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Win the battle of the bulge

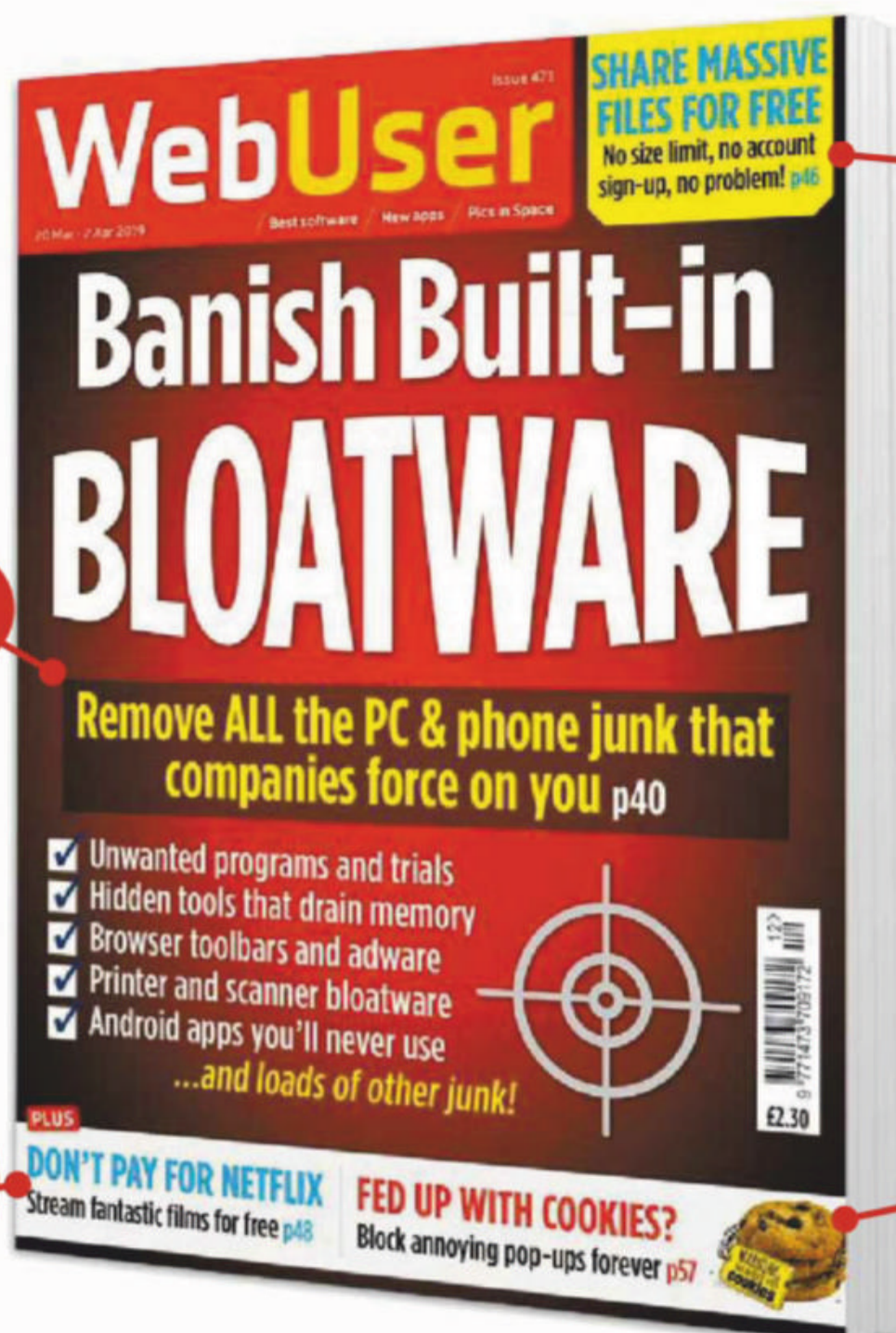
I recently bought a new laptop with a whopping 8GB of memory. Perhaps yours slams in more RAM, but considering that my old one squeaked by on a mere 1GB, I felt this was rather impressive. So I was puzzled when Windows Task Manager told me that this new machine was already guzzling more than half the available memory, as I'd only installed a few programs.

The reason for this drain was that HP had 'thoughtfully' preinstalled such tools as Jump Start, Cool Sense and ePrint SW, while Microsoft had treated me to Groove Music, 3D Viewer, Skype and much more.

Even Apple had chucked in Bonjour – to which I quickly said *adieu!*

This unwanted 'bloatware' is an increasing scourge on our systems, so in this issue's cover feature, we explain how to purge your PC and other devices of all built-in and bundled junk. From removing stubborn apps to downloading a factory-fresh version of Windows, we've got all the tips you need to beat the bulge.

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



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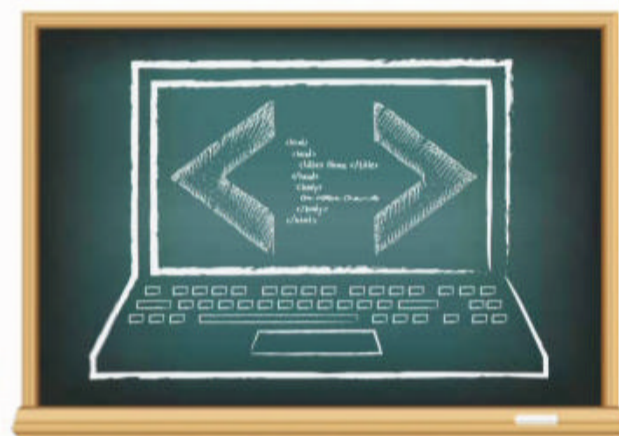
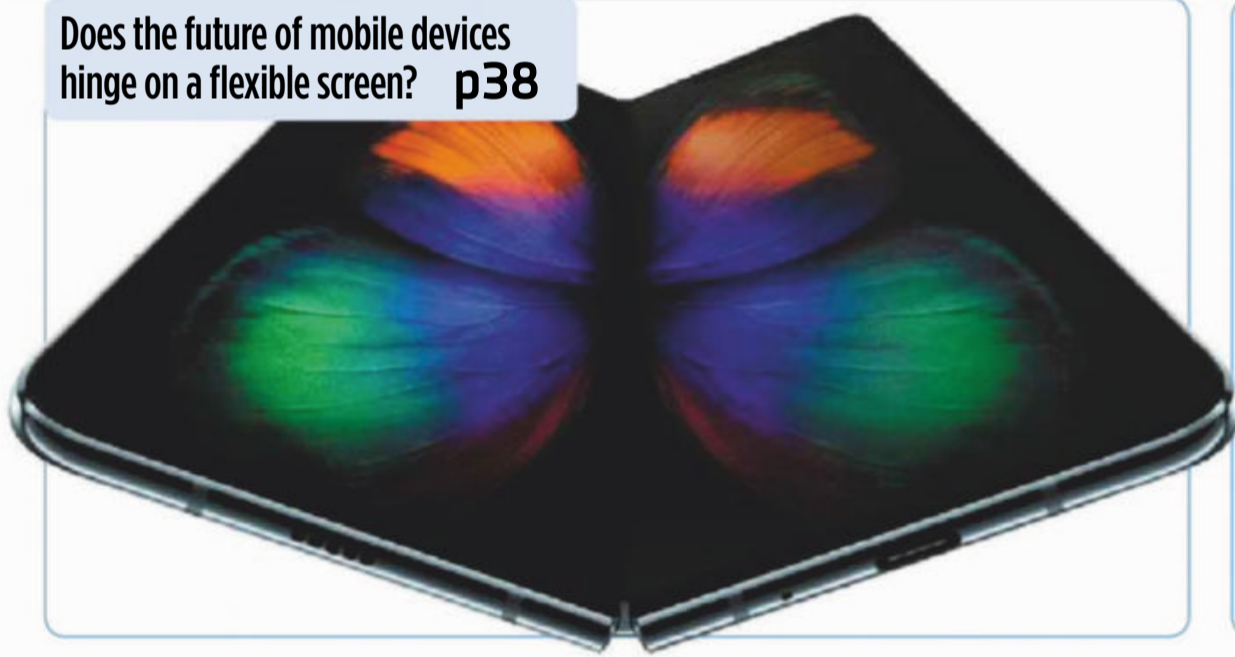
Banish Built-in BLOATWARE

How to get rid of preinstalled
software and redundant junk



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Does the future of mobile devices
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You're never too old to learn
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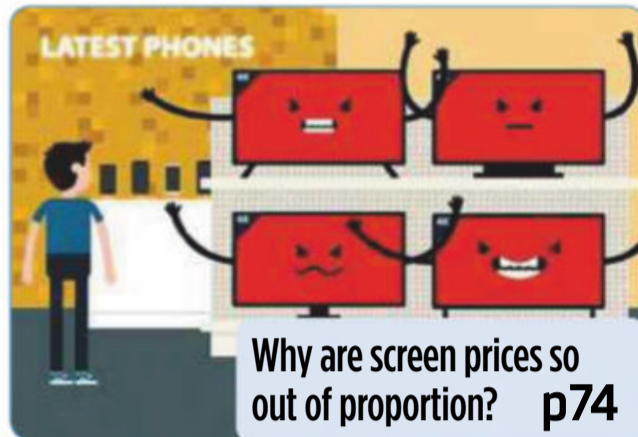
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PRINTING

Printed by Wyndeham Bicester, Oxon
Distributors Seymour 020 7396 4000

Web User is produced by Robirv Limited and published fortnightly by Dennis Publishing Ltd, a company registered in England 1138891.

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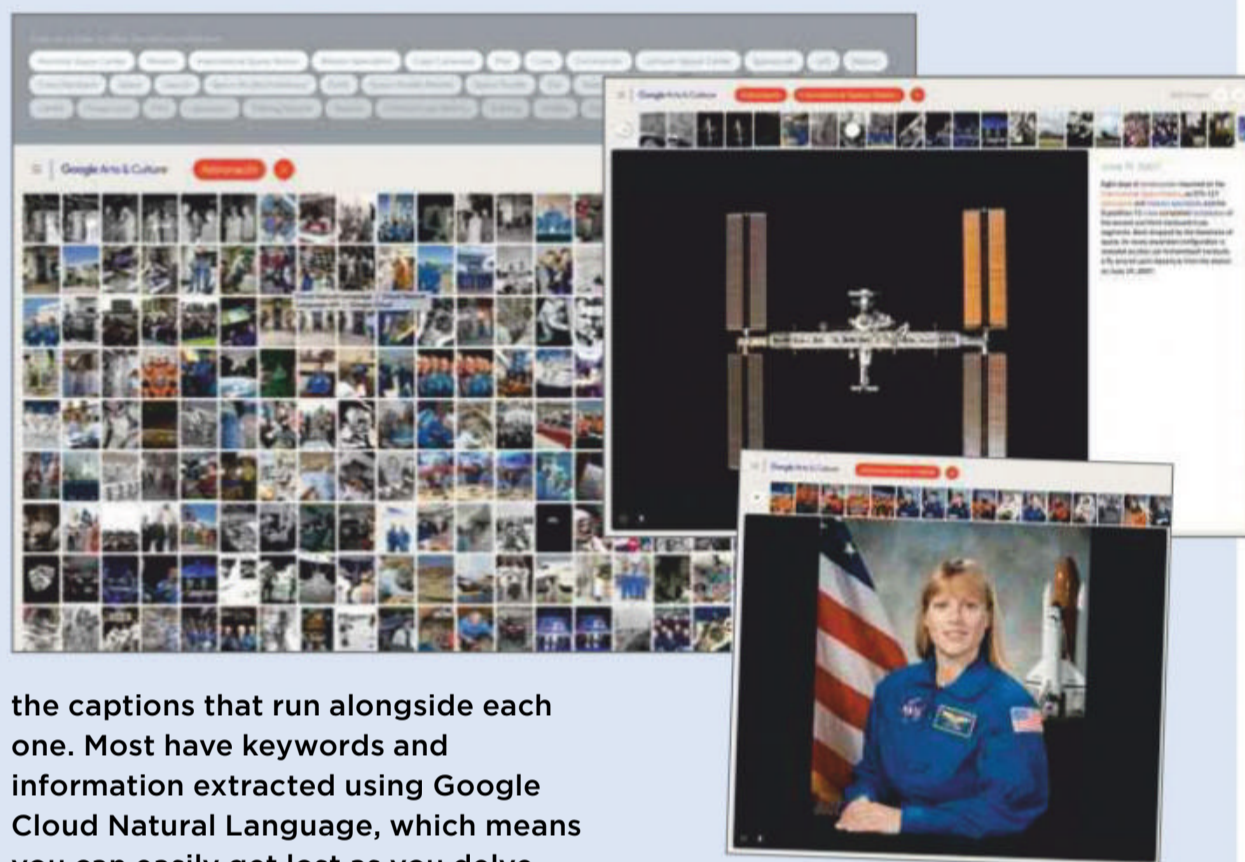
What's New Online

Experience 60 years of NASA exploration

Google has boldly gone where no other web giant has gone before – and the result is out of this world. It has taken 127,000 images captured by NASA since 1915 and analysed them using machine learning. The effect is a rich Arts & Culture experiment that tells the space agency's story (and that of cosmic exploration) from multiple visual perspectives.

After an animated introduction, the NASA Visual Universe project displays a host of circles, each of which contains space-related words and an indication of the number of images it includes. You can click any of these before refining your selection by selecting the '+' icon and choosing supplementary topics. It's also possible to view enlarged images and browse a series of thumbnails

As if that wasn't enough, you can search the images manually and read



the captions that run alongside each one. Most have keywords and information extracted using Google Cloud Natural Language, which means you can easily get lost as you delve ever deeper and discover new images and paths. Indeed, clicking X takes you to a page where you can get new

suggested insights. All the images can be shared and downloaded, too. bit.ly/nasa471

Fly around levels from Nintendo games

noclip.website

Want to see some of gaming's most celebrated titles from a fresh perspective? Then visit Noclip and use your mouse and keyboard to fly around maps of classic Nintendo games, including Mario Kart Wii, Super Mario Galaxy, Ocarina of Time, Luigi's Mansion and other Wii, GameCube, DS and 3DS gems. The maps use data-mined code, which makes them as authentic as possible, and you can see how developers create game worlds by checking out stats showing the number of drawn triangles and buffer uploads. You can also play around with elements such as vertex colours and textures, different fields of view, camera speeds and controls. There's a chance that Nintendo will try to pull this

open-source project but, if it does, there are some non-Nintendo maps here, too.



Chat in Google Duo on the web

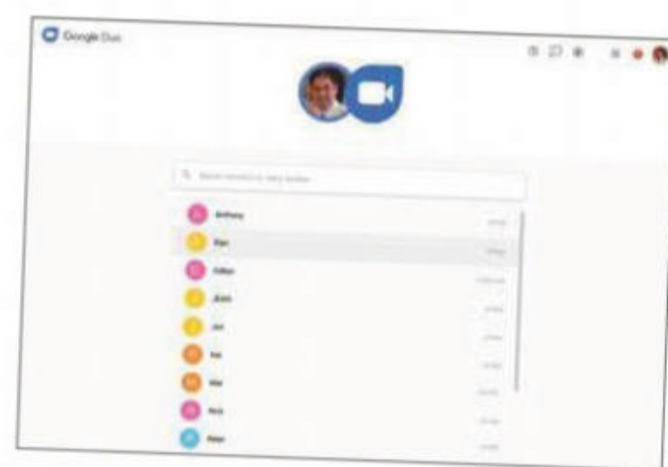
duo.google.com

Google's video chat app, Duo, has finally made its way from Android and iOS to the web, which should help in the ongoing battle against rivals such as Skype and FaceTime. It works

in most browsers (there's no support for Edge), allowing free video and voice calls to be made between Duo users, and it's extremely easy to use.

You'll see a list of your contacts and you simply click one and choose between making a voice or video call. You need to grant the website permission to use your microphone and camera. As with the mobile apps, Duo will adjust the call quality to suit your current network speed, avoiding those frustrating moments when calls become choppy.

Duo can also be used to make voice calls on a Google Home speaker. To set it up, open the Home app and go to Account, Settings, Services, 'Voice & video calls', Voice and Video Apps.



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

Help the Bash Street Kids escape

bit.ly/bash471

For 65 years, the Bash Street Kids have been running Teacher ragged in the pages of *The Beano* but now they're giving you the runaround in a fun against-the-clock platform game. The aim is to help each character find the exit by using your finger or mouse – jump over obstacles, avoid spikes and deal with life-sapping enemies.



Shop in a virtual street

bit.ly/fred471

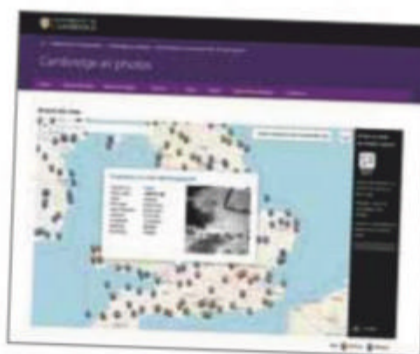
There are no shops to be seen around the suburban roads of this Street View-style website by Fred Perry, but there are still many opportunities to make a purchase. As you explore the area using your mouse, you can stop whenever you see someone walking and click on them to discover what they (and others in the scene) are wearing. It's akin to an edgy catwalk, albeit with the model's faces blurred, but you can nevertheless check out the available sizes, see the clothes up close and buy through the main part of the Fred Perry website.



See Britain from the air

www.cambridgeairphotos.com

Former RAF pilot Kenneth St Joseph pioneered the use of aerial photography in 1947 and his work led to him becoming a curator at Cambridge University, which now has a collection of more than 500,000 images covering most of Britain. A staggering 80,000 of those have been digitised and uploaded to this searchable website, which Cambridge academics have dubbed the historical Google Earth. The images, taken up until 2009, include a new set of 1,500 hi-res zoomable images, and you can browse the lot by location, keyboard, area, caption or featured photo.



Test your knowledge of flags

bit.ly/flags471

Do you know your Union Flag from your Stars and Stripes? Then test your knowledge (and your geography) using The World Country Flags Game, which challenges you to place flags on a map and see if you can avoid getting 10 wrong. There are five themes to choose from: most recognisable, richest population and largest area, population and economy.



NEW VOICE COMMANDS



Translate in real time

Ask Assistant to be your interpreter (“be my [language] interpreter”) – naming one of 26 languages – and it now translates real conversations in real time.



Check your Epson printer

The Epson iPrint app for iOS has introduced a Siri Shortcut to the main navigation menu. You can even ask your printer how much ink is available.



Tune into Pocket Casts

One of the best podcast apps, Pocket Casts, can now be used with Alexa. Ask for recommendations, play your “up next” shows, say “surprise me” for a random episode and request the latest episode.



Use Messenger's dark mode

www.messenger.com

Facebook has introduced a dark mode in Messenger. To unlock it, send a crescent-moon emoji from the text field to get details of the new setting, which is found by tapping your profile picture.

Read WhatsApp messages in secret

www.whatsapp.com

If your iPhone supports 3D Touch, long-press a conversation thread to see a preview and you can read the most recent messages without triggering blue ticks.

Work for Amazon

bit.ly/amazon471

This game aims to convey how hard it can be to work in an Amazon warehouse, based on the stories of eight workers. Choose a character, go through training, pick products to send and read the eye-opening information that frequently appears.



Need to Know

Google warns of security flaws in Chrome and Windows

What happened?

