

WebUser

9 December 2020 / Issue 516 / Best software / New apps / Time to click off

**PREPARE FOR
THE FUTURE
OF THE WEB**

Discover the exciting new
technology of tomorrow –
today p40

THE FINAL ISSUE

Logging off the web for the last time



**SPECIAL
EDITION**

2001 – 2020



£2.40

PLUS

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INTO A WI-FI WEBCAM**

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WHY COMPROMISE WHEN YOU CAN
EMBRACE THE FUTURE OF

Wi-Fi

CONNECT MORE, COVER EVERYTHING



HomeCare

DECO X60

AX3000 WHOLE HOME
MESH WI-FI 6 SYSTEM

DECO X20

AX1800 WHOLE HOME
MESH WI-FI 6 SYSTEM



Log out and exit your browser

So, this is the final issue of *Web User*. I never thought I'd be reading those words, let alone writing them, but the coronavirus pandemic has sadly put paid to any hopes we had of surviving into 2021 and beyond.

I joined *Web User* in January 2001, two months before the launch of the magazine and its website. I know that many of you have also been with us since Issue 1, and stuck with us through many changes, redesigns, price rises and the demise of the Web User Forums.

In our early days, naysayers used to sneer: "what's the point of a magazine about the internet when everything's on the internet?". But after nearly 20 years and 516 issues, I hope we've proved that there was a point. We've taken great pride and pleasure in bringing you the best websites, software, apps, workshops and practical advice every fortnight, and tried our best to keep up with the fast pace of technology news. Above all, I hope we've conveyed that the web can be a lot of fun, as well as frustrating and occasionally frightening.

We've been fortunate to have many brilliant writers, designers, editors and production staff on the team since *Web User* began, who have helped maintain the quality of the magazine despite many challenges, not least the decline of

print sales and advertising. Back in 2001, when we posed for a promotional photo with a giant inflatable spider on the roof of a 30-storey tower, I don't think any of us expected *Web User* to run for two decades.

But still, *Web User* would never have survived until now without you – our loyal, enthusiastic and discerning readers, who have helped us shape and improve the

magazine to reflect your needs and interests. I'd like to thank you all personally on behalf of the team for buying, subscribing to and supporting us over the years, and I hope you've enjoyed reading *Web User* as much as we've enjoyed producing the magazine.

I was determined that

our final issue not be too self-indulgent and sentimental (although there is a bit of that!), so instead of reflecting on the past, our cover feature looks to the future. We preview and predict the exciting new technology that could revolutionise our lives over the next 20 years, from quantum computing to Wi-Fi 7. We only wish that *Web User* was going to be around to experience it with you.

Robert Irvine, Editor
editor@webuser.co.uk
[#webuser](https://www.webuser.co.uk)



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How to use Bitly links

We use Bitly links to shorten web addresses that would otherwise be too long to print in the magazine. Type these into the address bar of your browser – not the search box – and you'll be redirected to the relevant web page.



 Average sales, Jan-Dec 2019, 24,266 copies per issue

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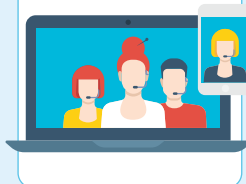
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WEB USER
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What's New Online

Track Santa's Christmas preparations

Christmas may feel different this year but you can still count on Santa to come up with the goods. Father Christmas will be flying around the world as usual and, by checking two perennially popular websites in the run-up to 25 December, you can see how he and his elves are getting on while enjoying a bit of fun along the way.

Google's Santa Tracker is once again delivering a host of activities, taking you to the heart of a colourful North Pole where you can play games, watch animations and give the bearded one a salon makeover. As always, there's an educational element too, with some games based around coding and a language tool that lets you translate Christmas greetings into different lingos. Each



day will feature something new, culminating in a location tracker that includes a live blog.

Tracking is also at the core of the annual offering from NORAD (the North American Aerospace Defence Command), which dates back to 1955. This allows you to track Santa's



whereabouts using a 3D map. You can also learn more about holiday traditions around the world, play Christmas games, watch videos and listen to festive music. Happy Christmas everyone!
santatracker.google.com
noradsanta.org

Turn your sketches into monsters

bit.ly/37jOA31

If your drawing skills are less than fantastic, you can still create fantastical creatures using Google's new artificial-intelligence tool, Chimera Painter. Choose body parts such as a head, torso, wings, claws and tail, then draw shapes in the canvas area of the screen to fashion a monster before hitting Transform and seeing it converted into an impressively artistic creation.



Chimera Painter has been trained on hundreds of thousands of 2D renders of 3D-creature models using the developer's own CreatureGAN machine-learning model. You have different brush sizes at your disposal and can erase any mistakes you make. There's also a selection of example drawings and their resulting creatures, so you can get an idea of how intricate and professional the transformations can be. Much better than our effort, that's for sure!

Delve into the BBC's Motion Graphics Archive

bit.ly/35XKuxV

Ever since television first flickered into life, our eyes have been bombarded by motion graphics, from opening titles and idents to promotional trailers and programme content sequences. Now, you can search through thousands of them, stretching back to the 1940s, at the BBC Motion Graphics Archive.

Pick a decade, choose a genre and select a BBC channel to uncover the intriguing historical footage. See the opening titles from *Andy Pandy* and view 1950s newsreel titles, or discover how BBC2 introduced itself for the first time in 1964 and relive the first taste of *Cheggars Plays Pop* in 1978.

Nostalgia aside, what makes this archive so compelling is that each snippet comes with information about the concept and the creative process. Videos can be downloaded and there are links to the BBC listing information printed in the *Radio Times*.



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

Save Spotify podcasts for later

www.spotify.com/uk

Spotify has introduced a new feature that lets you save individual episodes of podcasts rather than subscribe to an entire series. Simply select the Plus button next to a podcast episode and it will be placed under Your Episodes in the Podcasts section of the Spotify app for iOS and Android, ready for listening at any time.



NEW VOICE COMMANDS

Schedule smart lights
If you have lights compatible with Google Assistant, such as Philips Hue, you can now say: "Hey Google, turn on the lights at 8am" or "turn on the lights in 10 minutes".

Control Roku devices
The latest Roku software update - RokuOS 9.4 - supports HomeKit, so you can issue a voice command to Siri on your iPhone, Apple Watch or HomePod to control your Roku devices.

Get flight information
Glasgow Airport now lets passengers use Alexa to hear live flight details, discover wait times, submit lost property info and get COVID-19 information. Say: "Alexa, start Glasgow Airport".

Discover books in the Open Library

openlibrary.org/explore



A new Explore interface has been added to the Internet Archive's Open Library, which makes

discovering books easier by arranging them on shelves and organising them by subject matter. Using a slider, you can sweep your eyes along each row of books in the hope of coming across something you may never have considered. You can also delve into subcategories to find books that better suit your taste. As always, clicking a title on this wonderful site lets you find out more about it, see a preview and borrow or read.

Find predicted Christmas bargains

bit.ly/3m2W4NJ

Christmas is almost upon us, but there are still bargains to be had. To find the best deals, MoneySavingExpert has launched a predictor that looks back at previous years to see what retailers were offering and the likelihood of them doing so again. Simply scroll down the list to see the predictions, and use it to decide whether you should consider buying now or holding out. In each case, the site explains its reasoning and, last year, it got 89% of its predictions spot on or thereabouts.



Visit 100 cultural sites in Google

www.google.co.uk

Google Arts & Culture has launched a new virtual-tour feature that's accessible directly from Google Search on your phone. Look for one of 100 global museums and cultural sites, and you can view 360-degree Street View images, photos and artefacts. Try the Palace of Versailles, Valley of the Temples, Mount Haguro in Japan or the Palace Museum in China, then scroll and tap Virtual Tour in the About section.



+ Play emulated Flash games

bit.ly/33dPmwY

Adobe is ditching Flash, but you can still enjoy thousands of Flash animations and games via the Internet Archive's Ruffle emulator. You don't even need to install a plugin.

View song info on Amazon Music

www.amazon.co.uk/music

Listen to a song on Amazon Music and, if there's an X-Ray icon at the bottom of the screen, you can swipe up to view interesting trivia about the track, such as release dates and info about the musicians.

Use Google's iOS widgets

www.google.co.uk

With iOS 14, you can use new Gmail widgets to search your inbox, check unread mail and compose a message. Widgets are also available for Google Drive and Google Fit. Each needs the corresponding app to be installed first.

New tech regulator to limit Google and Facebook's power

What happened?

Governments around the world have struggled for years to regulate big tech companies, and British politicians are now making a fresh attempt by setting up a new regulator.

The latest plan is to create a Digital Markets Unit at the Competition and Markets Authority (CMA) to monitor anti-competitive behaviour and unfair business practices (bit.ly/39qT7TF). The specialist unit will write a new code of conduct for tech companies, but unlike previous codes, this one will be enforceable. This comes as the CMA is investigating the digital advertising market, in particular big tech's control over it.

The new unit will not cover all technology companies, only those deemed to be of "strategic market status". It's not clear what that actually means, since the unit hasn't yet been set up, but it's clear that it will include tech giants such as Google and Facebook.

Business secretary Alok Sharma acknowledged that these companies contribute to the economy and make our daily lives better, "but the dominance of just a few big tech companies is leading to less innovation, higher advertising prices and less choice and control for consumers. Our new, pro-competition regime for digital markets will ensure consumers have choice, and mean smaller firms aren't pushed out."

The move follows US regulators taking Silicon Valley tech giants to task at repeated committee meetings,

though as yet such pressure has sparked little noticeable change. Outgoing US president Donald Trump has tweeted about changes to laws that protect social-media companies from what users post, but whether any action is taken during the remainder of his tenure remains uncertain.

France has taken action against US tech firms over taxes with a new law introduced last year that requires digital companies to pay 3% of their earnings from online advertising and sales. Such companies often find ways to push their profits down by shifting money around to reduce their tax burden – for example, ads bought for Google UK are processed in Ireland, which has a lower tax rate, while Amazon is based in Luxembourg.

The new French tax aims to close such loopholes, but it failed to collect any money last year after the US threatened a trade war. After a year of negotiations, no solution has been found, which could mean such companies are liable to pay hundreds of millions of Euros. As with the CMA unit, the rules only apply to the largest tech companies — in this case, about 30 firms.

How will it affect you?

The new regulatory unit will be pulled together by April, though the CMA is already investigating the ad market so some work could be done beforehand. The unit will only target companies that have substantial and enduring market power, so smaller businesses need not be concerned.

The Digital Markets Unit will specifically target the impact of a



handful of firms dominating online areas such as advertising and data collection, looking at the effect on the news industry, consumer choice and control, and any reductions in innovation.

None of this will happen quickly. A new code of conduct will be the first milestone to watch for, and that may require the results of the investigation and a further consultation before anything is agreed in writing.

What do we think?

There's no question that regulators need to get a better grip on tech giants. A handful of firms dominate our lives, work and even our governments. While we don't want to restrict innovation, and enjoy using the products they create, it's high time something new was tried.

Is a unit at the CMA the answer? It's better than nothing, but no matter how well funded the unit is, the regulators will have their work cut out. Silicon Valley firms spend millions of dollars a year on lobbying in the EU alone, with a huge staff of lawyers to help make their arguments and hunt out legal loopholes.

After all, the CMA and other regulators, notably the Information Commissioner's Office, have yet to take real action against tech giants. It's not clear why this unit would fare any better, but it's surely worth another shot.



The government's new Digital Markets Unit will keep an eye on Google and Facebook

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

Google extends Windows 7 Chrome support

What happened?

Still using Windows 7? Then you'll be able to use the Chrome browser for a little longer, thanks to Google.

Support for Chrome on the ageing Microsoft operating system was originally due to end in mid-July 2021, but Google has extended the deadline to mid-January 2022. Google said the extension was sparked by research suggesting that a fifth of businesses still haven't upgraded to a more modern version of Windows, with some held back by this year's tough economic conditions.

Windows 7 was released in October 2009, and

Microsoft ended support for the OS in January 2020. This means Google is supporting Windows 7 for even longer than Microsoft.

How will it affect you?

If you or your business still use Windows 7, you should update if you can. Microsoft no longer issues security updates for Windows 7, which means any vulnerabilities will go unpatched. Using an up-to-date browser, however, will add an extra layer of protection.

If your computer still has robust enough specifications, it may be possible to upgrade your existing PC from Windows 7 to Windows 10. You can find the list of spec

requirements at bit.ly/3qf8CUX.

However, it's worth noting that Windows 10 costs £120, so it may be wiser to buy a cheap new laptop with it preinstalled.

What do we think?

It's good news that Google is extending this deadline by a few extra months, because some businesses have applications that only work in Windows 7 or can't get staff into the office to run upgrade programs during the pandemic. Having an up-to-date browser will help those companies be slightly more secure until they can complete their OS migration.



For everyone else, it's worth finding a way to upgrade to Windows 10 sooner rather than later, if finances allow. The newer OS has had its rough edges smoothed out and it will feel familiar to most Windows 7 users.

Microsoft lets bosses snoop on workers

What happened?

Microsoft has been criticised for letting bosses snoop on their remote workers. Last year, the company added a feature called Productivity Score to its Microsoft 365 suite of cloud-based office productivity tools, such as Outlook and Word.

Productivity Score gathers data about everything from computer performance to how much time employees spend in shared documents, comparing it to benchmarks set by other users. The idea is that managers will better understand staff productivity, and see where improvements can be implemented.



Researcher Wolfie Christl spotted the feature, sparking criticism of the tool as remote workplace surveillance, especially as more people are currently working from home. Microsoft said in a statement that the tool was opt-in, aggregated over a month and designed to spot common issues such as long boot times, inefficient document collaboration or poor network connectivity.

How will it affect you?

Your employer can't force you to opt into such a program but it can be difficult to say no when a boss

makes the request. Christl suggested it may not even be legal in the EU.

According to Christl, the tool lets a company see the frequency with which a specific employee sends emails and the length of time they spend in workplace chat channels. Microsoft said it was necessary to have data on individual employees in case they had a specific technical problem that IT needed to solve.

What do we think?

Productivity Score has two sides, which Microsoft calls 'people experiences' and 'technology experiences'. The latter makes some sense: if a company could boost worker productivity by investing in better networks and computers, that's useful information to know. But people work in different ways. An employee avoiding the workplace chat app, for example, is no proof of lack of productivity.

This is an ill-conceived tool that understandably causes concern, and provides little real benefit for companies. It's remarkable that Microsoft ever thought it would be a good idea.

Amazon and eBay hit by games console scams

What happened?

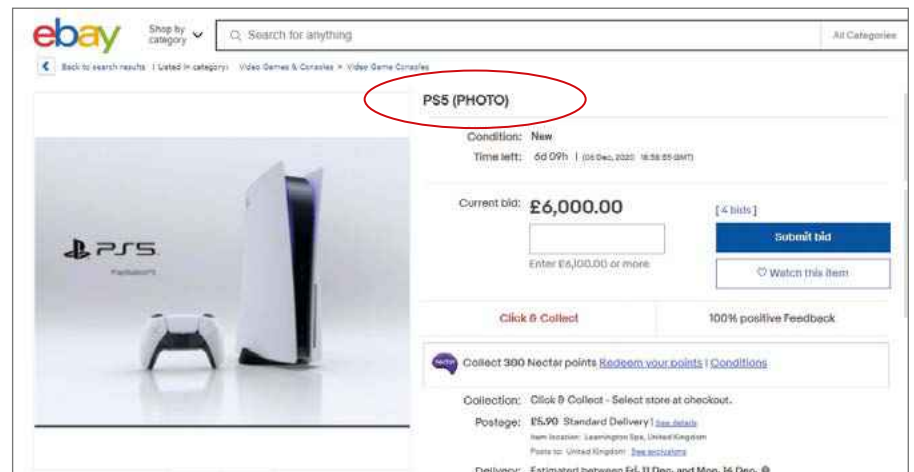
Last month saw the launch of next-generation games consoles the Xbox Series X|S and the PlayStation 5. Commanding prices of up to £500, and with limited stock, it wasn't long before scammers began to take advantage of gamers desperate for the devices.

Problems were already rife, with many prospective purchasers claiming that bots were being used to buy up as much stock as possible, which they then put on sale at triple or quadruple the price. And the issues intensified after launch.

Some people who ordered their games consoles from Amazon claimed that unscrupulous delivery drivers were going to their front door, registering the package as 'delivered' and then driving off with the consoles. One Amazon driver has already been sacked after being filmed doing exactly that.

Others reported that their parcels had been switched, with Xboxes and PlayStations replaced with heavy boxes of cat food and other cheap, non-gaming items. By the time the buyer discovered the ruse, it was too late.

Amazon and eBay said that they are investigating these reports. In the meantime, eBay told users to "exercise caution" and "thoroughly read the listing description" when making purchases. "We condemn these opportunistic sellers who are attempting to mislead



other users," the company said, "Buyers who receive an item which is not as described are entitled to a refund via our eBay Money Back Guarantee, provided they completed the transaction on the eBay platform".

How will it affect you?

If you're not careful, you could find yourself out of pocket. The best way to ensure you're getting what you've paid for is to collect it yourself from a reputable store. If you do buy online, especially from anonymous sellers, make sure to read the fine print. One scam saw a PlayStation 5 go on sale for £500 and reach a top bid of £6,000 – scroll down the page, though, and

eagle-eyed shoppers might notice that what was actually for sale was a photo of the console, not the PS5 itself. eBay has said it is removing these listings, but it's best to stay vigilant, research the sellers and avoid impulse purchases.

What do we think?

For the buyers, we have nothing but pity; for the scammers, nothing but contempt. It's not surprising to see people take advantage of others – even after this hellish year – but this is completely unwarranted. Amazon and eBay need to clamp down on these scams as soon as possible. Expect to see this happen more and more until Xbox and PS5 stock levels even out.



FIRST LOOK

Amazon Luna Controller amzn.to/3qay2ms

Cloud gaming is becoming more popular, and Microsoft and Sony have long championed the ability to stream games to your devices in the same way you'd watch Netflix on your phone. Last year, Google launched Stadia, and now Amazon, which owns game-streaming site Twitch, has entered the fray with Luna.

In anticipation of the platform's unveiling, the company has shown off its new Amazon Luna Controller. Taking design cues from both the Xbox and PlayStation controllers, the cloud-connected device makes gaming on the go simple. For anyone who's used the Nintendo Pro controller, the unit will feel very familiar, with its tapered grips, classic



D-pad and sturdy shoulder buttons. As with most Amazon devices, there's also a button to summon Alexa and ask it to launch any game in your library.

One of the main benefits is the controller's built-in cloud connection, which allows it to "connect directly to Amazon's custom game servers when playing on Luna, reducing roundtrip latency by 17 to 30 milliseconds vs a local Bluetooth connection among PC Mac, and Fire TV." In a world where split-second reactions make all the

difference between victory and defeat, this could literally be a game-changer.

Since the Luna controller primarily runs via Wi-Fi, it is also pretty smart. When Stadia launched, Google promised that you could almost instantly change between devices – start playing on your laptop, move to your TV, then carry on gaming on your phone. Luna promises something similar, letting gamers connect and switch between all their devices. You can also connect to devices using Bluetooth (which won't seamlessly switch between platforms) or a USB-C cable.

The controller – and the Luna service – is currently limited to the US, where it costs \$49.99 (£36.92). It's expected to arrive in the UK early next year.



WHAT'S THE RUMOUR

Will Windows soon run Android apps?

Since the death of the Windows Phone, Microsoft has made a point of shifting many of its apps to Android. Outlook, Word, Edge, Teams and more can now run on most Android phones.

But rumours suggest that we could see the reverse happen, as industry sources claim that Android apps will soon run on Windows 10. Few details are known, but it's thought that they could arrive as early as next year.

Quite how Microsoft intends to bridge the compatibility divide between computer and phone is unknown. Experts believe the company needs to somehow offer support for Google Play Services, the proprietary package used by almost all Android apps to update, authenticate and sync. And that takes more than simply flipping a switch. According to those in the know, while some platforms have integrated Android apps, others have been unavailable when requiring a connection to Google Play Services.

It's not the first time Microsoft has attempted to bring Android to Windows. Some readers may remember the little-known Windows Bridge for Android. Known as Project Astoria, it began trying to port apps to the operating system back in 2015, before it was cancelled.



In the meantime, you can run BlueStacks (www.bluestacks.com) to emulate Android on your computer.

LIKELIHOOD RATING



If this doesn't happen, it won't be for lack of trying, and technical complications will be the biggest hurdle to overcome. A lot has changed in the five years since Microsoft's previous attempt, and Google may be more accommodating this time around. It's in the interests of both companies, as well as developers who will only need to code an app once, to make this work. If it does, in years to come we'll probably look back and wonder why we used to limit apps to phones in the first place.

↑ WEBOMETER ↓

WE LIKE...

↑ Twitter warns users about misinformation

Twitter will now warn users when they 'like' a tweet that contains misleading information. This follows new rules introduced by the social network earlier this year to highlight and prevent misinformation about the coronavirus pandemic and the US election.



↑ Three rolls out 5G to 154 UK locations

Three has announced that its 5G service is now available in 154 towns and cities in the UK, beating EE's current tally of 112 and O2's of around 100. Three customers will have access to 5G with "no speed caps and at no extra cost" on all the mobile network's plans.



WE DON'T LIKE...

↓ Tier-checking website crashes on launch

The government's online tool for checking coronavirus restrictions in England (bit.ly/2KTICyb) spent most of its first few days offline. Visitors who wanted to find out which 'tier' had been assigned to their postcode instead saw a message about "technical difficulties".



↓ Amazon outage breaks smart devices

An outage on Amazon's Web Services platform wreaked widespread havoc on websites and smart devices on 27 November. Ring doorbells, Roku streaming sticks and Roomba robot vacuum cleaners stopped functioning in many households for several hours.



What's new on Kickstarter

Our favourite new project on the crowdfunding site

Oree

bit.ly/2VeUMDN | From £50

As the green revolution gathers pace, we're witnessing technology's role in shaping an eco-friendly world. Oree is a portable generator that breaks down biodegradable waste – specifically, food waste and animal manure. There are two devices at play: a biogas digester bin, which houses the waste and converts it into biogas and sludge that can be used for fuel; and the self-charging generator that runs on the biogas. Everything is controlled via the Oree app. Supporting the project gets you a range of Oree merchandise and your name engraved on a device.



Stay Safe Online

News about the latest threats and advice from security experts

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

350,000 Spotify users hit by hack

Hackers have accessed as many as 350,000 Spotify user accounts as part of a "credential-stuffing" attack, without having to breach Spotify's systems.

According to security researchers at VpnMentor, the attacks were successful because hackers reused logins from previous data breaches. They simply needed to try various username and password variations on Spotify – a process known as credential stuffing – until they found matches.

The researchers discovered the issue in July and contacted the streaming service within a week. Later that month, Spotify initiated a password reset for all affected users, rendering the stolen information useless.

bit.ly/2HDJPbD



NHS leaks 284 patients' data

NHS Highland suffered a data breach in which the details of 284 diabetic patients were sent to other people. The information included patients' names, contact details, their dates of birth and their hospital identification numbers.

After discovering the breach, NHS Highland referred itself to the Information Commissioner's Office (ICO) and notified affected patients by letter. The health board said that no sensitive medical information was shared with the 31 people who received the data.

Pam Dudek, NHS Highland's chief executive, said: "NHS Highland has directly contacted all of the patients affected by this data breach to apologise unreservedly. We have reported the incident to the Information Commissioner and are holding an investigation into this matter."

bbc.in/364VVUZ



Sophos compromises customer data

UK cybersecurity firm Sophos has warned customers that their data has potentially been leaked online due

to a misconfigured database. The company said it was alerted to the problem by a security researcher, and that it fixed the issue immediately.

However, a "small subset" of the company's customers were affected, with first and last names, email addresses and phone numbers thought to have been accessed.

"On November 24, 2020, Sophos was advised of an access permission issue in a tool used to store information on customers who have contacted Sophos Support," read an email sent to customers. It added that further safeguards had now been implemented to prevent future leaks.

zd.net/3l9q1KS



Security Helpdesk | Your questions answered by security specialists

THIS ISSUE'S EXPERT:
David Emm, principal security researcher at Kaspersky
(www.kaspersky.co.uk)



Q Will there be more online scams to watch out for in the run up to Christmas?

Rin Tin Tin, Twitter

A Recent research by Kaspersky found that more than four in five (84%) consumers are willing to share personal information,

such as email addresses and phone numbers, with retailers to save money on Christmas shopping. Fraudsters are therefore likely to take advantage of this increased desire for bargains, which is partly

fuelled by the economic crisis and job losses caused by the COVID-19 pandemic.

Emails with bargains and offers land in our inbox and, with just a few clicks, the goods can be winging their way to our homes.

This can be a risky business at the best of times. But as brands launch seasonal sales ahead of what is predicted to be one of the busiest



shopping periods ever for online retailers, scammers are more primed than usual to take advantage of unwitting consumers.

Given the year we've had, any bargains or major discounts will be very tempting, as many people try to make the most of the festive period. However, at Kaspersky, we encourage shoppers to be mindful and

“Fraudsters are likely to take advantage of the increased desire for Christmas bargains”

think about the data they are handing over in a bid for a bargain.

Consider whether it's absolutely necessary to share your personal information for each purchase. Could it just be a trick to lure you into disclosing your data?

By ensuring deals are genuine before making any purchases, you can reduce the risk of potential pitfalls and enjoy your Christmas.



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★ Best New Websites

Site of the Fortnight

BOOKS

RELAUNCH

World of Usborne usborne.com

Usborne has been publishing children's books for more than 40 years. Its new-look website not only lets you browse its vast catalogue but also provides activities. These include a free weekly audio story and fun facts, along with downloadable colouring sheets and puzzles that are sure to keep kids coming back for more. Finding books is easy: select one of six age categories and filter by genre or author. What makes the site stand apart is its huge number of links to third-party websites that let children dive deep into topics raised within a book, making World of Usborne the perfect literary companion for young readers.

Our rating



LOTS OF ACTIVITIES
Download activity sheets of puzzles and pictures, and encourage kids to write their own stories



BROWSE TOPICS

There are more than 40,000 hand-picked links to third-party sites that help bring books to life



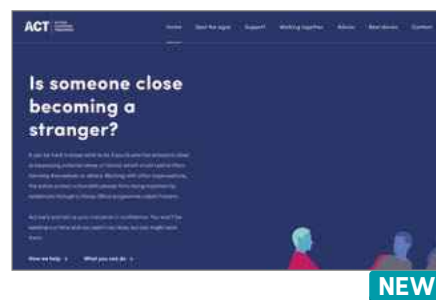
MUSIC

RELAUNCH

Tower Records towerrecords.com

Tower Records became an iconic part of the US music retail scene in the 1960s, eventually finding its way to the UK in 1984 when it opened its first store in London. After declaring bankruptcy 14 years ago, it's back as an online service selling more than 500,000 titles on CD, cassette and vinyl, and the site's design evokes the cultural vibe of the original stores. All tastes are catered for, but a web version of Pulse – the music magazine that ran from 1983 to 1992 – tends more towards the younger end of the market. The same is true of the live Instagram events. Products prices are listed in Euros rather than sterling, but we're still singing the site's praises.

Our rating



TERRORISM

Act Early actearly.uk

If you're worried about someone's behaviour and fear they're in danger of being radicalised, this website from Counter Terrorism Policing provides advice on spotting the vital signs, while explaining how to address your concerns. Clear information is presented in a simple design, so you can view bullet points of key vulnerabilities before deciding whether to delve deeper for a full explanation. You can also read a host of sympathetic case studies about how radicalisation can manifest itself. Should you become anxious while browsing, a button to exit the site is ever-present.

Our rating



We review this fortnight's best new and relaunched websites and rate them for content, design and features



READ THE BLOG

The blog delves behind the scenes into Usborne's history, and provides lots of tips and advice

LEARN PRONUNCIATIONS

Kids can learn how to pronounce dinosaur names as well as words in a range of languages



RELAUNCH

PETS

Company of Animals

companyofanimals.co.uk

Dog owners would be barking mad not to visit Company of Animals. Founded in 1979, the company creates products that help with pet training and behavioural problems. Its revamped website also offers lessons, with virtual training costing up to £96 an hour. Particular issues are explored in a behavioural blog called Our Community or you can head for the Ask The Experts section to find products for specific problems. Further help is provided in a refreshingly comprehensive FAQ but it's not all serious – check out the playful Instagram images, guaranteed to melt your heart.

Our rating



RELAUNCH

TOURISM

Visit Essex

www.visitessex.com

Tourism chiefs in Essex are hopeful that lockdown restrictions will be sufficiently lifted to give visitors greater freedom to explore the county. As such, they've relaunched their website to better showcase the many things you can see and do, though the result can feel a tad overwhelming. There's far too much distracting text on each page and the drop-down menus are overstuffed with links. Thankfully, the handy itinerary builder lets you click 'Add to Planner' on any attractions you like the look of, and you can browse the Essex Bucketlist of 20 things to do when you get there.

Our rating



RELAUNCH

TECHNOLOGY

The Turing Trust

turingtrust.co.uk

Founded by the family of the brilliant computer scientist Alan Turing, this organisation installs educational software on refurbished IT equipment and donates it to children in Africa. Boasting the charity's new logo, this relaunched website streamlines the donation process using a simple form that lets you indicate how many computers you're donating, and their age and type. You can learn about the Trust's work, catch up with the latest news and sign up to its newsletter. We'd like more about Mr Turing himself, but any books you buy via the site earn the Trust affiliate money from Amazon.

Our rating





HOUSEHOLD

The Heating Hub

www.theheatinghub.co.uk

Boilers aren't cheap so you don't want to land yourself in hot water by choosing the wrong one. This new service claims to offer unbiased boiler comparisons, impartial guides and estimates of installation costs. Start at the Help Centre by reading 12 steps towards getting a new boiler, from choosing the right size to maximising efficiency. You can then browse in-depth articles and use the quote calculator to obtain an estimate based on your home and boiler type. You can also opt to have Heating Hub call you to discuss your requirements, but this costs £120 and is the only way to discover its recommended installers.

Our rating



MOTORING

CaravanCloud

www.caravancloud.com

CaravanCloud evolved from a buy-and-sell website for caravans, motorhomes and lodges. It now also makes it easier to find campsites, caravan parks and glamping locations by featuring enticing destinations on the homepage that you filter by UK region. The site's fresh design makes browsing a breeze, with results pages showing summaries and photos, which you click for full descriptions. The quality of the content is down to the individual sellers, who each pay from £9.99 for an ad. Negotiations take place directly but personal profiles are verified for added peace of mind, and customer service is available 24/7.

Our rating



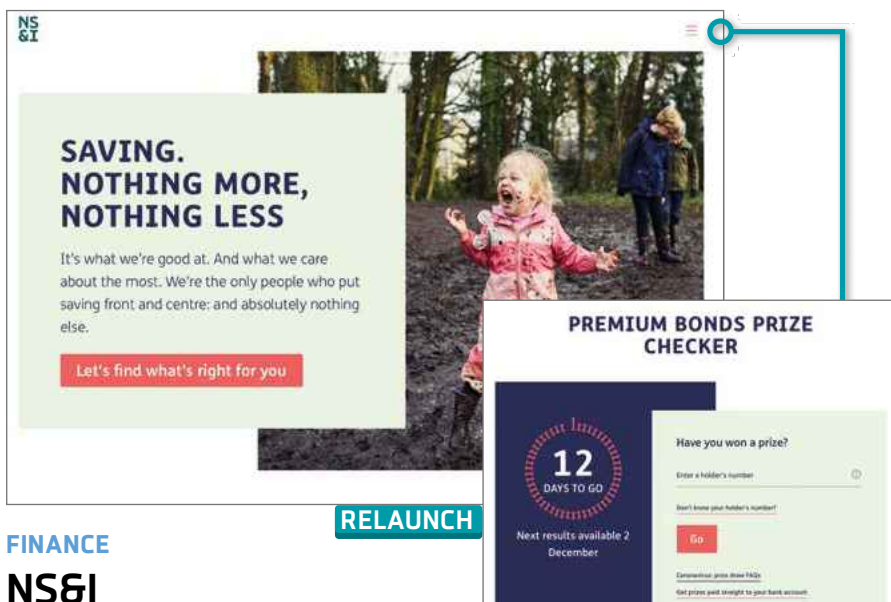
COMICS

Wow Comix

wowcomix.com

Comics and graphic novels are visual by nature, which makes Wow Comix's website a tad disappointing. Set up shortly after England's second lockdown closed its physical stores, the site feels rather rushed – but that's understandable given the circumstances. On the plus side, there are lots of navigation options and thousands of products, including figures and trading cards. Deals of the day, staff picks and bestsellers are highlighted, and filters help you find what you're after. Buying items is intuitive and points are rewarded for purchases. It's clearly a work in progress and the business is commendably trying its best.

