

East SIG Report – June 2023

After welcoming members to the May meeting of East SIG, host Frank Maher outlined the nights agenda below:

Presentation 1: **Q&A** with George Skarbek

Presentation 2: **Windows God Mode** by George Skarbek

Presentation 3: **"I tried 200 AI tools - these are the Best"** by Frank Maher

Presentation 4: **AI makes SENSE of my Power Usage** by Dave Botherway

Q&A by George Skarbek.

Question 1: I'm using Mail for Windows as my email client and I received an email with attachments, but I couldn't see them. I then went into webmail and open the same email and the attachments were there. How can I get the attachment to appear in Mail for Windows?

Answer 1: I'm not familiar with Mail for Windows as I use Outlook, but normally the attachments should appear. You should be able to see what type of attachment they are, and their size. I suggest you do the following test. Have a friend attach a common file type such as a jpeg photo and send that to you. Re-send it again, but this time embed the photo in the body of the email. You do this by selecting insert. That will add the photo into the body of the email. That may give you a clue to what's going on with Mail for Windows.

Question 2: In last month's Q&A there was a question about the disappearance of the Optical drive icon from Windows File Explorer. When a CD was inserted into the drive the icon would appear, then disappear again when the CD was removed. Another member of the audience found the same behaviour so it was assumed that the disappearing icon was normal behaviour.

I noticed that my DVD player was also not recognised in File Explorer, until I inserted a disk into the drive. After searching the internet, I found the loss of the optical drive icon is fairly common and often occurs after updating Windows, possibly due to a corrupt driver, out of date firmware, or a factory defect. I hope this information may be of use to others who have this issue.

Answer 2: Thank you for that information.

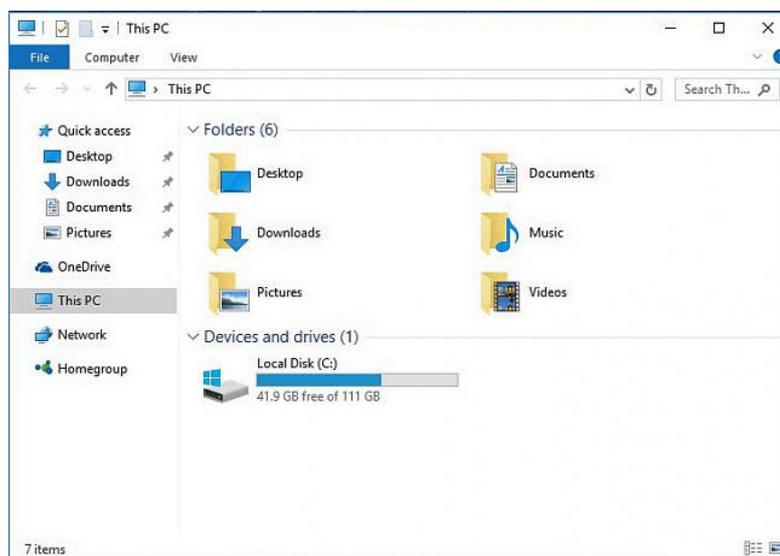


Figure 1 – Windows File Explorer with missing Optical Drive

Question 3: I'm about to upgrade a Windows 7 computer to Windows 10 or 11. Different sources say you need a certain amount of space for the new operating system when upgrading. Can you tell me what amount I will need?

Answer 3: It's unlikely you'll be able to upgrade from Windows 7 to 11 as you probably won't have the hardware TPM (Trusted Platform Module) that is essential for running Windows 11.

After the update to Windows 10, you'll need a minimum 10% free space for trouble free operation. By default, you'll have both operating systems available for 30 days, in case you have to roll back to the original Windows 7. Windows 7 will need around 5GB, and you'll need 15GB free to upgrade to Windows 10. If you don't want to wait the 30 days you can go into Settings and delete the old Windows 7 installation. It will be called Windows.old.

[Reply] My Windows 7 is on a 250GB SSD with only 20GB free. I'm thinking of cloning that to a much bigger SSD, then do the upgrade from that. Is that a good idea?

[George] That is a very good idea. If you lose another 5 or 6 GB out of that 20GB of free space, there may not be enough space for Windows to run safely. If you're going to upgrade to a larger SSD, do it now and you'll be trouble free.

[Reply] I notice if I get a Western Digital SSD, I receive a free version of Acronis True Image software.