Google has warned Chrome users to update their browsers after the discovery of two 'high severity' zero-day vulnerabilities, which were being used by hackers to gain access to computers. The first software bug was in Chrome itself, while the second was in Windows, with Google warning that the two flaws were being used together.

A zero-day vulnerability is one that's already being used by hackers. Often, such flaws are spotted by security researchers, but Google said it had already seen these two being used by cybercriminals. The attackers use the two flaws together, taking advantage of the bug in Chrome to attack other programs. Normally, Microsoft's operating system prevents this from happening, but a weakness in Windows 7 allows applications to interact.

The Chrome bug exploits a system built into the browser called FileReader, which is an API – a piece of code that allows applications to connect. This lets browsers or other apps see files, such as documents or photos, that are stored on your computer – handy if, for example, you want to upload a photo to attach to an email or share on social media. However, attackers have found a way to use it as a bridge to leap across from the browser to the operating system.

Google has already fixed the bug in Chrome, while at the time of writing,



Microsoft was working on a fix for its side of the vulnerability. With the updated browser now secure, hackers will have to find a new route to the operating system.

How will it affect you?

Google pushed out an update that patched the flaw, then issued its warning, so any Chrome users should be immediately protected because the browser automatically downloads and installs updates. If you're not sure whether your version of Chrome is up to date and secure, check the version number by clicking the three-dot menu button in the top-right corner of the browser and choosing Settings, Help, About Google Chrome. Alternatively, type `chrome://settings/help` in your address bar and press Enter. If your version number is 72.0.3626.121 or later, you're safe from this particular flaw. If you're not up to date, click the button to get the latest version.

The Windows vulnerability only seems to be present in Windows 7, because Microsoft has built tougher protections into newer versions of the operating system. If you're using Windows 10, this flaw definitely won't affect you, Microsoft has said, but the weakness in

Windows 7 that let hackers take advantage of the Chrome bug still exists for the time being. That means any similar vulnerabilities found in other software could still leave you at risk, although there aren't yet any specific threats to be worried about.

The advice to stay secure remains the same: keep your software up to date so you're patched against the latest bugs, and use the most recent version of whatever operating system you favour. If you're running Windows, it's now best to use Windows 10 for security and peace of mind. Anyone remaining on Windows 7 has until January

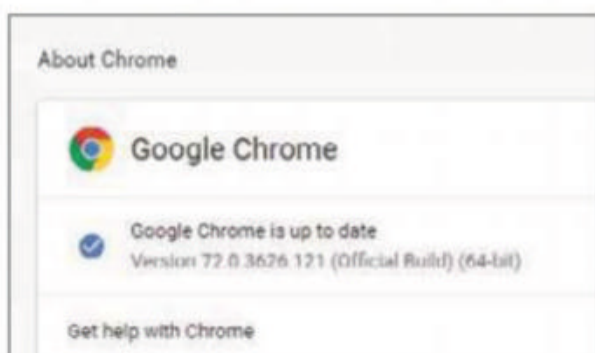
2020 to upgrade, because after that point Microsoft will no longer offer security updates or support for computers running the decade-old OS.

What do we think?

This security scare highlights the merits of Google Chrome's automatic update system. Most users will have been protected from the flaw in the browser well before they even heard any warning about the attacks.

This incident also shines a light on Windows 7 and those who still use that operating system. It's easy to understand why some people stay loyal to Windows 7: it's an excellent piece of software, upgrading probably means buying a new computer and Windows 8 was notoriously buggy and irritating to use. But Windows 10 is a return to form, and if your PC is relatively recent, has at least 20GB of hard-drive space and a 1GHz processor, you may be able to upgrade without buying new hardware.

Because Windows 7 is retiring next year, security problems will only get worse. If you're still using a computer running Windows 7 – or know someone who is – it's time to consider an upgrade. Any learning curve involved is worth the effort to keep you safe.



Make sure Chrome is up to date to stop hackers attacking your system

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

Cryptojacking threats may be on the way out

What happened?

Coinhive, which used computers to mine cryptocurrencies, is no more. Cryptominers are generally associated with hacking, but used with permission, they provide a legitimate means for raising funds – UNICEF used Coinhive to mine for donations, and other sites raised revenue via cryptominers instead of advertising. After all, ads use up processing power, so why not mine instead?

Used without permission, mining is criminal and known as 'cryptojacking'. When cryptocurrencies such as Bitcoin and Monero



climbed in value, hackers spread mining tools such as Coinhive via malware, hijacking computers to install scripts and use processing power. As much as two-thirds of all cryptojacking was attributed to the service.

Coinhive said it no longer makes enough money, so it is shutting down. That could be down to a fall in the value of Coinhive's currency of

choice, as well as attention from policing authorities.

How will it affect you?

Coinhive shut on 8 March, but the service will continue to operate until the end of April to allow users to cash in their earnings. For the rest of us, cryptojacking will continue to exist, but hopefully the demise of Coinhive will reduce the number of attacks.

Because cryptojacking spreads via malware, avoiding an infection requires following the standard security advice: don't click

links from unknown origins, run reliable security software and keep Windows updated.

What do we think?

Coinhive's closure is welcome news for web users, given the security challenges raised by cryptojacking. That said, the concept of lending out processing power for fundraising isn't new, and we certainly need new ways to fund content online as advertising revenues continue to fall. Cryptomining could have become a viable means of funding good causes, if only criminals hadn't already found a way to abuse the technology.

Banks test debit cards using fingerprint chips

What happened?

Contactless payments have become the norm – you just wave your card and pay. For security reasons, those payments are capped – normally at £30 – so you still need to use your PIN for more expensive purchases. But rather than remembering and entering your four-digit code, you could soon be using your fingerprint.

That's the idea being tested by the Royal Bank of Scotland (RBS) and NatWest, which RBS owns. The banks have put debit cards with fingerprint readers in the hands of 200 customers across the UK, to see if the idea is worth rolling out on a larger scale.

How will it affect you?

The cards are identical to existing credit and debit cards, but have a small reader built into one corner. This is powered wirelessly via a signal from card readers, so no batteries are necessary.

Those taking part in the current trial have to visit a branch of their bank for their fingerprint to be taken, but in the future this could be done remotely. The fingerprint is stored on the card itself.

What do we think?

It's an intriguing technology, but you'll still have to remember your PIN to withdraw cash from an ATM, so it all seems like a lot of effort for naught.

Banks rolled out contactless because it makes



payments much faster for customers and businesses alike, but there's no doubt it's less secure – anyone who finds or steals your card can use it, hence the £30 limit.

If you're offered a fingerprint card by your bank, and you like the idea, by all means, sign up – the card, not your bank, holds the fingerprint, which may

help you feel more secure.

However, it's surely only a matter of time before criminals find a way to hack these cards. We can't help feeling unsettled by the idea of a unique physical identifier ending up in the hands of criminals, rather than a random four-digit code that can easily be reset.

Facebook secretly shares your phone number

What happened?

An irate Twitter user revealed that giving Facebook your phone number makes it publicly searchable to everyone (bit.ly/fbtw471).

Like many other sites, Facebook prompts you to add a mobile number – which not only helps you find friends, but is also used to apply two-factor authentication (2FA). This safety measure adds an extra layer of security to your online accounts by texting an access code to your phone that's used to confirm your identity in addition to a password.

In an alarming thread, [@jeremyburge](https://twitter.com/jeremyburge) revealed that “for years Facebook claimed that adding a number for 2FA was only for security. Now, it can be searched and there's no way to disable it”. To make matters worse, the social-media site is sharing that information with its other enterprises – Burge claims that Facebook 2FA numbers are also shared with Instagram, which prompts you with “Is this your number?” once you add it to Facebook.

This isn't the first time that mobile numbers have been misused by Facebook. Last year, tech website Gizmodo reported that the social network used phone numbers to sell targeted ads.

According to Facebook's Help guide (bit.ly/fbhelp471), users can control who

can see personal information such as phone numbers, but they may still be visible “when someone uploads your contact info to Facebook from their mobile phone”.

How will it affect you?

If you've already given Facebook your number, log in and view your profile's Privacy settings. Check the setting ‘Who can look you up using the phone number you provided?’ – since you can't switch this off entirely, make sure it's set to Friends. To get rid of any telephone number associated with your account, go to the Mobile settings and click Remove.

Two-factor authentication is a valid security measure, and we strongly suggest visiting the Security settings and switching it on. But just because Facebook wants your mobile number doesn't mean you have to give it to



them. Since May last year, the site supports third-party apps such as Google Authenticator and Duo Mobile, which generate secure access codes without sharing your number.

What do we think?

After a damaging few years, which has seen droves of users desert the social network, we're surprised anyone believed the data-guzzling Facebook could be trusted with our phone numbers. But the site's sly means of capitalising on privacy and security fears to get hold of them is unforgivable. Users have a reasonable expectation that 2FA is only used to secure their accounts.



FIRST LOOK

Lenovo IdeaPad S340 bit.ly/idea471

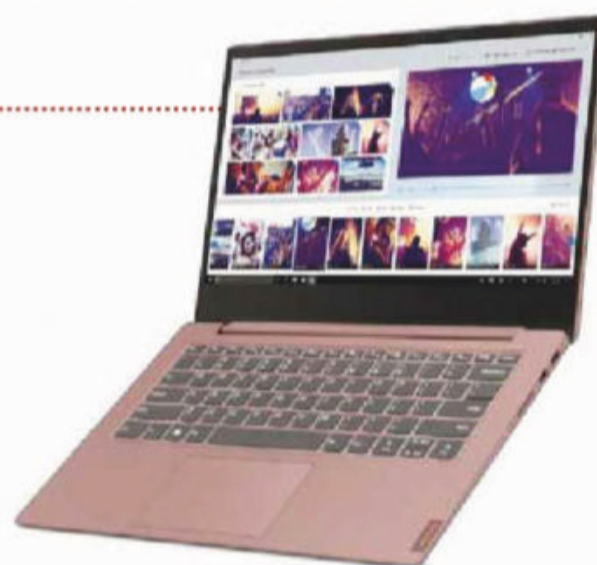
A stand-out at the recent Mobile World Congress in Barcelona, Lenovo's new IdeaPad S340 is a smart-looking, ultra-slim laptop with surprisingly impressive specs, given its expected £550 price tag.

There are two models available – take your pick between a 14in and a 15in HD display, but be aware that only the latter supports the optional touchscreen; then decide which type of processor to run and choose either an AMD Ryzen 7-powered version or a more impressive 8th-gen Intel Core i7-8565. The latter doesn't come cheap, though, which negates the main selling points of a laptop which, according to the manufacturer, features the ‘more

desirable' higher-end computing tech.

Unlike most budget laptops, the S340 feels durable and lightweight. Packed inside its Sand Pink, Onyx Black, Abyss Blue or Platinum Grey plastic and reinforced carbon-fibre shell is up to 12GB of memory and a 2TB SSD – though, as with every part of this laptop, you're free to tailor the gadget to your required specs. The most disappointing aspect is the three-cell battery, which only lasts up to eight hours (under test conditions, which are unlikely to be replicated in the real world).

Housed along the side of the unit are all the ports a modern user could need, with two USB 3 slots, a USB-C port, HDMI output, SD card reader and a headphone jack. Unfortunately, for those who prefer wired browsing, there's no Ethernet port – just standard Wi-Fi and Bluetooth connections.



If you're a nighthawk who feels particularly flush, the IdeaPad S340 supports an optional backlit keyboard, too.

For a base price that won't break the bank, this is a stunning machine that delivers Lenovo's usual reliability without compromising too much on specifications.

The IdeaPad S340 is due to go on sale in the UK next month.



WHAT'S THE RUMOUR

Are Spotify and Amazon suing songwriters?

Have you heard the one about the world's biggest music-streaming services suing musicians and songwriters? That's the story that's been doing the social-media rounds, with a slew of top industry figures criticising Spotify and Amazon for apparently taking artists to court, rather than pay artists increased royalties from streams.

Leading the charge is David Israelite, President of America's National Music Publishers Association (NMPA), who decried Spotify and Amazon's move to "sue songwriters in a shameful attempt to cut their payments by nearly one-third".

The truth is a little more nuanced than the outraged tweets might have you believe: Spotify and Amazon, along with Google and Pandora, have 30 days to appeal a ruling by the US Copyright Royalty Board that would see songwriters' royalties shoot up by 44% over five years.

So, it's a 'yes and no' – Spotify and Amazon are locking horns with the music industry in the courts, but they're not targeting individual songwriters. This is just another battle in the long-running war between Spotify and musicians, which has seen several high-profile artists pulling music from the service over unfair pay-out rates.

But before you hang up your guitar, US entertainment lawyer Jeff Becker suggests it was inevitable that the



music-streaming maestros would appeal the decision – to protect their profits – but believes the courts will find in favour of the royalty increase.

LIKELIHOOD RATING



'Spotify sues songwriters' is a simplified headline that raised awareness of the appeal without letting the truth get in the way. No modern music-streaming site would make such a reputation-damaging business move by suing a legitimate songwriter over profits. However, all parties should, like Apple Music – praised by the NMPA as "a friend to songwriters" – accept the Copyright Royalty Board's decision, and support struggling, streaming songsmiths.

WEBOMETER

WE LIKE...

↑ Disney streaming service will include classics

Disney has confirmed that its forthcoming streaming service, Disney+, will feature its entire back catalogue, including classics such as *Pinocchio*, *Dumbo* and *Fantasia*. The service will launch with around 7,000 episodes of TV and 500 films.



↑ ISP promises never to raise broadband prices

The UK ISP Zen is offering what it claims to be the first 'lifetime guarantee' for broadband services, by promising never to raise its prices even after customers reach the end of their contracts. Its packages cost from £37 per month.



WE DON'T LIKE...

↓ Skype for Web only runs in Chrome and Edge

Microsoft has confirmed that its new web-based version of Skype only works with Chrome and Edge, and not for users of other popular browsers including Firefox, Opera and Safari, who will need to rely on the desktop program instead.



↓ Charities can't afford to upgrade their tech

Technology companies have been criticised for failing to provide enough support to charitable organisations seeking to undertake digital transformation projects. Charities say that the cost of upgrades is delaying their progress.



What's new on Kickstarter

Our favourite new project on the crowdfunding site

NRG Power Stem

bit.ly/bike471 | From £160

Replace your standard bike stem – the bit that connects the handlebars to the chassis – with the NRG Power Stem, and you can charge your devices while you're out and about. Made from toughened metal to withstand the elements, this isn't a dynamo – you won't have to pedal to keep your phone or cycle computer alive – but works using a rechargeable battery and a custom cable (shortened so it doesn't get trapped in the wheels) that fits most devices. Support the project with a £5 donation or pledge £160 to receive your own NRG Power Stem.



Stay Safe Online

News about the latest threats and advice from security experts

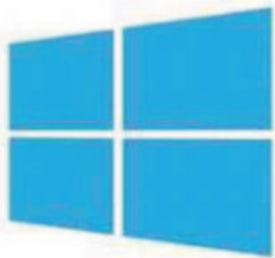
SECURITY ALERT! | What's been bothering us this fortnight

Encryption fears over Windows 10 Home

A new privacy campaign called Fix it Already (fixitalready.eff.org) is demanding that Microsoft stop Windows 10 sharing encryption keys. The problem only affects the Home Edition of the operating system, because the Enterprise and Pro editions work differently and don't share these keys.

The campaign, launched by privacy watchdog the Electronic Frontier Foundation (EFF), wants the process of sharing keys with Microsoft to be eradicated, stating that the company is treating users of Windows 10 Home Edition unfairly.

"Windows 10 Home Edition does come with a built-in encryption solution, but only for some users,"



explained the EFF. "Called Device Encryption, it only works if you have certain hardware and if you sign into your computer with a Microsoft account – which means you have to trust Microsoft with the backup keys".

Although giving the key to Microsoft means users are able to recover data, even if the backup is lost, the keys could be exposed if a data breach occurs, potentially allowing hackers to steal information stored on users' computers.

bit.ly/encryption471

Google discovers security flaw in macOS

Google's Project Zero research team has discovered what it describes as a "high-severity" security flaw in the macOS operating system. After Apple failed to patch the vulnerability within 90 days of being informed, Project Zero



made the details public.

The flaw, which is known as BuggyCow, allows an attacker to bypass the protection built into macOS's copy-on-write (CoW) system, which manages device memory. The attacker could then surreptitiously modify a mounted disk image and get the Mac to run malicious code without triggering any warnings.

"We've been in contact with Apple regarding this issue, and at this point no fix is available," said a Project Zero developer. "Apple is intending to resolve this issue in a future release, and we're working together to assess the options for a patch."

Technically, BuggyCow applies to anyone who uses an Apple laptop or desktop computer, but because the exploit is relatively obscure and requires the victim's Mac to already be infected with malware, there's no major cause for panic.

bit.ly/macOS471

Security Helpdesk | Your questions answered by security specialists

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



Q Can facial-recognition technology be trusted not to invade our privacy?

Matthew Clayton,
Facebook

A Facial recognition plays an increasing role in our lives, and it's no surprise that the police are trialling the

technology, but it's important that law-enforcement agencies – and others implementing the technology – remember that facial recognition isn't perfect.

The recent controversy over Amazon's use of facial-recognition technology demonstrated that there is a lot of work to be done before this can be considered 'reliable technology', and for its results to be trusted in environments where there is no room for error. The fact that this system is nowhere near perfect leads to concerns that it is vulnerable to cybercriminals.

There's also a significant privacy risk. Most people

“ It's imperative that law-enforcement agencies clearly communicate how they are using people's data ”

don't know the risks they face online – or the value of their personal details – so it's imperative that law-enforcement agencies clearly communicate how they are using people's data.

Q Are adult sites more likely to be hacked than other websites?

Francois Dupont, Twitter

A Premium-access login details for porn sites may not seem

like the most obvious thing to steal, but our research suggests that it's a profitable line of illegal business that cybercriminals are exploiting.

Malware can remain unnoticed and undetected on a victim's device for a significant time. This puts their data at a greater risk because hackers can continue to spy on their victims' private actions and use stolen credentials for their own benefit.

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★ Best New Websites

Site of the Fortnight

HEALTH

NEW

Health for Kids

www.healthforkids.co.uk

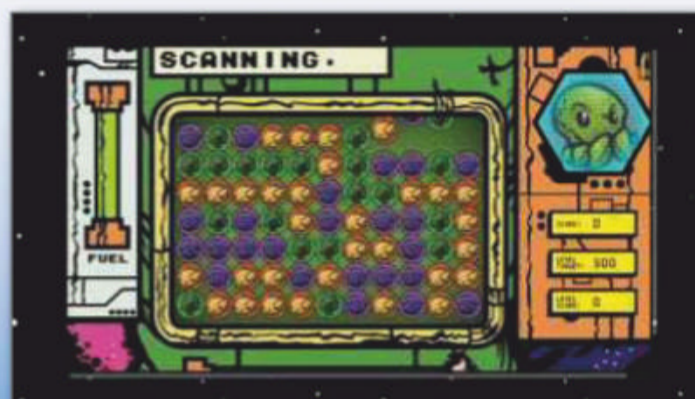
According to the Royal College of Paediatrics and Child Health, there is no reliable evidence linking time spent onscreen with obesity and depression in kids. Just as well, because this colourful and engaging website encourages children aged four to 11 to learn more about ways to stay healthy by interacting with its many resources. Starring a host of friendly characters exploring topics such as dental care, hand-washing, blood tests, food and mental health and illnesses, and with games and quizzes to try, it's hugely approachable and beautifully presented. Just the tonic for young health-conscious minds.

