/ **Best software** / **New apps** / **Tech that's skin deep**
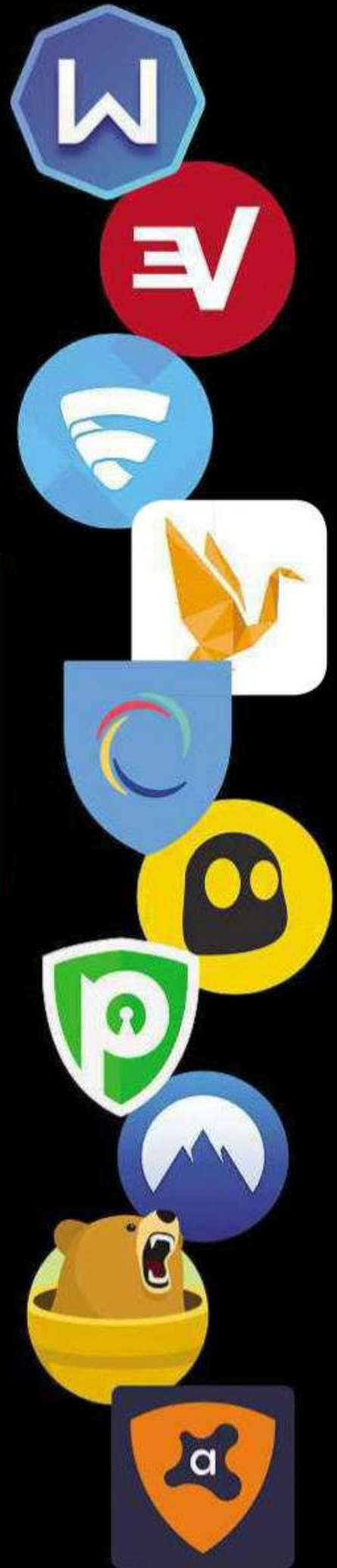
VPN

MEGA TEST!

Don't get ripped off – choose one that unblocks everything ALL THE TIME! p43

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- ☑ **Watch US Netflix**
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- ☑ **No drop outs**
- ☑ **Fastest download speeds**

10 VPNs TESTED
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The answer to your VPN question

On the rare occasion that someone recognises me from this page, they invariably ask me one of three questions: "Why do you always wear that awful blue shirt?", "What's number 4 in the emoji quiz?" or "How can I encrypt my connection to browse the web anonymously and access blocked content online?". To which I respond, respectively: it's part of the uniform, say what you see and use a VPN. This prompts the follow-up query: "But which VPN should I use?", and in this issue's cover feature, we provide the answer.

We've thoroughly tested 10 virtual private networks, to see which offers the best features, performance and value for money. So if someone asks you which VPN they should use, say: "see page 43 to find out!".

Also in this issue, we celebrate 20 years of a little company called Google. On page 40, we count down the 20 best (and worst) Google tools, and offer random Google-birthday titbits scattered throughout the pages of this issue.

Robert Irvine, Editor
robert_irvine@dennis.co.uk
#webuser
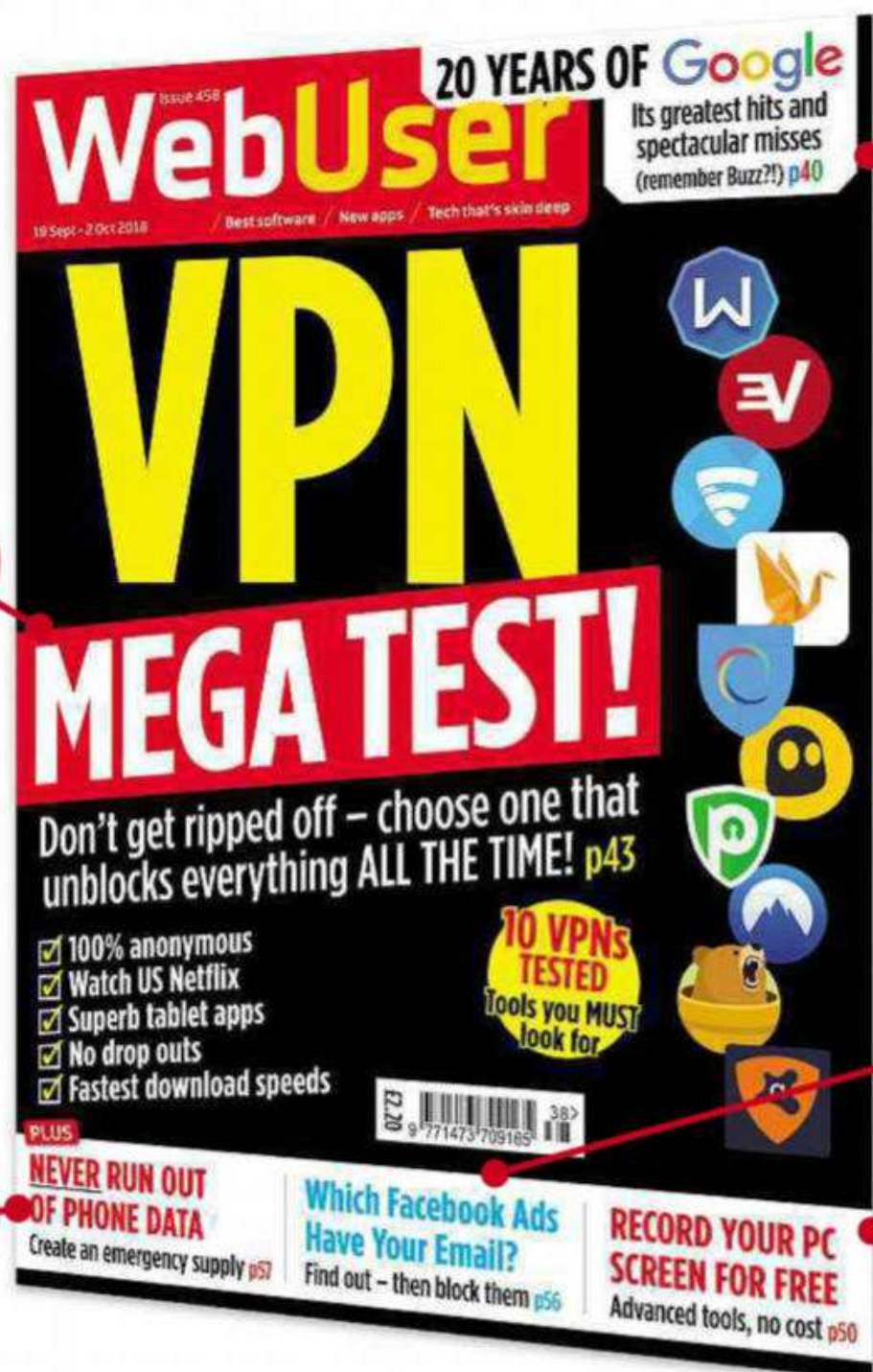
5 Things you'll learn this issue

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2 How to try the latest version of streaming software Kodi before everyone else **page 30**

3 How to block annoying GDPR-enforced cookie warnings on every website **page 32**

4 How to customise default Windows noises by applying new sound schemes **page 65**

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Boost your PC's graphics **p58**

Create a selfie sticker using Gboard

Google has salvaged the popular selfie-stickers feature from its flop messaging app, Allo, and made it available in its mobile keyboard Gboard.

Now renamed Minis, the feature allows you to take a photo of yourself and have artificial intelligence create a cartoon likeness, which you can then tweak and personalise. The results are similar to Snapchat's Bitmoji (www.bitmoji.com) and not a million miles away from Apple's new Memoji, but with the bonus that Minis can be created and used across multiple apps on both iOS and Android. It only takes a few minutes to produce a sticker resembling

Google at 20!

The Mount Mabu rainforest in Mozambique is nicknamed Google Forest because it was unknown until 2005 when scientists discovered it on Google Earth.

yourself. Your face is then placed in different situations, such as singing or giving a thumbs-up.

To get started with Minis, download Gboard from the Play Store or App Store and make it your primary keyboard. When you bring up the keyboard on screen, tap the emoji button and select Stickers, Mini. Press the Create button and position your face on your screen before taking a selfie. After a few seconds, you can choose between a 'bold' or 'sweet' mini, and select from various fun scenarios. You can customise your Mini further at any time.
bit.ly/gboard458

Run Windows 2000 in your browser

bit.ly/windows458
Before Windows XP launched in 2001, professional PC users had Windows 2000, but Microsoft's then new chief executive, Steve Ballmer, steered home consumers away from the operating system, saying 2000 didn't offer support for the kind of devices people wanted to use.

If you've ever fancied seeing what Windows 2000 was all about, or if you want to revisit the OS, then fire up this virtual machine and give it a go. Created by developer Fabrice Bellard, it recreates Windows 2000 in your browser, giving you access to Internet Explorer, Firefox, Paint, Notepad and more. You can also upload and export files, use the calculator and play FreeCell, Minesweeper, Pinball and Solitaire. All that's missing is the startup sound.

Tour the Space Shuttle Discovery

bit.ly/shuttle458
To mark the 34th anniversary of the Space Shuttle Discovery's maiden voyage, you can now open a 360-degree YouTube video on your phone, pop it in a VR device such as Google Cardboard and go on a thrilling tour with Major General Charlie Bolden and Dr Kathy Sullivan.

Using footage captured by Google's Halo camera, you get to see the spacecraft inside and out, while exploring space from dawn to dusk. You also get a solid understanding of what is involved when flying into space and see the various instruments an astonaut has to deal with on the way.

Accompanying the video is a host of digital exhibits – with more than 200 online artifacts – and virtual tours complete with audio. The package has been put together by Google Arts & Culture in conjunction with the Smithsonian's National Air and Space Museum.

We pick the 10 best things you must do on the web this fortnight

Match your face with works of art

bit.ly/selfie458

Long after launching in the US, Google has finally unveiled its Art Selfie tool in the UK. Embedded in the Arts & Culture app for Android and iOS, this matches a photo you take of yourself with famous works of art in galleries and museums around the world. The results may surprise and amuse you!

65% match Dr. Thomas Dagoumer (1762-1... Pierre-Paul Prud'hon

See a Tudor map of London

bit.ly/tudor458

The Layers of London map has added a Tudor overlay that shows the capital's layout in the year 1520. As you'd expect, many of the buildings are long gone but if you zoom in, you'll be able to view the old London Bridge, which existed from 1209 to 1831, the city wall and ditch, and the River Fleet, which became a sewer as London grew. Fleet Prison, which was built in 1197, is also there, as is Winchester Palace. Just open the map, select the Layers icon in the left-hand menu and choose Tudor Map.

Read novels on Instagram

bit.ly/insta458

Instagram now lets you begin at the beginning and go on till you come to the end, because the New York Public Library is posting classic stories on the social network, starting with *Alice's Adventures in Wonderland*. These so-called Insta Novels aim to make books more accessible and are enlivened with eye-catching animation. Go to @nypl in the Instagram app and click Alice Part 1 under the bio. Rest your thumb in the bottom-right corner to hold a page and lift it to turn. *The Yellow Wallpaper* by Charlotte Perkins Gilman is coming next.
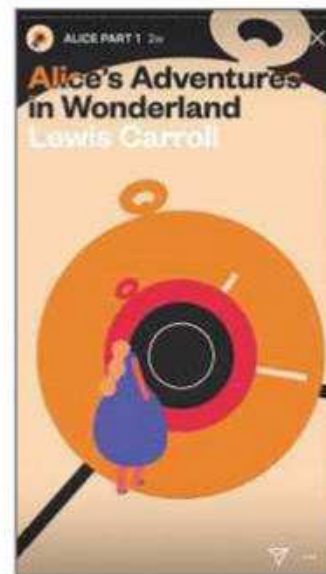
ALICE PART 1 · 2w
Alice's Adventures in Wonderland
Lewis Carroll

NEW VOICE COMMANDS

Talk in different languages

Switch between speaking in two languages with Google Assistant – perfect if you live in a bilingual home. Options include English, German, French and Japanese.

Use Siri in low-power mode

If you run iOS 12 on your iPhone or iPad, you can now call on Siri even if your device is in low-power mode.

Play BBC kids games

Alexa's new BBC Kids Skill, aimed at pre-schoolers, lets kids play a series of games populated by CBeebies characters. Say, "open CBeebies" and choose from Little Monster's Hide and Seek, Andy's Adventure Dance Party and more.

Listen to nature's sounds

bit.ly/park458

To celebrate its 102nd birthday, the Natural Sounds and Night Skies Division of the National Park Service in the US has compiled 12 minutes of audio. Taken from across its parks, it's a peaceful mix of bird and animal sounds cast against wind and water.

Check your heart age

bit.ly/heart458

This NHS test gives you a good idea of how your ticker compares to your actual age. Answer 16 questions about yourself and your medical history to get an estimated age. You can also see your BMI and discover more about keeping your heart healthy.

View the organ donor map

bit.ly/organ458

The UK Organ Donor Registrations map shows you how many people are registered as an organ donor in your region, and the numbers waiting for a transplant.

Check your YouTube viewing time

www.youtube.com

In Issue 450, we looked at YouTube's new time-limiting feature, which lets you set a reminder to stop watching videos. Now, the service has gone further by showing you how many hours and minutes you've viewed today, yesterday and over the past week, along with a daily average. To view the stats, open the Account menu in the YouTube app and tap Time Watched.

Time watched

Stats

Today   34 minutes
Yesterday   36 minutes
Past 7 days   4 hr 5 minutes
Daily average   35 minutes

Stats are based on your watch history (except YouTube Music).
LEARN MORE

Tools to manage your YouTube time

Remind me to take a break
Off

Autoplay next video
When you finish a video, another plays automatically.

Tell us your favourite new things at forum.webuser.co.uk

New-look Chrome improves passwords and searching

What happened?

To celebrate Chrome's 10th anniversary, Google unveiled its biggest ever redesign of the browser. The new version (numbered 69) is styled with Google's "Material" aesthetic, which is the design language that runs across Android, Gmail and now Chrome. It's like a design rulebook for making all Google services look consistent.

In Chrome, this translates to rounded edges for the search bar and tabs (see main screenshot), and new icons and colours. Overall, it's a subtle change that makes the browser look even more sparse. Some tweaks are intended to make it easier to use, such as changing the shape of tabs so you can always see the website icons clearly, which is useful when you have a lot of them open.

Google has added features, too, improving Chrome's autofill so it completes forms and passwords more quickly and accurately. Chrome will also generate new passwords for you, to help encourage better security.

The Omnibox – the search and URL bar at the top – now includes results for some searches. Type a name, for example, and it tells you who that person is, and suggest URLs to visit. Definitions and translations will also appear in the Omnibox (see screenshot below), and you can use it to search for pages you already have open – you'll see the option to 'Switch to Tab'. In fact, you'll soon be able to search your

Google Drive files. For any of these features to work, you need to be logged into your Google account.

However, Google's birthday celebrations were rather dampened by the revelation of a long-term flaw in Chrome, which has been fixed in version 69. Researchers at London security company SureCloud identified a vulnerability in how the password manager in Chromium, the open-source code at the base of Chrome, works with routers. Because passwords you saved were delivered unencrypted, hackers could have stolen them on an unencrypted Wi-Fi network and logged into your home router.

How will it affect you?

If you're a Chrome user, you should already have the new-look browser because Google automatically updates when a new version is released. If you're still seeing the old look, try restarting the browser and you should see the rounded corners and get the improved Omnibox. To force an update, click the three-dot icon in the top-right corner, then go to Help and click 'About Google Chrome'. This displays the version of Chrome you're running and lets you download the latest version.

Not everyone will like the changes, as subtle and small as they are, so if you want to revert

to the old version, type `chrome://flags` in the Omnibox and scroll down to the section headed: "UI Layout for the browser's top chrome". Switch from Default to Normal in the drop-down box, then relaunch Chrome. This will remove the rounded corners and turn off the password generator, but still give you the new tools in the Omnibox.

What do we think?

The rounded corners of the Omnibox jar with the straight lines of the tabs, but there's no question Chrome remains easy on the eye, and it probably won't take long to get used to the new style.

We like the Omnibox tweaks, particularly the clever 'Switch to Tab' shortcut, and it's great to have a password generator built into Chrome.

It's through such improvements that Chrome has grown to become the world's most popular browser, with a market share of 62%. Think back to how you used the web 10 years ago: perhaps you browsed with Firefox or were still on Internet Explorer 7. Microsoft's IE was seen as a monopoly by EU regulators, with Firefox the only major competitor.

Then Google changed everything by releasing Chrome. Its simple and clean interface was a revelation, forcing rivals to up their game. Smaller browsers, such as Opera and Vivaldi, are often more innovative, but Chrome remains the best mainstream choice and this redesign enhances its reputation.

Chrome's Omnibox has several new features, including definitions of terms

What we think of this fortnight's top tech news stories and rumours, and how they affect you

Shop at Argos using Google Home

What happened?

Argos now lets shoppers order items simply by speaking to a Google Home smart assistant. This makes Argos the first UK-based retailer to leap into the voice-assistant world, though it doesn't order items to be delivered – merely allows shoppers to reserve products to pick up at a store later.

This means you don't need to worry, for example, that your children will accidentally order a shedload of toys, because the order needs to be confirmed by the registered user and picked up in store. The system works on Google Home speakers, as well as with the Google Assistant, which is built into Android phones and can be installed on iPhones.

How will it affect you?

You can't just shout: "Hey Google, Ask Argos" to start shopping. First, you'll need to enable the voice app on Google Home. This lets you reserve products to pick up in store and will check their availability, but you'll still need to know what you're looking for first, whether by clicking around the website or flipping through the catalogue.

The tool is not available on the Amazon Echo, despite Argos saying it's sold plenty of the devices. But if the app is a success, it's bound to eventually pop up on the Echo, too.

What do we think?

With the cost of delivering goods increasing, perhaps Argos is trying to encourage more shoppers to pick up their items themselves. The retailer cllaims that this is already how 80% of its orders are completed.

However, its Google Home service isn't the easiest way to shop: flip through the catalogue to find the coffee machine, deckchair or other product you want, wake up your device and turn on the Argos app, place your order, and then confirm on your smartphone. It's not clear how this is preferable to simply ordering online. Then again, given the popularity of voice assistants, it may be worth Argos giving the technology a go.

Companies can keep Windows 7 till 2023

What happened?

Microsoft announced plans to extend security support for Windows 7 to January 2023, but only for users with an Enterprise or Education licence of the operating system (OS).

Part of Microsoft's Volume programme, these licences are bought in bulk for big businesses, and schools and universities. They're not the versions of Windows you get when buying a computer on the high street, but are specifically supplied to large organisations, so individual users won't be able to pay for extended support beyond 14 January, 2020.

How will it affect you?

Nothing has changed if you're using Windows 7 on a home computer – you still have 15 months left to make a decision: plan to upgrade to Windows 10 or buy a new computer this time next year, and you'll be in the clear.

While it's frustrating to have to ditch an OS you're familiar with, bear in mind that Windows 7 will be 11 years old when support ends, and that its replacement (the unloved Windows 8) is already six years old. That's ancient in software terms.

What do we think?

Millions of businesses and organisations still rely heavily on Windows 7, so it's not surprising that Microsoft is aiming to make some money by extending support. It always does this when an OS comes to the end of its natural life. In 2014, for example, the government paid Microsoft £5.5m to keep Windows XP supported.

It shouldn't be seen as a sign that Microsoft will push back its 2020 deadline. Yes, Windows 7 remains the world's most popular OS, but Microsoft's long-term ambition is to get 1 billion machines running Windows 10. To achieve that, it needs people to switch from Windows 7.

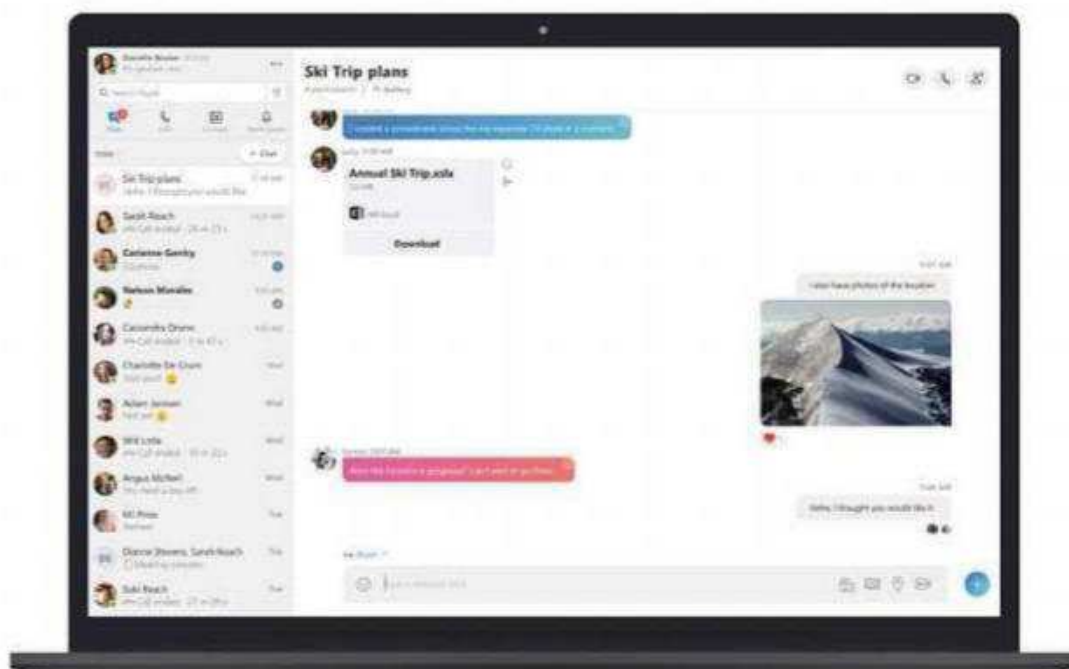# Microsoft revamps Skype again after backlash

What happened?

Skype has gone under the knife, with Microsoft redesigning its beleaguered chat app yet again.

This has been Skype's 'annus horribilis'. In July, Microsoft triggered a backlash over plans to discontinue support for Skype 7. The online furore forced the company to promise support "will continue to work for a limited time" – but the rot set in with 2017's universally panned radical redesign.

Skype has lost its simplicity over the years, with each passing update unsuccessfully attempting to rival WhatsApp, Messenger, Instagram and Snapchat – adding esoteric features no one asked for and drifting further from its core provision of messages and voice and video calls.

Now, Peter Skillman, Skype's Director of Design, has admitted in a blog post (bit.ly/skype458) that "as Skype functionality has expanded, so too has its complexity... We needed to take a step back and simplify!".

So, wave goodbye to unloved Snapchat knock-offs such as Capture and the Instagram Stories-inspired Highlights. In their place is a foolproof interface so clean it sparkles, as Microsoft strips out the clutter to focus on the three Cs: Chat, Calls and Contacts.

The redesign also cuts back on unnecessary visuals, while reinstating the simple Skype Blue theme of yore. Over on desktop, you'll find the update now marries the app's intuitive central control hub with what Microsoft dubs 'the Skype legacy'.

How will it affect you?

This streamlined Skype goes back to basics. Crunching the data and testing user interaction means, theoretically, that the new, distraction-free look makes it quicker and easier to locate and perform core actions. As such, Skype may even have a shot as a viable alternative to your current messaging app. If you're addicted to sharing snapshots and emoji, you still can – Skype continues to support sending GIFs, music, videos and money – but these frills no longer dominate the experience. Helpfully, you can also now offer feedback at the new UserVoice site (bit.ly/skypeideas458).

What do we think?

Like the much-despised Windows 8, Skype's last update angered and alienated in equal measure and cloth-eared Microsoft eventually had to listen to users' concerns. With fat trimmed and constructive criticism accepted, Skype is in a healthier, more competitive position. However, we remain cautious. After all, Skype is currently promising – or threatening – "many more updates over the next several months as we continue to simplify and improve the core experiences around calling, chat and contacts".

FIRST LOOK

Google Home Max
bit.ly/gmax458

The Google Home Max smart speaker is finally available to buy from John Lewis and the Google Store, having been on sale for several months in the US, but it will set you back a whopping £399.

Google justifies the high price by packing in twin 4.5in woofers and 0.7in custom audio tweeters to target audiophiles seeking high-quality hi-fi,

Google at 20!

Enjoy some fun Google Assistant Easter Eggs by asking: "OK Google, surely you can't be serious?" or "OK Google, what is love?".

powered by Google's AI Assistant. The machine-learning tool Smart Sound analyses your environment, altering sound quality accordingly. Tightly stretched across the front, the 'transparent' fabric weave brilliantly preserves audio fidelity, while a solid 5.3kg rig maintains speaker stability even at top volume.

Dotted around the front and sides sit touch-sensitive strips for controlling playback and volume, and summoning the Google Assistant. Google Cast and Bluetooth are both supported, and there's a USB-C port and a 3.5mm headphone jack (hurrah!). There's also a mute switch to stop Google listening in using the device's six far-field microphones.

The Google Home Max sounds great, figuratively and literally, but it's little more than a sophisticated-looking paperweight if you don't have a music-streaming subscription – which is why it comes with 12 months of free YouTube Premium.

With its banging sound system, this is clearly a device designed to unseat the Google Home as the music lover's dominant smart speaker. With this in mind, you can stand the Max vertically upright to more closely represent a modern-day spin on the traditional speaker. But if you're only intending to ask Google questions or set timers, there are more suitable – and far more affordable – speakers available.
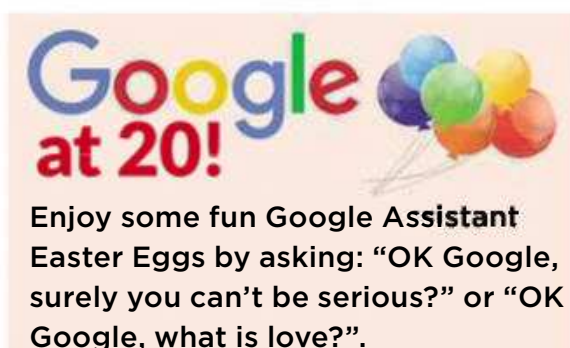
❓ WHAT'S THE RUMOUR

Is Instagram developing its own shopping app?

Instagram is rumoured to be planning a standalone shopping app. Dubbed IG Shopping, it reportedly lets users browse and buy from companies they follow, without navigating to an external website or third-party app.

Instagram already has standalone app experience: earlier this year, the Facebook-owned company unveiled IGTV, a YouTube-inspired video app for smartphones (basically, all videos are shot vertically in portrait mode).

The social network also dipped its toe in the ecommerce pool last year with 'product tagging'. The feature, rolled out this summer to the popular Stories, lets businesses showcase purchasable items in their posts. And IG's parent company runs the eBay-Gumtree hybrid Marketplace, where users flog second-hand items locally.

It's no wonder this has become a trend, given that 80% of Instagram users follow at least one 'brand' account. Tech-watchers believe the company is leveraging that statistic to entice businesses away from third-party shopping apps and into an ecosystem with a ready-made audience of millions.

Sources also point to the two million companies currently advertising on Instagram. By building better business tools – so the thinking at Instagram HQ allegedly goes – IG Shopping will challenge rival apps, while extracting a few dollars more from businesses.

LIKELIHOOD RATING
✓✓✓✓✓

As audiences tire of intrusive ads powered by personal data, Facebook has turned to shopping to make money. From the company's perspective, a dedicated shopping app promises ceaseless benefits: greater user engagement, increased business revenue and the remorseless destruction of all online rivals. It's a good fit for a platform defined by lifestyle – particularly, luxury lifestyle. Many Instagram posts already resemble glossy magazine ads so adding product placement isn't that far-fetched. And with 'product tags' already in place, IG Shopping feels less a leap of logic than an inevitable step.

WEBOMETER

WE LIKE...

⬆ **Dark Mode comes to YouTube**

YouTube's Dark Mode is finally rolling out on Android, months after appearing on iOS and youtube.com. Don't expect older phones to get the feature, but if you've received the update, you'll find the easy-on-the-eyes option under the app's General Settings.

⬆ **NASA's 360-degree view of Mars**

Nasa's Curiosity rover has been roaming the Martian terrain since 2012. Now, the little robot has produced a stunning 360-degree panorama of Mars. Head to bit.ly/nasa458 and use your mouse to control the camera and peek around the Red Planet.

WE DON'T LIKE...

⬇ **Popular iPhone apps selling your location data**

An app developer has revealed 24 popular apps containing code that scoops up and makes money from your location. Many of these apps show "a plausible justification" for needing your location – but they don't tell you they're sharing it with others.

⬇ **Google empty-chaired in Senate hearings**

Google's CEO declined to attend the latest Senate grilling on social media's 'foreign influence', leaving Facebook's Chief Operating Officer and the CEO of Twitter to face the politicians. When Google offered them a lower-level senior vice president, senators empty-chaired the company instead.

Ⓚ What's new on Kickstarter
Our favourite new project on the crowdfunding site

I-massage trainers
bit.ly/imassage458 | **From £77**

Available in seven colours, including Seaweed Green and Arctic Blue, the I-massage trainers will appeal to runners, joggers and other sporty types. It has six built-in massaging motors: four 9,000rpm motors around each ankle and above the toes; and two 16,000rpm motors pressed against foot and heel, powered by a long-lasting USB-charged battery. Vibration speeds are controlled through the mobile app, which makes it easy to soothe your aching feet after a long day on the go. Pledges start at £77, or £147 for a pair of 'treat for the feet' trainers.

Stay Safe Online

News about the latest threats and advice from security experts

SECURITY ALERT! | What's been bothering us this fortnight

Five Eyes countries to force encryption backdoors

The 'Five Eyes' governments of the UK, US, Canada, Australia and New Zealand have told technology companies to voluntarily create backdoor access to their systems, or be forced to do so by law if they don't.

The move is a final warning to firms including WhatsApp, Apple and Google who use encryption to guarantee user privacy on their services. However, the Five Eyes governments don't see it this way, arguing that encryption poses a significant challenge to combating serious crimes and terrorism.

"Encryption is vital to the digital economy and a secure cyberspace, and to the protection of personal, commercial and government information," the five ministers,

including the UK's home secretary Sajid Javid, said in a joint statement. "However, the increasing use and sophistication of certain encryption designs present challenges for nations in combating serious crimes and threats to national and global security."

If the industry does not "voluntarily establish lawful access solutions to their products" the statement continued, "we may pursue technological, enforcement, legislative or other measures" to guarantee entry.
bit.ly/back458

British Airways reveals massive data breach

British Airways has revealed it was the victim of a massive data breach that took place between 21 August and 5 September. It has recruited the help of the National Crime Agency and National Cyber Security Centre to investigate how the incident happened.

BA said details including personal

information and payment data may have been stolen from those using the company's website and

mobile app to make bookings during the two-week period in question. However, passport details and travel plans were not accessed by the hackers, the airline said.

BA revealed that 380,000 customer transactions were compromised. Those affected had been advised by the company on Thursday night that their details may be at risk.

The incident is one of the first major data breaches to occur since the enactment of the GDPR in May, raising the possibility that BA could be one of the first companies to be hit by the new, higher penalties.
bit.ly/babreach458

Security Helpdesk | Your questions answered by security specialists

THIS ISSUE'S EXPERT: David Emm, Principal Security Researcher at Kaspersky Lab (www.kaspersky.co.uk)

Q Has GDPR made web users better informed about data breaches?
Paul Swain, Twitter

A Following the implementation of GDPR (General Data Protection Regulation), complaints about data breaches have

actually risen, but this is not surprising. GDPR has made people more aware of privacy issues, and the legislation has empowered them to do something about it if they feel that their privacy is not being respected.

The regulations have meant a fundamental change to the way that companies handle our personal information, and also present an opportunity for positive change for consumers. Our data is as valuable as the money in our wallets and – as with physical possessions – we should take steps to protect it.

Being vigilant online – whether using a work computer, home laptop,

mobile or tablet device – should be second nature, but it often isn't. Undertaking simple steps, such as regularly changing passwords, reviewing default settings on social media and using antivirus software across all devices can significantly help to protect data.

Q Are Macs no longer safer than PCs?
Justin Burton, Twitter

A Over the last few years, there has been a steady increase in the volume of threats aimed at people

using Macs – and any flaws in Mac operating systems could prove a tempting target for attackers. It is worrying that a new Mac could be hacked straight out of the box – and even more worrying that hacks can be carried out remotely, before the owner is even logged in.

This is yet another warning to both consumers and businesses to carry out regular software updates – or, even better, turn on automatic updates – to ensure that their devices are operating the latest software versions and are as protected as possible against attack.

Email us your security questions at webuser@dennis.co.uk

Site of the Fortnight

CURRENCY
RELAUNCH

XE
xe.com

For up-to-the-minute exchange rates, XE, 'the world's most trusted currency authority' – hardly a crowded field, you'd think – is the go-to website. That professional standing is only likely to grow with its latest redesign. Here, you'll find a simple-to-use live currency exchange with rates updated every minute. Be warned, though, that you won't be able to buy at the mid-market rates shown – for most users, it's more a guide to check you're getting a good deal elsewhere. Improving on its existing secure international currency transfer service, the new site now includes bang on the money live transfer rates.

