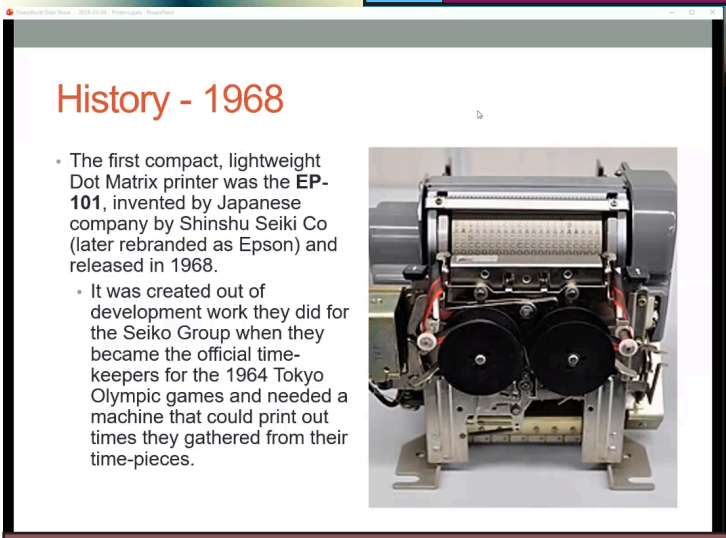
Issue 230

SPRING 2026

ISLE OF WIGHT PC USER GROUP

HOT KEY

APRIL 2026



In March Jonathan Burt gave us a presentation on the history of printers, printer languages and PDF.

In this issue — Pages

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 5.

FUTURE MEETINGS

Date	Subject	Speaker
6 May	Agentic AI	Dr Peter Huckle
3 June	The Life of Sean Colson	Jonathan Thornton
1 July	Summer BBQ	
5 August	No meeting	

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:
Committee member contacts 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

Since the last issue of HotKey we have had our AGM. A brief summary is that not much has changed! The committee remains the same as in previous years. Our expenses are now low following the move to not printing HotKey, so our financial position is sustainable, and we don't see a need to ask for a subscription this year. A look at the calendar shows planned meetings up to the start of the autumn.

The only negative point is the continued low attendance at the Zoom meetings.

Running out of inspiration for subject matter for this edition I asked ChatGPT what are the current hot topics in computing, one response was "Agentic computing". We may get an insight into some of this at next months zoom meeting.

David Groom

Virtual Printers

Most modern printers allow you to do clever things like printing to booklet format, two to a page, etc. In the old days you had to have a "virtual printer" like FinePrint to sit between your document and the actual printer and FinePrint would then do the clever stuff.

This was not so easy in Linux but then "Boomaga" (Booklet Manager) came along and did the same job. This is a blessing because printers are less likely to do booklet printing in Linux.

I have discovered another virtual printer for Windows called PriPrinter (**www.priprinter.com**) which seems more sophisticated than Fineprint. Both of these you have to pay for at various levels, while Boomaga is completely free.

Roger Skidmore

DiskGenius to the Rescue!

I am a backup freak – regularly using "SyncBack" for data backup to external hard drive and disk cloning software like Macrium (HotKey, October 2021) for whole disk backup to SSD. Last year I thought it smart to restore my main SSD to an NVME M.2 drive (HotKey October 2025)- and this was a success – well, it worked and the NVME drive was somewhat more snappy and responsive.

Then one day disaster struck and I had to restore my previous clone to the NVME. What is supposed to happen is that you get your several week-old main drive back on the NVME and then restore your backed-up data from a day or two ago.

But what happened is that it didn't boot. Copilot and experience both attested that this result was in fact to be expected – no subsequent bootable restoration was possible – whatever cloning software or process you use. I think I tried them all, including a detailed discussion with a lady from Crucial Memory.

In desperation I tried one more – "**DiskGenius**" - as recommended by David, our chairman. If only I had tried it first I would never have realised that it was the ONLY one which does in fact put the boot information back when cloning back to the NVME. DiskGenius is free for home use and very comprehensive in what it offers – and it looks pretty, too.

DiskGenius is readily searchable or on Hiren's Boot CD elsewhere in this issue. See also HotKey October 2025.

Roger Skidmore

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**

Want a simpler Windows 11 Start Menu?

