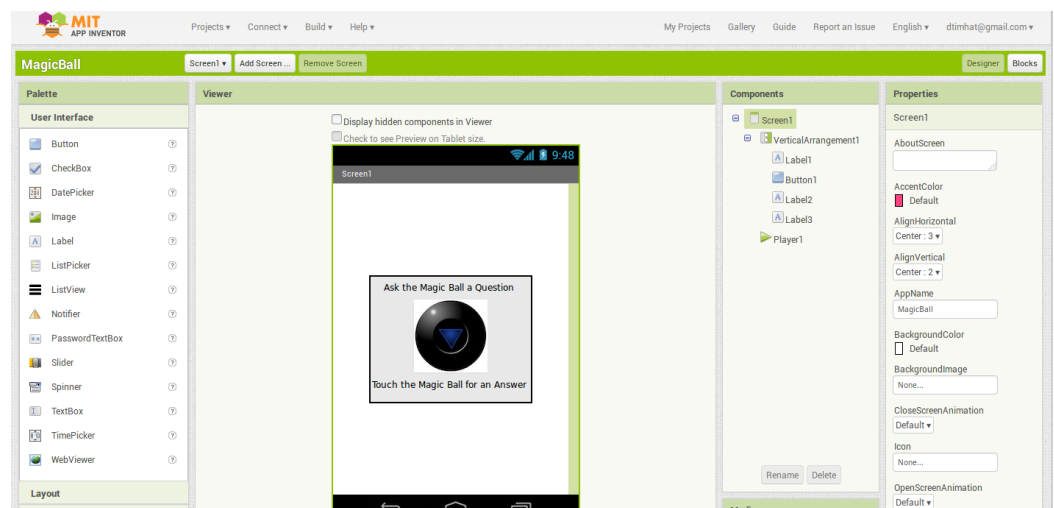
App Inventor: A user interface being created in the Designer View

After the social break it was time for the main session of the evening, and David Hatton spoke about and did a brief demonstration of MIT's App Inventor.

The App Inventor is described as "an intuitive, visual programming environment that allows everyone - even children - to build fully functional apps for smartphones and tablets". Those new to MIT App Inventor can have a simple first app up and running in less than 30 minutes. What's more, the block-based tool facilitates the creation of complex, high-impact apps in significantly less time than traditional programming environments. The MIT App Inventor project seeks to democratise software development by empowering all people, especially young people,
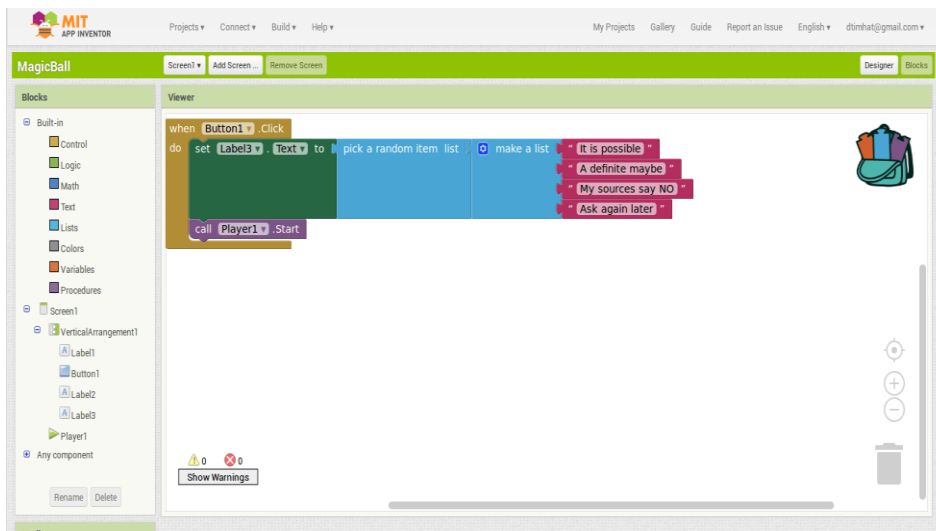
App Inventor: Using the Block View to create a program

The "programmer" can then select items for the user interface. In the demonstration a Button was chosen, along with a Text Box to tell the user to click the button.

A user interface being created in the Designer View

The program logic is created using Blocks, which can be selected after clicking the "blocks" item in the top menu. The left menu changes to show the types of blocks that can be created/included. Simply selecting and dragging the block onto the viewer portion of the screen will activate it, and the arrangement of the blocks determines the "program flow".