Our rating



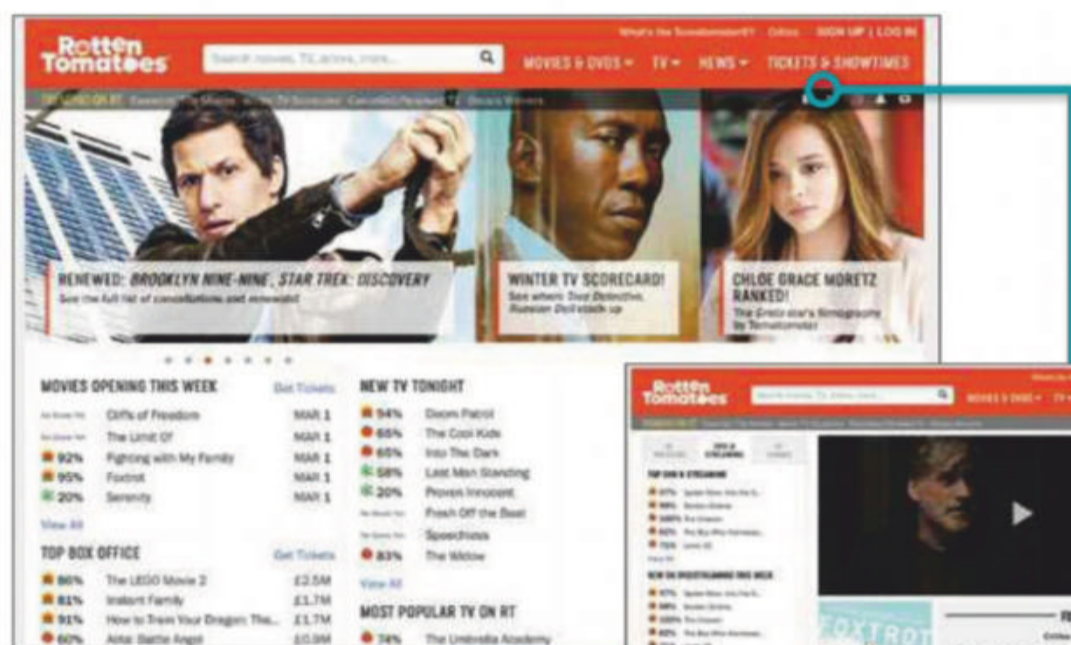
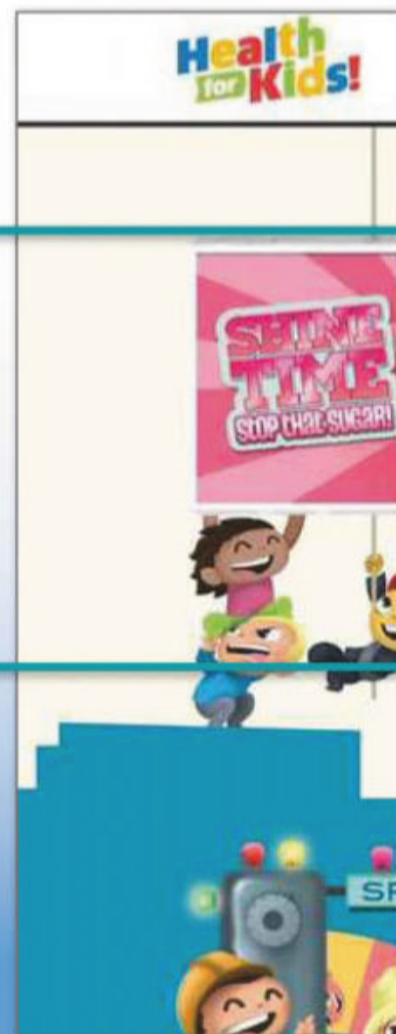
DANCE ALONG

Jungle Boogie will get kids moving, with a YouTube video that's billed as Zumba for kids



PLAY GAMES

Help a constipated alien digest the planet with the cartoon game Poop Shooter



RELAUNCH

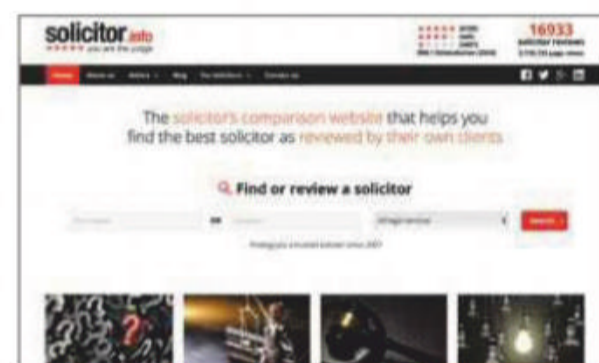
FILM & TV

Rotten Tomatoes

www.rottentomatoes.com

Are we awarding a fresh tomato or a green splat to the film and TV review-aggregation site? Sure, it's just missed top billing this fortnight but this revamp feels like a step in the right direction. Following 18 months of tweaks – changing identity from green to red, rejigging its Tomatometer criteria and adding original content – Rotten Tomatoes has at last tackled 'review bombing' (where trolls try to lower audience ratings). Now, only critics' reviews can be seen before films are officially released, and the Want To See score has been dropped to stop it being manipulated. Add to this some decluttering of the pages and the site is feeling much ripier.

Our rating



RELAUNCH

LEGAL

Solicitor.info

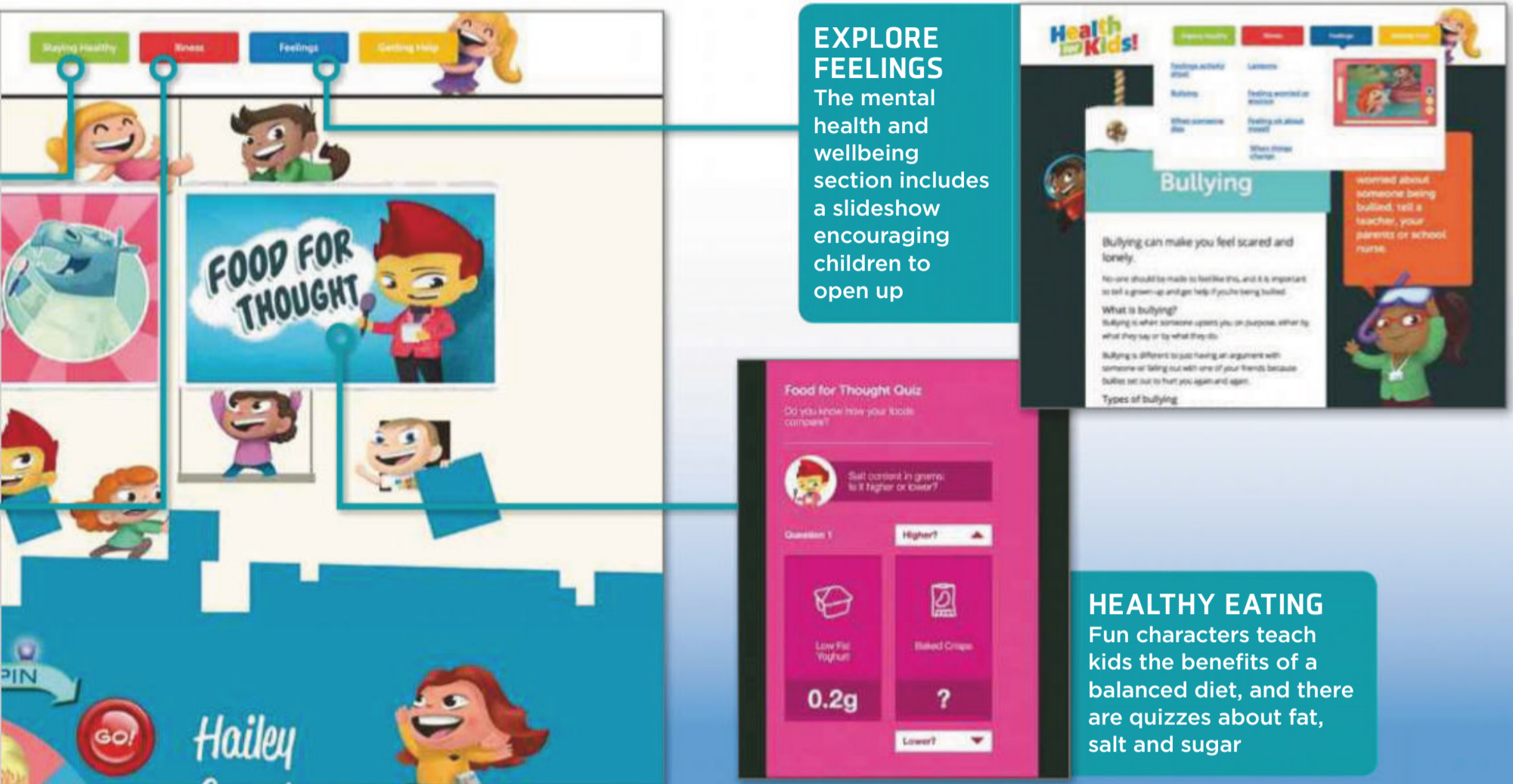
www.solicitor.info

With the tagline, "you are the judge", this solicitor-comparison site helps you find a trusted lawyer. It currently lists more than 15,000 registered UK solicitors and carries close to 17,000 reviews – just enter a name or location in the newly streamlined search engine and select the legal service you require. From there, you can see clearly presented results accompanied by star ratings, then read the reviews, respond or add your own. We like the greater prominence given to asking a solicitor a free question, and the advice section and FAQ, but the blog needs more regular updates.

Our rating



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



EXPLORE FEELINGS

The mental health and wellbeing section includes a slideshow encouraging children to open up

HEALTHY EATING

Fun characters teach kids the benefits of a balanced diet, and there are quizzes about fat, salt and sugar



NEW

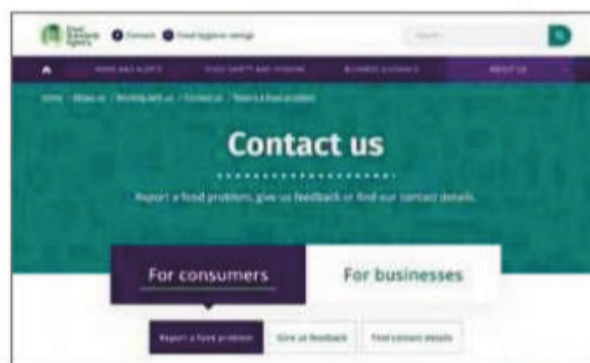
FOOD

Monty Bojangles

montybojangles.com

It's not quite Willy Wonka in its appearance but there's a magical quality to this new site from chocolate brand Monty Bojangles. Drawing on the brand's eccentricity, it mixes parallax effects and animations with an innovative shopping basket – a trunk that fills with up to 100 truffles as you drag and drop the chocs that take your fancy. You can't enlarge the boxes for a closer look but you can instantly see the ingredients they contain. When you're done, you can buy your trunk and add a personal message before waiting for your delicious delivery.

Our rating



NEW

FOOD HYGIENE

Food Standards Agency

bit.ly/food471

Checking the food-hygiene ratings of eateries helps you avoid an upset stomach but the FSA is doing more than merely posting scores on the doors. Its new service lets you report food issues by choosing a category – from suspected food poisoning and poor hygiene to crime and contamination – then naming the business along with details of the problem. Each step is clearly laid out and navigation is a breeze. The one downside is the product-labelling section, which makes you click through two pages but merely directs you to Trading Standards.

Our rating



RELAUNCH

MOTORING

Tesla

www.tesla.com/model3

How do you lower the cost of a premium car? If you're Elon Musk, chief executive of Tesla, you shut all your showrooms and move the entire operation online. It's a bold move, which relies on potential customers being happy to browse this site. Thankfully it's motoring along well, with exhilarating on-the-road videos, a wealth of stats, info about Tesla's electric range and a glimpse of its safety features. However, orders require an immediate £1,000 reservation payment, which may deter many would-be purchasers, particularly as there is no indication of when your car may arrive.

Our rating



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You can still buy our **2017 Back Issues Disc** from bit.ly/wudisc17





NEW

CYCLING

Bike Libraries

bikelibraries.yorkshire.com

One obstacle to encouraging kids to get on their bikes is that they may not have a bicycle to ride in the first place. Recognising this as a problem, Bike Libraries has been launched to lend donated bicycles across Yorkshire and, while this site explains the concept and keeps you updated with the latest news, its main role is helping you find the various locations of the many libraries and donation stations. These are plotted on a zoomable map and listed down the left-hand side of the screen. However, the site will need a better search facility should the number of bike locations rise considerably.

Our rating



NEW

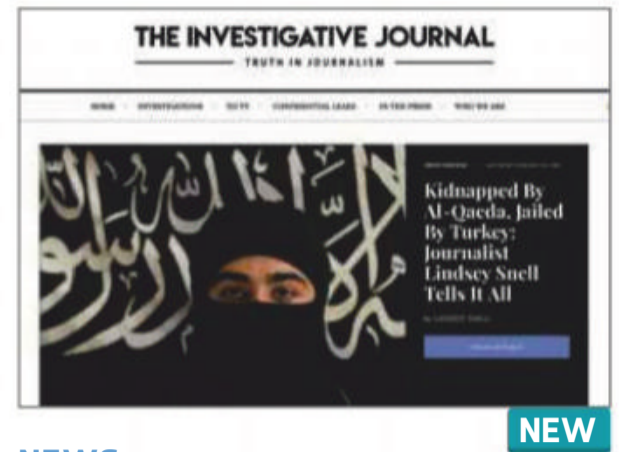
GAMES

Game Dragons

www.gamedragons.com

The Oliver Twins – creators of the classic Dizzy series of games – were recently named the most prolific 8-bit video-game developers by Guinness World Records, with 26 commercial releases, and have now set themselves up as consultants for the industry. But despite potential clients being able to find out more about their services on this site, we wish there was more info about their games. For that, you have to head to olivertwins.com, while consoling yourself here with an introductory video and the beginnings of a blog. That said, Games Dragons is primarily aimed at businesses, so perhaps we're not playing fair.

Our rating



NEW

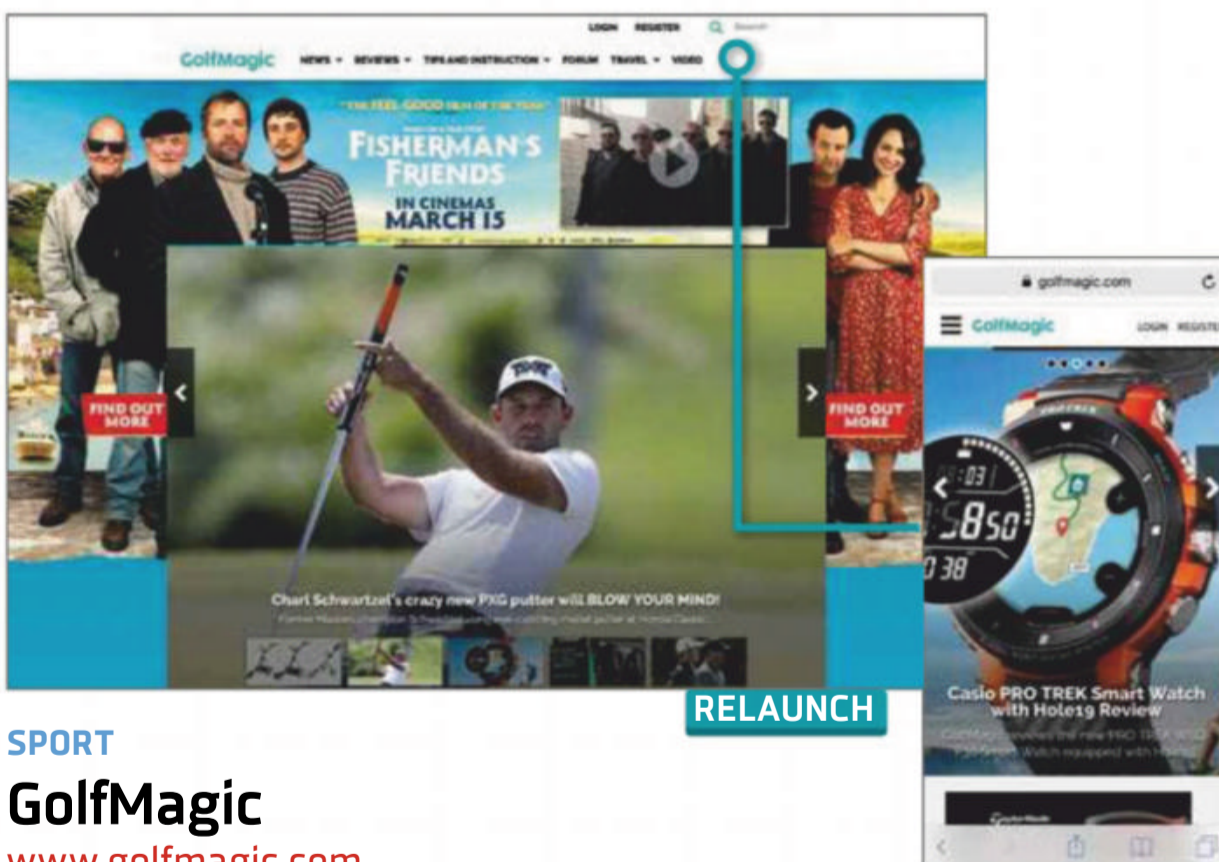
NEWS

Investigative Journal

investigativejournal.org

This investigative-news site aims to counteract fake reports with hard-hitting, impressively thorough articles that explore important subjects such as journalistic silencing in Pakistan, kidnappings and terrorist support – all beautifully written. Available to read on the site itself or as PDF downloads in the style of an academic journal, the reports are accompanied by insightful content and reviews from respected broadcast journalists. Clicking Confidential Leaks leads to a page encouraging whistleblowers to get in touch, and you can also add comments and engage on social media.

Our rating



RELAUNCH

SPORT

GolfMagic

www.golfmagic.com

Having already rebranded in an effort to engage with a young generation of golfers, GolfMagic has a new website design to provide easier navigation. To that end, it offers a news slider and an enhanced mobile experience, together with improved navigation for videos and a good use of drop-down menus. But while it's packed with content, the desktop site still feels a little under par: huge wallpaper adverts dominate the pages and squeeze the content, while tiny boxes filled with pictures and headlines fail to make a bold enough impact. Even so, it's certainly worth swinging by since its wide selection of news, reviews and tips is top quality, down to a tee.

Our rating



RELAUNCH

WEATHER

Met Office

www.metoffice.gov.uk

When the Met Office decided to update its site, it may have forecast a nationwide tsunami of negativity and for that reason released a beta version last October to iron out any trouble. It hasn't worked, though – the gales of criticism have raged, with some justification, mainly about the terrible pixellated maps and snow-related articles during February's mini-heatwave. Still, it certainly looks better, with breaking news, a prominent search engine, interesting articles (why is the sky blue?) and detailed five-day and long-range forecasts. ■

Our rating



Build a Better Site

Specialist tips, top tools and practical help

Top Tips of the Fortnight

Use one URL for different versions of your site

If you want to direct different devices to different versions of your website from a single URL, take a look at B64 (b64.me). It lets you send mobile visitors straight to a mobile-friendly version of your site. Go to b64.me, click the Platform button to choose a device and type in the page you want that type of user to go to. Repeat for as many devices as you want, then enter a fallback address at the bottom.