Our rating



FINANCE

NS&I

www.nsandi.com

Interest rates are plummeting, so it's harder than ever to make your money work for you. The revamped National Savings and Investments site has refreshed its Premium Bond prize checker, so you can use filters to find the ideal account for your savings. You can also complete tasks online that once required sending a form, such as withdrawing cash from an Investment Bond; and read a selection of stories from savers. We like how the search results show the interest rates and the amount you can invest, while the account pages include a handy FAQ and essential facts. Head to the Media Resources section for a timeline and overview of NS&I.

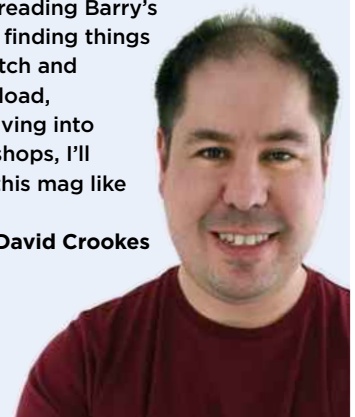
Our rating



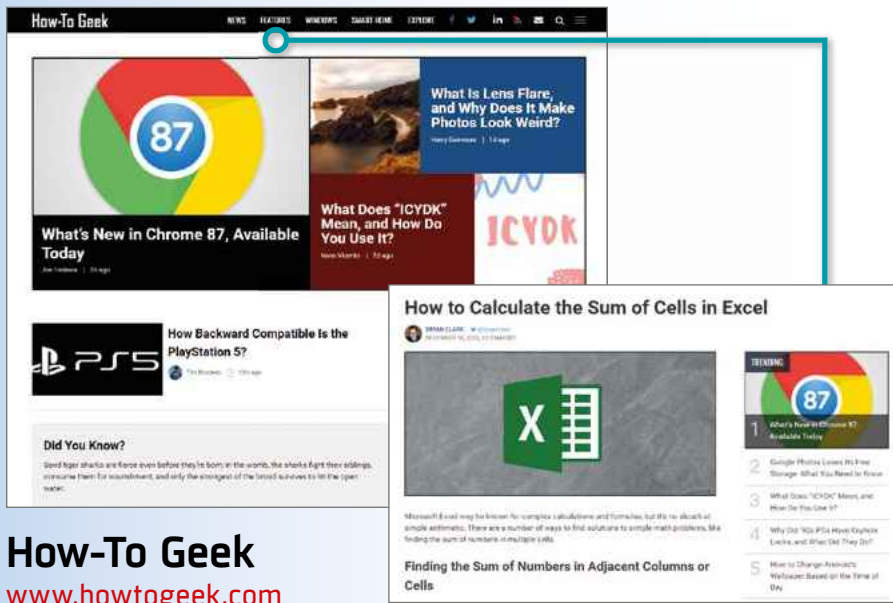
ALL THE BEST!

Discovering *Web User* was to cease publication after nearly 20 years came like a bolt from the blue. But COVID-19 hit us hard, and we can only reflect on how much the magazine has helped, advised and entertained readers (and writers) for so long. I'm honoured to have been in the company of such a talented team of journalists, and it's been a pleasure to have dived into hundreds of websites each year to uncover the cream of the crop. Whether it's finding tools for What's New Online, researching topics for FAQ, reading Barry's rants, finding things to watch and download, or delving into workshops, I'll miss this mag like mad.

David Crookes



ESSENTIAL BOOKMARKS THIS ISSUE: Top tech tips websites



How-To Geek

www.howtogeek.com

Who will you turn to for tech tips, now that *Web User* is off to the great newsagent in the sky? Top of the list is How-To Geek, an outstanding free website that offers troubleshooting tips and plain-English articles. These explore the latest software, apps, web tools and gadgets, as well as quirky tech stories such as 'Why Did 1990s PCs Have Keyhole Locks, and What Did They Do?' (here's the answer: bit.ly/35BGUCU). The massive archive of free content is beautifully organised, with main sections (such as Windows, iPhone, Android and Security) a click away from the Menu button. You don't have to register to unlock any content, let alone pay, but you can sign up for email newsletters and follow HTG on social media, including YouTube (bit.ly/2Uwliaa).



Computer Hope

www.computerhope.com

A 22-year-old veteran of the tech-tips web, Computer Hope started out in 1998 offering troubleshooting tech help to computer users who didn't want to fork out a small fortune for IT support. The most useful area of this supremely clear, easy-to-understand site remains the Tips section, where you can see visitors' favourite tips at a glance (keyboard shortcuts and Excel advice are eternally popular), and explore categories such as computer buying advice and command-line tips. Pages are clutter-free, with only the illustrations and screenshots that you really need, so all the articles load very quickly, even on a slow connection or in your mobile browser.



Ghacks

www.ghacks.net

Discover the day's new software releases and app updates from this authoritative site, started in 2005 by former IT insider Martin Brinkmann. The free daily newsletter has long been the first place we've heard about new programs, which Martin and his four fellow authors review and explain in detail within hours of their release. For example, Chrome 87 came out on 17 November and, by the next morning, Ghacks had posted an in-depth article covering all the browser's new features, with links to the relevant sections of the Chrome Status website and update log. Ghacks does assume some knowledge of tech jargon, but if you're okay with that, you'll find it an unbeatable source of software news and tips, all completely free.



MakeUseOf

www.makeuseof.com

The major strength of MakeUseOf is putting the latest tech developments and news into everyday context, with topical articles such as 'What Is Social Engineering? Here's How You Could Be Hacked' and 'Microsoft Wants You to Stop Getting 2FA Codes Over the Phone', which are packed with easy-to-follow advice. There are plenty of timeless tech features and videos, with the Windows and Google sections in particular full of useful guides. It's a Canadian site, so gadget reviews and offers are priced in dollars, and some of the content refers to tools that aren't available in the UK (for example, streaming service HBO Max). But by and large, these articles feel like they've been written for you and you alone.



Bleeping Computer Forums

bit.ly/3lMpi3o

If you find often yourself yelling "bleeping computer!" (but not quite in those words), then this forum is the place to come for help. Its knowledgeable tech users offer free help and advice on Windows, security and hardware problems, including how to install and use specific software, how to get rid of malware, and how to build your own computer. The site's non-forum sections include virus removal guides, glossaries and tutorials, plus the latest news. You can also send your own tips for publishing. But the site's community is its greatest strength, and its forum may be the only tech support you ever need.



What To Watch Online

Pick of the fortnight

NOW TV



Swap Canada for Liverpool in the final season of *Tin Star*

From 10 December

Tim Roth is back – and back in Britain – as the sheriff with the dodgy past, in the third and final season of *Tin Star*. Also returning are Genevieve O'Reilly and Abigail Lawrie as his wife and daughter, all now relocated from the magnificent Canadian Rockies to Merseyside, where they must confront the dubious events of 20 years ago.

Christina Hendricks doesn't appear in this season, but instead we have the brilliant Ian Hart (Professor Quirrell in *Harry Potter* and John Lennon in *Backbeat*) as Merseyside's top crime boss. The new season was filmed on location in 2019 (with the help of dozens of Everton fans: bit.ly/2Jf1R48), but the events of 2020 prevented it from reaching screens until now.

Six episodes air weekly on Sky Atlantic, so you can stream new episodes on-demand each week via Now TV with an Entertainment Pass. Watch the official trailer at bit.ly/2HxpaGb.



Get marooned in the desert in *Moonbase 8*

From 21 December

John C Reilly stars as a trainee astronaut in Showtime / Sky Comedy's six-episode comedy, which explores very 2020 themes of loneliness, quarantine and incompetence to gently funny effect. Reilly is marooned in the Arizona desert along with US comedy regulars Fred Armisen and Tim Heidecker as they try to qualify for their first lunar mission and face challenges such as Elon Musk's SpaceX setting up camp next door. Check out Showtime's official trailer at bit.ly/361wDqo.



Drive across Madagascar in a new *The Grand Tour*

From 18 December



James May, Richard Hammond and Jeremy Clarkson quickly reached the top of the Amazon Prime Video tree after defecting from the BBC in 2016 to launch *The Grand Tour*, which has settled into an annual launch around Christmas. Season 4 continues the theme of globetrotting adventures behind a variety of wheels, with the latest trailer (bit.ly/3nT8A2W) showing the trio on a gruelling island treasure hunt across glorious Madagascar.

Survive interplanetary war in Season 5 of *The Expanse*

From 16 December

The Expanse was one of the best-



reviewed sci-fi shows of recent years, but original network Syfy cancelled it after three seasons. Amazon cannily rescued the show, and Season 5 is based on *Nemesis Games*, the fifth *Expanse* novel by James SA Corey (www.jamessacorey.com). The story focuses on the Rocinante spaceship crew striving to survive interplanetary war.

All 10 episodes of Season 5 join Season 1-4 on Amazon Prime Video at amzn.to/3649N1q on 16 December. Meanwhile, you can watch the new season's trailer at bit.ly/33bL75d.

Survive an island of teen girls in *The Wilds*

From 11 December

Mean Girls meets *Lost* meets *Lord of the Flies* in Amazon's latest teen drama,

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



billed as "part survival drama, part dystopian slumber party". A plane crashes – by accident, or was it? – on a deserted island, forcing its teen passengers to reconcile their differences and figure out how to survive. Watch the official trailer at bit.ly/3pWirXy.

All 10 episodes come to Amazon Prime Video on 11 December at amazon.to/3nZuwcz. As an early Christmas present, Amazon is making the first episode free to watch for non-subscribers on its website, and also YouTube, Twitter and Facebook via [@PrimeVideo](https://www.facebook.com/PrimeVideo) and [@PrimeVideoUK](https://www.facebook.com/PrimeVideoUK).

Watch 33 years of *An Audience With...*

From 10 December Billy Connolly, Ronnie Corbett, Victoria Wood, Kenneth Williams and Peter Ustinov are among the legends who performed for an audience of celebrity guests in ITV's



An Audience With... series, which ran for 33 years from 1980 to 2013. BritBox will be screening the most iconic performances, which also include turns from Bob Monkhouse, Dame Edna, Harry Hill and Jimmy Tarbuck.

Also arriving on BritBox this fortnight are Tony Curtis and Roger Moore in seventies TV series *The Persuaders!* and

Richard E Grant in the 2015 film of *Jekyll & Hyde* (both from 10 December), along with all episodes of the Beeb's 2019 hit *Gold Digger*, with Julia Ormond (from 18 December).

Find out *How to Get Away with Murder*

From 9 December

Viola Davis returns for a sixth and final



season of ABC's entertaining legal melodrama, exclusive to Netflix in the UK. This tense tale of a law professor and a group of ambitious students who get drawn into a real-life murder conspiracy has received fantastic reviews from the moment it started in 2014, so the box set may be ideal for a full-winter hibernation binge. Watch all six seasons on Netflix at bit.ly/2V2JLoI from 9 December, and catch the latest trailer at bit.ly/3m5uWO1.

In case you missed it...

Ridley Scott's latest sci-fi epic, 10-part series *Raised By Wolves*, about androids tasked with raising human children on a mysterious



planet, has now begun streaming via Now TV. Watch it with an Entertainment Pass, and check out the official trailer

at bit.ly/33gNDXS.

Come back down to Earth with a new collection of bite-size (well, 15-minute) QI clips, available now on the BBC iPlayer at bbc.in/361eSr7,

with a new instalment arriving each Tuesday.

Netflix has just added David Fincher's new film *Mank*, starring Gary Oldman

as *Citizen Kane* screenwriter Herman J Mankiewicz (watch the trailer at bit.ly/2JjxnOQ), plus a fourth season of animated comedy *Big Mouth* (bit.ly/39gxMfx).

And finally, Taylor Swift surprised fans with the last-minute launch of a documentary about the making of her latest album. *Folklore* is available now to stream via Disney+.



What to watch online... at Christmas & beyond

N Watch new Netflix films with George Clooney and Chadwick Boseman

There isn't a Santa to be seen in the handful of major Netflix Original films arriving in the next few weeks.

First comes *Ma Rainey's Black Bottom*, with Viola Davis and the late *Black Panther* star Chadwick Boseman. The 1920s-set film arrives on 18 December; watch the trailer at bit.ly/39fz7TV. Then, on 23



December, comes George Clooney's latest actor-director project, post-apocalyptic thriller *The Midnight Sky*.

Watch the trailer at bit.ly/2J8AhpN.

January brings *Pieces of a Woman*, produced by Martin Scorsese and starring Vanessa Kirby and Shia LaBeouf as a couple struggling to cope with the loss of their new-born baby. The film arrives on Netflix on 7 January; watch the trailer at bit.ly/39gSMD3. Booker Prize-winning novel adaptation *The White Tiger*, starring Priyanka Chopra, arrives on 22 January; watch the trailer at bit.ly/2HCWlbg.

N Quickly find all Netflix's Christmas films

If your festive film tastes are a bit more, well, festive, here's a clever trick to track down all Netflix's Christmas movies: go to www.netflix.com/browse/genre/



then add a code to the end of the URL. For example, add 1394527 to browse romantic Christmas films including *The*

Holiday; 1527064 for British films including 2011's heartwarming animation *Arthur Christmas* (pictured); and 1475071 for festive comedies including *The Grinch*. Find more of these "secret codes" at bit.ly/3l6zld5.

N What to watch with a one-week Sky Cinema Pass

Now TV is adding several recent cinema

hits (and an infamous flop) in time for Christmas, including *Cats*, *Little Women*, *Clemency*, *Misbehaviour*, *Emma* and *Dolittle*. They join recent arrivals *Joker*, *Jojo Rabbit*, *The Invisible Man* and *Star Wars: The Rise of Skywalker*.

All films are included with a Sky Cinema Pass, which costs £11.99 per month after a free 7-day trial (www.nowtv.com/watch-movies-online).

N Watch TV's best Christmas specials

Mortimer & Whitehouse: Gone Fishing, *Ghosts*, *Masterchef* and *Call the Midwife* are among the shows getting special episodes on the BBC iPlayer this Christmas. There's also three 10-minute lockdown specials of *The Vicar of Dibley*, which join all three seasons at bbc.in/2J8l1Z, and the return of Captain Jack Harkness in *Doctor Who*, whose short and sweet teaser is on YouTube at bit.ly/33jIVKd.

On All 4, you'll be able to stream the first-ever Christmas special of *Taskmaster*. ITV Hub brings back *Birds of the Feather* after three years (www.itv.com/hub), and UKTV Play has a



two-part *Meet the Richardsons* Christmas special (uktvplay.uktv.co.uk).

N Choose a new period drama to stream

Travel back in time with a brand new drama series (or three). Christmas Day sees Netflix launch eight-episode period drama *Bridgerton*, a tale of romance and scandal set in Regency London. Watch the trailer at bit.ly/3l6uHBI.

Disney's new Marvel show *WandaVision* starts on Disney+ on 15 January, with Elizabeth Olsen and Paul Bettany in the 1950s TV spin-off that flips between colour and black-and-white. Watch the trailer at bit.ly/33jGzKd.

The Beeb's big new drama series is *Around the World in 80 Days*, which stars David Tennant as Phileas Fogg in a new adaptation of Jules Verne's classic. Eight one-hour episodes are due after Christmas.



Where to get your online TV tips

How will you know what to watch when we're gone? Bookmark these sites and you won't go wrong.

- **VODzilla** (vodzilla.co): Discover what's about to arrive and leave UK streaming services, including Shudder and BFI Player, as well as the bigger names.
- **Radio Times On Demand** (www.radiotimes.com/news/on-demand): Who doesn't love the *Radio Times*, especially at Christmas? The On Demand section of its website is second to none for Netflix news, Amazon analysis and iPlayer info.
- **Geektown** (www.geektown.co.uk): Streaming TV reviews, news of upcoming shows and season renewals, and the latest air date announcements.
- **TVWise** (www.tvwise.co.uk): Insider TV news including casting announcements and channel-switching rumours.
- **What's On Netflix** (www.whats-on-netflix.com): Get the latest UK (and US) Netflix news and reviews, plus charts that reveal the most-watched shows and films.



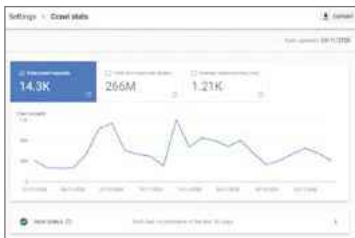
Build a Better Site

Specialist tips, top tools and practical help

Top Tips of the Fortnight

Explore the new Crawl Stats in Search Console

The workings of Google's 'crawl' – how it seeks out and finds new pages – are steeped in mystery, but you can now get an insight into its effect on your site. A new Crawl Stats tool has been added to the Search Console (search.google.com/search-console) – click Settings in the side menu, then look for the Open Report link next to 'Crawl stats'. It tells you how many times your pages have been crawled and any problems encountered. For more info, read the blog post at bit.ly/33khzm4.



Another reason for HTTPS

Firefox 83 has introduced a new HTTPS Only Mode, which means it's more important than ever to add an HTTPS security certificate to your site. The mode isn't switched on by default and won't stop people visiting a site without HTTPS, but it will throw up a warning screen if they do.

The main problem from a webmaster's perspective is that this is going to cost you money. If you're thinking about switching hosts or setting up a new website, you should definitely take this into account because some hosts charge more than others.

Deal of the Fortnight

Easyspace (www.easyspace.com) is offering a discount on its Standard Web Hosting package, now available for £3.36 per month instead of the usual £4.

Web-building Helpdesk

Q I'd like to take screenshots of my website, framed by a web browser. I've seen these on other sites that display stripped-back browsers and it looks really cool. How do I get this look on my screenshots?

Tony Galloway, via email

A There's a handy tool at Screenshot.Rocks (screenshot.rocks) that does this. It makes your screenshot look like it's been taken on a swanky MacBook. Type your site's address, including the `http://` or `https://`, into the box on the front page. You can configure how the screenshot looks using the control panel on the left, from changing the colour of the browser and the desktop wallpaper, to altering the look of the device the browser is displayed on.



Andy Shaw, Technical & Reviews Editor



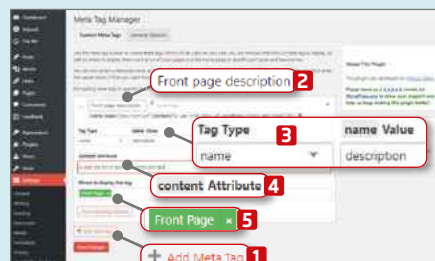
MINI WORKSHOP | Add meta tags to your WordPress website

Meta Tags Manager: bit.ly/37amVSO |  10 mins | Self-hosted WordPress website

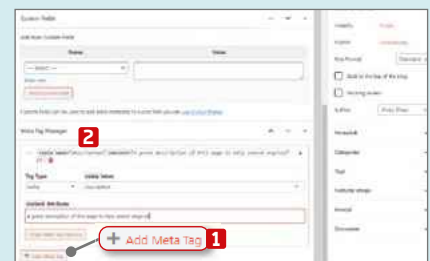
Meta tags are descriptions hidden in the HTML of your pages that help search engines summarise your site. To add them to a WordPress website, you need to install a plugin



1 Install the plugin by searching for Meta Tag Manager in Plugins, **1** Add New. Click the Install Now button, then Activate. Access the plugin's control panel from the Settings menu **2** by clicking the Meta Tag Manager option. **3**



2 Click the Add Meta Tag button **1** and fill in the form. For example, you could add a description of your site to your front page by giving it a name (for reference only), **2** choosing 'name' as the Tag Type and 'description' as the 'name Value'. **3** Now, type the description in the 'content Attribute' box. **4** Choose Front Page from the display options. **5**



3 To add a meta tag to a specific page or post, create it in the usual way and scroll to the bottom of the Add New page. As in Step 2, click the Add Meta Tag button **1** and fill in the form. **2** This option doesn't have the display options because it only appears on the particular page that you're editing.

Product Test

We test and compare the latest products

Microsoft Surface Laptop Go

The latest additions to Microsoft's premium range of laptops pack plenty of power at a lower price than you might expect

Microsoft's original Surface devices were hybrid tablets that you could convert into a laptop with a detachable keyboard cover. Since then, Microsoft has abandoned its push to turn Windows into a touch-first operating system and the Surface Laptop Go is the latest step toward a traditional laptop configuration: it still offers a touchscreen but this comes permanently attached to a keyboard with a trackpad.

The price is reasonable, with the basic version available from £549, though you can add more memory and storage in £699 and £899 configurations. This is refreshing, considering the device steals much of its design from the regular Surface Laptop 3, which cost more than £1,000 when it launched.

The display is an excellent 12.4in 3:2 aspect ratio PixelSense touchscreen (the same size and shape as the display on the Surface Pro 7) housed in a slim, well-built body that wouldn't look out of place on a vastly more expensive model.

Range of models, hardware and build

To get such a highly finished machine at this price, you'd



normally expect to sacrifice some core specifications, and that's certainly the case with the cheapest version of the Surface Laptop Go, which has only 64GB of eMMC storage and 4GB of memory. This most basic model should be viewed primarily as a cloud computing device – something more closely resembling a Chromebook than a Windows laptop. Once the operating system has taken its chunk, you'll have very little space left over for applications and file storage.

As you move up the range, the sacrifices become less extreme and prices stay surprisingly reasonable. The

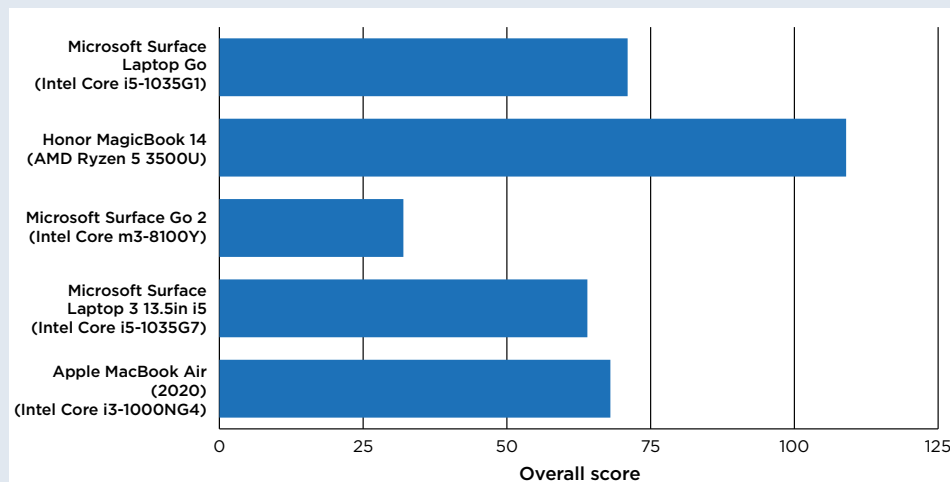
“If you can afford the higher spec model, the Surface's all-round quality brings it up to par with vastly more expensive laptops”

£699 model comes with 8GB of memory and a 128GB SSD, while the most expensive £899 model comes with 8GB of memory and 256GB of storage (which is the one we've tested here).

Despite the small overall size of the unit, the 12.4in display feels large enough to comfortably work on all day. That's mainly down to its squarer 3:2 aspect ratio,

which lends the display a more spacious feel than 16:9 displays with the same diagonal measurements. The keyboard is a delight to type on and, while we'd prefer the keys to have slightly contoured surfaces instead of the dead flat ones here, there's enough travel and feedback for frustration-free touch typing. The touchpad works without any

4K media benchmarks



problems, too.

Microsoft has provided a sensible selection of ports around the edges of the laptop: on the left, there is a full-size USB port, a USB Type-C port and a 3.5mm headset jack; on the right is a magnetic Surface Connect port that hooks up to your charger. Round it all off with Wi-Fi 6 connectivity and you have a thoroughly modern, well-connected laptop.

Screen, audio and performance

Budget laptops often compromise on their screens to keep costs down, but the Microsoft Surface Laptop Go's 12.4in PixelSense touchscreen is, technically, very good. The 1,536 x 1,024 pixels (148ppi) resolution screen is bright enough to be readable, even with a lot of ambient light, and its presentation of colours is impressive, displaying 91.6% of the sRGB colour standard. Its viewing angles are also excellent and, with a contrast ratio of 1,038:1, on-screen images have plenty of dynamism. All these factors combine to produce a display that's marvellously easy on the eye and better than most similarly priced laptops.

Audio isn't bad, either, with the laptop's under-keyboard speakers kicking out sound at surprisingly decent volume. They're a touch on the tinny side, as you'd expect from any laptop speaker, but perfectly capable for podcasts,

audiobooks and video calls.

All Surface Laptop Go models use the same Intel 10th-Gen Core i5-1035G1 processor, but the performance of the budget model's 64GB eMMC drive and 4GB of memory is outstripped by the faster SSD storage and 8GB of memory of the higher-priced Surface Laptop Go models.

In either case, don't expect ground-breaking performance, even with the speedier configuration. While the Surface Laptop Go is quicker and more usable than most Windows laptops around this price, it lags a fair bit behind the Honor MagicBook 14 (£549), which uses an AMD Ryzen 5 3500U processor.

The 256GB SSD inside our review unit isn't the fastest, either – again, it's slower than the SSD in the Honor – and the 64GB eMMC drive installed in the cheaper model will be slower still.

The good news is that all this still manages to add up to a responsive, highly usable machine. It won't stand up to high-resolution video rendering and gaming, but it boots quickly and, for most day-to-day tasks, the level of performance on offer is perfectly acceptable. In fact, it isn't that much slower than the more expensive Microsoft Surface Laptop 3.

The same goes for the Surface Laptop Go's battery life, which is also more than acceptable for the price. It can't beat the very best on this count – the Google Pixelbook Go is the longest-lasting budget laptop we've tested, managing to run for nearly twice as long in our tests. However, at 7hrs 27mins, the Surface Laptop Go's battery life is only slightly worse than the Honor MagicBook 14 and Surface Laptop 3, and slightly better than the Surface Go 2.

PRODUCT INFO

Microsoft Surface Laptop Go

Price: From £549

Buy from:

bit.ly/36YhRjv

SPECIFICATIONS

- Intel Core i5 processor
- Intel UHD Graphics
- 1,536 x 1,024 pixels 12.4in PixelSense touch display
- 10 point multi-touch
- 278mm x 205mm x 16mm
- 1.1kg

FOR

- ✓ Beautiful design
- ✓ Excellent display
- ✓ Fingerprint reader and Windows Hello webcam

AGAINST

- ✗ Cheapest model is short on storage and memory

BETTER FOR £549

Honor MagicBook 14, £549

bit.ly/2UZJpPD



MORE POWERFUL

Microsoft Surface Laptop 3, £959

bit.ly/2Hr76xd



OUR VERDICT



At the most affordable end of the scale, Microsoft has had to make compromises. The £549 version of this laptop is only worth considering if you're prepared to treat it like a Chromebook: to access cloud-based apps and mainly store files online. If you want something more capable for the same price,

we'd recommend the Honor MagicBook 14, which is faster, more practical and only a little less portable.

If you can afford one of the higher spec models, however, particularly the top-end £899 configuration, you're in for a treat. At this price, the Surface Laptop Go's improved specification and all-round quality brings

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

it up to par with vastly more expensive laptops, such as the Apple MacBook Air, Samsung Galaxy Book Ion and Microsoft's own Surface Laptop 3.

OnePlus Nord N10 5G

The latest OnePlus Nord smartphone is £50 cheaper than its predecessor, but at what cost?

The original OnePlus Nord won a Bronze Award in our Group Test in Issue 511 (bit.ly/webuser511) and, at first glance, this second phone in the series looks like a promising follow-up. It's £50 cheaper than its sibling, shares the same smooth-scrolling 90Hz 2,400 x 1,080 pixels-resolution screen, is similarly 5G ready and is only a millimetre or two larger than

its sibling in each dimension.

However, below the surface, OnePlus has made a couple of cuts to the N10's specification: a Snapdragon 690 processor, where the original had a Snapdragon 765G; and a reduction in memory from 8GB or 12GB options to 6GB. Storage is limited to 128GB (same as the original's basic 8GB version), though you can use a microSD card to boost this by 512GB. Finally, the display technology is a step down from the predecessor's AMOLED panel to an IPS in the new N10.

Screen, performance, battery and cameras

Despite these downgrades, the N10 performed solidly in our colorimeter tests. We measured the contrast at 1,668:1, with brightness maxing out at 477cd/m². It covered 97.5% of the sRGB colour standard, which is an excellent result. In short, our initial disappointment with the screen not being an AMOLED model was overcome by superlative performance in testing.

The Snapdragon 690 processor meant the Nord 10 didn't perform as well as the original model in Geekbench 5 tests, but it only fell slightly behind. However, while the phone can keep up in general use, the difference in graphical performance is more pronounced. In the GFXBench tests, the N10 recorded 33fps in the onscreen Manhattan 3 test and 37fps offscreen, while the original Nord reached 50fps in the onscreen test and 56fps offscreen.

In our video-rundown test, the battery lasted 17 hours



and 53 minutes before giving up. This is a few hours short of the original's 20 hours. However, it continues to include the 30W Warp charging tech, which promises to take your phone's battery from empty to a full day's charge in 30 minutes.

The N10's main camera is a 64-megapixels model, accompanied by an 8-megapixels 119-degree wide camera and a 2-megapixels

macro. Landscapes photograph well in good light, and it's easy to switch between the default 16-megapixels and the full 64-megapixels. It's not the best camera we've seen, and doesn't beat the Google Pixel 4a (also reviewed in our Group Test in Issue 511), but it's perfectly adequate if a camera is only a secondary consideration when choosing your next smartphone.

PRODUCT INFO

OnePlus Nord N10 5G

Price: £329

Buy from OnePlus:
bit.ly/3fsZ4AF

SPECIFICATIONS

- Octa-core Qualcomm Snapdragon 690 5G processor
- 6GB of memory
- 128GB of storage (upgrade to 512GB microSD)
- 6.49in 1,080 x 2,400 pixels IPS screen
- 90Hz refresh rate
- 64-megapixels rear, 16-megapixels front camera
- 3.5mm headphone jack
- USB-C charging
- OxygenOS based on Android 10
- 163 x 75 x 8.95mm
- 190g

FOR

- ✓ Solid IPS screen
- ✓ Decent camera performance
- ✓ £50 less than the original Nord

AGAINST

- ✗ Stripped-back processor and memory
- ✗ Weaker graphical performance
- ✗ Rival batteries last longer

OUR VERDICT



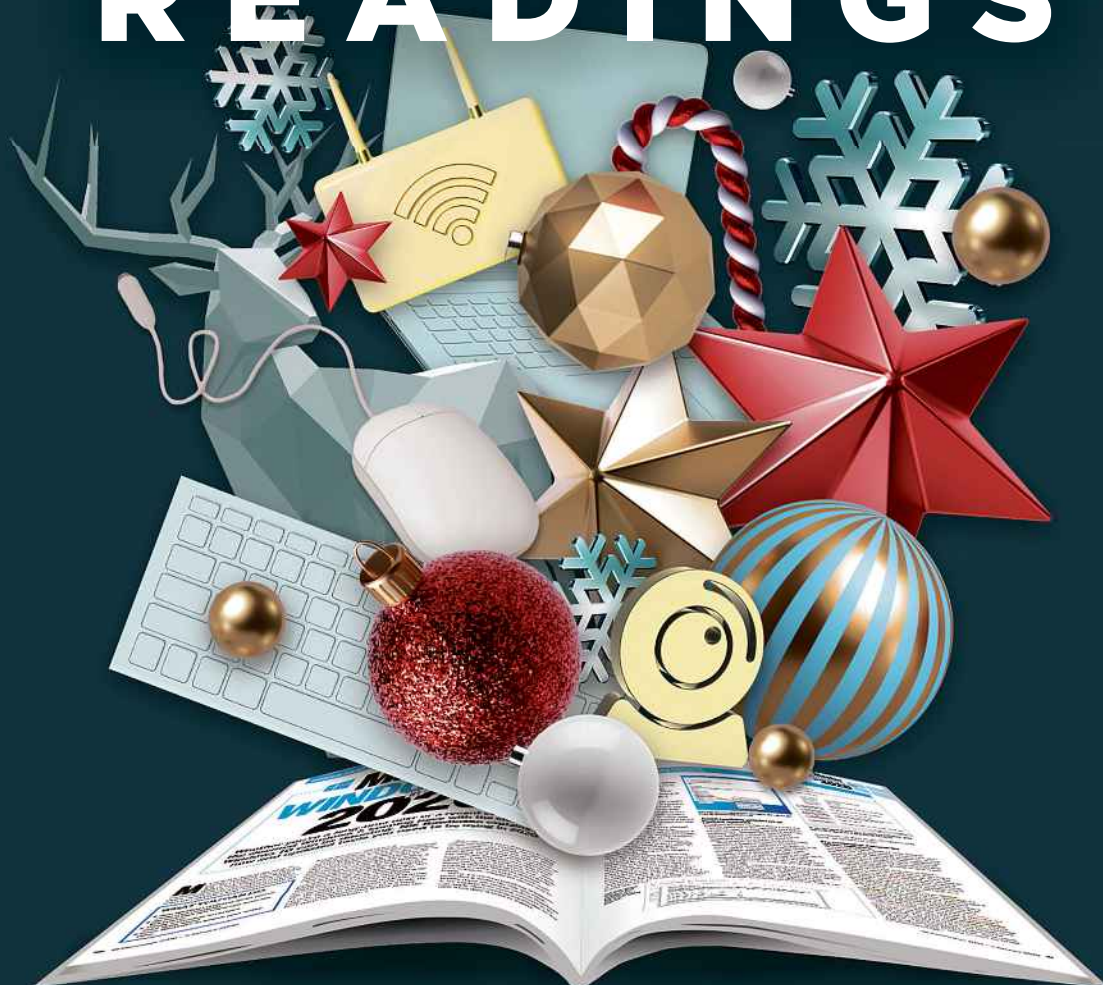
The original OnePlus Nord forged a brave path through tough mid-range competition, and continues to fight its corner. This makes the Nord N10 5G's job a doubly difficult one, because the compromises of a weaker processor, less memory and a downgraded screen start to stack up, and the £50 price saving

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

may not be enough to keep its rivals at bay.