Our rating ★★★★★

ALL THE TOOLS
Convert, calculate and compare currency rates, sign up for emails and alerts, and use the personal currency assistant when buying from abroad

SEND IT YOUR WAY
Whether you're using a free personal account or you're a business, the new site makes international currency transfers remarkably painless
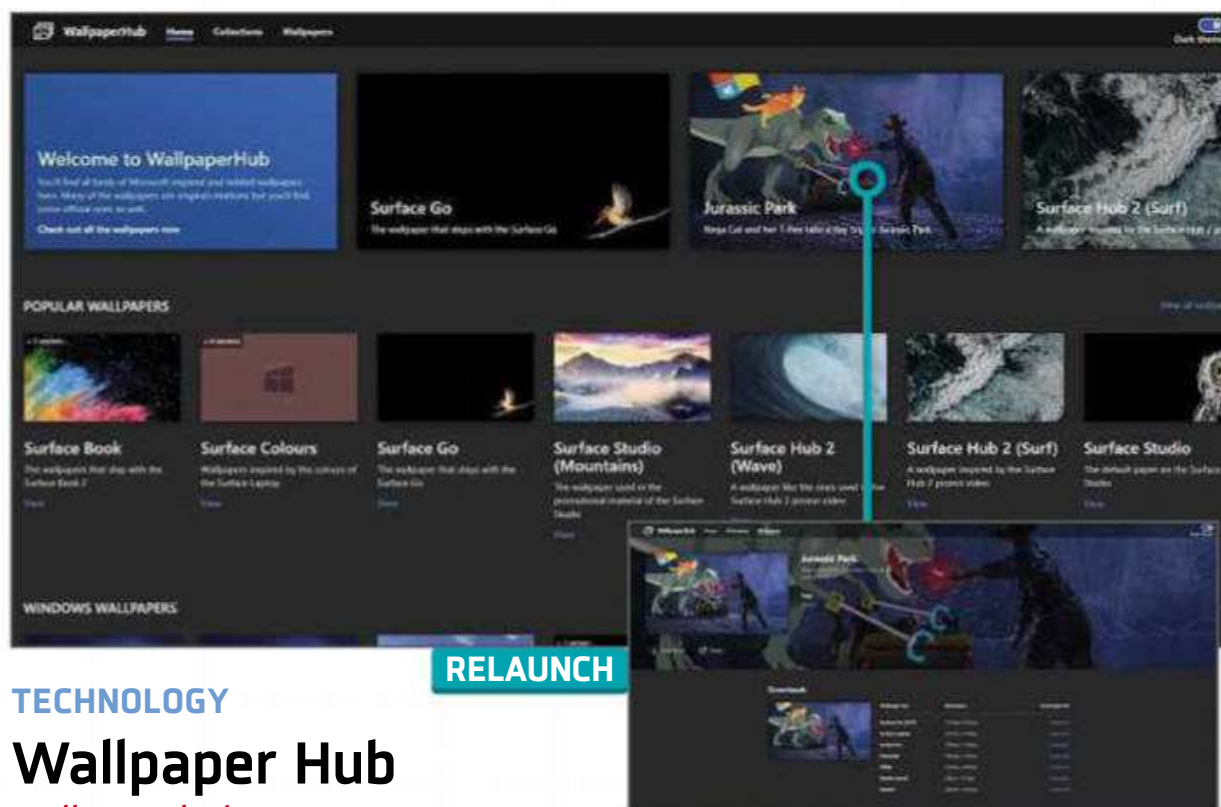
TECHNOLOGY
RELAUNCH

Wallpaper Hub
wallpaperhub.app

The Wallpaper Hub is exactly that: a place to download unique desktop backgrounds. So, if you've ever wanted wallpaper depicting a Ninja Cat riding the *Jurassic Park* T-Rex, you're in luck. It's a new(ish) site, so collections are limited, but there's a wide range of styles. Wallpapers are categorised by device – Desktop, Surface and Xbox – and each image typically includes download links for different screen sizes and resolutions. Built on Microsoft's Fluent design, a disclaimer advises using Edge (or with its Chrome Experimental Web Platform features enabled), and if you love Dark Mode, there's a switch to turn it on and off in the top-right corner.

Our rating ★★★★☆

TOURISM
NEW

Visit Mansfield
visitmansfield.co.uk

Bracketed by Sherwood Forest and loaded with heritage, the ancient market town of Mansfield lies in the heart of Robin Hood country and is an ideal tourist destination for those on the trail for the heroic outlaw and his Merry Men. Sadly, this promotional website doesn't always manage to execute its ideas well, so although you'll discover attractions galore in the Explore section, and photos and videos in the Media tab, we're not sure that hi-res images of the local bus station are the best way to attract travellers. The site itself also feels a little outdated and basic.

Our rating ★★★☆☆

Reviews by Steve Clark

We review this fortnight's best new and relaunched websites and rate them for content, design and features
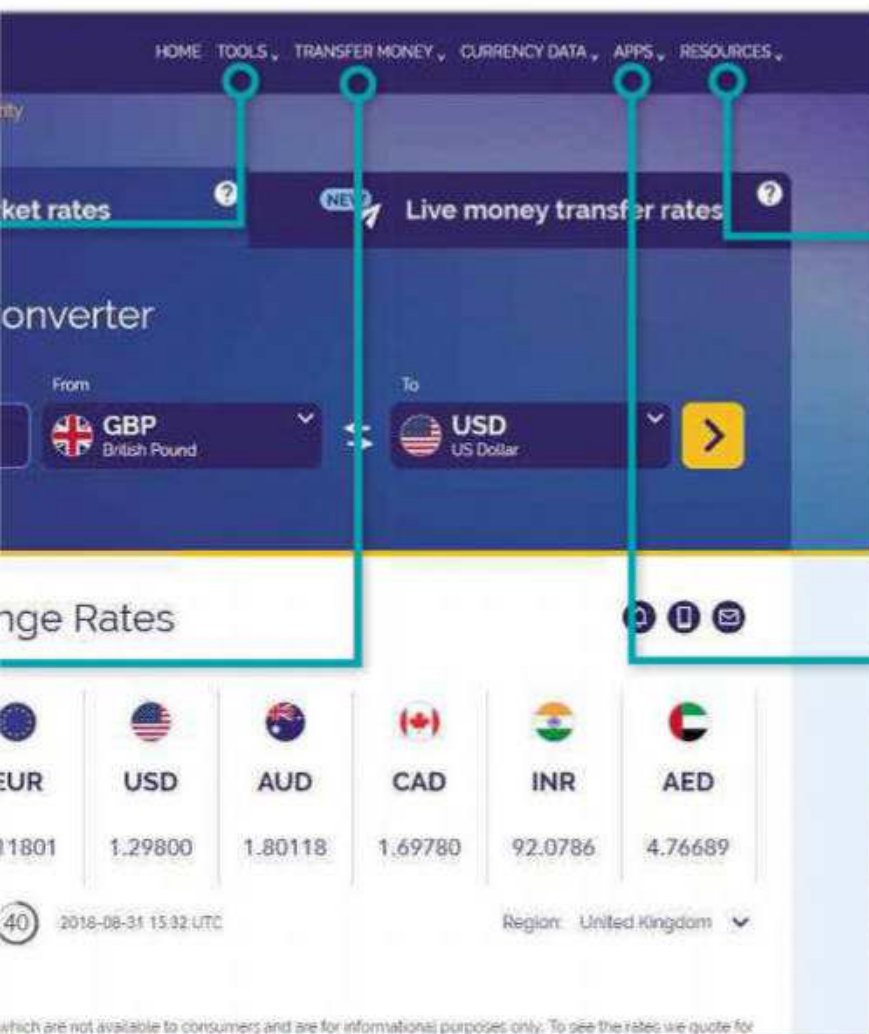
EXCHANGE RATES ON THE GO
The XE app is available on every platform, from Android and iOS to Slack, Alexa and even Windows Phone

FIND OUT MORE
Visit the excellent resource portal for tips and advice. The Currency Encyclopedia is also worth a read

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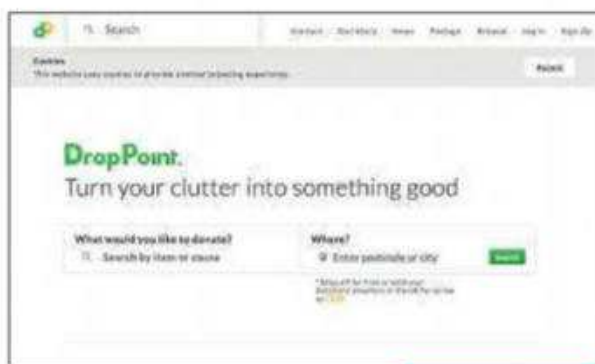
SERVICES

RELAUNCH

DropPoint
droppoint.org

DropPoint helps charities source much-needed donations, while helping you get rid of unwanted stuff. The setup is as simple as the site's sparse interface – just use the search bar to tell the site what items you want to donate and where you wish to send them. In addition to highlighting free drop-off points, the site also offers reduced UK postage rates to encourage people to donate larger items. Partnering charities can create profiles and request specific items, while searching the map shows you which items local charities (or causes close to your heart) most desperately need.

Our rating ★★★★☆

SERVICES

NEW

Toiletries Amnesty
toiletriesamnesty.org

Recognising that poverty doesn't only impact food and housing, but hygiene and presentation as well, Toiletries Amnesty connects you with food banks, refuges and community groups in need of toiletries. Navigation is basic and there's not much going on outside the news section, but if last Christmas' unwanted shampoos, smellies and shower gel are gathering dust and you're clearing out before Santa arrives this year, use the Directory tab, with its searchable map and long list of organisations that need your help (and your make up) to make a donation.

Our rating ★★★☆☆

GOVERNMENT

RELAUNCH

Ofsted Inspections
bit.ly/ofsted458

The updated Ofsted Inspections website is a vital resource for parents researching schools in their catchment area. The design, like most government portals, resembles a large-print library book, and the expanded search makes it easy to find specific schools or colleges. Click an establishment to see the latest rating (ranging from Inadequate to Outstanding), along with contact and location details. This information is now displayed on a single page rather than across multiple tabs, and the activity timeline usefully features PDFs of all visits, reports and inspections.

Our rating ★★★★☆

BACK ISSUES DISC 2017

WebUser

Issues 414 – 439
All 26 issues of 2017

2017 Back Issues Disc

Our **2017 Back Issues Disc** containing all 26 issues from last year is now on sale from Amazon

For more information, visit **bit.ly/wudisc17** or search for 'webuser disc' on Amazon

You can still buy our 2016 Back Issues Disc from **bit.ly/wudisc16**

RELAUNCH

MEDIA

Iain Dale
iaindale.com

Iain Dale, the LBC chatterbox, podcaster and political commentator, has been a long-standing star of the 'blogosphere', with blogs including the award-winning *Iain Dale's Diary*, *Dale & Co* and *West Ham Till I Die*. Now, Dale is back with a new-look website and daily New Year-style resolutions. It's a slick site – big, boxy and uncluttered – so you're not distracted from the articles. In keeping with his current-affairs interests, the Twitter feed at the top of the screen mimics a rolling news ticker. Drop into the Multimedia section to watch Dale's performances on shows including *CNN Talk*, *Newsnight* and *Question Time*.

Our rating ★★★★☆

NEW

FISHING

Women in Fisheries
women-fisheries.com

As the Women in Fisheries website sets out to prove, not everyone in the fishing industry fits the Captain Birdseye mould. It's a dicey old game, fishing, and this new site investigates what impact the perilous state of today's industry has on "women's roles, identities and wellbeing in fishing families". But while it's a worthy academic exercise, and features stunning sea-faring photos, the site lacks the content necessary to seriously raise awareness – we'd love to read or watch interviews with the women affected by the fishing industry's short-sighted closures, ungenerous national quotas and general neglect.

Our rating ★★★★☆

RELAUNCH

SECURITY

Safer-Networking
safer-networking.org

The revamped Safer-Networking hub puts the old, dated website to shame, as it should – this is a business, after all, promoting the sophisticated anti-malware software Spybot. The addition of drop-down headers means you can now swiftly compare different versions of the program, find support and quickly make purchases via the persistent pop-up at the side of the screen. Images of the software in action are great (though we'd like to lose the cheap-looking stock image on the homepage) and you can scroll through each product page for thorough information to find the right tool for the job.

Our rating ★★★☆☆
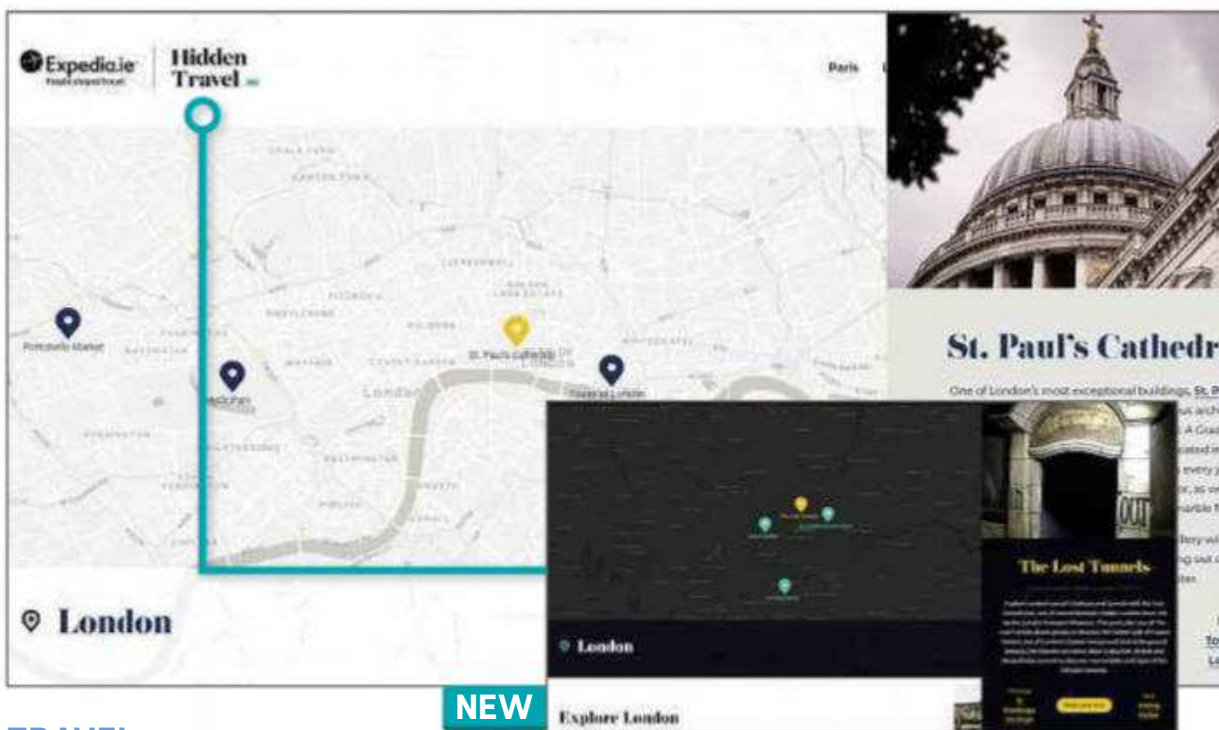
NEW

TRAVEL

Expedia Hidden Travel
bit.ly/hidden458

Explore the secret side of six of the most popular European cities – including London, Dublin and Paris – with Expedia's new Hidden Travels website. Pick a city to see popular attractions that you can click to pop up an info box, then toggle the 'secret' switch to see 'hidden' gems tucked off the beaten track. A few more so-called 'secrets' would be welcome – as it stands, London features just four hidden attractions, one of which is a feature within the already popular Holland Park, while another is the fairly famous Tooting Market. You'll also find a helpful button to book your visit – Expedia isn't doing this solely out the goodness of its heart, after all!

Our rating ★★★☆☆

COULD DO BETTER

RELAUNCH

NEWS

New York Times
nytimes.com

The changes to the relaunched New York Times site are negligible – if the guys in the Big Apple hadn't highlighted the facelift, we doubt we would have noticed. Ostensibly, the update reflects how visitors use the site, such as a comments section that runs parallel to articles and the ability (on a tablet) to swipe right-to-left as you would skim through the print version. Certain design tweaks are welcome: newly placed section headers ease navigation and stories sit on one scrollable page now. However, for a liberal paper, this is a decidedly conservative relaunch.

Our rating ★★☆☆☆

Build a Better Site

Specialist tips, top tools and practical help

Top Tips of the Fortnight

Make a blog with documents in Dropbox

Blot (blot.im) is a new service that lets you publish a website by simply uploading documents to a Dropbox account. You can drop standard word processor documents into a specific folder in your Dropbox storage and Blot will automatically convert them into blog posts, so you don't even need to worry about coding or saving the file to another format. It works with various file types including text, Word, Markdown, bookmark files, images and HTML code, and costs $20 (around £15.40) per year.

Python tool for beginners

Learning to program in Python is a great way to become familiar with the basic principles of computer coding, but it can be a pain to set up and experiment with in Windows. Instead, you can use a brilliant new free IDE (integrated development environment – a place to write and organise your code) for Python called Mu (codewith.mu). This installs everything you need, provides a handy place to type your code and will even run it. It can connect with hardware devices and use the Pygame Zero library (bit.ly/pgz458) to create simple games.

Deal of the Fortnight

Fasthosts (www.fasthosts.co.uk) is offering '.com', '.co.uk' and '.uk' domain names for £1.20 for the first year, as long as you sign up for two years.

Web-building Helpdesk

Q Can I set up my Wix website (www.wix.com) to receive payments?

Noel Lackey, via Facebook

A Wix has a range of add-ons for receiving payments, from complete shopping systems (bit.ly/sto458) to ticket sales (bit.ly/tick458). If all you want to do is take money, though, consider the PayPal add-on (bit.ly/ppal458). You can add the button next to the information about the item or service that you want to take payments for, and your users can click straight through to a PayPal checkout screen to buy it. Most people have a PayPal account because of its connection to eBay, and payments can be made with a credit card.

Andy Shaw, Technical and Reviews Editor

MINI WORKSHOP | Integrate Google Analytics with your WordPress Dashboard
MonsterInsights: www.monsterinsights.com | 🕐 10 mins | WordPress website

WordPress provides simple stats on its Dashboard, but you may prefer to see Google Analytics instead. MonsterInsights pulls your recent stats straight into WordPress so you don't have to leave your site to see them

1 Log into your WordPress dashboard and click Plugins. **1** Click Add New and search for `monsterinsights`, find it in the list and click Install. Click it again when it's turned into an Activate button. Click the Insights menu, **2** click 'Authenticate with your Google account', choose an account and click 'Complete Authentication'.

2 Click Reports **1** to see the Analytics overview graph for the past 30 days. Use the tabs to view the graph by Sessions (the number of people who visited your site) **2** or Pageviews (the number of actual pages your visitors viewed). **3** Below, you'll find the total visitors and sessions, **4** the average time spent on site and the bounce rate. **5**

3 Scroll down for more detailed information showing the countries your visitors come from **1** and the sites that referred them to yours. **2** At the bottom, you'll find the most useful section – the list showing which pages people are visiting. **3** If the default top 10 sites aren't enough, use the buttons at the bottom to view more. **4**

✚ Email us your website building questions at webuser@dennis.co.uk

Pick of the fortnight

NETFLIX

Watch Season 1 of *Maniac*
From 21 September

Emma Stone (*La La Land*) and Jonah Hill (*The Wolf of Wall Street*) play participants in a mind-bending drug trial that promises to "fix" all their problems with no side-effects. Both these reassurances are soon blown to bits and the pair find themselves experiencing "multi-reality brain magic" in assorted historical guises. Think *Doctor Who* meets *Inception*.

Director Cary Fukunaga is best known for Season 1 of *True Detective* (the good season), and also made *Alienist*, so he's got solid experience of taking audience on a wild psychological ride. The supporting cast is impressive, too, with Sally Field (*Forrest Gump*, *Lincoln*), Justin Theroux (*Mulholland Drive*) and Gabriel Byrne (*The Usual Suspects*) all popping up. But this is Stone and Hill's show, and judging by the trailer, the pairing really works.

As with most of its shows, Netflix lets you watch the official *Maniac* trailer and teaser (bit.ly/maniac458) without a subscription. All 10 episodes arrive in one binge-ready package on Friday 21 September.

See JK Simmons versus himself in *Counterpart*
From 28 September

"Do you have any idea how lucky you are? No one, *no one* gets to meet their other," declares the agency wonk who introduces bored employee Howard Silk to his parallel self, both played by JK Simmons (*Spider-Man*, *La La Land* and *Oz*, which you can now watch on Now TV: bit.ly/oznow458). Thus unravels a sci-fi spy thriller that leaves you wondering about your own possible parallel lives.

Counterpart is only available in the UK via Amazon's new StarzPlay channel (bit.ly/starzplay458), which costs £4.99 per month on top of a Prime Video subscription (£7.99 per month after 30-day trial). Find out more at bit.ly/channels458. The *Counterpart* trailer might help you decide if it's worth the extra cash: bit.ly/counterpart458.

See Karl Pilkington versus himself in *Sick Of It*
From 27 September

Like *Counterpart*, new Sky 1 sitcom *Sick of It* sees one actor playing double in a riff on the theme of "what might have been". In this case, it's a very British affair played for dark laughs. Regular Ricky Gervais collaborator Karl Pilkington (*Extras*, *An Idiot Abroad*) plays a recently dumped version of himself as well as his 'Inner Self' who muddles through the mundane life he'd have led if he'd never met Gervais.

The first of six episodes airs on 27 September on Sky 1, and you can stream and catch up online with a Now TV Entertainment Pass (£7.99 per month after a free 14-day trial; bit.ly/nowtv458). Watch the trailer: bit.ly/sick458.

Stream the Ryder Cup in HD
28-30 September

The best golf teams from Europe and the US face each other in this year's Ryder Cup, screened live in HD by Sky Sports from France's Le Golf National. Follow the action live and on-demand on Now TV, where a £12.99 Sky Sports Week Pass will cover the three-day tournament (bit.ly/nowsport458).

There's plenty to watch online for free, too. RyderCup.com offers commentary-free live streams of all the action, plus classic video highlights (bit.ly/ryder458). The Sky Sports site has free video previews, interviews and highlights (bit.ly/rydersky458).

We reveal what's new on Netflix, BBC iPlayer, Amazon Prime Video and other streaming services

Get the train times from Kylie for BBC Music Day 2018

28 September

"Come on baby, do the 0825 to Doncaster" is surely what Kylie Minogue will bark into a tannoy as she voices UK train announcements for the Beeb's annual celebration of song. You can watch video clips of Kylie's (sadly pre-recorded) announcements on the BBC Music Day 2018 website (bit.ly/bbcmusic458). The site also has clips from previous years' activities, but our favourite – Ozzy Osbourne voicing Birmingham's tram announcements – has been expunged. Worry not, you can still hear it on Twitter (bit.ly/ozzy458).

The iPlayer will stream special Music Day editions of *Bargain Hunt*, with 1990s bands Pulp and Happy Mondays; *Trust Me, I'm a Doctor* on music and mental

Will Brexit scupper British Netflix quotas?

Streaming services such as Netflix and Amazon Prime Video will be forced to show more British and European TV shows and films under new EU rules - but Brexit is likely to exclude the UK from the proposals. Services will be required to devote at least 30% of their catalogues to original EU productions (bit.ly/quota458). The current tally is about 21%. The companies will also have to give home-grown content fairer prominence. Brit hits such as *Sherlock*, *Peaky Blinders*, *Luther* and *The Crown* are currently less visible on Netflix than US shows such as *Ozark* and *Orange is the New Black*.

Whether the quotas will ever come into force here is moot. EU countries must enforce the quotas by August 2020, by which time the UK won't be a member state of the European Union.

health; and choirmaster Gareth Malone's new *All Star Music Quiz*. Get involved using the #BBCMusicDay hashtag.

Watch new Netflix comedy The Good Cop

From 21 September

Good cop/bad cop = son cop/dad cop in this new Netflix Original comedy that teams *Taxi* star Tony Danza with US chart-topping singer and TV celeb Josh Groban (www.joshgroban.com).

The pair play Tony Snr and Tony Jr, two NYPD cops who take a somewhat different approach to crime-solving: Tony Snr (Danza) is the charismatic rule-breaker who's even done a stretch in prison, while Tony Jr is obsessively by-the-book. Despite their differences, they form a winning team when it comes to cracking the uncrackable.

The Good Cop's creator Andy Breckman – who'll be hoping to repeat the success of his Noughties detective

series *Monk*, which ran for 11 seasons – makes no apologies for the show's light-hearted tone. "Many cop shows address the most controversial issues of the day," he says. "Bless 'em all. But the show I want to produce is playful, family-friendly and a celebration of old-fashioned puzzle-solving."

Gather your own evidence from the trailer (bit.ly/goodcop458). All 10 episodes of *The Good Cop*'s first season arrive on Netflix on 21 September.

In case you missed it...

Oddball spy thriller *Killing Eve* has just begun airing on BBC One, where episodes unfold week by week each Saturday. But if

you head over to the iPlayer, you can watch all eight episodes right now: bit.ly/eve458.

The show, starring Sandra Oh (*Grey's Anatomy*) and Jodie Comer (*Doctor Foster*), and written by BAFTA-winning *Fleabag* creator Phoebe Waller-Bridge, has already been a big hit in the US. To find out if *Killing Eve* won the two gongs it was nominated for at Monday's 70th Primetime Emmy Awards, watch the

ceremony on-demand on the Emmys YouTube channel: bit.ly/emmys458.

Over on Now TV, Sky Atlantic show *The Deuce* is back for a second season. The retro drama about New York's porn industry, written by *The Wire*'s David Simon, airs on Tuesdays at 10pm. You can stream and watch it on-demand with a Now TV Entertainment Pass.

Windows 10 laptops from £130

Looking for a new laptop? We've reviewed five new models to fit a range of budgets

I f you can't afford a top-of-the-range laptop that promises to do everything the latest technology will allow, it's best to only pay for the features you'll actually use. In this Group Test, we look at a cross-section of models, costing between £129.99 and £699.99, including ultra-portables, large laptops designed to replace a desktop PC and screens with a removable keyboard that can be used as a tablet. Manufacturers can't cut costs without cutting features, so we reveal where compromises have been made to balance affordable prices with superior components.

HOW WE TESTED

We tested the laptops by running our usual Windows benchmarks, to see how well they run Windows applications. We used a colorimeter to test the screen quality, how many colours it can display, the contrast (the difference between its darkest black and brightest white) and its peak brightness. We also tested the battery life by timing how long it lasts playing a looping video file at a specific screen brightness.

Acer Aspire 5 | £629.99 | Buy from Amazon: bit.ly/acer458

FEATURES ★★★★☆ **PERFORMANCE** ★★★★☆ **EASE OF USE** ★★★★★ **VALUE FOR MONEY** ★★★★★

VERDICT
★★★★☆

The Acer Aspire 5 sits in Acer's 'everyday computing' range and is the epitome of a no-nonsense laptop. It's a little on the chunky side but it delivers the goods when it comes to performance and usability.

There are various laptops available in the Aspire 5 range but the mid-spec model we tested houses an Intel Core i5-8250U processor, 8GB of memory and a 256GB SSD. You'll have to spend a little more to upgrade to the Intel Core i7-8550U.

The relatively low price is achieved by cutting back on luxury design. The case is mostly textured black plastic with a little brushed aluminium around the keyboard, but this doesn't stop it from flexing. At 2.1kg and 22mm thick, it's bulky, too.

It comes with a USB Type-C, a USB 3 and two USB 2 ports, a 3.5mm headphone socket, an SD card slot, HDMI port and Ethernet port. The keyboard incorporates a number pad and a good-size touchpad.

The 15.6in Full HD display is a good size and resolution for both work and entertainment. However, the performance isn't so cutting-edge: its brightness peaks at 231cd/m² (candles per square metre), which will leave you struggling to see it in full sunlight. Its contrast ratio of 321:1 is

WebUser GOLD AWARD

also disappointing, and its coverage of the standard sRGB colours is only 52.6%, which is the worst in this Group Test.

The Windows performance is brilliant, though, with an overall score of 85 that rivals some far more expensive laptops we've benchmarked recently. This is largely thanks to this device's processor, which is one of Intel's newer Coffee Lake models and sees significant improvement over older models.

The battery life is excellent, too, lasting 9 hours and 46 minutes in our looping video rundown test.

If you're looking for a no-frills Windows 10 machine, the Acer Aspire 5 fits the bill. It's a fast-performing Windows workhorse that will power through your tasks – even if it is a bit on the large side. The screen is disappointing and not suitable for high-quality visual work, but if you spend most of your time just browsing the web and working in Windows programs, this isn't a problem.

Linx 12X64 | **£229.98** |
Buy from Amazon: bit.ly/linx458

FEATURES ★★★★☆ PERFORMANCE ★★★☆☆
EASE OF USE ★★★★★ VALUE FOR MONEY ★★★★☆

The Linx 12X64 sounds too good to be true: a 2-in-1 laptop/tablet PC with a detachable keyboard and a Full HD, 12.5in screen – for less than £230. The black plastic shell is uninspiring but it has a handy aluminium kickstand for adjusting the angle of the tablet. The screen's contrast is a respectable 1,148:1 and it reproduced 63.2% of the sRGB colour standard, which was the best result in this Group test. It's a bit dark, though, with a peak brightness of 290cd/m². Inside, there's a low-power 1.44GHz quad-core Intel Atom x5-Z8350 processor paired with 4GB of memory. It's not a great performer, managing an overall score of 11 in our Windows benchmark. Even browsing the web with Chrome, you'll want to keep the number of tabs to a minimum. The battery life was reasonable, though, lasting 7 hours and 10 minutes in our video run-down test.

VERDICT ★★★★☆

It's not a great performer and the screen is pretty average, but the Linx 12X64 comes at a great price and, if you want the combined convenience of a Windows laptop that turns into a tablet, this is a great-value option.

Acer Swift 3 | **£699.99** |
Buy from Currys: bit.ly/acersw458

FEATURES ★★★★☆ PERFORMANCE ★★★★☆
EASE OF USE ★★★★★ VALUE FOR MONEY ★★★☆☆

This is the most expensive laptop we reviewed, and the 1080p, 15.6in IPS display housed in a durable aluminium shell looks promising. Like our Gold award-winner, it's a bulky build, weighing 2.1kg, but is marginally slimmer at 18.9mm and has a roomy keyboard with a number keypad. Once again, compromises have been made on screen quality: the Swift 3 manages to recreate only 57% of the sRGB colour standard and its peak brightness of 233cd/m² isn't great in direct sunlight. The contrast ratio is a reasonable 1,199:1, though. Windows performance is good, scoring 74 in our overall Windows benchmark, though that's still less than the Aspire 5. But it's a good gaming laptop for the price, with its integrated Vega 8 graphics chip running 3D games at a reasonable frame rate. Its biggest problem is the battery, which only lasted a meagre 3 hours and 16 minutes in our test.

VERDICT ★★★★☆

The Swift 3's screen is disappointing and it has a very short battery life, but it's sturdily built and is a reasonable all-round performer. It's best used as a family laptop to be kept plugged in at home, rather than carried around.

Acer Aspire 3 | **£369** |
Buy from Amazon: bit.ly/acera458

FEATURES ★★★☆☆ PERFORMANCE ★★★☆☆
EASE OF USE ★★☆☆☆ VALUE FOR MONEY ★★★☆☆

Acer's Aspire 3 is a classic budget laptop design – a bulky 2.1kg machine entirely encased in black plastic.

Its performance is good for the price, with its dual-core 2GHz Intel Core i3-6006U processor and 4GB of memory contributing to an overall Windows benchmark score of 27. This falls far short of the more expensive laptops in this Group Test but is a significant improvement over the Linx and Iota models, if you're willing to pay the extra. It also comes with a 128GB SSD, which is also a step up from the cheaper models, and the battery life is adequate, lasting 7 hours and 50 minutes in our test.

However, the screen isn't great, with a peak brightness of 227.5cd/m², low contrast of 339:1 and only capable of reproducing 53.4% of the sRGB colour standard. We also struggled with its keyboard, which rattled, and an over-sensitive trackpad that seems to have a mind of its own.

VERDICT ★★★☆☆

The Aspire 3 offers good specs and provides decent performance, but the screen is disappointing and we really didn't get on with the keyboard and trackpad, which for us is a deal breaker.

Iota Slim | **£129.99** |
Buy from Amazon: bit.ly/iota458

FEATURES ★★★☆☆ PERFORMANCE ★★☆☆☆
EASE OF USE ★★☆☆☆ VALUE FOR MONEY ★★★☆☆

If you were to stencil an Apple logo on the lid of this laptop you'd be hard-pushed to tell the difference between the Iota Slim and a MacBook Air. Closer inspection, however, shows that the keyboard and trackpad aren't nearly as refined in this vastly cheaper model – but it's still an impressive homage.

All the cost saving has been made internally. The Intel Celeron N3350 processor and 2GB of memory produces what can only be described as a painfully slow experience, struggling with even basic tasks such as opening the Settings app and searching with the Start menu. The 32GB eMMC storage is also too small. It all adds up to an overall Windows benchmark score of 7, which is the lowest in this test.

The screen is no worse than the more expensive laptops we looked at and its battery life beat the Acer Swift 3, lasting 4 hours and 50 minutes in our tests.

VERDICT ★★★☆☆

It looks great and is super cheap, but the Iota Slim puts in a disappointing Windows performance. You'll need to buy a microSD card to boost the storage or replace its existing eMMC drive just to install the next big Windows update.