The latest Windows Update restyled my Start Menu, I did not like it. It came with lots of setting, but none that reverted to the previous look and feel. So I started looking around and found there are a number of alternatives out there as 3rd party add-ons. Most required a small licence fee but there are some free ones too. I chose Open-Shell. A download is available from: https://github.com/Open-Shell/Open-Shell-Menu/releases. This downloads an exe install program which takes about 1 minute and you are instantly presented with a new start menu. Clicking the Start button presents a short setup dialogue. You can select the display style: 1, 2 or classic columns, you can select a skin (I kept the default) and other features. When finished click the Start button again and you get the menu on the left. (See back cover)

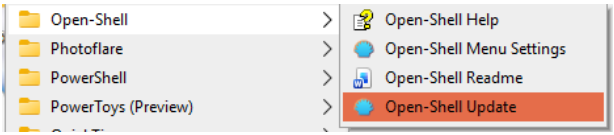
If you want to go back (temporarily) to the Windows 11 version click the Start Menu option.

The left column lists programs you have pinned to the start menu. On the right is a list of useful links to functions and folders (you can add/remove items as you wish).

Bottom left the Programs items open a list of ALL the programs available, likewise the Apps item.

Shut Down opens list of alternative actions including hibernate, restart, switch user etc.

If you open the Programs list and find Open-Shell, you get a list of options to open Help, open the menu settings, check for updates and view a readme file.



Maybe I'm old-fashioned but I find this, much less intrusive, and simpler to use than the MS version.

Mike Hoar

Can We Say Goodbye to Captchas?

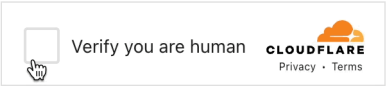
I have an admission to make - I hate "CAPTCHAS!" The CAPTCHA (Completely Automated Public Turing test to tell Computers and Humans Apart) is used on a web page to try and identify if the person browsing the web page is a human, or a computer, and can be used to cut down the amount of spam

The CAPTCHA has long been regarded as a terrible user experience. They typically come in the form of a challenge that is meant to be difficult for a computer to pass but simple for a human, such as identifying stretched letters or numbers, or things like zebra crossings or busses.

It has been estimated that collectively, humans waste 500 years a day trying to solve CAPTCHAs. In addition to being the speed bump of the internet, the tests have been critiqued for their lack of accessibility, assuming all internet users have the physical and cognitive capabilities to solve them. Privacy is also at risk; for example, Google's reCAPTCHA, which dominates the market, may ask for users to log in to their Google account as a form of verification, it's one reason why as a web developer I've never implemented reCAPTCHA on a client site, preferring to use hCaptcha (**https://www.hcaptcha.com**) instead. Though it has to be said that some of the challenges hCaptcha throws up to be solved are not immediately obvious, for instance see the back page showing a screenshot of a captcha where you have to click on all the images of animals which are taller than the animal in the top right image!

It has been estimated that humans give up on CAPTCHA puzzles approximately 15% of the time and, maddeningly, CAPTCHAs are significantly easier for bots to solve than they are for humans. Neither of which is good for the web site on which the CAPTCHA is installed. Either genuine users cant complete a desired action, or bots can complete it and waste company resources dealing with it.

Although it was released in September 2022 I've only recently come across the Cloudflare Turnstile service. Cloudflare's solution is a drop-in replacement for CAPTCHAs that preserves the user's privacy, and needs very little interaction from a user to actually pass the test. Pretty much all you are asked to do is click a simple checkbox (see image on the next page).



Turnstile is a simple, private way to replace CAPTCHA and help validate humanity across the internet. Now any site owner can replace CAPTCHAs through a simple API, whether they're a Cloudflare customer or not.

How It Works

Turnstile is a smarter, invisible CAPTCHA alternative. The solution automatically chooses from a rotating suite of browser challenges that work behind the scenes, looking for signals there is a human user. Turnstile can fine-tune the difficulty of the challenge, presenting harder challenges to visitors that exhibit non-human behaviours. It finds and stop bots by running a series of in-browser tests, checking browser characteristics, native browser APIs, and asking the browser to pass lightweight tests (ex: proof-of-work tests, proof-of-space tests) to prove that it's an actual browser. The current deployment of Turnstile checks billions of visitors every day, and is able to identify browser abnormalities that bots exhibit while attempting to pass those tests.

Turnstile now has the same stable solve rate as previously used CAPTCHAs. With this technology, Cloudflare reduced their own use of CAPTCHA by 91% and reduced the visitor time spent in a challenge from an average of 32 seconds to an average of just one second to run the non-interactive challenges.

