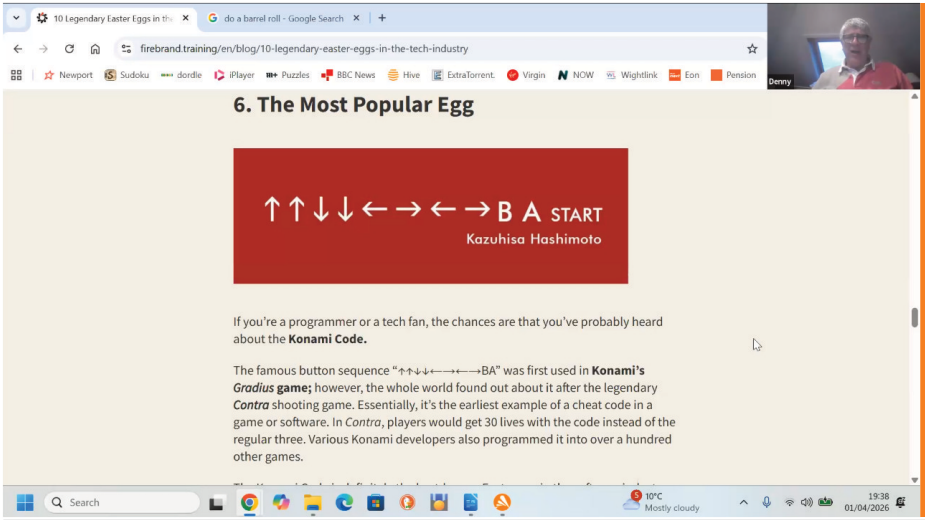
Issue 231

SUMMER 2026

ISLE OF WIGHT PC USER GROUP

HOT KEY

JULY 2026



Coinciding with April the first Denny gave us a talk on "Easter Eggs" in programs.

In this issue — Pages

Committee Members 3
Chairman's Report & Editorial 4
VueScan Optical Character Recognition 5-6
Generating Randomness 6-7
We Are Not Alone 8
What Is a Linux AppImage? 9-10
Affinity on Linux (using AppImages) 10
Adding Old HotKeys to the Website 11-12
Thoughts From Steve 13-14
Hiren's Boot CD 14
Updates to IWPCUG Web Site -Part 2 15

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 8:30 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 attend one of our meetings, or you can contact one of our Committee Members who are 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

Date	Subject	Speaker
1 July	Summer BBQ	
5 August	No meeting	
2 September	TBC	Jonathan Burt
7 October	TBC	
4 November	TBC	
2 December	Christmas Meeting	Denny Linzmaier

ISLE OF WIGHT PC USER GROUP COMMITTEE

Chairman : David Groom

Secretary : **position unfilled**

Treasurer : Mike Hoar

Membership and Database Secretary : Roger Skidmore

Committee Member : Steve Sutters

Committee Member : Susanne Bone

Treasury Supervisor : Phil Rogers

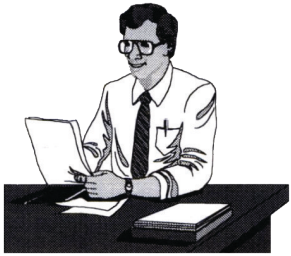
Note:

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 & Editorial



Fingers crossed that we had good weather on the 1st July so that the Club BBQ went ahead.

We are following the practice of the last few years and not having a meeting in August. Jonathan Burt has been booked in for a talk in September, but the October and November slots are currently unfilled, so keep an eye on the web site or the e-group, and of course if you want to volunteer to give us a talk please let me or Roger Skidmore know.

The articles on pages 9 & 10 are presented on the page in two columns. It was something Roger Skidmore suggested to me a few months ago, and to be honest I was not in favour of it. However reading past issues of HotKey I noticed that the 2 column layout had been in quite common usage in past issues, but stopped when we got a new HotKey editor in the autumn of 2003. I would welcome feedback on whether you prefer the two column layout.

David Groom

Puzzle Taken From a Past Issue of HotKey

Puzzles compiled by David Broughton used to be a regular feature of HotKey, the one below was taken from a past issue.

It takes a motor boat 5 minutes to travel 5 km when going with the current. When the boat is going against the same current, it takes 7 minutes. How long would it take the boat to do the same journey in slack water, when there is no current at all?

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**

VueScan Optical Character Recognition

VueScan, from Hamrick Software (**www.hamrick.com**), is the software I use for connecting my scanner to my Linux computer, mainly because the manufacturers of the scanners have not released appropriate software for Linux. But it's also useful for Windows users if the software which came with the scanner does not work on more recent versions of Windows.