	Acer Aspire 5	Linx 12X64	Acer Swift 3	Acer Aspire 3	Iota Slim
WEBSITE	www.acer.com	support.linxtablets.com	www.acer.com	www.acer.com	www.iotatablets.com
PRICE	£629.99	£229.98	£699.99	£369	£129.99
BUY FROM	Amazon: bit.ly/acer458	Amazon: bit.ly/linx458	Currys: bit.ly/acersw458	Amazon: bit.ly/acera458	Amazon: bit.ly/iota458
PROCESSOR	Quad-core 1.6GHz Intel Core i5-8250U	Quad-core 1.44GHz Intel Atom x5-Z8350	Quad-core 2GHz AMD Ryzen 5 2500U	Dual-core 2GHz Intel Core i3-6006U	Dual-core 1.1GHz Intel Celeron N3350
MEMORY	8GB	4GB	8GB	4GB	2GB
SCREEN SIZE	15.6in	12.5in	15.6in	15.6in	14in
SCREEN RESOLUTION	1,920 x 1,080 pixels	1,920 x 1,080 pixels	1,920 x 1,080 pixels	1,920 x 1,080 pixels	1,920 x 1,080 pixels
STORAGE	256GB SSD	64GB eMMC	256GB SSD	128GB SSD	32GB eMMC
USB PORTS	1 x USB 2, 2 x USB 3, 1x USB Type-C	1 x USB 3, 1 x Micro USB	1 x USB 2, 2 x USB 3, 1x USB Type-C	2 x USB 2, 1 x USB 3	2 x USB 3
NETWORKING	802.11ac Wi-Fi, Gigabit Ethernet	802.11ac Wi-Fi	802.11ac Wi-Fi	802.11ac Wi-Fi, Gigabit Ethernet	802.11ac Wi-Fi
MEMORY-CARD READER	SD	MicroSD	SD	SD	MicroSD
OPERATING SYSTEM	Windows 10 Home	Windows 10 Home	Windows 10 Home	Windows 10 Home	Windows 10 Home
SIZE	382 x 263 x 21mm	315 x 189 x 10.7mm	371 x 255 x 18.9mm	382 x 259 x 21.6mm	332 x 222 x 10mm
WEIGHT	2.2kg	1.1kg	2.1kg	2.1kg	1.3kg
WARRANTY	One-year return-to-base	One-year return-to-base	One-year return-to-base	One-year return-to-base	One-year return-to-base

OUR VERDICT

Our Gold Award goes to the £629.99 Acer Aspire 5. It was the most powerful laptop in our tests, and even outperformed the more expensive Acer Swift 3, thanks largely to the new generation Intel processor at the PC's core. However, we were a bit disappointed by the screen, and the build quality isn't what we'd call luxurious.

Anyone looking to spend less on a PC should consider the Silver Award-winning Linx 12X64 (£229.98). As you'd expect, its performance isn't as fast as the other, more expensive award-winners but it's a good cheaper option if you want a simple laptop for basic tasks such as browsing the web and using office tools.

The best built laptop was also the most expensive, but we awarded the Acer Swift 3 our Bronze Award because it's a good all-rounder. Its battery life was a disappointment, though, so it's best to keep it near a power socket. ■

Web User's Best Buys

Web User and its sister titles test over 2,500 products every year

HARDWARE

LAPTOP

Acer Aspire 5

NEW!

£629.99 from **bit.ly/acer458**
Tested: Issue 458

The Acer Aspire 5 is a no-frills, fast-performance laptop. It's not as slim and lightweight as top-of-the-range models, but is a reliable Windows workhorse that powers through tasks.

KEY SPECS

Quad-core 1.6GHz Intel Core i5-8250U processor ▪ 256GB SSD ▪ 8GB memory ▪ 15.6in, 1,920 x 1,080-pixels screen ▪ 1 x USB 2, 2 x USB 3, 1x USB Type-C ▪ 802.11ac Wi-Fi ▪ Windows 10 Home ▪ 382 x 263 x 21mm ▪ 2.2kg ▪ 1-year return-to-base

ROUTER

Linksys EA9500 Max-Stream

£224.99 from **bit.ly/lksy456**
Tested: Issue 456

The EA9500 Max-Stream is a superb router that's packed with features and sensibly priced. It delivers terrific wireless speeds, creates two 5GHz networks on separate frequencies and offers an excellent smartphone app.

KEY SPECS

802.11a/b/g/n/ac ▪ 8 x Gigabit Ethernet ports ▪ 2 x USB 3 ports ▪ Guest-network mode ▪ DLNA media server ▪ 318 x 265 x 67mm ▪ Two-years return-to-base warranty

PHOTO PRINTER

Epson Expression Photo HD XP-15000

£251.96 from **bit.ly/epsonexp450**
Tested: Issue 450

Epson's XP-15000 lacks some of the features of a true all-rounder but it prints photos beautifully, all the way up to size A3+.

KEY SPECS

5,760 x 1,440dpi maximum print resolution ▪ 250-sheet input capacity ▪ Double-sided printing ▪ Colour touchscreen ▪ USB, Ethernet, Wi-Fi connectivity ▪ 479 x 370 x 159mm ▪ 8.5kg ▪ Three-years return-to-base warranty

SMART THERMOSTAT

Honeywell Evohome

£199 from **bit.ly/honevo449**
Tested: Issue 449

The Honeywell Evohome is a powerful multi-zone smart heating product that lets you control all the radiators in your central heating system. This will save on heating bills, but it may take a while before you recoup the cost of the initial outlay.

KEY SPECS

Remote thermostat ▪ Battery-powered ▪ Hot-water support ▪ Individual radiator support ▪ Alexa voice-assistant support ▪ IFTTT support ▪ 13.9 x 2.1 x 10.1cm ▪ 898g

MONITOR

BenQ GL2580HM

£109.99 from **bit.ly/benq445**
Tested: Issue 445

This BenQ monitor's stylish slim bezel and attractive design are matched by its solid performance and good-quality colour display. However, it's not suited to serious gamers.

KEY SPECS

24.5in screen ▪ 1,920 x 1,080-pixel resolution ▪ 16:9 aspect ratio ▪ 16.7 million colours ▪ 50-76Hz refresh rate ▪ 1,000:1 native contrast ▪ 2ms response time ▪ HDMI, DVI and VGA ports ▪ Two 1W speakers ▪ 42.6 x 55.7 x 17.5cm ▪ 4.4kg

PC

Palicomp AMD Gravity RYZ1

£799.99 from **www.palicomp.co.uk**
Tested: Issue 443

This is the best PC we could find for under £800. It's powerful, well built and well balanced, so long as you're happy to use an overclocked processor.

KEY SPECS

AMD Ryzen 5 1600 processor ▪ Asus Prime B350M-A motherboard ▪ 8GB DDR4 memory ▪ GeForce GTX 1060 graphics card ▪ 240GB SSD ▪ 1TB hard drive ▪ 475 x 468 x 230mm tower case ▪ Windows 10 Home 64-bit

All prices correct at time of review

SOFTWARE & SERVICES

PHOTO-EDITING SOFTWARE

DxO PhotoLab

£99 from
bit.ly/dxo455
Tested: Issue 455

If you're put off by Adobe's subscription costs, DxO PhotoLab is the best alternative for managing and editing your photos. Its interface is streamlined and elegant, and the editing and image quality are exceptional. It's also very simple to use and comes with lots of sophisticated tools.

KEY FEATURES

RAW conversion ▪ High quality noise-reduction ▪ Optical corrections ▪ Red-eye correction ▪ Advanced light and colour ▪ Batch processing ▪ Selective tone ▪ Full-screen mode ▪ Spot-weighted mode

VIDEO-EDITING SOFTWARE

Adobe Premiere Elements 2018

£86.56 from
www.adobe.com/uk
Tested: Issue 453

With its clean interface and sackful of special effects, Elements performs just about every action you'll ever need from a consumer-level video-editing suite. It's a powerful beast and rendering is super-speedy, even when exporting at 4K – but note that it only runs on 64-bit systems.

KEY FEATURES

Automatic editing ▪ Image stabiliser ▪ Surround-sound support ▪ Stop-motion capture ▪ Variable-speed control ▪ Unlimited timelines ▪ DVD disc authoring (no Blu-ray support) ▪ 4K support ▪ Requires Windows 7/8.1/10 or Mac OS (64-bit versions only)

Web User Gold Award winners

DICTATION TOOL

Google Voice Typing

Free from docs.google.com
Tested: Issue 457
Google Voice Typing
delivers an effortless, impressively accurate speech-to-text experience that's sleekly presented and a joy to use.

NEW!

SYSTEM MONITOR

Wise System Monitor

Free from bit.ly/wise456
Tested: Issue 456
Wise System Monitor has effortless charm – a lightweight tool that performs seriously well, offers lots of useful features and is very easy to use.

IOS BACKUP TOOL

Air Transfer

Free from bit.ly/aitr455
Tested: Issue 455
Air Transfer takes all the fuss out of getting files and photos from your iOS device to your PC. It works beautifully over your Wi-Fi connection.
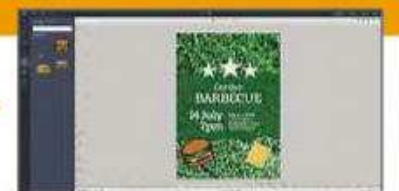
ONLINE DESIGN TOOL

Desygner

Free from desygner.com
Tested: Issue 454
Slick and powerful, Desygner lets you create great-looking designs in minutes, with no need to download software.

TAB MANAGER

OneTab

Free from bit.ly/onet453
Tested: Issue 453
OneTab shrinks all your open tabs to a single page in just one click. It's simple, clean and can be customised.

Best Free Software

Thunderbird 60

www.thunderbird.net
Min requirements: Windows 7/8.1/10, Mac OS or Linux
File size: 30.4MB

Most of us now use webmail and mobile apps to access our email from wherever we happen to be, but email clients such as Thunderbird remain popular, partly because they make it so easy to add email from various different sources: just enter your email address and password, and the software does the rest.

Mozilla's free, open-source Thunderbird client has been in development for 14 years, and for its 60th major release gains a new design, named 'Photon', which mimics the same look and feel first introduced in Firefox Quantum. In addition, there are new light and dark modes available.

Microsoft has recently been embracing dark themes in Windows 10, so the email client will look right at home there if that's the colour scheme you opt for.

Handling of attachments has been improved in this release, too. The Attach button has been moved to the right of the compose window, and attachments can now be reordered using a dialogue box, keyboard shortcuts or by dragging and dropping with your mouse.

You can now change Thunderbird's spellcheck language directly from the status bar, and this build switches exclusively to WebExtension themes,

following in Firefox's footsteps. This latter change does unfortunately mean that some existing add-ons will no longer work. Add-ons not marked as compatible with Thunderbird 60 by their authors will be disabled, although you can override this and try activating them manually.

There have been a number of updates made to the Calendar component, and Thunderbird Chat now contains multiple built-in message themes. The new version also introduces an experimental feature which lets you convert folders from MBOX to MAILDR format.

MINI WORKSHOP | Manage your emails in Thunderbird 60

1 When you first run Thunderbird, you'll be invited to set up an existing email account. Fill in your name, email address and the password you use. **1** Make sure 'Remember password' is ticked, **2** then click Continue. **3** The program will attempt to recognise your email provider.
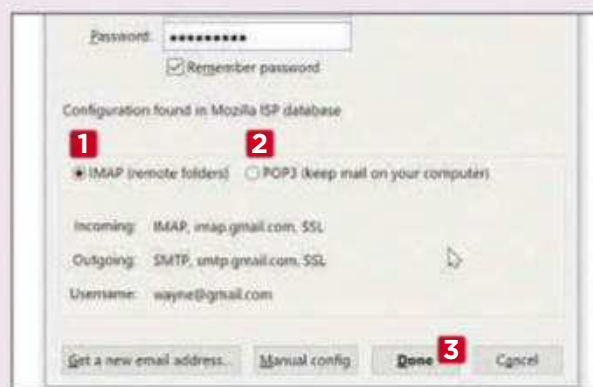
2 You'll now have the choice between using IMAP **1** or POP3 (Post Office Protocol). **2** IMAP keeps everything in sync, so if you delete a message in Thunderbird, it will vanish there and also from the web (and vice versa). POP3 just downloads the messages and deleting an email in Thunderbird won't remove it from your webmail. Click Done. **3**

3 If you're using Gmail, a browser window will open and you'll be asked to sign in with your account details and grant Thunderbird permission to manage your mail. Click Inbox **1** to view messages being downloaded in the background. Fetch new emails at any time by clicking the Get Messages button. **2**

This fortnight's top new software downloads to help you make the most of your PC, and they're all FREE

SYSTEM TOOL
Autorun Organizer 3
bit.ly/autorun458
Min requirements: Windows 7/8.1/10 **File size:** 23.1MB

Lots of programs set themselves to automatically start alongside Windows. This is fine with certain applications – such as your antivirus software – but you don't want everything starting up at the same time and slowing down your system. Autorun Organizer lets you manage your Windows startup items, so your PC will boot much quicker. This new version will notify you about new startup applications. Be sure to decline the bundled junk during installation.


PDF TOOL
JSoft PDF Reducer
bit.ly/pdfreduce458
Min requirements: Windows XP/Vista/7/8.1/10 **File size:** 23.6MB

JSoft PDF Reducer can compress, merge and split PDF files, as well as rearrange or delete pages, introduce or remove text, and add passwords, watermarks and signatures. To use it, just drag and drop a PDF or directory to the program window and make whatever changes you require. The website is in French, with the download button labelled Télécharger, but PDF Reducer itself is in English.
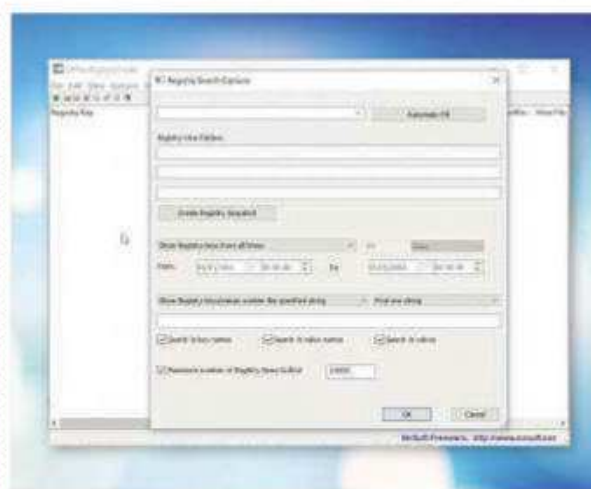
REGISTRY TOOL
OfflineRegistryFinder
www.nirsoft.net
Min requirements: Windows XP/Vista/7/8.1/10 **File size:** 85.7KB

Offline Registry files are ones that are not currently loaded by Windows. Nirsoft's portable OfflineRegistryFinder lets you scan saved Registry files by looking for certain keys, values and data. You can additionally use the software to create a snapshot of the current Registry and search through it. Nirsoft has also released OfflineRegistryView, a Registry viewer that supports search.

New Windows Apps

ISO Image Creator PRO
bit.ly/isoic458
Min requirements: Windows 10
File size: 17.79MB
This free app can create ISO image files from DVDs that you insert in your PC. All you have to do is select the source drive and destination, then click the Start button.

TranslucentTB
bit.ly/trans458
Min requirements: Windows 10
File size: 6.57MB
TranslucentTB gives you control over the appearance of the Windows 10 taskbar. You can change its colour and behaviour, and assign different looks to different states. There's also a standard desktop version.
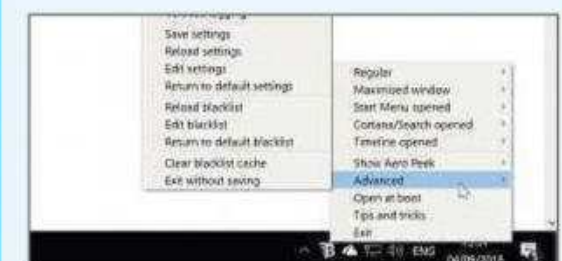
Mp3tag
bit.ly/mp3tag458
Min requirements: Windows 10
File size: 11MB
Mp3tag lets you edit metadata found in audio files. It supports batch tag-editing of ID3v1, ID3v2.3, ID3v2.4, iTunes MP4, WMA, Vorbis Comments and APE Tags. It works with all popular audio formats.

VIDEO EDITOR
DaVinci Resolve 15
bit.ly/davinci458
Min requirements: Windows 7/8.1/10, Mac OS or Linux **File size:** 920MB

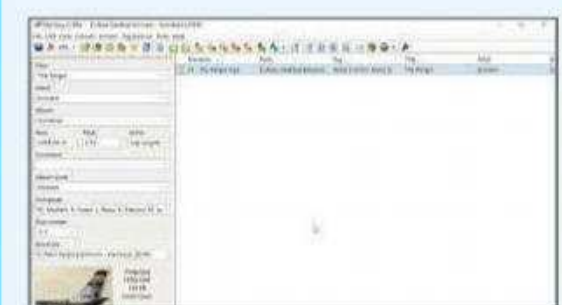DaVinci Resolve is a free but very powerful video editor that's a cut-down version of a professional suite. It delivers sophisticated video editing, colour-correction tools, visual effects and transitions, audio post production and more. The latest version introduces the Fusion visual-effects app used in many Hollywood productions, an improved colour module and support for more video formats .

If you need even more effects and 3D tools, or you want to collaborate on projects with other video editors, you can upgrade to the paid-for version for $300 (£234).

Look out for a workshop about DaVinci Resolve in the next issue of *Web User*.

HOME-THEATRE SOFTWARE
Kodi 18 'Leia' Beta 1
www.kodi.tv
Min requirements: Windows 7/8.1/10, Mac OS or Linux **File size:** 89.5MB

While Kodi 18 'Leia' is expected to officially launch by the end of the year, you can now download a fairly stable beta version of the software, which you'll find under the Pre-Release tab in Downloads. The standout features of Kodi 18 include a revamped video player, improvements to backend PVR and Inputstream clients, better Bluetooth support, a revamped music library, and Digital Rights Management (DRM) support.

A massive number of technical and code changes have been made, and there's a separate 64-bit version for Windows now, too. If you're upgrading from Kodi 17, you'll probably find any skins you've added won't load in this new version.

VIRTUAL OPERATING SYSTEM
Windows 95
bit.ly/win95-458
Min requirements: Windows 7/8.1/10, Mac OS or Linux **File size:** 128MB

Windows 95 introduced many of the features found on today's Windows operating systems, including the desktop, the Start button and the taskbar. An enterprising developer has found a way to get Microsoft's ancient OS running on modern systems, giving long-time Windows users the chance to reminisce, and letting a younger generation try it out for the first time. In runs in a small window, with components such as WordPad, Calculator, FreeCell and Media Player all working as you'd expect, although you can't browse the web with Internet Explorer because pages don't load.

It's a fun experiment that is likely to make you very grateful for modern operating systems.

❌ Don't install...

WinJail
www.winquota.com
Min requirements: Windows XP/Vista/7
File size: 1.64MB

This sandboxing tool is clearly aimed at more advanced users than us: "WinJail is full implementation of chroot, with additional features like 'copy-on-write' mechanism applied to chroot'ed files". Come again? It costs $49 (£38.23) per year per licence, and hasn't been updated since 2009.

...Install this instead ✔

Sandboxie
www.sandboxie.com
Min requirements: Windows XP/Vista/7/8.1/10
File size: 2.5MB

Whether a program carries malicious code or is just badly written, Sandboxie renders it harmless in a few simple clicks. Sandbox a suspicious tool by right-clicking its shortcut or EXE file and select Run Sandboxed. Alternatively, just drag and drop the program to the Sandboxie window. You can also transfer files to and from the sandboxed environment, and quickly terminate running applications that may pose a threat to your PC. Lightweight, powerful and frequently updated, Sandboxie is by far the best dedicated sandboxing tool around.

GAME
It's Paper Guy!
bit.ly/paperguy458
Min requirements: Windows 7/8.1/10 or Mac OS
File size: 220MB

The aim of this fantastic puzzle game, created by a French student, is to explore a world made entirely out of paper. You control Paper Guy, and must overcome obstructions by cutting through them using your mouse. You can nip your way through doors and slice up most of the scenery, which is hugely satisfying and great fun.

🔄 UPDATED | New tweaks and fixes for your favourite free programs

ISO TOOL
ISO Workshop 8.1
www.glorylogic.com
Min requirements: Windows 7/8.1/10
File size: 4.1MB

ISO Workshop lets you make ISO files from your own content, view and extract files, and more. The latest version of the program adds drag-and-drop support, updates the disk-burning SDK and improves copying to ISO. Decline the bundled junk during installation.

SYSTEM CLEANER
CCleaner 5.46
www.ccleaner.com
Min requirements: Windows XP/Vista/7/8.1/10
File size: 16MB

Avast's system-cleaning tool gets updated on a monthly basis. The latest version renames the monitoring features and adds new privacy settings. It also fixes widely reported problems from the last build (5.45). Make sure you decline the bundled Avast Antivirus program during installation.
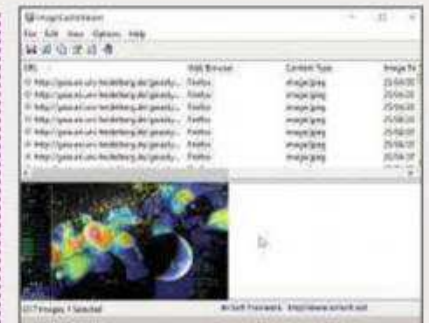
SYSTEM TOOL
HWiNFO 5.88
www.hwinfo.com
Min requirements: Windows XP/Vista/7/8.1/10
File size: 7.8MB

HWiNFO (Hardware Info) provides detailed information about your computer, including the status of the processor, hard drives and motherboard. This new version improves sensor monitoring on specific types of hardware, and adds support for newer components.

CACHE VIEWER
ImageCacheViewer 1.20
www.nirsoft.net
Min requirements: Windows XP/Vista/7/8.1/10
File size: 82.8KB

Your browser caches content from all the web pages you visit, to speed up loading times when you return. ImageCacheViewer lets you explore these cached images. This release adds support for Chrome's new 'Simple Cache for HTTP' format. ■

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Best New Browser Tools

CHROME

Skip GDPR-enforced privacy warnings

Although the introduction of GDPR in May has generally proved a good thing for web users – reducing the amount of junk email we receive and giving us more control over our personal data – it also means having to click past cookie and privacy warnings on virtually every website we visit. Fortunately, help is at hand from the brilliant add-on I Don't Care About Cookies (bit.ly/cookies458), which has been around for a few years and has now been updated to skip the new GDPR-enforced messages automatically, without you needing to click anything. It works on everything from the small pop-up boxes along the bottom of your browser to the huge overlays that obstruct your access to sites until you accept their terms.

You can report instances where privacy warnings still appear, and create a whitelist of sites on which to allow them. On the downside, blocking the messages means you won't know which cookies are being installed and why, but if you don't care then it won't matter! I Don't Care About Cookies is also available for Firefox (bit.ly/firecookies458).

Identify fake images in online news stories

Fake news shows no sign of going away and even though many stories are obviously bogus or satirical ('PETA condemns BBC for trapping endangered animals inside TV screens', from The Onion), it's often difficult to tell that a photo has been deliberately altered or taken out of context. A new Chrome extension called SurfSafe (bit.ly/surfsafe458) helps you fight the tide of fake visual news by identifying photoshopped and misleading images in online articles. Simply hover over a picture or right-click it and choose Inspect Image, and SurfSafe will classify it as 'safe', 'warning' or 'unsafe'. You can then click one of these icons to see where the image has been used before, so you can determine whether it's been adjusted or pilfered.

When you install the add-on, you're asked to select 'safe sources' for evaluation purposes, from options including BBC News, The Guardian and Mail Online – you can change these at any time. If you spot a photo that's obviously fake, help improve SurfSafe's accuracy by clicking Report.

View the weather on your new tabs

What a lot of crazy weather we've had so far this year, from the 'Beast from the East' in February to the record-breaking heatwave in July. You can stay abreast of the latest meteorological developments using WeatherTab (bit.ly/weather458), which replaces your boring New Tab page with details of the current temperature and conditions for your location (or anywhere else you search for). It does so against a background of stunning photos that reflect the current weather, and lets you choose between Fahrenheit and Celsius. If you require a more detailed forecast for the next few days, then try Weather Extension (weatherextension.com) from the same developer.

Google released the first version of Chrome in September 2008, so it also celebrates a milestone birthday this month. Chrome now claims a 58% share of the browser market.

This fortnight's most useful tips and add-ons to help you get the most from Chrome, Firefox, Opera and more
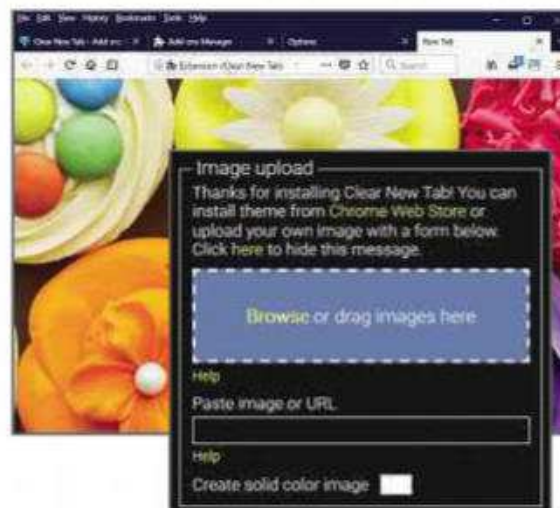
FIREFOX

Access all Google tools in one place

The brilliant extension Black Menu for Google (bit.ly/black458) has been around for years, and has just been updated yet again to cover Google's latest additions and refinements. It now lets you access dozens of Google tools in one handy drop-down panel, with the most popular listed in its default menu – including Search, Maps, Gmail, YouTube and Drive – and many more available to add simple by dragging and dropping them into place. These include new and updated tools such as YouTube Music, Fit and Voice, and they all open instantly within the panel, saving you the trouble of visiting the individual sites. Black Menu offers a choice of themes and lets you set up notifications for your favourite products – it's a must-have for Google addicts.
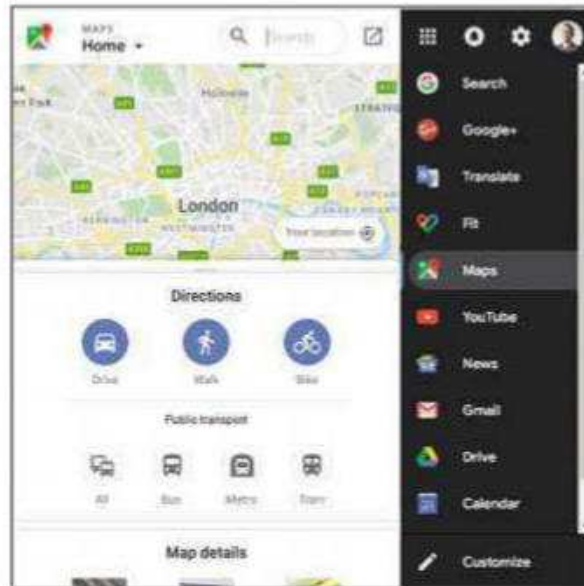
Censor offensive words on the web

Even if you don't mind the occasional rude word, a new Firefox add-on called Advanced Profanity Filter (bit.ly/profanity458) can make your browsing experience more pleasurable by hiding all terms that offend or annoy you. By default, it filters a selection of the worst swear words (albeit with an American slant), but the best part is that you can add your own bugbears to its filter list. This means that if you're sick of being bombarded by the terms 'millennial', 'selfie' or 'snowflake' on the web, you can purge them from your browser.

There are options to preserve the first and/or last letter of a censored word, block variations of the offensive term and show the total number of filtered words on a page. We found it worked surprisingly b***** well!

A man takes a s***** at a party

Customise your New Tab page

Mozilla is constantly trying to make Firefox's New Tab page more interesting, but some users would rather see a pretty picture than a selection of their 'top sites' and browsing 'highlights'. This is the idea behind Clear New Tab (bit.ly/clear458), which removes all the clutter from your new tabs and lets you replace it with the background image of your choice. This can either be a favourite photo you upload from your computer, an image you copy and paste from the web or – in an unusual move for a Firefox add-on – a theme you install from the Chrome Web Store. You can choose the size and position of the picture, and set the background colour for the page.

OTHER BROWSERS

Delete Opera's built-in bookmarks

Back in Issue 455, we questioned whether the beta version of Opera 55 was too much like Chrome, and the stable release of the browser is even more so. It's the first edition of Opera to have the bookmarks bar enabled by default, just like Chrome, and this is annoyingly pre-loaded with bookmarks for popular websites in your country – ours included eBay, Booking.com and Very. Fortunately, it's easy to delete these unwanted bookmarks by right-clicking them and choosing 'Move to Trash', or you can hide the bar altogether by deselecting 'Show bookmarks bar'.

Scan sites in Edge with Avast

No sooner has Norton released a security tool for Edge (see Issue 456) than rival company Avast issues its own add-on for Microsoft's browser. Avast Online Security Extension (bit.ly/avast458) works in much the same way, by scanning the site you're viewing for malware infection, phishing scams and privacy threats, and automatically blocking hidden trackers that collect your data. You can also hover over links in search results, to see whether Avast has rated them as safe or risky, and improve the tool's accuracy by rating your own experience with sites as positive or negative.

Best Free Apps

EDUCATION

NEW

BBC Learning English

bit.ly/bbcdroid458
bit.ly/bbcleios458

📱 5 🍎 10

Learning English is one of those brilliant BBC services you never even knew existed. Established back in 1943 as part of the World Service, it provides English-language learning resources to teachers and pupils across a series of radio programmes, a website (bbc.co.uk/learningenglish) and, now, via this impressive new app.

The app's Home tab takes you straight to the latest BBC Learning English programmes and lessons – tap one to go to its page and listen to or watch it. Press the Programmes tab and you'll be able to view all the lessons that are currently available, either by category (Everyday English, Business English, Grammar and so on) or as an A-Z list. The lessons themselves are delivered in easily digestible chunks – most are between 3-6 minutes long – and all come with a clearly flagged skill level. The presentation of each lesson is lively, informative and even entertaining – some grammar lessons are delivered in a gameshow-style format, for instance.

The app is fantastically straightforward to use. Familiar iPlayer-like controls let you play content and quickly share items with others. You can also add specific lessons to your personalised language course, which then appear under the Following section of the My Learning tab.

There are a few features we'd like to see added. Currently, for example, there's no option to set up a user account to sync your personalised lists or history across multiple devices. But it's a great start for the mobile version of this really useful resource.

## MINI WORKSHOP
Get started with BBC Learning English

1 The Home tab lists a selection of the latest content, but to browse all the programmes on offer, tap the Programmes icon at the bottom of the screen. **1** Tap the By Category button **2** to view the categories available, then press one and scroll through the content listed. Alternatively, select 'A-Z of programmes' **3** and scroll though all the programmes available as one long, alphabetised list.
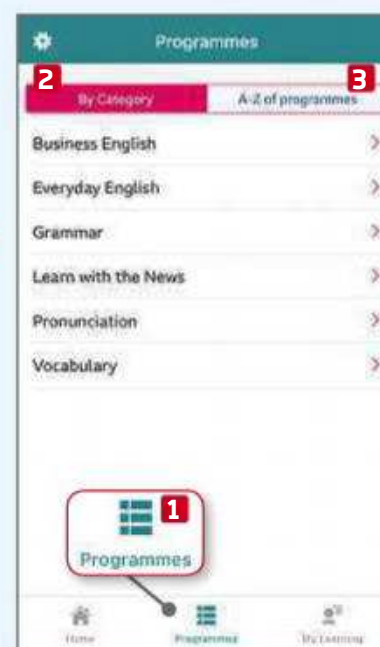
2 To play a programme, navigate to its page, then tap the speaker icon **1** for audio content or the playback icon for a video. Tap the '+' sign **2** to follow the programme – you'll find programmes you follow under the Following section of the My Learning tab. Press the Share **3** button to send a link to someone else. Below, you'll find a Lesson tab **4** (with the lesson in text form) and a Transcript **5** of the entire programme.

3 By default, the BBC Learning English app saves your lesson history and sends some usage data back to the BBC. The latter is intended to help the broadcaster improve its services, but it's easy to disable this if you prefer – tap the Settings cog in the top left-hand corner, then press the switch next to 'Send app statistics'. **1** Click Clear History **2** to delete your history.
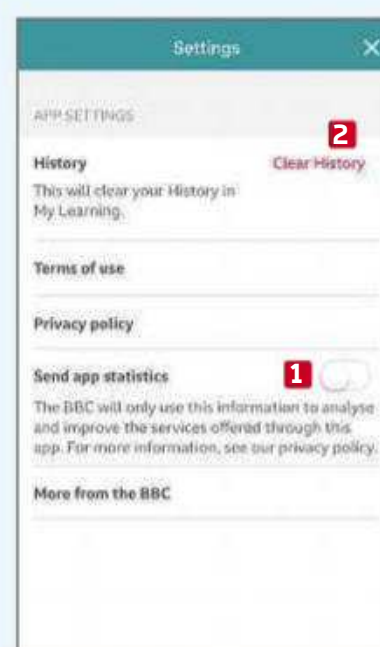
Our rating ★★★★★

This fortnight's top free and paid-for apps for Android and iOS phones and tablets

SHOPPING — UPDATED
Out There
bit.ly/outdroid458
bit.ly/outios458

🤖 6 11

We're all for saving a bit of cash and, with Out There on your device, you can discover the latest deals available in nearby outlets and enjoy discounts on everything from bars and restaurants to spas and golf courses. Bear in mind that it's early days for Out There – the app only went national a few months ago and when we tested it, there weren't many live deals on offer in the areas we visited. The potential for the service is huge, though, so it's definitely one to keep an eye on.

Our rating ★★★☆☆

GAME — NEW
Thunderbirds Are Go: International Rescue
bit.ly/thunderbirds458

🤖 4.3

This game, based on the recent Thunderbirds series, casts you as Virgil Tracy, tasked with saving the Arctic from destruction with a little help from Brains, John and the team. Gameplay is a mix of action, piloting and puzzle solving and the graphics are pretty good, too – check the game's requirements, though. International Rescue is completely free to play, though there are ads and some in-app purchases to watch out for. Apart from that, it's FAB!