Overall, the Nord N10 is still a good phone but it's not the must-have we were hoping for.

SEASON'S READINGS



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Web User's Best Buys

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

HARDWARE, SOFTWARE & SERVICES

TABLET

Apple iPad 10.2in

£329 from bit.ly/ipad513

Tested: Issue 513



The superb quality of the 10.2in iPad makes it easily the best tablet available for the price. It's wonderfully slim and light, has an excellent screen and easily connects to external drives and (for another £159) Apple's Smart Keyboard.

KEY SPECS

Hexa-core 2.49GHz Apple A12 Bionic processor ■ 10.2in Retina screen, 2,160 x 1,620-pixels resolution ■ 1.2-megapixels front camera, 8-megapixels rear camera ■ 32GB storage ■ 3GB RAM ■ 802.11ac Wi-Fi ■ 251 x 174 x 7.5mm ■ 490g

SMARTPHONE

Google Pixel 4a

£349 from store.google.com

Tested: Issue 511



This mid-priced compact phone is a great all-rounder. It offers plenty of storage, has a high quality screen, takes excellent photos and provides impressive battery life.

KEY SPECS

Octa-core 1.8GHz Qualcomm Snapdragon 730G processor ■ 6GB RAM ■ 128GB storage ■ 5.8in, 2,240 x 1,080 pixels resolution screen ■ 12.2-megapixel rear camera, 8-MP front ■ Android 10 ■ 144 x 68 x 8.2mm ■ 143g ■ 1-year return to base

MONITOR

AOC 24B2XH

£110.71 from bit.ly/aoc24b509

Tested: Issue 509



This monitor is the cheapest IPS screen we've ever seen, and it's phenomenal for the price, offering great contrast and colour accuracy. As long as your PC has VGA or HDMI connections, the AOC 24B2XH is a fabulous upgrade.

KEY SPECS

24in screen ■ 1,920 x 1,080 pixels resolution ■ IPS panel ■ 8ms response time ■ 75Hz refresh rate ■ 1 x HDMI, 1 x VGA ports (cables included) ■ Tilt stand ■ Three-years return-to-base warranty

INKJET PRINTER

Canon Pixma TS8350

£162 from bit.ly/canonts505

Tested: Issue 505



The Canon Pixma TS8350 is hard to beat for all-round print, scan and copy quality, producing rich, crisp text and precise photo prints. The generous touchscreen makes it easy to use..

KEY SPECS

Thermal inkjet printer ■ 4,800 x 1,200dpi print resolution ■ 2,400 x 4,800dpi scan resolution ■ 10.8cm colour touchscreen ■ Double-sided printing ■ 200-sheet input ■ 373 x 319 x 141mm ■ 6.6kg ■ One-year return-to-base warranty

MESH WI-FI SYSTEM

Netgear Orbi RBK50

£299.99 from bit.ly/orbi503

Tested: Issue 503



The Orbi is a brilliant mesh Wi-Fi package. It's powerful, the units look good and it has a well-designed interface. It's pricey, particularly with the add-ons, but we think it's worth it.

KEY SPECS

Two nodes ■ Tri-band 802.11ac Wi-Fi ■ 2 x 2 MIMO system ■ 4 Ethernet ports ■ Router mode ■ WPS ■ Guest network ■ Parental controls ■ Alexa and Google Assistant voice control ■ 203 x 162 x 79mm ■ One-year return-to-base warranty

EXTERNAL SSD

SanDisk Extreme Pro 500GB

£131.99 from bit.ly/sandisk501

Tested: Issue 501



Robust, fast and reliable, the SanDisk Extreme Pro 500GB outperformed every other SSD in our tests. You pay a bit more per GB but, if you can afford the best, why settle for less?

KEY SPECS

465GB formatted capacity ■ 28p per usable gigabyte ■ Also available in 1TB and 2TB capacities ■ USB Type-C connection ■ 96 x 50 x 9mm ■ 78g ■ Three-years return-to-base warranty ■ Sturdy and attractive design

Gold Award winners

The best from our software tests

ONLINE NOTEBOOK

Notion

Free from www.notion.so

Tested: Issue 515

Notion is an powerful online notebook that you can access from any device. As well as jotting down notes and making lists, you can insert files, images, links, tables and more.

NEW!



EMAIL APP

Outlook

Free from bit.ly/2GO4HsG

Tested: Issue 514

Outlook supports multiple accounts, syncs with your calendar and lets you connect your online storage. We much prefer it to Gmail.



WINDOWS DOCK

Winstep Nexus

Free from bit.ly/nexus513

Tested: Issue 513

Winstep Nexus is easy to control, and provides shortcuts to all your most used items in one place. It can be customised with themes to look and work exactly the way you want.



PHOTO-EDITING APP

Snapseed

Free from bit.ly/snapseed510

Tested: Issue 512

Whatever your experience level with image editing, Snapseed helps you turn any photo into a work of art. It offers an array of useful options, from editing tools to preset filters.



BLOATWARE REMOVER

Bloatbox

Free from bit.ly/2ZEAXsO

Tested: Issue 511

This tiny portable tool has one mission: to remove unwanted software and apps that Microsoft installs with Windows. It helped us reclaim nearly half a gigabyte of hard-drive space.



AUDIO EDITOR

Audacity

Free from www.audacityteam.org

Tested: Issue 510

Audacity is still the best free audio-editing software around. It has all the features of professional, paid-for alternatives, with no annoying limitations or paywalled extras.



WebUser

BACK ISSUES DISC 2019



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Best Free Software

BROWSER

Opera 72

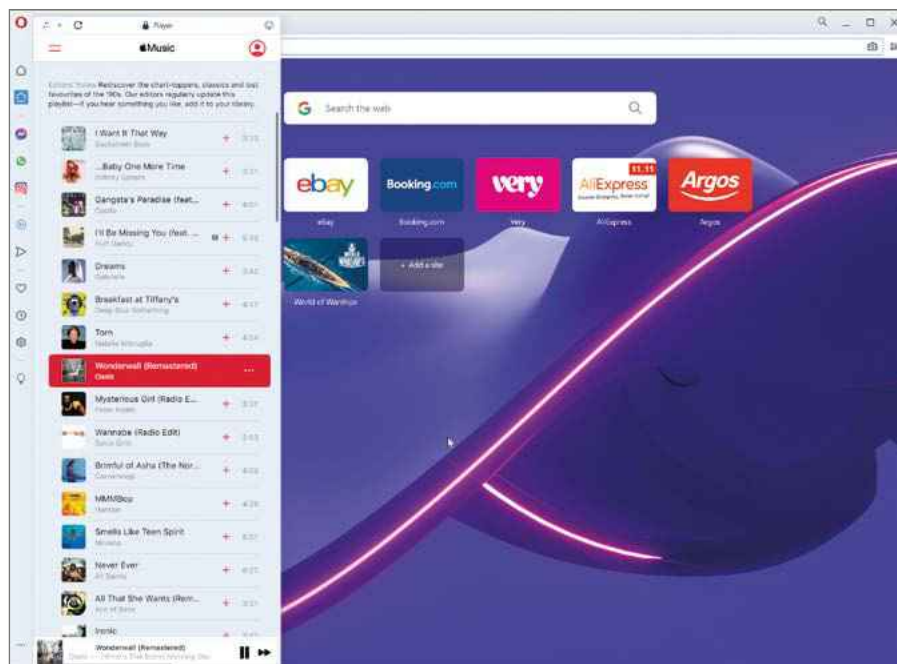
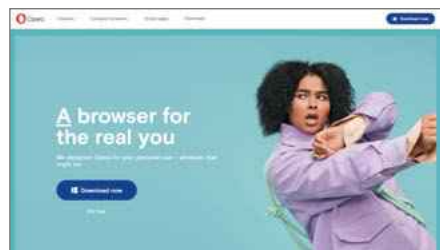
[opera.com](https://www.opera.com)

Min requirements: Windows 7/8.1/10, macOS or Linux

File size: 2.2MB

There are lots of different web browsers to choose from these days, from big names such as Chrome, Firefox and Edge, to innovative choices like Brave and Vivaldi. Opera doesn't get the love it deserves, which is a shame because it offers a wealth of great features. These include its own ad blocker, free VPN and built-in messenger tools – for Facebook Messenger, WhatsApp, Instagram, Twitter and more.

The browser also offers a built-in converter for time zones, currencies and measurements, a pop-out video player, a screenshot-capture tool and workspaces, so you can organise your tabs into customisable groups and switch between them. Opera also lets



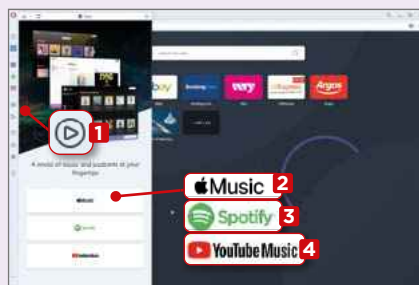
you personalise the browser in various ways, including adding wallpaper (one of Opera's choices or your own), and toggling between light and dark mode.

The Speed Dial page that appears when you open a new tab displays recent and favourite sites, Google Search and the weather forecast for your area. There's also a My Flow feature that lets you connect Opera to your phone (Android or iOS) and send content between devices.

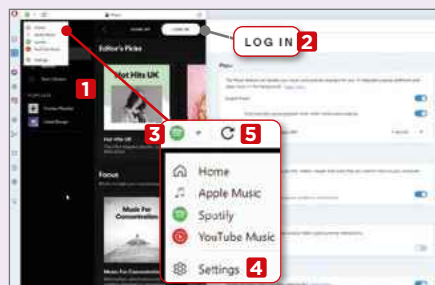
This latest version of Opera introduces another big innovation – an audio player so you can enjoy music or listen to podcasts while browsing. You can connect to your choice of streaming services in the sidebar, and switch between them, and control your music through the Player pop-up. Cleverly, the player will mute itself automatically when you open a web page that's playing audio, so you don't have to worry about sound clashing.



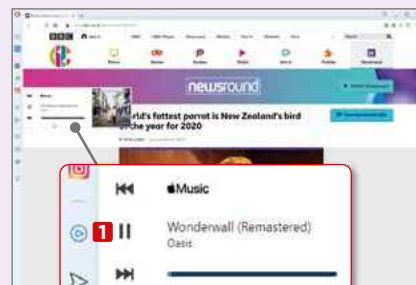
MINI WORKSHOP | Set up and use Opera's new audio player



1 Make sure you have the latest version of Opera installed. When you launch the browser, you'll see a new Player icon (a Play button in a circle) in the sidebar on the left. **1** Click this and you'll be able to connect to a selection of streaming services – Apple Music, **2** Spotify **3** and YouTube Music. **4**

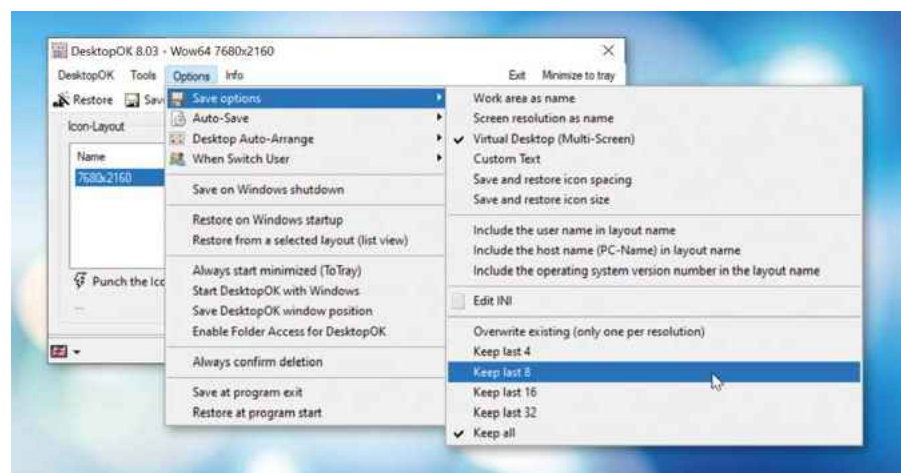


2 Click one of the services and the page for it will open in a new window. **1** Log in as normal. **2** The drop-down menu in the top-left corner **3** lets you switch to a different service and open the Player settings. **4** You can reload this page if there's a problem with it displaying. **5**



3 Once you're signed in, you can browse available content and start it playing. The controls appear at the bottom of the player window when it's open. Browse the web as normal and the audio will continue streaming. Hover your mouse over the Play button and controls will pop into view, so you can pause the track and skip forwards or backwards. **1**

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



SYSTEM TOOL

DesktopOK 8

www.softwareok.com

Min requirements: Windows 7/8.1/10 **File size:** 462KB

DesktopOK is a tiny free tool that lets you save and restore the position of icons on your desktop. You can have different layouts for different users, and also for different screen resolutions. The program can hide all icons automatically and display them temporarily with a click of the mouse; close open windows; and launch system tools. This new version fixes a problem with the program's uninstaller and updates the language files.

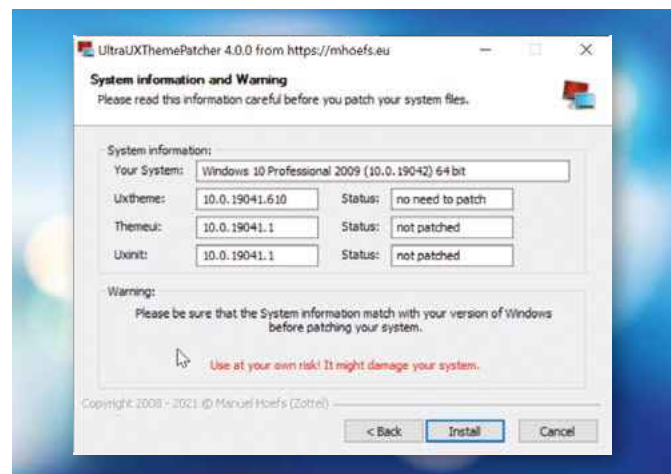
New Windows 10 App

Podurama Podcast Player

bit.ly/2IRDODv

File size: 1.26MB

This stylish Windows app lets you browse and listen to over 500,000 podcasts and millions of episodes, create unlimited playlists, arrange your favourite episodes into tiers, add notes, create custom RSS feeds and sync between devices for free. There are no ads and you can find great new shows to listen to through the Top Charts section.



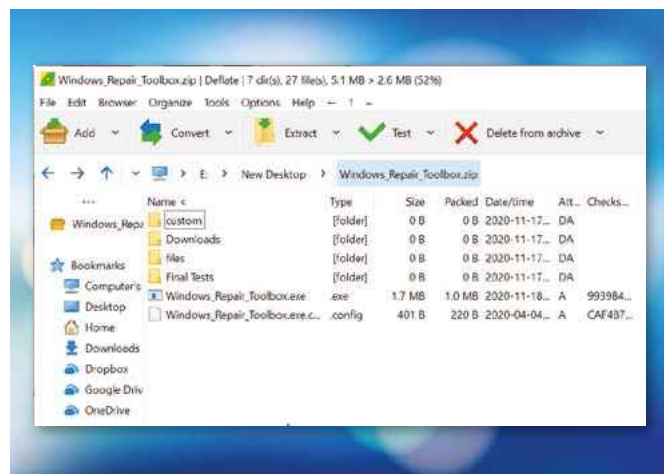
THEME TOOL

UltraUXThemePatcher 4

bit.ly/2IVKxpC

Min requirements: Windows 7/8.1/10 **File size:** 159KB

This tool makes it possible to install and apply third-party themes to Windows, totally transforming the look of the operating system. When you install it, make sure the detected OS version is correct and UltraUXThemePatcher will show you what will be patched. Once this has finished, reboot and then browse skinpacks.com for some themes to apply. The software backs up the system files so you can roll back all changes should you encounter any problems.



FILE-COMPRESSION TOOL

PeaZip 7.5

www.peazip.org

Min requirements: Windows 7/8.1/10 **File size:** 9.5MB

PeaZip is an open-source file and archive manager that lets you create, convert and extract compressed files in all the popular formats. It's particularly useful for opening RAR files for free (although it can't create them). This major update adds icons to help you distinguish archive types, and you can now extract everything in an archive to preview certain files (including HTML pages). Make sure you decline any bundled junk during installation.

PDF TOOLKIT

PDF24 Creator 10

en.pdf24.org

Min requirements: Windows 7/8.1/10

File size: 121MB

PDF24 Creator is a free suite of tools that lets you easily perform a number of tasks with PDFs, such as creating, splitting and merging files. This latest release adds a new toolbox that offers a much larger selection of tools, so you can do pretty much anything you want with a PDF file, such as optimising it for web use and creating a PDF job application.

Tools can be used both online and off, and the screen-capture tool has been improved. Also, the OCR (optical character recognition) feature can be used through the Windows Command Prompt and there's now a manual available, too.

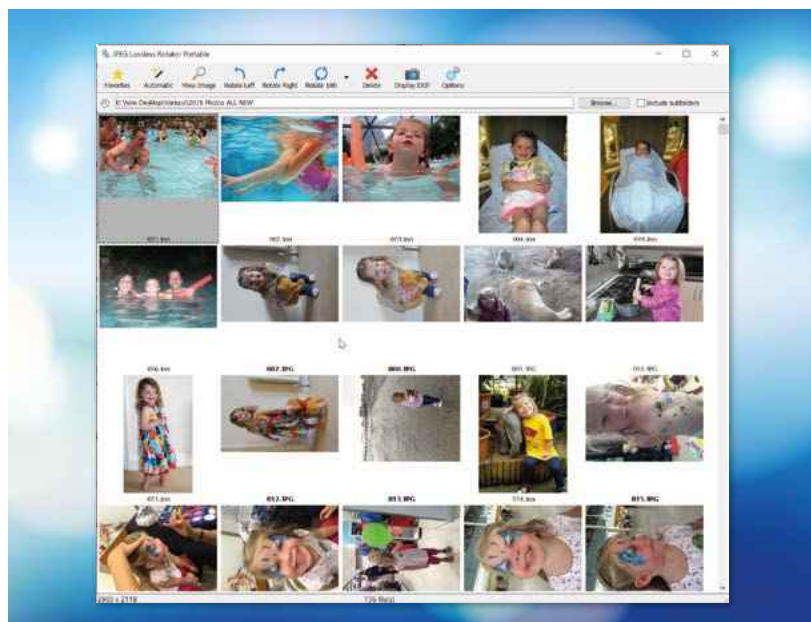


IMAGE EDITOR

JPEG Lossless Rotator 10

bit.ly/396JVnk

Min requirements: Windows 7/8.1/10

File size: 4.2MB

When you take photos with your phone or camera, some images appear sideways or upside down when you view them. As you can guess from the name, JPEG Lossless Rotator fixes this, and unlike some solutions, it doesn't lose any data in the process.

There are installer and 32- and 64-bit portable versions available, and it's very easy to use. Just load some images, select one that's incorrectly orientated, then click the button to rotate it left, right or 180 degrees. Clicking the Automatic button will identify and rotate all the incorrect images for you.

The software can also display a photo's EXIF data.

SYSTEM TOOL

Windows Repair Toolbox 3

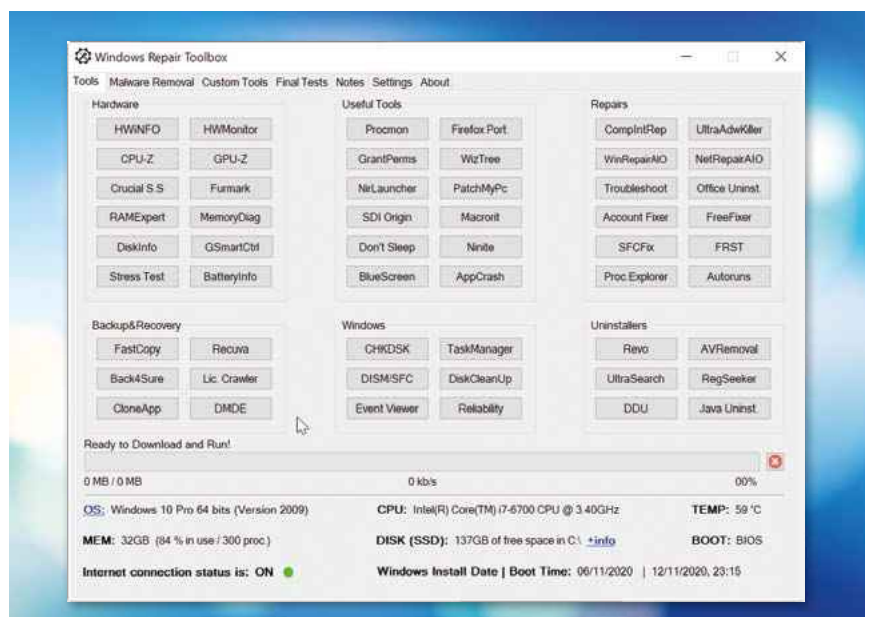
windows-repair-toolbox.com

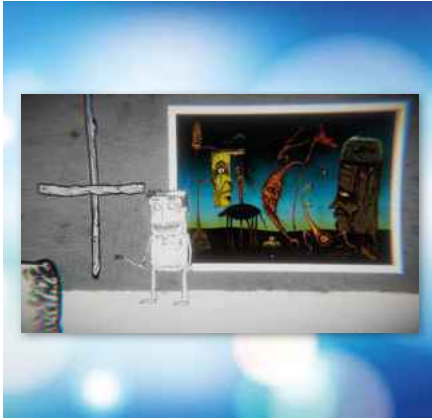
Min requirements: Windows 7/8.1/10

File size: 3.5MB

Windows can go wrong in many different ways, but there are plenty of free third-party tools you can use to troubleshoot and fix whatever problems you might be having. Windows Repair Toolbox provides a front end for many of these tools, including Recuva, Ultra Adware Killer, Autoruns, Ninite and HWINFO. The programs are arranged into categories such as Hardware, Useful Tools, Repairs, Backup and Recovery, Windows and Uninstallers. Just click a button for one of the tools, and the software will download and run.

This new version of the program removes some tools that are no longer compatible.





GAME

Dimitri Kozma Art Gallery DX

bit.ly/3m5d5a1

Min requirements: Windows 7/8.1/10

File size: 148MB

This visually stunning platform game takes place inside an art gallery populated with masterpieces created by Dimitri Kozma. There are no real challenges as such, you just need to guide your character around and admire the surreal artwork on the walls of the gallery. The game carries a “mature content warning” due to (artistic) nudity and blood.

✓ Install this program...

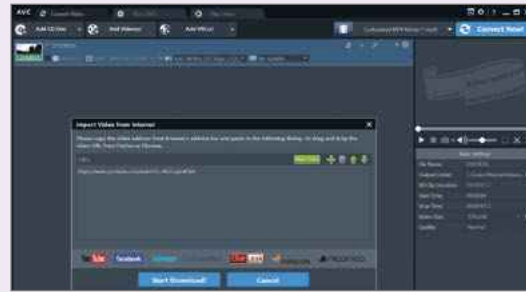
Any Video Converter

any-video-converter.com

Min requirements: Windows 7/8.1/10

File size: 6.7MB

This versatile free program can convert videos between all the major video formats – including MP4, MKV, WMV, AVI, FLV, HTML5 and WEBM – and export them for viewing on mobile and streaming devices. It also downloads and converts videos and music from websites such as YouTube, Facebook, Vevo and Vimeo. AVC offers lots of video-editing features and effects, so you can trim and crop clips, resize, rotate and join videos, and add subtitles, watermarks and audio tracks. It can also rip audio from CDs and video files, and burn movies to DVD. Decline the bundled junk during installation.



...Not this one ✗

ImToo Video Converter

www.imtoo.com

Min requirements: Windows 7/8.1/10

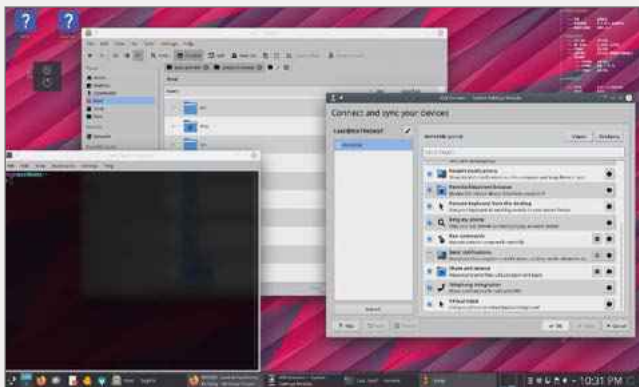
or macOS

File size: 35.7MB

ImToo Video Converter should really be called ‘ImToo Expensive’ because even its standard version demands you fork out \$39.95 (£29.70). Sure, you get plenty of tools and support for multiple devices, but we reckon you’d be better off investing your money in a festive Christmas jumper!



OTHER OPERATING SYSTEMS What's new for Linux and macOS



LINUX DISTRO

MX Linux 19.3

mxlinux.org

Min requirements: 64-bit processor

File size: 1.5GB

Based on Debian 10 (Buster), MX Linux is gaining in popularity and offers a choice of Xfce and KDE Plasma desktop environments. The operating system comes with some excellent software pre-installed, including Firefox, Thunderbird, LibreOffice, GIMP and VLC.

This new version fixes a number of bugs and gets upgraded to the latest Debian 4.19 kernel. Unlike past releases, the kernel will now update automatically along with Debian sources by default.



DRAWING PROGRAM

Tayasui Sketches 6

apple.co/35Oo81O

Min requirements: macOS

File size: 136.9MB

Tayasui Sketches is a high-quality sketching and painting program with more than 20 drawing tools, an unlimited undo function and support for styluses. This new version offers a revamped interface that matches the look and feel of macOS Big Sur. It also introduces a number of new tools, including a colour eraser, straight-lines rule, Indian Ink brush and Stipple brush.

There's a paid-for Pro version available for \$19.99 (£14.71) if you need additional features.



Best New Browser Tools



CHROME

Speed up your browsing and more in Chrome 87

One of the biggest complaints about Chrome is how slow it is, dragging your computer down every time you browse. That's changing with the final Chrome update of 2020, as the browser becomes "faster to start, faster to load, and [with] way more battery life".

The big changes in Chrome 87 see the browser open 25% faster than before, load pages 7% faster, and now prioritise active tabs (rather than treating all tabs as equal, which is what causes the drain on processing power).

Elsewhere, Google has added more functions for tabs. Alongside pinning, grouping and sending tabs to other devices, an option for searching tabs will be coming soon.

The address bar also gets an overhaul. You can now perform Chrome actions, such as deleting your browsing history, simply by typing in the address bar. No more rifling



through settings.

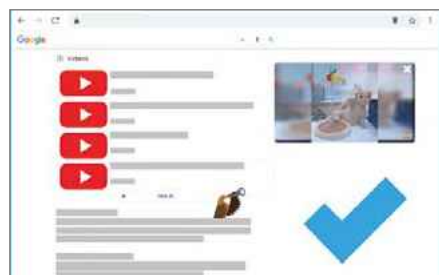
Finally, Chrome is introducing cards to the New Tab page, which will save you time by taking you to recently viewed and related content.

Open videos in floating windows

Not all sites offer picture-in-picture (PiP) playback, which means videos stop the moment you scroll past them. Either you watch the video where it's embedded or you listen to the audio while you continue to scroll or switch tabs.

Eagle Eye (bit.ly/39oWPxh) lets you open videos in a floating window, so you can continue browsing while the video plays. When you find a video you want to watch, hold down Alt and click it. The video instantly appears in a generously sized PiP box that can be moved into any position on your screen.

Other keyboard shortcuts include Shift+Alt+Click to open the video muted, and Alt+/ to play and pause.



Take control of all your tabs

Tab Merger (bit.ly/3qdOOwj) is a new tab-management tool that "merges your tabs into one location to save memory usage and increase your



productivity". With all your tabs open, click the Tab Merger toolbar button. Doing so instantly gathers them in a group displayed in a single tab.

This new page includes a range of useful tab-management tools, with options to merge tabs left and right, and open, close or share them. You can also drag and drop any tab from one group to another.

The extension features basic customisation, too. Rename any group by clicking the Edit button, or switch the default grey for another colour when you select the colour swatch.

Five more extensions you should install

As it's our final issue, we'd like to give honourable mentions to a few of our favourite browser tools:



First up, **Pocket Tube** (yousub.info) is an extension developed with YouTube that makes organising subscriptions easier than ever before,

and introduces collections, icons and personalisation options.



Pigeon (joinpigeon.com) is an extension that's particularly useful in these times of COVID-19 – it gives you the ability to schedule video calls with a single right-click.



Focus Fox (bit.ly/3q5lrAW) keeps you concentrating on the task at hand. The browser tool is designed for one use: to redirect you away from distracting websites to the sites you actually need.



Screenbreak (www.myscreenbreak.com) cleverly turns 'Saved for Later' web pages into ebook-style PDFs so you can print them to read at your leisure.

Finally, like the *Grange Hill* alumni, **Ninja Cookie** (ninja-cookie.com) just says 'No' (to unnecessary cookies).



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



FIREFOX

Browse faster with Firefox

As with Chrome, Firefox has recently received a raft of new features – and speeding up your browsing is just one such example. According to Mozilla, page load performances have been boosted by 15%, responsiveness up by 12% and memory usage reduced by 8%.

Security is also on the agenda at Firefox HQ. The team has replaced parts of its JavaScript engine for your added protection, and introduced an HTTPS-only mode, which can be turned on via Preferences.

The browser's interface has been tweaked, so that the search panel is now much more user-friendly, and picture-in-picture mode now supports keyboard shortcuts (find out more at mzl.la/2VhyKQw). Laptop users will celebrate the introduction of pinch-zooming for trackpads, which works exactly as it would on a mobile phone.

Make sure you're using version 83 by going to Settings, Help, About Firefox.



Hide your inbox until you're ready

It's estimated that it takes about 20 minutes to refocus your attention after receiving an email. That's a lot of time to lose for a single message in your inbox.

Inbox When Ready for Gmail (mzl.la/3fNj1Cb) is an anti-distraction add-on that helps you spend less time in your inbox and more time concentrating on the task at hand. It does this by hiding all your emails, which is about as distraction-free as it gets!

That's the default setting, at least. If you jump into the extension's settings, you can make rules that limit how often your Gmail inbox is available to you. There are plenty of options to fit your preferred requirements: you can create a schedule of when your emails are

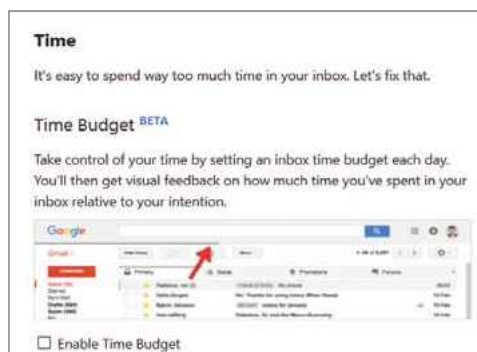
visible, set a 'time budget' or determine the frequency of visits (for example, you can limit yourself to viewing your inbox five times a day).