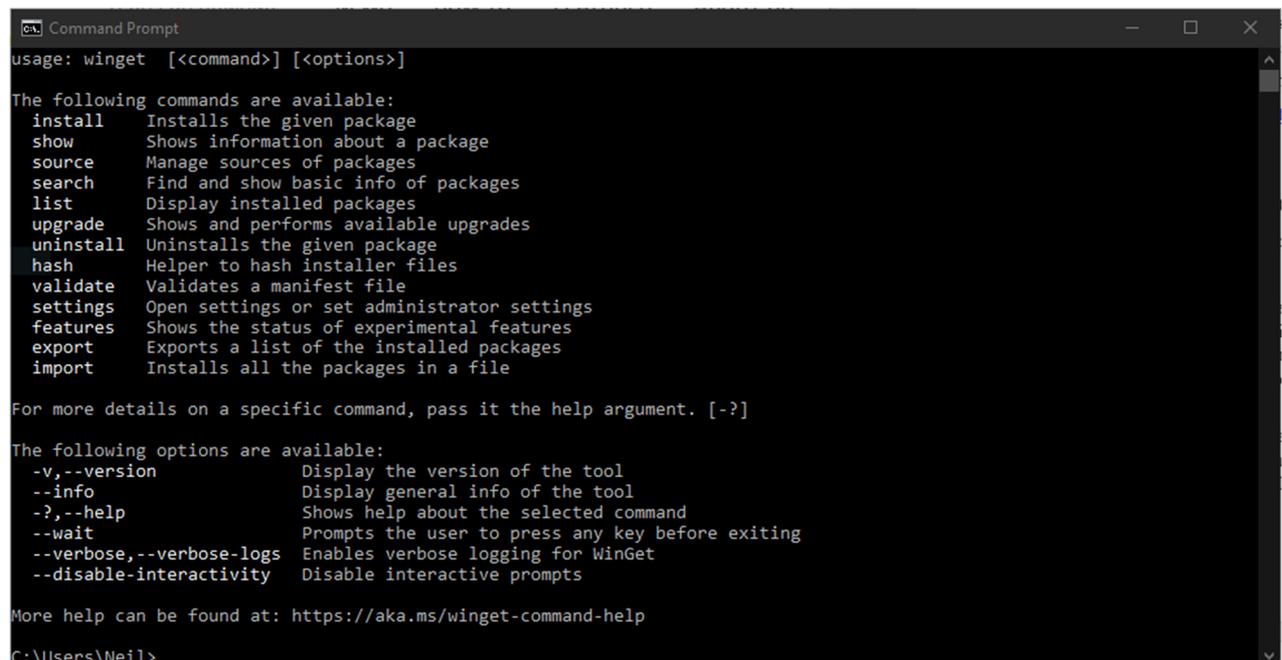
[George] Acronis is worth \$70 so that's a very good deal. I wouldn't go with Seagate at the moment as I've been looking at their drive statistics and Western Digital are much more reliable.

Question 4: Microsoft has recently introduced an extremely useful new utility called WinGet. It's a package manager that runs at the command line level. (Refer Figure 2) When you run WinGet, you get a list of all the packages you have on your computer and it gives you the ability to update any of them. WinGet seems to be inspired by the Linux package managers.

WinGet should be available on most Windows 10 PCs, but needs to be downloaded from the Microsoft Store for Windows 11. Using the "list" option, it shows all the software on your computer, the version number and whether there's an update available.

Answer 4: That is a very good find so thank you very much for that.

Reference: <https://www.howtogeek.com/674470/how-to-use-windows-10s-package-manager-winget/>



```
Command Prompt
usage: winget [<command>] [<options>]

The following commands are available:
install    Installs the given package
show       Shows information about a package
source     Manage sources of packages
search     Find and show basic info of packages
list       Display installed packages
upgrade    Shows and performs available upgrades
uninstall  Uninstalls the given package
hash       Helper to hash installer files
validate   Validates a manifest file
settings   Open settings or set administrator settings
features   Shows the status of experimental features
export     Exports a list of the installed packages
import     Installs all the packages in a file

For more details on a specific command, pass it the help argument. [-?]

The following options are available:
-v,--version    Display the version of the tool
--info          Display general info of the tool
-?,--help       Shows help about the selected command
--wait          Prompts the user to press any key before exiting
--verbose,--verbose-logs  Enables verbose logging for WinGet
--disable-interactivity  Disable interactive prompts

More help can be found at: https://aka.ms/winget-command-help
C:\Users\Neil>
```

Figure 2 – Windows WinGet Packet Manager

Question 5: When you save Chat in Zoom, where is it saved?

Answer 5: Chat is saved in the Zoom folder in your Documents folder.

Question 6: My local librarian suggested I download the game Candy Soda Crush. When reading through the Terms and Conditions, it mentions it has virtual money, they can change the T&C's anytime they please, they can remove you from the game at any time, you can't have a class action against them etc. There are so many Terms and Conditions, I'm wondering whether this is normal?

Answer 6: Firstly, congratulations for reading the Terms and Conditions, but yes, it is normal. I don't think its anything unusual. If you're concerned, download the file and before you run it run a full virus scan before installing it. I believe it's a very popular game so I wouldn't be too concerned.

Question 7: My computer is playing up. I think it's because I've got too much unnecessary stuff on it, but I don't know what to do to fix it?

Answer 7: I would consult MelbPC iHelp. This is a free service to MelbPC members and has many knowledgeable people who can assist you with problems. iHelp can be accessed by phone, email, or web form. Most questions are resolved on the spot or within a day. However, you will need to be more specific about what your problem is.

For cleaning unnecessary junk from your computer, I would go to Windows Settings, then select System, then Storage. Select "Temporary files" and tick the category of files you wish to remove in the open window. That will rid you of a lot of Windows junk and is a reasonable place to start. Ccleaner is another good option for removing junk files.

Windows God mode by George Skarbek

"God mode" is the name given by hackers to a hidden feature used by Window's programmers to give easy access to Control Panel settings. It was discovered by hackers during the Windows 7 era. The programmers called this feature "All Tasks". "All Tasks" was designed as the base folder for searching control panel options, using Windows sevens new start menu's search function. The term "God Mode" comes from the gamer's scene, where it refers to cheats that make players immortal.