Turnstile is now available for any developer to use on their site, regardless of if they are a Cloudflare customer. It was even imploded on the voting page for the 2023 Eurovision voting site (**https://blog.cloudflare.com/how-cloudflare-scaled-and-protected-eurovision-2023-voting/**)

For more information see **blog.cloudflare.com/turnstile-ga/**

David Groom

Updates to IWPCUG Web Site

Over the last few months I have been working on some changes to the club web site **www.iwpcug.org**.

The most noticeable change is that there is a new page on the website accessed via the menu item “software”. This page contains a list of software recommended by members. Periodically we used to produce such a list in HotKey but it could get out of date. It seemed to make more sense to put this on the website, particularly as there is more space to explain what the software does.

The idea is that members themselves will be able to add recommended software into the database on the website which generates the recommended software page.

I am working on a new login system so that each member has their own username and password. Currently Roger Skidmore and myself have been testing this, and I hope to roll this out to the rest of our members in the next month or so. This will give access to the same information as in the current members section, as well as the area to add your software suggestions, and update your details in the "skills database" in you wish these to be displayed.

Not yet implemented, but the next thing to do is to add in an area in the members section where you can post adverts of things to sell or give away to other members, this was a feature suggested at last years AGM. Also I will be replacing the simple CAPTCHA used to protect committee members email addresses with the Cloudfare based one.

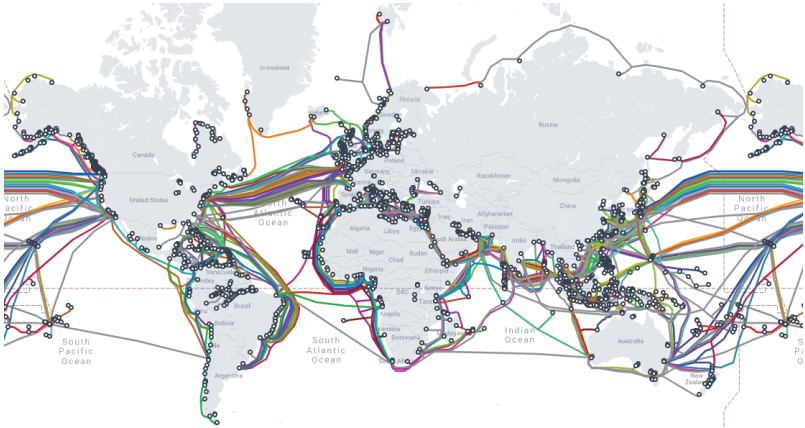
Other changes to the website are that I have updated the version of the Bootstrap framework which lies behind the formatting of each page and I've also slightly increased the default font size of the paragraph text.

David Groom

Undersea Cables Run the Internet

This is an updated version of an article I first published in HotKey in April 2021.

The modern internet feels wireless and intangible, but in reality it depends on a vast physical infrastructure: more than 500 sub-sea cables laid across the ocean floor. In total it is estimated 1.5 million kilometres of submarine cables in service globally. Some cables are pretty short, like the 131-kilometre CeltixConnect cable between Ireland and the United Kingdom. In contrast, others are incredibly long, such as the 20,000-kilometre Asia America Gateway cable. These cables carry over 95–99% of international data traffic, making them the true backbone of global communication—not satellites, as many people assume.



https://www.submarinecablemap.com/

These fibre-optic cables are surprisingly small—roughly the thickness of a garden hose—but incredibly powerful. They transmit data as pulses of light through glass fibres as thin as a human hair, enabling near-instant communication across continents. Modern systems can carry enormous volumes of data; for example, newer transatlantic cables can handle hundreds of terabits per second, vastly exceeding typical home internet speeds.

Despite their advanced capabilities, the basic method of installing these cables hasn't changed much since the 19th century. Specialised ships slowly unspool cable across the seabed, near coastlines, cables are buried under the seabed and reinforced with steel to protect them from damage, while in deep ocean areas they are simply laid on the floor where risks are lower.

The history of these systems stretches back to the 1800s, when early telegraph cables first connected continents. Initial attempts were unreliable, with cables frequently breaking or failing after short periods. Over time, innovations such as stronger materials, signal-boosting repeaters, and eventually fibre optics dramatically increased reliability and capacity. By the late 20th century, fibre-optic cables replaced copper wires, allowing tens of thousands of simultaneous communications—and today, millions more.