Watch Google's JavaScript guidelines

Building interactive web pages with JavaScript is challenging and fun, but once you've built your site, how do you get people to visit it? Optimising a JavaScript site for search engines is a different challenge to optimising



regular websites, so Google has launched a new series on its Google Webmasters YouTube channel that's all about JavaScript and how Google handles it. It's essential viewing for web builders who like to program. Jump straight to the first video at bit.ly/jsgoo471.

Deal of the Fortnight

Save 51% on shared hosting from A2 Hosting (www.a2hosting.co.uk), now available for £3.58 per month. To get the offer, use the code **SOFAST!** at the checkout.

Web-building Helpdesk

Q I'd like to transfer my domain name to a different web host to get a better deal. Can I do this, and will my site suffer any downtime during the switch?

Garth Fergus, via email

A You're free to move your domain name to a different host whenever you like, though it's recommended that you leave it at least 60 days after you first registered the domain. Contact your existing host to find out the process you will have to follow, and make sure you won't be paying any unnecessary charges.

Your host may have to lift a security lock on your domain (this is a safety feature to stop anyone else from stealing it) and provide you with an Auth/EPP code, which the new host will use to claim the domain on your behalf. As long as you're paying for both accounts at the point of transfer, there shouldn't be any down time.

Andy Shaw, Technical & Reviews editor,
Web User



MINI WORKSHOP | Build a chatbot to guide people around your site

Landbot: landbot.io | 20 mins | Any browser

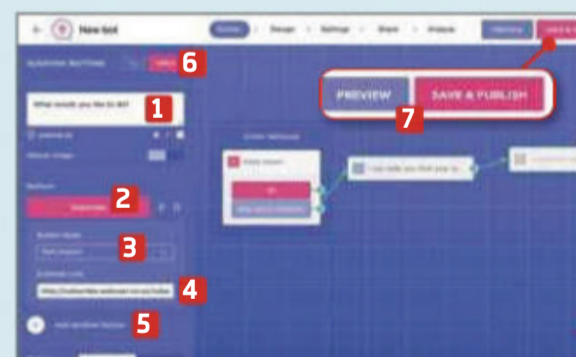
Many websites use a chatbot that pops up a message to engage visitors and invite them to chat about what they're looking for. Here, we show you how to create one of your own



1 At the landbot.io website, go directly to the Signup button to register for an account. You can step through the tutorial if you wish, then return to the Dashboard and click the 'Create a new Landbot' button. The default chat starts with a welcome message **1** and a "Hi!" button response. **2** Click Preview **3** to see what it does.



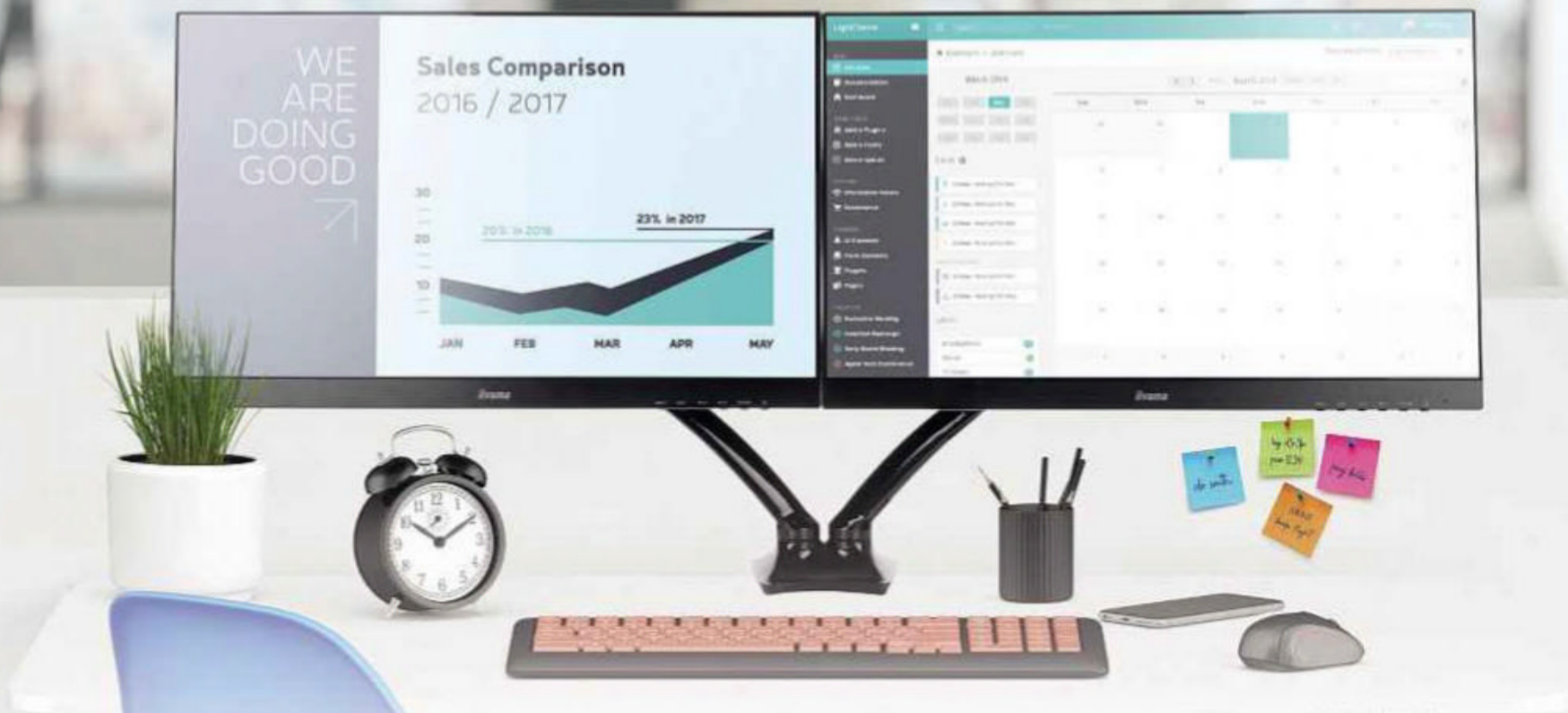
2 Click the box labelled 'This is another bot message' **1** and type in a new message. Click Apply. **2** To add a new item to the chat, click and drag the green dot **3** to the right, and choose whether you want to add another message or ask a question. **4** Next, choose the type of question (Buttons is a good multiple-choice option).



3 Type a question in the box **1** and some text for the button. **2** You can choose a different button style (image or emoji, for example) from the drop-down list below. **3** Fill in the URL to redirect visitors to the intended location. **4** Click 'Add another button' **5** and repeat. Click Apply, **6** then Preview and 'Save & Publish' **7** to finish.

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What To Watch Online

Pick of the fortnight

BBC iPlayer



Strike a *Pose* for the Beeb's new FX show

From 21 March

This acclaimed New York nightlife drama was adored by audiences and critics in the States last year, and it now makes its UK streaming debut on the iPlayer, thanks to an exclusive deal between the BBC and network FX.

Pose, which is set in 1987 and takes its name from Madonna's song about the 'vogueing' craze of the time, is the latest hit from hot-shot producers Ryan Murphy and Brad Falchuk (*American Horror Story*, *Glee*). On one level, it's the soapy tale of a New Jersey couple (Kate Mara from *House of Cards* and Evan 'Quicksilver' Peters from *X-Men*) who get sucked into the big city's decadent nightlife, but at its heart it's a celebration of boundary-busting clubbers who lived life to the full amid the devastation of AIDS. C'mon vogue to the HD trailer at bit.ly/pose471.

Season 1's eight one-hour episodes air weekly on BBC Two, and you can stream them live and on-demand via the iPlayer, with the usual 30-day time limit. We'll let you know if *Pose* later gets an extended iPlayer run as a box set, like its FX stablemate *Mayans MC* (now available for "over a year" at bit.ly/mayans471).



Watch Amazon's adaptation of Brit-flick thriller *Hanna*

From 29 March

To the remote wilds of northern Finland, where widowed mercenary Erik (Joel Kinnaman from *Suicide Squad*) raised his teenager Hanna (Esme Creed-Miles, daughter of *Minority Report*'s Samantha Morton) to be the perfect assassin. The devoted pair are split when a rogue CIA agent (Mireille Enos from *The Killing*) comes calling, and we're off on a fast-paced killing tour of Europe.

It's a cracking set-up, based on British director Joe Wright's 2011 film of the

same name – which you can also stream on Amazon Prime Video (bit.ly/hannafilm471). Check out the latest trailer for Amazon's new eight-part TV version at bit.ly/hanna471.

N See Costner and Harrelson take down Bonnie and Clyde

From 29 March

Kevin Costner and Woody Harrelson return to the small screen in *The Highwaymen*, a Netflix

Original film that revisits the oft-told tale of outlaws Bonnie and Clyde – only this time it's from the law's point of view.

Harrelson and Costner play Maney Gault and Frank Hamer, the real-life former Texas police officers who came out of retirement to outgun the FBI and catch the charismatic criminals in 1934



(here's a Wikipedia recap: bit.ly/bonnieclyde471). Watch the trailer on Netflix, with or without a subscription, at bit.ly/highwaymen471.

N Get *The Dirt* on Mötley Crüe

From 22 March

Discover, if you dare, the down 'n' dirty world of the big-haired tight-trousered bad boys of rock, Mötley Crüe. Netflix Original film *The Dirt* dramatises the 2001 bestseller of the same name, a "collaborative autobiography" by the band – Tommy Lee, Mick Mars, Vince Neil and Nikki Sixx (with hefty help from *New York Times* writer Neil Strauss) – which chronicled their car-crash lifestyle



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

with hair-raising candour.

The new film's cast includes Iwan Rheon as lead guitarist Mick Mars and Colson 'Machine Gun Kelly' Baker (*Bird Box*) as drummer, hellraiser, reality TV celeb and serial Hollywood husband Tommy Lee. Strap yourself in for the trailer at bit.ly/dirt471.

Count on a new season of *Billions*

From 27 March

Damian Lewis (*Homeland*) and Paul Giamatti (*Sideways*) return for a fourth run of dodgy dealings in the world of high finance – like *The Wolf of Wall Street* with fewer bedroom shenanigans.

The first three seasons of *Billions* will be available to stream via Now TV until well into next year, so you have plenty of time to catch up with Showtime's dark cat-and-mouse tale of Wall Street billionaire Lewis versus US attorney Giamatti. Season 4's guest stars include John Malkovich as the ominously named Grigor Andolov. New episodes arrive weekly on Now TV at bit.ly/billions471.



In case you missed it...

Stylish Cold War thriller *Deutschland 86*, the sequel to 2015's *Deutschland 83*, has now begun airing on



More4. Stream 10 weekly episodes live and on-demand via All 4 at bit.ly/

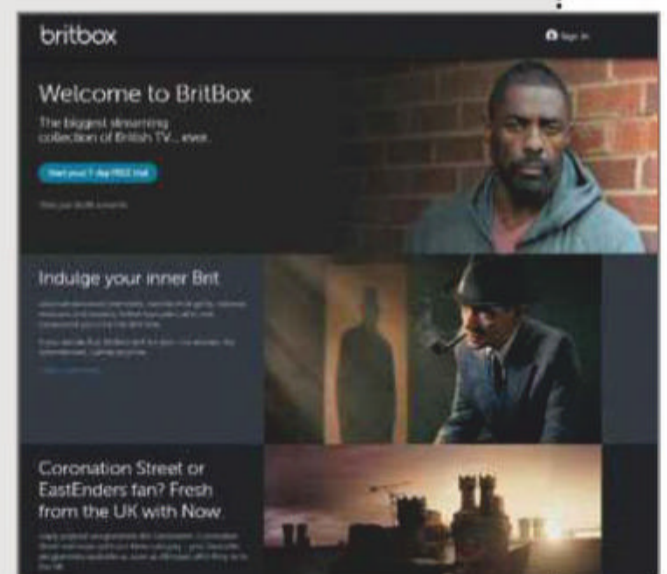
BBC and ITV confirm BritBox UK launch

The BBC and ITV have confirmed the launch of their paid-for streaming service BritBox in the UK later in 2019, which they hope will rival Netflix.

Other broadcasters, including Channel 4, are reportedly in talks to join BritBox, which is already up and running in the US and Canada (www.britbox.com). BritBox currently offers archive content only, such as ITV's *Cracker* and the Beeb's *Luther*, with no iPlayer-style expiry dates.

Following criticism that licence-fee payers are being forced to pay twice for old programmes, ITV boss Carolyn McCall revealed that £25m in 2019 and £40m in 2020 will be set aside for new shows.

The subscription fee, which is unlikely to stray far from the current US fee of \$6.99 per month (no contract), may also replace the need to pay for another streaming service. The BBC and ITV are less likely to license their archives to Netflix and Now TV if they can use BritBox instead.



BritBox already gives viewers in the US and Canada full expiry-free access to BBC and ITV shows

Suspend disbelief for Part II of *The OA*

From 22 March

After nearly three years since Part I, one of Netflix's strangest sci-fi shows is finally back with Part II. But will the eight new episodes shed any light on what's actually going on in *The OA*?

The show, written by its lead actors Brit Marling and Emory Cohen, began with the sudden reappearance after seven years of a young, previously blind woman Prairie Johnson (Marling), who set about recruiting five strangers for a mysterious mission. Part II brings back co-stars including Jason Isaacs and hopefully clarifies proceedings. Watch Part I and now Part II with a

Netflix subscription, and the official trailers for free, at bit.ly/theoa471.



deutsch471. You can still stream all nine episodes of the original *Deutschland 83* at bit.ly/deutsch83-471.

All 4 also has the must-see documentary of the year so far, the astonishing *Three Identical Strangers*, at bit.ly/strangers471.

Over on Netflix, new docu-series *Formula 1: Drive to Survive* offers fly-on-the-wall coverage of

the 2018 World Championship. There's no Mercedes or Ferrari, but the eight other F1 teams gave the filmmakers access. Watch all 10 episodes at bit.ly/drive471.

Additionally, BBC co-production *Watership Down* is finally on Netflix at bit.ly/watership471, two months later than originally planned.



Group Test

We test and compare the latest products

Wi-Fi extenders

Everyone wants their Wi-Fi to be faster and stronger. We've tested 12 products you can add to your network to give your signal more reach and speed

There's nothing more frustrating than losing your Wi-Fi signal as you move around your house, and while modern routers are great at sending radio signals across open spaces, they still struggle with negotiating thick walls, radiators and mirrors.

There are ways to help your router reach the trickiest corners of your house, and the simplest upgrade is a humble Wi-Fi extender. However, with prices ranging from £20 to just shy of £150, it can be difficult to know which model to plump for.

To solve the problem, we tested 12 devices that claim to extend your Wi-Fi, to find out which ones are the best.

HOW WE TESTED

We tested the extenders in a regular two-storey domestic maisonette in London. The router was placed in the living room at the front of the property, then we positioned each extender in the middle of the house and tested how quickly the network could transfer 100MB of files to different rooms: the kitchen and utility room. Although the construction of your home may be different, a strong performance in our test house is a good indicator that a device will operate well in your home, too.

Netgear Nighthawk X6S | £145.99 | Buy from Amazon: bit.ly/ngx6s471

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

If you're looking for a dinky little extender to plug unobtrusively into a wall socket, the Nighthawk X6S will come as something of a shock. Standing nearly 23cm tall, it's as big as a regular router, and its upright design means it can't easily be hidden away under a sofa or on a shelf.

But the imposing case is justified by its contents. Most Wi-Fi extenders use a single radio to talk to your router and to connected devices, which slashes the effective bandwidth, but the X6S boasts a tri-band design, in which a single 2.4GHz radio is partnered with two 5GHz radios, one of which handles communication with the router, while the other broadcasts the extended network and deals with traffic to your devices.

The results speak for themselves. The X6S left every other extender in this Group Test in the dust.



It topped the table for 5GHz performance in every room in our test house and beyond. On the 2.4GHz band, its performance wasn't as stellar but it still proved solid and consistent.

Previously, we've only seen this level of performance from mesh routers, which makes sense because they use the same concept of a separate radio to communicate with each other.

The difference here is that you don't have to replace your existing router, which makes this system cheaper and easier to configure. The X4S (reviewed right) uses the same concept, but the radios in this model are more powerful and better at penetrating walls and other barriers to create the best network.

The device has four Gigabit Ethernet ports for hard-wiring devices, and a USB 2 port for sharing files. It's controlled using the same interface that Netgear uses on its routers, so if you're already familiar with the company's products, you'll feel right at home.

VERDICT

★★★★★

With its unbeatable combination of high speed and top-end features, the X6S is the clear stand-out product in this Group Test. If you need to boost your Wi-Fi signal to a remote part of your home, you could save a lot of money by opting for a cheaper device. But if you also want top speeds and plenty of features, the X6S is well worth the extra outlay for mesh-like speeds and coverage. You'll appreciate its performance long after you've stopped worrying about its bulk.

Devolo Magic 1 WiFi | £129.52 | Buy from Amazon: bit.ly/devm471

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



Devolo is renowned for its 'powerline' products, which transfer data around your home using your existing electrical wiring. While its top speeds rarely compete with a strong Wi-Fi signal, the connection isn't troubled by obstacles such as walls and radiators.

It's also very easy to set up. Simply connect the base station to your router using the supplied Ethernet cable, then plug the wireless access point into a socket located somewhere else in your home. This has its own Wi-Fi network, though you can clone your existing one if you want to switch between networks seamlessly.

The system performs brilliantly, with consistent performance across our test house on both 5GHz and 2.4GHz channels. It couldn't keep up with Netgear's tri-band extenders but bettered most of the other devices we tested.



VERDICT



The Devolo kit is the best-performing powerline system we've reviewed to date. However, it's only slightly cheaper than our Gold Award-winner, so unless your home is particularly obstacle-ridden, we'd still opt for the Nighthawk X6S.

Tenda A15 AC750 | £21.48 | Buy from Amazon: bit.ly/tena471

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



The Tenda AC750 is the smallest, cheapest Wi-Fi extender in this test. Unlike most bulkier power-socket-mounted devices, it only takes up the space of a single plug, so it shouldn't stop you using any other sockets that sit alongside it.

On the downside, its compact size means it's not particularly powerful. It predictably scraped the bottom of our 2.4GHz tests, though this may be acceptable if all you want is to browse and check email from an existing Wi-Fi deadzone. It also sat in the bottom half of our 5GHz tests but performed better than some vastly more expensive devices.

Considering the rock-bottom price of this unit, it offers a surprising range of features. There's an Ethernet socket on the bottom and hassle-free push-button setup. From the configuration tool, accessed via your browser, you can set the device up as an access point and even blacklist specific devices from connecting.



VERDICT



The Tenda isn't the most powerful Wi-Fi extender but it's impressive for the price, with 5GHz performance that stands up well against pricier devices. It's ideal if you just want an affordable signal boost rather than superfast downloads.