Automatically pause media

One of the annoyances of multi-tab browsing comes when you're listening to music or a video in one tab while browsing in another, then you come across another video you actually want to watch and have to find and pause the original tab.

Auto Pause (mzl.la/3le5dlq) helpfully solves this problem. Whenever media plays in your active tab, all other videos or audio sources are immediately halted. This means you can carry on watching without a clash of audio – there's no need to disrupt your browsing by hunting through tabs or quickly muting them.

The add-on, which is also available for Chrome, even has an auto-resume feature, with other media picking up precisely where it left off when your most recent video stops playing.



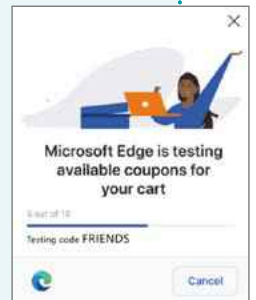
OTHER BROWSERS



Save money with Microsoft

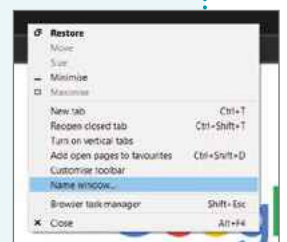
Continuing this fortnight's trend for browser updates, Microsoft Edge has also seen a handful of useful additions including enhanced PDF annotations. Chief among them is the introduction of coupons. This will be familiar to anyone who's used the Honey extension, which automatically applies money-off vouchers. Collections, meanwhile, has seen its recently released price-comparison feature updated, so it's easier to jump to the best deal available for whatever you're buying.

Elsewhere, the browser now features a smarter URL-copying function – content copied from the address bar also includes the name of the page.



Rename browser windows

Microsoft's experimental Canary browser – where features are tested before being rolled out to the public – has an intriguing new addition: the ability to rename your browser windows for better identification (especially if you switch windows using Alt+Tab). Unlike most beta features, this one doesn't need to be enabled via edge://flags. So long as you're running the latest build, just move your cursor to the top of the screen, making sure you avoid any tabs, and right-click. You'll see the option to 'Name window' – selecting this opens a dialogue box that lets you Set Window Name.





Best Free Apps



App of the Fortnight

TOOLS

Brightness Control Free

bit.ly/36bhSS0

4.4

NEW

Do you ever find yourself having to adjust your mobile device's brightness whenever you use a specific app – a particularly dark, moody game that needs lightening up, for example, or an app with such a bright, white interface that it threatens to blind you whenever you open it?

The default way to address this, of course, is to swipe down from the top of the screen to access the brightness setting, but it's annoying to have to do this

yourself. Most current Android devices offer an adaptive brightness option (under Settings, Display, 'Adaptive brightness'), and enabling this will automatically adjust the screen's brightness according to your environment. However, while this is useful, it doesn't help when you want to specify brightness on an app-by-app basis.

That's where Brightness Control Free comes in. This clever little app lets you configure the brightness settings for individual apps, so whenever you launch them, they will automatically switch to your preferred brightness level.

For each app, you can either opt to enable Brightness Control's automatic setting or use a slider to adjust the brightness exactly to your liking. Apps that haven't been customised in Brightness Control will display at your device's default brightness level.

Brightness Control Free is one of those simple but brilliantly useful tools that can make a big difference to the way you use your phone or tablet. It's well designed and easy to set up, though you may need to tinker with some settings, depending on your device

– follow our Mini

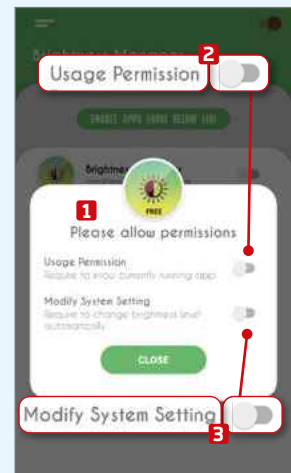
Workshop, right, for instructions on how to set it up. The app is supported by adverts but you can pay 59p to get rid of these.



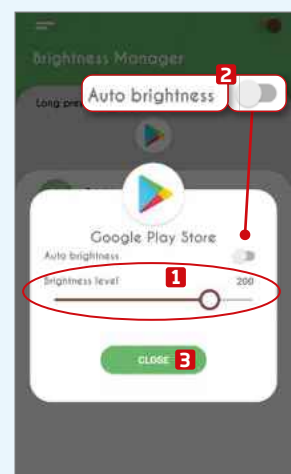
MINI WORKSHOP

Set the brightness for apps using Brightness Control Free

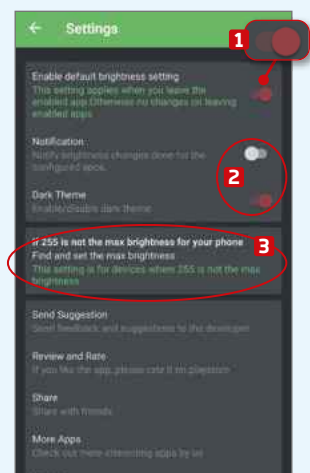
1 When you first use Brightness Control Free, you'll be shown a 'Please allow permissions' alert. **1** Tap the switch next to Usage Permission **2** and, in Android's 'Usage access' settings, tap Brightness Manager, then tap the switch to enable usage access and return to Brightness Control. Now press the switch next to Modify System Setting, **3**



2 Press the Back button to return to Brightness Control Free, then choose an app to configure from the list on the main screen. Tap the switch next to the app you want to open the options for. You have two choices: either set a specific 'Brightness level' using the slider **1** or enable 'Auto brightness' by tapping the switch. **2** Tap Close **3** when you're done.



3 Continue to configure apps as needed. Press the menu (two-line) button and choose Settings. Make sure 'Enable default brightness setting' **1** is on. You can enable Notifications and the Dark Theme, **2** if you wish. If the app isn't working correctly on your device, tap the setting that says 'If 255 is not the max brightness for your phone...' **3** and follow the steps to see if it rectifies the problem.





Our rating



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

HEALTH

Google Fit

bit.ly/1x8Onqi
apple.co/3IdmOF6
 (varies)  

Google's fitness app has often lagged behind other popular third-party tools such as MyFitnessPal and Nike Run Club. But a recent update could change all that. The new home screen, for example, has been completely revamped and is now designed to be a hub for all the fitness information across your connected apps and devices, showing an at-a-glance summary of your daily fitness goals. Support for more sleep-tracking tools has been included, and the Google Fit app for Wear OS smartwatches has been updated, too.





Our rating

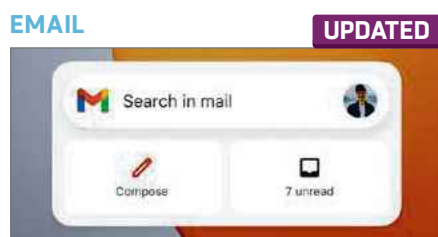


EMAIL

Gmail

bit.ly/2DYy2Qs  (varies)
apple.co/2YHxjwc 

Fit isn't the only app that Google has updated – the company recently treated its Gmail app for iOS to a minor makeover, too. The main change in the new version is improved support for iOS 14, in the shape of a dedicated Gmail widget. This lets you search your inbox, launch a new message or track your unread messages from your home screen. It's worth noting that the Google Drive app for iOS (apple.co/3kXWu7c) has just been updated with a new widget, too. See What's New Online on page 7 for more details.





Our rating

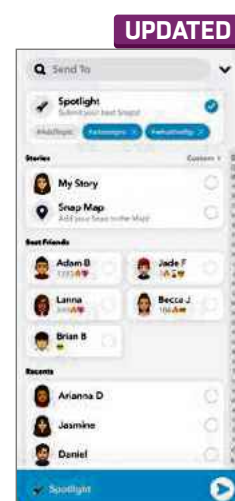


SOCIAL

Snapchat

bit.ly/1apic9z
apple.co/377lmUM
 4.4  

Snapchat recently announced a record peak of 250 million daily users, despite growing competition from the similarly youth-focused TikTok. Apparently, the social network isn't one to rest on its laurels because it has just launched a new feature called Spotlight – a way to “shine a light on the most entertaining Snaps created by the Snapchat community” (according to Snapchat itself). The idea is that users submit Snaps and the most popular ones each day earn a share of \$1m (£750,000).



Our rating

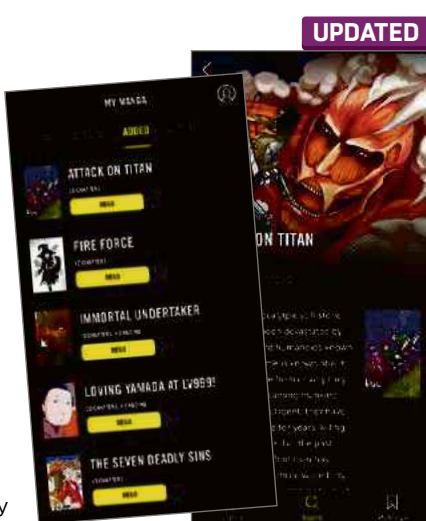


ENTERTAINMENT

Mangamo

bit.ly/2V7n96H
apple.co/367JkzY
 5  

If you like your comic books to have a Japanese flavour but can't always get your hands on the series you want, this new mobile manga reader could be the answer. Mangamo is basically a Netflix for manga, with thousands of fully licensed volumes on tap and an all-you-can-eat subscription model. It costs £4.59 per month, but you can try it for free for 30 days. Mega-hits such as *Attack On Titan* and *Ghost in the Shell* are included, as are platform exclusives, such as *Japan Sinks 2020* and *The Shinsengumi*, with fresh chapters available every day. Features include customisable reading options, bookmarking and more.



Our rating



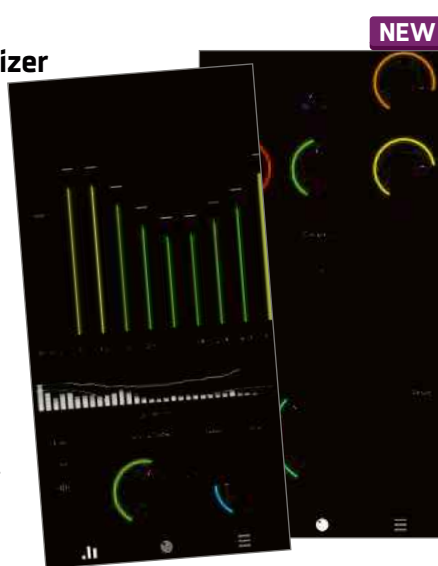
TOOLS

Poweramp Equalizer

bit.ly/2V4z5Xl
 (varies) 

Audiophilia and mobile devices don't always go hand in hand. But if you've got a decent pair of headphones and you like your tunes to sound the best they can, then you should give Poweramp Equalizer a whirl. As the name suggests, it's based on the popular

Poweramp music player and works with most third-party players and streaming apps. The array of configurable options is dazzling, and you can save your own presets. It's currently still in early access, so you may experience the odd quirk until the final release, but we didn't encounter any game-breaking bugs when we tested it.



Our rating



5 NEW APPS WORTH PAYING FOR

PHOTOS

ProCamera

apple.co/2V7Vbrs

Price: £8.99

 13.1

This popular iOS camera app has been updated with support for Dolby Vision and 10-bit HDR video recordings on compatible iPhones. Other new features include a haptic shutter button and support for external microphones.



PHOTOS

Adobe Lightroom

bit.ly/2huxZTr

apple.co/2V4lfDX

Price: £4.49 per month

 5  12.3

Version 6 of Adobe's photo-processing app adds colour-grading tools and the ability to roll back to previous versions of your edits. You can try it for free, but the full range of tools requires a subscription.



GAME

Football Manager 2021 Mobile

bit.ly/39idLVZ

apple.co/2HMOiJa

Price: £8.99



 (varies)  9

Budding Jürgen Klopps everywhere will want to download the latest entry in this long-running football-management simulator, which introduces Mexico, Argentina and Canada to the roster of nations.

EDUCATION

Human Anatomy Atlas 2021

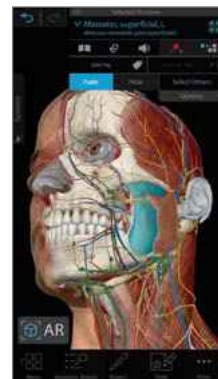
bit.ly/2dsKhqX

apple.co/3fH0zLr

Price: 89p (Android), 99p (iOS)

 5  13

Medical students and anatomy enthusiasts, rejoice! The 2021 edition of the Human Anatomy Atlas is here, with all the latest body parts and internal organs in glorious 3D. In-app purchases let you add more corporeal details.



GAME

Moonlighter

apple.co/33oeuRN

Price: £11.99

 13

Already a hit on consoles, this brilliant dungeon crawler/retail simulator mashup has made it to mobile. The idea is to battle your way through dungeons and find treasures, which you then sell in your shop.



ProCamera



Adobe Lightroom



Football Manager 2021 Mobile



Human Anatomy Atlas 2021



Moonlighter



✓ Install this app...

Elf Yourself

bit.ly/3mdCuyy

apple.co/39kDGfR

 4.1  9

Let's face it, Christmas 2020 is going to be a little... different. With all its social distancing, tiers and bubbles, this pandemic is basically a big Grinch trying to spoil our seasonal celebrations. What we need is a way to connect to our loved ones and cheer ourselves up in the process. Which is why, this year, we need Elf Yourself more than ever. For the uninitiated, Elf Yourself is a daft but fun app (loosely based on the Will Ferrell film) that allows you to send personalised Christmas greeting videos that include elf-ised versions of you (and your friends and family) doing silly dances.



...Not this one



Picture Advent Calendar 2

bit.ly/3fFqLWP

Advent calendars are designed to induce excitement and anticipation in the lead up to Christmas Day. Unfortunately, all the Picture Advent Calendar 2 app is likely to induce is a mild headache. The calendar's overall design, which displays a series of identical, numbered presents representing each day, is amateurish, to say the least, while the cheesy, clip art-like illustrations hidden behind each 'present' are, frankly, just plain depressing.

































Take a Screen Break

Take a rest from your browser with our final fortnightly challenges. Can you guess the website and app emoji, and work out our Wayback Machine year? Answers at the bottom of the page

Don't email – it's just for fun!



CAN YOU GUESS THE WEBSITES & APPS FROM THE EMOJI?

- | | |
|---|--|
| 1   | 2   |
| 3     | 4     |
| 5   | 6    |
| 7     | 8   |
| 9   | 10   |
| 11   | 12   |

GUESS THE WAYBACK MACHINE YEAR

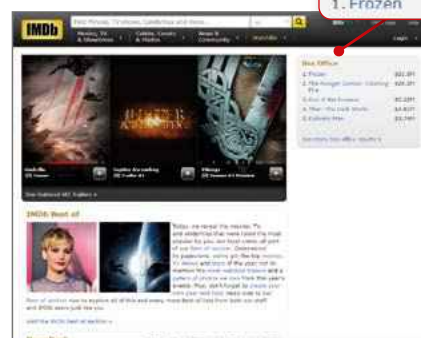
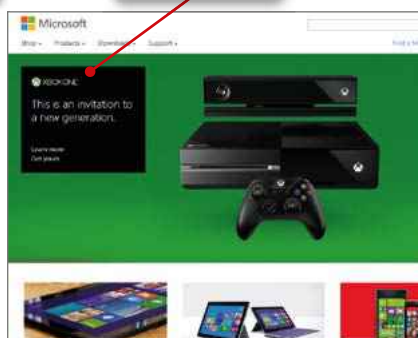
Can you work out which year the Internet Archive's Wayback Machine captured the following websites?

WayBackMachine

Revealed: how US and UK spy agencies defeat internet privacy and security

XBOX ONE

Box Office
1. Frozen



WAYBACK MACHINE

1 YouTube 2 Facebook 3 BBC News 4 Wikipedia 5 Rightmove 6 Mail Online 7 DuckDuckGo 8 Deliveroo 9 Dropbox 10 Firefox 11 Apple Music 12 Fortnite

ANSWERS

FAQ

Everything you need to know about the most interesting new technology trends and events

Google One

Google is now pushing us to sign up for its One subscription service. **David Crookes** takes a look at what one can expect from One

What is it?

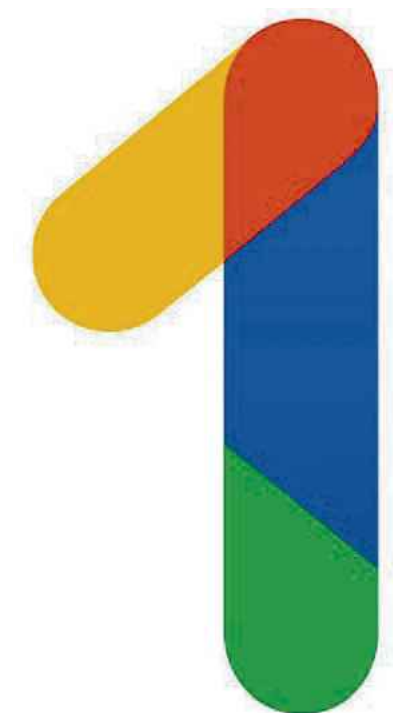
Google One (one.google.com) is a subscription-based service that offers up to 30TB of cloud storage and several membership benefits. It's primarily aimed at anyone who needs more than the 15GB of space that's offered for free with every Google account, and it works both with files on your computer and those stored on your phone or tablet.

Hasn't it been around for a while?

Yes. Google One launched in 2018, effectively replacing the storage plans offered by Google Drive. Recently, however, Google has been making more of an effort to get people to sign up with the service. One development has been an imminent end to free unlimited storage for some key Google services, which industry experts suggest is a way of pushing people to pay.

So what is on offer?

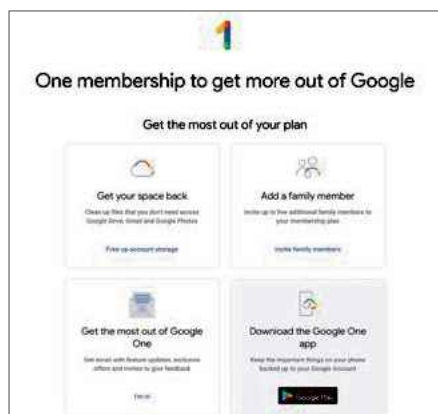
One offers a number of paid-for plans, depending on how much storage space you need. Pay £1.59 per month (or £15.99 upfront per year), for instance, and you'll get 100GB of storage. Splash out £2.49 per month (or £24.99 per year) and you'll get double that amount of space. For £7.99 per month (or £79.99 per year), you can use 2TB of storage, after which



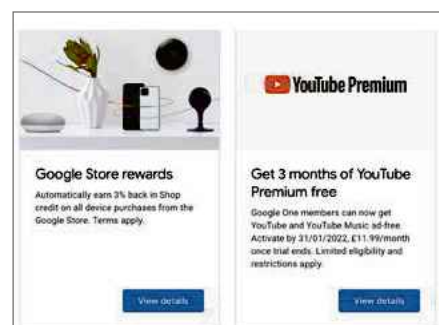
the tiers jump to 10TB, 20TB and 30TB. But that's only part of the story because the more you pay, the more benefits you'll receive.

What are these benefits?

Well, each tier gives you access to Google experts, should you need a helping hand. It's also possible to share your storage space with up to five family members, allowing each person their own private section of 15GB, in which they can store files, emails and photos.



Google One is a subscription-based online storage service with additional benefits



Google One's benefits include discounts on other Google products and services

Should any member fill up their space, they can then use the account's shared storage space.

Other perks include discounts on selected hotels and three months free with Stadia Pro and YouTube Premium. But the 200GB tier will also get you a 3% credit when you buy items from the Google Store (store.google.com), while the 2TB tier offers a 10% credit. This is useful if you intend to buy a Google Pixel phone, Nest Audio or Pixelbook, for example.

Does Google keep adding benefits?

To some extent, yes. The most recent addition is a free VPN for anyone subscribing to the 2TB tier. It's only available in the US for now, but we're hopeful it will make its way over here soon. The VPN allows you to stream, download and browse on an encrypted private connection while hiding your IP address, and it's activated by a single tap in the Google One app.

But can't I just stay with Google's free plan?

Of course. For a large number of people,



The new VPN in Google One is only available to US subscribers on the 2TB plan



From next June, you'll have to pay if you exceed your free storage limit of 15GB

15GB is more than enough cloud-storage space, but that may change in the future. As we mentioned, Google is set to change its storage policy for some key services, most notably Google Photos (photos.google.com).

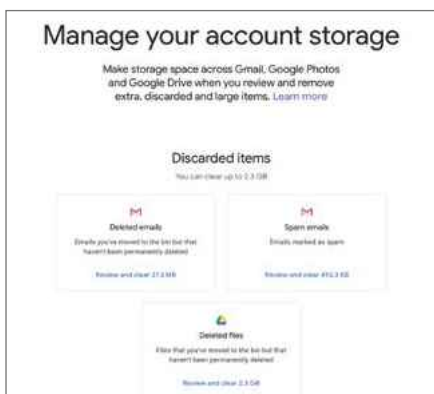
Indeed, from 1 June 2021, it will stop offering free unlimited "high quality" and "express quality" photo and video backups, putting them instead in the same bracket as "original quality" snaps and recordings. This means they'll eat into the free 15GB of space that's given to each Google user.

If you use Gmail and Google Photos, and store lots of large files in Drive, then you may find yourself at the limit rather quickly. And that's when Google will be waiting for your cash. The policy change will also affect data created in Google Docs, Sheets, Slides and more.

How can I free up storage space?

For starters, you could empty the Bin in Google Drive and remove files from the deleted and spam folders in Gmail. An easy way to do this is to visit Google's Storage Management pages at bit.ly/38Usw1e, where discarded or large emails and files can be reviewed and removed.

You can also wait for the new image-management tool in the Photos app that's set to be introduced by June. This will highlight images that are dark, blurry or large, and make them easier to remove.

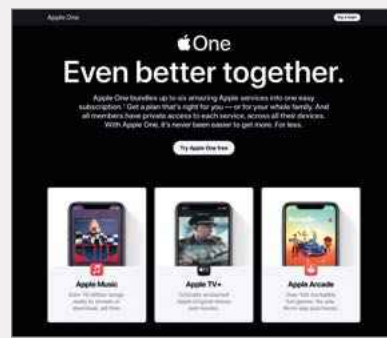


You can manage your storage online to remove large and unnecessary files

IS GOOGLE ONE THE ONLY ONE?

Some Ones are similar to Google One but not every One is the same. Microsoft's OneDrive (onedrive.live.com), for instance, lets you save files and photos to the cloud and gives you 5GB of space for free.

This can be upped to 100GB for £1.99 per month, but opt for the paid-for 1TB+ tiers, which cost from £5.99 per month and you also get Skype, Outlook, Word, Excel and PowerPoint.



Apple One (www.apple.com/uk/apple-one) offers iCloud storage space, starting at 50GB on the individual tier, 200GB on Family and 2TB on Premier. But it's primarily sold on the strength of its entertainment

services, with the more hefty £14.95, £19.95 and £29.95 monthly fees getting you Apple Music, Apple TV+ and Apple Arcade, while the higher tier also includes News+ and Fitness+.

Can I ignore some files?

Yes, don't worry about files in Shared With Me and other shared folders because they only consume storage on the owner's Google Drive. It's also worth bearing in mind that any high-quality photos uploaded before June won't count toward the limit. Neither will photos and videos uploaded from a Pixel device because these won't count toward your storage limit even after June.

Are users okay with all of this?

Not really. Some have vowed to seek an alternative photo service, though that's easier said than done. Photobucket, for instance, only gives you 250 photo uploads for free while Flickr's free plan now limits you to 1,000 photos and videos, and you can't go above 200MB for each image and 1GB for videos. Arguably one of the best alternatives is



If you have a Pixel phone, you won't be affected by Google's storage changes

Amazon Prime, assuming you're already a member. It offers unlimited photo storage and up to five friends or family members can share the benefit. Keep a lookout for other companies making enticing offers before June.

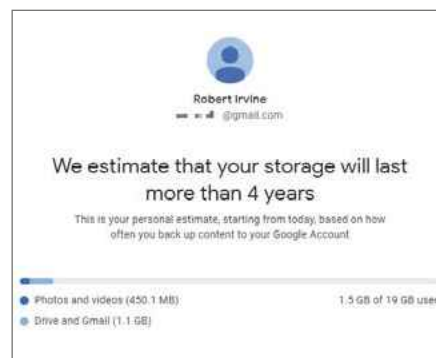
How is Google justifying this change?

Google said that its old policy of allowing free unlimited photo backups means it now has four trillion images on its servers, supplemented by a further 28 billion photos and videos each week. "This change allows us to keep pace with the growing demand for

storage," the company added. Google also claims that more than 80% of users will still be able to store three more years worth of images and videos before they breach the 15GB limit. For a personal estimate of how long it may take you to get to that point, visit photos.google.com/storage.

So should I avoid Google One?

Not necessarily. Its storage prices are competitive and, for Android owners, the service becomes even more useful for easy backup of photos, videos, contacts and other files via the Google One app, which has been downloaded more than 100 million times. Again, you can use your 15GB of free storage for phone backups or pay for more space if you want to backup large volumes. You'll find the app in the Play Store (bit.ly/3kFW7NV) and it's due to come to iOS soon.



Google estimates that it will take us more than four years to reach our 15GB limit

PREPARE FOR THE FUTURE OF THE WEB

COVER
FEATURE

There's lots of exciting new technology on the horizon, but sadly we won't be around to share it with you. **Wayne Williams** previews and predicts the internet innovations that will arrive after *Web User* departs

The web has changed dramatically since *Web User* launched in March 2001. Back then, most people still connected to the internet using 56k dial-up modems, mobile phones didn't have cameras and the likes of Facebook, YouTube, Gmail, BBC iPlayer and Twitter didn't yet exist.

Who knows what exciting innovations the next 20 years of the web will bring? Sadly, the only certainty is that your favourite internet magazine won't be around to guide you through them, so instead

we're devoting our final cover feature to previewing the technology of tomorrow – today.

Naturally, it's impossible to predict everything that we can expect to see in five, 10 or 20 years' time, but there are already projects in development that give us some clues. Over the following six pages, we take a peek into our virtual crystal ball to speculate on the software, devices and online services that could revolutionise our lives in the future, and reveal how you can prepare for them today.

Future Software & Apps

Windows 10 gets a major makeover

Windows 10 launched in 2015, and despite some significant developments since those early days, the overall appearance of the operating system hasn't changed much. With the October 2020 Update, Microsoft introduced a few cosmetic tweaks to the Start menu, and next year it intends to go a step further, "reinvigorating" the operating system with an interface refresh referred to internally as 'Sun Valley'.

According to reports, this change will be based on an expansion of Microsoft's Fluent Design language (bit.ly/3nOX8VZ), focusing on updating the appearance of the Start menu, File Explorer and the Action Centre, and providing better support for dark mode. Exactly when all of this will come to fruition isn't known for certain, but it's likely to happen toward the end of 2021.



As the sun sets on Web User, it's due to rise on Windows 10 Sun Valley

The BBC takes on Alexa

There are already lots of voice assistants out there, including Alexa, Siri, Google Assistant, Bixby and Cortana. Beeb is a new voice assistant from the BBC that's been built using Microsoft technology and is designed to deliver a British twist.

The beta release of Beeb that's out at the moment has a Northern England accent, and the BBC says it has been

working hard to ensure the app can understand as many regional accents as possible.

"OK Beeb, where can I find an emoji quiz now that Web User is closing?"



The assistant can currently access BBC radio, music, podcasts, news and weather, and respond to queries with unique answers based on BBC programmes. You wake it by saying "OK Beeb".

If you're a Windows 10 Insider (insider.windows.com), you can try the Beeb beta now, by installing the free app from bit.ly/370fGvH.

Group streaming becomes commonplace

Watching TV with friends used to mean everyone coming round to socialise in front of your living-room screen. These days, many services offer ways to watch programmes and films while chatting with your co-viewers online. Teleparty (formerly Netflix Party) has Chrome and Edge extensions (www.netflixparty.com) that synchronise video playback, so there's no danger of spoilers, and includes group chat for Netflix, Disney+ and more. Meanwhile, Facebook's Watch Party option (bit.ly/378LWgh) lets you and friends enjoy videos together on the social network. Amazon Prime Video has just added the function, and Plex has an experimental new feature called Watch Together (bit.ly/3kVRIGT).

You can expect many more such services to launch in the next few years.



More streaming services will soon let you group-watch films and TV shows

Everyone gets fooled by deepfakes

You may already be familiar with deepfakes – videos in which the subject is replaced with someone else's likeness. There are loads on the web – Jim Carrey replacing Jack Nicholson in *The Shining* is a great example (bit.ly/3fshwJz). You can even create your own deepfakes using the Impressions app (www.impressions.app).

The technology is still in its infancy, but already the results are impressive, and almost indistinguishable from the real thing. However, there are worrying possibilities. With the shift to working



Deepfake videos such as Jim Carrey in The Shining will become more common

from home, for example, there's a real danger that employees could be fooled into handing over company information to hackers who are using deepfakes to pretend to be members of staff.

Deepfakes could also be used to make it look as if public figures – politicians, actors and celebrities – have been caught behaving badly on camera. Indeed, the creators of *South Park* recently launched a deepfake satire show called *Sassy Justice* (bit.ly/3fty2sJ), which features deepfake versions of Donald Trump and Mark Zuckerberg, among others.

Listen to music that artists never made

Deepfake music is the audio equivalent of deepfake videos, in which AI creates new songs from popular artists such as Frank Sinatra, Elvis Presley, David Bowie, Louis Armstrong and The Beatles. OpenAI's Jukebox project generates tracks in the style of the chosen artist, then makes it appear as if the artist is singing on it. You can listen to the results on its SoundCloud page at soundcloud.com/openai_audio.

At the moment, the results are very rough and they sound – at best – like early demos recorded on ancient equipment. However, in time the technology is bound to improve and get cleverer, and it probably won't be too long until we get convincing new music from long-gone stars.



Deepfake music can create new songs from artists who are no longer alive

Future Gadgets & Devices

Foldable phones find an audience

You can already buy phones that unfold to become tablets from the likes of Samsung, Microsoft, Huawei and Oppo, but this is really just the start. The technology behind folding phones is only going to get better (and more affordable), and according to a leaked document (bit.ly/338OpI9), Google is planning to release a foldable Google Pixel phone, codenamed 'Passport', towards the end of 2021.

Apple first filed a patent for a foldable iPhone back in 2016 (with other patents following in 2019 and 2020), and a recent rumour from a Chinese supplier suggests that the tech giant is planning to release its first such device in the autumn of 2022 (bit.ly/33ab454).



We're likely to see more foldable phones like the Samsung Galaxy Fold

Shopping arrives via drone

Thanks to the pandemic, we're already used to deliveries being dropped off outside our front doors, but at the moment, they're still being delivered by actual people. In the near future, we're more likely to see our shopping arrive via drone.

It's not even that futuristic a premise as Amazon has been discussing this for a while, and recently got the Federal Aviation Administration (FAA) approval to operate a fleet of delivery drones in the US, making Amazon Prime a

'designated air carrier'.

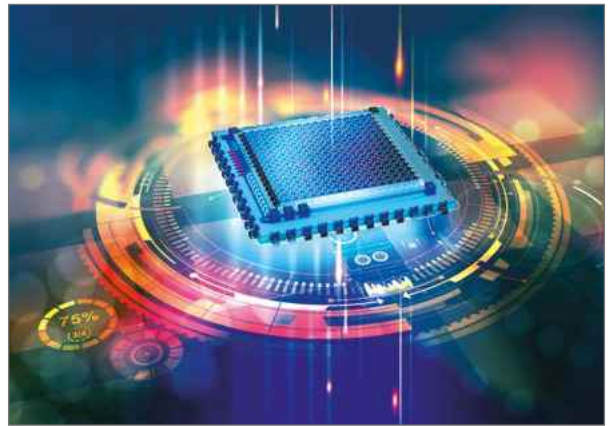
Amazon tested delivering products via drone in the UK back in 2016, but there is still some way to go before the retail giant can begin safely delivering products in this way in either country.

It's not just Amazon that's investigating the possibilities. Tesco is trialling drone deliveries of up to 4kg (9lb) of shopping to customers, with products arriving within 30 minutes of being ordered. So far, it's only been running tests from a store in County Galway, but if the trial is successful, it will expand to other areas in the coming years. Noise is one of the biggest problems with drone deliveries, so companies will need to address this going forward.

