

Issue 214

SUMMER 2021

ISLE OF WIGHT PC USER GROUP



HOT KEY

July 2021

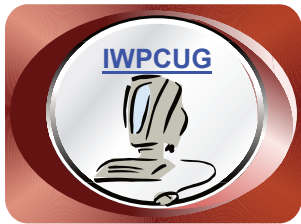


At our May meeting Peter Warren gave us a talk on the subject of his life in computing.

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The Isle of Wight Personal Computer User Group

We welcome anyone who has an interest in computers and related technology and what you can do with them.

We are a group which seeks to exchange ideas and new information.

Membership is £12 per annum

Our meetings are normally held on the first Wednesday of each month from 7.00 to 9.00 pm. Until further notice these will be held online via Zoom.

Visitors are always welcome.

If you would like to know more about us, you are most welcome to come along to one of our meetings, or you can contact one of our Committee Members listed on page 3.

The Club web site address is www.iwpcug.org

We also have an e-group discussion area on

Groups.io: <https://groups.io/g/iwpcug>

Details of how to join are on page 4.



FUTURE MEETINGS

<u>Date</u>	<u>Subject</u>	<u>Speaker</u>
7 July	General online chat	
4 August	Socially distanced meet up	
1 September	TBA	Jonathan Burt

ISLE OF WIGHT PC USER GROUP COMMITTEE

Chairman : David Groom

Secretary : Susanne Bone

Treasurer : Mike Hoar

Membership and Database Secretary : Roger Skidmore

Committee Member : Steve Sutters

Treasury Supervisor : Phil Rogers

Note:

Contact details removed prior to publishing on the internet.

Suggestions for new events, topics or speakers for talks are always welcome.

Please contact Steve Sutters, or any committee member, with your ideas. If necessary we may be able to find a speaker for your subject.

Chairman's Report

Thanks to a couple of new speakers we've managed to continue with our Zoom meetings during the spring and early summer. Although the calendar on page 2 does not extend beyond September we have two other meetings in the planning stage, so are just looking for one more speaker to fill the schedule up to the end of the year.

With lockdown restrictions easing we are considering how to proceed with our monthly meetings. The August meeting would traditionally be the summer BBQ, but in order to help with social distancing we are tentatively thinking of having a more "drinks and nibbles" type event, further details in due course. Before we come to any decisions on whether later meetings in the year will be via Zoom or in person we will canvas members opinions, and also check the availability of rooms at the Riverside Centre.

I am conscious that one or two articles in this months issue may be a little specialised, but it is sometimes difficult to find topics to fill the pages of HotKey.

Just after the last issue was printed we received the sad news that Ray Boote had passed away. Ray was a long standing member of our club and had served on the committee for many years, latterly as our membership secretary from 2002 – 2013. Our thoughts are with his family.

David Groom

Joining the Email Discussion Group

Send an email to: iwpcug+subscribe@groups.io, you will receive a confirmation email, follow the instructions in that email, and then wait for your approval request to be approved by one of the moderators.

All members are encouraged to join this group (it's free and private to club members) so you can keep in touch with events and join in with the discussions.

You can also keep in touch by regularly visiting www.iwpcug.org

Roger's Keyring Memory Stick Set of Utilities - Update

In 2007 I wrote that my keyring USB stick was 64 Mb - well it is now 4Gb and nearly full of goodies. But it is surprising how many utility programs are still very similar - probably upgraded or replaced by better, but still doing the same jobs.

We all had a major utilities update in October 2019 when Jonathan Burt produced his universal utility CD Cover Disk. If anybody didn't get this disk I still have an original and can make a copy for them.

Some of my favourites are listed below and are easily searchable on the web:

Speccy for system details; FastStone - a versatile photo manager and its partner FSCapture screen capture. I always vet my incoming mail with Mailwasher before downloading. I like NoteTab lite for basic text editing although there is a fuller version for complex editing tasks. xPlorer2 is my go-to dual pane file manager. For casual desktop notes I use Tom Revell's Stickies.

See <https://www.iwpcug.org/pastmeetings.php> for previous meetings and David's really useful search facility.

Linux has some equivalents and with the help of David and Mike I have tried to list some...