There are tutorials and examples on the web site at

http://appinventor.mit.edu/explore/

There is plenty of scope for folks to try out the app. inventor and spend many happy hours building and playing with it. And to add some more fun, the app inventor is going to be expanded to build apps. for iPhone and iPad devices running the iOS operating system.

[*See also our cover story, page3 - Ed*]

to move from technology consumption to technology creation."

There are three ways of creating an app:

1. On an Android device connected via wifi.

2. Via an Android emulator on a PC.

3. On an Android device connected via USB.

At the meeting the second method was used, with the emulator running on a Linux-based PC. Once the PC-based tool is installed, the app. is created via a web browser (Chrome or Firefox, but not Internet Explorer) on the MIT web site. The emulator was "connected" to the web site and a project started.

• Microcontroller SIG March meeting

David Stonier-Gibson

The microcontroller SIG attracts people who are interested in electronics hardware, microcontroller "chips", products like Arduino and Raspberry Pi, and related topics. We meet at Moorabbin at 7pm on the 2nd Wednesday of the month. There are also associated Microcontroller and Raspberry Pi workshops, which are more hands-on and meet on Saturdays. Twenty people attended the March Wednesday night meeting. The March meeting was MC'd by John Shirt. Two new visitors were identified and presented with "Light Theremins", a small electronic toy in kit form that new non-member attendees receive.

For Show and Tell John Hollow had brought along a stack of Jaycar and Altronics catalogues. John makes it his mission to scoop up catalogues, for free, from the stores just before the new edition comes out. Normally they cost $5. John also went through the online catalogues and pdf downloads, including using archive.org to retrieve a Jaycar catalogue pdf from several years ago.

After John Hollow, Brian Davis entertained us with his humorous "single bit computer" where a 2-input OR gate has been turned into a 1-input, 2-output

computing device. After describing it in some abstract detail Brian brought it out to display. It was a PVC pipe Y-fitting with a float valve. Its function, in Brian's own

> "I am enclosing two tickets to the first night of my new play; bring a friend.... if you have one." - George Bernard Shaw to Winston Churchill
>
> "Cannot possibly attend first night, will attend second... if there is one." - Winston Churchill, in response.

words: "1-bit unit is designed to make decisions based on the amount of what the available local capacity is to store water. When the amount of the available local capacity to store water has been fully used up, the unit is designed to change state and return the excess to the local environment for recycling". He certainly had us wondering!

The guest speaker was Michael Bauer, a retired electronics engineer and inventor of the DREAM-6800 computer that hobbyists were building 40 years ago. Michael has recently developed an electronic
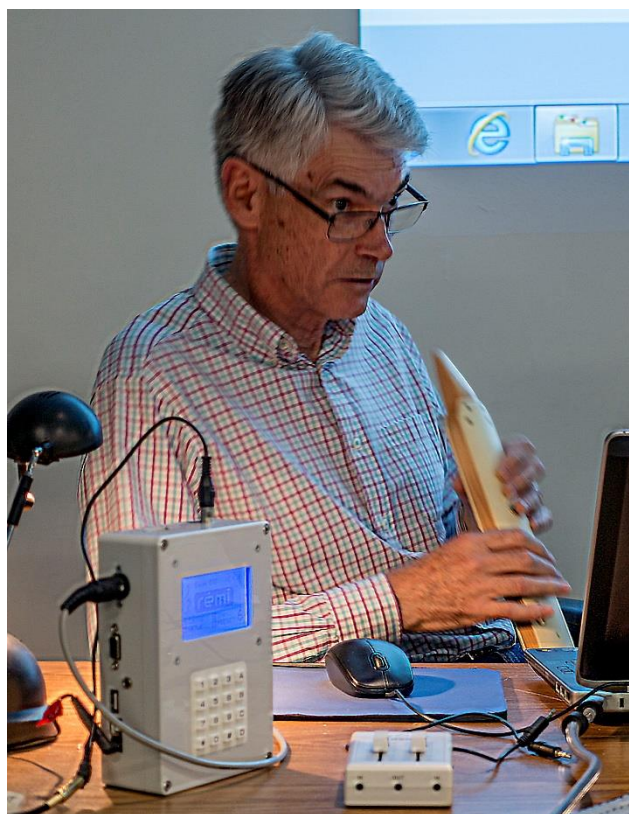
Michael Bauer with his Electronic Wind Instrument. Interesting tech and impressive results.

wind instrument (EWI). Michael's EWI uses a pressure sensor and metal touch studs in the "hand piece" (the bit you blow into). The fingering is like a recorder, but modified for a 4-octave range. Thanks to the pressure sensor the harder you blow, the louder it gets. The hand piece connects to a control box that contains a 32-bit microcontroller chip. That has inbuilt tone generation as well as a MIDI output. Other hobbyists have made EWIs, but they generally don't have inbuilt tone generation.