Computers take a quantum leap

Currently very much still in its infancy, quantum computing is definitely the future, but we should begin seeing commercial devices arriving in the next five years or so. Google hit the headlines in 2019 when it claimed to have achieved 'quantum supremacy' (bit.ly/3pXaMYS) by building a quantum computer that "can perform a task no classical computer can". This feat consisted of completing a computation in 200 seconds that – according to the search giant at least – would take the world's fastest supercomputer 10,000 years to process (IBM contested this claim – ibm.co/373ySZs).

What makes a quantum computer so fast? Well, traditional computers store information as either a 0 or 1, whereas a quantum bit (or qubit) harnesses the unique ability of subatomic particles to be both 0 and 1 at the same time – a property called superposition. Two quantum bits can simultaneously be 00, 01, 10 or 11, and these four states are equivalent to four standard computers running side by side. Add more qubits and the power of the quantum computer grows exponentially. Fields including artificial



Quantum computing is the future but you'll have to work it out for yourself

intelligence, finance and so-called Big Data will all benefit from this technology.

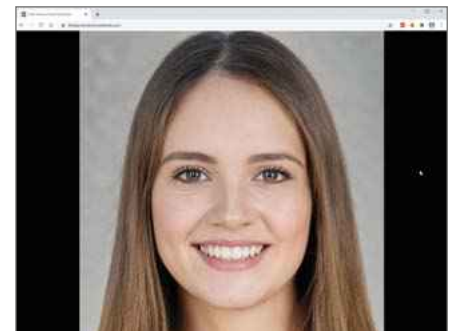
Artificial intelligence gets smarter

We already have artificial intelligence (AI) in our homes, thanks to Alexa and Google Assistant, but this concept will become more widespread and intelligent in the coming years, often replacing humans. When you contact a web service these days, there's a good chance that your first port of call will be with a chatbot, and by 2025, according to a prediction from Servion Global Solutions, AI will power 95% of customer interactions, including live telephone and online conversations (bit.ly/3pPYDoV). In a recent survey, Myplanet (www.myplanet.com) found that people were more comfortable chatting to AI using voice on their phone rather than text, and this seems to be the way the technology is headed.

AI can be used for lots of other purposes. The rather creepy website This Person Does Not Exist (thispersondoesnotexist.com) uses the technology to create completely believable images of people who don't actually exist in real life. Each time you



Our online orders could soon be delivered via drone rather than human couriers



AI will make interacting with people who don't exist an everyday activity

refresh your browser, a new face will be generated.

VR and AR go beyond gaming

Though VR (virtual reality) and AR (augmented reality) are commonplace through devices such as your smartphone and Oculus Quest 2 (www.oculus.com/quest-2), they are mostly used by gamers. However, the technology is also being put to good use in other areas, including education, retail, healthcare and the military.

Facebook bought VR darling Oculus for around \$2.3bn in 2014, and it's also working on AR in the form of Project



Virtual and augmented reality will soon have many more uses than gaming

Aria (bit.ly/3pTnfgn). With this, Facebook is “building towards a future where our devices disappear into the flow of everyday life, enhance the world around us as we go, and render our devices more human in design and interactivity”.

At the moment, the technology comes in the form of smart glasses that capture what the wearer sees and hears, along with eye movement and location information. The idea is to help Facebook’s researchers understand how AR can best be used in the real world.

Holograms will be everywhere

Holograms were once considered a sci-fi staple – who can forget Princess Leia’s message in *Star Wars: Episode IV - A New Hope* in which she implores “Help me, Obi-Wan Kenobi, you’re my only hope”? In recent years, however, holograms have become ever more life-like, with music stars including Tupac, Michael Jackson, Elvis Presley and Whitney Houston all performing as ‘holograms’ after their deaths, using a modern twist on the 200-year-old Pepper’s Ghost parlour trick

(en.wikipedia.org/wiki/Pepper_ghost).

AR on our phones, and on devices such as Microsoft’s HoloLens (bit.ly/3nSLrOm), already allows us to see 3D objects that aren’t really there (which is essentially what a hologram is), and companies such as Looking Glass Factory (lookingglassfactory.com) and Real Fiction (www.realfiction.com) go a step further with their products.

ResearchAndMarket predicts the global 3D holographic display and services market will grow from \$607.6m in 2020 to \$1.8bn by 2025, driven by the advertising and media industries (bit.ly/399ni1K).



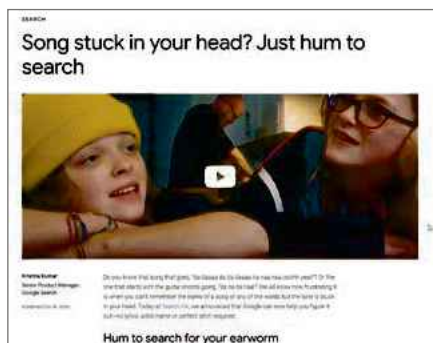
Firms such as Looking Glass Factory already create convincing holograms

Future Websites & Services

New ways to search the web

Google has its fingers in many pies these days, but search remains the service it’s best known for, and the company isn’t resting on its laurels. Google recently introduced a new way to identify a song stuck in your head – you can hum, sing or whistle it into your phone. Provided you have the newest Google app or Search widget, you just need to tap the ‘Search a song’ button or, alternatively, tap the microphone icon and ask: ‘What’s this song?’.

Google also recently introduced a new spelling algorithm which uses a deep neural net to significantly decipher



Google now lets you search for a song online by humming a few bars

misspellings (one in 10 daily search queries are misspelled, apparently), and its search engine can now index individual paragraphs on web pages.

Google is already making great use of AI to analyse and understand the information it indexes, and this is only set to improve in the coming years.

We’re influenced by the Internet of Behaviours

You’ve heard of the Internet of Things (IoT). Well, the Internet of Behaviours (IoB) is a new, emerging tech field where organisations gather information about you via existing technologies, then use this data to influence your behaviour. Research and advisory firm Gartner predicts that by the end of 2025, “over half of the world’s population will be subject to at least one IoB programme, whether it be commercial or governmental” (gtnr.it/3fsO46s).

Fill your prescription through Amazon

For many of us, buying products online usually means going through Amazon. The site provides a one-stop-shop for

pretty much anything you’re after, from entertainment products and hardware, to footwear and groceries. Amazon is always looking for new avenues for revenue, and its latest venture is an online pharmacy service.

Amazon Pharmacy (pharmacy.amazon.com) lets customers buy prescription medication online, with big discounts promised for Prime members – up to 80% on generic brands and 40% on brand name products. The way it works is doctors can send the prescription directly to Amazon, or patients can switch from their current pharmacist. It’s a US-only service at the moment, but expect it to roll out to the UK and other countries in due course.



We could soon be ordering our prescriptions through Amazon Pharmacy



Future Privacy & Security

Google puts our privacy in a sandbox

If you're worried about your privacy online – and, frankly, you should be – there are a number of initiatives that can protect you from snoopers. Privacy Sandbox from Google (of all companies!) is the one that's likely to have the most impact. It's a set of open standards designed to enhance privacy on the web by providing “a secure environment for personalisation that also protects user privacy”.

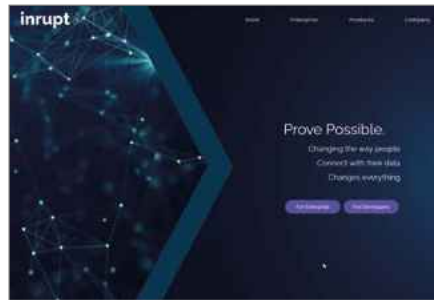
Google plans to phase out third-party cookies – used to target us and track advertising online – by 2022, and also replace the functionality that's currently served by cross-site tracking. You can find out more about Google's Privacy Sandbox at bit.ly/2ITAsoZ.



Google's Privacy Sandbox could stop companies snooping on us online

Tim Berners-Lee puts our privacy in PODS

Sir Tim Berners-Lee is best known as the creator of the worldwide web and, over the years, he's been vocal about the direction his invention has taken, believing the web should be free and open. His new startup, Inrupt (inrupt.com), has a privacy platform called Solid that's designed to help large organisations – such as the BBC, NatWest and the NHS – and governments build applications that



Sir Tim Berners-Lee's Inrupt company wants to help us protect our data

give users control over who can see their data. This privacy is achieved via Personal Online Data Stores (PODS). You store your data separately and share only what's necessary with the services you use.

If Solid receives the widespread adoption it needs to succeed, it could prove to be a major turning point for the web, and stop the widespread data harvesting and personalised advertising we see today. Of course, that could mean that some free services – such as webmail – will have to start charging users, but that day is still some way off at the moment.

Cryptography keeps us quantum-safe

Once quantum computers (see page 42) go mainstream, existing encryption algorithms – such as ECC and RSA – will be rendered obsolete, because the new generation of computers will be able to crack them in seconds. Quantum-safe cryptography will replace the obsolete algorithms, offering cryptographic protocols that cannot be efficiently broken using a quantum computer. The Open Quantum Safe

(OQS) project launched in 2016 with the plan to integrate all the various quantum-safe schemes (there are several) into a single library.

The web gets policed by governments

In the early days of the web, its lawless nature meant it was often likened to the Wild West. Things have changed considerably over the past two decades as companies such as Google have done a better job of self-policing. However, following the COVID-19 pandemic and US elections, rampant misinformation has spread across social-media platforms like wildfire, and the softly, softly approach of social networks – Twitter flagging Donald Trump's outright lies as 'disputed content', for example – has done little to quash the spread of “fake news”.

Further escalation could well lead to a call to hold firms accountable by imposing tighter regulations and, ultimately, legislation. If this happens in the US, the UK is bound to follow suit shortly afterwards.



Web firms could soon be held accountable for the content that users post

WHICH TECH HAS NO FUTURE?

It seems a safe bet that mechanical hard drives will become a thing of the past relatively soon. The main reason why they've stayed around so long is their greater capacity, but the faster and quieter SSD is catching up and becoming more affordable.

Digital cameras and MP3 players have mostly been replaced by smartphones, and that's a trend that will continue. Meanwhile, non-Apple smartwatches and tablets are likely to become increasingly thin on the ground.

It's also possible that, in the next decade or so, home games consoles could be replaced (or at least supplemented) by streaming services, such as a next-generation Google Stadia.

Finally, will the creation of new and more advanced ways for us to chat online signal the death of email? It seems increasingly inevitable, but then again, people have been predicting email's demise for years, so don't bet on it!



Future Internet & Networking

6G delivers astonishing fast speeds

5G is only just starting to become widely adopted, with the latest phones – such as the iPhone 12 – now supporting the standard. The speeds it delivers – currently around 100Mbps in major UK cities, with the potential to hit 1Gbps in the future – are significantly faster than 4G's 30Mbps, and offer lower latency.

Looking further into the future, there's 6G. The exact details around this standard aren't known yet because it's very early days, but it will be much faster than 5G – perhaps up to 100 times faster. Don't get too excited about 6G yet, though. It probably won't arrive in a usable form for another 10 years or so.



5G may still be rolling out in the UK but plans are already underway for 6G

Wi-Fi 7 means instant downloads

Web User has seen wireless technology improve massively over the last 20 years. In the early days, Wi-Fi used the 802.11a and 802.11b standards, with the most popular of the two standards – 802.11b – only able to deliver 11Mbps on the 2.4GHz band at a range of up to 150 feet. Things improved with the arrival of 802.11g in 2003, and 802.11n (Wi-Fi 4) in 2009. In 2014, the arrival of 802.11ac



Sadly, Web User won't be around to celebrate the wonders of Wi-Fi 7 with you



Starlink will use satellites to deliver high speed broadband across the world

(Wi-Fi 5) shook things up, and today 802.11ax (Wi-Fi 6), which arrived in 2019, offers theoretical maximum speeds of up to 9.6Gbps.

Wi-Fi 7 (aka 802.11be) is projected to arrive in around 2024 and offer speeds of up to 30Gbps, as well as better range and lower latency. More information will be available from the Wi-Fi Alliance (www.wi-fi.org) once the standard is finalised.

Low-cost satellite broadband for everyone

There's a good chance you've heard of Elon Musk's Starlink project (see our FAQ on rural broadband in Issue 507, bit.ly/webuser507), and you might have

even seen it in the night sky. Starlink is a satellite internet constellation from SpaceX that consists of thousands of small, low Earth-orbit (LEO) satellites. It basically looks like a string of glowing pearls in the night sky. Its aim is to deliver high-speed broadband internet across the globe, starting with the Northern United States and Canada, and expanding to other countries in 2021. You can express your interest by signing up for Starlink's Better Than Nothing Beta programme at www.starlink.com.

Amazon is looking to provide a rival service in the form of its \$10bn Project Kuiper endeavour. You can read more about this at bit.ly/35VOikP.

GOODBYE FROM WAYNE



It's been 15 years since I started writing for *Web User*, and it's been a hugely enjoyable experience. In one of my earliest pieces for the magazine, I introduced readers to Web 2.0 (remember that?), and later on I wrote about all the new social sites – YouTube, Facebook and Twitter – as they launched, not quite realising at the time just how integral to our lives they would become.

I've loved writing for *Web User*, and like you I'm gutted that it's come to an end. However, I'm also grateful that I've been able to chronicle a period of such amazing technological change for as long as I have, and to share it with such a fantastic, appreciative and loyal readership. Thank you for reading.

Wayne Williams

Best Windows startup managers



If your computer is slow to start, you need to take control over what runs when it boots up. **Steve Clark** explores the best free Windows startup managers

Quick Startup | bit.ly/2V2XHyZ | ★★★★★
FEATURES ★★★★★ PERFORMANCE ★★★★★ EASE OF USE ★★★★★

WebUser
GOLD
AWARD

What we liked:

When you power on your computer, it takes a while for the operating system and programs to load before you can start using it. Windows has a built-in startup manager that helps you speed up this process, but it's a basic tool and there are plenty of better options available.

Glarysoft's Quick Startup is the best free option. Its simple interface and spacious layout are similar in design to familiar, everyday programs such as internet security software. This makes it easy to use, whatever your level of tech experience. With one click, you can enable or disable programs from running when you start your PC.

The interface is organised into tabs that group together different types of startup items, such as programs, tasks and services. At the top of the screen, you'll see an estimate of how long a full startup takes, and the number of programs that launch when you boot up. It's intuitively easy to understand what you're looking at and how to navigate Quick Startup's features.

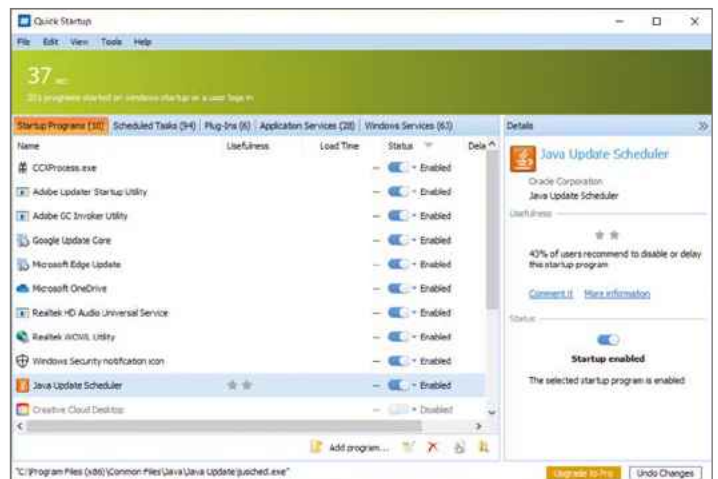
Almost every other option you need can be accessed by right-clicking an item in your list. This is where you'll find

the excellent Delay setting – a useful tool that lets you stagger the start time of your programs to avoid bottlenecks. You can delay programs by anything from 30 to 270 seconds, or set your own time if you want to delay for longer.

You can highlight any process, program, task or action, then select Tools and click 'More information' to view more details about it. This information includes Glarysoft's security rating and users' opinions.

How it can be improved:

When you select an item, the details are displayed in a sidebar. This includes a section entitled 'Usefulness', which lets you see whether other users recommend disabling or delaying the program. This is a great idea in theory, but since it relies on user feedback, very few of the startup programs



actually have a rating. It's a shame because this could be a genuinely useful guide if it included more community responses.

OUR VERDICT

Quick Startup is ideal for all experience levels: easy for rookies to learn but powerful enough for experts to master. It's sensibly and neatly presented, and packed full of useful at-a-glance features that are brilliantly simple to use.

Autoruns | bit.ly/2Byc8Ao | ★★★★★☆
FEATURES ★★★★★ PERFORMANCE ★★★★★ EASE OF USE ★★★☆☆

WebUser
SILVER
AWARD

What we liked:

Straight from the Microsoft vault comes Autoruns.

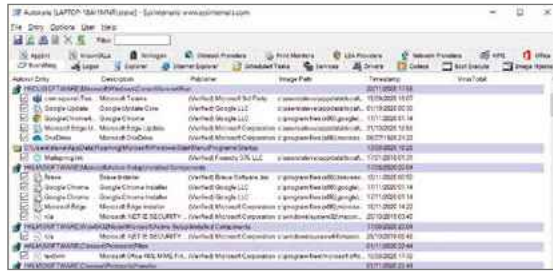
According to the brains behind the tool, it has “the

most comprehensive knowledge of auto-starting locations of any startup monitor”.

This admirable thoroughness makes for a very busy interface that’s bursting with options and information, and feels a tad overwhelming. But don’t let the steeper learning curve put you off.

Once you know what you’re looking for, Autoruns proves itself to be a brilliant tool.

Navigate the tabs to switch between every process, big or small – from Explorer tasks to codecs and DLLs. Right-clicking programs serves up a handful of basic management options, the most useful of which is Check VirusTotal. There’s even an option to hide Microsoft entries, so you can more easily identify the third-party programs slowing down your device.



How it can be improved:

Autoruns does it all but, if you’re new to the tool, finding out which feature does what takes time. Easier navigation and a simpler interface would be a blessing, as the convoluted layout makes it hard to find even some basic features.

OUR VERDICT

Microsoft’s Autoruns is a comprehensive startup manager. Along with the usual options, you can analyse the offline system and compare your current startup to previously saved Autoruns files. But it demands a confident user to navigate its complicated layout.

Autorun Organizer | bit.ly/2UXq5CQ | ★★★★★☆
FEATURES ★★★★★ PERFORMANCE ★★★★★ EASE OF USE ★★★★★

WebUser
BRONZE
AWARD

What we liked:

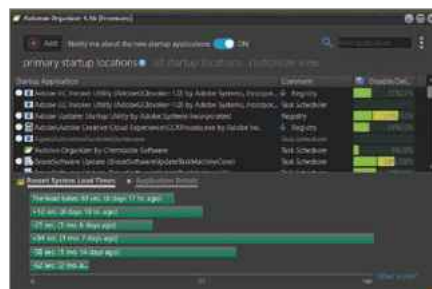
Autorun Organizer uses graphical flourishes to present its information.

By default, the lower pane displays Recent System Load Times as a bar chart,

complete with the time and date, so you can easily compare past startups and remedy any speed problems.

Selecting a program in the list switches the view to Application Details, where much of the startup management occurs. Use the tick boxes to temporarily disable a program, or click ‘Remove and Disable’ to ditch it entirely. Delays are managed either through the one-click 30-second delay or via the drop-down menu to customise your own. Instead of having to run programs through VirusTotal, a built-in ‘review’ instantly shows whether the application is safe.

Autorun Organizer’s standout feature is Optimization. This analyses an application’s use and suggests an optimum delay – anything from 30 seconds to 10 or 20 minutes – to make boot-up times quicker.



How it can be improved:

Compared to our Gold and Silver award-winners, this software lacks startup applications beyond scheduled tasks and programs. There’s no tab navigation, so all startup items are placed in a single list, but you can be notified about every new startup app.

OUR VERDICT

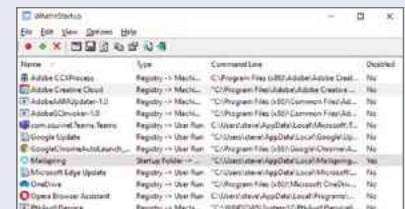
Autorun Organizer isn’t as thorough as its rivals, but it’s arguably the easiest to use. Select a program and all its options are placed at your fingertips, making for quick and easy startup management.

BEST OF THE REST

What In Startup

www.nirsoft.net

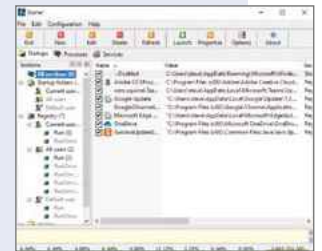
What In Startup, like most Nirsoft tools, is designed to be easy to use. Like Quick Startup, the tool houses its many options within a right-click context menu, albeit with fewer features. Basically, you use red and green buttons to disable and enable programs. Sadly, it hasn’t had an update for a long while – arguably, it doesn’t need it – so it’s built for previous versions of Windows, though we had no trouble using it in Windows 10.



Starter

bit.ly/18jZQLS

Starter’s layout is what you might call ‘classic’, featuring a collapsible tree view, information pane and tab navigation. Tasks are performed using a string of clearly labelled buttons at the top of the screen,

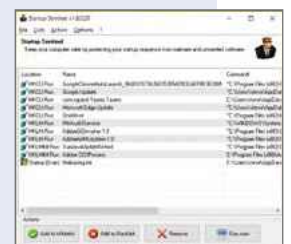


which make it easy to use the tool, and it’s very customisable, so it’s worth dipping into Configuration to play around with your preferred style. Watch out, though: Starter, like What In Startup, hasn’t been updated for some time.

Startup Sentinel

bit.ly/3IZit9W

Startup Sentinel is squarely aimed at novice users. This means it’s not quite as powerful as its rivals, but it’s streamlined for ease of use, with an uncomplicated design that keeps options to a bare minimum. At the foot of the screen are four buttons that let you add programs to your whitelist or blacklist, and remove and launch software. You can also export your startup data for future reference.



WebUser

BEST FREE DOWNLOADS ...EVER!

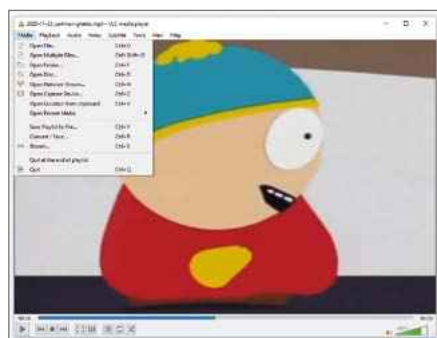
BEST MEDIA PLAYER

VLC

www.videolan.org/vlc

The free program originally known as VideoLAN Client launched days before *Web User* in spring 2001, and quickly became our favourite tool for playing video and audio files. VLC has kept up with trends and is now the best free tool for streaming between your devices. For example, it lets you stream a live video capture from your desktop or phone to your TV via Chromecast (here's how: bit.ly/35SN1cu). VLC still plays most digital file formats, including DVDs for all regions, and includes oodles of features including subtitle syncing.

Like many tools in our hall of fame, VLC is open-source, so it's constantly being updated by dedicated volunteers and will always be free.



We've spent nearly 20 years turning our PCs into TV sets with VLC

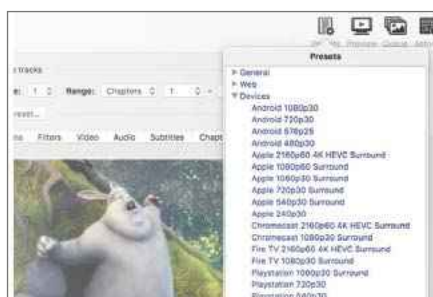
ALSO TRY: MediaPortal (www.team-mediaportal.com) is an alternative to Windows Media Player based on the same source code as Kodi.

BEST VIDEO CONVERTER

Handbrake

handbrake.fr

DVD was the video format of choice



Convert video and audio for any device with one click of a Handbrake preset

when *Web User* launched, but people increasingly wanted to save – or ‘rip’ – those discs to keep forever as video files. Handbrake, which launched in 2003, became briefly infamous as the best tool for the job, but its creators soon removed the controversial feature. Never mind: it's still the best free tool for converting video files between device formats, using one-click presets for Android, Chromecast, Fire TV, YouTube and more.

ALSO TRY: OBS Studio (obsproject.com) is powerful open-source broadcasting software that lets you record, edit and broadcast live video.

BEST IMAGE EDITOR

GIMP

www.gimp.org

Free Photoshop alternative GIMP is the senior program in our line-up, launching



GIMP is as big and powerful as Adobe's legendary Photoshop, but costs nothing

Every fortnight for 20 years, we've recommended the best free software to download – but which programs are the best of the best? **Jane Hoskyn** unveils *Web User's* software hall of fame

25 years ago, before we had so much as a dial-up modem to our name. GIMP (short for GNU Image Manipulation program) is similar to Adobe's widely expensive software in scale, power and features, with tools including layers, blemish removal, perspective distortion and a channel mixer.

ALSO TRY: XnView (www.xnview.com) is an image library and editor in one, with a duplicate finder, slideshow maker and metadata manager built in.

BEST MUSIC AND AUDIO TOOL

Audacity

www.audacityteam.org

You don't need music skills to love the powerful audio editor Audacity. It's also perfect for splicing together treasured voicemail clips of your grandchild, or trimming, improving and sharing audio recordings of birds in your garden. Audacity is one year older than *Web User* and is still the most popular tool on software site FossHub (www.fosshub.com), from where it's been downloaded more than 100 million times in the last five years alone.



Audacity lets you edit your concertos or splice together your birdsong clips

ALSO TRY: Spotify (www.spotify.com), which has had the kind of influence on

our music listening that *Top of the Pops* once dreamt of. Free users can now play songs in full, with only a few ads to spoil the fun.

BEST EBOOKS SOFTWARE

Calibre

calibre-ebook.com

Download, convert and read ebooks via sources including Amazon and the wonderful Project Gutenberg – and even write and publish your own tomes – using this magnificent digital library tool. Calibre works as a personal cross-device browser, letting you securely access your ebooks on your tablet, phone and laptop without having to download e-reader apps. You can even set up your private Calibre server, using the instructions at bit.ly/2J0fZ1t.



Read, organise and write books with Calibre – no other apps are necessary!

ALSO TRY: Amazon's Kindle app (bit.ly/2m2Pfxz) is free to download and, if you're a Prime subscriber, provides a huge library of free content to read.

BEST WEB BROWSER

Chrome

www.google.com/chrome

Google's founders had only just finished their PhDs when *Web User* first went on sale, but it didn't take long for their creation to dominate our pages. Chrome arrived in 2008, back when we were using Firefox and Internet Explorer (IE), and revolutionised our browsing with tabs, incognito mode and integrated search across bookmarks and history. It's not perfect – there are too many

unnecessary processes – but it's the biggest free software release of *Web User*'s lifetime, and possibly the most welcome.

ALSO TRY: Microsoft's successor to IE, Edge (www.microsoft.com/edge) is snapping at Chrome's heels with its innovative built-in features and speedy performance.

BEST FLIGHT SIMULATOR

FlightGear

www.flightgear.org

This enormous open-source simulator launched way back in 1997, before any of us had computers powerful enough to run it on. FlightGear now offers the most advanced flight-simulator settings and visuals found anywhere for free. Perfect lockdown escape for 2020, so thank goodness our home PCs are now up to the challenge!



FlightGear's phenomenal graphics were unimaginable on a home PC 20 years ago

ALSO TRY: Google Earth (earth.google.co.uk) uses NASA data to recreate the world and beyond in astonishing detail and includes a built-in flight simulator.

BEST FREE OFFICE PROGRAM

LibreOffice

www.libreoffice.org

LibreOffice feels like it's been around forever but it's a relative youngster, having evolved from OpenOffice just 10 years ago. It quickly became the leading alternative to Microsoft's pricey Office tools, which increasingly push you towards online services and subscription payments. LibreOffice runs entirely offline, and you can even run a portable version of LibreOffice from a USB stick (libreofficeportable.org).



LibreOffice provides office software on your computer, and not in the cloud

ALSO TRY: Web-building platform WordPress is responsible for 60 million websites, including a third of the current top 10 million websites. Not bad for a blogging tool co-designed in 2003 by a fella from Stockport (mikelittle.org).

BEST PC CLEANUP TOOL

BleachBit

www.bleachbit.org

When junk started turning up in CCleaner's installer, we switched to



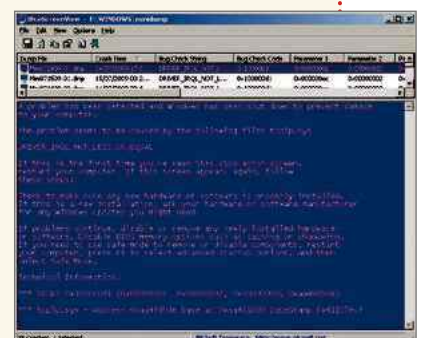
OUR PICK OF PORTABLE PROGRAMS

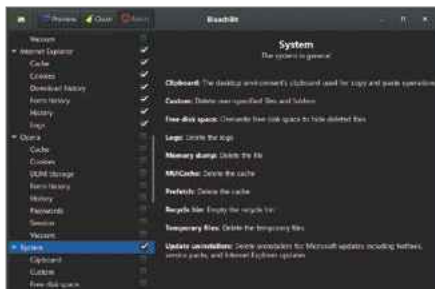
Several of our favourite programs, including LibreOffice and Chrome, have portable versions that you can run from a USB stick or folder without the need to install them. Here are a few more dinky portable EXEs we'd keep on the same stick:

- **MemPlus** (bit.ly/35XKduE) lifts the lid on any PC's running tasks, then lets you quickly kill problematic processes.
- **Resonic Player** (resonic.at) is a portable audio player. Click Download, then 'portable version' and copy the EXE to a USB stick along with a folder of songs, then run it on any computer.
- **CloneApp** (cloneapp.de) backs up your system and software for restoring on a new PC.
- **Marble Portable** (bit.ly/3nPU245) is an interactive virtual atlas. Click any location to go straight to its Wikipedia page.
- **IrfanView Portable** (bit.ly/2JOToLa) is another of our favourite image viewers, with support for dozens of file types, including vector graphics and QuickTime videos.
- **BlueScreenView** (www.nirsoft.net) reveals why your computer crashed, and keeps a log of the problems – perfect for an ageing laptop.



Google has dominated Web User's lifetime, and Chrome is its star





We keep our PCs running smoothly with a regular BleachBit spring-clean

BleachBit, now 12 years old and as clean and efficient as ever. It's constantly improving, and now lets you drag specific folders and drives onto the program window to clean them up, and shred deleted files for security.

ALSO TRY: Malwarebytes AdwCleaner (bit.ly/1WWSgn) roots out any dodgy files that have infiltrated your system and delivers a noticeable speed boost.

BEST PC SETTINGS TOOL

Ultimate Settings Panel

bit.ly/2gmyhLr

We still had Windows XP to look forward to when *Web User* began, but now we look back on XP's marvellous Control Panel with wistful nostalgia. Ultimate Settings Panel doesn't replace your Windows 10 settings, but this brilliant tool organises them as they used to be, for much greater control.



Ultimate Settings Panel restores XP-style order to Windows 10's messy settings

ALSO TRY: Make your monitor easier on the eyes with NirSoft's ControlMyMonitor (www.nirsoft.net), which lets you adjust contrast, brightness, sharpness and colour tone with a scroll of your mouse.

BEST FILE ORGANISING TOOL

Bulk Rename Utility

www.bulkrenameutility.co.uk

Back in 2002, when Bulk Rename Utility (BRU) launched and *Web User's* office contained more paper files than digital ones, a tool for bulk-editing filenames wasn't top of our wish list. Now we can't live without it. Just think of all those photos you download from your Facebook account, with filenames



Bring order to messy Facebook photos in one go with Bulk Rename Utility

like an Enigma machine dispatch. BRU lets you edit them all in one go, automatically using information such as dates and file sizes in an intelligent pattern that avoids clashes.

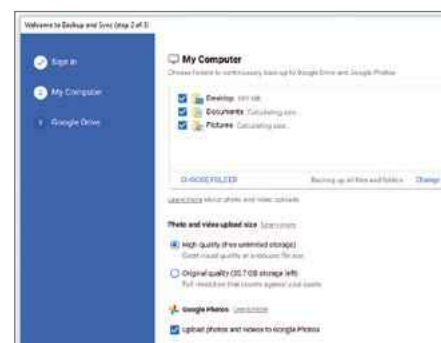
ALSO TRY: AllDup (www.alldup.de) blitzes any duplicate files cluttering up your drives, and is smart enough to avoid deleting what you'd rather keep.