Our rating ★★★★☆

SHOPPING — NEW
Iceland
bit.ly/iceland458

🤖 4.0.3

Iceland has finally joined the ranks of supermarkets offering a dedicated online shopping app – for Android devices, at least. The iOS version is presumably still in development. Currently, the app is a bit basic and not without the occasional bug (though, hopefully, any problems will be ironed out via updates). The latest offers at Iceland are promoted on the main screen and you can search for items, save favourites, manage your bonus card and book delivery slots. That's about it, though.

Our rating ★★★☆☆

VIDEO — NEW
Nova Video Player
bit.ly/nova458

🤖 4.2

You probably already have a favourite Android video app, but it's definitely worth giving Nova a spin. It's a brand new, open-source video player with a simple, clean interface and some very useful features. It supports a wide variety of video file formats, including MP4, MKV and AVI, and is designed to work not only on tablets and phones, but also on Android TV devices, with a sofa-friendly interface, support for 3D playback and surround sound. You can play videos from internal storage, from a computer over a network or from external USB storage, and playback is hardware-accelerated on most devices for better streaming.

Our rating ★★★★★
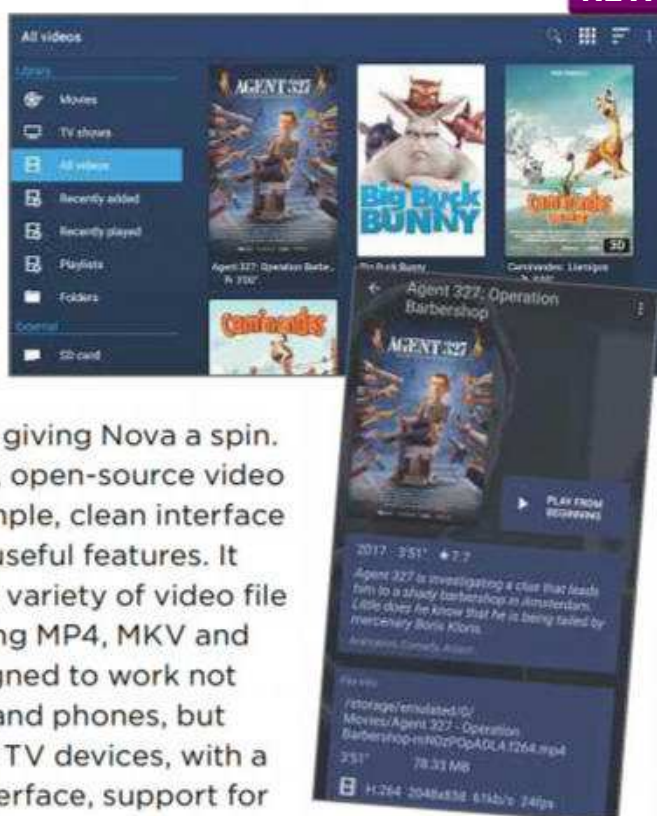
PHOTOS — NEW
NASA Selfies
bit.ly/nasadroid458
bit.ly/nasaios458

🤖 4.0.3 7

Unless you're Tim Peake or a billionaire entrepreneur, there comes a point in life when you have to face the sad fact that you'll probably never go into space. But this app – from NASA itself – has a clever fix. Developed to tie in with the 15th anniversary of the launch of the Spitzer Space Telescope, NASA Selfies lets you don a virtual spacesuit and insert your astronaut self in front of stunning photos of outer space, such as the Helix Nebula and the centre of the galaxy. It's pretty basic, but it provides a certain amount of cosmic – if slightly silly – wish fulfilment.

Our rating ★★★★☆

5 NEW APPS WORTH PAYING FOR

FAMILY
Baby Led Kitchen
bit.ly/babydroid458
bit.ly/babyios458
Price: £4.99
🤖 7 🍎 9

If you have hungry little mouths to feed, this handy reference app provides easy, healthy recipes, tips, advice and more for babies of weaning age and up.

OFFICE
PDF Editor
bit.ly/pdfeditor458
Price: £2.29
🤖 5.1

Many apps that claim to offer PDF editing let you do little more than annotate them. This one actually lets you edit almost anything, but you'll need a subscription for larger files.

GAME
BestLuck
bit.ly/bestluck458
Price: £1.99
🍎 9

This beautifully illustrated, story-led adventure game is relatively short but well

worth playing. It's a genuinely moving, often dream-like experience with intriguing puzzles and multiple choices that lead to different outcomes.

PHOTOS
PicTapGo
bit.ly/picdroid458
bit.ly/picios458
Price: £2.69 (Android), £2.99 (iOS)
🤖 5 🍎 9

This easy photo editing tool has been available on iOS for a while but was recently released for Android devices, too. Apply professional-looking filters, carry out quick fixes and more.

ENTERTAINMENT
Ghost Tracker EMF EVP Recorder
bit.ly/ghostdroid458
Price: £2.59
🤖 4.0.3

If there's something strange in your neighbourhood, don't call Ghostbusters – use this 3-in-1 ghost-hunting app instead. It contains an electromagnetic field scanner, motion detector and EVP (Electronic Voice Phenomenon) recorder.

Baby Led Kitchen	PDF Editor	BestLuck	PicTapGo	Ghost Tracker EMF EVP Recorder

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❌ Don't install...

Universal Authenticator
bit.ly/universal458

Two-factor authentication (2FA) is a great way to lock down your accounts. The trouble is that there are dozens of different authenticator apps available and they aren't all equally safe. We'd suggest avoiding any that send codes via text message, for example, because these could be intercepted. And we'd also encourage you to avoid Universal Authenticator, partly because it hasn't been updated for over a year, but mainly because it costs a ridiculous £96.99!

...Install this instead ✔️

Google Authenticator
bit.ly/installdroid458
bit.ly/installios458
🤖 2.3.3 🍎 7

The best authentication tools handle multiple accounts from the same app. However, not all authentication methods use the same protocols, so there's currently no 'universal' authenticator – if you want to use 2FA effectively across multiple accounts, you'll need multiple authentication apps installed.

LastPass, Microsoft, Sophos and others all offer authentication apps that are compatible with multiple services, but for sheer simplicity, Google Authenticator is hard to beat. It supports most Time-based One-time Password (TOTP)-based authentication systems and, most importantly, it won't rip you off to the tune of £97, because it's free. 🔷

Google at 20!

Android versions are named after sweet treats because Andy Rubin, the brains behind the mobile OS, loves desserts. Android 1.5, Cupcake, was the first to have a sugary monicker.

Give your eyes a rest from your browser by taking our fiendish fortnightly challenges. Can you guess our football-club emoji and our web year?

CAN YOU GUESS THE FOOTBALL CLUBS FROM THE EMOJI?

1 🦢 🌊 🏙️

2 🔗 ↔️ON! 🏙️

3 👶 👄

4 🔩 ↔️ON! 🚶🚶

5 👴 🍖 🏃

6 ⬛ 🔥 🐕 🐕

GUESS THE ~~TECHNOLOGY~~ GOOGLE YEAR

Google at 20!

Can you work out which year the following Google news stories occurred in? No cheating!

1 Google launches its first Android smartphone, the Nexus One, both as an unlocked handset and on contract with Vodafone in the UK.

2 Google admits to "accidentally" gathering data about people's web activities from their Wi-Fi networks using its Street View cars.

3 Google buys Picnik, the popular online photo-editing tool, only to close it down three years later and move its users to Google+.

4 Google introduces Instant Search, which automatically updates your search results as you type, to "shave seconds off search time".

5 Google closes its search engine in China, following disagreements over censorship and Chinese-originated hacking attacks.

COMPETITIONS

WORTH £59.99 EACH

WIN 1 OF 5
Photostory Deluxe 2019
The 2019 version of MAGIX's Photostory Deluxe lets you embed GIF animations into even more stunning slideshows. The new Grouping tool makes it quicker to make multiple changes. To enter, email your address to webusercomp@dennis.co.uk with 'photostory' in the subject line. For more information, visit www.magix.com/gb and follow @MAGIX_INT on Twitter.

WORTH £59.95 EACH

WIN 1 OF 5
Monarch cases for Samsung Galaxy Note9
Made from polycarbonate, rubber, alloy metal and top-grain leather, Urban Armor Gear's Monarch case will keep your Samsung Galaxy Note9 safe. It meets double the accepted military standard for 'drop and shock' protection. To enter, email your address to webusercomp@dennis.co.uk with 'monarch' in the subject line. For more info, visit urbanarmorgear.com and follow @UrbanArmorGear on Twitter.

Microchip implants

Futuristic or voyeuristic? **David Crookes** looks at the technology that's designed to get under your skin

What are they?

Microchip implants are tiny integrated circuit devices or Radio Frequency Identification (RFID) transponders that are inserted under the skin. They allow you to perform numerous tasks without contact, such as unlocking doors, paying for items and accessing computers, and can also hold useful information, such as medical records and travel tickets.

How do they work?

The RFID technology used in modern human-microchip implants is the same as that used in mobile phones and contactless credit and debit cards – that is, near-field communication that operates within a high frequency of 13.56MHz. The RFID chip sits in a capsule that's little bigger than a grain of rice.

When a reader is used to scan the microchip, power is received by a tuning capacitor. This is then passed to the chip, allowing the reader to receive the information via an attached antenna coil.

An RFID microchip sits in a capsule about the size of a grain of rice

How is the information stored on the chip?

Typically, the data is stored in the form of a unique serial number, which is in turn used to unlock information stored elsewhere. As such, the microchip implant uses electromagnetic fields to *identify* data rather than hold it itself (the chip carries just one kilobyte of data). When the serial number matches a code attached to saved records or fits with one being used by a device, the required task is carried out.

So a bit like microchips in pets, then?

Yes. Microchips have already proven very useful for retrieving lost animals because they contain identifying information about their owners. They've also come in handy for keeping on top of vaccinations and allowing pets to pass through a door into their home. The only real difference is that human microchips are designed to make *our* lives more convenient as we go about our day-to-day tasks.

Most microchip implanters push a chip under the skin on the back of your hand, often between the thumb and forefinger. This means a quick wave is all that is needed for the microchip to activate.

Microchips are usually implanted under the skin on the back of your hand

Who is making them?

Many of the current chips, which cost around $150 (£116), are made by BioHax International (www.biohax.tech), a technology company based in Sweden. Founded in 2013 by the so-called biohacker Jowan Österlund, it subscribes to the belief that our bodies and lives can be improved by embedding technology.

So too does biohacking site Dangerous Things (dangerousthings.com), which says as many as 100,000 people have implanted microchips inside them.

Who is using them?

Companies are springing up offering microchip implants for several purposes: a technology incubator called Epicenter in Stockholm (epicenterstockholm.com), for example, has offered implants to workers so they can ditch their pass cards; and Statens Järnvägar (www.sj.se), a Swedish rail operator, has allowed some customers to use embedded microchips to pay for journeys.

One of the best-known initiatives comes from the Wisconsin company Three Square Market (32market.com), which hit the headlines last July by offering chips to all its employees – to buy snacks from the breakroom, log into computers, use machines and open doors. Todd Westby, the company's CEO and founder, called the technology the 'Internet of People' and, a year later, revealed that 90 people had volunteered to be chipped.

Why not just use a card or smartphone?

Again, it's all about convenience. All people have to do is place their hand containing the microchip next to a proximity reader, which means there is no need to fumble around in pockets or remember to take cash or your phone with you. Westby says that his chips can be used by staff to carry other data, citing insurance information and a driver's licence as examples.

Three Square Market is one of the leading companies behind microchips

Can payments be made anywhere?

It's not yet possible to walk into any shop on the UK high street and place your hand on the card reader to pay for items, but the potential is there. Users of an implanted microchip made by a Danish company called BiChip (www.bichip .com) can make payments using the cryptocurrencies Bitcoin and Ripple, and store medical data, driving licences and passports.

"HUMAN INTELLIGENCE NEEDS TO KEEP UP"

One of the first people to have an RFID chip implanted in his body was Kevin Warwick, a professor of cybernetics and deputy vice-chancellor at Coventry University. He had the 23 x 3mm chip embedded in his forearm for nine days in 1998 to study the control of intelligent buildings run by computers, and he tells his story in the book *I, Cyborg* (bit.ly/cyborg458). "Human intelligence needs to keep up with the intelligence of machines," he said at the time. "If we implant silicon chips into humans, humans can stay ahead."

But are these microchips tracking people?

Not yet – at least, not directly. It's true that every time someone uses an implanted microchip to open a door or access a service, it is possible to pinpoint where they are and where they've been. But the same applies when you use a payment card or carry a location-beaming smartphone. However, there's little doubt that steps are being taken toward implanted microchips that are specifically designed to reveal the wearers' whereabouts. Indeed, Three Square Market says it is working with a Californian company to create a chip with GPS capability, which will contain a SIM card and reveal the wearers' location every 30 minutes. This could, for example, allay parents' fears about their children going missing, and could also help keep a eye on dementia patients – but it certainly raises ethical concerns.

Should we be worried?

Not at the moment. Your smartphone can dish out far more information about you than these implanted microchips, and phones incur the additional risk of being hacked, with criminals gaining access to your camera and microphone. As for worries that anyone could unlock the information by walking by, the readers need to be a centimetre away from your hand to do so (and the person operating it has to know you have a microchip).

Who needs all this pocket clutter when you can have a single microchip?

Are there any health concerns?

Yes, concerns have been raised, but the companies developing and promoting the technology believe them to be unfounded, especially if the chips are implanted properly. Care simply needs to be taken to keep the area of insertion clean to avoid infection and the implants themselves use a bio-safe epoxy resin, lead-free borosilicate glass or soda-lime biocompatible glass, so there should be little to worry about (the Food and Drug Administration in the US approved an RFID chip for implant in 2004 to help share medical information with doctors – see bit.ly/ medical458.

That said, reports suggest it can take a few days for the bruising and swelling to subside, and there can be some itching in the area for a couple of years (gulp!). Links between the implanted chips and cancer have been dismissed, however.

A microchip implant can cause a small swelling on the skin of your hand

So, what other implant tech is being worked on?

Companies are looking at the potential health benefits to be gained from having technology implants. One of these projects is the biotechnology startup, Grindhouse Wetware (www .grindhousewetware.com), which is based in Pennsylvania and is best known for its Circadia device. Implanted into its co-founder Tim Cannon five years ago, this wirelessly sends biometric data via Bluetooth to a mobile device. It can be used to read the body's temperature and alert health workers if biometric conditions fluctuate dangerously. One drawback, however, is that the Circadia device is about the same size as a deck of cards (double gulp!).

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20 years of Google

To celebrate Google's 20th birthday on 27 September, **Robert Irvine** counts down the 20 biggest milestones from the search giant's first two decades

20 BUZZ

"I'll Buzz you later!", said no-one to anyone, ever. Google's Facebook rival proved one of its biggest flops, launching in February 2010 and buzzing off in December 2011. The social network is best known for its huge privacy flaw, which publicly listed who its users most frequently interacted with.

19 LIVELY

Google's Second Life rival looked fantastic, but the 3D virtual world lacked scope and customisation, could only run in Internet Explorer and Firefox (requiring Adobe Flash) and proved a cumbersome way to communicate. Launched in July 2008, it wasn't lively enough and was shut down at the end of the year.

18 WAVE

Collaborative tools such as Slack are now very popular, so perhaps Wave was ahead of its time in 2009. It offered a way for people to work on and discuss projects in real time, but its confusing interface and uncertain purpose deterred many prospective users, and it took Google Docs to get collaboration right.

17 GOOGLE+

Google+ has proven more successful than Buzz, partly because Google forced YouTube commenters to sign up for an account, but it's never threatened the big social networks. Its most useful feature, Photos, was spun off into a separate service in 2015, and most of its 395 million users have forgotten it's there.

16 BLOGGER

Blogger became the top blogging service after Google bought it in 2003, until Tumblr and WordPress stole its thunder. In its heyday, Blogger's attractive templates and simple publishing process made it a great way for anyone to share their views with the world, but Twitter now offers a quicker, pithier approach.

15 READER

The much-loved RSS-feed aggregator closed five years ago due to alleged declining usage – our Technical & Reviews Editor still hasn't forgiven Google! Presumably, the idea was for users to follow websites and blogs on Google+ instead of subscribing to them through Reader, but the latter was a far superior service.

14 TRANSLATE

Originally based on the same technology as AltaVista's ground-breaking Babel Fish tool, Google Translate now covers more than 100 languages and uses a neural machine translation engine to translate whole sentences. You no longer need a phrasebooks while travelling abroad and it turns Google Home into an interpreter.

13 ASSISTANT

Speaking of which (pun intended), Google's voice-activated technology has improved massively in the past two

years, integrating with a wide range of apps and devices, such as Home, and overtaking its rivals Alexa and Siri. You can now perform thousands of tasks hands-free, and engage in natural, two-way conversations with Assistant.

12 ADWORDS

For better or worse, AdWords (recently renamed Google Ads) has made the web go round since it launched in 2000. It allows advertisers to reach their target audience, lets content creators earn money through its AdSense program and ensures most sites remain free for us to access. Also, it earned Google $95.4bn (£74.2bn) last year alone.
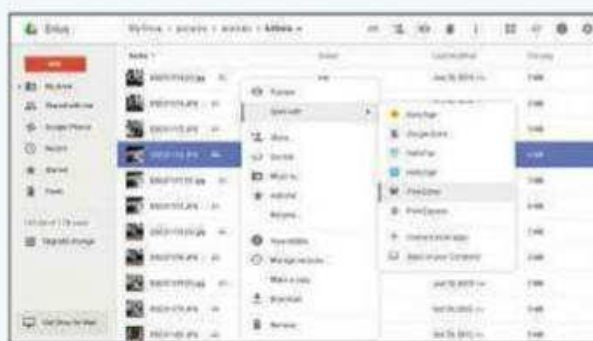
11 CHROMECAST

Who would have thought that a tiny £30 dongle would revolutionise the way we watch TV? Chromecast arrived in 2013 and made streaming Netflix, BBC iPlayer and other services from a phone or tablet to a non-smart telly an absolute doddle, with no buttons to press other than the 'cast' icon. This writer couldn't live without one.

10 DRIVE

Google Drive arrived in 2012, which was pretty late compared to other online-storage services. Still, it soon made up for lost time and now encompasses Google Docs, offering 15GB of free storage and boasting more than 800 million users, although there have been concerns about privacy and what Google does with your uploaded files.

9 PHOTOS

As fans of Picasa, which shut down in 2016, we were initially suspicious of its usurper, but Google Photos soon won us round with its slick interface, useful editing tools and ability to sync seamlessly with mobile devices, which means your precious pictures are always backed up to the cloud. We also love how easy it is to organise and share your images.

8 EARTH

Bought by Google in 2004, this astounding 3D virtual globe lets you visit anywhere in the world from your desktop, so it's amusing that the first thing most users do is zoom into their own home. Constantly adding interesting tools such as a flight simulator and the Moon, Mars and Ocean, it's now available for Chrome and Android, too.

7 DOCS

When *Web User* staff were switched from Microsoft Office to Google Docs last year, many of us wondered how we'd survive, but it's been a revelation for everyday use and has come a long way since its creaky early days. Auto-save, revision tracking, easy sharing and collaboration, and a simple, speedy interface with all the tools you need make this cloud-based suite preferable to desktop software.

6 CHROME

Cynical folk might say that Chrome has become the new Internet Explorer, such is its ubiquity across devices, influence on web developers and susceptibility to security flaws. Yet we still love Google's browser, with its thousands of useful extensions, smart syncing capabilities and speedy search – even if it is a dreadful memory hog. Its laptop version – Chrome OS – is pretty nifty, too.

5 GMAIL

Gmail arrived long after Hotmail and Yahoo Mail, but it now has more users than all other webmail services combined. That's partly because you need a Gmail address to sign into Google's other products, but is also down to Gmail's minimalist, easy-to-use interface, excellent spam filter and handy tools such as Undo Send, Auto Reply and the recently added Confidential Mode.

5 INTRIGUING GOOGLE TOOLS TO COME

1 Duplex AI
This slightly creepy addition to Google Assistant uses artificial intelligence to make phone calls that sound convincingly human. It's currently still in testing.

Google AI
Google Duplex

Hi, how can I help?
Google Assistant
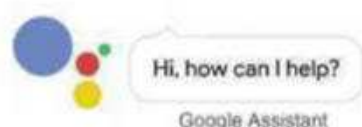
2 Search suggestions
Google is already able to predict your search queries as you type them, but a new feature will allow it to suggest topics upfront, based on your search history.

3 Pop-out video player
YouTube users have for a long time been requesting a pop-out video player that would let them continue watching clips while browsing elsewhere, and Google is now testing an add-on that does this.

4 Hearing-aid support
Google is working on a project with Danish firm GN Hearing that will let users with hearing impairments connect their hearing aids to their Android phones via Bluetooth.

5 Laptop/tablet hybrid
Rumours are flying that next month Google will launch its new Chrome OS-powered Pixelbook laptop, which will have a screen that is detachable from the keyboard and can be used as a tablet.

4 YOUTUBE

Where would we be without YouTube and its easy access to old TV shows, classic music videos, handy how-to guides and comedy clips of cats? It's become so ingrained in our lives since Google bought it in 2006 that we happily put up with annoying ads, idiotic commenters and tricks to keep us watching when we should be working. It's still the best free streaming service available.

3 ANDROID

Now the most popular operating system in the world – and that includes Windows – Android owes its success to its versatility. In only 10 years, it has conquered the mobile market with handsets ranging from under £80 to over £800, and now has more than 3.3 million apps available from the Google Play store. True, it's fragmented across different versions and lacks the locked-down security of iOS, but every update brings welcome new features and Android still feels as friendly as its iconic logo.

2 MAPS

Like many Google tools, Maps wasn't the first of its kind (remember Multimap and Streetmap?), but it quickly became the best, constantly improving its detail, accuracy and features to provide an incredible and invaluable free service. Since 2005, it's brought us satellite imagery, turn-by-turn directions, real-time traffic data, public-transport information, 3D buildings, offline access, the amazing Street View and much more. It's safe to say that we'd (literally) be lost without Google Maps.
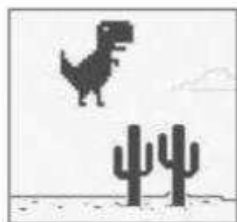
1 SEARCH

No surprises for what we've chosen as Google's most important milestone of its first 20 years – search is where the company started, and what it will forever be synonymous with; the verb 'to Google' was added to the Oxford English Dictionary in June 2006. Its mysterious, ever-changing and reliably accurate algorithm forever reconfigured how we find stuff online, soon surpassing pre-existing search engines such as AltaVista and Lycos, and still reigning supreme two decades later. Sure, there have been controversies, especially over privacy, advertising and its heavy-handed tactics with webmasters and its rivals, but the web would be a much lesser place without Google search, and *Web User* a much lesser magazine! ■

PLAY GOOGLE'S BEST HIDDEN GAMES

Join Google's 20th birthday festivities by playing the secret games hidden in its most popular tools

Chrome's offline dinosaur

Have some fun when you lose your internet connection by playing Chrome's dinosaur game, which you can start by clicking or tapping the T-Rex on the offline page. Alternatively, play it while online at chrome://dino. The aim of the game is to make the dinosaur jump over cacti by pressing the spacebar or tapping your screen (hit the spacebar twice to activate 'arcade mode'). The longer the dinosaur runs, the faster it gets and the more points you score. Watch out for the pterodactyls!

Android's secret treats

Every version of Android contains a surprise including a Flappy Bird-style game in Lollipop (Android 5) and a cat-collecting challenge in Nougat (7). The 'Easter egg' in the latest edition of the operating system, Android Pie (9), is a bit disappointing – just a series of psychedelic circles – but you probably won't have that yet and anyway, the hidden octopus game in Oreo (8) is much more fun. All these 'secrets' are accessible in the same way: go to Settings, tap 'About phone' and keep tapping 'Android version' until the logo appears. Tap and then long-press this to start the game.

Retro games in Search

The Google team clearly loves its classic arcade games, because there are several to play directly from its search box. For example, in Google Images (images.google.co.uk), search for atari breakout and the colourful brick-busting timewaster will open in your browser. Type zerg rush into the search box on the Google homepage (or the Chrome address bar) to launch swarm attack from the game Starcraft – click the falling '0's to stop them destroying your search results. And last but not least, search for pac-man to play Google's brilliant 'doodle' from May 2010, which it has retained ever since due to popular demand.

Solitaire in Search

If you're looking for something more cerebral than arcade fun, type solitaire into Google, press Enter and click to play the classic card-stacking game. You can choose between easy and hard difficulty levels. There's also a game of tic-tac-toe (or noughts and crosses, as it's properly called). Compete against a friend or select the 'impossible' setting for a particularly demanding game.

VPN

MEGA TEST!

COVER FEATURE

Which VPN should you use? In our biggest test ever, **Wayne Williams** reveals the best service for staying anonymous online and accessing content that's blocked in the UK

Back in Issue 443 of *Web User* (bit.ly/webuser443), we published our 'Ultimate Guide to VPNs', which explained what a virtual private network is, what you can do with one and how to tweak your settings for maximum benefit.
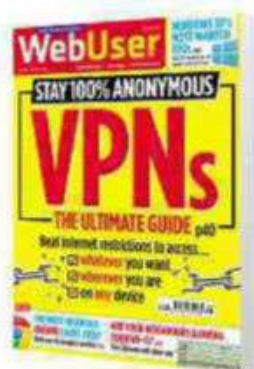
In this issue's cover feature, we follow up that guide by answering the real burning question – which VPN service should you choose? Over the following seven pages, we compare 10 of the most popular VPN programs and apps to determine the best option for features, performance and ease of use. We also consider whether you need to pay for a VPN, or if a free one will be enough to keep you anonymous online and let you access content that's blocked in the UK.

Additionally, we outline the factors that you should consider before signing up with a service, and reveal five new – and unexpected – uses you can put your VPN to. Turn over to discover which VPNs you should opt for, and which to avoid.

HOW WE TESTED

Beyond simply looking at each VPN's features and taking it for a spin, we put our 10 contenders through a number of tests, including using Speedtest (www.speedtest.net) to measure ping and upload and download speeds for UK, US and other servers, and testing to see whether the VPNs could gain us access to the American version of Netflix. The streaming service famously clamps down on VPNs, but all our top choices bypassed this restriction with ease.

We also tested each VPN for DNS leaks (dnsleaktest.com) and IP leaks (bit.ly/ipleak458), which happily they all passed.

NordVPN

bit.ly/nordvpn458 | ★★★★★

EASE OF USE ★★★★★ FEATURES ★★★★★ PERFORMANCE ★★★★★

WebUser GOLD AWARD

WHAT WE LIKED

NordVPN is one of the most respected VPN services, and for good reason. It's very easy to use, is packed with features and connnects to a whopping 4,901 servers across 62 countries. There are apps available for most of the major operating systems and devices – Windows, Mac OS, Android (and Android TV), iOS, Chrome and Firefox – and it's just released a brand new Linux app, so is one of the few VPNs to be truly multi-platform.

A single NordVPN account protects up to six devices and can be used with P2P file-sharing services such as BitTorrent. Unlike many VPNs, it also works with US Netflix, which means you can watch TV shows and films that aren't available on the UK arm of the streaming service. You'll find a list of recommended servers to try on the website, although it took us a fair few attempts to find one that worked.

The NordVPN service, which is based

Kill Switch disconnects you from the web when you lose VPN protection

in Panama, protects your browsing using military-grade encryption and supports OpenVPN (even, unusually, on iOS) and IKEv2/IPSec. It also offers Double VPN technology, which routes your traffic through two servers. This improves your anonymity because the second server doesn't have access to your real IP address, although it does slow down your browsing. This option is located in the Speciality Servers section.

The software also comes with an optional feature called CyberSec (for Windows, Mac OS and Android), which removes ads from web pages and helps to protect your browsing from malware, phishing and other threats by automatically blocking suspicious sites. You can choose whether or not to enable the feature during installation, and can disable it at any time.

We particularly like that NordVPN can be set to connect automatically to a server of your choosing, and its clever 'kill switch' – which detects when your VPN connection drops, and immediately ends all online activity – worked very well in our tests. NordVPN can also hide your computer from systems on a local area network. Unlike many free VPNs, it doesn't log your activities, data or browsing history, and its privacy policy is clear and concise.

You can try NordVPN free for three days (free.nordvpn.com) and choose the plan that best suits your needs: one-month, six-month, one-year or two-year, with the latter reducing the cost to just

Double VPN increases anonymity by routing traffic through two servers

$3.99 (£3.10) per month – a huge 66% saving. There's also a 30-day money-back guarantee on full subscriptions.

HOW IT CAN BE IMPROVED

We'd like more filters for sorting the huge number of servers on offer, though you can 'favourite' the ones you like or search for them by number. Connecting to certain servers could be slow at times, but switching to another, faster one is a doddle.

OUR VERDICT

NordVPN is easy to use, has loads of servers across lots of countries, and has all the security features you could want from a VPN. It's not the cheapest but you get good value for money, including the welcome option of CyberSec protection and ad-blocking, use across multiple devices and Double VPN anonymity.


⚙ MINI WORKSHOP | Secure your browsing with NordVPN

1 NordVPN offers two ways to choose a server. The first is to browse the map **1** and find a country you wish to appear to be browsing from. Click a marker **2** and you'll be automatically connected to the 'best' choice in that country. You can see you're connected **3** and view your new IP address. **4**

2 The second option is to click Countries **1** and browse the list of nations. Hover your mouse over one and you can connect to your preferred choice **2** or click the three-line menu button to browse the list of available servers. You can also view servers you've bookmarked, **3** and speciality ones. **4**
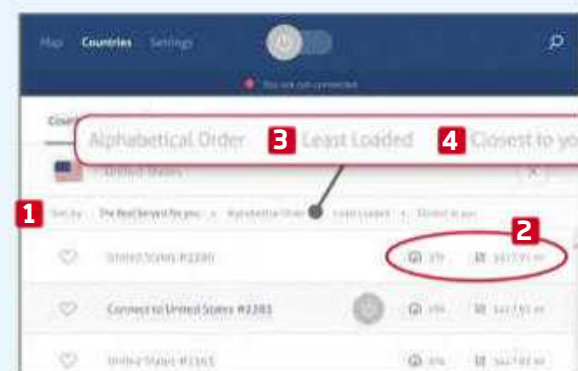
3 The list of available servers in a country is ordered from best to worst, **1** and you can see the speed and latency for each one. **2** You can browse these servers in alphabetical order, or by least loaded (busy). **3** You can also select servers closest to you, **4** which should therefore be fastest.

ExpressVPN

www.expressvpn.com | ★★★★★

EASE OF USE ★★★★★ FEATURES ★★★★☆ PERFORMANCE ★★★★★

WebUser SILVER AWARD

WHAT WE LIKED

ExpressVPN ran a very close second to our Gold Award winner, NordVPN, and you may actually prefer its mobile-style interface, which makes it feel lightweight, even on your desktop. It's available for Windows, Mac OS, Linux, Android, iOS and routers, has extensions for Chrome, Firefox and Safari, and offers 2,000+ servers – fewer than half of what NordVPN offers but spread further afield with servers in 148 cities across 94 countries, including unexpected destinations such as Kazakhstan and Nepal. ExpressVPN itself is based in the British Virgin Islands, which has no data-retention laws, so it's not legally required to keep logs of users' activities. There is some session logging – recording your connection dates, choice of server and total data transferred – but this information can't be used to identify you.

ExpressVPN has a simple interface but limits you to using it on three devices

One feature we particularly like is split tunnelling, which lets you route some rather than all of your traffic through the VPN to avoid unnecessarily slowing your connection. Equally useful is ExpressVPN's built-in speed tester, which lets you check how fast its different servers are, so you don't get stuck with a sluggish one. ExpressVPN automatically chooses the best security protocol for you – typically OpenVPN – but you can switch to a different one manually or tweak the OpenVPN configuration files for better results.

In our speed tests, ExpressVPN lived up to its name by delivering consistently faster connections than NordVPN when browsing from a location in the UK, although there wasn't as much difference when using American servers (a matter of 4-5Mbps) to access US Netflix.

HOW IT CAN BE IMPROVED

An ExpressVPN subscription only covers three devices, unlike NordVPN's six and TunnelBear's five, though you can install it on a router and add more devices that way. There's no free trial – only a 30-day money back guarantee

Choose from more than 2,000 servers spanning 94 countries across the world

– which is a shame considering its comparatively steep price of more than a tenner a month. We would prefer a better designed desktop app, too, but others may prefer its simple approach.

OUR VERDICT

ExpressVPN may not have as many servers as NordVPN, but it covers more locations. It's easy to use, with enough advanced features to satisfy most needs. The simple interface will either be a bonus or a drawback, depending on your taste.

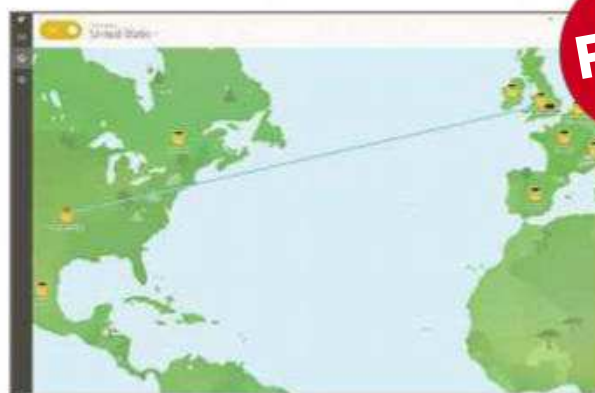# TunnelBear

www.tunnelbear.com | ★★★★☆

EASE OF USE ★★★★★ FEATURES ★★★☆☆ PERFORMANCE ★★★★☆

WebUser BRONZE AWARD

WHAT WE LIKED

TunnelBear is available for Windows, Mac OS, Android and iOS. Its Chrome and Opera add-ons are useful for giving the appearance that you're based elsewhere when using a particular browser – so you can fool a website that restricts UK access – but they don't offer the same protection as the full desktop or mobile apps.

