

The

Southern Highlands Computer Users Group Inc.

Assisting all members to explore and enjoy the benefits of Information Technology.

Monthly Newsletter

Keyword

September 2020



2020 Committee

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Please note: We are not computer professionals and our expertise is limited.

Scott Hall

Our weekly meeting place for activities for PC and Apple users.



HarbisonCare, 2 Charlotte St, Burradoo, 2576, NSW.

www.shcug.org.au

How to join SHCUG.

Visit our Education Centre and drop in at one of our weekly activities to collect an application form. Payment can be made in cash or by cheque and handed to a tutor. Fees are \$40 single or \$60 couple. Alternatively use EFTPOS transaction IMB Bank: BSB number is: 641 800 and the account number is: 200456000, or send the application form and cheque, made out to SHCUG, to following address: The Treasurer, SHCUG, c/- HarbisonCare, 6/2 Charlotte St, Burradoo, NSW, 2576.

Renewing memberships.

Renewal forms are sent out each year in early December to all current members by email, with all the relevant information needed to renew membership for the upcoming year.

Correspondence: Letters to the committee can be addressed to shcugcontact@gmail.com

Our Weekly 'Members Helping Members' sessions are held in Scott Hall , all members welcome.

Please note

Due to social distancing rules, members attending our Monday help sessions must have booked a place in one of our time slots, which are as follows; 10 am to 12 noon, 12 noon to 2 pm and 2 pm to 4 pm. A maximum of 10 members are allowed in any session. Email your preferred time slot to: shcugcontact@gmail.com

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By your committee
By Martina Oprey
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From your committee

Spring has arrived and in our gardens the buds on the trees are bursting, letting out new flowers and leaves. Due to coronavirus, Corbett gardens will not be open for tulip time this year.

SHCUG is still able to open each Monday for “Members Helping members” sessions. We have to be careful though and follow the rules of a “ maximum of 10 members at any session”. Members wanting to attend a session will have to book into a time slot before turning up (see page 2).

Your committee met on 7 September, at 9 am. With very few items on the agenda, the meeting was closed at 9.30. Our finances remain steady, with income and expenses at same level. Three new members were added to our members list during July and August.

As mentioned several times in Keyword, there are still a few items that have not been sold and are now offered for free. If not taken up by any of our members we have no other option than to send these to charities at the end of this month. Following is list of free items; 2 office chairs, 1 vacuum cleaner, laser printer, inkjet printer, computer screens, computer tower, keyboards and mice.

Members, interested in any of the above mentioned articles, email your request to:
shcugcontact@gmail.com

Your committee.



Wifi and Bluetooth, what is the difference.



It has been almost a year now since our home (finally) was connected to the NBN. Our modem/router sits on the kitchen bench and allows us to connect our devices to the internet from any room in the house, completely wirelessly. My iPod provides background music and it connects via BlueTooth to the boombox. My guess is that most of us use these wireless technologies without ever thinking about how these systems came into being or work. To find the difference between WiFi and Bluetooth, I did a bit of research into the technologies and I found some interesting facts.

Although Wifi and Bluetooth are both technologies which provide wireless communication, they are not the same. The difference is that each one is designed for a specific function. WiFi provides high speed access to our devices to and from the internet whilst Bluetooth is primarily used to connect our devices to other compatible devices, all without the use of cables. Keeping it simple, let's have a look at both systems.

WiFi.

The letters WiFi stand for *Wireless Fidelity*. Over the years many people have contributed to the WiFi invention. Victor "Vic" Hayes (born July 31, 1941 Surabaya, Dutch East Indies) is referred to by some to be the "Father of WiFi". The basic idea of WiFi, including Bluetooth, goes back a bit further (see page 7).

PCs, laptops, mobile phones, Tablets and iPads are all able to connect to a WiFi internet service without the need for a physical wired connection. Wi-Fi (pronounced "Why-Fy") is a term that was coined by a branding company in 1999 as a name which would be easily recalled, due to its similarity to the then well-known term "Hi-Fi". WiFi technology uses radio signals to transmit information between your Wi-Fi enabled devices and the internet, allowing the device to send/receive information to/from the web in the same way that a radio or mobile phone sends/receives sound.

How does WiFi work.