As well as producing a simple scanned image of a page VueScan also has Optical Character Recognition ("OCR") facilities. Going to the "output" section of VueScan there are two options that are most relevant. The first one is a check box marked "PDF OCR text" and the second a check box marked "OCR text file". I clicked both of these, chose output files names such as "HotKey136.pdf" and "HotKey136.txt" and scanned an old issue of HotKey.

Note that OCR scanning increases the time taken for VueScan to process each page, so it takes a little over 14 minutes to scan a 16 page A5 booklet.

With both the check boxes ticked VueScan saved two separate files to my computer, one a text file and one a PDF.

The text file was fairly straightforward and included as best it could the text from the scanned page, or if scanning a multi-page document the text from all of the pages. As a simple text file, other than recognising lower & upper case characters and line breaks, there was no formatting of the text.

The PDF version was interesting. At first sight it seemed no different to that created if the "PDF OCR text" box was unchecked. But when I opened the file in Acrobat Reader I found you could actually search for text.

I opened up the PDF in Affinity and what I noticed was that there were multiple layers in the PDF. One layer contained the page as a scanned image, and other layers contained text frames which had the text identified by OCR within them. However this text had no colour set, which is why when I first opened the PDF in Acrobat you couldn't see it, and the file looked no different to one created without OCR, even though the text was now searchable.

There are two further options in VueScan relevant to OCR. The first is “OCR text multi page”, which has values of “off” or “on”. I had left this to the “on” setting. Changing this to “off” at first seemed to have the annoying effect that on a multi-page document such as HotKey the text file only contained the text from the last page which was scanned. To get a more useful result it was necessary to change the output file name to have a “+” in it so that each page scanned was saved to a separate file. Setting the output file name format to “HotKey139-1+.txt” resulted in output files of “HotKey139-1+.txt”,“HotKey139-2+.txt”,“HotKey139-3+.txt” etc - much more useful!

The last option you can choose is the checkbox “OCR text RTF format”. With this ticked rather than saving a straightforward text file VueScan saves the text output as RTF. This file had each block of text on the page in a separate text box, placed in a position as close as possible to where it was in the scan, and with an attempt to match the font size of the original page. I’m sure in some instances this this would be useful.

I was very surprised by the accuracy of the Optical Character Recognition in VueScan. If the original copy of HotKey was in good condition and I aligned it well on the scanner then there were almost no errors on the page. The most common error was that “I” was recognised as “|”.

David Groom

Generating Randomness

The League of Entropy is a coalition dedicated to delivering publicly verifiable decentralised randomness.

Randomness is extremely important for secure encryption. Each new key that a computer uses to encrypt data must be truly random, so that an attacker won't be able to figure out the key and decrypt the data.

However, computers are designed to provide predictable, logical outputs based on a given input. Random number algorithms used in most programming languages start with a "seed" number and apply a formula to produce a long, seemingly random sequence. If you know the formula and the seed, you can predict every subsequent number.

In order to produce a truly random number you need something which is chaotic and totally unpredictable. Luckily the real world has many such sources of random data.

Some modern computers and servers use hardware to measure the electrical noise in the CPU or motherboard and use this as a source of randomness.

Cloudflare, a major global cloud services and cybersecurity company, has taken a far more artistic approach to generating randomness (**https://blog.cloudflare.com/harnessing-office-chaos/**). In the lobby of their San Francisco office there is a wall of 100 lava lamps. The flow of the warm coloured wax blobs in a lava lamp is totally unpredictable. A camera takes a photo of the lava wall at periodic intervals. The unpredictable flow of "lava" inside the lamps is used as an input to a camera feed into a Cryptographically Secure PseudoRandom Number Generator that generates the random value. This system was first used, and patented by, Silicon Graphics in 1996. (See back page for image of the lava lamps.)

Cloudflare has offices in cities around the world, and several of them have their own methods for generating random data from real-world inputs. London takes photos of a double-pendulum system mounted in the office (a pendulum connected to a pendulum, the movements of which are mathematically unpredictable - see back page for an image). The Austin office features hanging translucent rainbow mobiles, which twist and shift in response to random events that disturb the airflow (such as doors opening and closing) and are captured periodically on camera. And, the Lisbon Cloudflare office features a display of 50 wave machines, also photographed periodically.

In a less artistic way the University of Colorado randomness beacon (CURBy) is a public randomness service that regularly broadcasts a set of random bits. It is composed of a classical periodic source of randomness as well as a quantum source of randomness based on the unpredictable correlations arising from measuring distant quantum particles.

David Groom

We Are Not Alone

With the decline in our membership over the years I've wondered what might be happening to other computer clubs. Do any still exist?