TunnelBear has around 1,000 servers in 20 countries, and you can use it on up to five devices – only one less than our Gold Award winner. Recently, it also made it possible to share files securely on P2P networks. The service secures your browsing using the OpenVPN protocol, except in the iPhone app which uses IKEv2. Its handy GhostBear feature disguises encrypted VPN traffic to look like regular internet data, while VigilantBear mode acts as a kill switch, so if your VPN connection gets disrupted, all unsecured traffic is blocked until you're protected again.

TunnelBear has a friendly interface, but it only offers servers in 20 countries

BEST FREE OPTION

TunnelBear's biggest lure is that you can use it for free. You only get 500MB traffic a month, which isn't enough for daily use, but you can earn another 1GB simply by tweeting about the service. The service is based in Canada – one of the Five Eyes countries – but we weren't unduly concerned by its privacy policy. TunnelBear makes all its money from paid subscriptions, not from selling user data, and clearly states that it doesn't log information or collect IP addresses.

HOW IT CAN BE IMPROVED

We'd like a larger data allowance in the free provision. More servers would be welcome, too, although most users will be happy enough with the number on offer, especially if they're using the service for free. TunnelBear doesn't cover many countries but it's probably adequate for most casual home users. However, it would be useful to have more information about the servers you're connecting to, such as load and ping times.

OUR VERDICT

TunnelBear has an attractive interface and is very easy to use. The free option is ideal if you only need a VPN for occasional anonymous web access. We'd like more server options and advanced features, though.

Best of the rest

WINDSCRIBE
windscribe.com

We prefer TunnelBear's super-friendly interface and simple but useful tools, but its 500MB of free data seems stingy compared to the 10GB of bandwidth you get each month from the free version of Windscribe. You need to register your email address with the service to claim this generous allowance – but even if you don't, you still get 2GB.

Windscribe can be installed on an unlimited number of desktop and mobile devices in Chrome, Firefox and Opera, and on your router, Amazon Fire TV stick and Kodi box. The free version lets you access servers in 11 countries, including the US, Canada, France, Germany and the UK – so you can use it to access iPlayer when you're on holiday and American Netflix from home. Notable features include a built-in firewall and support for peer-to-peer file sharing. Even better, the lack of payment isn't a trade-off for logging your data.

You can upgrade to one of the paid-for plans to get access to servers in more than 300 locations across 55 countries, and choose between monthly, yearly and biennial plans. The last option comes with a free six-month premium subscription to the Dashlane password manager.

Windscribe's biggest flaw is that its connection speeds are noticeably slower than many rival VPNs, especially in the free version. It's also annoying that its ad blocker is only available in the browser extension and not the actual VPN software.
OVERALL:
★★★★☆
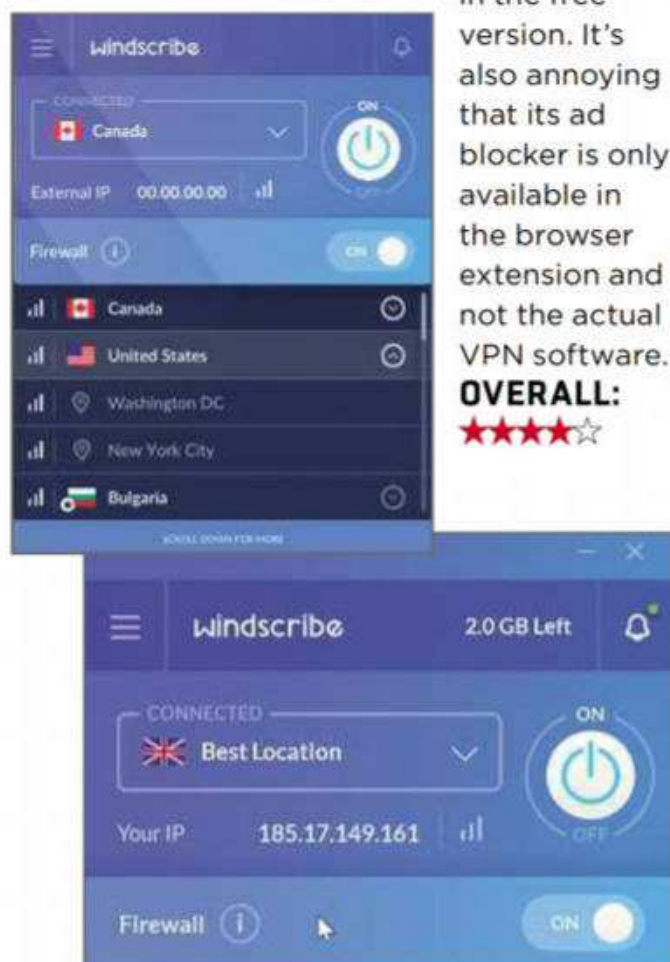
Windscribe has a generous free option and works across unlimited devices

CYBERGHOST
www.cyberghostvpn.com

CyberGhost is available for all the main platforms, as well as routers. A single subscription allows you to run it on up to seven devices, which is one more than our Gold Award winner, NordVPN, and two more than the average.

This VPN provides access to an impressive 2,844 servers in 30 countries worldwide, securing your traffic using OpenVPN, L2TP-IPsec and PPTP protocols. It's very easy to use on both desktop and mobile, and handily compresses some online elements to speed up browsing over a slow connection.

CyberGhost offers a free one-day trial so you can get a feel for using its VPN

Like our award winners, CyberGhost provides you with an automatic kill switch, and it can secure peer-to-peer traffic to allow for anonymous torrenting. There's also a free – if not exactly generous – one-day trial available, to give you a feel for the service, and a 30-day money-back guarantee if you decide to opt for a subscription. What's really impressive, though, is the generous 50% discount that's applied if you pay annually rather than monthly.

On the downside, we found CyberGhost's performance didn't match up to that of NordVPN and ExpressVPN. We were unable to access US Netflix and found the service's privacy policy confusing because it is far from clear about what data it does and doesn't collect from users.

It's also interesting to note that CyberGhost was bought last year from its original Romanian owner by an advertising and analytics company called Crossrider, although the team stressed at the time that "CyberGhost VPN will never keep user logs".
OVERALL: ★★★★☆

OUR VERDICT

F-SECURE FREEDOME
bit.ly/freedome458

F-Secure Freedome is available for Windows, Mac OS, Android and iOS, but you can't configure it with a router. Compared to rival VPNs, it doesn't have many servers (the exact number isn't specified), and offers only 27 locations, the majority of which are in Europe and North America. There are just three Asian locations, while Central and South America aren't represented at all. The service is based in Finland, which has strict privacy laws, and uses OpenVPN and IKEv2 (on iOS only) technology to encrypt your connection.

Although F-Secure Freedome lacks a 'kill switch' option, it offers an interesting feature called Tracker Mapper, which creates a 24-hour visual record of all the tracking attempts it has blocked while you've been browsing the web, so you can see who's been watching you online. Freedome deletes this data automatically after three days, or you can erase it yourself. It also blocks potentially harmful sites. Less usefully, F-Secure discourages BitTorrent traffic and will even restrict network access to disable it.

We like that you can try this VPN for free for 30 days, without needing to provide your credit-card details, and that if you opt for a paid subscription, the annual cost varies depending on how many devices you want to use it on – three, five or seven. Freedome lacks advanced settings, but we found it to be fast acoss its limited range of servers.
OVERALL: ★★★☆☆

F-Secure Freedome blocks tracking attempts and encrypts your connection

NordVPN wins our VPN Mega Test because it was difficult to fault. It wasn't the fastest VPN, and connections sometimes took longer to establish than we'd like, but they always succeeded.

We had to make more attempts at finding a server which could bypass US Netflix's restrictions than we did with other VPNs, but that's mostly down to NordVPN having so many servers to pick from; on another day, we might have chosen the perfect server immediately.

ExpressVPN is excellent, if pricey, and provides speedy connections. Although it doesn't offer as many servers, we got onto US Netflix with our second attempt.

The battle between TunnelBear and WindScribe was closely fought. Both have free versions and both are based in Canada. TunnelBear is friendly, easy to use and reliable, while WindScribe offers a generous 10GB of data to free users. However, we found the latter's servers to be slow and unreliable, and not all were available, giving TunnelBear the edge.

As for the other VPNs we tested, they simply weren't able to compete with our top four choices.

PUREVPN
www.purevpn.com

PureVPN offers a 3-day trial for a non-refundable $2.50 (£1.95), but warns users that this version doesn't guarantee your online privacy, which isn't very reassuring and, frankly, seems weird. The company would much prefer you to take out a normal subscription, which is very reasonably priced and provides five multi-logins per household for your family and friends, across all major platforms including routers, games consoles and Kodi.

PureVPN has more than 2,000 servers across 140 countries and offers a useful 'split tunnelling' feature, which allows you to send some data through the VPN and the rest (less private traffic) through your standard ISP connection. It protects BitTorrent traffic, but we found that its claim to allow access to US Netflix didn't stand up. Also, many of its servers were slower than rival VPNs' equivalents in the same countries.
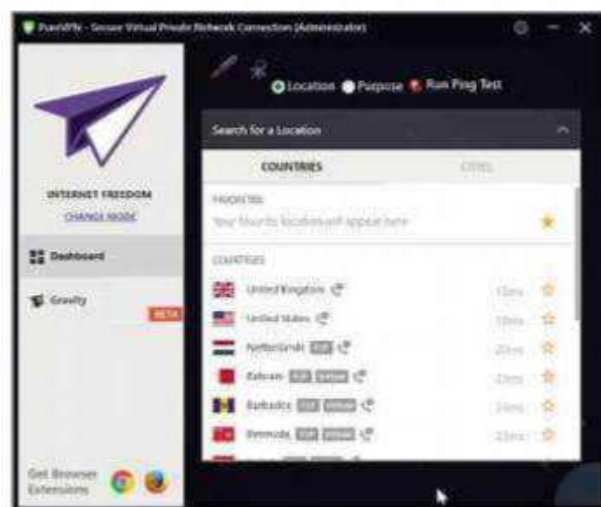
PureVPN is cheap and versatile but some of its claims are troubling

More worrying is PureVPN's contradictory (and tucked away) privacy policy, which starts by stating that it doesn't record your data or keep connection logs, before going on to detail all the information it *does* collect.
OVERALL: ★★★☆☆

GOOSE VPN
goosevpn.com

Most VPNs limit the number of

GooseVPN is a no-frills VPN which offers flexible use and payment

devices you can use them on, but Goose VPN doesn't. One subscription lets you use it on unlimited devices and it's available for Windows, Mac OS, iOS and Android. Based in the Netherlands, but with a clear no-logging policy, you can try the software and apps for free for 30 days (albeit with a 45p PayPal validation fee). Goose VPN is a little light on features – there's no kill switch, for starters – and it only has 114 active servers. If you don't want to buy one of the more expensive unlimited data packages, there's a 50GB monthly plan available for a bargain £2.99 a month.
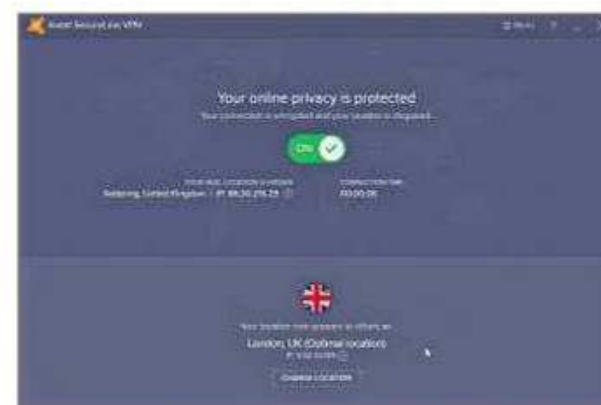**OVERALL:** ★★★☆☆

AVAST SECURELINE
bit.ly/secureline458

This comparatively basic VPN from the security company offers just 54 servers and no kill switch. There's a 7-day free trial but if you opt for a paid-for plan, you'll need to sign up for a year because there are no shorter-term options available. You can choose between protecting a single PC or Mac, a single mobile, or – for an extra £15 per year – five mixed devices. Like most VPNs, it uses the OpenVPN protocol and offers a clear privacy policy. It is rather too basic for our tastes, though, and

Avast's rather basic VPN covers only 54 servers and offers no monthly plan

while it claims to let you "stream your favourite shows", it couldn't get us around Netflix's geographic restrictions.
**OVERALL:** ★★★☆☆

HOTSPOT SHIELD
www.hotspotshield.com

Hotspot Shield is one of the best-known VPN tools, but finishes last in this test. Based in California, it's available for all the major platforms, and there are paid-for and free (ad-supported) versions. While Hotspot Shield doesn't store your IP address, it does collect anonymous, aggregated data about the sites you visit, and advertisers may be able to record details such as your advertising ID and wireless carrier when serving up ads in the free version. On the plus side, it offers 2,500 servers across 25 countries, lets you connect up to five devices, includes an automatic kill switch and has a generous 45-day money-back guarantee.
OVERALL: ★★★☆☆
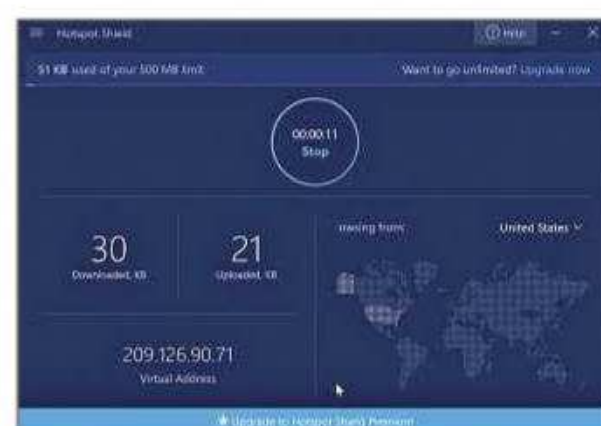
*Hotspot Shield collects data about your activities, which is why we placed it last*

How the 10 VPNs compare

	NordVPN	ExpressVPN	TunnelBear	Windscribe
PAY MONTHLY	£9.32	£10.10	£7.79	£7.01
PAY YEARLY	£65.40	£77.92	£46.76	£38.18
FREE TRIAL	3 days	No	Free version	Free version
MONEY-BACK GUARANTEE	30 days	30 days	No	No
BASED IN	Panama	British Virgin Islands	Canada	Canada
MAXIMUM DEVICES	6	3	5	Unlimited
No. OF COUNTRIES/SERVERS	62/4,901	94/2,000+	20/1,000	55/348
LIVE-CHAT FACILITY	24 hours	24 hours	None	24 hours
PRIVACY POLICY	bit.ly/nordpriv458	bit.ly/expresspriv458	bit.ly/tunnelpriv458	bit.ly/windpriv458
OUR RATING	★★★★★	★★★★★	★★★★☆	★★★★☆

5 NEW things you can do with a VPN

Access Tubi TV
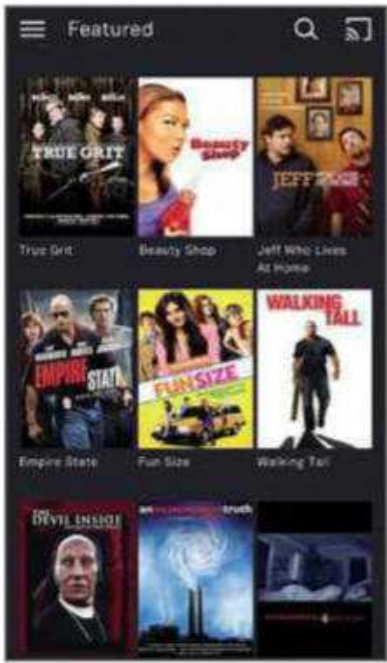
Tubi TV for Android (bit.ly/tubi458) gives you access to popular movies and TV shows in HD, for free. Thanks to the introduction of GDPR in May, the streaming service is no longer available in Europe, but you can get around this by installing an APK of the app from bit.ly/tubiapk458 and using an Android VPN to make it look like you're in the US.

Stream free-to-air sport

A lot of sport is streamed live in host countries, but not elsewhere. If you can find a broadcaster streaming a live match, race or other event, you can use a VPN to pretend to be in that country and view the broadcast as it happens. Obviously, this should only be done with legal, free-to-air streams.

Don't wait for Android updates

When – or indeed if – you receive an updated version of Android depends on your mobile provider, but you may be able to jump the queue by using a VPN. If you know the update has started to roll out in other countries, you can use a VPN to appear to be located elsewhere, then go to Settings, System Updates and check to see if the update has become available to you.

Download games early

Games often receive a staggered launch across the world, which means that gamers in some countries get to play them before those of us in the UK. A VPN will get around this geo-restriction and, as an added bonus, you might end up paying less for games and downloadable content, and enjoy superior streaming.
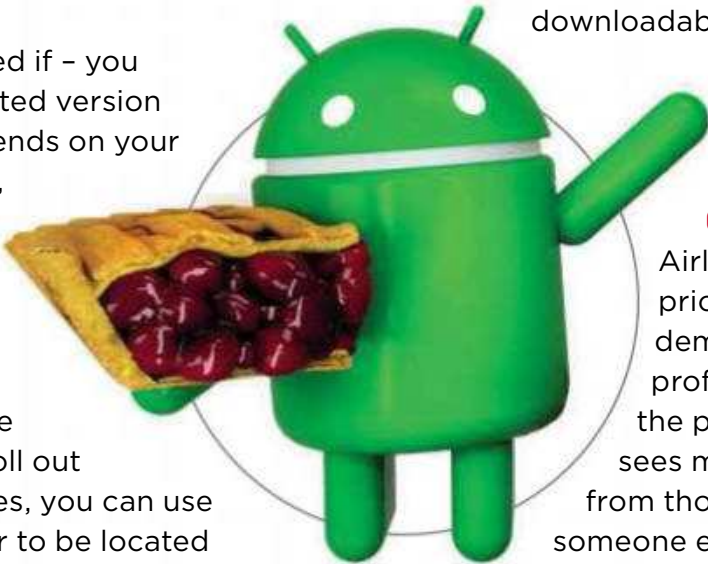
Save money on flights

Airlines change their prices based on demand, and dynamic profiling means that the prices one customer sees may be different from those offered to someone else. Using a VPN to change your apparent location can result in you being offered cheaper fares for the exact same flights. When comparing flight and hotel prices using a VPN, make sure you open a new private-browsing window each time.

CyberGhost	F-Secure Freedome	PureVPN	Goose	Avast SecureLine	Hotspot Shield
£9.34	N/A	£8.53	£12.99	N/A	£12.99
£56	£39.99/£49.99/£57.99	£50.58	£59.88	£64.99	£71.88
1 day	5-days	No	30-days	7-days	Free version
30 days	30 days	31 days	No	No	45 days
Romania	Finland	Hong Kong	Netherlands	Czech Republic	USA
7	7	5	Unlimited	5	5
33/2,844	Unknown/27	140+/2000+	Unknown/114	Unknown/54	25/2500
8am-5pm	24 hours	Yes	24 hours	None	24 hours
bit.ly/cyberpriv458	bit.ly/fsecurepriv458	bit.ly/purepriv458	bit.ly/goosepriv458	bit.ly/avastpriv458	bit.ly/hotspotpriv458
★★★★☆	★★★☆☆	★★★☆☆	★★★☆☆	★★★☆☆	★★★☆☆

WHAT TO LOOK FOR IN A VPN

AVOID 'FOURTEEN EYES' COUNTRIES
To make sure governments aren't snooping on your VPN activity, pick a service that isn't based in one of the so-called Fourteen Eyes countries – see bit .ly/14eyes458 for the full list. These countries share military signal intelligence as part of the SIGINT Seniors Europe (SSEUR), which means VPNs are obliged to hand over collected user data to the authorities when requested.

FREE VS PAID
With a free VPN, your data could be sold to third parties, though that isn't always the case – see our Bronze Award winner, TunnelBear. Always read a VPN's privacy policy before you sign up, to find out exactly what data it gathers. Free VPNs also offer fewer servers and countries to choose from. If you want top quality, unrestricted VPN protection, you should be prepared to pay for it.

ENCRYPTION TYPE
All VPNs promise strong, reliable encryption, but only consider those that offer OpenVPN, IKEv2, IPSec, L2TP or OpenSSH. PPTP is faster but less secure, so it's best avoided.

NUMBER OF DEVICES
Paid-for VPNs usually let you use their service across a number of devices, five being the standard. If you regularly browse the web on a phone, tablet or games console, as well as on your PC or laptop, you should pay attention to this detail.

RESTRICTIONS
If you want to use a VPN to protect file-sharing via BitTorrent or to make VoIP calls, check to see if this is allowed in the service's terms and conditions, and make sure this type of traffic isn't throttled by the VPN provider. Our Gold and Silver Award winners are both completely unrestricted in this respect. ∎

NEXT ISSUE

on sale Wednesday 3 October 2018

HACK THE WINDOWS REGISTRY!

Optimise your PC using secret tweaks Microsoft doesn't want you to know about

PLUS...

⊕ **NAME THAT THING ONLINE**
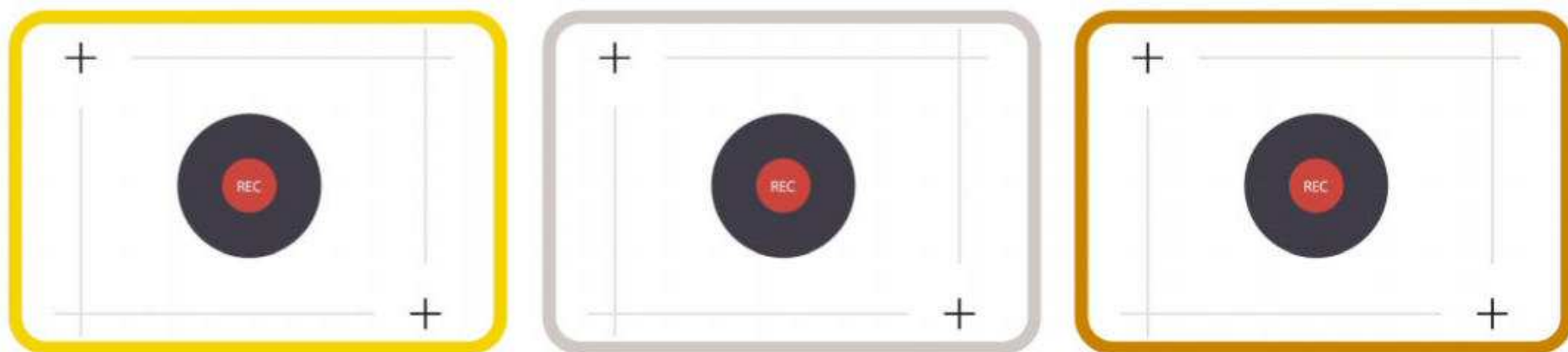Best free tools for identifying mystery items

⊕ **MAKE FILES UNRECOVERABLE**
Delete private photos and messages forever

⊕ **BLOCK ADS ON ANY DEVICE**
Turn an old PC into a network-wide ad blocker

Best free Windows screen recorders

Whether you want to show people how to do something in Windows or record game footage for showing off on YouTube, you need a screen recorder. **Andy Shaw** puts six free options to the test

What we liked

WebUser GOLD AWARD

FlashBack Express is the free, pared-down version of paid-for software (FlashBack Pro) but it's still a superb tool for recording your screen. Launch the software and you get a simple panel with a few key options, including whether to record full screen, a specific window or within a region of your choosing. You can also choose where sound is going to come from, and choose to record footage from a webcam if you have one connected. Hidden away in a menu are more sophisticated options, including scheduled recording, so you can start and stop a recording even if you aren't present. Once you've set everything up the way you like it, FlashBack Express remembers your preferences for the next time you use it.

The program comes in two parts: a recorder and a player. The recorder captures the footage, which is then transferred to the player, where you can perform simple post-production edits. The free version doesn't let you undertake a full edit, trimming and rearranging your video, but you can perform tasks such as cropping, which
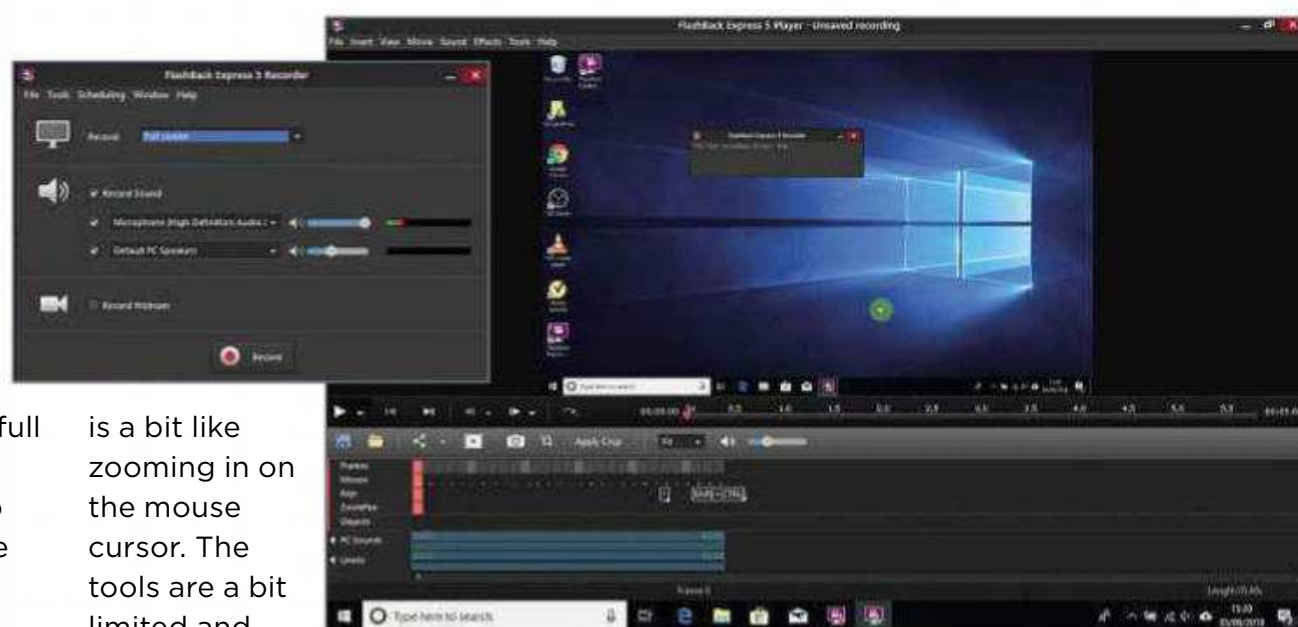
is a bit like zooming in on the mouse cursor. The tools are a bit limited and you get tempting prompts to try features you can only unlock if you pay ($49, around £38), but you can tweak your video before you go ahead and export or share your file.

Files can be saved in FlashBack's own format, which lets you come back and make more changes at a later date, or exported to MPEG4, AVI or WMV formats. You can also share files by uploading them straight to YouTube, or to a website via FTP.

How it can be improved

We were mildly annoyed that the software dropped two icons on our desktop (one for the recorder, another for the player) and put a permanent error log icon in the notification area of the taskbar – but we're splitting hairs.

OUR VERDICT

FlashBack Express looks good, is easy to use and produces great results. It's a free version of paid-for software, so there are some limitations. However, they don't stop you from accessing the software's core tools, which can be used to simply and effectively capture video of anything that's happening on your screen.

OBS Studio | obsproject.com | ★★★★☆
FEATURES ★★★★★ PERFORMANCE ★★★★★ EASE OF USE ★★★☆☆
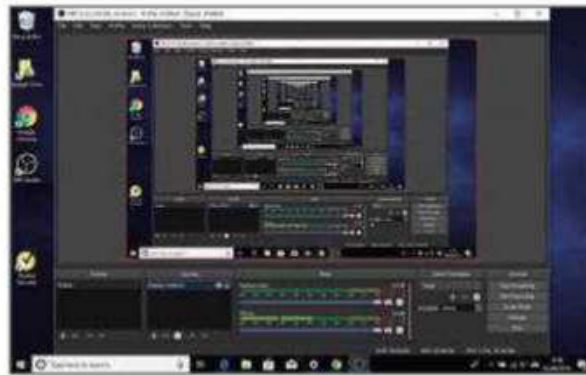
WebUser SILVER AWARD

What we liked

Watching other people play computer games has become massively popular on YouTube and Twitch (much to the bewilderment of non-gamers), with millions of people around the world tuning in. If you want to get in on this kind of screen recording and broadcasting, OBS Studio is exactly what you need.

Put the time and research into learning how to use OBS Studio, and it rewards you with powerful tools and total control over your videos. You can balance the audio from what you're recording with your own voice; and record streams from multiple sources, such as the game you have on screen and a webcam to record your reactions. You can even vision-mix these sources while you're recording. It's a phenomenal free program that, if we weren't taking ease-of-use into account, would certainly win our Gold Award.

How it can be improved

The banks of controls and options are overwhelming at first and a significant barrier to getting started. While there's an argument that having everything on screen means it's all within easy reach, this interface assumes you know what you're doing and isn't particularly helpful if you don't.

OUR VERDICT

This is a powerful piece of software that's widely used by people streaming videos of their gameplay, and can also be used for other screen-recording purposes. It's truly excellent but needs reserves of patience to get started, because it isn't obvious what you need to do.

oCam | ohsoft.net | ★★★★☆
FEATURES ★★★☆☆ PERFORMANCE ★★★★☆ EASE OF USE ★★★★★

WebUser BRONZE AWARD

What we liked

Our last review of screen-recording software, back in Issue 419 (bit.ly/issue419), gave oCam the Gold Award because it is so fantastically simple to use. This is still the software's major plus point: launch it and you're presented with a simple window with tabs across the top. Just click the tab that best describes what you want to do and use the buttons below to make any configuration changes. A large green rectangle on the screen makes it clear what's going to be recorded.

The video that pops out the other end is free of any watermarks or other annoyances, and the only limit on how much video you can capture is whether or not it will fit on your hard drive.

How it can be improved

Having discovered FlashBack Express, the advertising on oCam's screen – which has always been there – now feels over-the-top and intrusive. You also can't choose to record a specific window - you always have to arrange the green rectangle to capture whatever it is you want to record, which requires a bit more careful setting up than simply choosing a particular Window or recording full screen. Nothing has changed, but oCam has been usurped.

OUR VERDICT

We accepted the adverts and nags of oCam in our previous test because the software's rivals were limited in even more annoying ways. Now, FlashBack Express is nearly as easy to use and is ad-free, so oCam has been knocked off the top slot.

BEST OF THE REST

eLecta Live Free Screen Recorder
www.screenrecordings.com

Although this won our Bronze Award in Issue 419, eLecta has been pushed down the pecking order by the rise of FlashBack Express. However, if you're looking for something less sophisticated that isn't crammed with advertising, Electa is a viable alternative. It's very basic but, if you just want to record video from your PC with as little fuss as possible, it does a great job.

Apowersoft Free Online Screen Recorder
bit.ly/apow458

Recording a video from a web app rather than downloading, installing and launching a program is an attractive proposition. However, Apowersoft makes you download and install a helper program, set up an account to remove watermarks and jump through a number of other hoops. Disappointing.

Game bar on Windows 10
www.microsoft.com

Microsoft bundles a screen recorder with Windows 10, which ought to be the simplest option of all: press Windows+G and choose whether to stream live, or record and upload later. You can even set it to go back and save something you've just done, without having to perform the action again. However, it's aimed at gamers and is finicky and temperamental when used with other software.

Enhance your photos with GIMP

The powerful image-editing tool has been updated with useful new tools and an improved interface. Here's what you need to know

GIMP: www.gimp.org | 10 mins | Windows | Mac OS | Linux

The GNU Image Manipulation Program (GIMP) is a powerful, open-source alternative to Adobe Photoshop that offers a wealth of features and functionality, including full layer support, colour adjustments, automatic image-enhancement tools, customisable brushes and more, as well as plenty of effects and filters. It also

supports third-party plugins, so you can further expand its set of features.

GIMP is available for Windows, Linux and Mac OS and the latest update, version 2.10.6, introduces support for vertical text along with two useful new filters – Little Planet and Long Shadow.

Image straightening using the Measure tool has also been improved.

HEALING TOOL
Similar to the clone tool, this lets you quickly fix image irregularities, such as weird marks and facial wrinkles

1 GIMP's interface isn't particularly brilliant but it's a lot better now since it abandoned the old-style floating windows. The toolbox **1** provides everything you need, including a free select tool, fuzzy select tool (magic wand) and paintbrush. Options for the selected tool appear in the box below. **2**
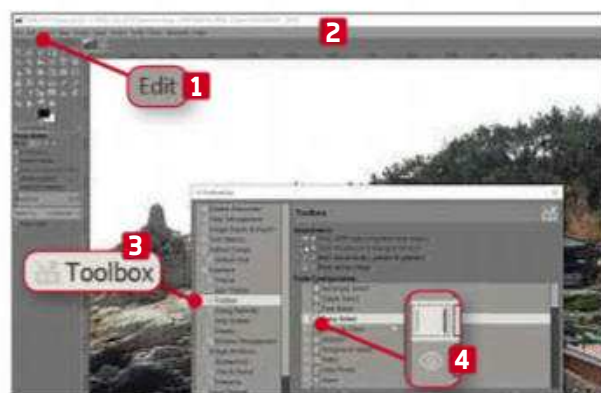
2 You can customise various elements of the interface. Go to Edit, **1** Preferences and select Theme to choose a new look. **2** Select Toolbox **3** and click the eye icon next to a tool **4** to hide it in the toolbox. You can reorder items by clicking and dragging. Changes are made instantly.