BEST OF THE REST

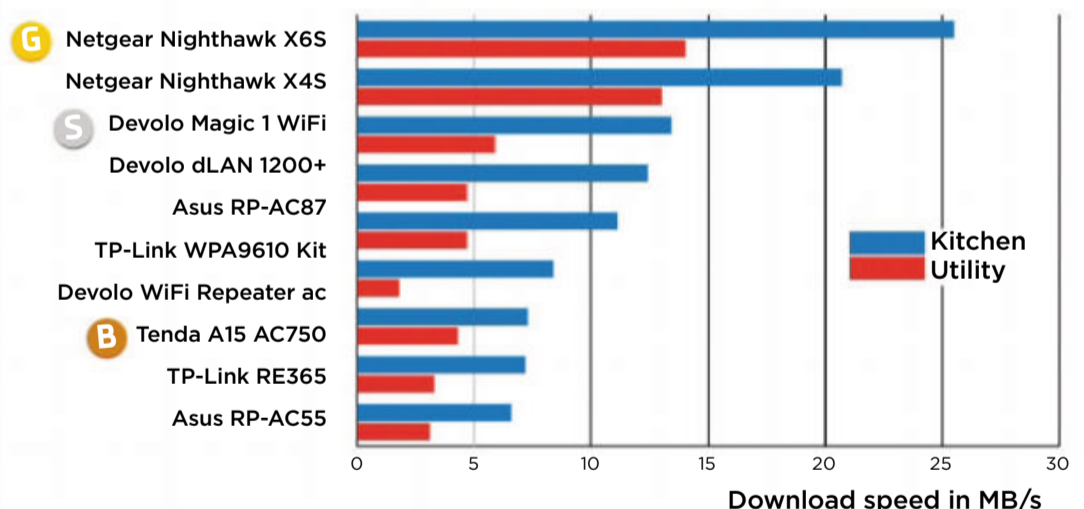
We awarded four stars to two other products, but they didn't quite make our awards. The **TP-Link WPA9610** (£99.99 | bit.ly/tplw471 | ★★★★★) is a slightly cheaper powerline option than Devolo's Magic 1 but it doesn't have the useful passthrough sockets. Meanwhile, the **Netgear Nighthawk X4S** (£114.49 | bit.ly/ngx4s471 | ★★★★★) performed almost as well as its Gold Award-winning sibling in the 5GHz tests but fell behind in the 2.4GHz tests. For the money, we think the Devolo Magic 1 is a better option.

ALSO TESTED:

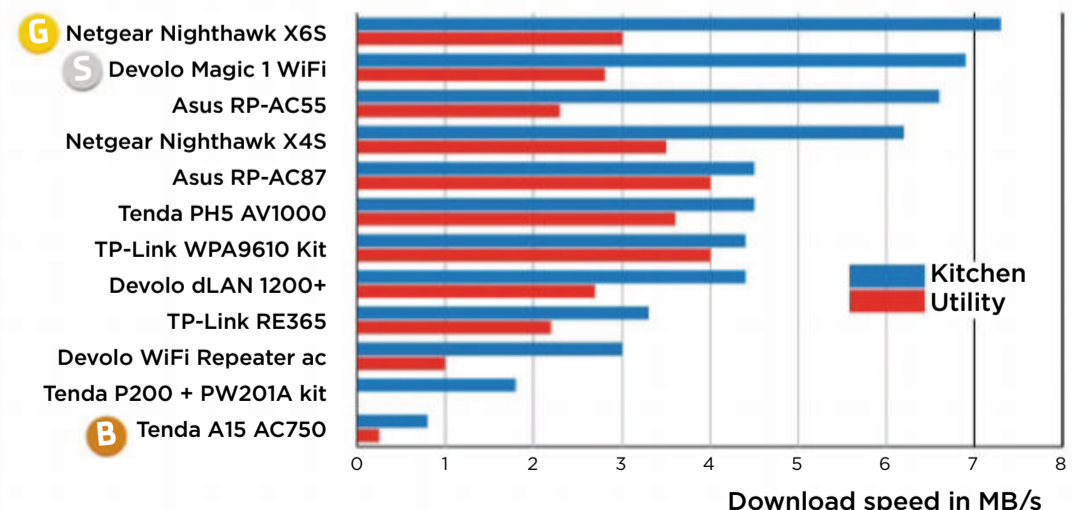
Asus RP-AC55 | £55.28
bit.ly/asu5471 | ★★★★★
Asus RP-AC87 | £143.82
bit.ly/asu8471 | ★★★★★
Devolo dLAN 1200+ | £108.97
bit.ly/devd471 | ★★★★★
Devolo WiFi Repeater ac | £53.25
bit.ly/devw471 | ★★★★★
Tenda PH5 AV1000 | £34.97
bit.ly/tenph471 | ★★★★★
Tenda P200 + PW201A kit | £31.59
bit.ly/tenp471 | ★★★★★
TP-Link RE365 | £47.38
bit.ly/tplwp471 | ★★★★★

TEST-RESULTS CHARTS

5GHz network download speeds



2.4GHz network download speeds



| |  |  |  |  |  |
|-------------------|---|--|---|---|---|
| | Netgear Nighthawk X6S | Devolo Magic 1 WiFi | Tenda A15 AC750 | TP-Link WPA9610 | Netgear Nighthawk X4S |
| WEBSITE | netgear.co.uk | www.devolo.co.uk | www.tendacn.com | www.tp-link.com | netgear.co.uk |
| PRICE | £145.99 | £129.52 | £21.48 | £99.99 | £114.49 |
| BUY FROM AMAZON | bit.ly/ngx6s471 | bit.ly/devm471 | bit.ly/tena471 | bit.ly/tplw471 | bit.ly/ngx4s471 |
| TYPE | Wireless repeater | Powerline access point | Wireless repeater | Powerline access point | Wireless repeater |
| EXTERNAL ANTENNAE | ✗ | ✗ | 2 | ✗ | ✗ |
| MAINS PASSTHROUGH | ✗ | ✓ | ✗ | ✗ | ✗ |
| NETWORK TYPES | 2.4GHz, 5GHz | 2.4GHz, 5GHz | 2.4GHz, 5GHz | 2.4GHz, 5GHz | 2.4GHz, 5GHz |
| ETHERNET | 4 x Gigabit | Base: 1 x Gigabit; access point: 2 x Gigabit | 1 x Fast (100Mbps) | Base: 2 x Gigabit; access point: 1 x Gigabit | ✗ |
| GUEST NETWORK | ✗ | ✓ | ✗ | ✓ | ✗ |
| ACCESS CONTROL | ✓ | ✗ | ✓ | ✓ | ✓ |
| WI-FI NETWORK | ✓ | ✓ | ✗ | ✓ | ✓ |
| WPS BUTTON | ✓ | ✓ | ✓ | ✓ | ✓ |
| OPERATION MODES | Repeater | Access point | Repeater, access point | Access point | Repeater, access point |
| DIMENSIONS | 277 x 170 x 93mm | Base: 133 x 66 x 42mm; access point: 152 x 76 x 50mm | 80 x 58 x 48mm | Base: 123 x 68 x 30mm; access point: 141 x 78 x 48mm | 161 x 84 x 76mm |

OUR VERDICT

The Netgear Nighthawk X6S is the most expensive Wi-Fi extender in our test but it's also the best, and we simply had to give it our Gold Award. It's a luxurious product, as full-featured as it is overstated in its design. Its superior technology is worth paying for, though, particularly since it doesn't cost much more than its top-range rivals.

Our Silver Award goes to the Devolo Magic 1 WiFi. This powerline device cuts out the Wi-Fi middleman, connecting your router and extender over your existing electrical wiring, then breaking out to Wi-Fi again at the other end.

The kit performed well and, if your home isn't very Wi-Fi friendly, this superb powerline device provides a brilliant alternative.

If price is a major factor, check out the extremely affordable Tenda A15 AC750. Priced at under £22, this product won't outperform our other award winners but is good enough to get a basic connection to those hard-to-reach spots in your house that never seem to get a Wi-Fi signal. We gave it our Bronze Award for its excellent value for money. ■



PHILIPS

Monitors

Vivid, true-to-life colours
in an elegant design

276E7QDSW

innovation ✨ you



amazon



ebuyer.com



Web User's Best Buys

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

HARDWARE

WI-FI EXTENDER

Netgear Nighthawk X6S

£145.99 from bit.ly/ngx6s471

Tested: Issue 471

The Nighthawk X6S's unbeatable combination of high speed and top-end features makes it the best Wi-Fi extender available. It's big and boxy, but its performance gives mesh-router systems a run for their money.

KEY SPECS

Works with 2.4GHz and 5GHz networks ■ 4 x Gigabit Ethernet ports ■ Access control ■ Wi-Fi schedule ■ WPS button ■ 277 x 170 x 93mm ■ Two-year warranty



SECURITY CAMERA

Blink XT

£149.99 from bit.ly/blink470

Tested: Issue 470

The Blink XT can be positioned anywhere in your home, indoors or out, and includes a lifetime subscription to its cloud-storage service. You get a couple of years' use out of the camera before you need to replace the batteries.

KEY SPECS

HD Video ■ Motion and temperature sensors ■ Built-in microphone ■ Camera mount included ■ Weatherproof ■ Infrared night vision ■ Wi-Fi connectivity ■ Instant alerts to your phone ■ Two years of battery life



LAPTOP SSD

Samsung 970 Evo

£75.51 from bit.ly/sevo469

Tested: Issue 469

The Samsung 970 Evo is a smart, affordable choice for anyone looking to get better performance from their laptop. It's very fast, with excellent file-transfer speeds, and there are higher capacity versions with up to 2TB of storage.

KEY SPECS

256GB capacity ■ 3,600MB/s maximum speed ■ M.2 PCIe Gen 3 x 4 interface ■ Samsung Phoenix 5-core processor ■ Samsung V-NAND 3-bit MLC flash memory ■ 22 x 80 x 2.38mm ■ five-year warranty



MINI PC

Lenovo IdeaCentre 620s

£479 from bit.ly/lenovo467

Tested: Issue 467

This compact PC crams in more power for entertainment, work and gaming than you might think, and includes decent graphics performance at an affordable price.

KEY SPECS

Quad-core 2.4GHz Intel Core i5-7400T processor ■ 1TB hard drive ■ 8GB memory ■ 4 x USB 2 ports ■ 802.11ac Wi-Fi ■ 4GB Nvidia GeForce graphics adapter ■ Windows 10 Home ■ 224 x 212 x 102mm ■ One-year return-to-base warranty



BUDGET SMARTPHONE

Motorola Moto G6

£199.99 from bit.ly/motog466

Tested: Issue 466

A budget phone that looks good, feels natural to use and takes great photos, the Motorola Moto G6 offers powerful features found in handsets that cost twice as much.

KEY SPECS

Octa-core 1.8GHz Qualcomm Snapdragon 450 processor ■ 3GB RAM ■ 64GB storage ■ 5.7in, 2,160 x 1,080-pixel screen ■ 12-megapixel rear camera, 8-megapixel front camera ■ 154 x 72 x 8.3mm ■ 167g ■ One-year return-to-base warranty



SMART SPEAKER

Google Home Hub

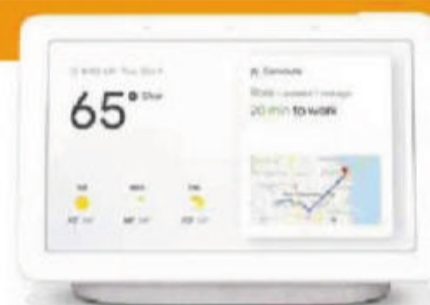
£139 from bit.ly/homehub463

Tested: Issue 463

Its low price, seamless integration with Google services and ability to double as a digital photo frame make the Google Home Hub the best smart screen we've seen.

KEY SPECS

7in LCD touch screen ■ 1,024 x 600-pixels resolution ■ Dual-band 802.11b/g/n/ac ■ Bluetooth 5.0 ■ 178 x 118 x 67mm ■ 480g ■ Choice of Aqua, Chalk, Charcoal or Sand ■ One-year return-to-base warranty



SOFTWARE & SERVICES

PHOTO-EDITING SOFTWARE

DxO PhotoLab

£99 from
bit.ly/dxo455

Tested: Issue 455

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

KEY FEATURES

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



VIDEO-EDITING SOFTWARE

Adobe Premiere Elements 2018

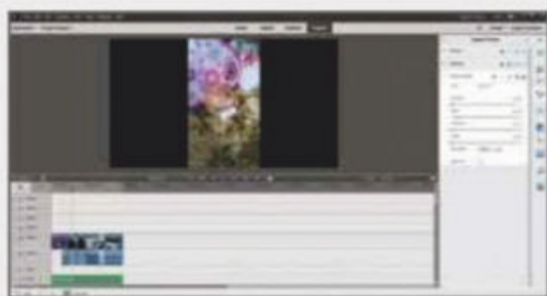
£86.56 from
www.adobe.com/uk

Tested: Issue 453

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

KEY FEATURES

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



Web User Gold Award winners

PRIVATE-MESSAGING APP

Signal

Free from signal.org

Tested: Issue 470

Signal is a near-perfect private-messaging tool. It does everything WhatsApp can do, along with some useful and unique extras.

NEW!



DRIVE-SPACE ANALYSER

WinDirStat

Free from windirstat.net

Tested: Issue 469

WinDirStat delivers comprehensive analysis of your hard drive and makes it easy to take action against space-hogging files. It also offers a portable version.



DUPLICATE CLEANER

Duplicate Cleaner Free

Free from bit.ly/dc468

Tested: Issue 468

With its streamlined design and rapid performance, this tool is the ultimate duplicate file remover. It makes clearing out your PC a breeze.



PRIVATE BROWSER

Brave

Free from brave.com

Tested: Issue 467

For everyday use, Brave is like Chrome on steroids. For maximum privacy, it offers a quick and easy switch to Tor.

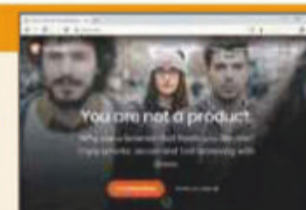


PHOTO CLEANER

AVG Cleaner

Free from bit.ly/avgcleaner466

Tested: Issue 466

AVG Cleaner is a delight to use – packed with features that go beyond merely tidying up.



WEB USER

BACK ISSUES DISCS

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2014 TO 2018



**2018 DISC
AVAILABLE
NOW!**

Best Free Software

FILE-SHARING TOOL

OnionShare 2

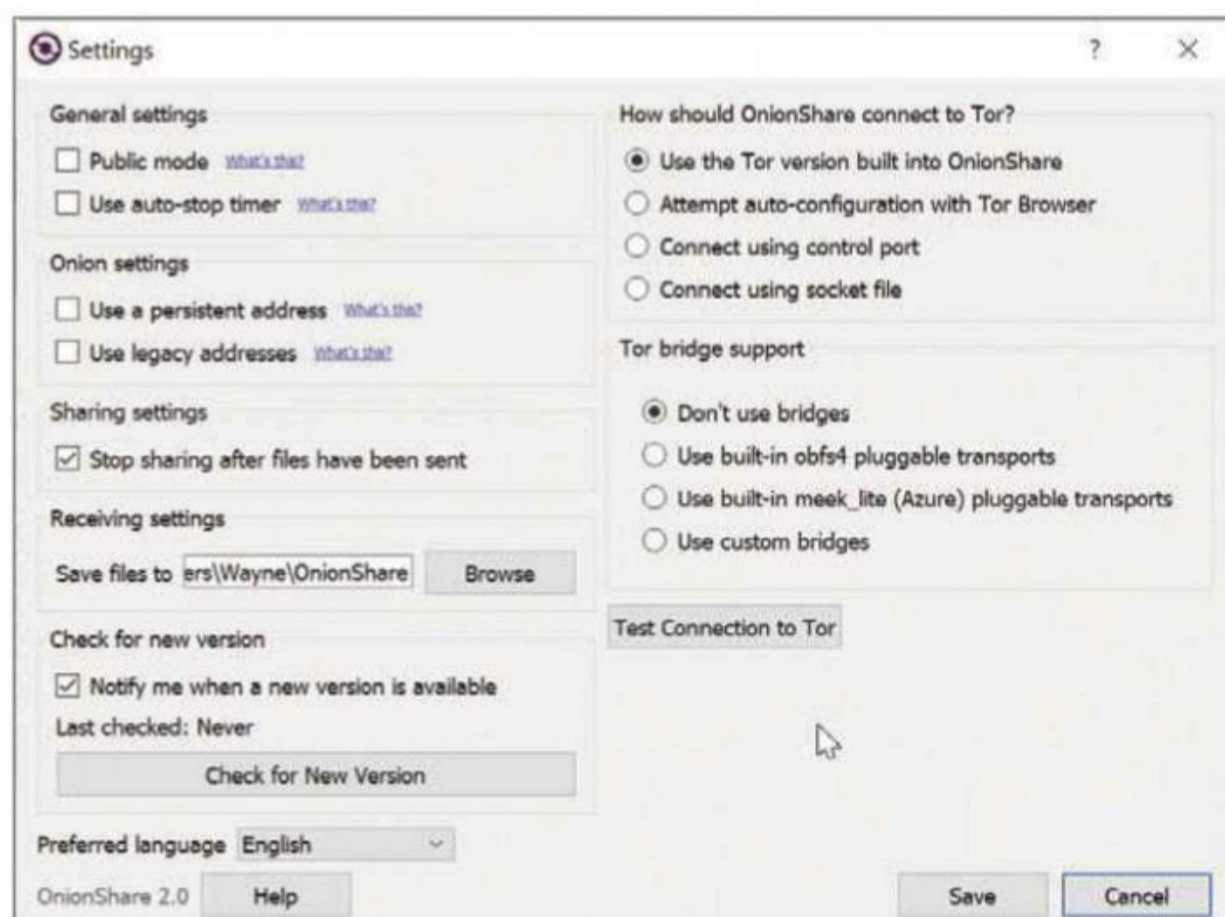
onionshare.org

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

File size: 36.7MB

If you're going to share personal files over the internet – bank documents, private photos and other confidential content – it's worth remembering that email and other standard file-sharing tools are not considered safe enough. To prevent your items from falling into the wrong hands, you should use a secure sharing solution such as OnionShare.

This tool was originally designed to allow journalists to send and receive top-secret files, but anyone can use it to securely and anonymously share files of any size over the internet. It works by creating a web server on your computer and turning this into a super-secure Tor web address that others can access. To use OnionShare, you first need to install



the Tor Browser from bit.ly/tor471 and have this running in the background.

This updated version of OnionShare has been in development for two years and introduces a number of new features, including a public mode (for sharing files with anyone who has the Tor address), support for 12 new languages (including Spanish, Portuguese, Russian and Japanese) and anonymous Dropbox support. This last feature lets people anonymously

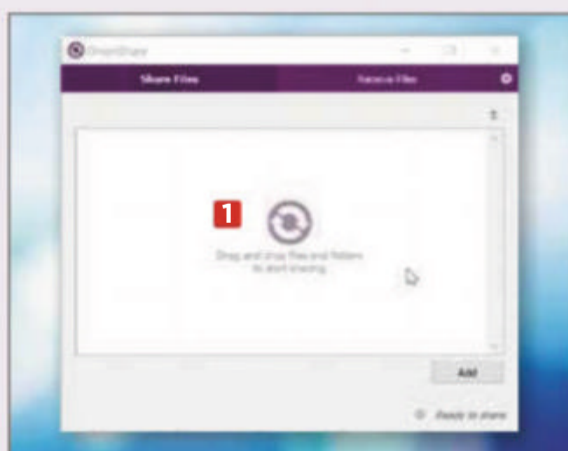
send files directly to your Dropbox and requires you to use a persistent web address that doesn't change between sessions. The option can be enabled in Preferences.