For his demonstration Michael just connected the inbuilt tone generator to our speaker system. It is capable of producing a remarkably wide range of instrument sounds and effects like varying tremolo. Very impressive indeed.

The central theme of Michael's presentation was the software techniques he used to generate the sounds

The light Theremin lights up Red, Green or Bluie, depending of which of the three light sensors you cover. It will also mix colours.

in a relatively modest microcontroller. It includes static wave tables stored in flash memory, and on-demand tables generated from stored parameters (12 32-bit numbers can define a wave shape) and stored in RAM. Essentially the wave table is what defines the "sound", be it piccolo or saxophone. Because the MCU lacks floating point hardware Michael does all the heavy lifting in 18.14 bit fixed point arithmetic. The firmware includes dual oscillators and functions for modulations like tremolo, frequency offsets and the like. All in all a fairly busy little processor. The final audio output is generated by PWM, with a second PWM output controlling the cutoff frequency of a rather nifty analogue low pass filter.

Michael wrote all the firmware in C. For his Mk2 model he plans to use the same processor, but has realised more of the processing can be done by the processor. It will use a wireless (radio) connection between the hand piece and the control box. Michael is looking for collaborators to contribute to PCB layouts and 3D modelling/printing.

Michael's presentation kept us fascinated well over time, so after that the meeting wound down, with some other agenda items abandoned.

Special Interest Groups – All details

Data Source: Updated: 27-Mar-2018 - 15:43

Amendments: Please advise changes/corrections to: calendar-admin@melbpc.org.au/

Recent changes are at:https://www.melbpc.org.au/index.php/sigs/about/recent-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	
Location	Melb PC HQ, Level 1, 479 Warrigal Rd, **Moorabbin** Melway:78.D8	
Convenor(s)	Craig Evans 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	
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 - 12:30pm	
Email	beast@melbpc.org.au	
Location	Vermont South Community Centre, 1 Karobran Drive, **Vermont South** Melway:62.G7	
Convenor(s)	Dave Botherway	

Casey - Main Meeting

Date Jan	**No Meeting**	
Feb-Nov	**Second Fri of month**	
Dec	**Second Fri of month. (Christmas function - check location/time etc with Convener)**	
Time	1pm - 3:30pm	
Location	Beaconsfield Neighbourhood Centre, 8 O'Neil Road, **Beaconsfield** Melway:214.A1	
Convenor(s)	Jan Whitaker - 9705 9009 jwhit@janwhitaker.com Jan Weiner - 9796 2807 weijan@westnet.com.au	

Casey - Workshop

Date Jan	**No Meeting**	
Feb-Nov	**Fourth Fri of month**	
Dec	**No Meeting**	
Time	1pm - 3:30pm	
Location	Beaconsfield Neighbourhood Centre, 8 O'Neil Road, **Beaconsfield** Melway:214.A1	
Convenor(s)	Jan Weiner - 9796 2807 weijan@westnet.com.au Jan Whitaker - 9705 9009 jwhit@janwhitaker.com	

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	
Location	Melb PC HQ, Level 1, 479 Warrigal Rd, **Moorabbin** Melway:78.D8	
Convenor(s)	Phil Lew - 0418 567 019	

Digital Images

Date Jan	**Third Fri of month**
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
	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
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 & 3D Printing

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
Location	Wadham House, 52 Wadham Parade,
	Mount Waverley Melway:61.E12
Convenor(s)	Paul Woolard - 0417 566 209
	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
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
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	**No Meeting**
Time	9:30am - 12noon
Email	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	**No Meeting**
Feb-Nov	**Third Tue of month**
Dec	**No Meeting**
Time	2pm - 4pm
Email	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
	Sam Fiumara

Genealogy East

Date Jan	**No Meeting**
Feb-Nov	**Third Sun of month**
Dec	**Third Sun of month**
Time	1pm - 3:30pm
Email	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 John Hall - 9803 2731 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	
Location	Melb PC HQ, Level 1, 479 Warrigal Rd, **Moorabbin** Melway:78.D8	
Convenor(s)	Dave Simpson	

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	
Location	Melb PC HQ, Level 1, 479 Warrigal Rd, **Moorabbin** Melway:78.D8	
Convenor(s)	Richard Solly	