A small device known as a wireless transmitter, or hub, is required; this device receives information from the internet via your home broadband connection. This transmitter (often referred to as a Wireless Access Point, or WAP) then converts this information into radio waves and emits it, effectively creating a small, local area around itself, within which your devices can receive these radio signals if they are fitted with the correct kind of wireless adapter. This area is often termed a Wireless Local Area Network, or WLAN for short. When you send information back to the internet – by clicking on a link or sending an email, for example – the process works in reverse; your device sends information via a radio signal to the wireless transmitter, which converts the signal and communicates it back via the broadband connection.

Most of us will have desktop/laptop computers that have built-in wireless transmitters and about all mobile devices (iPhones/Smartphones, Tablets/iPads) are WiFi enabled. It is possible to make an older computer/laptop connect wirelessly to the internet with a wireless adapter that can be plugged into a USB port of the device. This adaptor acts both as a receiver and a transmitter. Our WiFi system at Scott Hall, has one wireless modem/router installed next door, in unit 56. The Wireless Access Point in it has a range of about 40 meters. This enables us to connect to our iiNet internet service whilst being in the Hall.

WiFi hotspot.

WiFi hotspots are simply areas with an accessible wireless network. The term is most often used to refer to wireless networks in public areas such as the Mittagong Market Place, MacDonald's and coffee shops. Some are free whilst others require fees for use, but in either case they can be handy when you are on the go. Another way is to create your own mobile hotspot by using your mobile phone to connect an iPad or laptop to the internet.



Wifi and Bluetooth, what is the difference.

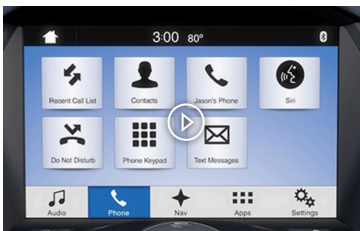


The Bluetooth standard was originally conceived in 1994 by Dr Jaap Haartsen whilst working for Ericsson. The technology was named *Bluetooth*, the eponym of the Danish and Norwegian King Harald Gormsson (c. 958 –c. 986). Besides bringing christianity to his kingdom, he also united various clans under a single banner. The Bluetooth technology has the same goal, i.e. uniting everything under a single platform.

Like WiFi, Bluetooth also uses radio signals to send data between devices. In fact, Bluetooth uses some of the same frequencies as WiFi, which can cause interference with WiFi. Unlike WiFi, Bluetooth does not require you to use a password to connect to a device. All you need to do is *to pair it* with another device. On most iOS devices this is done via *Settings*, then check if the Bluetooth button is in the *ON* position, if not slide the button to the right. On an Apple computer click on Settings, then find the icon of *Bluetooth* and click. From the list given click on the device you want to pair your device with. On a PC, click on the 'hidden icons' symbol, from the list of compatible devices given, click on the one you want to connect too. Speakers and Wireless headphones usually have a button to press in order to connect these to another device's list of discoverable Bluetooth devices.

Bluetooth has a wide variety of applications and as such has boosted the convenience and functionality of portable devices such as laptops, tablets/iPads and iPhones/smartphones which are all bluetooth enabled. Designed to exchange data between electronic devices over short distances (appr. 9 meters) they communicate with other bluetooth enabled devices near by. Besides the above mentioned devices there are many more. Think about speakers, headphones, homepots, digital cameras and camcorders, keyboards and mice, hearing aids, fitness trackers and many other peripheral (add-ons) devices.

The car industry has also embraced the Bluetooth technology. Most newer car models have bluetooth enabled car stereo's, becoming the de facto standard for connecting audio devices and smartphones to car infotainment systems. Paired to a car, a Bluetooth-connected phone allows you to make or receive phone calls, hands-free. Additionally, the connection provides a conduit for high-end vehicles to read out SMS and email messages received by the phone. And web-based apps, such as Apple Maps, can guide you to a destination, even if your car isn't equipped with its own satellite navigation system. Finally, of course, either a phone or an audio player can stream music to the car's infotainment system – hundreds of songs without a commercial to be heard.