- Speccy (system information) in Windows = Hardinfo in Linux
- xPlorer2 file manager in Windows = Dolphin in Linux (or XFE)
- FastStone image viewer in Windows = gThumb in Linux
- Syncback backup program in Windows = rSync in Linux
- Notepad Lite in Windows = Kate in Linux (Notepad++ only in Windows)
- Stickies sticky notes in Windows = xPad in Linux
- Filezilla FTP - available on all platforms
- Audacity sounds editor - available on all platforms
- PDFsam Basic and PDF Reader are free (and provide merge and split tools in addition to read) - available on all platforms

Roger Skidmore

What is Fog Computing?

In the early days, computers were big and expensive. There were few users in the world, and they had to reserve time on a computer (and show up in person) to have their punchcards processed. Systems called mainframes made many innovations and enabled time-shared tasks on terminals (like desktop computers, but without their own CPU).

Skip forward to today, when powerful computation (a Raspberry PI) is as cheap as US\$35 and no larger than a credit card. That doesn't even begin to cover all the little devices in modern life that gather and process data. Take a high-level view of this collection of computers, and you can imagine all of these devices outnumbering grains of sands or particles in a cloud.

It so happens that the term "cloud computing" is already occupied, so there needs to be a unique name for the network comprised of the Internet of Things (IoT) and other strategically situated servers. And besides, if there's already a cloud representing nodes of a data center, then there's surely something unique about the nodes intermingling with us folk outside that cloud.

Welcome to fog computing

The cloud delivers computing services over the internet. But the data centers that make up the cloud are big and relatively few compared to their number of potential clients. This suggests potential bottlenecks when data is sent back and forth between the cloud and its many users.

Fog computing, by contrast, can outnumber its potential clients without risking a bottleneck because the devices perform much of the data collection or computation. It's the outer "edge" of the cloud, the part of a cloud that touches down to the ground.

Fog and edge computing

Fog computing and edge computing are essentially synonymous. Both have strong associations with both the cloud and IoT and make the same architectural assumptions:

- The closer you are to the CPU doing the work, the faster the data transfer.
- Like Linux, there's a strong advantage to having small, purpose-built computers that can "do one thing and do it well." (Of course, our devices

actually do more than just one thing, but from a high-level view, a smartwatch you bought to monitor your health is essentially doing "one" thing.)

- Going offline is inevitable, but a good device can function just as effectively in the interim and then sync up when reconnected.
- Local devices can be simpler and cheaper than large data centers.

Networking on the edge

It's tempting to view fog computing as a completely separate entity from the cloud, but they're just two parts of the whole. The cloud needs the infrastructure of the digital enterprise, including public cloud providers, telecommunication companies, and even specialized corporations running their own services. Localized services are also important to provide waystations between the cloud core and its millions and millions of clients.

Fog computing, located at the edge of the cloud, intermingles with clients wherever they are located. Sometimes, this is a consumer setting, such as your own home or car, while other times, it's a business interest, such as price-monitoring devices in a retail store or vital safety sensors on a factory floor.

Fog computing is all around you

Fog computing is built up of all the connected devices in our lives: drones, phones, watches, fitness monitors, security monitors, home automation, portable gaming devices, gardening automation, weather sensors, air-quality monitors, and much, much more. Ideally, the data it provides helps to build a better and more informed future. There are lots of great open source projects out there that are working toward improving health and wellness—or even just making life a little more entertaining—and it's all happening thanks to fog and cloud computing.

Seth Kenlon

published at <https://opensource.com/article/21/5/fog-computing>
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Keep Multiple Linux Distros on a USB Stick **With This Open Source Tool**

Create a multiboot USB drive with Ventoy, and you'll never be without your favourite Linux distros.

Giving friends and neighbours a bootable USB drive containing your favourite Linux distribution is a great way to introduce neophyte Linux users to the experience we all enjoy. There are still a large number of folks who have never heard of Linux, and putting your favorite distribution on a bootable USB drive is a great way to break the ice.

A few years ago, I was teaching an introductory computer class to a group of middle schoolers. We used old laptops, and I introduced the students to Fedora, Ubuntu, and Pop!_OS. When the class was over, I gave each student a copy of their favourite distribution to take home and install on a computer of their choice. They were eager to try their new skills at home.

Put multiple distros on one drive

Recently, a friend introduced me to Ventoy (<https://www.ventoy.net>), which is an open source tool to create bootable a USB drive for ISO/WIM/IMG/VHD(x)/EFI files. Instead of creating separate drives for each Linux distribution I want to share, I can create a single drive with all my favorite Linux distributions on the drive!