The program now uses a more secure address format than that used in the first generation of OnionShare, and the interface has been updated to make it visually more appealing.

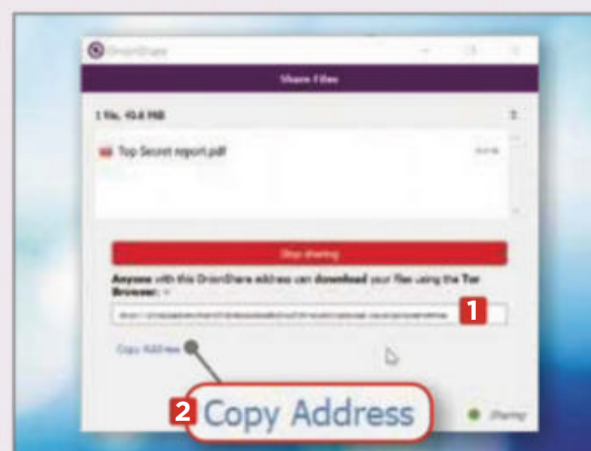
See page 46 for our reviews of other file-sharing tools.



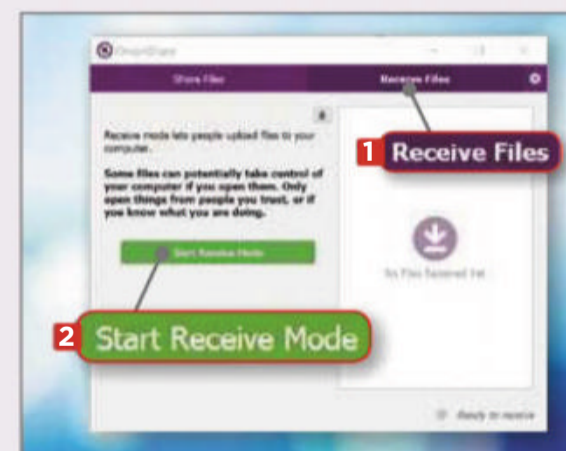
MINI WORKSHOP | Securely share personal files with OnionShare 2



1 With Tor Browser running in the background, open OnionShare and the program will connect to the Tor network (this takes a little while, so be patient). When it's ready, simply drag the file or folder you want to share to the program window. **1** You can queue up multiple items.

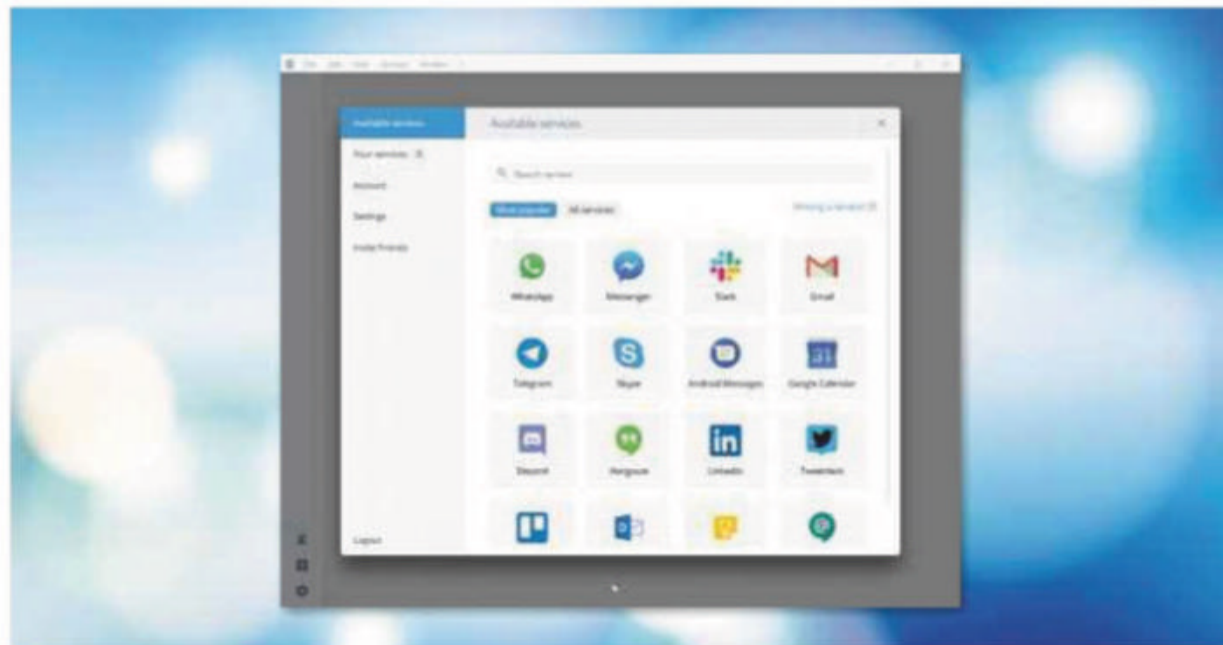


2 Click the 'Start sharing' button. The software will generate a secure, cryptic URL **1** that you can pass on to the person you want to share with. Click the Copy Address link. **2** The recipient will need to paste this link into the Tor browser to get the item – it won't work in any other browser.



3 When the file has been shared, click the 'Stop sharing' button. You can also receive files in OnionShare. Click the Receive Files tab, **1** then the Start Receive Mode button. **2** The software will generate an address that people can use to upload files to your computer using the Tor Browser.

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



New Windows 10 App

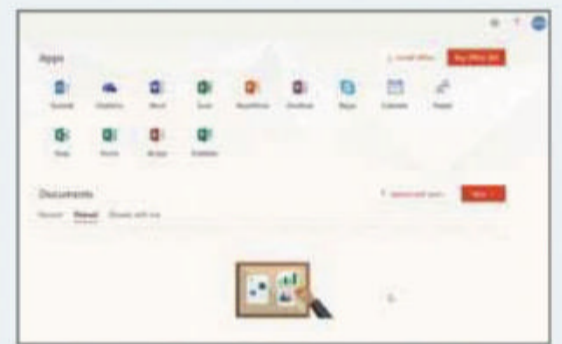
Office

bit.ly/office471

Min requirements: Windows 10, Microsoft Office

File size: 169MB

Microsoft has rolled out a new, free Windows 10 app for anyone using its popular Office suite. The Office app replaces the software giant's previous My Office, and works with all recent versions of Office and Office online. You get easy access to your files and can quickly launch Word, Excel, PowerPoint, Outlook, Publisher and OneDrive. It works without an internet connection, too.



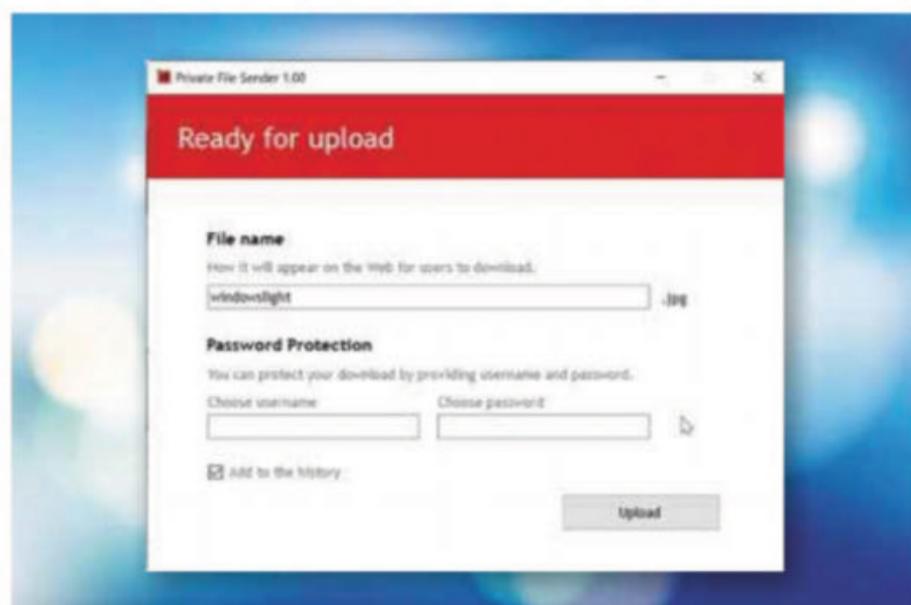
CHAT TOOL

Franz 5

www.meetfranz.com

Min requirements: Windows 7/8.1/10, macOS or Linux **File size:** 141MB

There are so many different chat services out there – WhatsApp, Facebook Messenger, Slack and more – that it can be confusing trying to manage communication with all your friends and colleagues. Franz rolls multiple chat and messaging services into one desktop communication tool. This new version adds automatic spell-checking language detection and an option to quit Franz from the Taskbar. Look out for a workshop about Franz 5 in our next issue.



SHARING TOOL

Private File Sender

www.ertons.com

Min requirements: Windows 7/8.1/10

File size: 1.5MB

OnionShare (see opposite) is an excellent tool for privately and securely sending files over the internet, but if you want a simpler option, try Private File Sender. This program uploads your file to a web server (you can password protect it for an additional layer of security) and provides you with a unique link to it. The History page lets you see everything you've shared, and you can copy a link again or delete your item(s) from the server.



SYSTEM TOOL

Windows Drive Hider 4

bit.ly/wdh471

Min requirements: Windows 7/8.1/10

File size: 1.1MB

If you share your computer with other users, it can be difficult to ensure that no one but you can access your personal files. Windows Drive Hider does exactly what you'd expect from the name – it makes drives invisible so that no one other than you knows they exist. It's fully portable and lets you quickly hide and unhide drives, either from just the current user or from all users. This new version supports the latest Windows 10 releases.

UPDATER

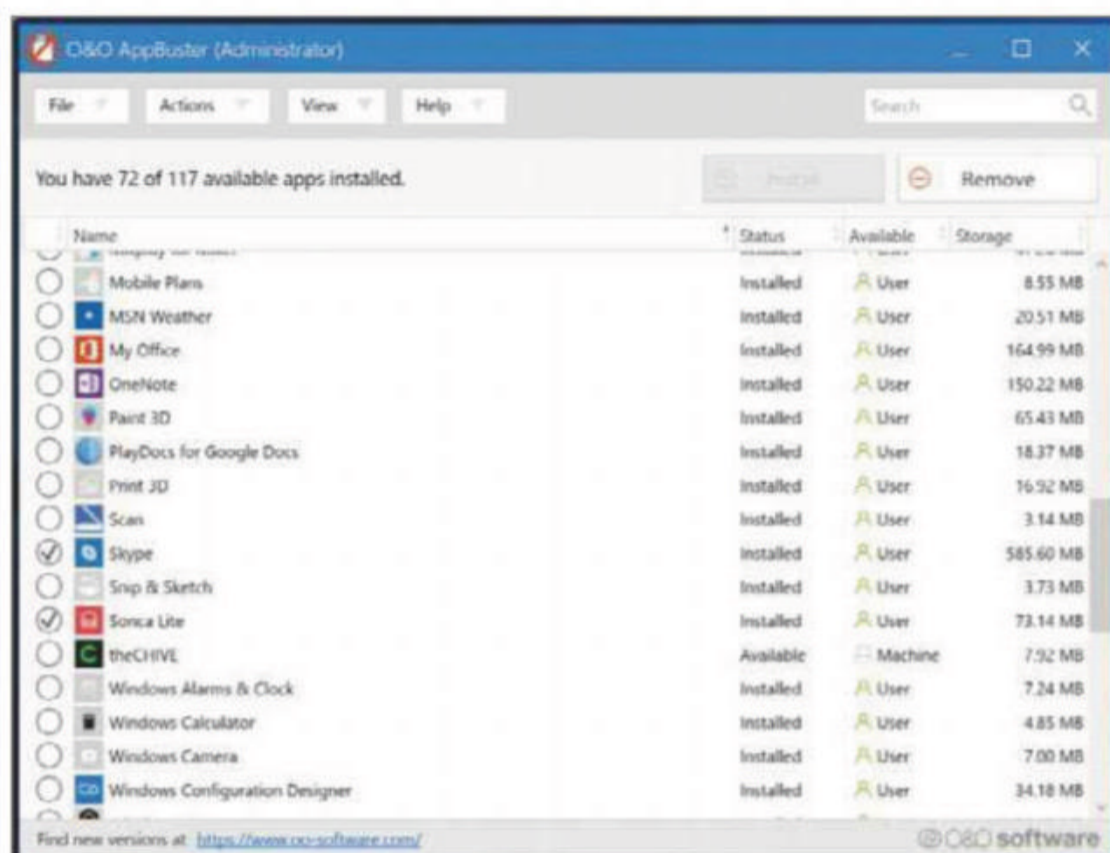
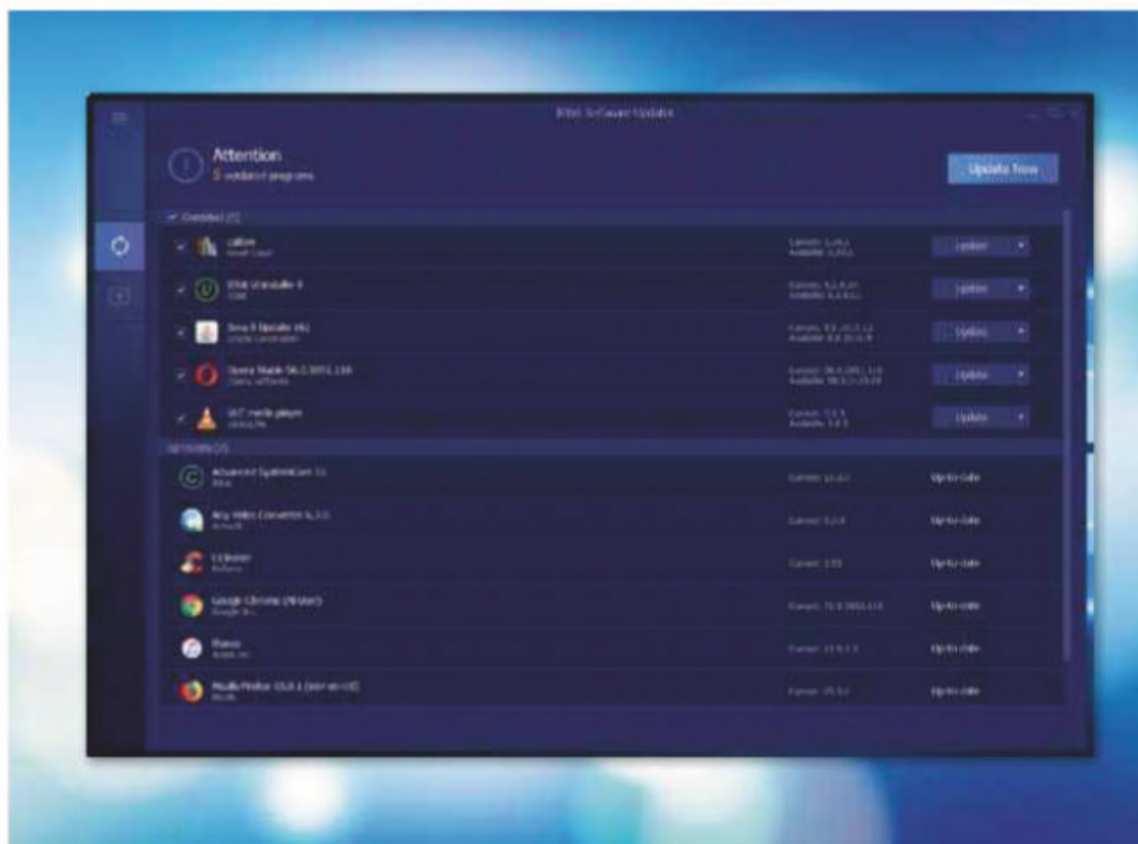
IObit Software Updater

bit.ly/software471

Min requirements: Windows 7/8.1/10

File size: 10.5MB

It's important to keep your installed software up to date, to ensure that bugs and security vulnerabilities get fixed. And while some programs, such as your browser, update automatically, others don't. IObit Software Updater saves you time and trouble by scanning your installed software and listing any programs that have a new version available. You can update them all in one go by clicking the Update Now button, or update individual programs. The software can also be set to auto-update items or ignore those you have reason to keep on the current version. You can also use IObit Software Updater to install a number of popular programs.



APP REMOVER

O&O Appbuster

bit.ly/appbuster471

Min requirements: Windows 10

File size: 1MB

Windows 10 comes with a number of apps – some from Microsoft, which you may want, and others from third-parties, which you probably don't. Removing them can be tricky, or at least time-consuming, but O&O Appbuster lets you quickly remove unwanted preinstalled apps, including hidden ones, and gives you the option to reinstall any apps you removed by accident. It's tiny, fully portable and lets you undo any changes at any time, simply by creating a restore point in advance.

Appbuster is very easy to use: just run it, wait while it detects installed apps and then select the ones to remove and uninstall. See page 40 for more about uninstalling built-in junk.

SYSTEM TOOL

Windows Firewall Control 6

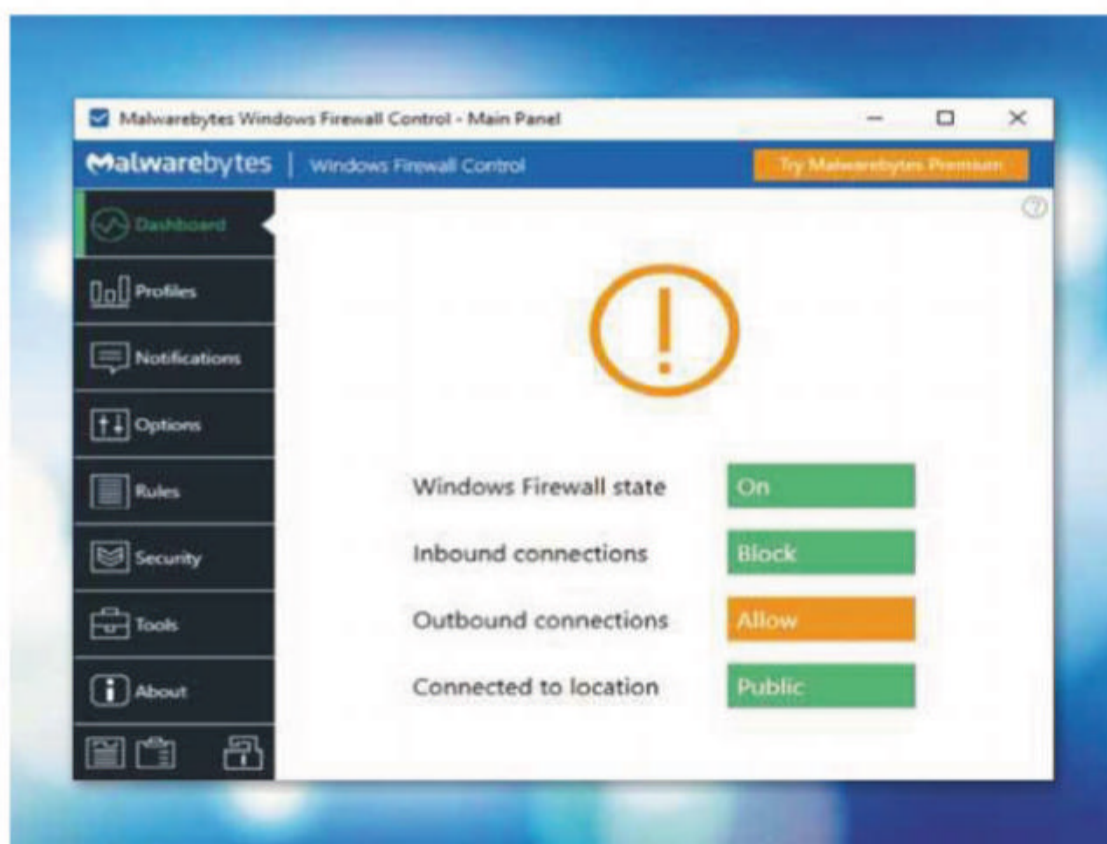
binisoft.org/wfc

Min requirements: Windows 7/8.1/10

File size: 2.2MB

The Windows Firewall is surprisingly powerful, but for additional functionality you may want to install Windows Firewall Control. This third-party tool – now owned by Malwarebytes – offers a choice of filtering modes: High (blocks all outbound and inbound connections), Medium (blocks outbound connections based on rules you set), Low (allows outbound connections based on your rules) and No (firewall is off).