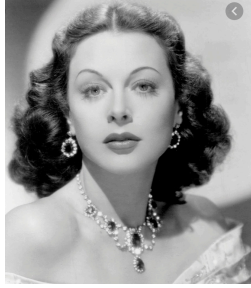


It's anticipated that every future car will come equipped with four to six sensors and by 2024, around two-thirds of all cars on the road will be featuring some form of Bluetooth technology. It is expected that Bluetooth will also become the norm when it comes to connecting to your car's sensors for troubleshooting and code-reading. Going wireless saves weight, manufacturing costs and labour

There is a constant drive to improve the Bluetooth technology to make it available in more and more products. Think about the lightbulbs, TV, Stereo, front door etc of a *Smart Home*.

Hospitals and doctor's surgeries also use Bluetooth enabled gadgets such as handheld thermometers, blood pressure readers, glucose readers, heart monitors and many more. There are Apps to be installed on mobile phones used to track a patient's health remotely.

By Martina Oprey



Hedwig Eva Maria Kiesler, more than a pretty face. By Martina Oprey

Many of us Seniors would have seen movies such as *Algiers* and *White Cargo*, featuring stunning looking ladies and equally good looking men in the leading roles. The leading lady in the above mentioned films was Hedwig Eva Maria Kiesler, better known by her stage name of *Hedy Lamarr*.

Hedwig Eva Maria Kiesler was born November 9, 1914 in Vienna, Austria. At an early age she had an interest in acting and was discovered at the age of sixteen by the Austrian film director Max Reinhardt. She gained international fame in 1932 with her role in the sexual charged Czech film *Ecstasy*. In 1933 Hedy married Fritz (Friedrich) Mandl, chairman of Hirtenberger Patronen-Fabrik, a leading Austrian armaments firm founded by his father, Alexander Mandl. The marriage was a disaster and Hedy escaped from Mandl's grasp in 1937 and fled to England. While in London, she was introduced to Louis B Mayer, of the famed MGM Studios, and her consequent move to Hollywood where she became known as the most beautiful woman.

Hedy not only possessed beauty but she was also highly intelligent. As a child she was taken on long walks by her father who would inspire her to be curious about how things worked. He often would explain the workings of machines to her, such as the streetcars they saw, as they ambled along. When Hedy dated Howard Hughes her interest in science was rekindled. Hughes gave her a small trailer with equipment to use whilst she was at work at the film studio. He also took her to his airplane factories, showing her how the planes were built and the scientists behind the process.

In 1940 Hedy met George Antheil, another clever individual. Known for his writing, film scores and experimental music compositions. He shared the same inventive spirit as Hedy Lamarr. During her marriage to Fritz Mandl, Hedy had gathered knowledge on munitions and various weaponry that now would prove beneficial. The two came up with an extraordinary new communication system (idea came from the 88 keys of the piano) they thought could be used to guide torpedoes to their targets in times of warfare. The system involved the use of *frequency hopping* amongst radio waves, with both transmitter and receiver hopping to new frequencies together. Doing so prevented the interception of the radio waves, thereby allowing the torpedo to find its intended target. Lamarr and Antheil sought a patent and military support for their invention.

The patent was granted under US Patent 2,292,387 on August 11, 1942. The US Navy however was not receptive to their idea as the technology was difficult to implement. Nevertheless their invention was classified in the "*red hot*" category. Laying forgotten for many years the technology was first adapted in 1957 to develop a sonobuoy (A sonobuoy is a relatively small buoy expendable sonar system that is dropped/ejected from aircraft or ships conducting anti-submarine warfare or underwater acoustic research) before the patent had expired, although the US Navy denied this at the time. During the Cuban missile crises in 1962, an updated version of their design was installed on Navy ships.

Hedy's movie career overshadowed her inventions and it was years before she was recognised for the latter. In 1997 the Electronic Frontier Foundation jointly awarded Hedy Lamarr and George Antheil the Pioneer Award. Hedy also became the first woman to receive the Invention Convention's Bulbie Gnass Spirit of Achievement Award. She was inducted (posthumously) into the National Inventors Hall of Fame for the development of her frequency hopping technology in 2014. These achievements have led to Hedy Lamarr being dubbed *Mother of Wifi and other wireless communications like Bluetooth and GPS*.

Financially Hedy Lamarr nor her estate have seen a cent from the multi-billion-dollar industry her idea paved the way for, despite the fact that the US military has publicly acknowledged her frequency-hopping patent and contribution to wireless communication technologies.



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