As you might expect, a USB drive's size will determine how many distributions you can fit onto it. On a 16GB drive, I placed Elementary 5.1, Linux Mint Cinnamon 5.1, and Linux Mint XFCE 5.1... and still have 9.9GB free.

Get Ventoy

Ventoy is open source with a GPL v3 license and available for Windows and Linux. There is excellent documentation to download and install Ventoy on Microsoft Windows. The Linux installation happens from the command line, so it can be a little confusing if you're not familiar with that process. Yet, it's easier than it might seem. [Full details of how to do this can be found online at the link at the foot of this article.]

Once Ventoy has been installed to your USB you can copy and paste all the Linux distributions that will fit on the drive. If you boot the newly created

drive on your computer, you'll see a menu with the distributions you have copied to your USB drive.

Build a portable powerhouse

Ventoy is your key to carrying a multiboot drive on your keychain, so you'll never be without the distributions you rely on. You can have a full-featured desktop, a lightweight distro, a console-only maintenance utility, and anything else you want.

I never leave the house without a Linux distro anymore, and neither should you. Grab Ventoy, a USB drive, and a handful of ISOs. You won't be sorry.

The above is an edited version of the article by **Don Watkins** published at <https://opensource.com/article/21/5/linux-ventoy> under a [CC-BY-SA](#) licence

VoIP Phone

Computability has acquired a VoIP phone - a RingCentral Polycom VVX410, new, boxed, and which it is unlikely to find a home for. We recently had an excellent presentation on VoIP technology by our Chairman, David Groom, and we wondered if anyone would like to tie the two together? To review the talk and try it out on this quite respectable VoIP phone. David's talk is available for viewing here <https://iwpcug.org/url/voip>

And the phone itself is shown here.



As featured in the current PCPRO magazine it seems that landline phones will be withdrawn from 2025 so we had better get used to VoIP.

If you would like the phone please contact Roger on roger@***.co.uk . Either free or a small donation to Computability: www.cfd-iw.org.uk.

Roger Skidmore

OpenLearn - free learning from The Open University

OpenLearn (<https://www.open.edu/openlearn/>) is a free learning platform, delivered by The Open University as part of its Royal Charter commitment to support the wellbeing of the community.

Since its launch in 2006, OpenLearn has become an integrated part of The Open University, with the site attracting almost 75 million visitors.

The OpenLearn team originate, commission and develop content that unites faculty and University priorities with areas of topical and general interest. This is in support of our own student population in their academic, skills and career and personal development (CPD) endeavours, delivering quality assets openly available for teaching and learning.

There are a number of courses relating to computing, one which might be particularly interesting is detailed below.

Discovering computer networks: hands on in the Open Networking Lab

Have you ever wondered how the internet gets into your home, school, college or workplace? How do all the computers, phones, tablets, printers and other devices connect and work together?

In this free course, *Discovering computer networks: hands on in the Open Networking Lab* (www.iwpcug.org/url/OpenEduNetwork), you can explore how computer networks operate, discover how data is sent around the internet, put your understanding into practice using an inbuilt network simulator to create your own – simulated – computer networks.

The course starts by looking at ‘home networking’, introducing key concepts and principles as used in a relatively small computer network. Later, the course moves on to looking at ‘commercial networking’, where the same concepts and principles apply, but at a larger scale. Hence, you will gain insight into how computer networks operate in different contexts.

The course uses an embedded online network simulator – giving you the opportunity to put into practice some essential network technology skills.

David Groom

using content taken from the OpenLearning website (<https://www.open.edu>)
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OBS Studio

A few months ago a client of mine wanted to know how best to record a video for uploading to YouTube, and I have to admit I was a bit stumped as to the best way of doing this. However whilst researching possible subjects for articles for this months HotKey I came across an article entitled “How I use OBS Studio to record videos for my YouTube channel” [see the link to the Opensource web site at the bottom of this article]. I had no idea what OBS Studio was, so decided to investigate.

On its web site (www.obsproject.com) OBS Studio is described as free and open source software for video recording and live streaming. OBS provides real-time source and device capture, scene composition, encoding, recording, and broadcasting. OBS was publicly released in 2012. What started out as a small side project by Hugh “Jim” Bailey to make a free and open source program to stream StarCraft 2 has grown into a powerful force in the streaming and video production industry. Hundreds of thousands of people use OBS Studio every day.

The software is available for Windows, Mac & Linux.

The first time you launch OBS Studio, the software runs an auto-configuration wizard to determine the best settings for recording videos. This makes setup a breeze. OBS Studio will run through a series of automated tests before it confirms the best video settings for your system.