While recreating the August 2001 edition of HotKey I came across mention of the Association of Personal Computer User Groups (APCUG). I wondered if it still existed, so I performed a quick Google search, and found it.

APCUG (**https://apcug2.org**), says it is an international, cross-platform (Windows, OSX, Linux, iOS, Android, and Chrome) association, is a valuable resource for technology and computer user groups, helping them stay connected, informed, and effective in their mission to support and educate their members.

It costs $50 per year to join, so it seems reasonable to assume that any groups shown on their website are still in existence. According to the website there are 98 member groups in the USA, 2 in Australia, and 5 in Canada.

Turning to the the UK a Google search for "computer user groups england" brought up a directory on PC pages (**https://www.pc-pages.co.uk/Directory/Computer_Clubs.htm**) which listed over 20 general computer clubs, not a single link to their web sites was working! So I then Googled the names of the clubs in that directory and found only three which appeared to be active:

- Cheshunt Computer Club (**https://cheshuntcomputerclub.co.uk**) holds meetings online.
- Chorley Computer Club (**https://www.chorleycomputerclub.co.uk**) meets once a week in person.
- North Wales Computer Club (**http://www.nwcc.org.uk**)

So although we are not alone we do appear to be one of only a handful of computer user groups left in England.

David Groom

What Is a Linux AppImage?

An AppImage is a portable software packaging format designed for Linux. Unlike traditional Linux software packages, which often require installation through a distribution's package manager, an AppImage contains everything needed to run an application in a single file. This includes the program itself along with any required libraries and dependencies.

Using an AppImage is simple. Users download the file, make it executable, and then run it. No installation is required, and no changes are made to the operating system. This makes AppImages particularly useful for users who want to try software without affecting their existing setup.

One of the main benefits of an AppImage is its portability. The same AppImage file can often run on a wide range of Linux distributions, including Ubuntu, Debian, Fedora, Mint, and others. This saves software developers from having to create and maintain separate packages for multiple distributions.

AppImages are also convenient because they can be stored anywhere, including on USB drives or network shares. Removing an application is as easy as deleting the AppImage file, leaving no installed package or configuration data behind unless the application itself creates user files.

Another advantage is that users can run newer software versions even when their Linux distribution provides only older packages. This is particularly useful on long-term support (LTS) systems where software repositories may not always contain the latest releases.

However, AppImages do have some disadvantages. Because each AppImage includes many of its own libraries, files can be significantly larger than traditional packages. Updates are not always automatic, so users may need to manually download newer versions. AppImages also do not integrate as tightly with the operating system as software installed through a package manager, which can make menu entries, file associations, and security updates more difficult to manage. In addition, users should only download AppImages from trusted sources, as they bypass the distribution's normal software repositories and review processes.

For users seeking a simple, portable, and distribution-independent way to run Linux applications, an AppImage offers an elegant and practical solution.

There is no one central store for Appimages, and developers may list the app image on their own site or on github (as with the Affinity appimage - see below). However there is a web site **www.appimagehub.com/** which currently has 1,590 Appimages listed.

David Groom

Affinity on Linux (using AppImages)

Affinity desktop publisher is not supposed to run on Linux, just Windows and MacOS. However, some **clever developers** have combined WINE (which runs Windows apps in Linux) with Affinity 3. There is an explanatory YouTube video **here** (11 minutes) which tells you how and then introduces a further refinement to put an Affinity icon onto the Linux desktop. (Ed. For more information on Linux Appimages see previous page).

This **link** takes you to a site from which you can download the 1.95 Gb Affinity AppImage Affinity-3-x86_64.AppImage .

Then in the downloads folder, right click and grant permission to run, then click the file in the normal way (while in the downloads folder).

That should work, but it's more elegant if you can run Affinity from the desktop. **This** is home page for "AppImageLauncher".

Get the AppImagelauncher app from **here**. Then look at "AppImageLauncher downloads" - choose the correct one for your system - such as:

appimagelauncher_3.0.0-beta-2-gha287.96cb937_amd64.deb

In Linux Mint this should install with one click just like in Windows.

There is one note of caution. The current appimage uses a release of Affinity which is a little older than the latest official releases. If you also use Affinity on Windows and keep it updated you won't be able to open files created in it in the Linux version.

Roger Skidmore

Adding Old HotKeys to the Website

Some years ago I started scanning past issues of HotKey which I did not have the original source files for. I used VueScan to create a PDF of the scanned images of each page, and I then edited the images in this PDF to remove any personal information such as address, phone number or email, before saving the PDF to the web site.