3 The Toolbox preferences also let you add shortcuts for colour levels and curves **1** (they can also be accessed via the Colors menu). **2** The Levels feature lets you correct an image's tonal range and colour balance. Use the sliders to adjust the input and output. **3** You can split the view to see the difference. **4**

4 GIMP offers a large selection of effects that you can apply to your images – these are accessible via the Filters menu. **1** These effects include blurs, enhancements, distorts and artistic. **2** Select one from the menu **3** and tweak its settings in the box, **4** then apply it.
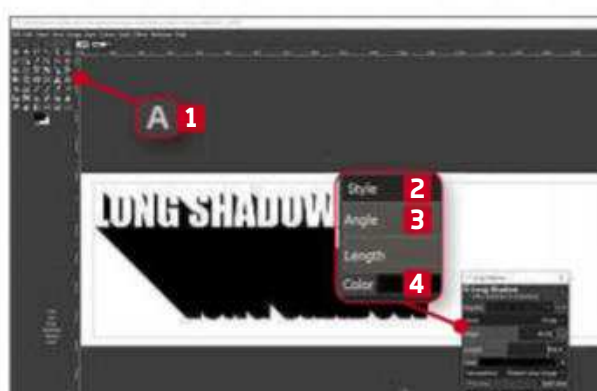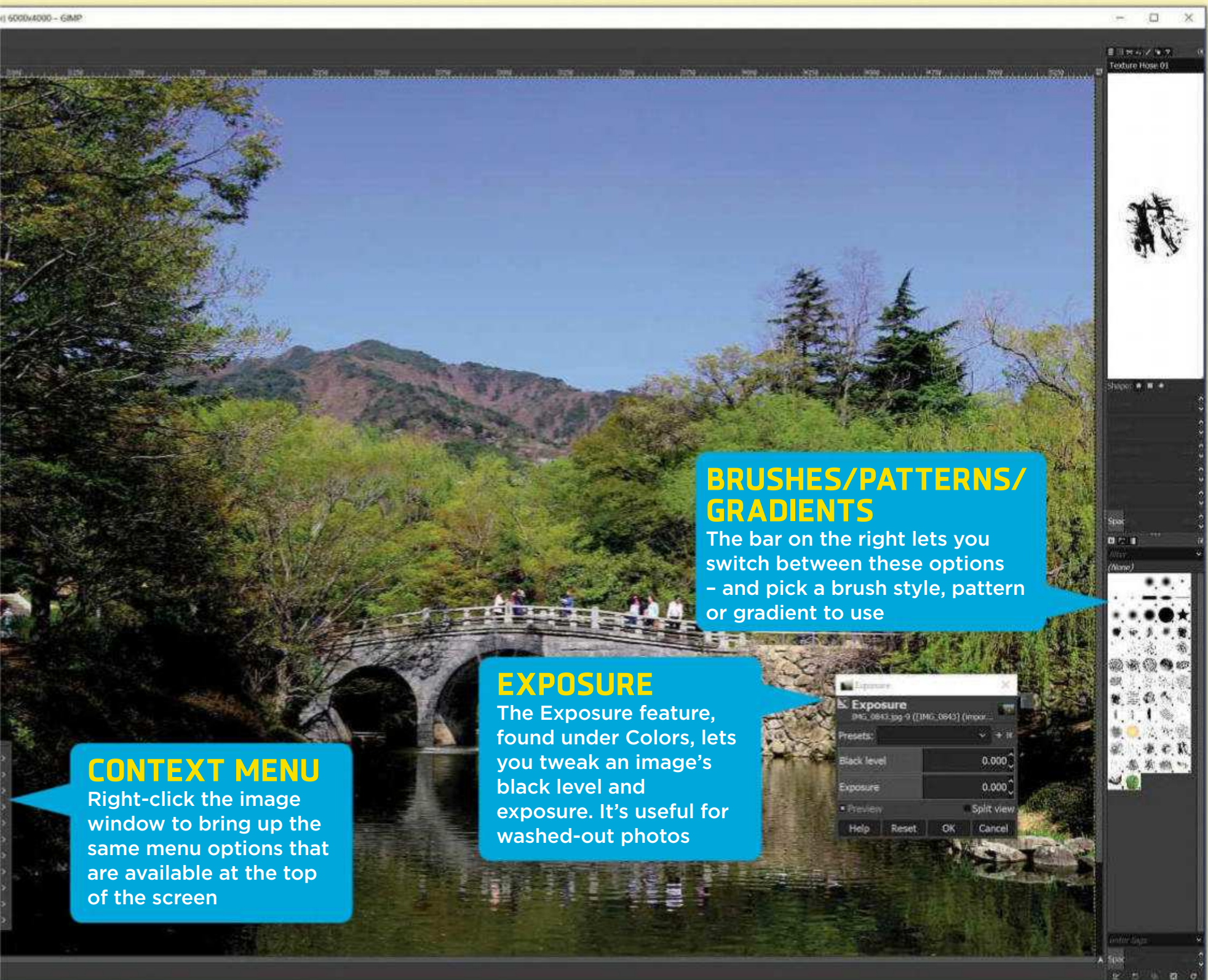
5 The new Little Planet filter – under Filters, Map – transforms your image into a compact sphere. It works best with 360x180° equirectangular panorama images. You can adjust the pan, tilt, spin and zoom **1** of the effect, invert the transformation **2** and pick a different resampling method, such as LoHalo. **3**
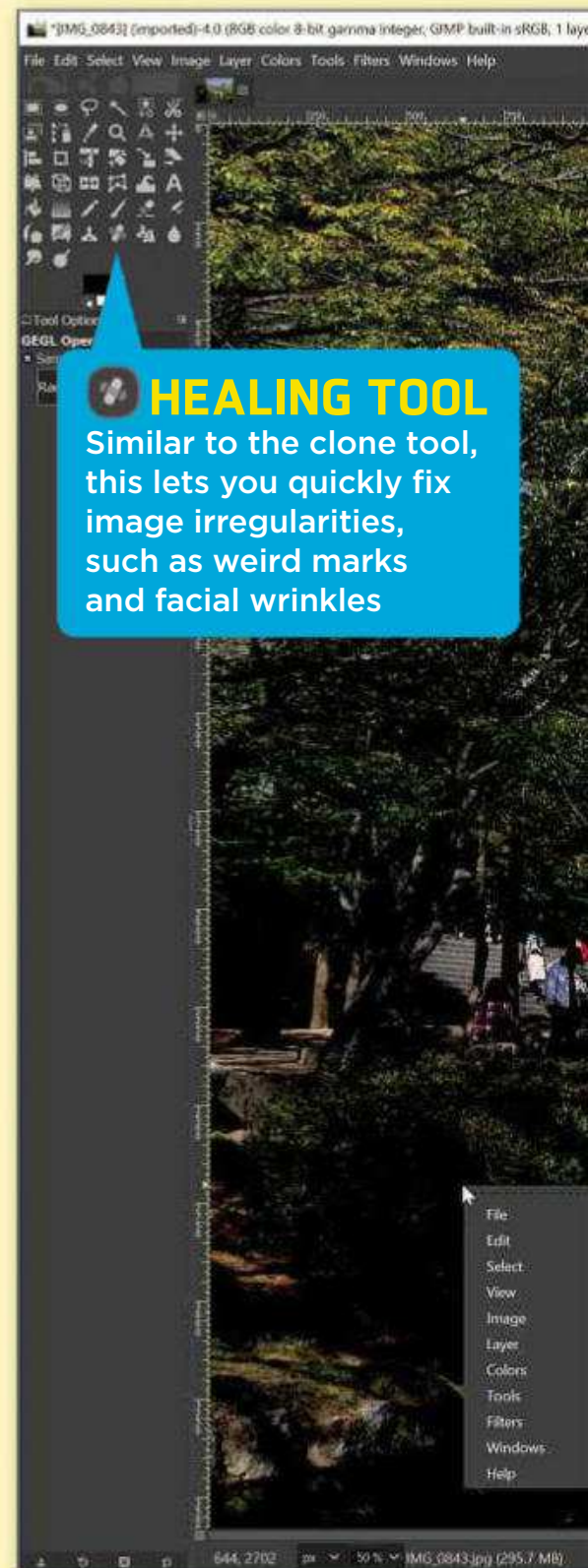
BRUSHES/PATTERNS/ GRADIENTS
The bar on the right lets you switch between these options – and pick a brush style, pattern or gradient to use

EXPOSURE
The Exposure feature, found under Colors, lets you tweak an image's black level and exposure. It's useful for washed-out photos

CONTEXT MENU
Right-click the image window to bring up the same menu options that are available at the top of the screen

6 As you may guess from its name, the new Long Shadow filter adds a long shadow effect to text. Click the text tool in the toolbox, **1** then go to Filters, 'Light and Shadow', and select Long Shadow. You can change the style (Finite, Infinite, or Fading), **2** along with the shadow angle **3** and colour. **4**

7 Vertical Text is another new feature that lets you add top-to-bottom headings and captions. Select the text tool, then enter some words on screen. Once that's done, right-click the text box and select the style you require at the bottom of the context menu. **1**
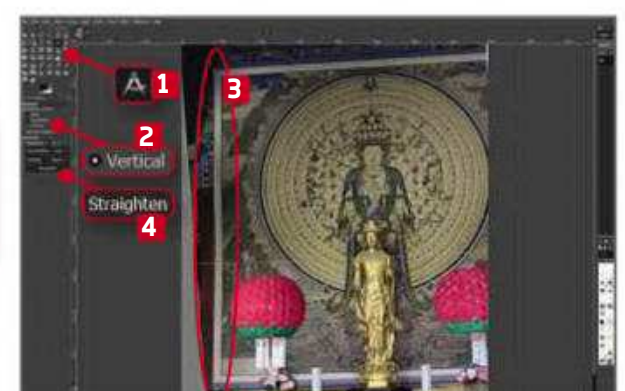
8 If you need to adjust a photo that's a little crooked, GIMP already allows for horizontal straightening, but it now offers vertical straightening, too. Select the Measure Tool in the toolbox **1** and select Vertical in options. **2** Draw a line to straighten the wonky part of your image **3** and click Straighten. **4**

Add useful new tools to Gmail

**Email Studio for Gmail: bit.ly/email458** | ⏱ **20 mins** | M **Gmail**

After its recent update, Gmail is packed with more useful tools than ever before. Handy offline capabilities? Check. Secret, self-destructing messages in Confidential Mode? Check. But why wait for Google to enhance your inbox even more? Email Studio, from add-on developer Digital Inspiration, slips neatly into Gmail, promising to make it even more useful by adding new tools and expanding on Google's current (and often limited) offerings. With its hassle-free layout, creating rule-based messages such as automatic replies, scheduled emails and personalised bulk emails has never been easier. If you need to swiftly clean up your inbox, it can do that too. It's a must if you want more control over your Gmail.
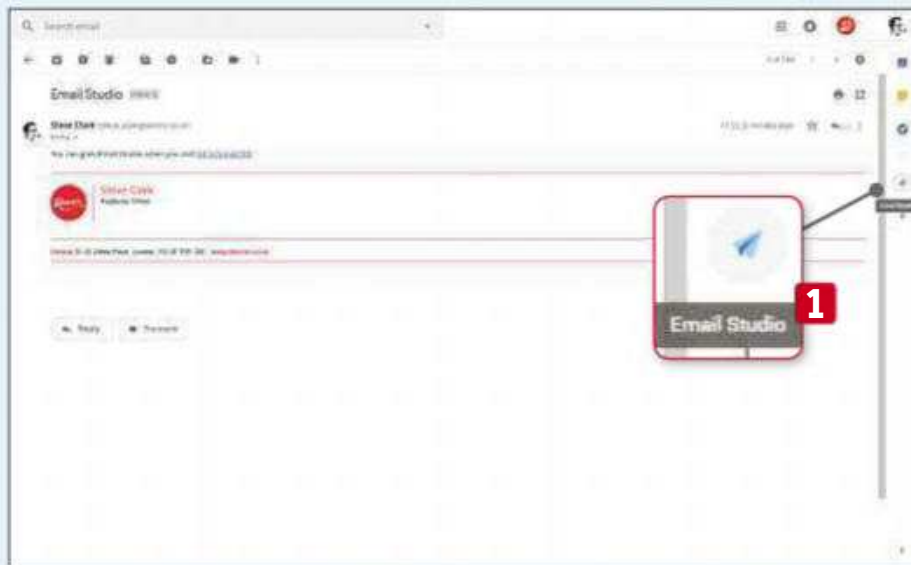
1 Let's start by creating a mail merge for bulk-emailing. Compose your mass email and add any attachments. Add personalisation by typing `{{first name}}` or `{{full name}}`. The software uses Google Contacts to fill in the blanks. Save your email in drafts. Open any email in your inbox and click the Email Studio icon. **1**
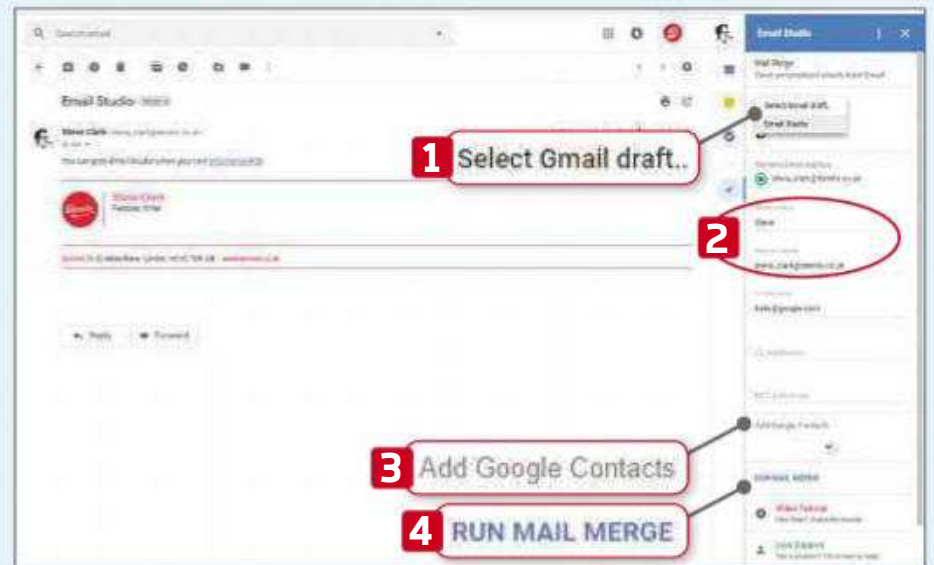

2 Click Email Merge and 'Select Gmail draft' from the drop-down menu. **1** Press the Refresh button if your draft doesn't appear, then select it. Now fill in the form below to specify sender information. **2** You can type to add the TO Addresses or click 'Add Google Contacts' and tick the boxes to add them. **3** Click Run Mail Merge to send. **4**
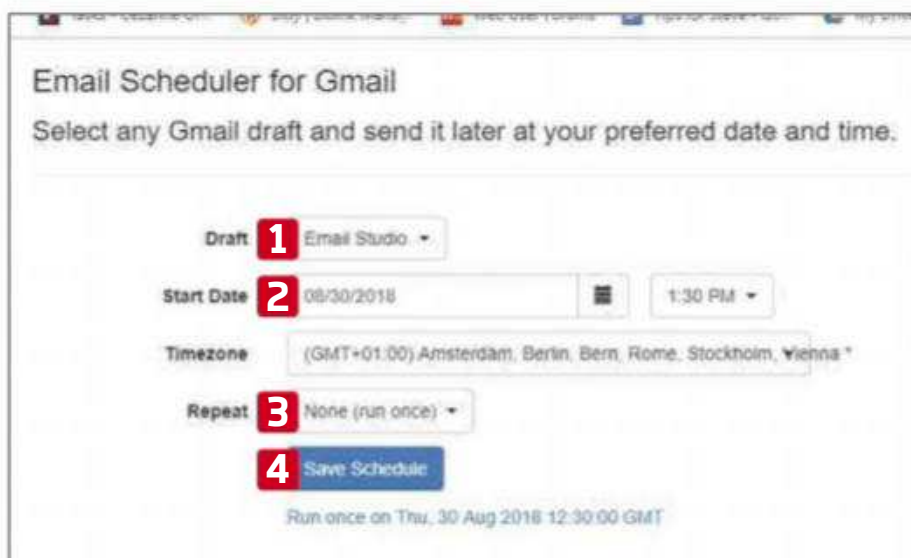

3 To schedule emails, create a draft and open a message from your inbox to force Email Studio to appear. Click Email Scheduler, then Add New Schedule. Use the drop-down menus to select your draft, **1** set the time and date, **2** and whether to send it on a recurring basis. **3** Click Save Schedule. **4** You can now view, edit or delete your email.
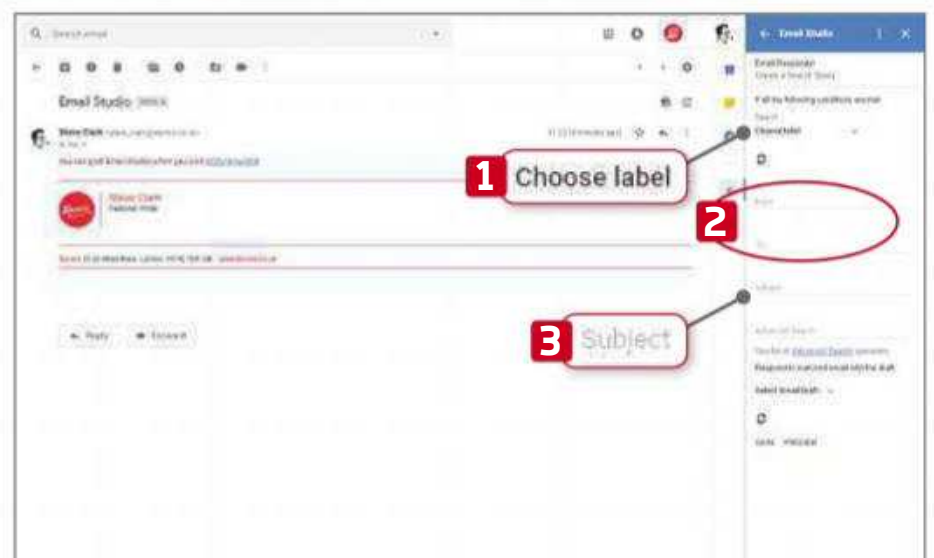

4 Email Studio offers more control than Gmail's limited canned responses, and lets you add attachments. Click Email Auto-Responder, then Add New Rule. Choose a Label to use to tell Email Studio to apply your new rule, **1** and decide if the message should be sent when receiving specific emails **2** or those with specific words in the subject line. **3**
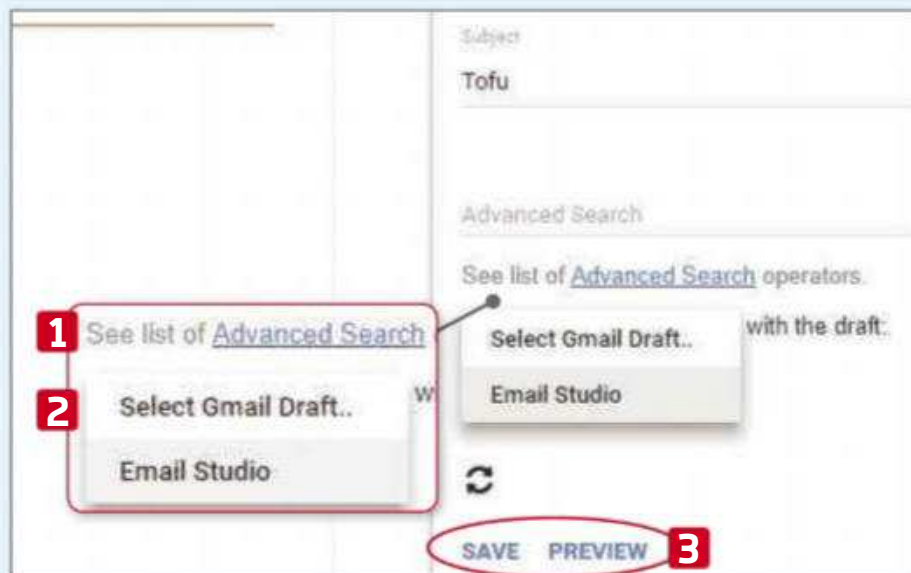
5 For advanced auto responses, such as only responding to emails over a set size, include Google's Search Operators in Advanced Search. **1** Choose your auto-response draft **2** and press Save (or Preview to check your setup). **3** These auto-response emails are sent every hour. Press Run to force an immediate response to emails matching your rules.
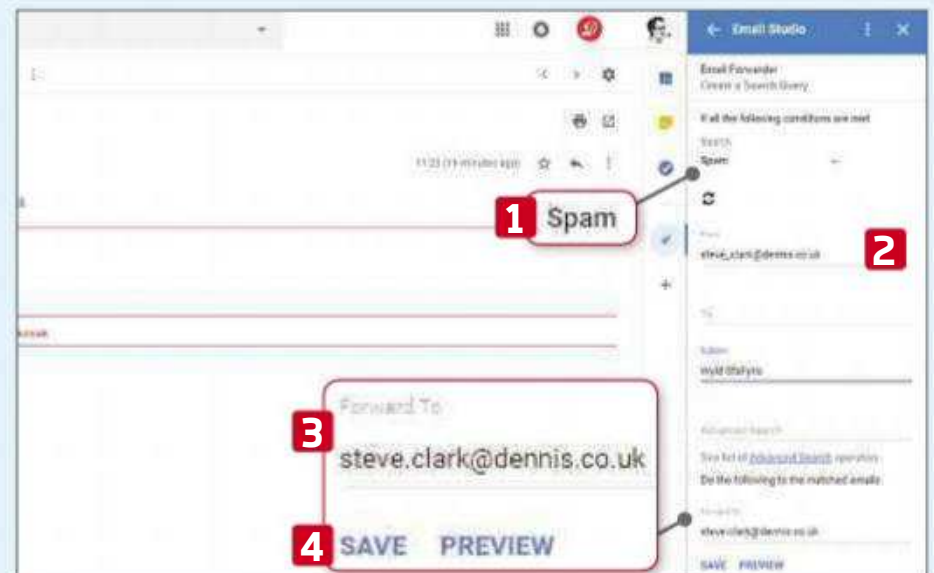

6 Automatically forwarding multiple emails is similar to the Email Responder. Click Email Forwarder, Add New Rule. Select the Label your rule applies to **1** and choose to forward depending on who your email is From, To or if it has certain words in the Subject. **2** Set the email address receiving forwarded emails. **3** Save or Preview your handiwork. **4**
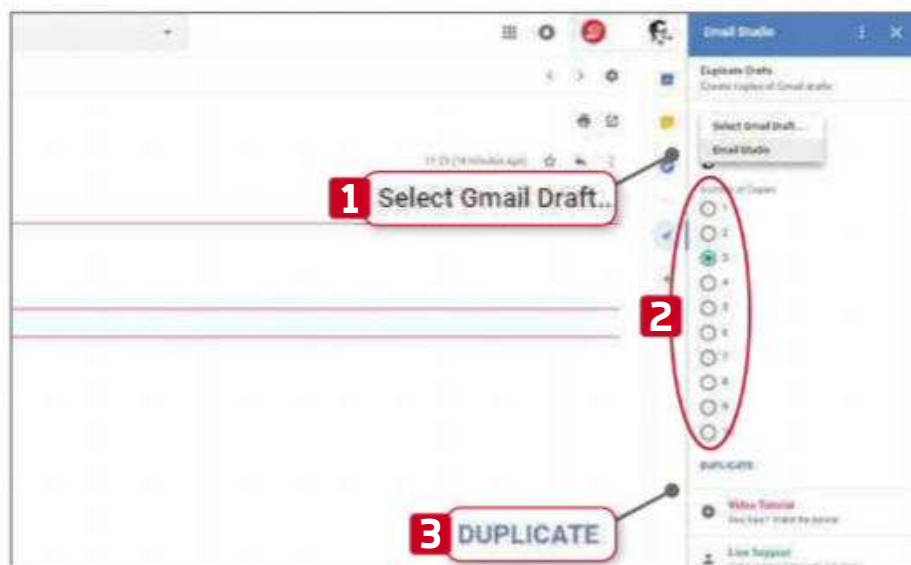

7 If you want to create copies of any drafted emails, you don't need to copy and paste. Once your message is saved in Drafts, open Email Studio and click Email Draft Copier. Press Select Gmail Draft and choose from the drop-down menu. **1** Pick how many copies you need using the numbered buttons, **2** then click Duplicate. **3**
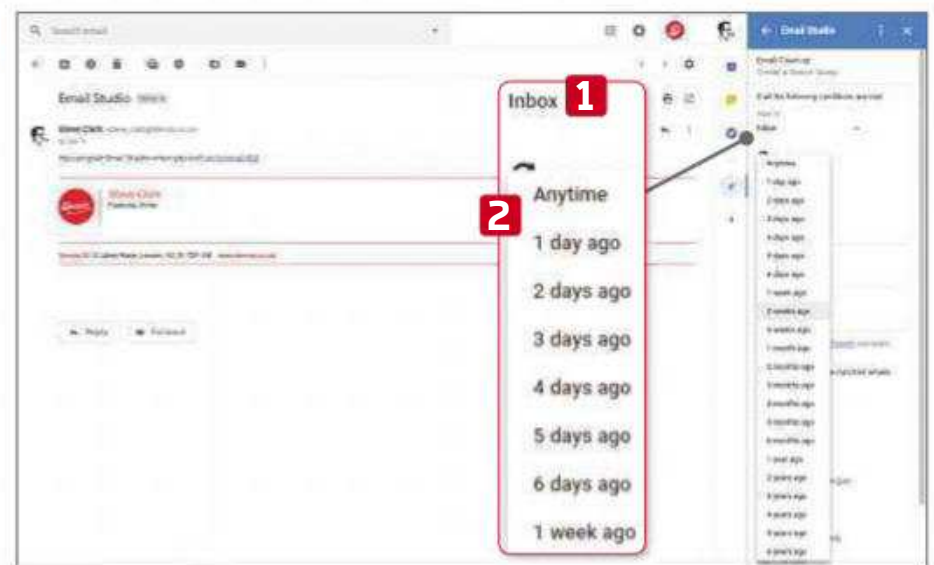
8 To spruce up your inbox, locate Email Clean Up and press Add New Rule. As before, choose which Label to apply the rule to – individual labels require individual rules. **1** Click the drop-down menu beneath Received. Scroll through the dates to determine how far back you want to clean up – between six years and one day ago (or Anytime). **2**
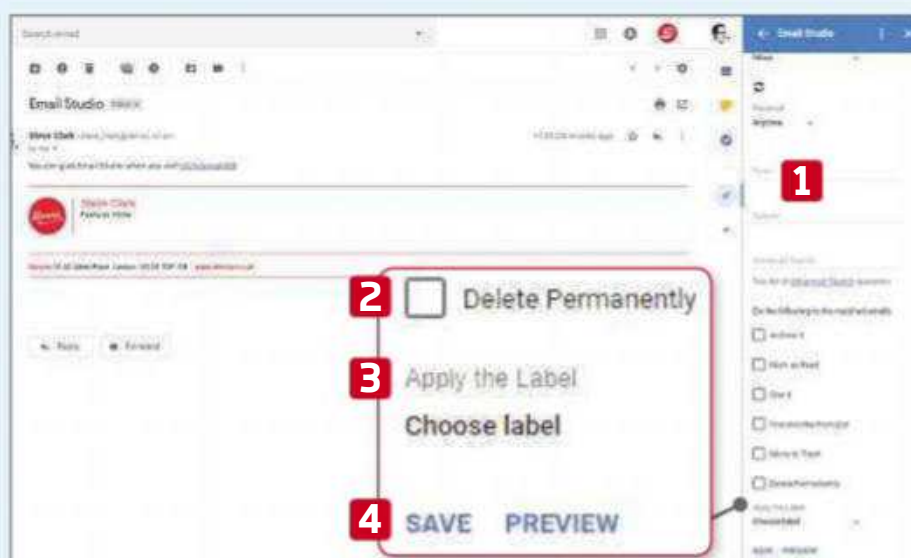
9 Develop your rule by adding email addresses in the From line, Subject line keywords to activate the rule, and relevant search operators. **1** Tick the boxes to set actions to occur when an email matches your rules, from unsubscribing from a mailing list to archiving it. **2** You can select multiple options if they don't conflict. Apply a Label **3** and press Save. **4**
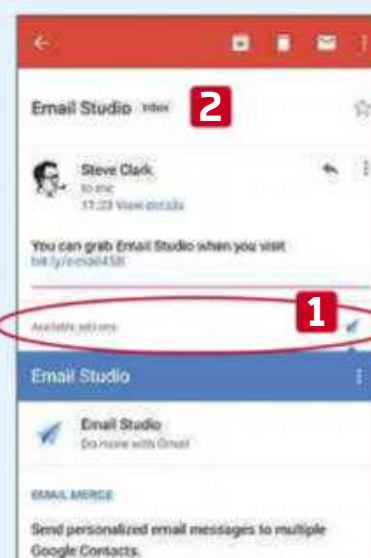
10 Because it's an add-on, Email Studio works with Android's Gmail app. Once installed on your computer, it's available on your phone. In the app, open any email in the inbox. Scroll to the bottom of the screen. You'll see 'Available add-ons' with the paper aeroplane icon. **1** Tap to launch Email Studio. The interface and options are identical to the desktop version's. **2**

Google at 20!

For its first five years, a trademark dispute meant Gmail was called Google Mail in the UK. British users had to wait till 2010 to change their email addresses to '@gmail.com'.

Stop Facebook targeting you with ads

Facebook claims to give you total control over your information – information that's used by advertisers on the site to more accurately target you with ads. But if you don't trust the social network, in light of recent revelations, try Fuzzify. This open-source extension helps you block ads on the site, then track any that you see, so you know if Facebook really does keep advertisers off your back.