The main user interface is organized into five sections: scenes, sources, audio mixer, transitions, and controls. Scenes are groups of sources like live and recorded video, text and audio. The mixer panel lets the user mute the audio, and adjust the volume through virtual faders, and apply effects by pressing the cogwheel next to the mute button. The control panel has options for starting/stopping a stream or recording, a button to transform OBS to a more professional Studio Mode (see below), a button for opening the settings menu and a button to exit the program. The upper section has a live video preview, used to monitor and edit the current scene. The user interface can be switched to a variety of themes, including both dark and light themes, depending on what the user prefers.

OBS does not capture any video by default. To get started capturing, you need to add a Source. At the bottom of the window is a box called 'Sources'. Click on the + (or right click inside the box) and pick the source you want. As a few examples, select Game Capture if you're capturing a game, Window for non-game applications, or Video Capture Device for a webcam or capture card.

Any particular broadcast may contain a number of different scenes or sources. How you define your scenes depends on the kind of video you want to make. If you do a lot of hands-on demonstration videos, you may have have one scene with a full-screen webcam video, another scene that's just a program window, and yet another scene that's "picture-in-picture" with the webcam feed over the top of a program window. You can also set up separate scenes that show a "thank you" or closing image. That may sound like a lot of work, but once you have the scenes set up, changing scenes is just clicking an item in the Scenes menu.

When in Studio Mode, there are two canvas preview windows, the left one for modifying and preview of non-active scenes, while the right window is for preview of the live scene ("Preview" and "Program" respectively). In the middle there is a secondary transition button, allowing for transitioning to the non-active scene in the left window using user-defined "quick transitions".

I have to admit I haven't as yet tried out OBS Studio, and it may be a little over complex, but if I have time I shall investigate further and see how it goes. If this article has whet your appetite then I would definitely recommend reading the Opensource article linked below.

David Groom

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URL Shortening

URL shortening is a technique on the World Wide Web in which a Uniform Resource Locator (URL) may be made substantially shorter and still direct to the required page. This is achieved by using a redirect which links to the web page that has a long URL. Two of the most popular URL shortener services are [Bitly](https://bitly.com/) and [TinyURL](https://tinyurl.com/).

The IWPCUG web site now has its own URL shortening service. In this edition of HotKey you will find several links which start www.iwpcug/url/ and these will redirect to a web page not hosted on our server.

Phishing: How to Report an Email to the NCSC

The following article is taken from the UKs' National Cyber Security Centre ("NCSC") web site.

Discover how to report a potential phishing message to the NCSC using the Suspicious Email Reporting Service (SERS).

Cyber criminals love phishing. Unfortunately, this is not a harmless riverbank pursuit. When criminals go phishing, you are the fish and the bait is usually contained in a scam email or text message.

The criminal's goal is to convince you to click on the links within their scam email or text message, or to give away sensitive information (such as bank details).

These messages may look like the real thing but are malicious. Once clicked, you may be sent to a dodgy website which could download viruses onto your computer, or steal your passwords.

Have you spotted a suspicious email?

If you have received an email which you're not quite sure about, forward it to the Suspicious Email Reporting Service (SERS) report@phishing.gov.uk The message might be from a company you don't normally receive communications from, or someone you do not know. You may just have a hunch. If you are suspicious, you should report it.

Your report of a phishing email will help us to act quickly, protecting many more people from being affected.

In a small number of cases, an email may not reach our service due to it already being widely recognised by spam detection services. The vast majority of reports do reach our system so please keep reporting any suspicious emails you receive. If you continue to have problems then please contact us so we can investigate it further.

As of 31st May 2020 the number of reports received stand at more than 6,100,000 with the removal of more than 45,000 scams and 90,000 URLs.

Reported an email? Here's what happens next...

The NCSC will analyse the suspect email and any websites it links to. We'll

use any additional information you've provided to look for and monitor suspicious activity.

If we discover activity that we believe is malicious, we may:

- seek to block the address the email came from, so it can no longer send emails;
- work with hosting companies to remove links to malicious websites;
- raise awareness of commonly reported suspicious emails and methods used(via partners);

Whilst the NCSC is unable to inform you of the outcome of its review, we can confirm that we do act upon every message received.

Protecting yourself from phishing attacks and staying secure online

If you have reported a suspicious email or message then thank you – this will help us to track and stop many cyber criminals using phishing as a form of attack.