In recent years, control over this infrastructure has shifted. Traditionally, sub-sea cables were funded and operated by telecom companies in international consortia. Now, major technology firms—often called "hyperscalers," including companies like Google, Microsoft, Meta, and Amazon—are heavily investing in and even owning their own cables. This reflects their massive data needs, driven by cloud computing, streaming, and global online services. In fact, a large share of global internet traffic now originates from these companies' platforms.

However, this critical infrastructure is surprisingly fragile. Cables are frequently damaged—on average, a break occurs somewhere in the world every few days. The majority of these incidents are accidental, caused by ship anchors or fishing equipment dragging across the seabed. Natural events such as earthquakes can also sever cables. Repairing them is slow and complex: specialised ships must locate the break, retrieve the cable from the ocean floor using grappling hooks, splice it, and lay it back down. Repairs can take weeks or even months depending on conditions and permissions.

Beyond accidental damage, there are growing geopolitical concerns. Because these cables carry vast amounts of financial, military, and communications data, they are considered strategic assets—and potential targets in conflicts. Some regions rely heavily on a limited number of connections, making them vulnerable to disruption. As global tensions rise, experts increasingly view the seabed as a contested domain, similar to space or cyberspace. At the same time, demand for connectivity continues to surge. The number of cables is growing, with hundreds already in operation and more planned. Data traffic is increasing rapidly due to streaming, cloud services, and emerging technologies, requiring constant expansion of this hidden network. Ultimately, there is a key paradox: the internet—often thought of as virtual—is deeply physical and dependent on infrastructure that is both technologically sophisticated and surprisingly vulnerable. These undersea

cables form the unseen “nervous system” of the global economy, enabling everything from video calls to financial transactions. Without them, modern digital life would simply not function.

David Groom

For more info see:
https://www2.telegeography.com/submarine-cable-faqs-frequently-asked-questions#Cable-101

https://www.cnet.com/home/internet/features/the-secret-life-of-the-500-cables-that-run-the-internet/

Project Glasswing

Project Glasswing is a major new cybersecurity initiative led by Anthropic in partnership with some of the world’s largest technology and infrastructure organisations, including Amazon Web Services, Apple, Google, Microsoft. Its goal is to strengthen the security of critical software systems worldwide.

The project was created in response to the emergence of Claude Mythos2 Preview, an unreleased frontier AI model developed by Anthropic. According to the Anthropic, this model has reached an advanced level of coding ability—capable of outperforming nearly all human experts in identifying and exploiting software vulnerabilities. It has already discovered thousands of serious flaws, including vulnerabilities in major operating systems and web browsers.

Anthropic believes these capabilities could transform cybersecurity, but also warns of the risks if such tools spread without safeguards. As AI advances rapidly, offensive cyber capabilities may become widely available, potentially threatening economies, public safety, and national security. Project Glasswing is intended as a defensive response—using AI proactively to protect critical digital infrastructure before malicious actors can exploit similar technologies.

For more information see **www.anthropic.com/glasswing**

David Groom

Selected notes from Computability contact Nigel Watson and a contact in Ukraine, Nataly, a psychologist helping war victims in Ukraine (Jan 2026).

Ok Rog, I'm here 'killing time' now until I drive back to Bulgaria. I was due to go back for Christmas as was out of funds now but Russians blew up 2 bridges I needed to get there causing massive 3 day jams etc so decided to stay a while longer until January 2/3.

Hi Roger, that would be brilliant but Amazon etc is not really underway here yet especially as it's wartime. There are some deliveries of a sorts going on here but it takes 3 weeks … if it gets there.

Everything is available in the shops here tho. If you want to send money direct or through me to Nataly. Tell her what to buy and she can send photos etc of purchases.

Hiya Roger, I asked Nataly about their needs and she just sent me this …

Considering we're currently without power for 7-8 hours a day, the biggest help right now is a power bank or a large, standalone mini power station for home use, so we can connect a router for internet and charge all our devices. We're living like moles right now, and the internet is really bad for work. Thankyou.

Nataly and her colleges go to supermarkets and cafes to charge their appliances when no power - it's a proper inconvenience.

[12:13, 18/01/2026]: My name is Nataly, I'm 49, I am a psychologist and a mother of two children. I have been working as a psychologist for more than 15 years, it's my second education. Now during the war I am not only trying to keep working, but also to volunteer and support our military.

All of my colleagues are around the same age, and each of us is doing the same. Together we are doing our best to help during this extremely difficult time and to volunteer as psychologists, so that our knowledge can support not only our clients, but also the people who are defending our home and our country.