One of the problems with a scanned image PDF is that you can't search the PDF for text, and for the same reason the PDF files are not accessible to those using screen reader technology. Also with the text as an image it is not a displayed cleanly and crisply, see **www.iwpcug.org/hotkey/HotKey136AsImage.pdf**.

I recently wanted to add more issues of old HotKey to the website, and decided to use the OCR facility of VueScan (see page 5) so that the PDF would have searchable text.

Having scanned an old issue of HotKey I next needed to edit the PDF in Affinity. This was to remove the personal information of anyone who wasn't a business, as this I consider to be confidential information. If you read the article on VueScan you will know that the PDF contains an image of the whole page, and additionally layers with text. Therefore in Affinity I deleted the text containing the contact details and also edited the image to remove those details. Having saved the file as a PDF I was disappointed to find that when opening the PDF in Acrobat Reader I could no longer search for text.

It would appear that Affinity does not include invisible text in its PDF export (even if the "export invisible layers options" is checked). The trick was to go into every text box and add colour to the text, Affinity would then include this text in the PDF. However I needed to also move the scanned image of each page to be the front layer otherwise the text was overlaid on top of the image and you got a very confusing and blurred result.

It should also be noted that as the initial run through by Affinity was not very good at choosing font sizes the actual position of the new text on the page may not exactly match that shown in the image. A clear example of this can be seen if you open up the file **www.iwpcug.org/hotkey/HotKey136ImageAndOCR.pdf** and search the PDF for the word "friendly", this should take you to page eight, and the highlight is before the actual word.

Although the workflow described above does allow the PDF to have searchable text it doesn't get away from the fact that the file sizes are very large because the complete content of every page is included as an image in the PDF file. Also as the file displays a scanned image of the whole page there is discolouration, hole punch marks, and other blemishes. In order to fix this it's necessary to do a lot more editing of the file in Affinity.

It is possible to create a “better” PDF, similar to what I create for recent issues of HotKey where images are included as an image, but the text is included as text rather than an image.

From VueScan I already have the necessary text for each article in the OCR text file, though it is necessary to read through this to check there are no errors. To recreate the PDF so that it looks as close as possible to original it’s necessary to work out what font and what font size was used. For the bulk of the text it is Times New Roman, but every now and then a single word, or maybe the first letter of an article, is in a different font. For fonts I didn’t recognise I used **www.myfonts.com/pages/whatthefont/** to identify it, and then if I did not have the font on my computer I had to download and install the font (I now have 22 new fonts on my computer!).

To get the images I then copied the portion of the scanned page which originally would have been a proper image. Incidentally with both a photo editor, and a desktop publisher both within the new affinity studio this was very easy to do – no need to keep changing between software applications. I now had everything I needed to recreate a new PDF as close as possible to the original, an example being **www.iwpcug.org/hotkey/HotKey2003March.pdf**.

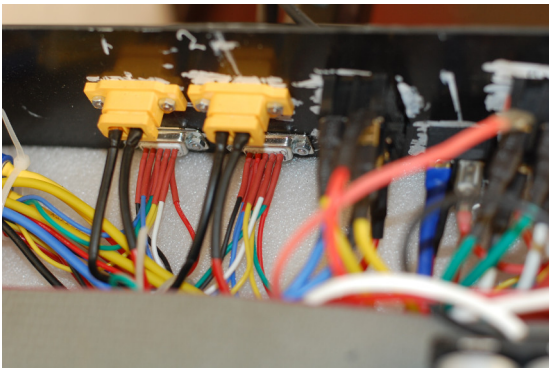
Doing this is very time consuming sometimes taking over 30 minutes per page, so many hours work for each issue of HotKey. It is my intention that all HotKey issues from January 2000 onwards will have a good quality PDF on our web site. At the time of writing I have 3 left to complete. Disappointingly I have no copy of issue 113.

Over time I will try to add issues prior to January 2000, but due to time constraints these will simply be the OCR PDF of the scanned issue (edited to remove contact details) rather than fully recreated quality files.

David Groom

Thoughts From Steve

The second ebike build has gone well and this time I wanted a fast and convenient way to connect up the balance wires for charging. Had to connect 23 thin (low current) wires to the balance charger and D-sub connectors were ideal as these are not too bulky or expensive. These were often used as a VGA (Video Graphics Array) connection. It is a legacy analogue standard that used to link computers to monitors, projectors, and TVs. It utilises a 15-pin D-sub port and is typically identified by a blue-coloured plug or port. Soldering wires to the pins was fiddly as the connections are only just under 1 mm apart so used a thin chisel tipped soldering iron to get between them. After months of charging they have been 100% reliable.