The installation of "God mode" results in the creation of an unnamed folder icon, typically positioned on the desktop. By choosing the God mode folder, users gain easy entry to more than 200 Control Panel settings already in existence. All these settings are neatly organized in a single table for convenient and instant access. When a setting is double-clicked, its link promptly directs you to the corresponding Windows setting. This feature stands apart from Microsoft PowerToys, a collection of small utility programs currently absent in Windows.

The topic headings in the "God mode" folder are organized alphabetically, mirroring the headings found in the Windows Control Panel when opened.

Topic headings are as follows: Administrative Tools, AutoPlay, Backup and Restore (windows 7), BitLocker Drive Encryption, Colour Management, Credential Manager, Date and Time, Devices and Printers, Ease of Access Centre, File Explorer Options, File History, Fonts, Indexing Options, Internet Options, Keyboard, Mouse, Network and Sharing Centre, Phone and Modem, Power Options, Program and Features, Region, RemoteApp and Desktop Connections, Security and

Maintenance, Sound, Speech Recognition, Storage Spaces, Sync Centre, System, Taskbar and Navigation, Troubleshooting, User Accounts, Windows Defender Firewall & Work Folders.

To demonstrate “God mode”, George scrolled through the above list and clicked on a number of the links to demonstrate those settings.

The procedure to enable God Mode is as follows:

1. Right-click on a blank area of your Windows desktop to open a context menu. Move your mouse pointer down the context menu to “New”. Select “New”, then choose “Folder” from the side menu options. Windows then opens a new folder on your desktop.
2. Select the “New folder” on your desktop and rename the folder with the following name by copying and pasting the text below, then press Enter.

GodMode.{ED7BA470-8E54-465E-825C-99712043E01C}



Figure 3 – Microsoft “All Tasks” aka God Mode icon

I tried 200 AI tools - these are the Best by Frank Maher

In this presentation, Frank played a 12-minute video from YouTube titled “**I tried 200 AI tools - these are the Best**”, by the presenter with the pseudonym Obscurious. The video can be viewed at https://www.youtube.com/watch?v=gpP_YEv_9jA&list=WL&index=26&t=357s

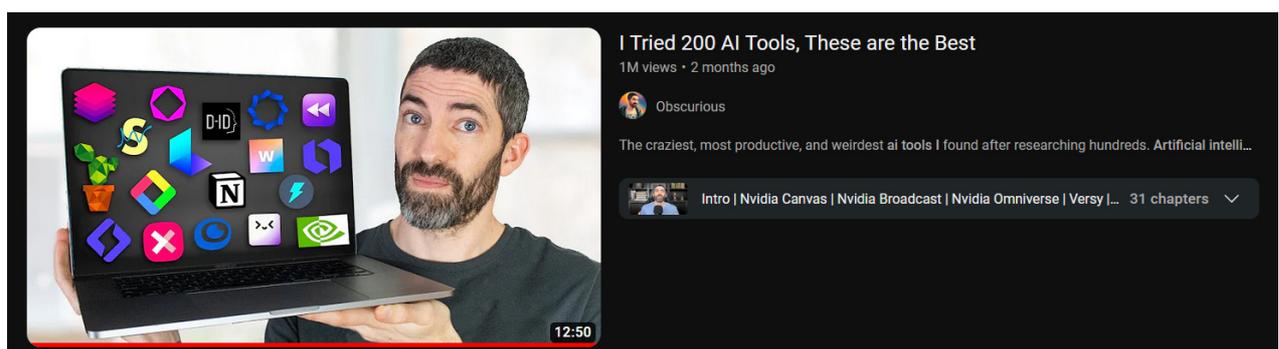


Figure 4 – YouTube banner - I tried 100 AI Tools, these are the Best

The video briefly describes a selection of the vast array of AI tools evaluated by Obscurious. Some are still in development; however, the video gives an idea of what is to come from likes of NVidia, Microsoft, Google and others. A high percentage of the AI tools featured relate to video, photography and to a lesser degree music. There are too many AI tools to feature in this report, but one that I feel is worth mentioning is Future Tools at <https://www.futuretools.io/> (Figure 5). Future Tools is a comprehensive index of current AI tools, offering a searchable database that covers a wide range of categories featuring the best available AI tools in each group.