There are a number of ways you can protect yourself from attacks like this and the NCSC has published plenty of advice which will help you to stay secure online:

- The NCSC's top tip for staying secure online (<https://www.ncsc.gov.uk/collection/top-tips-for-staying-secure-online>)
- Phishing attacks: how to deal with suspicious messages and emails (<https://www.ncsc.gov.uk/guidance/suspicious-email-actions>)
- Securing your devices (<https://www.ncsc.gov.uk/guidance/securing-your-devices>)

For a full overview of the NCSC's advice for the general public please head to our dedicated individuals and families webpage (<https://www.ncsc.gov.uk/section/information-for/individuals-families>)

The above content was taken from:
<https://www.ncsc.gov.uk/information/report-suspicious-emails>
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Alternative Electric Cars

It's a great green concept to buy an electric car (as long as the electricity is made in an environmentally friendly way). Trouble is at present it costs about twice as much to buy the smallest electric car compared to a small petrol car. The main cost is due to the large battery they need. With prices from about £5,000 it's not surprising. The cost of batteries is predicted to come down but it could take years. I've not noticed a decrease in the cost of electric bike batteries in the last few years.

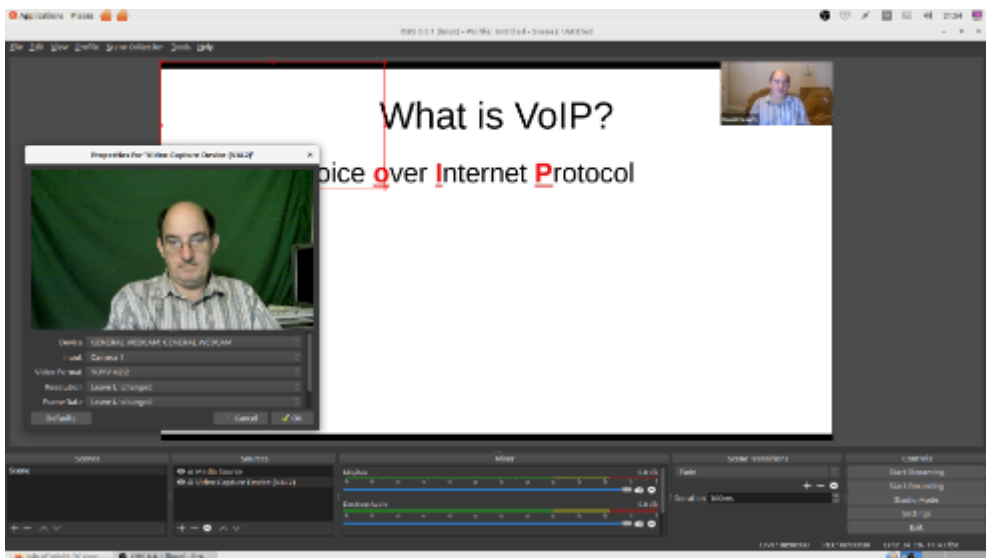
What can be done to make EV's cheaper to buy and run? Making them more aerodynamic, smaller and lighter are important considerations. This would mean they would not need batteries with such a high capacity and / or could go further per charge and would help offset the low energy density of batteries compared to petrol. Computers are increasingly being used to design car body shapes as this is cheaper than using models in wind tunnels. Computers are also increasingly being used in the many management systems in cars.

If transport for only one or two people is required the passenger seat can be placed behind the driver which gives smaller frontal area so less drag. An example is the SEAT MINIMO. Similar to the RENAULT TWIZY but with doors and windows as standard! An example of an extreme aerodynamics is the APTERA three wheeler electric car which looks like a cross between a UFO and a light aircraft without wings (see image on the back page). Very futuristic looking and to me beautiful. Thankfully as unlike a Reliant Robin as you could get!

One could go really minimalist with a PODBIKE FRIKAR. This could be thought of as a cross between a bicycle and a car or a 4 wheeled bike with a weatherproof body, suspension and electric motor. This looks modern and stylish to my eyes. Like any electric bike the exercise helps keep the driver alert and fit. I think a version with a more powerful motor would have a wider appeal as the present version only gives assistance to 15 mph to conform with European electric bicycle laws.

All the vehicles mentioned can be looked up on the internet.

Stephen Sutters



The OBS interface showing two sources, a pre-recorded recording of my presentation in March 2021, and a live feed from my web cam, see pages 11 & 12 for details of this program



The Apera three wheeled car, see page 15.

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