BEST STORAGE TOOL

Google Drive

drive.google.com

Google launched Drive in 2012, five years after Dropbox and Microsoft OneDrive (then SkyDrive), but it quickly overtook them in user numbers – 800 million, compared with around 500 million each. Drive is a must-have for Android users especially, whose photos



Install Google Drive on your computer to automatically keep folders backed up

are automatically backed up via Google Photos. Drive's 15GB free storage is relatively generous, and its built-in search is second to none.

ALSO TRY: OneDrive (onedrive.live.com) has reduced its free storage to 5GB, but it's still an excellent choice, especially if you use Office. The installed version of OneDrive automatically saves your work to a local folder whenever your internet is on the blink.

BEST SOFTWARE MANAGER

Ninite

ninite.com

So many great free programs, so little time to keep them updated and look out for dodgy developments. Ninite came along in 2009 to automatically do the job for you, and it's still one of our most-used tools. Go to the website, choose a batch of programs to download or update at once, then click Get Your Ninite to get an all-in-one executable file (EXE) that contains the whole lot, guaranteed adware-free.



Create a safe, portable EXE file of your favourite programs with Ninite

ALSO TRY: NirLauncher (launcher.nirsoft.net) lets you download dozens of system tools in one go from www.nirsoft.net. Like all NirSoft tools, NirLauncher is portable, so it doesn't need installing. ■

GUDBUY FROM JANE

When I was a kid, 2001 wasn't just the future, it was *the* future. Arthur C Clarke himself would've been shocked by quite how auspicious it turned out to be. Windows XP, Wikipedia, Xbox, iTunes, the iPod, BitTorrent and Google Image Search all arrived that year - and so did *Web User*. I joined the team the day before the horrifying events of 9/11, which we watched unfold on the analogue TV screens in a neighbouring library. Since then, we've seen analogue give way to digital, in a revolution that still boggles my mind. We've explored it, explained it, blocked its dodgy bits and been utterly awed by it in a way that wouldn't have been remotely possible without *Web User's* readers. You have helped shape the way I see and understand the world, and I will miss you.

Jane Hoskyn



Switch your mobile provider

Moving to a cheaper and more reliable phone network is now easier than ever. **Robert Irvine** explains how

Compare mobile tariffs

With their different configurations of minutes, texts, data, handsets and SIMs, mobile deals can be confusing to browse, so the best place to start looking is on a comparison site. All the usual suspects – MoneySupermarket, GoCompare, uSwitch and so on – cover phone plans, but we prefer the independent site HandsetExpert (handsetexpert.com). Free of the bias and limited choice that often plague comparison services (as we revealed last issue), this site lets you compare tariffs from 22 UK providers. You can filter the results by price, provider, data and other useful criteria, and view the total contract cost upfront. We especially like that HandsetExpert tells you when it would be cheaper to pay for a SIM-free phone and SIM-only plan separately, rather than choose a bundled deal.



Request your PAC

Once you've found a better mobile deal to switch to, you'll need to get your port authorisation code (PAC) from your current provider. Thanks to new legislation introduced by Ofcom last year (bit.ly/3kKOG8v), you no longer need to call your network to request your PAC and sit through its attempts to persuade you to stay. Instead, you can use the AutoSwitch service to get your PAC via text message.

If you want to keep your existing mobile number, text **PAC** to **65075**. Sending the message won't cost you anything (ignore any warning that it



will), and your network should reply with the code within one minute (it may ask for additional security information such as your date of birth).

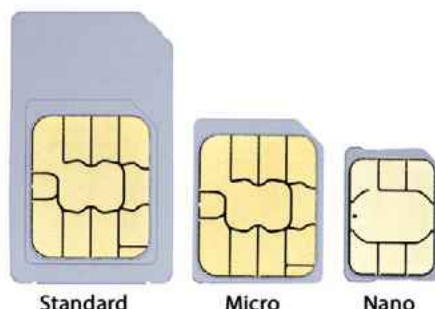
The PAC is valid for 30 days and the reply will include details of any charges you have to pay if you're leaving your contract early. You can also request your PAC via your account on your provider's website.

If you want a new phone number on your new network, text **STAC** (service termination authorisation code) to **75075**. And if you're unsure whether you'll be charged for leaving your current provider, text **INFO** to **85075** for information, without requesting a code.

Get the right SIM card

Armed with your PAC (or STAC), you can now sign up with your chosen mobile provider. Once your new network has the code, it must arrange for the switch to be completed within one working day.

If you've gone for a SIM-only deal, make sure that the SIM card will fit your existing phone or the new handset you intend to buy. Most cards these days are Nano SIMs, measuring 12.3 x 8.8mm, but it's possible your phone uses a Micro



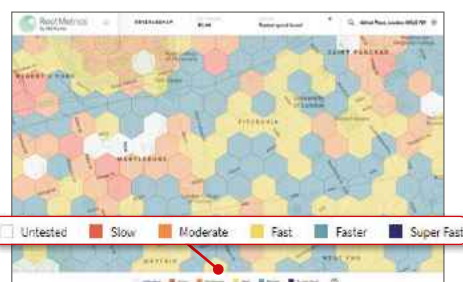
SIM, which measures 15 x 12mm. If it's a really old handset, you may need a Standard SIM (a relatively huge 25 x 15mm).

Some providers send you a three-in-one Combi SIM that lets you pop out the correct-sized card. If not, you can either request a replacement for free, buy a card adapter or perform some DIY trimming (not advised) to make the SIM fit your device. On certain mobile plans, you may even get an eSIM, which is built into a phone's motherboard but still lets you switch to other networks.

Check mobile coverage

Before you switch to a new provider, it's wise to check that you'll get reliable service in your area, for voice calls and internet usage. All the mobile networks provide coverage checkers on their websites, which let you enter your postcode to see if 3G, 4G and (increasingly) 5G are available. As the four main providers (EE, O2, Three and Vodafone) cover nearly all of the UK, don't expect to see any huge gaps on their colour-coded maps. However, do ensure that your address will have good coverage both indoors and out (unless you want to climb a hill every time you make a call).

For an unbiased overview, RootMetrics provides an independent coverage map (bit.ly/3pK1FuA), which you can filter by provider, call performance and internet speed. It's a US site that labels 4G as 'LTE', but its UK data is reliable and comprehensive. ■





Practical WebUser

16 pages of workshops, tips, projects and problem solving

Create Hollywood-quality movies using DaVinci Resolve 17

The latest version of this video editor adds some useful new tools. Here's what you need to know

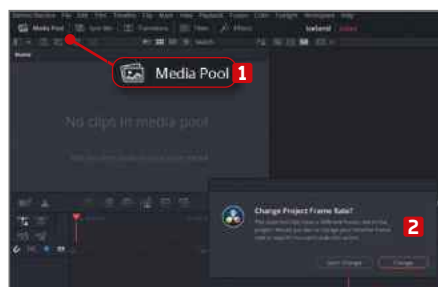
DaVinci Resolve 17: bit.ly/2B0yQT6 | ⌚ 20 mins | 🖥️ 🍏 🐧

You can use apps to make edits and apply filters to videos you record on your phone, but if you want to produce something more impressive, you need desktop video-editing software such as DaVinci Resolve. The software, which is available for Windows, macOS and Linux, is a professional-grade video editor that's been used on Hollywood

blockbusters, TV shows and commercials. It offers all the tools you are likely to need, and the latest version comes with improved audio functions and a new HDR grading tool. The free version lacks some of the advanced tools found in the full £235 edition, such as the new AI-based magic mask, but nothing that most home editors are likely to miss.



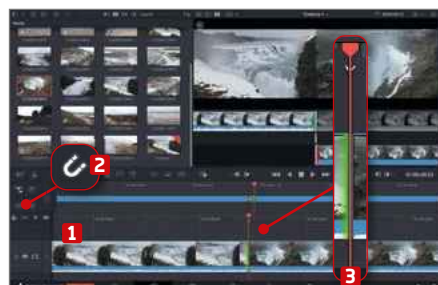
1 Launch the software and you're invited to take a Welcome Tour. This is worth doing but you can skip it if you prefer. You're then asked to run the Quick Setup (you can also skip this), which checks your hardware and lets you specify the video resolution – SD, HD, Ultra HD or decide later. **1**



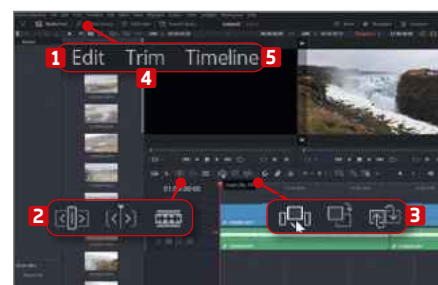
2 Set the save location and select the keyboard editor (the default DaVinci Resolve option is fine). The editing window opens. Drag video clips to the media pool. **1** If the clips have a different frame rate from the current project, you're given the chance to change your timeline frame rate to match. **2**



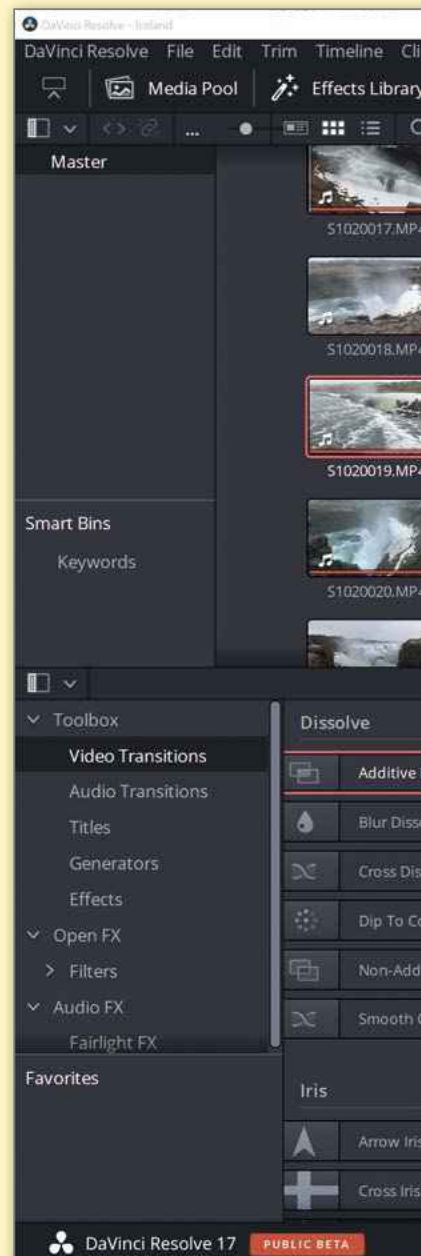
3 Your clips appear in the pool. **1** You can use the buttons above to change the view from the default thumbnail layout to Metadata View, Strip View or List View. **2** Drag a clip to the timeline **3** and a new thumbnail appears, **4** along with a video preview. **5**

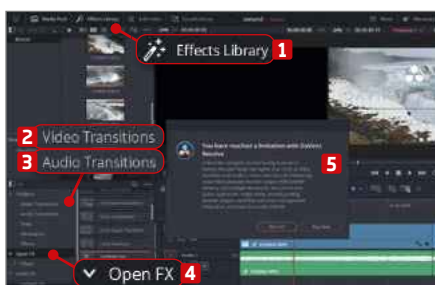
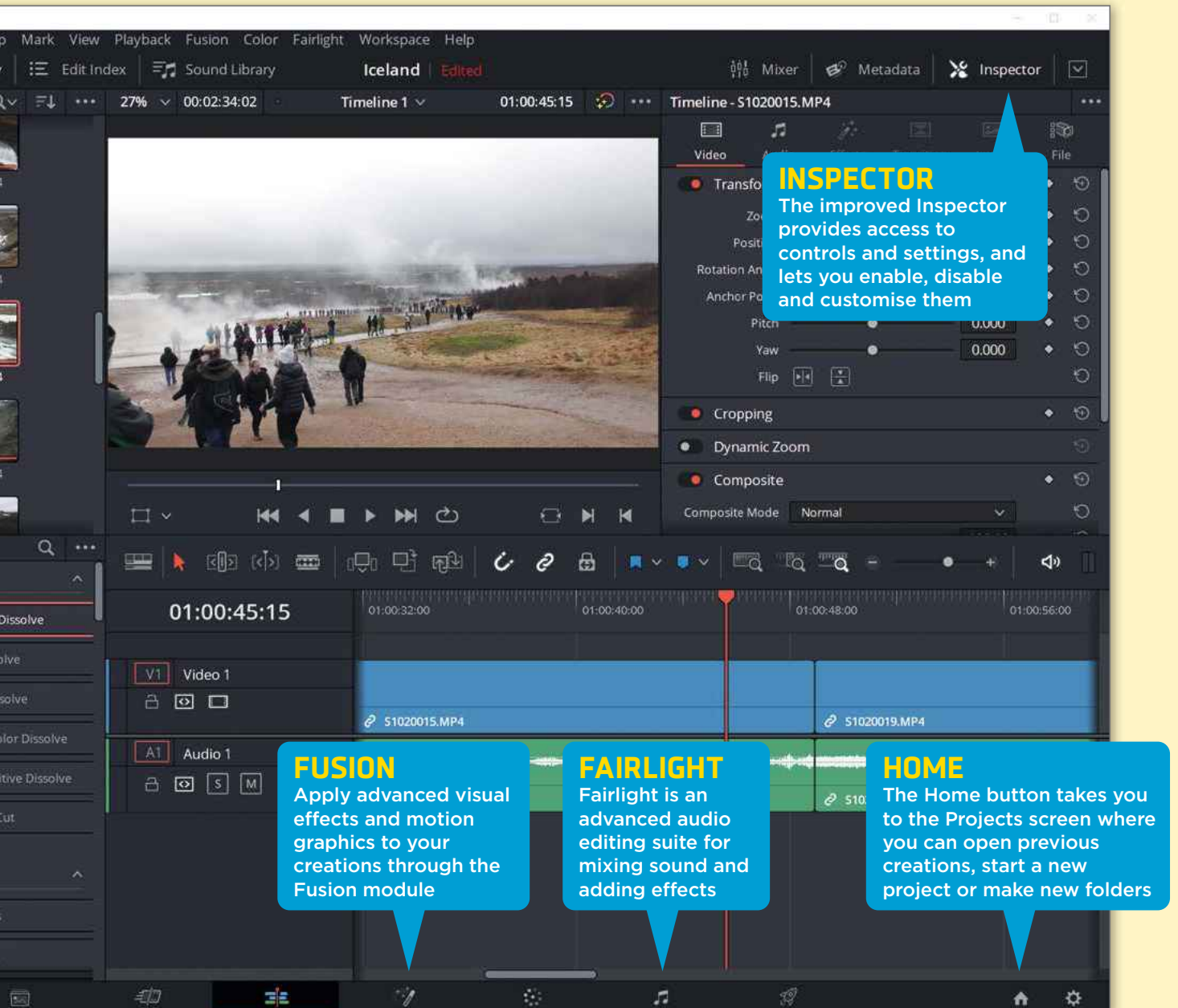


4 Drag more video clips to your timeline, **1** and reorder them by clicking and dragging. The magnet button **2** toggles clip-snapping on and off. Click and drag the beginning or end of an item on the timeline **3** to change its start and end points.



5 Edit mode **1** contains more tools for trimming the video, **2** as well as inserting, reordering and overwriting clips. **3** More cutting options can be accessed through the Trim menu, **4** while the Timeline menu **5** provides greater control over the layout.





6 Click Effects Library **1** to add video **2** or audio **3** transitions to your movie. The OpenFX section **4** lets you apply a number of different filters. Just drag and drop the ones you want to a clip on the timeline. Some options are only available in the paid version. **5**



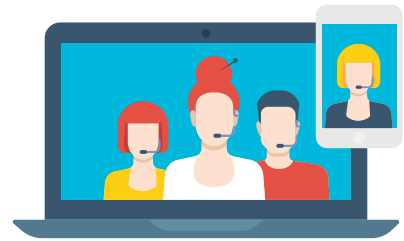
7 DaVinci Resolve has various tools you can use to adjust your movie's look and mood. Click the Colour button **1** and select a tool from strip, **2** such as the new HDR grading palette. **3** The Curves option **4** lets you tweak the tonal range, and the new Colour Warper **5** offers refined grading.



8 Save your project at any time via the File menu **1** or by pressing Ctrl+S. When you've finished editing your movie, click the Deliver button. **2** You can select a preset for YouTube, Vimeo, Twitter and others, **3** or opt for Custom and pick your settings below. **4** Click 'Add to Render Queue' **5** to export your movie.



Use your smartphone as a wireless webcam



EpocCam / DroidCam: apple.co/2MK7buR / bit.ly/17Q59j3 | ⌚ 10 mins | 🖥️ 10 🍏 13+ 🤖 5+

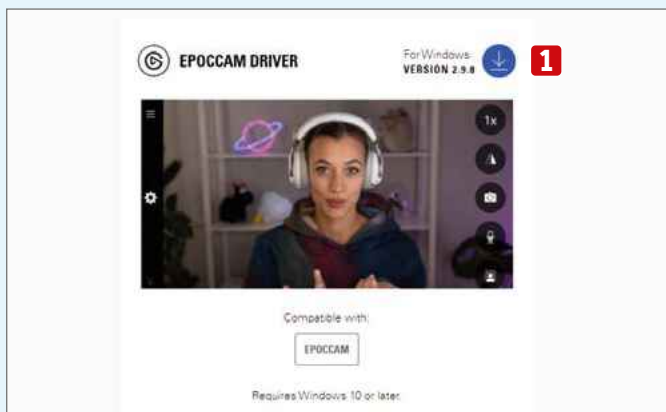
As easy as it is to make video calls from laptops and mobile devices, both methods have their drawbacks. The camera embedded in your laptop screen is probably the worst camera you own, and while your smartphone's camera may be great, its tiny screen isn't ideal for displaying busy video calls.

Get the best of both worlds by conducting your video chat on your PC, using your smartphone as a webcam. With the tools featured in this workshop, you can run your video software on your PC, then wirelessly connect your smartphone to it over Wi-Fi. Once connected, you can use the camera on your phone as if it were a webcam.

EXPERT FAREWELL

Andy Shaw says

It's almost 20 years since I started working on Project Spider, as *Web User* was called before it launched. At the time, I'd never have guessed I could get so many rewarding years writing for a single magazine, but as editors, publishers and even publishing companies came and went, *Web User* kept going. I'd really like to thank you, our readers, for buying and enjoying the magazine over the years. It's been a great place to work and we owe it all to you.

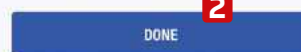


1 If you're using an Android device, skip ahead to Step 6. On an iPhone, download EpocCam from the app store – there are two versions available but the free one is fine. Run it and tap the Begin button. You also need to install a driver on your PC, which you can get from bit.ly/3nR9cpQ. **1**

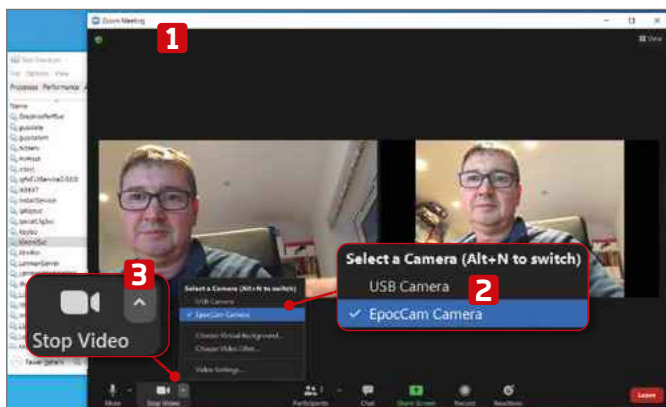
STEP 3: GIVE EPOCCAM PERMISSION

EpocCam is a webcam app. It needs access to your camera and microphone to function. If you want to link your phone and computer wirelessly, EpocCam requires access to your local network.

APP PERMISSIONS



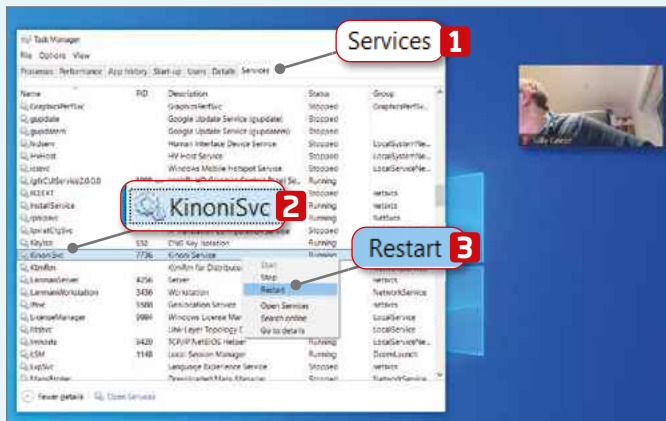
2 The easiest way to connect your phone to your PC is by using Wi-Fi. Make sure your PC and mobile device are connected to the same network. You also need to give the app permission to access the camera and the network connection. **1** Tap Done. **2**



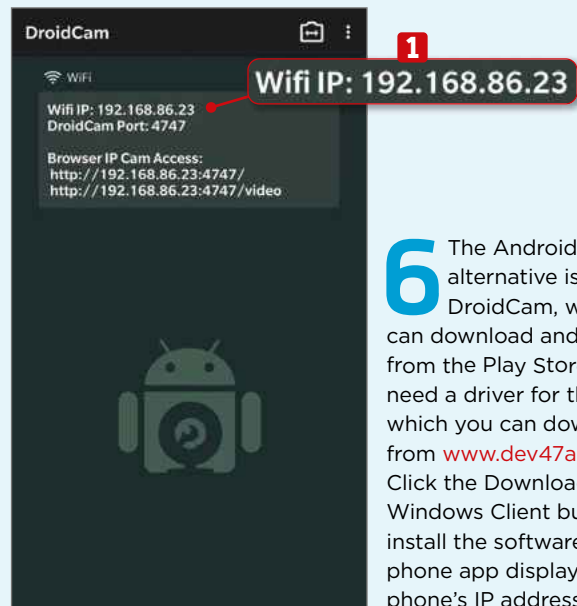
3 Check whether the camera is working by running the EpocCam Viewer in Windows. When the smartphone is connected to the PC, you'll see the camera's output on screen. When using your video software, **1** you may need to go into the settings to choose the correct camera. **2** In Zoom, for example, click the arrow next to the Stop Video button. **3**



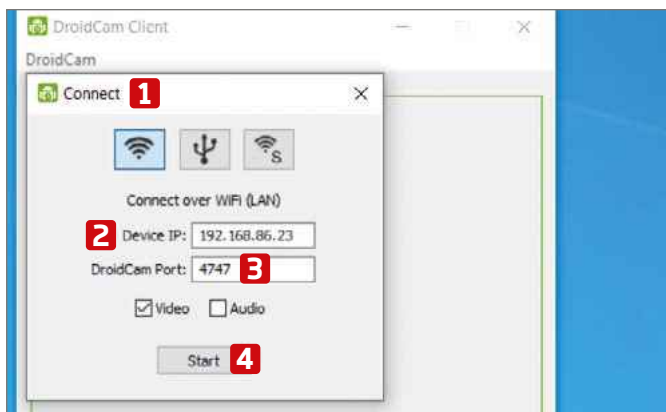
4 The free version of EpocCam comes with basic controls that let you mirror the image, **1** if you're appearing on the webcam the wrong way round. **2** You can also choose between the front and rear cameras. **3**



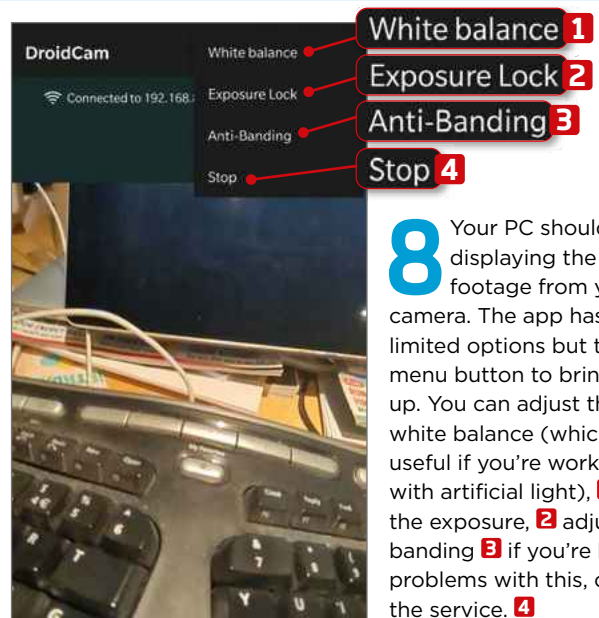
5 If you have problems connecting the camera to the PC, try restarting the driver. Right-click the taskbar and choose Task Manager. Click the Services tab **1** and scroll down to find KinoniSvc. **2** Right-click it and choose Restart, **3** then try again.



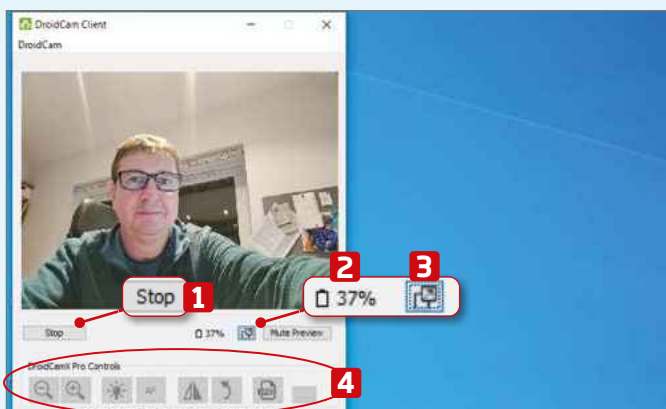
6 The Android alternative is DroidCam, which you can download and install from the Play Store. You need a driver for this, too, which you can download from www.dev47apps.com. Click the Download Windows Client button and install the software. The phone app displays your phone's IP address. **1**



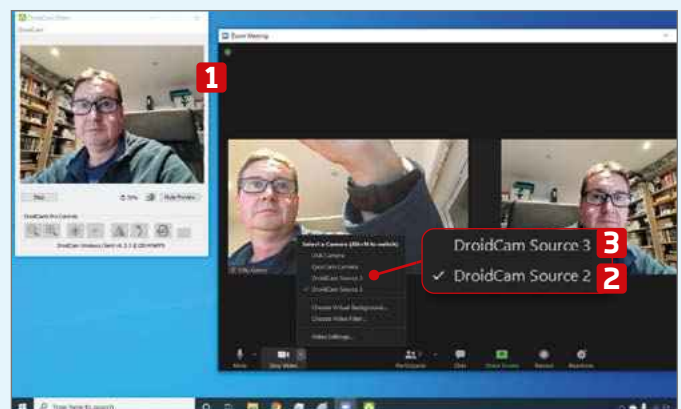
7 Find DroidCam Client in your Start menu and run it. A Connect window opens. **1** Enter the IP address from the app into the Device IP box. **2** The port should already be entered. **3** Click Start. **4**



8 Your PC should start displaying the footage from your camera. The app has limited options but tap the menu button to bring them up. You can adjust the white balance (which is useful if you're working with artificial light), **1** lock the exposure, **2** adjust the banding **3** if you're having problems with this, or stop the service. **4**



9 The DroidCam client lets you stop the camera, **1** displays how much battery you have left **2** and can pop out a preview window. **3** The controls at the bottom of the window **4** are only available if you're using the Pro version of the app (which costs £4.99).



10 Keep the DroidCam Client running in the background while you launch your video-chat software **1** and choose the source from the settings. **2** DroidCam may provide more than one option. **3** This is for compatibility reasons, so just choose the one that works for you.

Manage all your conversations in one place

Pidgin started out as an AOL Instant Messenger clone for Linux, but quickly became a popular way to gather all your communication accounts in one place. This comes courtesy of the software's ability to embrace plugins, which

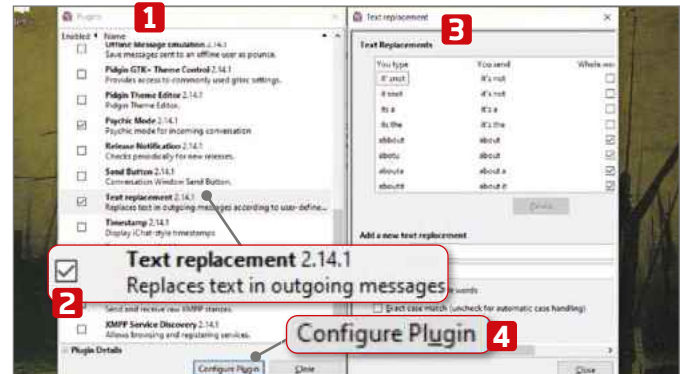
have been widely developed over the years and now embrace all the modern messenger tools and social apps. They also let you add new messaging features.



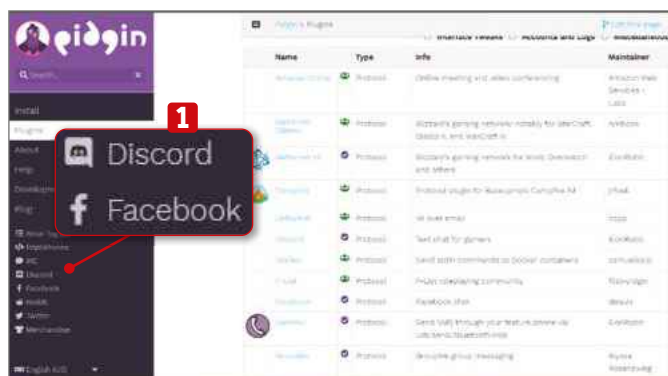
Pidgin: pidgin.im |  10 mins |  Windows  Linux  macOS



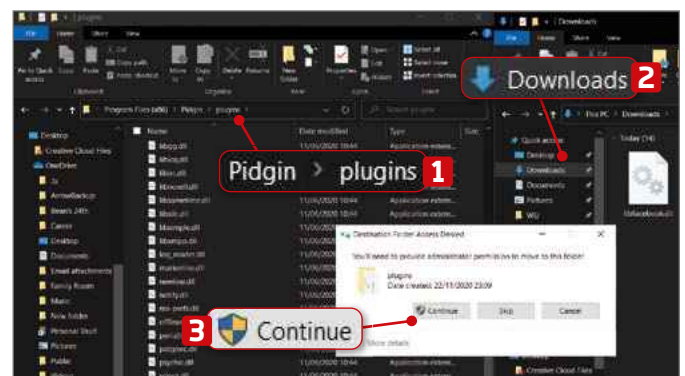
1 When you first load Pidgin, you're asked to add your instant messenger (IM) accounts, but the options are limited to older programs such as Google Talk and AIM. Instead, close this down and go straight to the main Pidgin tool. This lets you view Buddies, **1** add Accounts **2** and configure Tools. **3**



2 Click Tools, then Plugins to view a list **1** including the excellent Psychic Mode (get a notification when someone starts typing a message to you) and the typo-avoiding Text Replacement. Tick the box **2** next to any plugin you want and set its options **3** by clicking Configure Plugin. **4**



3 Expand Pidgin by heading to pidgin.im/plugins to add plugins for more modern messengers **1** including Facebook, Slack and Discord. Select a plugin and you're taken to an external website (usually Github, but it varies). Download the plugin and extract the DLL file if it's zipped.



4 Open the Pidgin folder in your computer's Program Files **1** - our path was C:\Program Files (x86)\Pidgin\plugins. Drag and drop (or copy and paste) the DLL file from your Downloads folder **2** to the Plugins folder. If you're prompted to continue as an administrator, click Continue. **3**



5 Restart Pidgin for the plugin to register. Some plugins work right away but for modern messenger apps, you may need to click Accounts, **1** Manage Accounts. On the next screen, choose Add. **2** Under Protocol, **3** use the drop-down menu **4** to find your new messenger option, then fill in your login details.



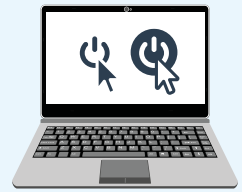
6 Some plugins, such as Facebook's, ask you to complete an additional step. You still place a DLL file into Pidgin's plugins folder, **1** but you may also be asked to add another DLL file to the main Pidgin folder. **2** Check the plugin's GitHub page for more details about installing it on your OS.