Linux Workshop - Moorabbin

Date Jan	**No Meeting**	
	Feb-Nov	**In Recess**
	Dec	**In Recess**
Time		
Email	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 Convener for location**	
	Feb-Nov	**Third Sun of month**
	Dec	**Third Sun of month**
Time	10am - 2pm	
Email	maceatari@gmail.com	
Location	Melb PC HQ, Level 1, 479 Warrigal Rd, **Moorabbin** Melway:78.D8	
Convenor(s)	Andrew Boschan andrewbosc@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	
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 Sat (only) of Dec.**
Time	12noon - 5pm	
Email	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	
Location	Mornington Community Information and Support Centre, 320 Main St, **Mornington** Melway:104.E12	
Convenor(s)	Terry Said - 0427 750 327 dulnain@gmail.com Ian Thomson 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	
Location	Mornington Community Information and Support Centre, 320 Main St, **Mornington** Melway:104.E12	
Convenor(s)	Colin Ackehurst 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). Meeting will be held on Anzac Day (25-Apr-2018), per normal schedule.**
Dec	**No Meeting**
Time	2pm - 4pm
Email	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

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
Location	Wadham House, 52 Wadham Parade, **Mount Waverley** Melway:61.E12
Convenor(s)	John Hall - 9803 2731 johnhall@melbpc.org.au Kelvin Cording - 9438 1047 kcording@bigpond.net.au

Music

Date Jan	**No Meeting**
Feb-Nov	**Third Thu of month**
Dec	**No Meeting**
Time	7:30pm - 9:30pm
Email	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. Apr-2018 meeting is at Old Shire Offices - details at https://www.melbpc.org.au/index.php/sigs/about/recent-changes/**
Dec	**Second Wed of Dec - join with North East Daytime SIG - end-of-year breakup**
Time	10am - 12noon
Email	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 Kelvin Cording - 9438 1047

North East Daytime and Photography

Date Jan	**No Meeting**
Feb-Nov	**Second Wed of month. Apr-2018 meeting is at Old Shire Offices - details at https://www.melbpc.org.au/index.php/sigs/about/recent-changes/**
Dec	**Second Wed of month**
Time	10am - 12noon
Email	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

North East Genealogy

Date Jan	**No Meeting**
Feb-Nov	**First Wed of month. Apr-2018 meeting is at Old Shire Offices - details at https://www.melbpc.org.au/index.php/sigs/about/recent-changes/**
Dec	**First Wed of month**
Time	10am - 12noon
Email	negen@melbpc.org.au
Location	Hawdon Street Community Hall, 80 Hawdon Street, **Heidelberg** Melway:32.A4
Convenor(s)	Lynn. Hammet 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
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
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
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
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-2018 - Australia Day
	Feb-Nov	Fourth Fri of month
	Dec	No Meeting
Time		10am - 12noon
Email		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
		Lance Lloyd - 9884 5559
		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
Location		Sunbury Senior Citizens Centre (back room), 8 O'Shannassy 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
Location		Sunbury Senior Citizens Centre (back room), 8 O'Shannassy 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
Location		Sunbury Senior Citizens Centre (back room), 8 O'Shannassy 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
Location		Sunbury Senior Citizens Centre (back room), 8 O'Shannassy Street, **Sunbury** Melway:382.E4
Convenor(s)		Kevin Hale - 9740 5786

Video Inner East

Date	Jan	**No Meeting**
	Feb-Nov	**Second Mon in month, except NO meetings in Mar & Jun; and meeting moved to third Mon in July, namely 15-Jul-2018.**
	Dec	**Second Mon of month**
Time		7:30pm - 9:30pm
Email		rbalse@tpg.com.au
Location		Copland Room, Ashburton Library, 154 High St, **Ashburton** Melway:60.C9
Convenor(s)		Richard Balsillie - 9809 4116

Video Production - Pinnacle

Date	Jan	**No Meeting**
	Feb-Nov	**Fourth Wed of month. No meeting in April-2018 due to Anzac Day.**
	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 spisawn@optusnet.com.au Tony Pickup - 9878 0706 tonypickup@optusnet.com.au

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 rdwragg@fastmail.fm

Bob Flack

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		phil@melbpc.org.au
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 - 9807 4072

Website Design - Tutorials

Date	Jan	**No Meeting**
	Feb-Nov	**Fourth Sun of month**
	Dec	**No Meeting**
Time		2pm - 4pm
Email		webdesign@melbpc.org.au
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		webdesign@melbpc.org.au
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		winplus@melbpc.org.au
Location		Melb PC HQ, Level 1, 479 Warrigal Rd, **Moorabbin** Melway:78.D8
Convenor(s)		John Swale - 0417 530 766 Barry Stone