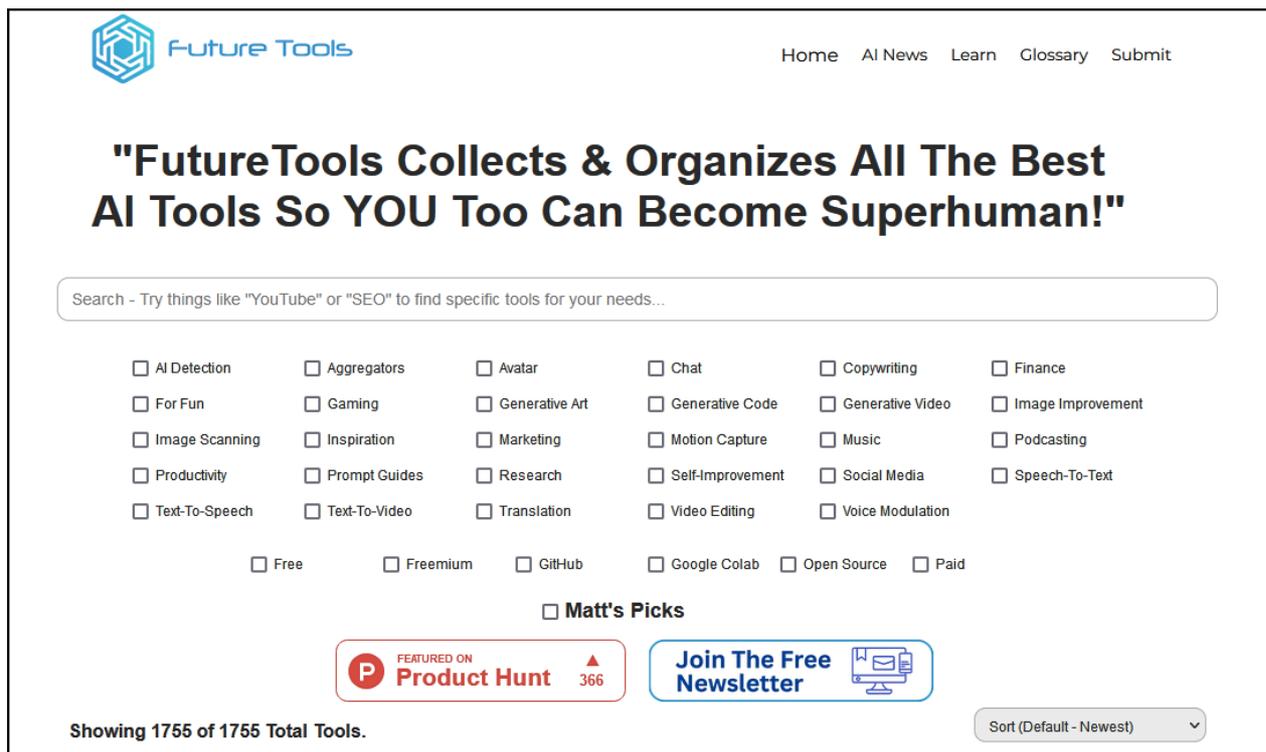


Figure 5 – Future Tools AI Database

After viewing the video, Frank recommended members seeking further information on AI, should read an extensive review featured in "TechRadar". This article analyses the top AI tools in ten distinct categories.

The URL for the Tech Radar article is <https://www.techradar.com/best/best-ai-tools>

AI makes SENSE of my Power Usage by Dave Botherway

Dave Botherway delivered the concluding presentation titled "AI Makes SENSE of My Power Usage." During conversations about this topic, Dave noticed that many individuals had forgotten the fundamentals of basic electricity from their secondary school physics education. Therefore, in order to introduce the "SENSE" concept, which Dave is currently testing at his new home, he began by providing a brief summary of essential electrical terminology.

Electricity Basics

Voltage (V)

Voltage is the pressure from an electrical power source that pushes current through to a device allowing it to work, such as illuminating a light. Voltage can be viewed as pressure and is measured in volts with the symbol V.

Typical power sources are:

1.5-volts Alkaline or Carbon batteries, with familiar sizes being AAA, AA, C or D.

A 9-volt battery is comprised of 6 @ 1.5-volt batteries in series.

A 12-volt car battery is comprised of 6 lead acid cells in series.

In Australia, 240 volts is the household supply.

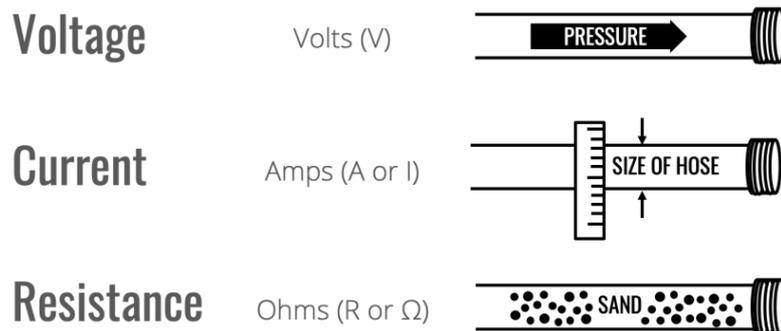
Current (I)

An electric current is a flow of electric charge in a circuit and is measured in amperes or amps. The current flow depends upon the circuit's resistance, which is referred to as ohms.

Dave gave the following example for a 3-cell torch of 4.5 volts, with an incandescent bulb that has a resistance of 6 ohms (i.e. $R = 6$ ohms)

From **Ohms Law**: Current (amps) = Volts / Resistance (i.e. $I = V / R$). In this example, the torch's current is calculated as $4.5V / 6 \text{ ohms} = 0.75$ amps

Electricity is like a water hose



Voltage = Current \times Resistance ($V = I \times R$)

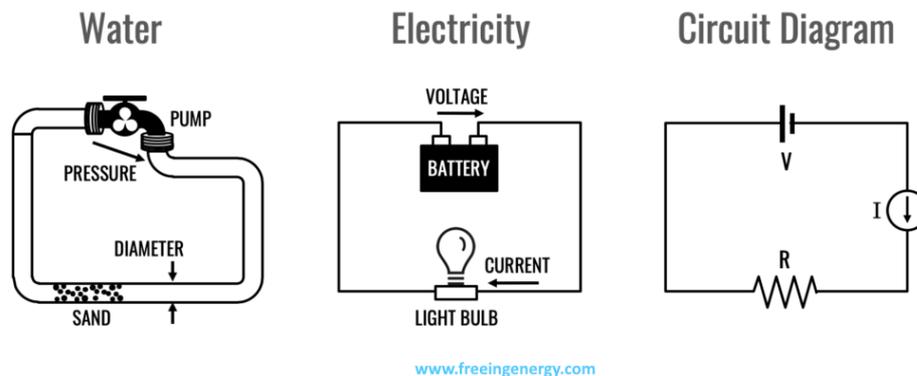


Figure 6 – Electricity basics

Power (w)