This latest version has a new interface and a Dashboard tab, which shows the state of the Windows Firewall, along with inbound and outbound connections. The program offers multi-language support now, too, and an updated manual.





GAME

Penumbra

bit.ly/penu471

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

File size: 137MB

Penumbra is a short but very atmospheric first-person exploration game. It starts off on a snowy mountain, from where you quickly descend into an underground maze. In order to progress, you'll need to pay attention to the clues scattered around and use your timing skills to avoid the giant robotic spider patrolling the ceiling!

Don't install...

Piranha

ifxsoftware.com

Min requirements:

Windows 7/8.1/10, macOS or Linux

File size: 43.6MB

Piranha is an advanced video editor with an impressive array of useful features. However, it hasn't been updated for six years, so it pales in comparison to the latest tools. More importantly, Piranha's full version is priced at a staggering \$995, which is sure to take a bite out of your finances.



...Install this instead

DaVinci Resolve

bit.ly/davinci471

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

File size: 920MB

DaVinci Resolve is a free but very powerful cut-down version of a professional video-editing suite. It has sophisticated editing and colour-correction tools, visual effects and transitions, audio post production and more. Version 15 introduces the Fusion visual-effects app used in many Hollywood productions. DaVinci Resolve is easily on a par with commercial video-editing tools such as Adobe's Premiere Pro CC, but if you need more effects and 3D tools, or you want to collaborate with other video editors, you can upgrade to the paid-for version for \$300 (£228).



OTHER OPERATING SYSTEMS

What's new for Linux and macOS



LINUX DISTRO

LibreELEC (Leia) 9.0.1 MR

libreelec.tv

Min requirements: Linux

File size: 7.8MB (installer only)

LibreELEC is a lightweight Linux distro that is designed to run Kodi, the hugely popular open-source home-theatre software. It is ideal for installing and using on a Raspberry Pi, although it runs on other hardware, too. This release is based on Kodi v18.1, but it contains a number of changes to the user experience and a complete overhaul to the underlying operating-system core to improve stability and extend hardware support.



JOURNAL SOFTWARE

Day One 3

dayoneapp.com

Min requirements: macOS

File size: 34MB

Day One is a free diary-cum-organisational tool designed to let you record your life, set reminders and perform other useful everyday tasks. With this update, the software has been given a makeover, so it looks more at home on macOS, and had improvements to speed and performance. There's now a new single-entry window, along with editor selection and text-formatting menus.

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Best New Browser Tools



CHROME

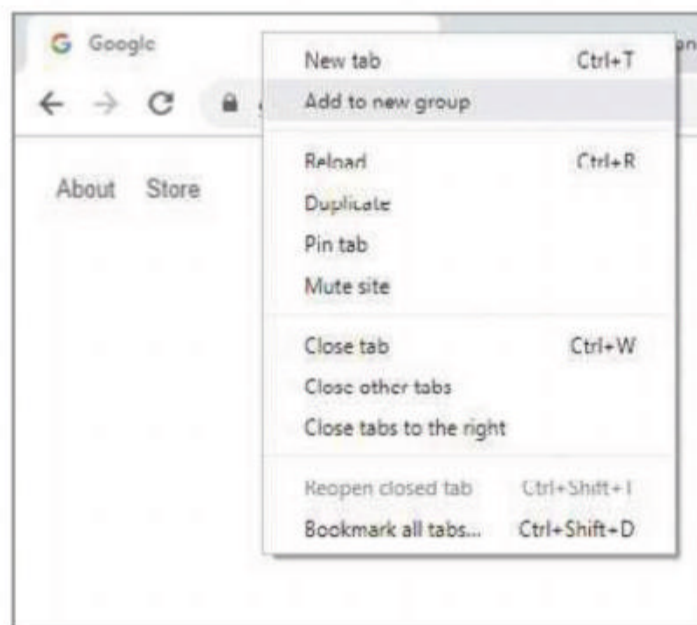
Chrome adds new features including dark mode

Google's latest Chrome update, version 73, introduces several new tools, including enhanced sync settings, web-app notification badges and keyboard playback controls for all media players.

Of particular interest is the improved picture-in-picture (PiP) mode. Already a feature since Chrome 70, the latest update sees videos automatically play in PiP mode the moment you navigate from the video to a new tab. You can also send the video back where it came from by using the new 'Back to tab' feature.

If you often have web pages open across multiple tabs, the new Tab Grouping option helps you stay more organised by bundling tabs together with a right-click on any tab and selecting 'Add to new group'. You can switch on both these experimental new features by searching for them in `chrome://flags` and choosing Enabled.

Dark mode, too, is now available - but only for macOS. Apple fans can turn it on using the command: `/Applications/Google\ Chrome.app/Contents/MacOS/Google\ Chrome --force-dark-mode`.

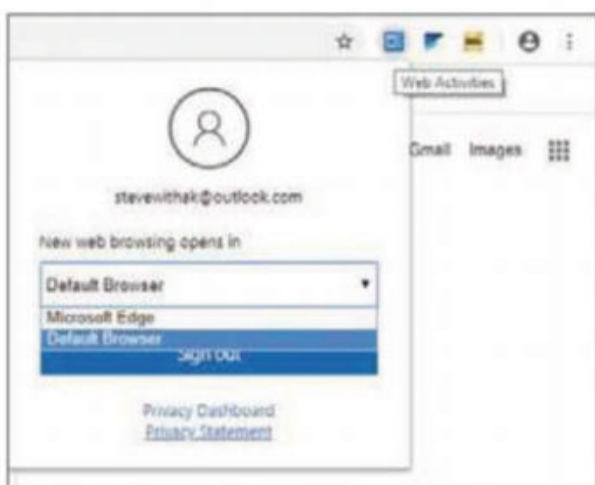


Sync Chrome history to Windows Timeline

Chrome users keen to add browsing activities to Windows Timeline have had to make do with a series of workarounds and unofficial browser extensions - until now. Microsoft has finally released Web Activities (bit.ly/msweb471), an add-on that syncs your Chrome browsing history with Windows 10.

The first time you launch the extension, you'll need to sign in with your Outlook account. You can also click the drop-down menu to choose which browser is used when opening a new window: the Default Browser is set to Chrome. You can then access any previously visited site by clicking the Windows Timeline button on your desktop.

We're still waiting for a version for Firefox, which isn't currently supported by this extension.

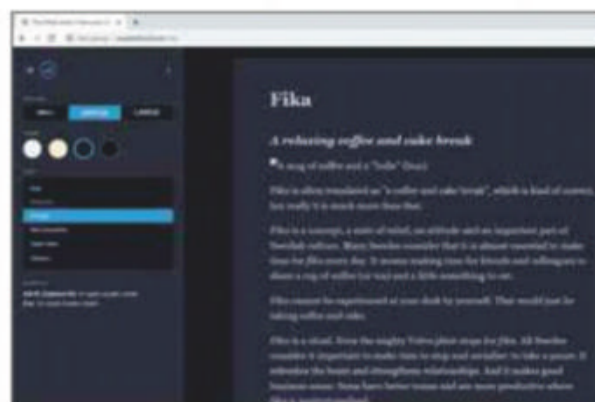


Add reader mode to your browser

It's baffling that, unlike its rivals, Chrome has yet to include a dedicated reader mode that lets you focus on web content with no distractions by displaying pages like an ebook. Fika (bit.ly/fika471) is a new extension that addresses this glaring omission.

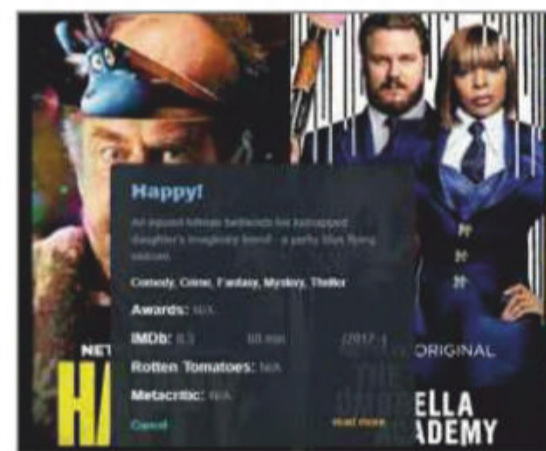
Scandiphiles may note that 'fika' is a Swedish concept roughly translating to a relaxing break. And browsing with Fika certainly offers that, cutting out all the onscreen clutter that typically distracts us from catching up on the news or reading an engrossing article. With one click, the browser tool strips out annoying adverts and pop-ups, while simplifying the layout.

On the sidebar, the tool adds a table of contents, so you can jump to any point of interest. The settings let you tweak the font size, and includes three additional themes that make reading text onscreen easier on the eyes.



Check out movie ratings

The IMDb Ratings extension (bit.ly/imdb471) is a boon for movie buffs everywhere, helping you find must-watch films. No more cross-referencing movies on the excellent Internet Movie Database before you watch - if you're browsing films online, simply enable the extension with a tap, then hover your mouse over your chosen title.



The tool displays a small pop-up with a brief description of the film, along with the genre, IMDb score and ratings from Rotten Tomatoes and Metacritic. Click 'read more' to be whisked straight to the film's IMDb page if you want further information (or you're still not sold).

The extension works with most websites, including Netflix, cinema booking sites and other streaming sites, as well as those featured in Google search results.

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



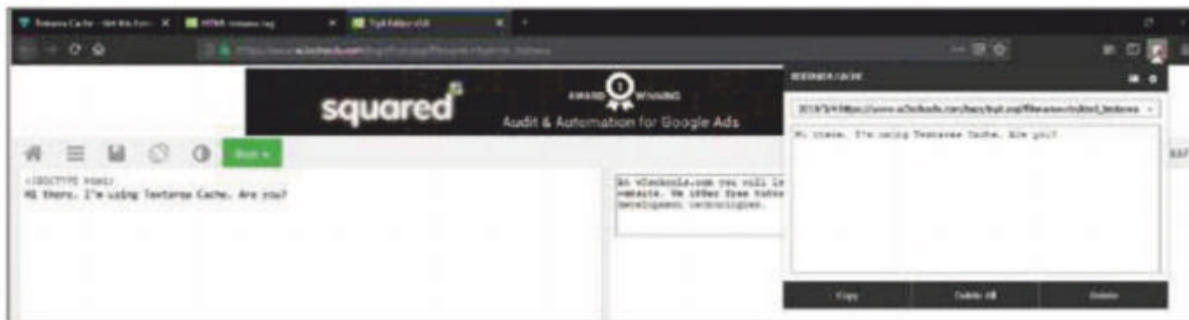
FIREFOX

Never lose online text again

If you've ever spent ages typing out forum replies, filling in an online form or creating a WordPress blog, only to lose everything when your browser crashes, Textarea Cache (bit.ly/text471) ensures you're never again left bereft.

Start typing in an online text field and this new extension automatically saves what you write. You're then able to retrieve your writing should Firefox or your computer crash – or you just want to see what you wrote sometime later – by clicking the browser tool and selecting the List icon. From here, you can copy the text, clear the cache and even filter cached text by URL.

Head into the settings menu and you can not only dictate how often the tool saves (by default, it's once every 2,000 milliseconds), but also which sites you'd rather not save to the cache.

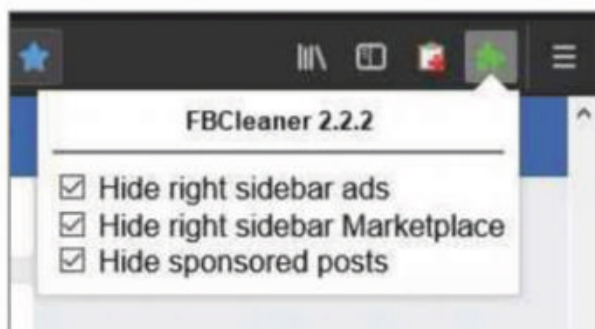


Scrub Facebook clear of adverts

If Facebook feels more like a billboard than a social-media site these days, the antidote is FBCleaner (bit.ly/fbclean471). This clever little tool works as soon as it's installed, instantly wiping all those annoying, unsightly ads from the site's sidebar.

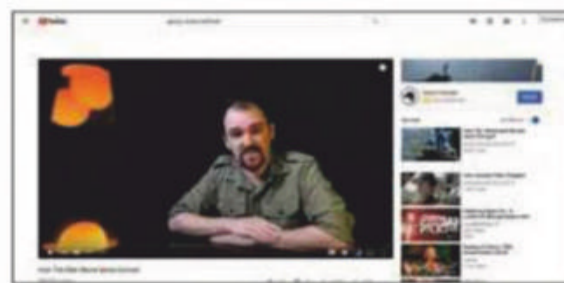
FBCleaner also removes sponsored posts and suggested groups from your news feed, so you can actually see what your friends have been up to. Unfortunately, it won't stop the social network showing you posts similar to those you've interacted with, but you can blame Facebook for that.

Of course, if you find yourself missing the 'full, rich Facebook experience', you can click the extension at any point: this lets you choose which type of ads the extension hides. Go ahead and install it, then visit Facebook – it's like a breath of fresh air.



Control YouTube videos with a click

YouTube Pauser (bit.ly/pause471) must be the quickest way to control videos in Firefox. This extension's primary function lets you pause a video just by tapping the extension icon – and, in a move that'll please those who like to listen to YouTube-based audiobooks and podcasts, it even works when you're in a different tab to the video that's playing. A quick double-tap on the icon skips straight to the next video.



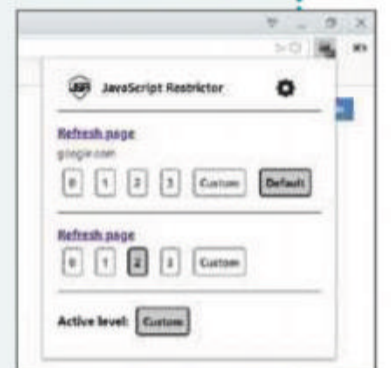
The extension also displays the video's timings. Set your video going and the total duration is displayed beneath the line, while the current minutes are shown above. If you're using dark mode, head into the browser's Add-ons Manager to tweak the tool's colour. The default setting is black, which makes everything rather difficult to see, but we found a nice bright yellow that worked a treat.

OTHER BROWSERS

Block JavaScript in Opera

Malicious JavaScript code is a popular way for sites to track you and for hackers to spread malware. JavaScript Restrictor (bit.ly/java471) is a new extension for Opera that keeps you safer online by tricking any JavaScript that runs in your browser, effectively blocking what data is collected on you.

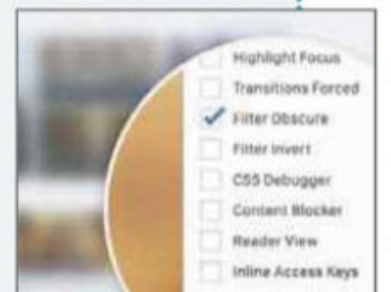
Getting started is simple: click the icon to set a general security level – 0 turns off the extension, while 3 offers top-level security – or create a custom setting. Alternatively, you can set different values for individual websites. The extension is also available for Chrome (bit.ly/javacr471) and Firefox (bit.ly/javaff471).



Obscure what's on your screen

Vivaldi's handy Filter Obscure option hides information such as your emails and online banking, or even your general browsing if you prefer to keep everything you do private. Switch it on using the browser's Page Actions.

Click the two arrows in the bottom-right corner, then tick the box labelled



Filter Obscure. Once it's set, move your mouse away from the browser and the tab will instantly blur, so no-one can see what's on your screen. Filter Obscure is applied on a per-tab basis, so you'll need to remember to switch it on for each new 'private' tab.



Best Free Apps



App of the Fortnight

TOOLS

Clip Cloud

bit.ly/clipcloud471



The humble clipboard is actually a pretty remarkable tool, with vast untapped potential. Yes, you can copy and paste text between apps on your device, but what if you could copy and paste between any apps on any devices, or even between different operating systems?

Well, that's basically what Clip Cloud does. It uses Google's Cloud Messaging service to transmit text you've copied on one device over the internet to the clipboard of another, where you can then paste it into the app of your choice.

All you need to do is sign in with your Google account, then install a small, free Chrome browser extension on the devices you want to sync your clipboard with. The extension works on PCs, Macs and even Linux. Once everything is set up, using Clip Cloud is as easy as copying some text on one device, then pasting it in another.

You don't need to worry about privacy – all transmissions over the service are secured by AES encryption. Clip Cloud itself doesn't store anything from your clipboard on its own servers – your data is sent directly through Google's Cloud Message systems.

One catch is that there's a limit on how much text you can copy – a maximum of 2,000 characters. A somewhat bigger catch is that ClipCloud is only free for 30 days. After that, you need to pay either a one-off charge of £5.49 or a quarterly subscription fee of 89p.

Depending on how you use your devices, Clip Cloud is one of

those tools that you'll either find invaluable or struggle to see the point of, but it's definitely worth a try.



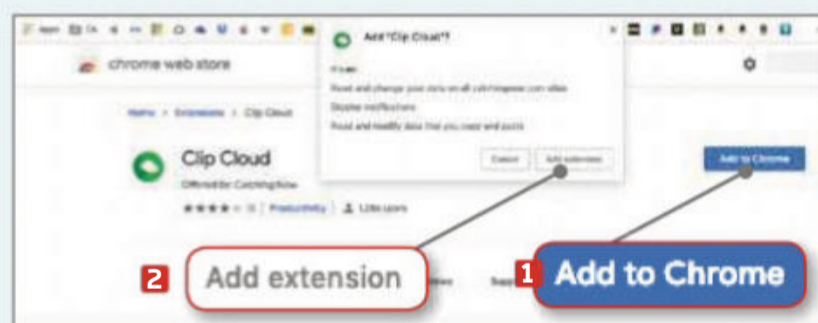
NEW



MINI WORKSHOP

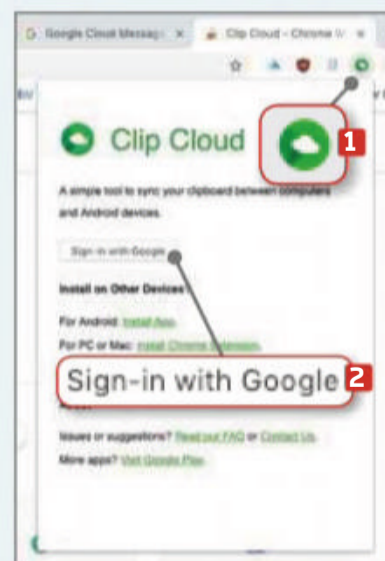
Copy content between devices using Clip Cloud

1 Install Clip Cloud from Google Play, then launch the app. Before you can use the tool, you need to connect it to your Google account. Tap the 'Sign in with Google' button, **1** then enter your account details if prompted – in most cases you'll be logged in automatically. Press the grey cog icon in the top-right corner **2** to switch between the app's light and dark themes.