April Calendar

Maintained by John Hollow

Sun	Mon	Tue	Wed	Thu	Fri	Sat
Legend SIG meeting at Melb PC HQ, Moorabbin. **Non-Moorabbin meeting.** ~~Cancelled Meeting~~ Changed Meeting To be confirmed	**Changes** Please advise changes to: calendar-admin@melbpc.org.au	Other SIG (Special Interest Group) information:	https://www.melbpc.org.au/index.php/sigs/about/ Recent Changes: https://www.melbpc.org.au/index.php/sigs/about/recent-changes/			**Have A Question Post it on Yammer** Yammer: http://yammer.com/melbpc.org.au/
1 PUBLIC HOLIDAY (Easter Sunday)	**2** PUBLIC HOLIDAY	**3**	**4** **North East Genealogy SIG** *Old Shire Offices Heidelberg* *10am - 12noon* **MONTHLY MEETING** *Melb PC HQ, Moorabbin* *7pm – 9:30pm* then Supper (WAFFLE) *at Fong's 9:35pm*	**5** **Sunbury Daytime SIG** *New Users* *9:30am - 12noon*	**6** **Essendon SIG** *Main meeting Avondale Heights 9:30am - 12noon* **Multimedia Home Entertainment SIG** *Mount Waverley 10am - 12noon*	**7**
8 **East Workshop & 3D Printing SIG** *Mount Waverley 10am - 2pm*	**9** **Access (database) and Excel SIG** *Moorabbin 6:30pm - 8:30pm* **Video Inner East SIG** *Ashburton 7:30pm - 9:30pm*	**10** **Investment Tools - WASINT SIG** *Moorabbin 10:30am - 12:30pm*	**11** **Video Production – Sony SIG** *Moorabbin 10am - 12noon* **North East Daytime & Photography SIG** *Old Shire Offices Heidelberg 10am - 12noon* **Communications SIG** *Moorabbin 7pm – 9:30pm* **Microcontroller SIG** *Moorabbin 7pm – 9:30pm*	**12** **Sunbury Daytime SIG** *Advanced 9:30am - 12noon* **East SIG** *Blackburn South 7:30pm - 9:30pm*	**13** **Essendon SIG** *Open Forum Avondale Heights 9:30am - 12noon* **Hardware SIG** *Mount Waverley 10am - 12noon* **Casey SIG** *Main Meeting Beaconsfield 1pm - 3:30pm*	**14** **Microcontroller Workshop SIG** *Moorabbin 12noon - 5pm* **Raspberry Pi – Moorabbin SIG** *2pm - 4pm*
15 **Beginners East (BEAST) SIG** *10am - 12:30pm* **MACE (Atari Computers) SIG** *Moorabbin 10am - 2pm* **Genealogy East SIG** *Vermont South 1pm - 3:30pm*	**16** **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*	**17** **Everything Apple SIG** *Moorabbin 2pm - 4pm*	**18** **North East Android SIG** *Old Shire Offices Heidelberg 10am – 12noon*	**19** **Sunbury Daytime SIG** *Main Meeting 9:30am - 12noon* **Bayside SIG** *Brighton 10am - 12noon* **Music SIG** *Moorabbin 7:30pm – 9:30pm*	**20** **Essendon SIG** *Various topics. Avondale Heights 9:30am – 12noon* **Digital Images SIG** *Including Photoshop Mount Waverley 10am - 12noon* **Melb PC Committee** *1pm, Mt Waverley* **PC Update – Articles Deadline**	**21** **Windows Plus SIG** *Moorabbin 10am - 12noon*
22 **Website Design SIG** *Tutorials Moorabbin 2pm - 4pm — Troubleshooting Moorabbin 4pm - 6pm*	**23**	**24**	**25** PUBLIC HOLIDAY ~~Video Production – Pinnacle SIG~~ ~~Moorabbin~~ *No meeting AnzacDay* **Mornington Peninsula SIG** *Family History – Advanced DNA LAST Wed of month Mornington 2pm - 4pm AnzacDay.* **PC Update – Reports Deadline**	**26** **Sunbury Daytime SIG** *Maintenance & Linux (Fourth & fifth Thu of month) 9:30am - 12noon*	**27** **Raspberry Pi - Mt Waverley SIG** *10am - 12noon* **Casey SIG** *Workshop Beaconsfield 1pm - 3:30pm*	**28** **Microcontroller Workshop SIG** *Moorabbin 12noon - 5pm*
29	**30**					