Power is measured in watts (w) and is defined as Voltage (V) multiplied by Current (amps) = watts. i.e. 1 volt @ 1 amp = 1 watt. From this formula, as the Voltage (V) goes Up, so does power (amps). Similarly, when the Current (amps) goes Up, so does Power (watts)

Low Power devices are measured in milli watts, while large Power devices are measured in kilo watts

Electric Power vs Energy

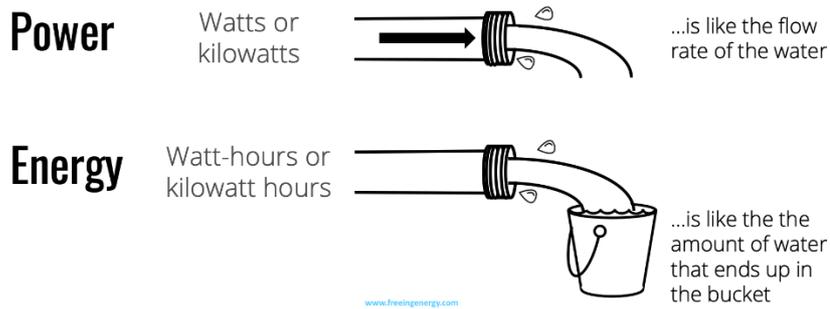


Figure 7 – Electric Power vs Energy

Domestic Homes (240 volts)

The domestic electrical supply to homes in Australia is around 240 volts and the standard wall outlet has a maximum 10 amps per circuit. Many devices such as toasters, kettles, heaters will use the maximum power of 2400watts.

For larger appliances such as cooktops, ovens, and air conditioners, special wiring is necessary, possibly requiring up to 30 amps. Consequently, your meter box will be equipped with dedicated fuses designed to accommodate these high electrical loads.

Dave provided an example of a common 2-bar heater used in Australian homes, with a power supply of 240 volts. When this heater is connected to a wall plug with a maximum current capacity of 10 amps, it generates a maximum heat output of 2.4 kW. Initially, during the startup phase, the current drawn by the heater exceeds 10 amps for a brief period of 1-2 seconds, as the resistance (R) of the heater increases with temperature. The power versus time graph in Figure 8 from Dave's SENSE app below shows this behaviour.

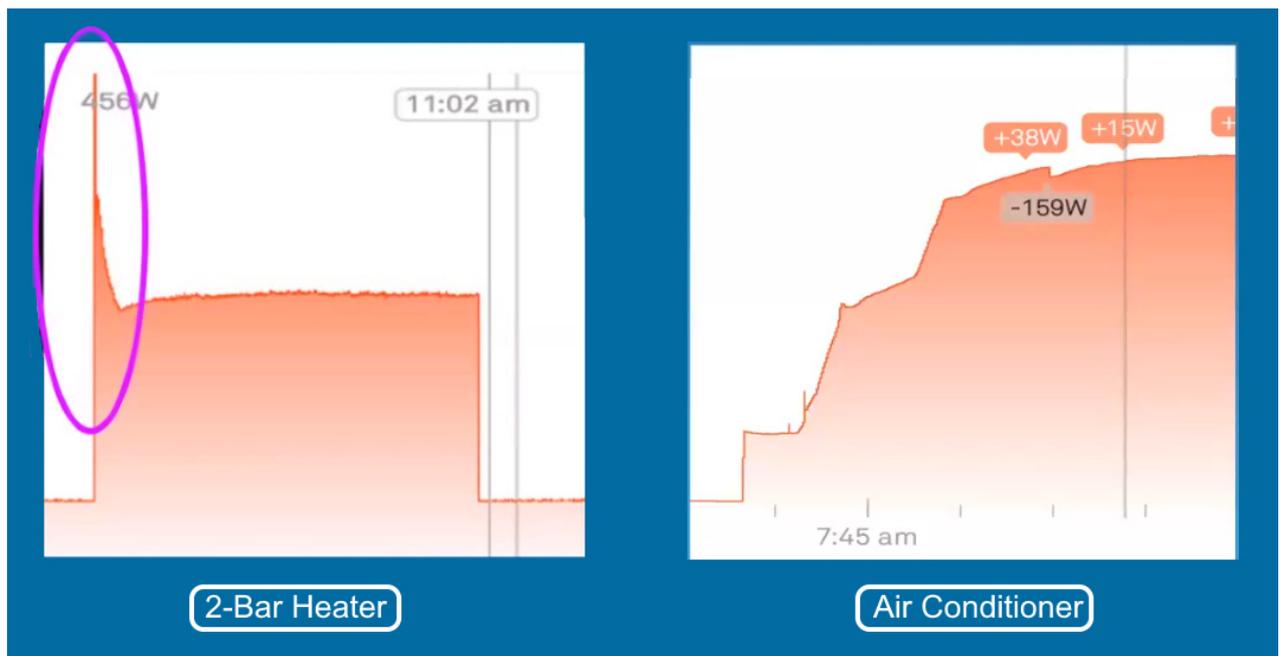


Figure 8 – Power versus Time graphs, taken from the SENSE App

Motors from fans or refrigerators will have a similar startup current to the radiator, but are likely to be more complex. Dave provided a second example of the current for an air conditioner at his new residence which is shown in Figure 8, again taken from the SENSE app. When the air conditioner is turned on, the current gradually builds up over 2 minutes as the various fans and compressors start up. A startup routine that builds up rather than everything starting up together, avoids blowing a fuse. As air conditioners have at least 3 fans, a compressor, an evaporator and other elements, all components can be seen on the graph to work in harmony with each other