I've always wanted an oled TV as the picture quality is superb and contrast excellent with true blacks. Trouble with oled TV sizes for close viewing distances (I find the ideal is 1.5 times the diagonal of the screen) is the smallest oled TV is 42" and I wanted a 32" screen as 48" is the distance away from my sofa. So I bought a 32" monitor and connected it to a youview box for TV which has worked fine. Not cheap at £800 but the picture quality is excellent with the high definition channels. Oled monitors start at 27" and £349 from Curry's which would make a superb PC monitor.

On the domestic front last winter I bought 3 small oil filled radiators from Screwfix. Being only 3Kg and 15" high they are easy to move about and are very economical at 4p to 6p an hour electrical cost. They would not make much difference to a medium or large room but are great for heating a small area while standing or sitting.

Also from Screwfix I bought a 4 hob induction top for £120 and what a difference compared to my gas hob! It's like going from cooking in the 1900's to the Star Ship Enterprise. 2 presses on the touch screen and pans heat up fast so very little faffing about. Also a gloss easy to wipe clean surface.

On the sad passing over (I am a spiritualist) of Sean Colson I always found him friendly and full of energy. When I enquired if he had any old lithium ion 18650 cells he gave me 2 new ones which are still powering my bike lights after many years!

I recently went to Andertons music shop to buy a mini keyboard and also a ring modulator effect pedal. This gives the iconic Dalek voice which is achieved by taking a human voice and processing it through a **ring modulator**. The effect multiplies your vocal signal with a low-frequency sine wave (usually between 20 Hz and 80 Hz), creating the characteristic metallic, robotic, scary sound. Just the right vocal effect to put down any hecklers. Wonder if my neighbours suspect a Dalek invasion from 30 Station Street though?

Lastly my Weidian industrial PC with Windows 11 is still working great. I can't see myself using my dual core Windows 10 desktop PC again so anyone want a cheap desktop PC?

Steve Sutters

Hiren's Boot CD

Years ago we used to have "Hiren's Boot CD" which really was a CD and was full of useful stuff (and some not so useful). Now it is still called the same but it's over 3Gb and even more useful. This **YouTube** video introduces it and explains how to create your own utility USB. Though the video is two years old and the latest version of Hiren's is based on a Windows 11 Preinstallation Environment, not Windows 10 as shown in the video.

Hiren's BootCD can be downloaded from **https://www.hirensbootcd.org/download/** and that page also lists all the tools included in the download.

Roger Skidmore

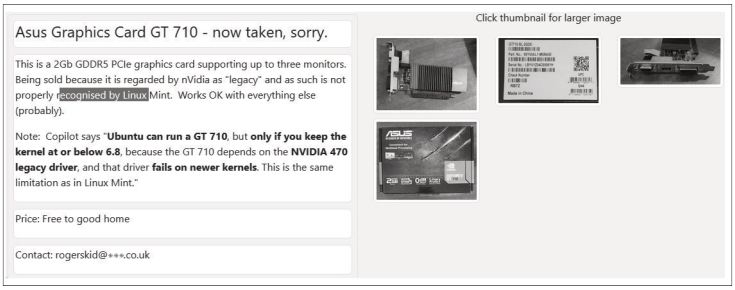
Updates to IWPCUG Web Site -Part 2

In the last issue of Hotkey I introduced some of the upcoming changes to the club web site. Those changes have now been fully implemented.

Each member now has their own username and password to log in. These should have been emailed out to you over the last month, if you haven't received the email please contact me!

Once you are logged in the left hand side of the menu has links to content available to logged in members only (club minutes and accounts, the skills database, and members adverts). The right hand side of the menu has links allowing you to edit your content, and update your account details.

The members' adverts section is now live, you can add you details of any items you wish to sell (or give away) and include up to six images.



The members' skills database is now editable by the member. In the past a member had to email updates to Roger Skidmore, who would then update a database, create an HTML page from the database, and then email the HTML to me to update the website – a convoluted process which understandably meant very few changes were ever made.

I've tried to make the members' sections as user friendly as possible, on certain pages if the ? on the right of the menu is blue there is help available if you click there.

On the public side of the website the simple CAPTCHA used to protect committee members' email addresses has been replaced with the Cloudflare based one, though if you are currently logged into the members' section there is no need to show any captcha.

David Groom

Lavalamps at Cloudflare (see page 6). **https://commons.wikimedia.org/wiki/File:Lava_Lamps_at_Cloudflare_1_2022-12-04.jpeg**. FASTILY, CC BY-SA 4.0

Double Pendulums at Cloudflare's London Offices (see page 6).

We try to publish HotKey quarterly in April, July, October and January
This edition was produced using Affinity version 3.