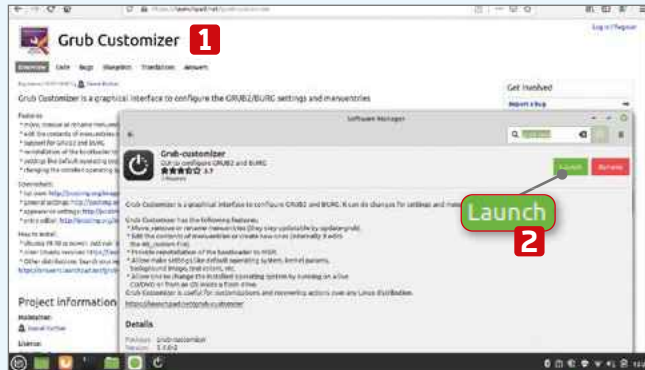
Manage your PC's boot settings

PCs normally boot straight into whichever operating system you have installed, but if you've ever tried installing a second OS, you'll have a menu that asks you to choose the one you'd like to use. Usually, the second

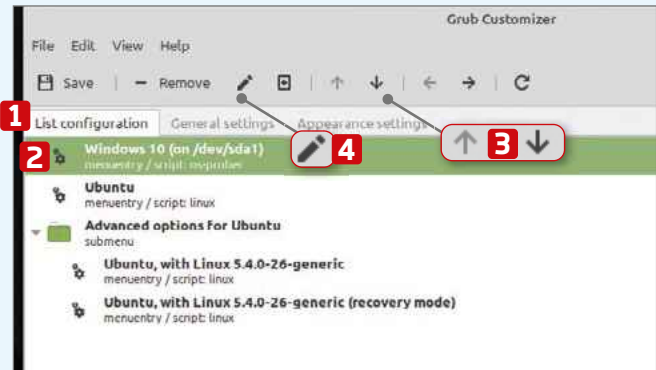
OS you installed takes control and sets itself up to be the default. Here, we show you how to change the way your multi-boot menu works.



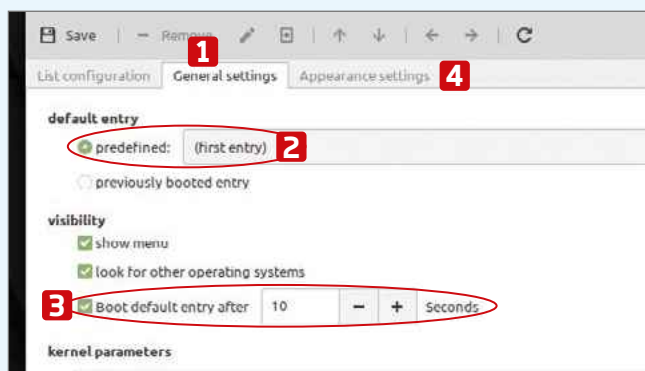
Grub Customizer / EasyBCD : bit.ly/36L8nbg / bit.ly/3fbeyZJ | 10 mins | 7, 8, 10



1 If your PC has Windows preinstalled with a version of Linux added alongside, you need to download Grub Customizer (bit.ly/36L8nbg). **1** Grub is the Linux boot manager that kicks in when you turn on your PC. Download Customizer from Linux's Package or Software Manager. **2**



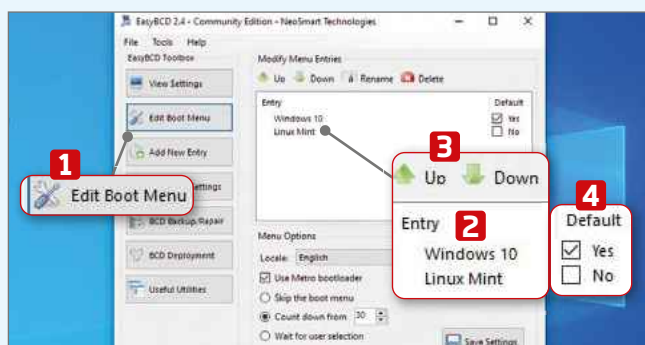
2 On the 'List configuration' tab, **1** you can reorder the list of options that appear when you first start your PC. For example, select the Windows option, **2** then use the up and down arrows **3** to reorder it to the top. You can rename options by clicking the pencil icon. **4**



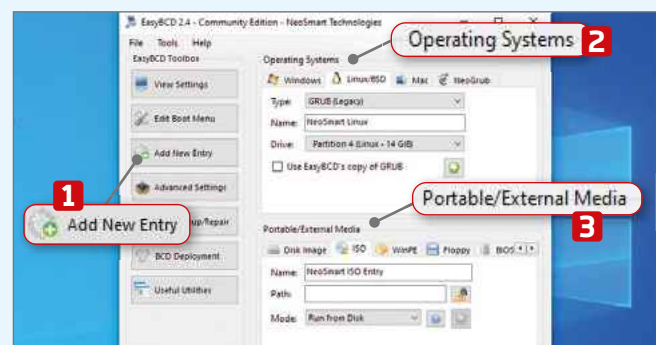
3 The 'General settings' tab **1** lets you choose an OS to use as the default or stick with the standard option (the first one on the list). **2** You can also set how long you have to make a choice before the default is launched. **3** The 'Appearance settings' tab **4** lets you control the menu's look.



4 If you started with a Linux PC and added Windows to it, you will use the Master Boot Record. To configure this, download the free version of EasyBCD (bit.ly/3fbeyZJ). This creates a menu that appears when you first boot your computer. **1**



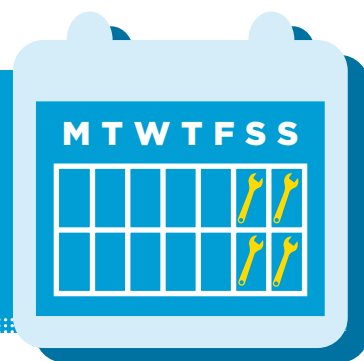
5 Click the Edit Boot Menu button. **1** You can change the order of items on the menu by highlighting the Entry **2** and clicking the Up and Down buttons. **3** You can also Rename the items. To change the default option, tick the Default box **4** of the relevant entry.



6 To add more options to the menu, such as a Disk Image, ISO file on a USB drive or an OS on a separate partition of your hard drive, select Add New Entry. **1** Add OSs on partitions from the Operating Systems section, **2** and ISOs and disk images under Portable/External Media. **3**

Weekend Project

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



How to...

Remove bloatware and junk from your Android phone

Wayne Williams shows you how to clear preinstalled and accumulated clutter from your Android device

Although there are many different models of iPhone available to buy, they all run the same version of iOS. Apple refreshes its mobile operating system once a year, but endeavours to make sure it's compatible with older models. For example, iOS 14, released in autumn 2020, runs on every iPhone from the 6S onwards – a device that was launched in 2015.

Owners of Android devices aren't so well looked after. While Google also refreshes its mobile operating system on an annual basis, it's usually down to the phone manufacturers when – or indeed if – the update gets rolled out to users. Worse still, the manufacturers often add their own apps and launchers to Android, drastically changing Google's intended setup.

In this final Weekend Project, we show you how to reclaim your Android phone from your manufacturer, and clear out any other unwanted accumulated junk on your device.



Remove junk yourself

You can see which items are taking up the most space on your device by going to Settings, Storage and tapping the Clean Up button. Tap Clean Up next to any category to remove the junk. You can uninstall Apps you no longer need in the Settings, Apps section.

Use an app to clear junk

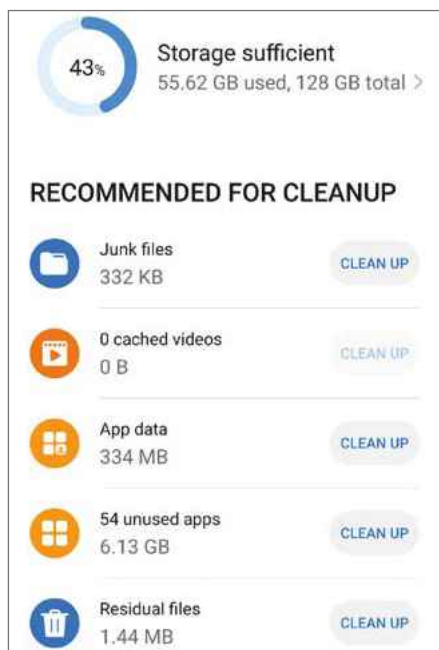
Some of the system-cleaning apps found

on Google Play don't really do what they claim to, and a five-star rating isn't always a trustworthy mark of quality. There are some decent junk cleaners available, however, and our first port of call would be Files by Google (bit.ly/2kpwOCE).

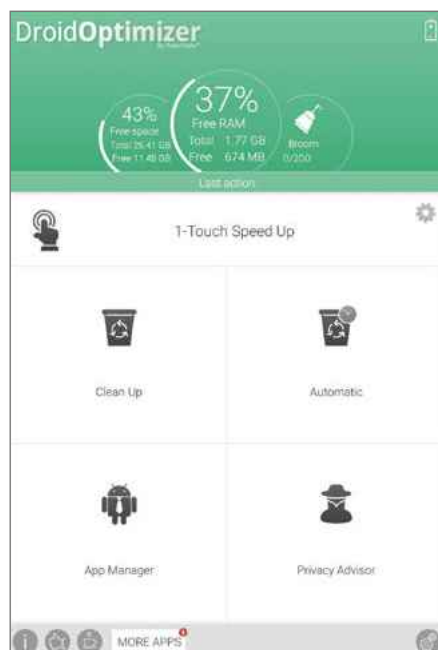
This official app can free up space on your phone, boost performance and find, manage and share files. It can also move items from internal storage to the cloud or to an SD card, if you have a phone that

supports memory expansion. It's free, lightweight and, unlike most other similar tools, won't bombard you with adverts or ask you to upgrade to a paid-for premium version. We show you how to use it in our Mini Workshop, opposite.

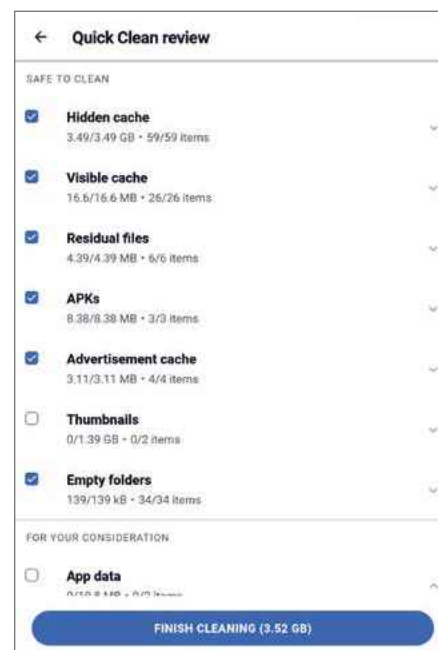
Next, you should try the excellent Ashampoo DroidOptimizer (bit.ly/1JUPaEO), which cleans and optimises your phone, frees up memory by terminating apps and reclaims space



Remove some junk files yourself via Android's Settings menu



DroidOptimizer is a powerful junk cleaner for your Android device



If you use CCleaner on your PC, you'll know what to expect from the Android version

by emptying caches and browsing history. It can also find and remove the biggest space hogs. It's free, though there are in-app purchases that unlock additional features.

Finally, if you use CCleaner to keep your PC running in tip-top condition you'll be pleased to know there's a free, ad-supported version for Android (bit.ly/U2AonD). This can remove junk files, reclaim space, clean up memory, kill running tasks and hibernate apps. The new App Stats feature shows you the overall impact of the various apps installed on your phone. Like DroidOptimizer, it's free, but there are in-app purchases on offer.

Reclaim Android as Google intended it

'Stock Android' is the version of Android that Google makes and installs on its own devices, such as the Pixel range of phones. This is Android as Google intended, without any of the tweaks, additions and bundled junk that other manufacturers add. Whether you view this as better than what you'd get from Samsung or Huawei largely depends on what you expect to see when you switch on your phone, but it's certainly cleaner and more consistent.

Replicate stock Android via rooting

When manufacturers tweak Android,

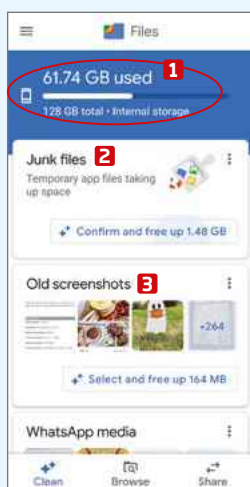
they usually make it as hard as possible for users to undo the changes and return to the stock OS. The only real way to do this is to root your phone and then install a custom ROM, a process that isn't for the faint hearted. However, if this is the route you choose to go down, then XDA Developers (forum.xda-developers.com) is the place to go to learn how to do it. If you're planning to replicate stock Android, look for ROMs that say they are AOSP-based. Once your phone is rooted, you can flash (install) the new ROM on it.

There are various ways to do this, but the simplest is to use the FlashFire app (bit.ly/37dOMAO), which is free and handles the entire process (aside from



MINI WORKSHOP | Spring clean your phone with Files by Google

1 Install and launch the Files by Google app. It shows you how much space has been used and the total amount of storage available. **1** The app uses a card system for the various cleaning options. For example, the top one here removes junk files **2** and the one below removes old screenshots. **3**

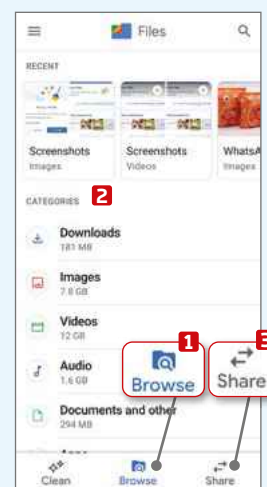


2 Scrolling down reveals more choices, including apps you don't use, old downloads and large files. Start by cleaning temporary and junk files. Tap the option and, on the next page, you can view the files to be cleaned.

1 Tap the Clean button **2** to remove the selected junk and free up space.







3 Tap the Browse button **1** to explore everything that's taking up space on your device, including downloads, images, videos, audio and apps. **2** Remove anything you don't want. The Share button **3** is a bonus tool that lets you send and receive files over your network without using the internet.



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XDA Developers can tell you everything you need to know about rooting your Android phone



the rooting part) in a couple of clicks.

Non-rooting methods

If that all sounds a bit much and you don't want to take the risk of rendering your phone entirely useless, you can replace various elements on Android without rooting your device. This brings you closer to Google's vision. It isn't the same as you'd get on a Google Pixel, but it will be close enough.

The first place to start is with a new launcher. There are lots of these to choose from, each with a different design. Our personal favourite is Lawnchair 2 (lawnchair.app), which you can get from Google Play. It has a clean, stylish look that's close to the stock Android experience. Install it as you

would any app, then go to Settings, 'Apps & notifications', Advanced, 'Default apps', 'Home app' to set Lawnchair as your default launcher, so it starts along with your phone. Once you have this installed, go to lawnchair.app/lawnfeed on your phone and download the Lawnfeed add-on in APK (Android Application Package) format. Lawnfeed is an implementation of the Google Feed, which comes with stock Android.

There is a security risk involved with installing apps in APK format because you don't have the protections offered by Google Play, so this ability is disabled by default. To get around the restriction, open Settings on your Android phone and look under Applications or Security to tick the Unknown Sources option.



FlashFire takes the hard work out of installing a ROM on a rooted phone

Once Lawnfeed has downloaded, you'll be able to install it. The Lawnchair menu also lets you install the Pixel Q icon pack, which gives Android the same icons found on Pixel phones. There are other similar icon packs available but this is the one we like most. Download the pack from bit.ly/3m6Tx59, then open the Lawnchair menu and go to Home Settings, Theme, Icon Packs. Select Pixel Q Icon Pack and either tap it or drag it up the screen to enable it.

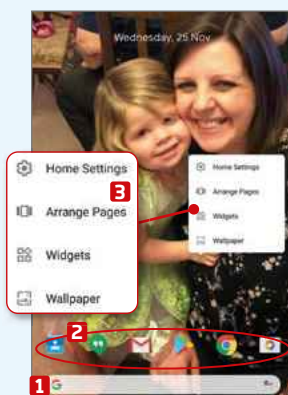
We show you how to install Lawnchair and Lawnfeed in our Mini Workshop, below. ■



MINI WORKSHOP | Install and run Lawnchair and Lawnfeed

1 When you install Lawnchair, it changes the home screen, displaying the Google search bar at the bottom **1** and icons for popular Google apps above. **2**

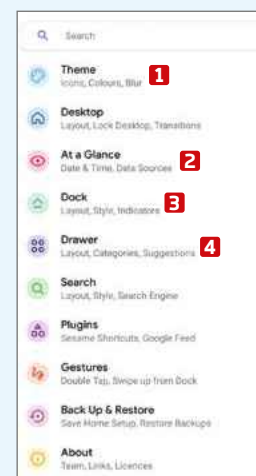
Swipe up to reveal all your installed apps. Tap and hold a blank area of the screen to show Lawnchair's customisation menu. **3**



2 Download the Lawnfeed APK from lawnchair.app/lawnfeed and install it. Tap and hold the Home screen to display the Lawnchair menu, then select Home Settings, Plugins and toggle on Show Google App Feed. Swiping in from the left reveals the feed. **1** Tap the top-right three-dot button to open the customise menu. **2**



3 To customise the launcher, open the Lawnchair menu and go to Home Settings. Select any of the options to reveal the available settings. You can change the launcher's look under Theme, **1** set what you want to see under 'At a Glance' **2** and make whatever tweaks you want to the Dock **3** and Drawer. **4**




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Web User Masterclass

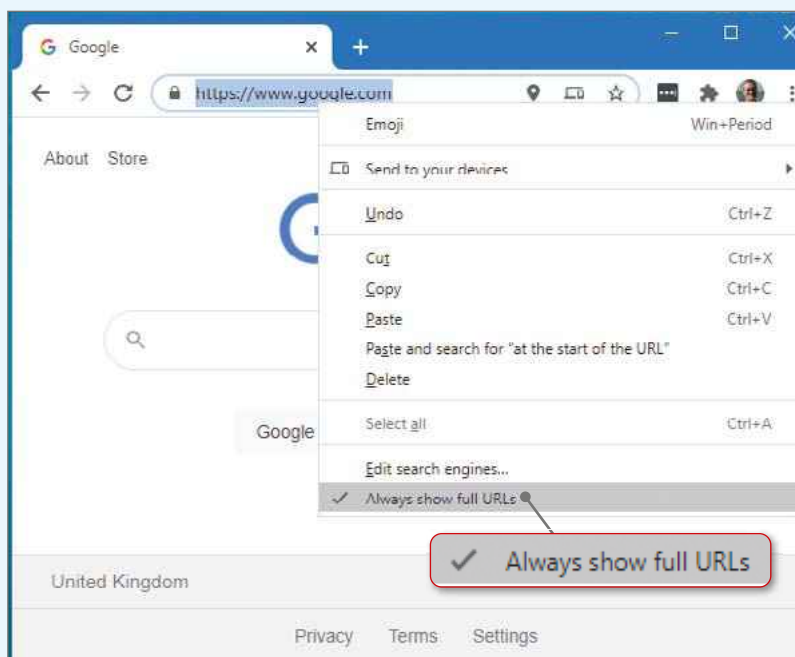
Customise Chrome and Edge using hidden browser settings

Show full URLs

You may have noticed that the address bars in Chrome and Edge no longer show the full web address. The 'http://', 'https://' and 'www.' prefixes are hidden, along with subdomains, so you get [google.com](https://www.google.com) instead of <https://www.google.com>.

Type `chrome://flags` into the address bar, press Enter and enable 'Context menu show full URLs'. Restart Chrome, right-click the URL in the address bar and select the menu option: 'Always show full URLs' to show full URLs instead of shortened ones.

In Edge, enter `edge://flags` and enable or disable 'Omnibox UI Hide Steady-State URL Scheme' and 'Omnibox UI Hide Steady-State URL Trivial Subdomains' to show or hide full URLs. It's simply a question of personal preference and doesn't affect anything else in the browser, but we find it preferable to see full web addresses.



Choose between showing full and shortened URLs in the Chrome address bar

Experiment with defaults

Entering `chrome://flags` or `edge://flags` into the Chrome or Edge address bar reveals lots of experimental settings. Many of them are set to Default, but there is no indication if that means the default is Enabled or Disabled – it could be either. When changing a flag, try both options, restarting Chrome whenever a change is made and testing it.

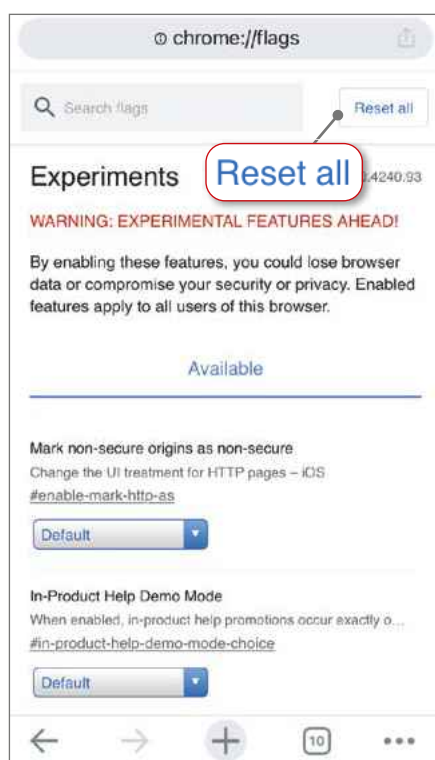
After experimenting with flags, you can put everything back to the defaults by returning to the flags page and clicking the 'Reset all' button at the top.

Flags in mobile browsers

Chrome flags aren't just for computers, they're also available on Android phones, iPhones, Android tablets and iPads. Just enter `chrome://flags` into the address bar. Some flags work in desktop Chrome, some on mobile, and many work on both.

Mouse hover reveals URLs

In our first tip, we showed you how to enable or disable full URLs in the



Customise Chrome on your phone with dozens of flags settings

address bar. However, you can still easily see the full URL, even if your address bar is set to show shortened ones. Go to <chrome://flags> or <edge://flags> and find 'Omnibox UI Reveal Steady-State URL, Path, Query, and Ref On Hover'. Enable it and, when you hover your mouse over the shortened URL in the address bar, the full URL is displayed.

Increase download speeds

Internet speeds are increasing and, with fibre-optic broadband, download speeds are incredibly fast compared to a few years ago. However, downloads are also growing in size, and if you download a lot of big files,

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.



there is a way to speed them up.

A big download can be split into several smaller parts that are downloaded simultaneously to maximise the available internet bandwidth. This is especially useful with slower internet connections. Go to <chrome://flags> or <edge://flags> and search for 'parallel'. Change 'Parallel downloading' from Default to Enabled. Big files now download more quickly.

Increase internet security

Increasing security often results in a slower computer because more checks, scans and monitoring are carried out. Removing security has the opposite effect and may speed up your computer.

A few years ago, Google developed a new way of communicating over the internet called QUIC. This experimental protocol aims to speed up the websites that use it, and several Google sites, including YouTube, have already enabled it by default.

The downside to this speed boost is that it bypasses some security features, such as internet and website monitoring, parental controls and so on. For this reason, some security providers, such as Bitdefender, ESET and others, recommend disabling it to increase security.

In the Chrome and Edge flags pages, search for QUIC and set 'Experimental QUIC protocol' to Disabled - to get the best security; or Enabled - to get the best speed. It's up to you which benefit you want to prioritise.

Make Chrome a lazy loader

The word 'lazy' implies slow speed and poor response, but this is actually a positive attribute for web browsing. Web pages are often larger than your screen allows for, so when you visit one, most of its content can't be seen. There may be dozens of images further down, off the bottom of the screen, and loading them all can take a long time. This is wasted time because you might not end up scrolling down at all.

Lazy loading only loads the images on a web page that are currently displayed on your screen, allowing pages to display faster by ignoring images you can't see. An image is loaded only when you scroll the page and bring it into view.

In Chrome flags, search for 'Lazy' and enable 'Lazy image loading'. The latest version of WordPress supports this feature and there are tens of millions of WordPress sites, so it shouldn't cause problems. However, if you find that a site isn't working properly, try disabling the setting.

TAKE IT TO THE NEXT LEVEL

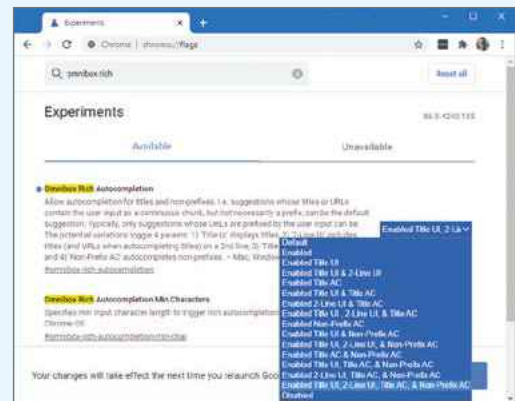
More advanced tips for when you're feeling brave

Supercharge the omnibox

The omnibox is another name for the address bar and it can be used for two things: typing in the URL of a website or typing a word or phrase to search for. As you type, a list of suggested websites and bookmarks appears below and can be clicked if you see the one you want.

Open <chrome://flags> and enter 'omnibox' into the search box. There are lots of settings relating to it, but here are some you should enable:

- **Omnibox short bookmark suggestions:** Normally, you have to type three or four characters to see bookmark suggestions, but enabling this setting lets you see them after typing one or two.
- **Omnibox switch to tab suggestions:** Enable this if you frequently have dozens of tabs open. If what you type in the omnibox matches a tab that is already open, it suggests you switch to it.
- **Omnibox suggestion button row:** This enables buttons in the suggestions list, such as the 'Switch to this tab' button.
- **Omnibox Google Drive Document suggestions:** If this is enabled and you type the name of a Google Doc, Google Sheet or Google Slide file, it is included in the suggestions. Only the most-used or recently-used documents are shown.
- **Omnibox Rich Autocompletion:** This is an odd but interesting enhancement. Instead of the usual Enable and Disable, you get a list of 16 options! Try some of the two-line



The omnibox can be customised in 16 different ways from this single Chrome flag

ones, which expands the one-line omnibox to two lines so it can show more information and suggestions as you type. We like 'Enabled Title UI, Two-Line UI, Title AC, & Non-Prefix AC' (UI is user interface and AC is auto-complete).

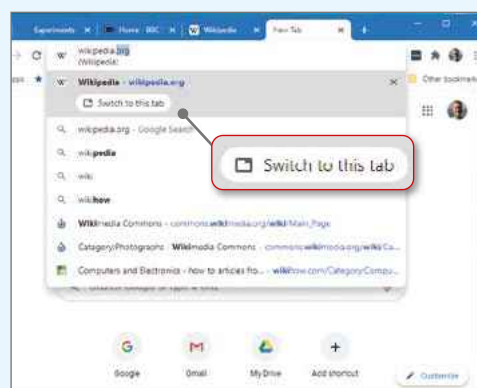
Edge has similar omnibox flags and a few extras, including 'Omnibox highlighting for sites flagged by Microsoft Defender SmartScreen'. If you are typing something and a matching URL is suggested, Defender highlights it and flags it as dangerous if it is known to have malware. This keeps you away from bad sites before you even visit them.

Boost graphics speed

Many websites are highly graphical, particularly online web apps such as games, photo editors, word processors and video editors. Graphics hardware (GPU) acceleration helps boost the speed, but only for computers on Chrome's 'safe' list - all other computers use software rendering, which is slower but more widely compatible with most PCs.

It's possible for a PC to be able to cope with hardware acceleration but not be on Chrome's list of compatible systems. Go to <chrome://flags> or <edge://flags> and set 'Override software rendering list' to Enabled. This forces the browser to use hardware acceleration.

You may also need to go to Settings, Advanced and enable 'Use hardware acceleration when available'. If there are problems and the PC is incompatible, return and disable it.



Get a button to switch tabs when entering searches and web addresses

Ask the Expert

For the last time, **Roland Waddilove**, computer programmer and PC journalist since 1981, answers all your technical questions.



WINDOWS

Fix a startup error

Q I wonder if you could offer any advice on how to get rid of an error message that has started appearing whenever our home PC is switched on. This is the second day of it appearing and I have searched the web and YouTube for solutions, and performed a system restore, but the message keeps coming back. If I click OK, it goes away for 15 seconds, then reappears again.

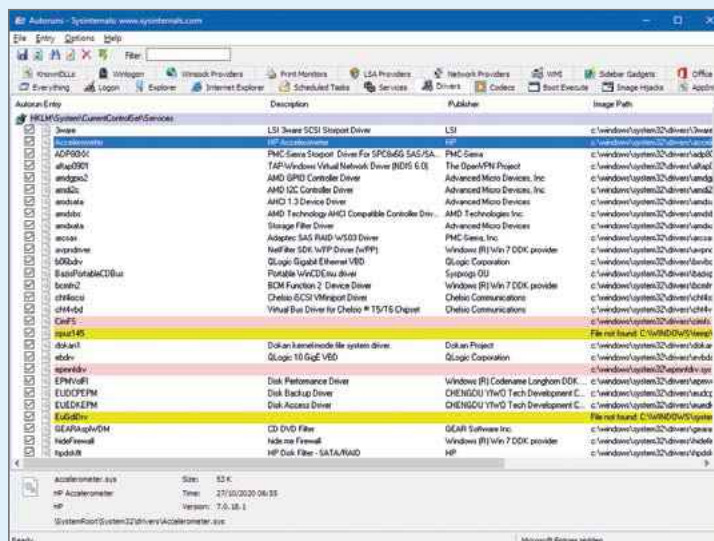
My son has learning difficulties and the extra icon at the bottom of the screen that flashes initially is really causing him problems. It's a Lenovo PC running Windows 10.

Steven MacPhee, via email

A The error message refers to a Java programming library called Spring Framework. Many programmers use it in their software, so it's not possible to say which program might be causing the error. There could be hundreds or even thousands of programs that use it. Tracking down the culprit will require some patient trial and error.

The error occurs during startup, which means all or part of the

Autoruns is the ultimate tool for checking everything that loads with Windows



software is loading with Windows. Right-click the taskbar and select Task Manager, then select the Startup tab to see all the programs that load with Windows. Look for any that obviously relate to Java, and any other programs that you don't need to have running as soon as your PC launches. Select them and click Disable.

Open Settings, click Apps and look for programs that mention Java or might use Java, or any you don't use any more. Uninstall them all.

If you still haven't found the cause,

Autoruns (bit.ly/2KQz7xb) shows you everything that loads with Windows. However, the list of items is very long and complicated. Look on each tab for anything that might be related to software you may have installed at some point, then search the web to find out what it is. Only disable it if you're sure it's not part of Windows.

Be cautious, though. Autoruns is a powerful tool and disabling the wrong things could prevent Windows from starting, making the problem even worse.

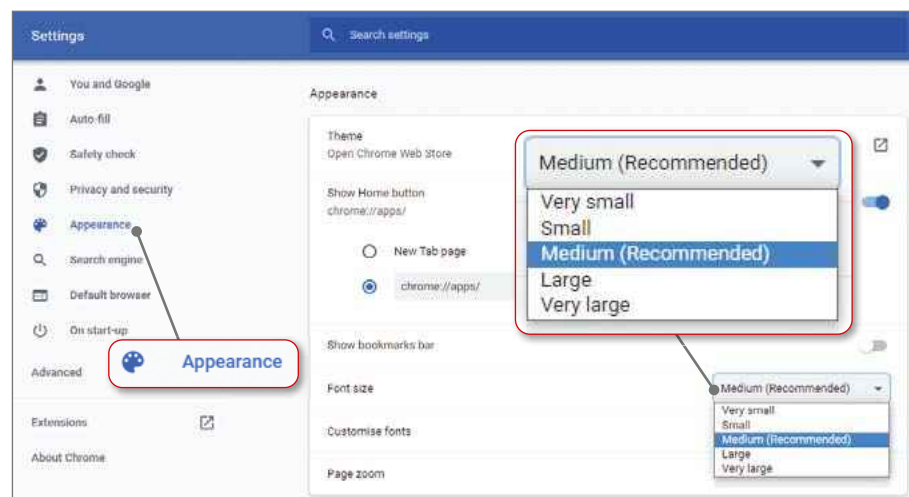
BROWSERS

Make web text easier to see

Q My eyesight is getting worse as I grow older and I already need glasses when using my computer. To make matters worse, there seems to be a trend towards smaller, thinner fonts on web pages and sometimes grey text on a white background. Is there anything that can be done to make web pages more readable?

Bill Williams, via email

A There are several things you can do and one is to enlarge the web page. If you are having trouble reading the text, hold down the Ctrl key and spin the mouse wheel to zoom in or out. On a



Choose a display size for web fonts from Chrome's Settings menu



SSD storage is now much cheaper so it's worth upgrading if you're running out of space

laptop, hold down Ctrl and push up or down with two fingers on the trackpad.