Consumption (kWh)

Consumption = Power x Time and is measured in kilowatt hours (e.g. kW hours)

Using the 2-bar heater as an example, at 2.4 kw running for two hours = 4.8 kWh. If the local electricity supply rate is 20c / kWh, the cost to run the heater for the two hours is 96 cents.

Electricity charges to consumers is based on total kWh over the billing period, usually 1, 2 or 3 months.

Capacity (Ah or mAh)

Capacity = Storage displayed in Amp hours or milliamp hours.

The capacity of rechargeable batteries is shown on the battery case. In the graphic from Dave's presentation (Figure 9), the different capacities of 2 AA batteries and a laptop battery are circled. Dave noted that when replacing a battery in a laptop, it's important to look at the capacity, as often 2 or 3 different capacity options are available for purchase.



Figure 9 – Electricity basics - Capacity

SENSE.com Services

SENSE Equipment

The term SENSE used in the title of Dave's presentation refers to an American company that provides hardware to measure voltage and current at the point of supply. (i.e. at the meter box). SENSE provides real-time recording of power usage, with the data sent for cloud processing. AI analysis of this power data is then able to recognize devices, due to their different startup characteristics, for example the current from an air conditioner. Once devices are identified, (which Dave assists with), the SENSE app displays real time graphical reports on power usage versus time for the device. This feature enables a user to compare usage to other users.

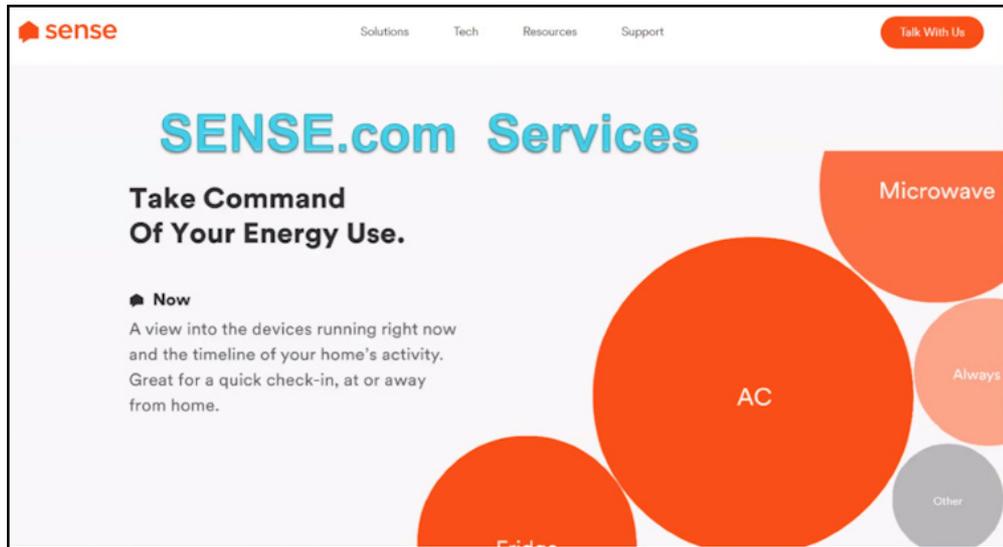


Figure 10 – SENSE.com Homepage

SENSE Hardware

The SENSE hardware has been installed in over 3 million establishments in the USA, for measuring both Voltage and Current. Users can remotely monitor their power use by logging onto the SENSE website via a smart phone, tablet or PC.

In USA residences generally have a two-phase feed of 15-20 kw into their house. As a consequence, the Standard Kit from SENSE has two current Clamps placed around each of the incoming power cables.

SENSE is currently interested in compiling Australian data, with the view to possibly entering the Australian market in the future. As a result, they sort out interested Australians to become beta testers. Dave applied and was accepted, with SENSE providing both free equipment and installation. With Australia's single-phase feed, only one of the current Clamps was needed. As the standard kit mentioned earlier includes 2 current Clamps, SENSE recommended the second clamp be used to measure the power used by Dave's air conditioner as shown in Figure 11.