Fuzzify.me: fuzzify.me | ⏱ **10 mins** | 🌐 **Chrome** 🦊 **Firefox**

1 Install the Fuzzify.me extension and log into Facebook. You'll be taken to the ad-preferences page with a Fuzzify overlay. **1** This highlights interests, categorised by topic; **2** advertisers you've interacted with; **3** and your profile info **4** – all data that helps Facebook target you with ads.
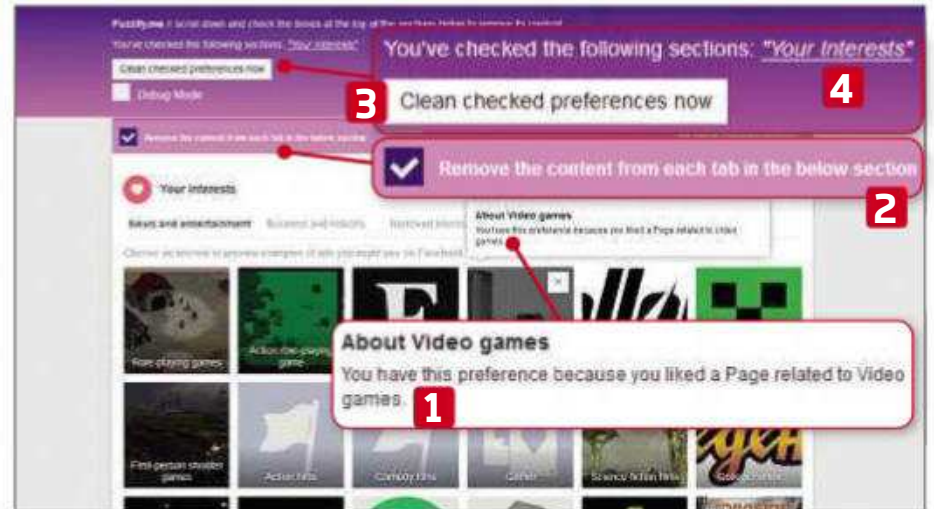
2 In 'Your interests', click an 'interest' to see example ads or hover over it to see why it's listed – maybe you 'liked' a related page. **1** Tick 'Remove the content from each tab' for a category-wide removal, **2** then 'Clean checked preferences now'. **3** Sections you've selected appear above this button. **4**
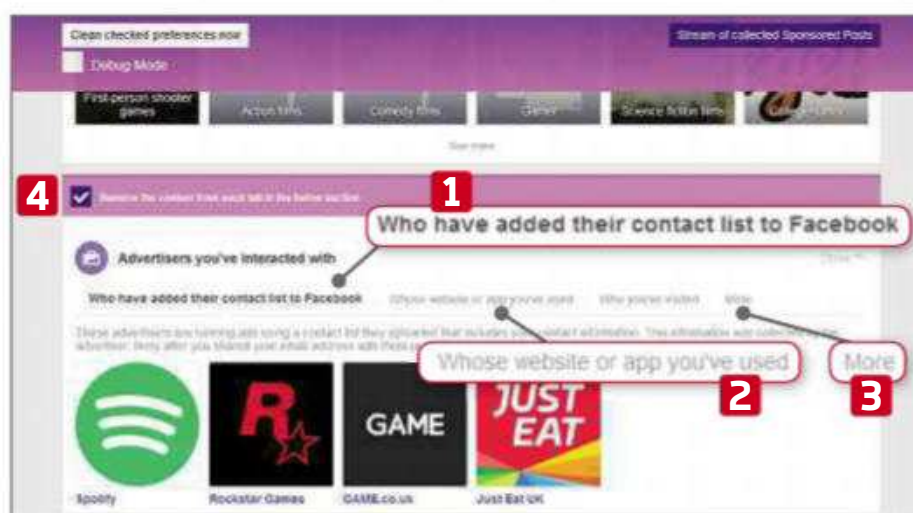

3 Scroll to 'Advertisers you've interacted with'. The first tab shows advertisers who have your email. **1** Clear these before eliminating businesses you've interacted with **2** or – in More **3** – reviewing hidden, visited and clicked ads. Bulk-delete as before: tick the box **4** to clear selected preferences.
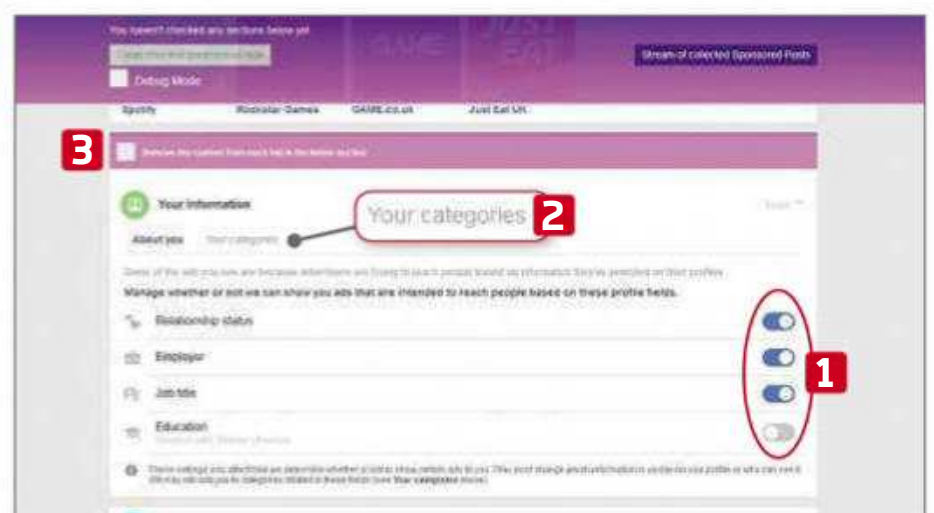
4 Fuzzify lets you toggle basic 'About you' info, such as relationship status and education, On or Off. **1** Go to 'Your categories' **2** for details based on Facebook activity, such as your birthday and choice of browser. Stop advertisers seeing these by ticking 'Remove the content'. **3**

5 Review your actions by clicking 'Stream of collected Sponsored posts' at the top of the page. Over time, this monitors categories you've removed and ads appearing on your feed. **1** Check what data is used to target you, and how. Remove these interests as Facebook updates its data about you.
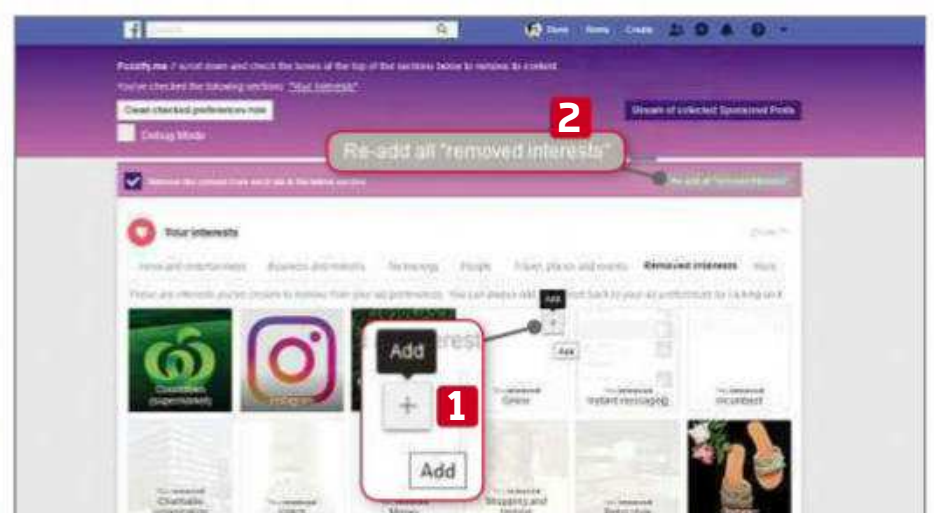
6 If, for some reason, you miss seeing ads related to specific interests, you can restore them. Facebook's default method lets you hover over any greyed-out interest or advertiser and click '+'. **1** To restore all content, scroll to 'Your interests' and choose 'Re-add all "removed interests"'. **2**

Control and conserve your phone's data

Silently, in the background, apps are guzzling your mobile data. Datally, Google's data-saving app, helps you plug these leaks with simple tools that limit apps and keep you informed on what's using your data. It has now been updated with useful new tools you can use to better track and manage how, when and which apps have permission to plunder your data.

Datally: bit.ly/data458 | ⏱ **10 mins** | 🤖 **Android**
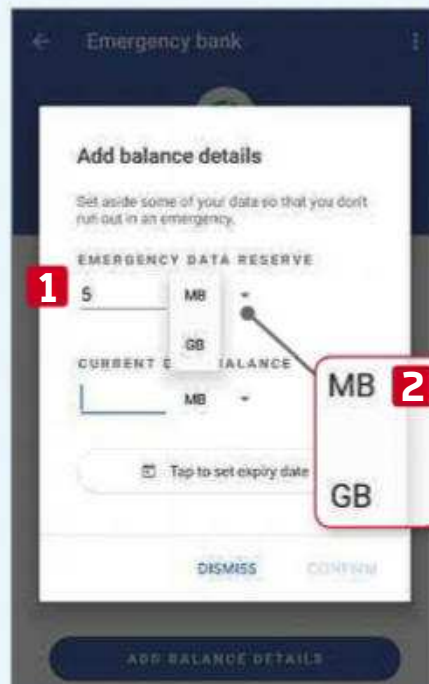
1 Datally's new 'Emergency bank' feature works like a savings account for data, stashing a set amount away for when you need it most. Tap 'Emergency bank', then press Add Balance Details. Set aside your Emergency Data Reserve (5MB+). **1** Press the down-arrow **2** to switch between MB and GB.
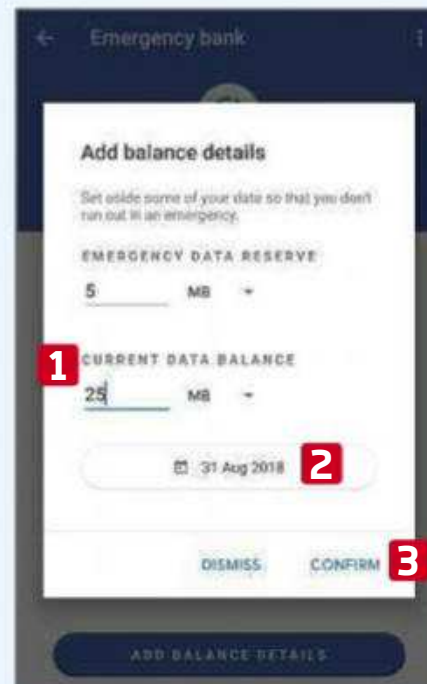
2 Under Current Data Balance, set the amount of data you currently have (25MB+). **1** Again, use the down-arrow to toggle between megabytes and gigabytes. Pressing 'Tap to set expiry date' displays a calendar – use this to limit how long data is 'banked'. **2** Click Confirm **3** to save.
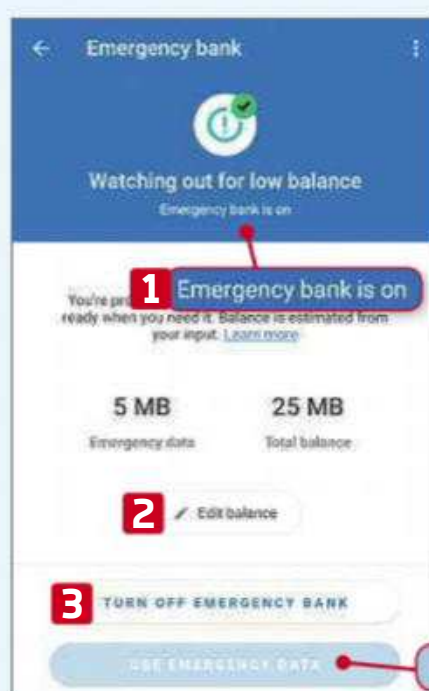
3 Re-enter 'Emergency bank'. The app informs you that emergency banking is on. **1** Beneath this is an overview of your banked data settings, with options to 'Edit balance' **2** or Turn Off Emergency Bank. **3** If you run out of data, tap Use Emergency Data to activate what's in the bank. **4**

4 Most apps continue draining data even while you sleep. To prevent this, from the home screen, tap the new 'Bedtime mode'. In the top slot – represented by a crescent moon – set a time to pause background activity. **1** In the sunny slot, determine your data's wake-up time. **2** Tap Turn On Bedtime Mode **3** to save.

5 Guest Mode stops friends and family blitzing through your data when they borrow your phone. Tap 'Guest mode' and input their maximum data allowance (5MB+). **1** Tick 'Include a password', **2** then press Turn On Guest Mode. **3** You're prompted for an alphanumeric password. Enter it and tap Set. Enter it again and press Confirm.

6 Use Find Wi-Fi to save data on the go. Move the map to your desired area – or tap the target to zero in on your current location **1** – then press Search Map Area **2** to see all nearby networks. Click individual flags for Google Map directions **3** or tap Nearby **4** to list all local networks.

Get to grips with some serious tech tinkering to boost your computer and other devices

M T W T F S S

How to... Choose and fit a new graphics card

Wayne Williams guides you through a relatively simple upgrade that can significantly boost the graphical power of your PC

Most modern PCs have graphics capabilities built into their core hardware, which means you don't have to carry out any fiddly installation or worry about compatibility. However, built-in graphics hardware tends to be less powerful than the standalone alternative, often sharing resources with the other key components in your PC.

For basic Windows tasks, the built-in provision is all you need, but if you want to perform more challenging tasks, such as running the latest games smoothly in high resolution or watching 4K video, then it's worth considering an upgrade.

There are lots of different graphics cards to choose from and prices vary widely, so it can be tricky to pick the right one. In this Weekend Project, we help you make an informed purchase, and show you how to install your new card and get the most out of it.
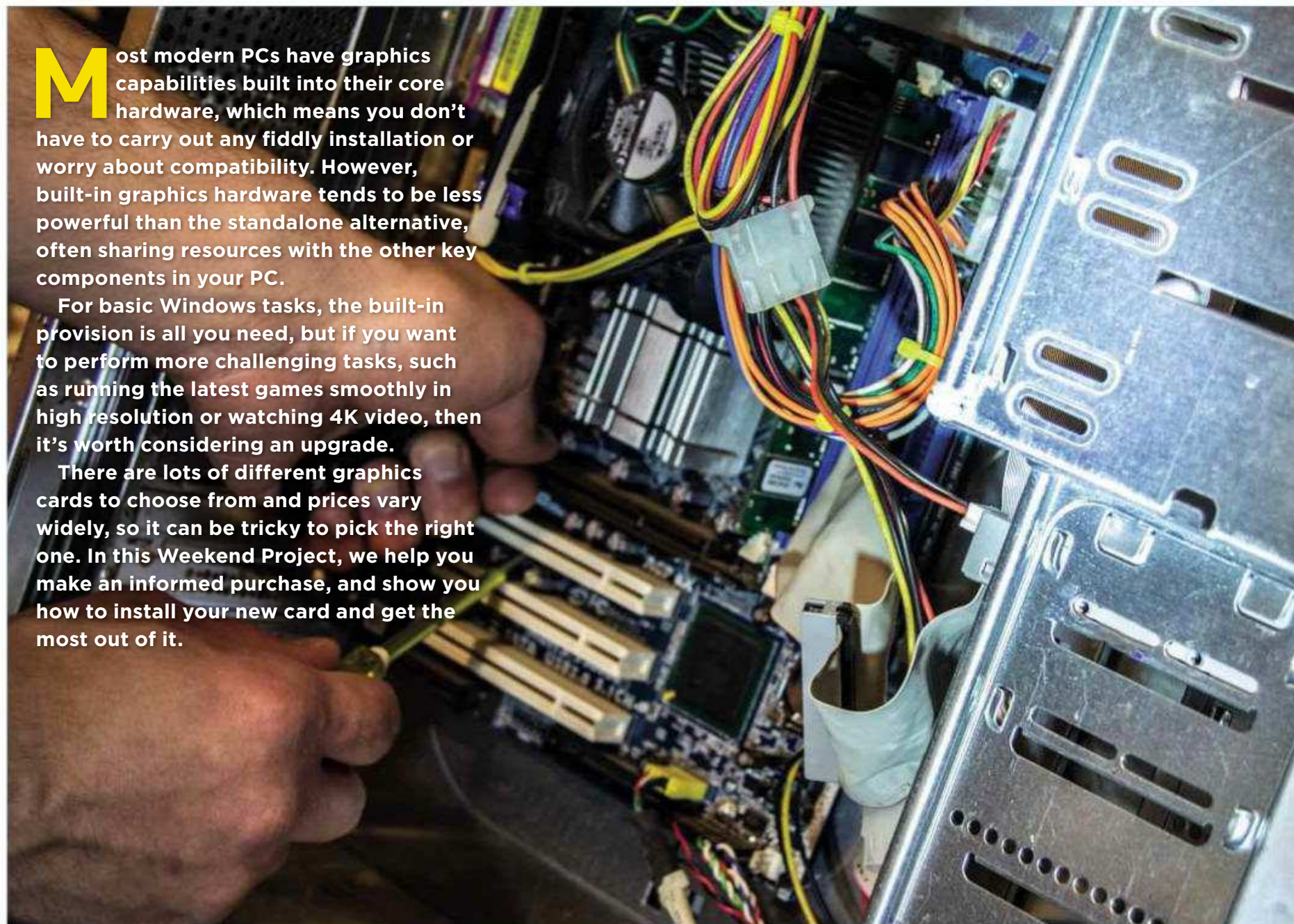
Choosing the right card

There are lots of different graphics cards produced by numerous manufacturers including Sapphire, Asus, MSI, Gigabyte, and Matrox, but they all use hardware produced by either Nvidia (under the GeForce brand, www.nvidia.com) or AMD (Radeon, www.amd.com). It doesn't matter what kind of PC you have, or who makes the motherboard or processor – as long as you have the compatible

sockets, you should be able to use any kind of card. Prices vary from moderate to very expensive, but you get what you pay for with graphics cards and they are usually the most expensive component in a PC. A really good make and model could cost more than £500.

Once you decide how much you want to spend, make sure you stick to your budget. It's easy to overspend to get the latest and greatest graphics hardware,

but the difference in performance might be minimal. If you don't do lots of high-end gaming, it's worth buying previous-generation models, which are still excellent and will provide better value for money.

The main factor you need to establish when choosing which card to buy is what you need it for. Popular games such as Fortnite (bit.ly/fort458), Overwatch (bit .ly/over458) and Dota 2 (bit.ly/dota458)

The new RTX 2080 Ti is expensive but it delivers incredible performance

The GeForce GTX 1050 Ti offers decent results for a reasonable price

don't need a particularly powerful graphics card, but Crysis 3 (bit.ly/crys458) and Assassin's Creed Unity (bit.ly/assa458) really shine when the graphics quality is ramped up, and you'll need some impressive hardware to do them justice.

For lesser needs, a card running on either AMD Radeon RX 560 or Nvidia GeForce GTX 1050 or 1050 Ti will be fine. These will set you back between £100-£200, depending on the configuration and amount of memory they include, and will deliver significantly better performance than on-board graphics.

If you want a bit more power, go for the AMD Radeon RX 580 or GeForce GTX 1060 at around £250.

For more performance, opt for the GTX 1070 (or 1070 Ti) or the excellent GTX 1080 Ti, which is expected to drop in price once RTX 20-series cards become

available this autumn. For top of the range, the new RTX 2070, RTX 2080, or RTX 2080 Ti offer incredible performance with 4K gaming at 60fps (frames per second) and upwards, as well as real-time ray tracing, but they are priced at £569,

Cards running AMD's Radeon RX 580 provide good value for money

£749, and – gulp! – £1,099 respectively.

You'll also need to check what type of sockets your motherboard has. Modern graphics cards use PCI Express 3.0 but should be backwardly compatible, meaning they'll still work if your motherboard has PCI Express 2.0 slots. Check the manual to find out what your board offers. If you have two longer PCI Express x16 sockets next to each other, you'll be able to have two graphics cards running side by side using Nvidia SLI or AMD CrossFire, but this is often more effort than it's worth, and will cost twice as much.

Before you buy a new card, make sure you have enough room for it inside your PC. The chunky cooling fans mean that graphics cards are twice as wide as a standard expansion card, so they take up the equivalent of two slots and backplates. They are also very long, and

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MINI WORKSHOP | Install a new graphics card

1 Earth yourself and switch off your PC at the wall socket. Modern graphics cards are large, so you need to clear room inside your PC case. This may involve temporarily disconnecting cables and moving hard drives. The first thing to do is to connect power to the card, using the supplied Molex-to-six-pin adapters. **1**

2 Insert the card in a spare PCI-Express slot and push down hard. The locking clip pops into place, securing the card into position. Screw the card into the chassis, **1** then connect your monitor(s). This card comes with outputs for DVI-D, DisplayPort and HDMI. Put your case back together, turn on your PC and Windows will load.

3 Install the supplied software, including the drivers. This Nvidia card comes with GeForce Experience software, which keeps drivers up to date, **1** optimises game settings and lets you capture and share screenshots and videos. It also displays an in-game overlay for instant access to recording and broadcasting features.

Broadband Deals

	Provider	Package name	Monthly price	Contract length	Broadband speed	Allowance	First-year cost*
1	First Utility broadband	First Utility: Broadband	£18.99	18 months	11Mbs avg. speed	∞ unlimited	CHEAPEST £227.88
2	TalkTalk For Everyone	TalkTalk: Broadband	£22.50 (£32 after 18 months)	18 months	35Mbps avg. speed	∞ unlimited	£270.00
3	sky	Sky: Broadband	£30.00 (£43.99 after 18 months)	18 months	66Mbps avg. speed	∞ unlimited	£360.00
4	Virgin media	Virgin Media: Broadband + Weekend Calls	£32.00	12 months	108Mbs avg. speed	∞ unlimited *	£384.00

Terms & Conditions apply - see ISP sites for details
* Fair-usage or restriction policy applies.

Data supplied by www.broadbandgenie.co.uk. Correct as of 3 September 2018.

Ofcom

Broadband Genie's helpline is powered by Simplify Digital, the Ofcom-accredited switching service

The Aorus GTX 1080 turns a laptop into a gaming powerhouse
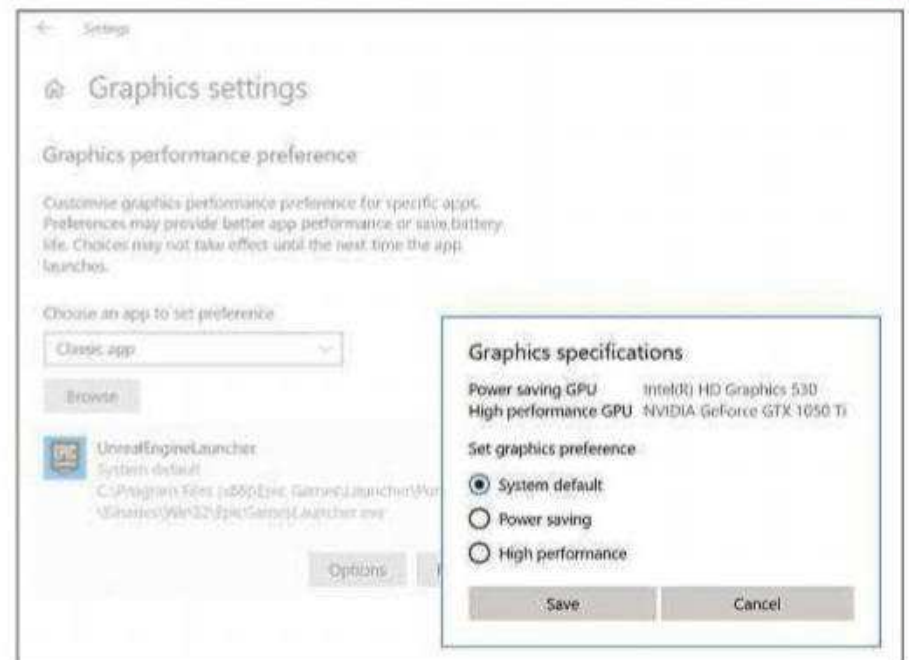
Choose which GPU to use for a program directly in Windows 10

have power sockets on the back edge, so make sure that they fit and that you don't have lots of cables getting in the way.

Finally, make sure that you have the spare power cables needed to connect your new card, and that your power-supply unit (PSU) is capable of producing at least 600W and will be able to power it. You can find out your PSU's specs by searching online.

We show you how to install your new card in our Mini Workshop on page 59, and test how fast it is in our other Mini Workshop, below.

External graphics add-ons for laptops

Most laptops can't be opened and aren't amenable to having their internal graphics upgraded. Instead, you can add an external graphics card (eGPU). If your laptop supports Thunderbolt 3 (Intel's connection port, which can handle speeds of up to 40GB/s via a compatible USB-C port), you can add a graphics-card dock complete with its own power supply.

A search on Amazon for 'eGPU' brings up plenty of options, including the AKiTiO Node Thunderbolt 3 Laptop/PC (eGPU) External Graphics Enclosure for £314, and the Gigabyte Aorus GTX 1080 Gaming Box for £673. If you're wondering about the difference in price: the former doesn't come with a graphics card, so you can choose and add your own, while the latter comes with an Nvidia GeForce GTX 1080 preinstalled.

Choose which GPU to use

You may have more than one graphics processing unit (GPU) in your PC – some basic on-board graphics and a standalone, more power-hungry graphics card. Windows 10 lets you choose which GPU to use for what task, so you're not wasting energy on the more powerful one when performing everyday tasks.

Open Settings (Windows+i), click System and select Display on the left. Scroll down to 'Graphics settings' and click the link, then use the drop-down box to switch between Classic or Universal app. Click Browse and find the program, then click its Options and select your preference in the window that appears: you can choose from 'System default', 'Power saving' or 'High performance'. The GPUs used for 'Power saving' and 'High performance' are shown at the top.

MINI WORKSHOP | Benchmark your new card
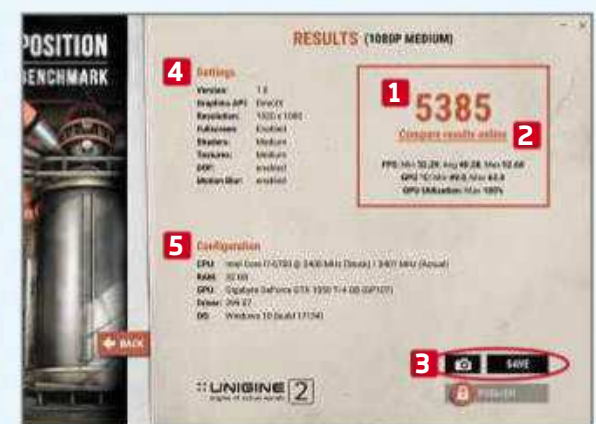
1 There are several tools that test and benchmark graphics performance. We're using Superposition Benchmark (bit.ly/unig458). Download the 1.2GB file (there's a BitTorrent option which may be faster) and install and run it. Select Benchmark **1** and Performance. **2** Pick a graphics preset **3** and the API to use. **4**

2 To test your card, close any running programs and click the Run button. The current frame statistics and GPU parameters are shown on the right as the test runs. **1** The benchmarking tool also offers a Game Mode, which lets you explore and interact with the world and has a number of additional options.

3 When the test completes, you'll be presented with an overall score, **1** along with the option to compare your results with other people online. **2** You can take a screenshot of your results and save them. **3** The Settings **4** and Configuration **5** of the test are shown on the left.

NEXT ISSUE **How To...** Turn an old PC into a network-wide ad blocker

On sale Wednesday 3 October

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Web User Masterclass
Customise the sounds on your PC

Find all the sound settings

The hardest part of tweaking Windows settings is knowing where to find them. Many are buried in unlikely corners and you will rarely come across them by accident. The best way for Windows 10 users to find all their sound settings is to click the search box on the taskbar and type sound or sounds. This displays links to settings for configuring system sounds, adjusting playback volume and more. To see more settings, open the Settings app (Windows+i) and type sound or sounds into the search box at the top.

In any version of Windows, open the Control Panel, click the search box and type sound or audio to see a list of sound settings. Many of them are accessed through the Control Panel's Sound section.

Search for sound settings in the Settings app and Control Panel
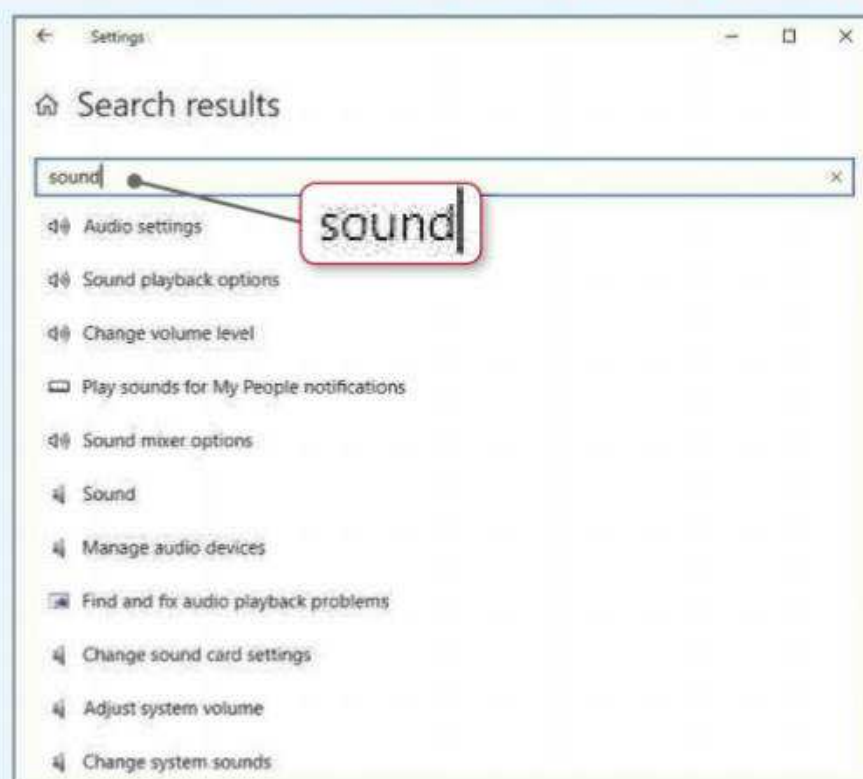
Switch off incessant bleeps

Windows plays a sound when certain events occur, such as a notification popping up, a laptop battery falling below a certain level or the arrival of a new email message. You'll either find this helpful or will opt to turn the sound down (or completely off) to stop being bothered by irritating noises. If you're in the latter camp and would rather not hear any alerts, you don't have to resort to constantly adjusting your speakers – instead, you can simply

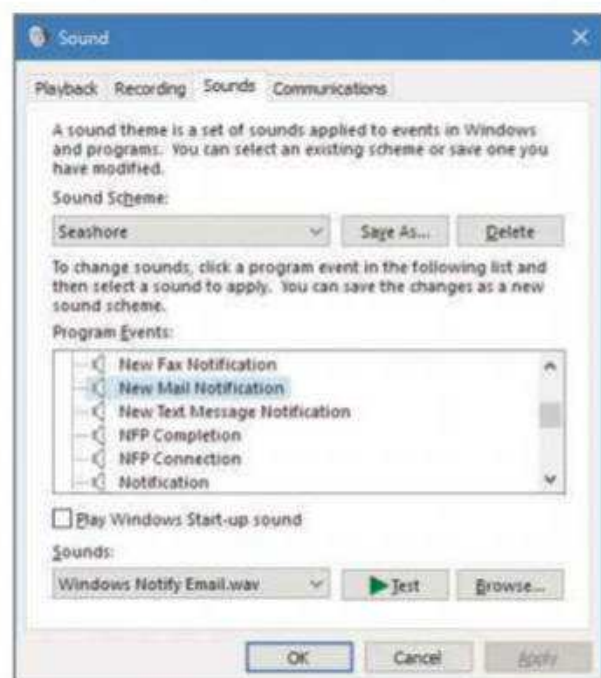*Change sound schemes, mute annoying sounds or select different ones*

configure Windows not to play sounds.

Open the Control Panel, click Sound in the small-icons view and select the Sounds tab in the window that opens. Click the drop-down Sound Scheme menu and select the No Sounds option to mute all Windows' beeps and chimes.

Customise your PC sounds

Windows has a large collection of built-in sounds and you can select different ones for various events on your computer. Go to the same drop-down Sound Scheme menu mentioned in the previous tip and select Windows Default to see a list of Program Events displayed below. Select an event, then look at the Sounds section at the bottom of the window to see the sound used for that event. Click the list and choose any of the items. The number of sound files may vary with the version of Windows – we found more than 70 on our PC. After selecting a sound, click the Test button to hear it, then Apply.

Not all events have sounds assigned to them. For example, on our PC the Empty Recycle Bin event is set to '(None)'. However, you can change this by clicking it and choosing the Windows Recycle sound from the list. Click Apply if you like it. You can also tick the box to hear the Windows start-up sound.

Quieten system sounds

When you adjust the audio volume on your PC, you're usually changing the master volume control that affects all sounds. Your computer actually has several volume controls and everything from individual apps to system sounds can be adjusted separately. It's possible to turn up the volume when listening to music or a video, for example, but to have system sounds turned down low so they don't interrupt your listening.

Right-click the speaker icon at the right side of the taskbar and select Open Volume Mixer. There is a Device volume control for your speakers, a System Sounds volume slider and other sliders for any running programs that can produce sounds. Drag the System Sounds slider up or down to adjust the beeps and chimes produced by Windows events.

> If you see words that `look like they've been typed in a typewriter`, **follow the instructions and type them exactly as they appear, paying close attention to spaces and punctuation.**
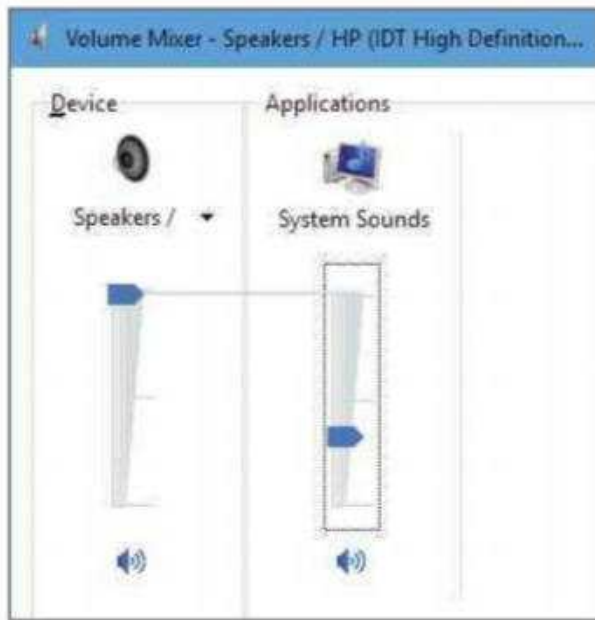
The volume of system sounds can be changed separately to the master volume

Windows 10 users have even more audio controls at their disposal. Open the Settings app and click System, then select Sound on the left and click 'App volume and device preferences'. There are sliders to adjust master, system and app volumes.

Add a theme with sounds

Your PC's desktop background, lock screen, colour scheme and other visual attributes can all be changed by downloading and installing a new theme. Some themes come with their own sounds, so if you like to use your computer with the sound turned on, they can make an interesting change from the usual Windows selection.

There are several ways to get themes. In Windows 10, go to Settings, Personalisation, Themes and click 'Get more themes in Microsoft Store'. This doesn't tell you which themes include sounds – the best place to get these are from the Microsoft support article at bit.ly/theme458. In the list of categories on the left, select 'With custom sounds' to see the available options. Click the Download link under a theme, then double-click the file in the Downloads folder to install it.

The sounds are applied automatically but they can still be selected, customised or deselected in the Sound window, as we explained earlier.

Add a new theme containing sounds and switch sound schemes

TAKE IT TO THE NEXT LEVEL
More advanced tips for when you're feeling brave

Download new sound schemes

You can search Google and Bing for Windows sound schemes to get custom sounds for your PC. Many are based on popular games but there are all sorts available, such as a collection of over 40 sound schemes at Windows Sounds (winsounds.com). Unzip the download and copy the sound files or folder to C:\Windows\ media, then use the Sound window to assign sounds to events.

Show hidden sound events with this Registry hack

Customise and save sound schemes

Windows provides dozens of sound files but you can also opt to use your own. Select an event in the Sound window, then click the Browse button. Select any WAV audio file on your hard drive, then click Apply to assign it to the event. After changing one or more system sounds, the Sound Scheme at the top says 'Windows Default (modified)'. Click the Save As button and name it, and it now appears in the Sound Scheme list.

The WAV files for system sounds must be short – just one or two seconds. You don't want to wait for a three-minute music track to play every time an email arrives! Use Audacity (www.audacityteam.org) or a website such as Zamzar (www.zamzar.com) to convert other audio files to WAV.

Enable hidden sound events

Open the Control Panel and click Sounds to see a list of events and associated sounds in the Sounds tab. Some of these are hidden, so if you want to unhide them and see the full list, press Windows+R, type `regedit` and press Enter. In the left-hand pane of the Registry Editor, select and expand:

HKEY_CURRENT_USER\ AppEvents\EventLabels

This shows all the events that appear in the Sounds window. Select WindowsLogon. In the right-hand pane, there's an item called ExcludeFromCPL, which means 'exclude from the Control Panel'. Double-click this and change the value from 1 to 0. Also change WindowsLogoff and any others that are hidden that you want to use.

Open the Sounds window again and you'll now see those previously hidden items listed. You can assign sounds to them using the method explained in previous tips.