In Chrome (Edge is similar), open the menu and click Settings. Select Appearance on the left and find 'Page zoom' on the right. Set this to your preferred size, such as 110%, 125% or more. Now, every website you visit will be shown at this zoom level, making the text easier to read.

If you'd prefer not to zoom the entire page, images and all, it's possible to make only the text bigger. Find 'Font size' and set it to Large or 'Very large'. Alternatively, click 'Customise fonts' and use the 'Font size' and 'Minimum font size' sliders. Setting a minimum, so that text is never smaller than a certain size, could be the solution.

There are options to select the fonts used but this is only for websites that don't expressly set them, and most do. Selecting alternative fonts, such as bold ones, probably won't change anything.

Zooming preserves the page layout by making every element proportionally bigger, but changing the font size can sometimes cause page layout problems, such as text becoming too large to fit into its designated spot on the page. Try both methods to see which you prefer.

HARDWARE

Upgrade SSD storage

Q Three years ago, I had the hard drive in my PC replaced with an SSD (solid-state drive). This gave it a new lease of life and it ran like new. It still runs very well, but since the drive is only 256GB, it's now nearly full. Should I replace the old SSD with a bigger model? They are probably even faster these days. Is there an alternative solution, such as using a USB drive?

Clive Roberts, via email

A Your best option is to replace the old SSD with a bigger and faster one. However, replacing an internal drive requires some DIY skills and you'll need some technical knowledge to move the contents of the old drive to a new one. Tools such as EaseUS Partition

HARDWARE

Connect AirPods to Windows

Q I'm fed up with having to untangle earphone cables every time I want to listen to music on my iPhone, so I am going to buy some Apple AirPods.

I sometimes watch YouTube videos and listen to audio content on my PC. Will I also be able to use the AirPods with my Windows computer? How would I get them working?

Ian Morris, via email

A Apple AirPods are designed primarily for iPhones but they can be used with anything that can output audio to a Bluetooth headset or earphones. In Windows, open the Settings app and click Devices. Turn on Bluetooth and click 'Add Bluetooth or other device', then select Bluetooth in the next window.

Open the lid of the AirPods case and hold down the button on the back. When the charging light flashes white, let go and return to the PC. You should see the AirPods listed. Click them to connect. After a few seconds, Windows automatically adds them and they appear in the Bluetooth devices list.

In Settings, System, Sounds, select

Master free (bit.ly/2Eg7cFv) can help with the process.

Another option is to add a USB drive, which is a simple plug-and-play upgrade. A USB 3 drive is much faster than USB 2, and 1TB drives aren't expensive. You could then move things such as photos, videos and music onto the USB drive, freeing up space on the internal SSD for software.

A third option is to use online storage. You can add 100GB to OneDrive for £1.99 per month, or to Google Drive for £15.99 a year. OneDrive is the obvious option for Windows users because it's built-in. It also lets you choose which files are kept on the PC and which are online-only. For example, media files you rarely access could be stored online.

You can squeeze a few gigabytes of extra space by compressing the contents of the C: drive. Right-click the C: drive in an Explorer window and select Properties, then tick the box next to 'Compress this drive to save disk space'. The space you gain varies, but you may get 10 or even 15GB. That will get filled up sooner or later, but it might help for now.

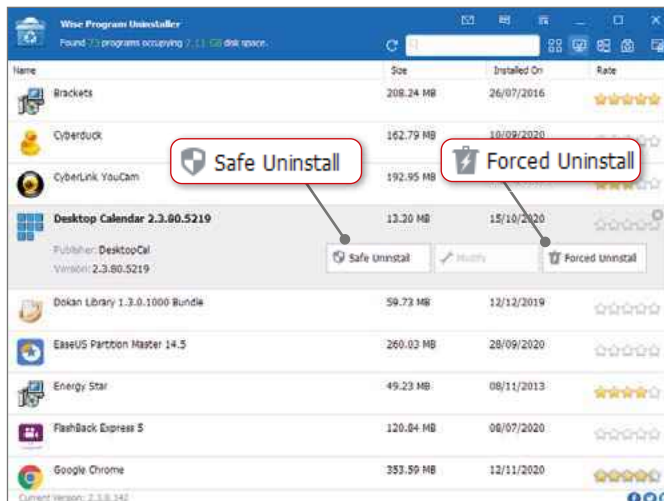


Apple's AirPods work with Bluetooth so should connect to any compatible PC

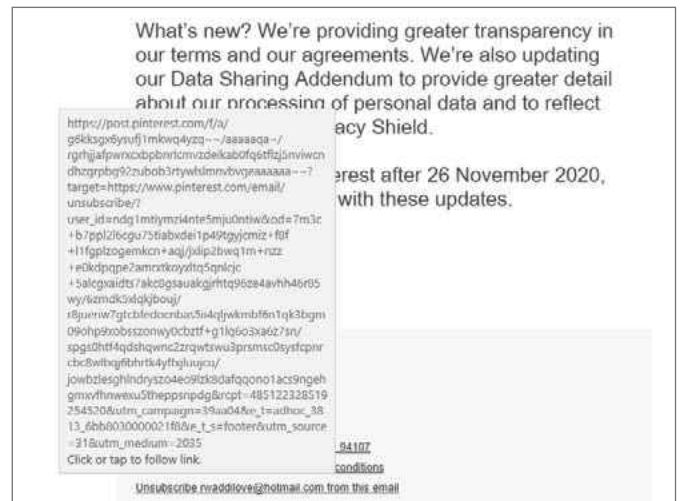
the AirPods as the output device for audio and they should now be ready to use. Alternatively, click the speaker in the taskbar, then click the up arrow in the corner and select the AirPods. Some people have found that the volume can't be adjusted, but switching from Headset to Headphone solved the problem.

There will be far fewer steps required to connect the AirPods the next time you use them because they'll already be paired with the PC.





Use Wise Program Uninstaller's Forced Uninstall if the Safe Uninstall option doesn't work



Check the URL of links in emails to make sure they are genuine

SOFTWARE

Uninstall awkward software

Q I have a program called PC Accelerate on my computer and although I don't think it's actually malware, it may be a PUP (potentially unwanted program). It's not what I expected and not what I want, but if I try to uninstall it, I just get errors. How do I remove it?

Oliver Thompson, via email

A The usual method for uninstalling software is to open Settings, click Apps, find the software in the list, click it and then click Uninstall. Alternatively, you can open 'Programs and Features' in the Control Panel and double-click the program in the software list.

Well-behaved programs uninstall cleanly but, if there's a problem, try uninstalling the troublesome software in Safe Mode. Open Settings, choose

'Update & Security' and select Recovery. Under 'Advanced startup', click 'Restart now'. When Windows restarts, select Troubleshoot, 'Advanced options', then 'Startup settings'. Press the F4 key to choose the Safe Mode startup.

Uninstalling awkward software is more likely to be successful in Safe Mode. However, if that doesn't work, a tool such as Wise Program Uninstaller (bit.ly/2G9Hldo) might do the job. This tool offers two types of uninstall: safe and forced. With a forced uninstall, Wise Program tries to find and delete every component of the targeted software. It's not a tool that's designed for everyday uninstalling but it's worth a try when the regular uninstall tool fails.

EMAIL

Get messages back in the Mail app

Q I have a problem with the Windows 10 Mail app. I think it started not long after the last update. Whenever I select an email, I get a message that says: "Message cannot be displayed."

I cannot use the app to access my email, but I can see it in a web browser. I would prefer to use the Mail app, though.

James Gordon, via email

A One explanation is that the Mail app's store of messages on your hard drive has become corrupt. There

is a way to reset this, which should solve the problem. Press Windows+R and enter **regedit**. Now go to:

HKEY_CURRENT_USER\SOFTWARE\Microsoft\Windows Live Mail

Look for RecreateFolderIndex, RecreateStreamIndex and RecreateUIDLIndex. If they don't exist, click Edit, New, DWORD (32-bit) Value and create them. Double-click them afterwards and set them to 1.

Close the Registry Editor, restart Windows and open Mail. Hopefully everything should be working.

EMAIL

See genuine links in emails

Q I use the Windows 10 Mail app and I find the popup boxes that contain link code very annoying. If I accidentally move the mouse over a link in an email, a huge pop-up appears that sometimes covers half the message, so I can't read it. It's annoying to have to be so careful about where I position the mouse. Is there any way to turn off this pop-up?

Sarah Young, via email

A It can be irritating to have to keep your mouse away from links if you don't want to expand them, but it's worth remembering that this is a useful security feature. Phishing scams that pretend to be from your bank, Amazon, PayPal and other places sometimes look very convincing. Letting the mouse hover over a link in the email shows the URL in the pop-up and it's often easy to spot a fake one because it clearly doesn't use a recognisable URL.

Unfortunately, there's no option to switch it off in the Mail app's settings so you're going to have to live with it.

The end of an era, past and future

I've had a lot of fun solving your computer and Windows problems over the years. Finding the solutions often required significant research and I have learned so much – it has probably helped me as much as it has helped you!

Sadly, after many years and countless emails and letters, the end has come – the last *Web User* tip has been written and the last problem solved. Thank you all for your communication and support over the years.

Although we won't meet again here, you can still follow me on the web, where I continue to share my tech tips and solutions to problems. You can find me at rawinfopages.co.uk.

Roland Waddilove





Readers' Helpdesk

For the last time, you write in to help your fellow readers with their computer problems

CREATIVE

Choose a free photo editor

Q I've recently started to take an interest in photo editing and would like to be able to touch up some of my family's pictures more effectively. Unfortunately, Photoshop is too pricey for what I consider to be a hobby rather than a professional interest. Can you recommend a cheaper alternative?

Marcus White, via email

A There are a couple of good options, depending on how much use you intend to get out of the software and your patience with learning new skills.

For the casual user, Paint.NET (getpaint.net) is a great option. Despite the name, this isn't connected to the feature-light Microsoft Paint software – though it was originally conceived of as a free MS Paint alternative. With Paint.NET, you get a very straightforward image- and photo-editing program that lets you touch up your photos without too much of a learning curve.

The interface will feel familiar to Microsoft users, making it relatively intuitive to use. If you're mainly after red-eye correction, colour adjustment and lighting fixes, this should be perfect.

A second, more feature-rich option would be GIMP (gimp.org). This is undoubtedly the best free Photoshop alternative out there, if you're willing to spend a little more time getting to grips with how it works. Luckily, GIMP also has a great online community and resources



GIMP's professional photo-editing software is an impressive free Photoshop alternative

READERS RESPOND

ANDROID

Add multiple clocks to your home screen

A I'm writing in response to Martin Brady (Issue 511, bit.ly/webuser511) about showing two clocks on your Android home screen. I display both Melbourne time and London time on the home screen of my phone and tablet. To do this, press and hold a spare spot on your Android screen, select widgets, then select whichever widget you fancy. There are lots to choose from.

Add widgets to your phone for easy access

Lynnette Hammet, via email



THANKS FOR YOUR HELP

It's been a delight looking after this section and seeing so many of you assist each other. Thanks for giving us the opportunity to help you get the most out of software and hardware,

and navigate the weird and wonderful web. We couldn't have done it without you!

Steve Clark



to help you get started.

GIMP is brilliant for fixing blemishes and imperfections on your photos because it has its own version of Photoshop's 'healing brush' tool. Once you've downloaded GIMP, you'll find the healing tool in your 'tool-box' – look for the plaster icon.

Steve Clark, Web User

BROWSERS

Manually choose download locations

Q Whenever I download a file from Chrome, it goes straight into my downloads folder. I'd prefer to have the option of downloading files into the folder of my choice. Is there a way to change this?

Ian Coles, via email

A There's a quick and easy fix for this annoying quirk. Click the three-dot button in the top-right corner of your Chrome browser and go to Settings, Advanced. Find the downloads section and toggle on the option 'Ask where to

save each file before downloading'.

You might also want to consider using a download manager. The RegExp Download Organiser Chrome extension (bit.ly/3nOieUt) lets you set rules to send downloads to different folders based on criteria such as file name or extension. For instance, you could have all your images sent to a particular subfolder. It also lets you save downloads to certain folders based on the source URL.

If you're meticulous about your folder organisation, then it's worth spending the extra time setting your preferences.

Steve Clark, Web User



RegExp Download Organiser lets you take control of your downloads

Your Top Tips

Our final pick of the best advice from our readers. Thank you for all your tips over the years



TOP TIP

WINDOWS

Speed up your PC by blocking app notifications

Notifications pinging from your desktop apps aren't just annoying, they could also be slowing down your computer. It's actually really easy to turn them off, and I would recommend this if you're finding that Windows 10 is running a little slower than you'd like.

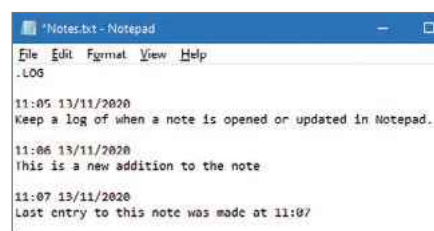
Open the 'Notifications & actions' page in Settings, System to



change the notification settings for each app. I've found that there are hardly any desktop apps that I actually need notifications for – in most cases, they're a totally unnecessary use of your computer's power, and an unwanted distraction.

Li Okamoto, via email

Switch off notifications and speed up your computer



Automatically add the date and time to entries in a Notepad file

you paste it into Notepad, then copy the text and paste it into Word, the actual URL is pasted. It strips out all the unwanted extras from a copy and paste.

You can also keep a diary or log in Notepad, and have each entry automatically start with the date and time it was made. Open Notepad and type .LOG on the first line, then press Enter so the cursor is on a new line. As long as you leave the cursor on a new line whenever you close Notepad, you'll find that every time it's opened, the date and time is automatically added.

To save your notes, you can just click the Close button and, if the note has changed, a Save button appears automatically. If nothing has changed, it just quits.

G Philips, via email

WINDOWS

Switch to XYplorer

I wish to draw readers' attention to XYplorer (www.xyplorer.com), a wonderful alternative to File Explorer. I've had it installed for a while, and although it took some time for me to start using it as my default, there is no way that I'd go back to File Explorer now.

It's worth spending some time going through all the different settings, such as the ability to colour-code files and folders. File Explorer always forgot my settings, whereas XYplorer never does, and it lets me save my settings before closing. It's also worth customising the

configuration of the toolbar because it includes some really useful icons.

If you have a problem, the help at XYplorer is also wonderful. I am in Australia and if I ask them a question, the owner comes back almost immediately, despite the time difference. I can't recommend it more highly.

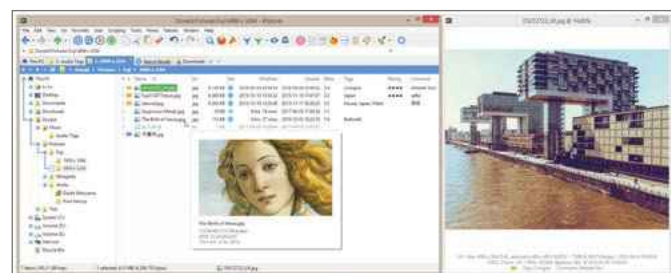
Lynette Hammet, via email

WINDOWS

Top Notepad tips

Notepad is such a simple tool and I use it a lot. When copying text from one app to another, I sometimes paste everything into Notepad to tidy it up first. An

irritation introduced into the latest version of the Edge browser is that if you copy the URL of a web page from Edge's address box and paste it into Word, you don't get the URL but a hyperlinked page title. However, if



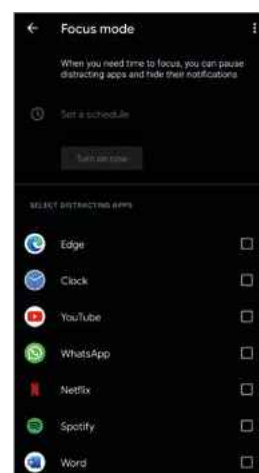
XYplorer is a highly recommended alternative to Windows' basic File Explorer

MOBILE

Remove Android distractions

My phone has been taking up much less of my attention since I started playing around with the Digital Wellbeing settings. Its menu is packed with tools

Switch on Android's Focus mode to block out unnecessary distractions





for managing your screen time, and I've been finding it really helpful as I try to spend less time glued to my phone.

The most useful part for me has been 'focus mode'. This lets you pause notifications from apps, such as social media, emails and messaging. I've chosen about 10 apps to pause, and set up a schedule so they're now automatically turned off during work hours. It's great for feeling more in control: now, I only open these apps when I actually want to use them, not because they're jostling for my attention.

Mike Finn, via email

WINDOWS

Create a Windows guest account

Setting up a Guest account on your Windows PC is handy for letting visiting friends or family use it without accessing your personal files. There's no specific tool for adding a Guest account to Windows, but the next best thing is to create a general-purpose account instead.

Open the Settings app and go to Accounts, then 'Family & other users'. Click the plus button in the 'Other users' section. It asks for their email address, phone number or Microsoft sign-in address. Ignore this and click 'I don't have this person's sign-in information'.

Once again, it tries to get you to use an existing Microsoft account or create a new one. Click 'Add a user without a Microsoft Account'. You can then create an account using just a name and password. Name it 'Guest Account' and either add a simple password or leave it blank for no password. People can then click it on the login screen and get straight to the desktop. They won't be able to access anything that's saved in your account.

Roger Simmonds, via email

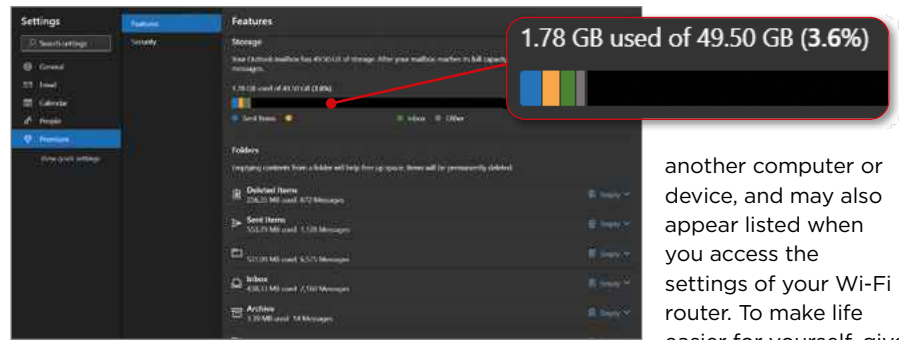


Create a local Guest account with no password to let other people use your PC

EMAIL

Clear your Outlook inbox

Anyone who has an Outlook email address (www.outlook.com) may be interested to know of a quick and easy way to manage its storage. I find that



Check Outlook's storage feature to see how big your inbox is

the inbox can fill up quite quickly, so I'm always trying to find old emails to delete.

Using the Outlook web app (outlook.com), you can quickly work out which folders are taking up the most space. Open the settings by clicking the cog icon in the top right-hand corner and search 'storage' to bring up the storage menu. It has a clear graphic showing you which folders are biggest. Even better, you can clear out old emails directly from the storage page. Finding this has made managing my inbox much simpler.

Joshua Chung, via email

WINDOWS

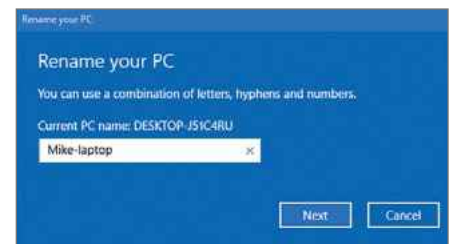
Rename your PC

If your PC came with Windows installed, it was probably given an automatically generated name. My PC was called DESKTOP-J51C4RU, which isn't an easy name to remember or type, not that I need to do this very often. However, computer names do appear when they're accessed remotely over a network from

another computer or device, and may also appear listed when you access the settings of your Wi-Fi router. To make life easier for yourself, give it a proper name, such as Mike-Laptop,

Lounge-PC or Office-PC. This makes it much easier to recognise when checking which devices are connected to your wireless network, for example. You can rename your PC from the Settings app. Click System, then scroll down to the bottom of the list on the left and choose About. On the right, click the 'Rename this PC' button. There are some restrictions in that only letters, numbers and dashes are allowed, so you can't have 'Mike's PC', it's got to be something like Mikes-PC.

Mike Jacobs, via email



Rename your computer to something more recognisable

BLUNDER OF THE FORTNIGHT

MOBILE

Save data with PDF web pages

I've been having a nightmare with my phone this month after foolishly forgetting to reconnect to the Wi-Fi at home and streaming a few too many Netflix shows! I ran out of data – which meant that I couldn't access some of the pages I needed while out and about.

I mostly use my phone for maps and recipes, so now I've started downloading pages that I want to return to later as PDF files. It can't curb my excessive data usage but at least it means I have an archive of helpful content! You can do this by tapping the three-dot button in the top-right corner, selecting the Share option, then choosing Print. When it asks you to choose a printer, simply 'save as PDF' instead. This is done through the Chrome app on an Android phone.

Maria K, via email

Save web pages as PDFs by 'printing' them to the format in Chrome





Since we announced our closure to subscribers with the delivery of Issue 515, we've received many messages of condolence. We'd like to thank all our readers for your loyal support and valuable contributions over the last 20 years

Absolutely stunned to see the sad news in the letter accompanying my subscription delivery of Issue 515. I feel so sorry for the *Web User* staff, who have worked so hard over the years to make this a great magazine.

I have always been quite surprised that the over-the-counter price has been so low (and my subscription even less) - let's face it, £2.40 is only a fraction of children's pocket money these days. But presumably it's all about market forces, online forces and accountants. Such a shame, as £3 would still have been great value.

But thank you for the years of tech learning that you have given us and I wish you all the best in the future.

Dave W, via email

We are so very sad to hear that our wonderful *Web User* will soon be no more. I have been a subscriber for many years and have thoroughly enjoyed reading the magazine.

My wife is a newer fan and we have a running joke in our house about when I will be able to read 'my' copy after she's finished with it!

Thank you very much for your hard work and for a first-class magazine. It shall be sorely missed.

Claude Vecht-Wolf, Bushey

I can't believe after all this time that *Web User* is ending. I have been reading the magazine since day one - and have even kept the 100th



edition! My copies have travelled the world.

I am so sad and sorry for all of you involved. You succeeded in delivering a fantastic magazine and should all be proud of what you have achieved.

Tony M, via email

I am very sad to hear that Issue 516 will be the last issue of your great magazine. I have read *Web User* since the first issue and have only recently become a subscriber due to local difficulties in buying the magazine.

I have always enjoyed the magazine, as well as reading *Computeractive*, but will be happy for my subscription to be transferred to the latter!

I wish all the *Web User* staff all my best wishes for the future, and hope your expertise will not be wasted for too long.

David Church, via email

I'm so sad to learn that you're ending *Web User*. I've been a fan since 2002-2003, in the days when you had to find Netty the Penguin. No other magazine has printed my name as much as you guys!

I wish each and every one of you the very best for the future.

Ady Colclough @AdyC76

I have been reading *Web User* since 2005 and don't know where I'd be without it. You persuaded me to switch from Internet Explorer to Chrome, convinced me to stick with Windows 7 rather than upgrading to Windows 8, and gave lots of other useful advice.

Thank you to the team for all your help over the years.

Colin Folkes, via email

I just wanted to say that I'm really sad that you are no longer going to produce this magazine.

I am a computer professional (for 58 years - been in the IT industry my whole life) and it is without a doubt the best computer magazine there is. It's always exciting to see it pop through the door.

I will miss everything about *Web User* - all of it was truly excellent.

Stephen Whitelaw, via email

I was very sad to see that Issue 516 of *Web User* will be the last one. Although I am very ignorant in matters of computing, age has not improved things, and I always looked forward to getting the next very informative edition.

The questions that you have answered for me have been an immense help in solving my numerous problems.

Alan Smith, via email

I started buying *Web User* when it was still 99p and subscribed when the price increased to £1.85. I still believe the magazine offers excellent value for money, and am very sad to see it go.

Brian Haines, via email





What can I say? I picked up my copy of *Web User* from the postman this morning and read the enclosed letter to subscribers. I am absolutely gutted at the news – it's like losing an old friend.

I've been reading the magazine since day one (more recently taking out a subscription because of the difficulties getting hold of it during the pandemic) and always looked forward to getting it on my shopping trip to Tesco! Even more so during lockdown.

I've always liked *Web User's* format and the way everything is explained in an easy to understand way. It's just so sad that it had to end like this and I'm really going to miss it.

I've never written to the magazine before, but this is such a sad occasion that I had to put finger to keyboard and just say a big "Thank You" to all the team who have made *Web User* my favourite magazine.

Steve Milner, via email

I have much to thank the *Web User* team for since the birth of the magazine, not least keeping me savvy with matters digital in a rapidly changing and hazardous IT world.

I hope to find some content in *Computeractive* in the future to replace the loss of my web crutch.

Bob Clare, via email

So sad today to read that you are closing down. I love this magazine.

Jean Clark, Facebook

I will dearly miss your magazine and all the great content and advice it provides every issue. Guessing the answers in your emoji quiz has become part of my fortnightly routine.

Derek Whiting, Facebook

Noooo!! I can't believe that you're closing *Web User*. Where else am I going out to find out what's new online every fortnight? Your magazine has been

invaluable to me for the last 10 years, and I'm really going to miss it.

John Stockwell, via email

I am sorry that you are discontinuing your magazine. I also subscribe to *Computeractive*, which I find more technical. I find your magazine much easier to read and will miss all the important information you provide.

Jill Ringwood, via email

I was really saddened by the news that *Web User* has reached the end of the road. I have been a reader since Issue 1 and always looked forward to the next issue.

I have learned so much from your articles and all the software I use is as a result of your recommendations. Thank you to all the staff at *Web User*. I wish you all well in your new ventures.

George Dalton, Colchester

I'm really sorry to hear that the magazine is ceasing. I bought it from the first issue and it hugely helped me.

I thoroughly enjoyed being one of the moderators on the *Web User* Forums for many years, and "meeting" and interacting with the WU team. I wish all at *Web User* Towers

health and happiness in the future.

Caroline Sharman, Facebook

I've been reading *Web User* since the first issue when the pages were bigger and it cost 99p! I'll miss the information about the latest free software and new websites, as well as all the practical advice.

John Stokes, Facebook

With so many magazines closing this year, I'm not surprised by this news but I am sad about it. There are so few technology mags left, there used to be dozens! I guess I'll have to make do with *Computeractive*.

Graham McPhee, Facebook

This is very sad news. Roland Waddilove was kind enough to answer one of my technical queries once, which was very helpful. I am going to miss *Web User*.

Michael Jameson, Facebook



Quiz Answers: Issue 515

1 **Upstairs, Downstairs**



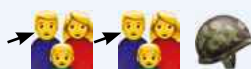
2 **Please Sir!**



3 **Crossroads**



4 **Dad's Army**



5 **Armchair Theatre**



6 **Fawlty Towers**



WINNER!

Well done to **Bob Donegan** who wins our final *Web User* Back Issues Disc



WAYBACK MACHINE

2007

! Page 404



Barry Collins signs off from his *Web User* column with one final buying recommendation

We'll miss tech mags when they're gone

Way back when, not long after I started working on tech magazines, the Royal Mail refused to deliver one month's copies of *PC Pro* to subscribers because they were so thick they wouldn't fit through letterboxes. Since then, the explosive growth of the internet and online publishing has put the mag on a diet, with readers feasting on free web content. "We taught these people how to use the internet and look how they repay us," our publisher remarked, only half joking.

Now, with the sad closure of this magazine and veteran stablemate *Computer Shopper*, there aren't many tech mags left on the shelves. Free online content has put the squeeze on mags for the past 20 years, and COVID-19 shutting stores and smashing up the economy merely added a nail to the coffin.

I'm fully conscious of "he would say that, wouldn't he?" syndrome, but we're going to miss tech mags when they're all gone – for reasons you've probably never considered. There are some brilliant tech titles online, a couple of which I work for myself, but online publishing works to a different model. News is largely driven by getting noticed on Google, while income from reviews is often generated by affiliate revenue – a commission for encouraging readers to click a 'buy now' link in the review.

Check out the reviews sections of some tech websites (no, I'm not going to name them) and you'll be hard pressed to find anything but four- or five-star reviews, because staff are



instructed not to criticise products. There's no point in writing bad reviews, they're told, because they won't earn any money. That's not true of all sites – certainly none that I work for – but it happens. Trust me.

For the one-man-bands who write their own blogs, the temptation is even stronger. The more glowing the review, the more they earn back in

affiliate cash. It's a virtuous circle for everyone except the poor reader who's left with a mediocre product.

Print magazines don't dance to the same tune. Of course, they have (or did have) adverts, and occasionally the advertisers kick off when you criticise one of their products. But good, strong editors – such as our very own – don't bow to such pressure. Not once over the

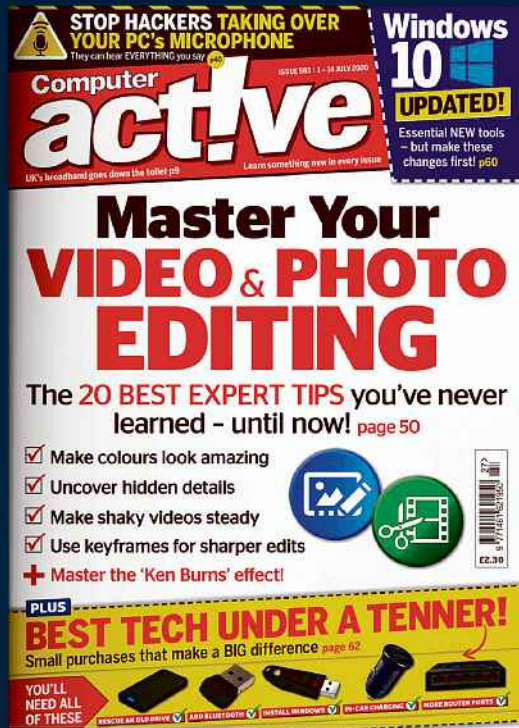
past five or so years, when I've spent almost every column taking a swipe at one company or another, has the editor told me to rein it in through fear of upsetting an advertiser. If a product is rubbish, we've told you it's rubbish. Telling people what not to buy is as important as trumpeting the good stuff.

Print mags may be slower to deliver the latest reviews and breaking news, and they charge you a few quid to read them, but they have integrity. They're not perfect, they get stuff wrong and there are bad apples in print, too, but the model is fundamentally cleaner. No print journalist I've ever heard of got a bonus for writing a glowing five-star review.

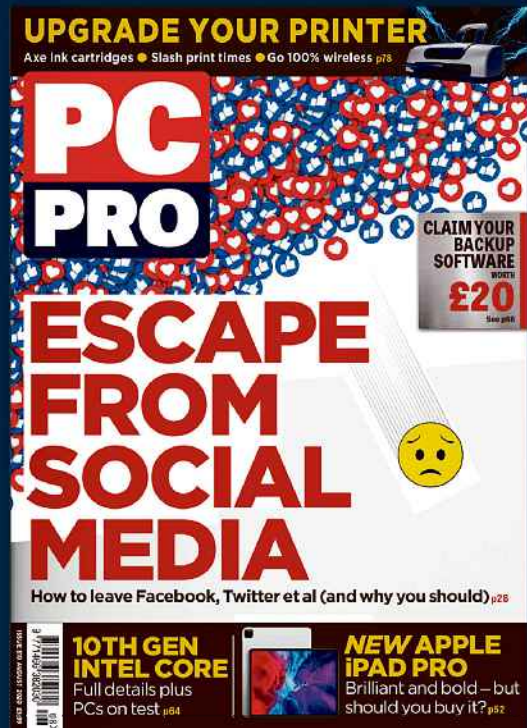
So, if you'll allow me one last recommendation, strap on a face mask and spend the money you save on buying *Web User* on one of the few tech mags left on the shelves. You might even find me ranting about something in one of them.

“Check out the reviews sections of some tech sites and you're hard pressed to find anything but four- or five-star reviews”

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Computeractive is the UK's best-selling fortnightly computer magazine and your friendly guide to PCs, gadgets and the web.



PC Pro is the UK's number one IT monthly, keeping readers up to speed on the latest technology developments since 1994.

Try these magazines:

magazinedeals.co.uk/technology

Whether you're an IT professional or looking to get more out of your home PC, Dennis technology has a magazine for you, both of which are written and produced by expert editorial teams.

We cover the whole spectrum of technology news, reviews and features.

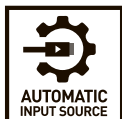
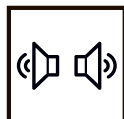
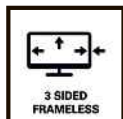
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