[12:14, 18/01/2026] : My colleagues and I are working online to support military personnel who have gone through a long and difficult journey of war. Our mission is to help them recover psychologically and emotionally after their military experience.

Many of them have been wounded and are currently undergoing rehabilitation abroad or in medical clinics. For us, it is essential first and foremost to give them the opportunity to look within themselves and rediscover the inner light that can help them move forward, find their path to happiness, and feel a sense of well-being in the present moment.

At the same time, we are facing constant challenges due to power outages, ongoing attacks from Russia, and extremely unstable internet and Wi-Fi connections. Because of this, it is often difficult for us to stay consistently connected during online sessions and interventions.

[12:15, 18/01/2026]: When we speak about the war we are living through right now, it is simply horrifying. Every single day you are fighting for your life and for survival in the conditions imposed on us by the enemy. You live with the constant fear that a missile or a guided drone could strike nearby at any moment.

It is a terrifying feeling — not knowing what could happen to your home or your loved ones from one minute to the next. Air raid sirens, bomb shelters, power outages — and yet, despite everything, you still have to work somehow and try to think about something good.

Because, no matter what, this is our home. And we are ready to fight for it until the very end.

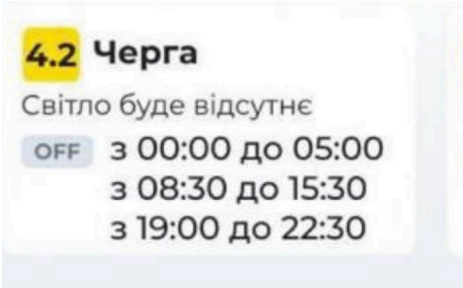
[13:32, 19/01/2026]: When Nigel texted me that you wanted to help, my colleagues and I initially thought of buying each person a powerful charger, so everyone would have access to work and more people could assist, especially during frequent power.

Later, when we realised the amount would be higher, we decided it would be best for our office to purchase an electric substation. It not only charges devices but also provides Wi-Fi when there is no power. We usually use

mobile internet when the power is off and it's not cheap at all. With it, we will have constant access and the ability to communicate and support our military.

We also plan, if there are funds left after purchasing this station (we want our Ukrainian electricity specialists to recommend the best option based on the situation in Ukraine and in our city), to buy a gas heater with a large tank. This will ensure that all me and my colleagues can stay warm in the office during outages and work comfortably.

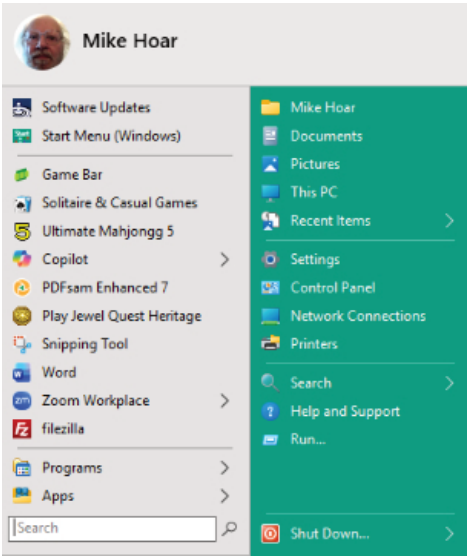
Power outage schedule:



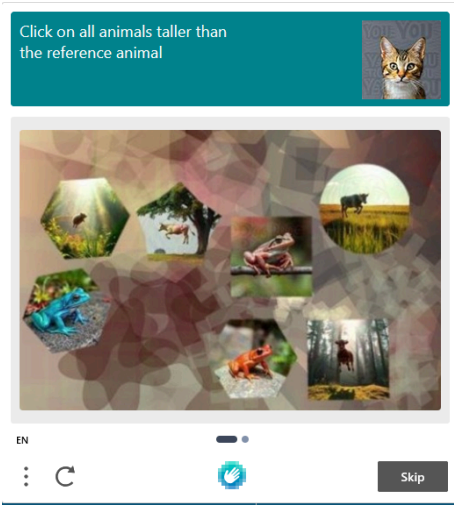
Video from Nataly thanking IWPCUG for computer items taken out to Odessa by Nigel Watson:

https://www.rogerskid.org.uk/ukraine-thankyou.mp4

Roger Skidmore



The Open-Shell menu in Windows 11, see page 6



Two CAPTCHA methods.

(1)hCaptcha to the left; and (2)above a very simple text based one as currently used on the IWPCUG web site to protect the email addresses of committee members.

(see page 7)

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