Configure audio hardware

It's possible that your PC isn't playing sound to its full potential. Open the Control Panel and click Sound. On the Playback tab, you'll see various playback devices – there are usually one or more items listed. Right-click each one to see a Properties menu – some may also have a Configuration menu. Select these menus and new windows will open containing multiple tabs and step-by-step guides for setting up the audio.

For example, if you right-click Speakers and select Properties, you'll see tabs for General, Levels, Advanced and Spatial Sound. Right-click and select Configure Speakers to bring up further options for stereo, quadraphonic and surround sound.

These options vary depending on the type of audio hardware in your PC. Many settings are personal preferences and can even depend on the room, speakers or earphones you are using. It's worth exploring them all to discover the best settings to suit your preferences.

Mute only annoying sounds

Instead of muting all sounds, you can just mute the ones that irritate you. On the Sounds tab in the Sound window, go through the list of program events and select one you don't want. In the Sounds list below, select '(None)' and that event will no longer trigger a sound.

Ask the Expert

Roland Waddilove, computer programmer and PC journalist since 1981, answers all your technical questions. Email us for help at webuser@dennis.co.uk

Unlock barriers to saving files

Q When trying to save files, I get error messages saying "File not found" or "File does not exist". I'm trying to save a file, not open it – I wouldn't expect it to be found because I haven't saved it yet!

Sarah Taylor, via email

A It sounds like Windows 10's 'controlled folder access', which stops ransomware encrypting your files and locking you out, is preventing an unauthorised program from writing to a specific folder, such as Desktop or Documents.

Open Settings (Windows+i), then

Switch off 'Controlled folder access' or opt to allow an app through

search for and click 'controlled folder access'. Turning off the switch solves the problem but is less secure.

Alternatively, click 'Allow an app through controlled folder access', then the plus button and select the option to show recently blocked apps. Click the plus next to the software that's being blocked and run it again.

PHOTOS
Back up Google Photos

Q I have embraced Google Photos with a vengeance and uploaded 4,000 photos, prints, slides and JPEGs from various cameras and phones. So far, so good: all my photos are safe in the cloud. However, I'm worried that I will have no control over them in the unlikely event that Google crashes out of business. I would like to find some way, daft as it may seem, to back them up to a hard drive.

I've searched the web for a method but no one appears to have a definitive answer. Google Drive seems to be the best option, and I have activated copies

Download albums from Google Photos to back them up

to be saved in Drive, but it isn't clear what's in there. The copies all appear to be there but in a different order and organised into the albums I've set up. I've tried to save the photos as a zip from Drive, but can't find any such file.

My second concern is the term 'Download'. If I proceed down this route, will the original photos remain in Photos or Drive? I would prefer to use Google Photos so I can copy the contents of my favourite albums, stage by stage.

Doug Pyburn, via email

A It's unlikely that Google will go out of business and lose your photos but the security of your files is still worth considering. If you use the same password for several online services, a hack elsewhere could expose your Google login details and someone could get into your account and lock you out. If you use your Google password anywhere else, change it to something unique and hard to guess.

You should back up all your photos, anyway. Go to drive.google.com and click the cog icon and install 'Get Backup & Sync for Windows' (or Mac). During the install – and at any time in

Settings – there's an option to sync Google Photos to your computer. Enable it and every photo online is mirrored on your PC.

Google Photos uses a folder for each year to organise your images, so the Google Drive folder on your PC will have subfolders for 2018, 2017, 2016 and so on. However, it won't be easy to find individual photos if you take more than a handful each year.

The Albums you create on Google Photos can also be downloaded as individual zip archives, which is the only way to get an organised collection. Go to photos.google.com and click Albums on the left. Open an album, click the three-dot menu in the top-right corner and click 'Download all'. This won't affect photos stored online or on the PC – however, it's not a brilliant way to back up all your photos because those that aren't in albums won't be downloaded. You will at least have them somewhere in the PC's Google Drive folder, though.

GENERAL PC
Fix updates for Windows 8.1...

Q I am trying to install updates for Windows 8.1. During the last two months, the majority installed but the following important updates failed: KB4340558 and 4054566 in July, and KB4054566 in August. Each time I try to download them, I get error 80092004, for which Microsoft helpfully says there is no information. I looked this up in Issue 389's Fix Windows Error Messages (bit.ly/webuser389), which didn't list the code but referred to the free Error Lookup Tool (bit.ly/error458). The associated download button linked to a site called Henry++ and then said 'access denied', so I didn't proceed any further.

I use paid-for versions of CCleaner (www.ccleaner.com), Malwarebytes (www.malwarebytes.com) and Norton Internet Security (my.norton.com).

Alan S, via email

A First, let's try to fix Windows Update. Find Disk Cleanup on the Apps screen or search for it, then run it and click the 'Clean up system files'

The Update Catalog lets you download updates from Microsoft and install them

button. Select all files and clean up.

When you have a spare hour or so to run maintenance on your PC, type `Command Prompt` in the search menu, right-click it when it appears, choose 'Run as administrator' and type the following, pressing Enter after each line:

```
sfc /scannow
DISM.exe /Online /Cleanup-
image /scanhealth
DISM.exe /Online /Cleanup-
image /Restorehealth
```

Open the Control Panel and click Troubleshooting, then click 'View all'. Run Background Intelligent Transfer Service, Internet Connections and Windows Update. Back at Command Prompt, delete any existing updates by typing these lines and pressing Enter after each one:

```
net stop wuauserv
net stop bits
rename c:\windows\
SoftwareDistribution
SoftwareDistribution.bak
net start wuauserv
net start bits
```

If the update still won't install, go to the Microsoft Update Catalog in a browser (bit.ly/msuc458) and search for the KB numbers. Download the version appropriate to your PC (there may be several, such as 32- and 64-bit) and try installing it from your hard drive.

At least one of the failed downloads you mention has a known fault that Microsoft has fixed. See bit.ly/udf458 and follow the links to download it.

GENERAL PC
...and for Windows 10

Q Windows Update says I am up to date, but I can see four cumulative updates that say they require a restart to finish installing. The most recent one (KB4343909) also says this, but my PC has been restarted many times since.
Paul, via email

A First, try to fix Windows Update as described in my answer to Alan S, above. If it doesn't work, you could just ignore the errors. The major spring and autumn updates often fix minor faults that occur in between, so the problem is likely to go away in a few weeks.

Another option is to hide updates that don't install. Go to bit.ly/prev458 and download the 'Show or hide updates' troubleshooter. Run it and scan for problems, then click 'Hide updates'. Windows won't attempt to download and install hidden updates.

Hide problem updates so Windows can ignore them

SECURITY
Test suspicious files with more security tools

Q My antivirus software reported that something I downloaded was malware and wanted to quarantine it. However, Windows Defender didn't see any problem. Which one is right and what should I do in this situation?
John Collins, via email

A There are several reasons why one security program flags a file as malware and another doesn't. The program may be a PUP (potentially unwanted program) that isn't malware but might trigger a response from a savvy security program with more stringent controls. Malware is designed to harm your computer while PUPs usually just display ads and are essentially no more than an annoyance. Also, malware only does its damage when it runs and some security software may not detect a downloaded file as malware until you try to install or run it.

Security software rarely fails to detect malware but a false positive, when a security program mistakes a safe file for malware, is more likely – the thinking is that it's better to be safe than sorry.

To get more scrutiny on the supect file – so long as it's under 128MB – upload it to VirusTotal (www.virustotal.com). This uses more than 60 different security programs to test the file. They often all agree that a file is safe or malware, but if a few of the lesser-known scanners report it as malware and the 60+ others don't, it's probably a false positive.

SOFTWARE
Batch edit Excel sheets

Q I have some large Excel files that I use to maintain lists of my music and film collections. Each file contains several sheets on different tabs, with numerous rows and columns. Is there a way to select everything in every sheet of a spreadsheet file, across all the tabs, so I can edit elements such as the font, text size, row depth and column width all in one go? Opening each sheet on each tab and editing things individually is very laborious.
Julian King, via email

A To make global changes, select one sheet and Ctrl+click every other sheet tab you want to change. Formatting, such as font selection, is applied to all the sheets you've selected.

GENERAL PC
Stop unnecessary corrections

Q Both Edge and the Mail app in Windows 10 automatically correct errors, such as capitalisation and spelling. Normally, this wouldn't be a problem, but I'm learning to program and sometimes things I type get corrected or underlined in red as if they were errors. It's annoying.
Jay Garner, via email

A Open the Windows Settings app (Windows+i), click Devices and select Typing to see the spelling and autocorrect options. Turn off all the

Choose whether to automatically correct errors in Windows 10 apps

switches, close Settings and restart Windows. This doesn't always work – spellcheck and autocorrect may still be enabled, even when turned off. Let's hope it's something that gets fixed in the next Windows update!

Your Top Tips

Our pick of the best advice from our readers. To get help or offer it to others, visit forum.webuser.co.uk

TOP TIP

WEBSITE
Block unwanted Gmail chat

The chat feature in Gmail has always irritated me. I get requests to chat almost every day, always from people I don't know and mostly from "young ladies". It's just another way for scammers to contact you.

If you don't use the Gmail chat feature in the bottom-left corner, click your status to open the panel, scroll down to the bottom and select 'Sign out'. Next, click the cog (Gmail menu) icon and choose Settings. Select the Chat tab and turn off chat. It also

If you don't use Hangouts chat in Gmail, disable it to stop random chat requests

makes more space for your folder list.

Ben Elliott, via email

SOFTWARE
Get the result you need with 'sfc /scannow'

I recently opened the Command Prompt and ran `sfc /scannow` and got the report: 'Windows Resource Protection found corrupt files but was unable to fix some of them'. A bit of a nuisance, but I ran `sfc /scannow` again the next day and this time it said: 'Windows Resource Protection found corrupt files and successfully repaired them'. Much better!

It doesn't always work, but if you get the first result, try running it again, even three or more times, and the problems may be fixed. It's certainly worth a try before resorting to more drastic action.

Madeline, Web User Forums
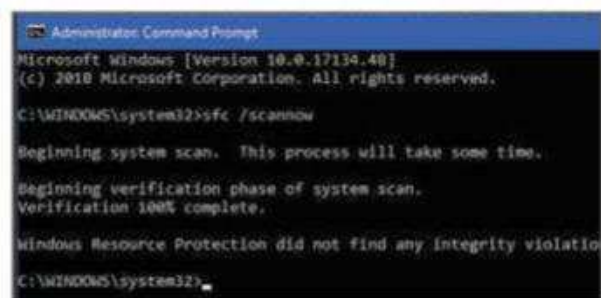
If at first you don't succeed, try running the `sfc` command again

YOUTUBE
Play YouTube videos faster

Are you tired of having to click back after watching a video on YouTube and waiting ages for the page to reload? There's a

Make every YouTube video a pop-up

smart little extension available on Chrome called InstantView for YouTube (bit.ly/instantview458) that turns every video on the site into a pop-up, just by clicking the thumbnail. You can also click the Minimize button to send your video to the lower-right corner, so it keeps playing while you browse for your next video.

Enid Hobbs, via email

ONLINE STORAGE
Free up space on OneDrive

If you are close to filling your OneDrive (onedrive.live.com), try viewing all your stored files at once, sorted by size with the largest at the top, so you can see where the most space is being used.

Open the OneDrive website in your browser and click the cog icon. Click Options to display a bar showing the amount of free and used space. Click the 'What's taking up space' link on the right to see a list of files in size order. Click the View Options icon at the top and select

'Compact list' to see the file sizes and the folders they are located in. If you need more OneDrive space, start by removing the biggest files at the top of the list.

A James, via email

GENERAL PC
Personalise your Windows 10 desktop

Windows 10's default customisation settings may not be to your tastes. If you want to change the colour of the Start Menu tiles, buttons and taskbar, open the Settings app (Windows+i) and select Personalisation, Colors. You can select to 'Show accent color' on the Start menu, taskbar and action centre. Alternatively, search `accent` in the Start menu and click 'Choose your accent color'. You can pick a hue from the colour palette or create a custom shade of your own.

Bedstor, Web User Forums

Give your Windows 10 PC a colour makeover

GENERAL PC
Manually re-centre your taskbar icons

In the last issue of *Web User*, Michael Gunther explained how to move taskbar icons to the centre using Falcon. This is a great method, but I can show you a manual way to do this.

First, create a new folder anywhere on your computer, then right-click your taskbar and untick 'Lock the Taskbar'. Now, right-click again and go up to Toolbars. Select New Toolbar and choose the new folder you created. Drag the toolbar across to the left, between the Start bar and your existing icons. You may have to fiddle around with the separators to create the illusion of centred icons. Once that's done, hide the

Move taskbar icons to the centre with this toolbar hack

new toolbar's name and title. Finally, right-click the taskbar again and, this time, lock it into place again.

Craig Stead, via email

GENERAL PC
Explore hidden system settings

It's not always obvious where to find all your PC's system settings, but if you open the Control Panel and type a single vowel, you will see a broad range of items listed, some of which you probably didn't know existed. Typing `a OR e OR i OR o OR u` into the search box will produce a very long list of every setting.

A vowel search also works in Windows 10's Settings app (Windows+i), though it doesn't support `OR`. Open it and type a vowel in the search box. Only the top results are shown, so click 'Show all results' to see the full list. Try it with each vowel to discover new settings.

The search box in the taskbar works in almost the same way. Click it, type a vowel and click Filters at the top, followed by Settings. You'll be shown a list of all settings containing that vowel.

Mark Evans, via email

GENERAL PC
Add your Chrome activity to Windows Timeline

If you like the new Windows Timeline, but wish it remembered Chrome and Firefox activity, there's a homebrew browser extension that fixes this. Download the extension from Github (bit.ly/timeline458) – it's not an official add-on, so you need to visit your extensions page and switch on 'Developer mode'. Click Load Unpacked and select the unzipped Timeline Extension download folder, then click the extension icon and sign in with the same Microsoft account that's running on your PC.

Nana Betts, via email

SOFTWARE
Lock notes in OneNote

If you use the Microsoft OneNote app in Windows 10 or on your phone, you can password protect sections to stop other people accessing them. In the Windows 10 app, right-click a section and choose the Password Protection option on the menu. On a phone, tap and hold a

section, then select 'Protect section'. You can access OneNote on the OneDrive website, but I can't see how to password protect sections online. However, once it's set up in the Windows 10 app or on your phone, you need a password to unlock them on the OneDrive site.

Don Mullen, via email

MUSIC
Import your iTunes playlist to Spotify

I've just discovered how to transfer my iTunes playlists to Spotify. Just copy the iTunes songs into a new folder, then open Spotify and go to Preferences, Settings. Click the option to Add A Source and choose the folder containing your iTunes songs – you'll have to untick all other sources, too. Create a new playlist in Spotify and choose Local Files. This will display your iTunes songs. Select them all and paste them into your new playlist.

A Clements, via email

Move your iTunes music to Spotify using Add A Source

BROWSERS
Restart Chrome quickly

If you need to restart Chrome (because it's becoming a bit of a resource hog, for example), type `chrome://restart` in the address bar. This will end all Chrome processes and relaunch the browser. You can manually create a bookmark for this address-bar method (press Ctrl+Shift+O, or it won't work) so when you start typing the bookmark's name, the address bar auto-populates the command.
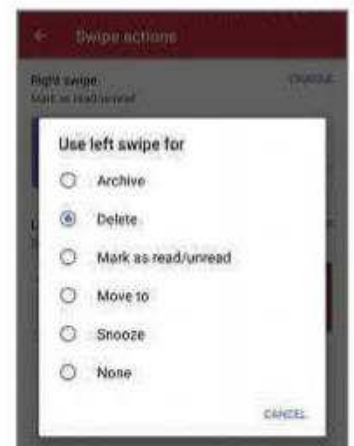
Mick Boulton, via email

ANDROID
Customise Gmail swipes

Outlook has let you change the function of left- and right-swipes in the Android app for a long time, and the latest version of Gmail seems to have finally caught up. To switch out the default Delete and Archive, go to Settings, General

Control Gmail with gestures

Settings and select 'Swipe actions'. Tap Change to pick what your left- and right-swipes do. It's missing some of the options you get in Outlook for Android, but you can Snooze or mark an email as unread, along with lots of other actions.

Gene Arnez, via email

BLUNDER OF THE FORTNIGHT

GOOGLE DOCS
Sync your Google Sheets data

I've come up with all sorts of imaginative workarounds for merging data from one Google Sheet to another: multiple saves, relentless copying and pasting, giving up with a sigh – you name it, I've tried it (sighing, by the way, definitely doesn't work).

Google Docs originated from two separate products: the web-based word processor Writely and spreadsheet tool XL2Web, which were bought by Google in 2005.
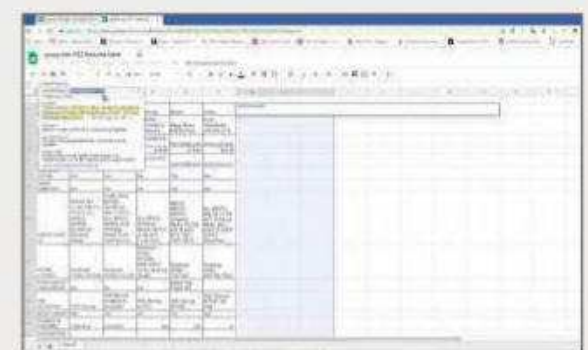
Google makes merging data simple

It turns out I've been wasting my time – Google has already made it stupidly easy: open two Sheets, then grab the URL and the range of cells you wanted to merge. Tab across to the primary document, select the cells to add to, and type `=IMPORTRANGE`. Google asks for the URL, tab name and the data range.

I found it a bit complicated the first time, but now I know how, syncing Sheets has become so much easier.

Colm Gandy, via email

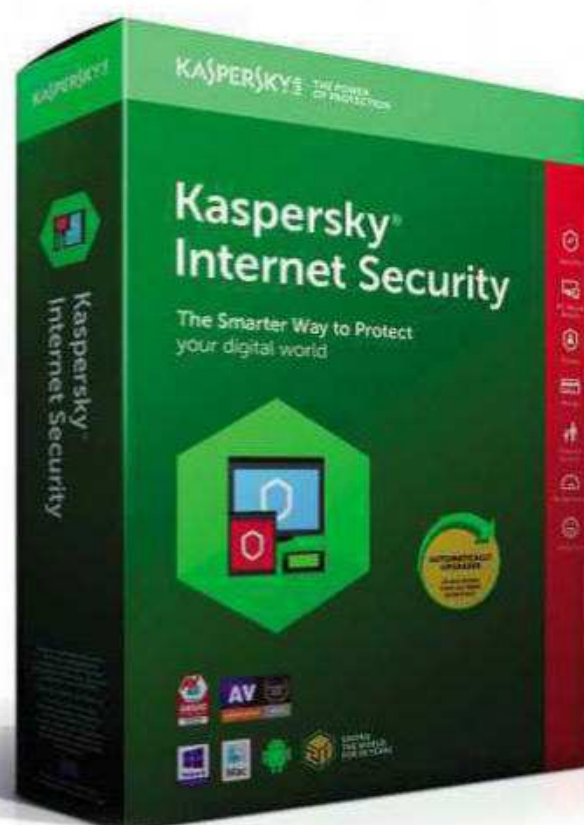**Have you managed to fix a PC-related disaster? If so, please send your story to webuser@dennis.co.uk**

Readers' Helpdesk

Our pick of the best solutions posted on our reader forums. Visit forum.webuser.co.uk – it's friendly and free!

Find and remove unwanted software

Q I'm struggling to install updates on my computer because I can't uninstall Avira anti-spyware (avira .com). I've tried using the standard Windows uninstall option, and I've also searched the hard drive and Registry, and deleted any reference to the software. However, I still get the same message when I try to install updates. Can anyone please help?

jpeterh, Web User Forums

Got software you can't remove? Use IObit and Wise Force Deleter

A I use two programs: IObit Uninstaller (bit.ly/iobit458) and Wise Force Deleter (bit.ly/wise458).

IObit can usually delete the miscreant, but if it doesn't, Wise Force Deleter will. If you also install JAM Software's TreeSize Free (bit.ly/tree458), you can see if there are further traces of the software lurking in places that Windows won't let you go.

Bally1001, Web User Forums

HARDWARE
Open all the Ethernet ports on your router

Q I have IFNL broadband, with a main router for the incoming cable feeding my second router. Only one Ethernet port is configured on the main router. I'd like to have them all working to add them to the network. I'd prefer to do this without having to buy an Ethernet switch. I can get into the second router's configuration screen, but I'm not sure how to access the primary router to open the ports.

grahammelon, Web User Forums

A Disconnect the second router and connect the modem to your computer. Then open a command prompt and type `ipconfig /all` to see if this gives you a Default Gateway – this is its login address. I'm not familiar with your specific router/modem, but I would have thought that plugging an Ethernet cable into each of the ports and connecting to a computer would configure the hardware automatically. In general, though, modems have just one Ethernet port. If IFNL is set to 'modem mode', only one port – bridging to the second router – will be working. A router or modem can't usually operate in both modes at the same time, and you certainly don't want two routers operating on the same network, so an inexpensive switch is the best solution.

Cantrel & Sneakybeaky, Web User Forums

Find out if you can open additional Ethernet ports on your router

GENERAL PC
Delete mysterious $OF files

Q I have an old WD My Passport 1TB external hard drive. While deleting files from a two-year-old backup –

Is it time you gave the $OF folder on your computer a clear-out?

because I now have a larger external hard drive – I noticed a folder called $OF, which contains 3,985 additional folders and 16,915 files with a mixture of file extensions.

I've checked my PC and searched for similar folders but to no avail. I've also noticed that these folders and files aren't on my later backups. What are $OF files and can I delete these folders and files?

Jonthy, Web User Forums

A I read about these files on the Microsoft community boards many moons ago. Essentially, $OF files are overflow files saved in your File History with names that are too long for the regular save file storage on the external hard drive. Check your File History, and restore personal files if necessary, and you should see that all those files are actually still in their rightful place. You can then delete files and folders you don't need.

mikec1, Web User Forums

BROWSERS
Force Chrome to load pages

Q I use Chrome on a Windows 7 PC, but web pages no longer load properly. I get a blank page until I hit 'refresh' and the page suddenly displays. I've uninstalled and reinstalled Chrome, but it doesn't seem to make a difference.

western153, Web User Forums

A Go to Start and type `cmd`. Right-click Command Prompt and choose 'Run as administrator'. Clcik Yes, then type the following commands, one at a time, pressing Enter after each one:

```
netsh winsock reset catalog
shutdown /r /t 00
```

After your PC reboots, check to see if Chrome can now load pages correctly.

Cantrel, Web User Forums

Use the Command Prompt to get web pages loading properly in Chrome again

Inbox

You can let us know your views via: webuser@dennis.co.uk, www.facebook.com/webusermagazine, www.twitter.com/webusermagazine and forum.webuser.co.uk
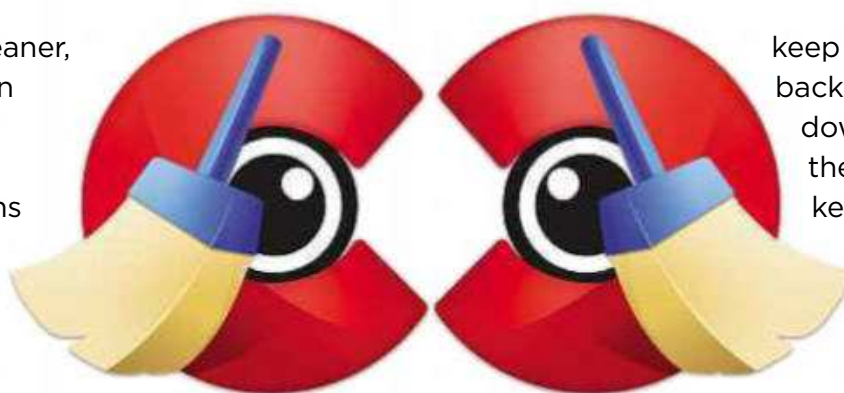
Star Email

CCleaner's dirty tricks let us all down

As a long-time user of CCleaner, I feel compelled to write in and express my disgust about the way its owner, Avast, has treated the program's millions of loyal users.

I have been using CCleaner for over 10 years and I have always found it to be a fast and reliable means of removing junk files and a way to noticeably improve my PC's performance. I particularly liked that CCleaner was free to use, whereas other so-called PC-optimisation tools cost £40 and upwards.

So it was to my dismay last year when I read that a CCleaner download contained a Trojan that could install a backdoor on users' PCs. However, I gave Piriform – or Avast, or whoever's fault it was – the benefit of the doubt, as it quickly removed the infected version before it could do much damage. But now we discover that CCleaner has deliberately been compromising its users' privacy, with hidden options that allow it to track and report our activities, and keep the program running in the background, even when we shut it down. And don't get me started on the pop-up ads and nags that now keep appearing on my PC, nor that Avast is reportedly bundling other tools with CCleaner downloads.

We once trusted CCleaner to keep our computers running smoothly and securely, but these dirty tricks let us all down and have turned a once-brilliant program into a cause for concern. CCleaner was much better when it was run by a small developer, and I am actively seeking an alternative tool that doesn't treat its users with such contempt.

SJ Pollard, via email

Tech magazines should look in the mirror

Barry Collins feels we've gone too far when a few crumbs are enough to cripple a £2,000 laptop (Page 404, Issue 456). I agree, but much of that is down to the obsessive way many computer magazines compare a device to an iPhone, iPad or MacBook, marking it down for being 0.7mm thicker than the corresponding Apple device.

On a separate note, one of your readers called people Luddites for not moving to Windows 10. He needs to look in the mirror – Windows 10 may have a long future in the corporate environment, but it lacks the immediacy and ease of use you get on phones and tablets. It's like using a sledgehammer to crack a nut if you just want to browse the web, access Facebook, write some emails, create the odd document and work on photos.

Steve Bastiman, via email

Linux Mint is a breath of fresh air

I got a good laugh from the letter in Issue 456 by the "extremely offended" Windows 7 user, about being called a Luddite. I cannot understand why anyone would be offended by what is, after all, just another person's opinion. It seems to be fashionable to take offence at the slightest thing.

The best excuse people have for not upgrading from Windows 7 to the latest version is that they failed to do so when it was free. Otherwise, it seems rather shortsighted not to run Windows 10.

That said, although I have a Windows computer for certain programs, for my everyday email and browsing I have for over 10 years used Linux because it's more reliable and secure. I therefore concur with your other correspondent's comments that it is a better choice.

I use Linux Mint (MATE version), which is similar to XP in appearance and use. The regular updates take less than a minute to install, compared with over an hour for Windows, and it does not require a restart. In my view, it is the

Quiz Answers: Issue 457

#		
1	*Puppy Love*	🐶 💕
2	*Waterloo*	💧 🚽
3	*Spirit in the Sky*	👻 ➡️ 🌃
4	*Message in a Bottle*	💬 ➡️ 🍾
5	*Tie a Yellow Ribbon Round the Old Oak Tree*	👔 🎗 ↩️ 🌳
6	*Another Brick In the Wall*	➕ 🧱 ➡️ 🧱

TECH YEAR
1999

most complete and user-friendly version, and can be tried using a live disc without having to install it.

Terry Sims, via email

Last word on the Luddite debate

I am *not* a "dinosaur", nor am I a "Luddite", as some readers have claimed (Clive Davies in Issue 454). I may wear glasses but they are not rose-tinted ones, and I am able to see through all the hype issued by companies (software or otherwise) and can work out what is right and good, and what is wrong and bad.

As Brian Walbey quite rightly says in Issue 456, these people who condemn us for not using "the latest software" believe every update to any program is the best thing since sliced bread, even when it is proved otherwise. Every company has to make money to survive but the products they try to tempt us with should be worth the expense – especially in these days of continued austerity. Both *Web User* and its sister magazine *Computeractive* list in every issue problems with Windows 10 and how to solve them. This *never* happened with Windows 7 – perhaps because it really is the best version of Windows that has ever been released.

Barry Singleton, via email

My advice for improving Gmail

Firstly, I agree with N Bradley in Issue 454 about editing the subject lines of emails to make them more meaningful. I think a lot of people should consider more seriously how they title their emails in Gmail, because some don't give you any idea of what they are about, and if you don't recognise the author, you tend to delete them.

Secondly, I think Gmail contacts should have an alphabetical index down the side, like Android does. I have suggested this to Google, because I find Gmail's system of A-H, H-T and so on very long-winded and clunky.

Lynnette Hammet, Australia

What you say...

MICROSOFT HAS REDESIGNED SKYPE YET AGAIN (bit.ly/skype458). DO YOU STILL USE IT?

I only use it if recruitment people want to chat 'face to face'.

Richard Squires

I was an early adopter of Skype beta back in 2003. Once Facebook Messenger introduced group video chat, Skype became redundant.

Chris Armstrong

Never been a fan of Skype. Previously used to send video messages on Facebook Messenger, but I find WhatsApp is more stable and secure.

Brian Brown

Only ever used Skype to talk to my daughter when she was out in Sri Lanka doing voluntary work following the 2004 tsunami. Never a fan.

Ken Green

APPLE HAS RELEASED THE iPHONE 11 (bit.ly/iphone458). HOW INTERESTED ARE YOU?

I would like to be interested (in the overhyped, unoriginal, overpriced, uncustomisable doorstop), but I have a freshly painted wall that needs to be constantly watched.

John Scott

I am getting fed up with constant marketing hype by both Samsung and Apple. I really couldn't care less about the overpriced, overrated lump of plastic they plan to foist on the world.

Iain Wolstencroft

It's not about Android vs iOS, it's about overpriced and overhyped phones. I'm typing this on a Nokia One

bought new for £50 – a 20th what an iPhone X or Samsung Note 9 costs.

Paul Grim

Oh not again! They never put decent batteries in the darned phones and never will, so I'm not buying one.

Lance Parkington

DO YOU THINK CAMPAIGNS LIKE 'SCROLL-FREE SEPTEMBER' PERSUADE PEOPLE TO GIVE UP SOCIAL MEDIA?

Nah, dry January is popular after a long Christmas of eating and drinking, but this idea of dumping social media is daft.

Si Mellor

It's a well-meaning campaign. We could all do with a break from social media now and again and if it encourages people to rethink how often they use it, then fair enough.

Lynsey Spence

As there appears to be no known link (that I can find) between regular computer use and poor health, one has to wonder what the point is.

Richard Morgan

Bah humbug. Keep scrolling...

Geoffrey Boow

SHOULD FACEBOOK MAKE IT EASIER FOR POLICE TO ACCESS PRIVATE INFO (bit.ly/facebook458)?

Yes, in the most serious cases where there is a lot of evidence, but not *carte blanche* for every investigation.

Gavin Green

No. A judge needs to make that decision and there are already mechanisms in place to do so.

Claire-Louise Devon

The police make out it's for serious offences, yet we all know they will abuse it and spy on us.

Andrew Wakeman

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Barry Collins reckons you need an MA in rocket science to understand game specs

Doctor, doctor! Can this laptop play games?

O nce people know I'm a tech journalist, they can't wait to burden me with their personal problems. It's the closest I get to feeling like a doctor. The tech question I hate being asked the most? "Can you recommend a gaming laptop for my son/daughter?". To which my answer is: no, no I can't. Because it's an almost impossible question to answer.

Games consoles are stupidly simple. Will an Xbox One game play on an Xbox One, or a PlayStation 4 game play on a PlayStation 4? Yes, of course it will. There are slightly souped-up variants of the consoles where the games might look a touch slicker or load a tad quicker, but if the console and the game match, it'll play. 'Nuff said.

Now for games on Windows. This is such a minefield, I'm astonished Angelina Jolie isn't leading a campaign against it. Let's take the system requirements for the game that every teenager will have just spent their summer holidays slumped over: Fortnite. According to its makers, the 'recommended' spec required is a Core i5 2.8GHz processor, with 8GB of RAM and an "Nvidia GTX 660 or AMD Radeon HD 7870 equivalent DX11 GPU".

I've worked on computer mags for 20 years and even I'd struggle to make sense of that. That processor, for example: does it have to be a Core i5? Would one of the latest Core i3 chips that run at 3.9GHz be better than the Core i5 2.8GHz? What about the AMD processor? I honestly couldn't tell you.

The memory requirement is straightforward enough, but what about those graphics cards? What the hell is the "equivalent" of an Nvidia GTX 660 or AMD Radeon HD 7870? How is any ordinary person meant to know this stuff?

Of course, that's why you buy *Web User*, to get much-needed no-nonsense advice. But with the greatest of respect for my colleagues in the reviews department, all they can do is run a new PC or laptop through several different synthetic benchmarks and tell you the results. Hence, you'll be told that the latest Dell Inspiron will play Goat's Grunt IV (or whatever the latest title is) at 30 frames per second at medium-details settings, and you still won't have the first clue whether it's going to let young Tarquin play Minecraft. So, in an effort to be of service, here is my rough and ready guide to gaming on laptops:

• **Those £500 laptops advertised on the TV by PC World** – these won't play a thing. You'll be lucky to get a session of Solitaire out of them. Your children will put you in a nursing home at the first possible opportunity if you buy them one of these.

• **Most mid-range laptops in the £1,000 price bracket** – likely to play Minecraft or Football Manager without setting fire to the curtains, but will almost certainly choke on modern 3D games such as Fortnite, PUBG or Far Cry.

• **Laptops with rainbow-coloured keyboards that are the size of a combi boiler and not much cheaper to buy** – these should play pretty much anything you can throw at them, at least for the next year or two, but also risk bringing down the National Grid when connected to the mains.

In conclusion: buy your daughter or son a PlayStation and be done with it!

> ❝ Can you recommend a gaming laptop for my son/daughter? To which my answer is: no, no I can't ❞

Illustration: Andrew Torrens

✚ Do you agree? Let us know at webuser@dennis.co.uk