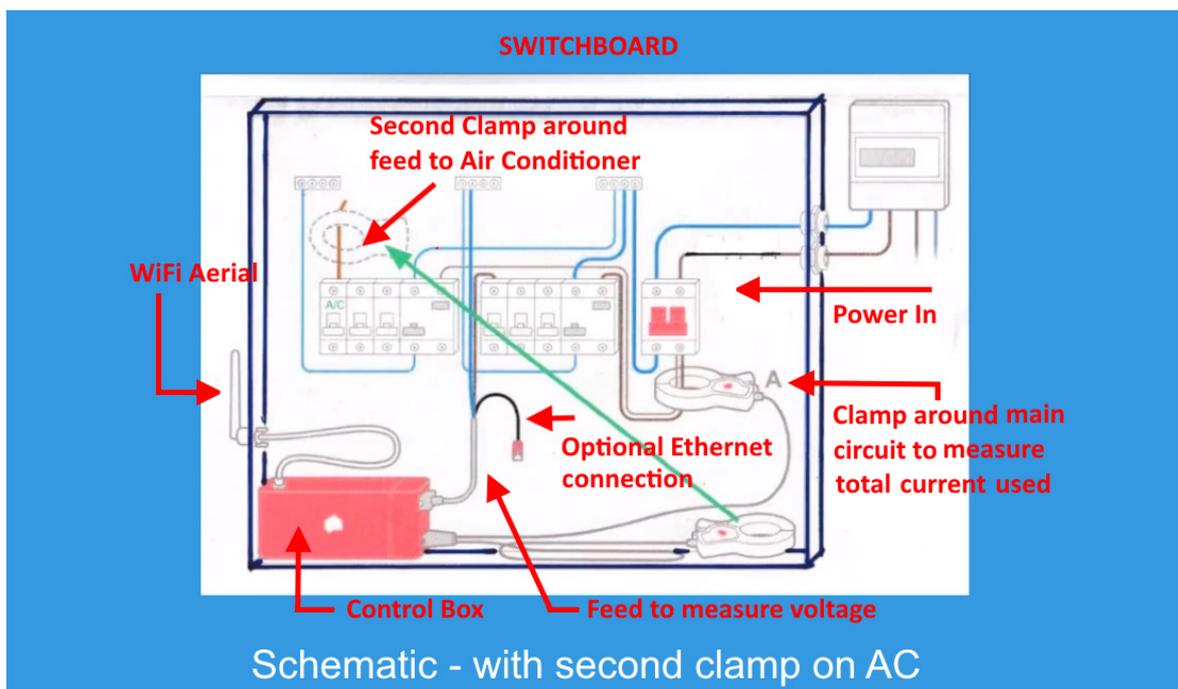


Figure 11 – SENSE Hardware Schematic taken from Dave's presentation

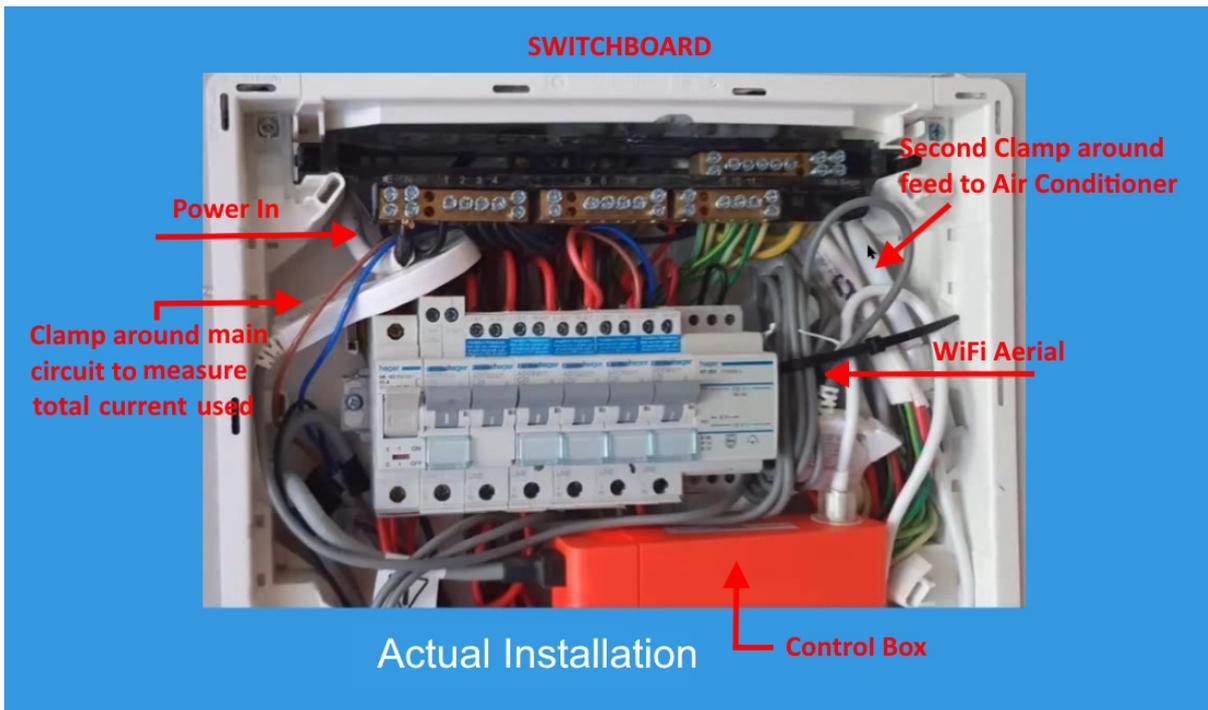


Figure 12 – The actual Installation of the SENSE equipment.

SENSE Smart phone App

When using the SENSE smart phone App to monitor power use, 5 screens are available, with the main 4, shown in Figure 13 below.

- Home screen - The size of circles shown on the Home screen indicates the proportion of the total power being used by that device. In the Home screen depicted, the largest circle is for the Fridge/Freezer. “Always on” refers to the constant power used by a Router, TV on standby, clocks and other devices that are constantly on. The “Other” circle refers to devices Dave is still to recognise as part of his role as a beta tester, such as lights, computers, chargers, toasters, kettles etc.
- Dashboard - gives the power used to date for the month, with a projected monthly total.
- Meter screen - gives the instantaneous measurement of power shown as current being used versus time. The graphs shown earlier in Figure 8 for the startup of a 2-bar heater and air conditioner were taken from the Meter screen.
- Settings

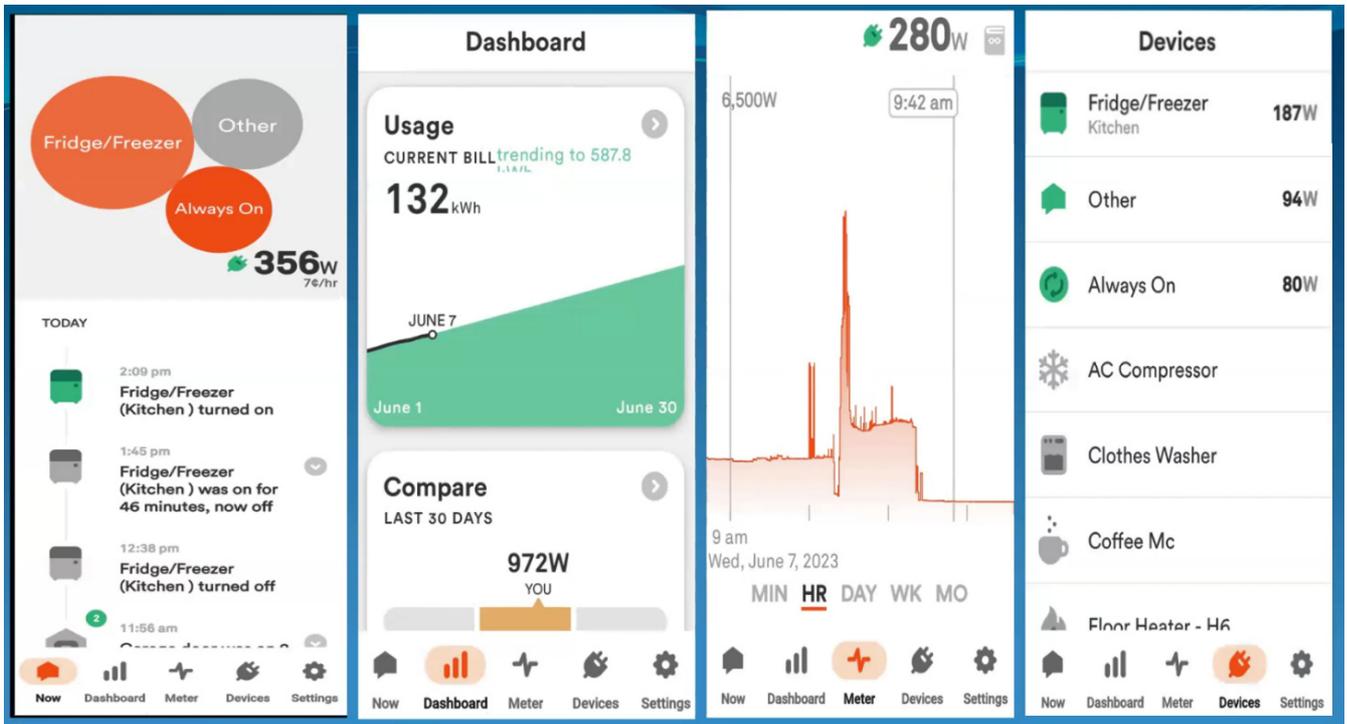


Figure 13 – SENSE Smart Phone App Screens

Device Recognition

Once the equipment is installed, the SENSE AI attempts to identify the devices using power. For Dave’s installation, SENSE identified “Always-On” power was 65 watts, probably due to standby load from appliances such as TV’s, Routers, Clock radios and others. To commence device identification, the remainder of the power being used is initially classified as “Other”. The SENSE AI then highlights reoccurring usage, as probably lights, heater or motor load for a specific device. One device the AI identified without input from Dave, was a 2-minute power load due to a garage door opener. Dave’s role as a beta tester was to confirmed or deny the identification, plus identify others such as when a kettle was turned on and off. Once a device is recognised the SENSE AI can then identify future use of the device, without input from the user.

The role of users is to look at occurrence and time of power usage, and declare what the device was likely to be. Currently Dave has identified the power load for his fridge/freezer. However, a small 410-watts “heater” load for 9 minutes 30 seconds duration, occurring every 20 hours, was more problematic to resolve. The 410-watt heater load turned out to be from the fridges cyclic defrost. Once the cause of the power load was determined, the model details for the fridge/freezer were then entered into SENSE’s AI database for updating.

With the model details for the fridge/freezer known, SENSE is then able to report to the user any voltage or motor deviations observed. This data is also used for users with the same model.

Current Investigation

With the SENSE system operational and when other devices are recognised, Dave plans to then investigate the lowest cost option for heating his house overnight. He aims to compare the ducted air conditioner that heats the whole house, against a convection heater that only heats the main bedroom. The ducted air conditioner is effectively a heat pump with efficiencies between 200 - 400%, compared to a convection heater with only a 100% efficiency, but which is only used in the bedroom. The choice between the 2 options is not as straight forward as one might think.

Dave concluded the presentation with a live demonstration.

Neil Muller