2 To copy and paste between two Android devices – a smartphone and a tablet, for example – simply install the Clip Cloud app on your other Android device and repeat the sign-in process, as outlined in Step 1. To copy and paste between Android devices and PCs or Macs, open a Chrome browser window and head to bit.ly/clipchrome471, click the 'Add to Chrome' button, **1** then click 'Add extension'. **2**

3 Click the small, green Clip Cloud icon that now appears in the top-right corner of your Chrome browser window, **1** then click 'Sign in with Google' **2** and enter your account details if prompted (again, you may be logged in automatically). Once this is all done, you can try using the tool: copy some text on your Android device, then select the Paste command on another device – your copied text should magically appear!



Our rating



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

TV

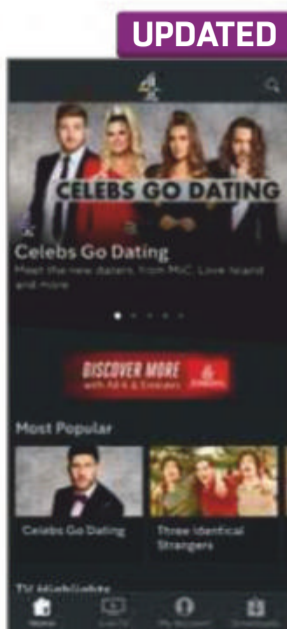
All 4

bit.ly/all4droid471

bit.ly/all4ios471

 4.4  10.3

Channel 4 has updated its streaming app for iOS with a new look and a selection of fresh features. The app provides on-demand access to content from More4, E4, Vice and Adult Swim, as well as the main channel. Under the hood of the new design, performance improvements help the app feel more responsive and reliable. In addition, iOS users can now download programmes over mobile data as well as Wi-Fi, and access audio-described programmes. Improvements to the Android version are on their way, too.



Our rating



AUGMENTED REALITY

NEW



Convergence AR

bit.ly/converge471

 (varies)

If you're interested in the evolution of modern technology, then keep an eye out for tech veteran Charlie Fink's (charriefink.com) latest book, *Convergence*, which tells the story of the rise of augmented reality. Given the book's subject, it makes sense that it has an AR app tie-in – just point your device at the book's pages and watch AR animations come to life! Currently, the Convergence AR app is in beta, but you can try it now by downloading the PDF samples of the book from convergencear.com.



Our rating



SOCIAL

Curated

bit.ly/curated471

 (varies)

Ever wanted to keep a diary of all the books you've read, TV shows you've enjoyed and movies you've seen?

That's part of the idea behind Curated, a new social platform that lets you save and share books, podcasts, films and other media you've enjoyed, as well as follow what other like-minded people are reading and watching. It's a neat idea but, as with other social ventures, Curated will live or die by how popular it is. That said, this Android-only beta is definitely worth trying.



Our rating



TOOLS

Calculator Touch

bit.ly/calctouch471

 5

A simple idea, brilliantly executed, Calculator Touch is a beautifully designed calculator app with built-in support for handwriting recognition. Standard numerical buttons are included but instead of tapping these, you can just use your finger to write out the sums on the number pad. It works really well and feels very natural. In addition, Calculator Touch comes with a selection of very useful extras, including a history tool and a selection of conversion tools, along with a live currency converter. Though the basic app is free, you can continue to enjoy its premium features by watching occasional video adverts.



Our rating



EBOOKS

Serial Box

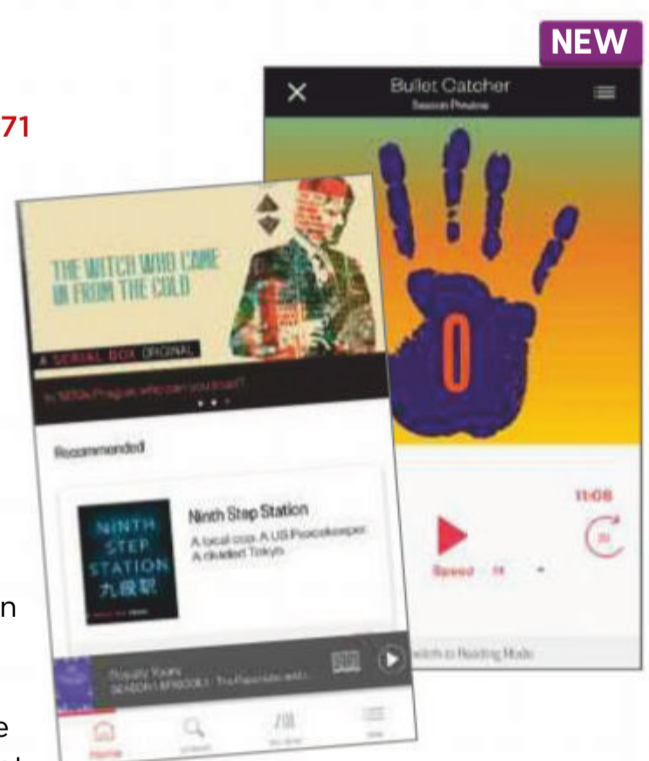
bit.ly/serialdroid471

bit.ly/serialios471

 (varies)

 11

Netflix and DVD box sets have conditioned us to devour what we watch in an on-demand serialised format, and Serial Box is an ebook platform – new to Android – that aims to do the same thing for what we read. The idea is simple: instead of getting your book all in one go, Serial Box delivers stories in manageable chunks. You get your first 'episode' for free, but then you can subscribe to the rest of the series or just pay for what you read. Prices include both the text version of the book and the audiobook, and you can switch seamlessly between the two.



Our rating



5 NEW APPS WORTH PAYING FOR

HEALTH

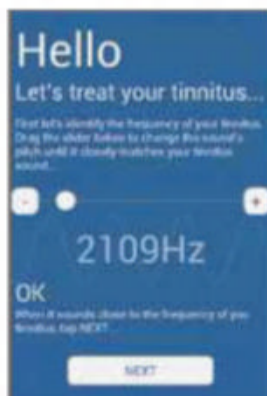
Tinnitus Therapy

bit.ly/tinnitus471

Price: 79p

 **3.2**

Tinnitus is thought to affect around 15% of adults. The theory behind this app is that you can improve symptoms by forcing your ears to adjust for missing frequencies.



FITNESS

Sezzy Timer

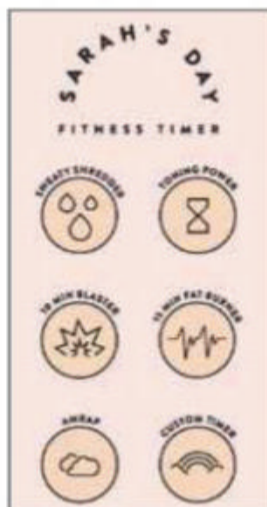
bit.ly/sezzydroid471

bit.ly/sezzyios471

Price: £1.99

 **4.1**  **9**

This workout app from Aussie YouTuber Sarah's Day lets you set six different customisable exercise timers, with visual and audio cues to alert you to what's coming up next.



GAME

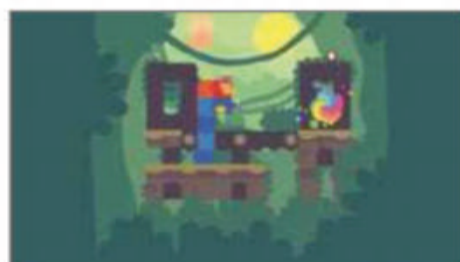
Snakebird Primer

bit.ly/snakedroid471

bit.ly/snakeios471

Price: £5.99 (Android), £7.99 (iOS)

 **4.1**  **8**



In this follow-up to the fiendishly tricky puzzle game Snakebird, each level tasks you with guiding hybrid bird/snake creatures to the exit. Thankfully, this version's difficulty level is less daunting than its predecessor.

PHOTOGRAPHY

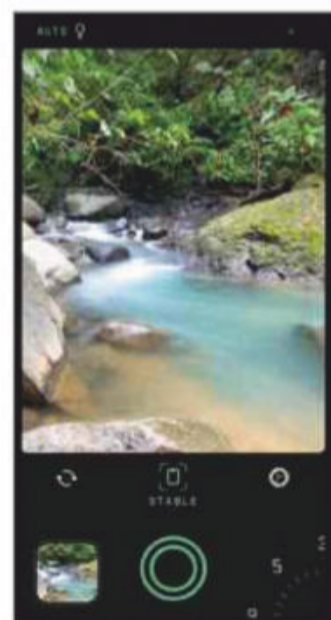
Spectre Camera

bit.ly/spectre471

Price: £2.99

 **11**

This clever photo app lets you harness the power of AI to create beautiful long-exposure effects without having to hold your device steady or faff around with settings.



PHOTOS

FilmLab

bit.ly/flimlabdroid471

bit.ly/flimlabios471

Price: £5.49 (Android), £5.99 (iOS)

 **5**  **11**

If you've got lots of old analogue film negatives, this app will let you digitise and convert them into positives. You'll need a light table or other backlight to illuminate your negs.



Tinnitus Therapy



Sezzy Timer



Snakebird Primer



Spectre Camera



FilmLab

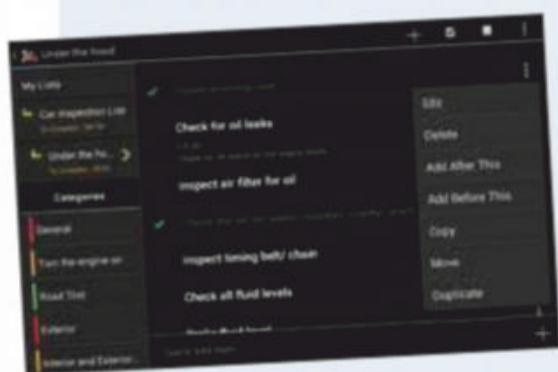


Don't install...

Car Inspection List

bit.ly/carinspect471

Whether you're looking to buy a used car or maintain your existing vehicle, this app aims to provide you with a digital checklist of all the items you should check thoroughly - exterior lights, fluid levels, oil leaks and so on. It's a nice idea but apps, like cars, need to be carefully maintained, and this one hasn't been



updated in more than three years. According to the reviews, it won't even install on some devices.

...Install this instead

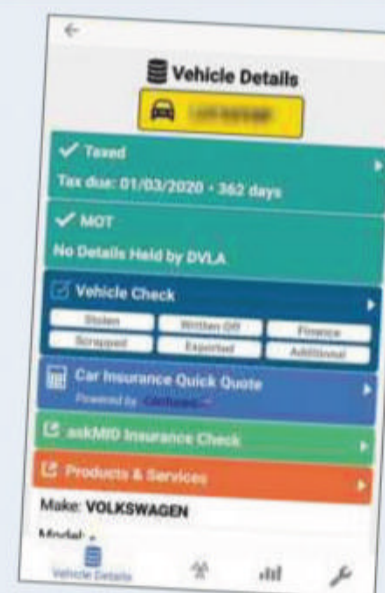
Vehicle Smart

bit.ly/vehicledroid471

bit.ly/vehicleios471

 **4.1**  **9**

Whether you only own one vehicle or you have multiple motors to manage, this is a great app for car owners. Type in a registration number and you'll be automatically presented with up-to-date MOT and tax-status info. You can add further information manually, including your mileage and insurance details, and set reminders for upcoming MOT inspections, services, renewal of breakdown cover and so on. Buyers can run detailed checks on used vehicles before they buy, including whether the car has been stolen, written off or if there's any outstanding finance on it. Some checks are free, but others cost a few pounds. ■





Take a Screen Break

Give your eyes a rest from your browser by taking our fiendish fortnightly challenges. Can you guess our kids' TV show emoji and our Wikipedia article?

**WIN A
WEB USER
2018 BACK
ISSUES DISC!**

Email your answers to
editor@webuser.co.uk
- one correct entry
will win a disc



CAN YOU GUESS THE KIDS' TV SHOWS FROM THE EMOJI?

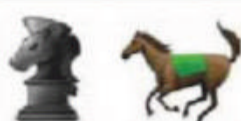
1



2



3



4



5



6



GUESS THE WIKIPEDIA ARTICLE

NEW!

Can you work out which technology-related Wikipedia entry the following clues refer to?



1 "He wears a long-sleeved red shirt, a pair of blue overalls with yellow buttons, brown shoes, white gloves and a red cap."

2 "He's appeared on lunchboxes, T-shirts, magazines, shampoo bottles, cereal packets, badges, board games and as a plush toy."

3



4 "His most common form of attack is jumping to stomp on the heads of enemies, sometimes causing secondary effects."

5 "In the film, he finds himself in an alternative universe ruled by dinosaurs, where he must save the Earth from invasion."

COMPETITIONS

WIN 1 OF 4 Corel VideoStudio Ultimate 2019

The latest version of Corel's video editor streamlines your workflow, making it easier than ever to create stunning videos. Take advantage of new Color Grading, Custom Transitions, and dynamic Split Screen video. To enter, email your address to webusercomp@dennis.co.uk with 'videostudio' in the subject line. For more details, visit www.videostudiopro.com and follow [@VideoStudio](https://twitter.com/VideoStudio) on Twitter.



**WORTH
£89.99
EACH**

WIN 1 OF 5 SafeToGo 302E USB (64GB)

Cardwave's new SafeToGo 302E USB encrypts your data, keeping it safe wherever you go, whatever you do. It's available in five capacities: 8GB, 16GB, 32GB, 64GB and 128GB, with prices starting at £26.47. To enter, email your address to webusercomp@dennis.co.uk with 'SafeToGo' in the subject line. For more details visit www.safetogosolutions.com and follow [@SafeToGo](https://twitter.com/SafeToGo) on Twitter.



**WORTH
£55.58
EACH**



FAQ

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

Foldable phones

Does the future of mobile phones hinge on a flexible screen?
David Crookes takes a look at the bendy new tech

What are they?

More and more of us now watch videos and play games on our mobile phones, but a bigger screen means a bigger device, which means that fitting one into your pocket becomes increasingly difficult. Foldable phones may be the solution – a double-sized screen that folds in half so you can comfortably stash it away.



So like a flip phone?

Not exactly. While flip phones (which were hugely popular until around 2009) open up to reveal a screen and an interface, foldable phones provide a large, uninterrupted and seamless display. This allows the devices to straddle the line between a phone when closed and a tablet when opened.

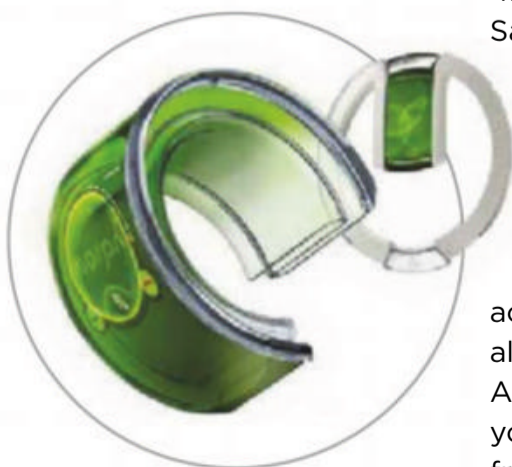
Remember flip phones like this one? Well, foldable devices are different

But what's the point of them?

Aside from revitalising the mobile phone market, which has recently been bereft of ideas, foldable phones offer versatility. If you want to read your messages, make a phone call or check the time, you can just look at the screen on the front of the device. If you fancy watching a film, reading a book, playing a game or doing some work, you can open the phone and take advantage of the larger display.

Who is making them?

Some of the world's biggest manufacturers are currently on board with the technology, which has grown out of many years of work on flexible OLED



Nokia's curvy Morph phone looked impressive but was never developed



displays. Nokia was first out of the blocks in 2008 when it showcased a concept mobile phone called the Nokia Morph, although this never came to fruition. Since then, Sony has prototyped a rollable TFT-driven OLED display, while Samsung added a curved screen to the Galaxy S6 Edge in 2015. Indeed, it's Samsung's newly announced foldable phone that's got many people talking.

What has Samsung been doing?

The company unveiled the Galaxy Fold (bit.ly/samsung471), which has a 4.6in Super AMOLED screen with a 21:9 ratio on its front and a 7.3in QXGA+ Dynamic Infinity Flex AMOLED display with a 4:2:3 ratio when it's unfolded. Samsung says it has invented a new polymer layer and created a display that is 50% thinner than a typical smartphone display. The larger screen is capable of showing three active apps at once and it also uses a feature called App Continuity. This means you can open an app on the front, unfold the device and continue where you left off inside.

That must put some wear on the hinge?

Yes, it does, but Samsung reckons it has solved the problem, recognising that the average user will fold and unfold the device perhaps dozens of times each day. It says its engineers have worked hard on the hinge mechanism, using multiple interlocking gears hidden within its own



Samsung's Galaxy Fold has a special hinge for smooth opening and closing

enclosure so that the Galaxy Fold opens smoothly but closes flat.

Doesn't all this extra tech take its toll on the battery life?

You'd think so but, again, Samsung appears to have made provisions for this. So while the Galaxy Fold is powered by a Qualcomm 64-bit octa-core processor, and has 12GB of RAM and 512GB of storage (plus a 10-megapixel selfie camera and a rear triple camera), it also includes two batteries – one for each side – which gives it a total capacity of 4,380mAh. That's just as well because the Galaxy Fold runs Android 9, which is notorious for its battery drain.

Has Samsung cornered the foldable market?

No. Samsung made its announcement at the Galaxy Unpacked 2019 event in San Francisco, but things really hotted up a few days later at the Mobile World Congress (MWC) in Barcelona when Huawei unveiled the impressive Android-powered Mate X (bit.ly/matex471). This device is just 11.5mm thick when folded, and wraps its screen around the front and back of the device rather than enclosing it inside. There's a 6.6in AMOLED screen at the front, a 6.4in one at the back and it unfolds to an almost bezel-less 8in 2,200 x 2,480-pixel display.

The Mate X also includes a triple-camera system, a bar for comfortable



Lots of phone manufacturers are working on their own foldable devices

grip, a Kirin 980 processor and a battery capacity of 4,500mAh.

Are more phones coming soon?

They certainly are. At MWC, Chinese manufacturer Oppo (www.oppo.com) showed off a prototype which, like Huawei's model, folds back on itself and has a bar-like grip. However, there were no firm details of specs and it appears the company wants to sit back and assess the market before rushing ahead.

Meanwhile, LG has announced the V50 ThinQ (bit.ly/lgmob471), which isn't strictly a foldable phone in the sense that the Samsung and Huawei handsets are but, by allowing you to add a secondary display, achieves a similar result – albeit with a big join down the middle.

More promising is Xiaomi's Duel Flex double-folding phone (www.mi.com/uk). Still a prototype, it opens into tablet form and folds back on two sides.

When can I buy a foldable phone?

The Samsung Galaxy Fold is due to go on sale in Europe on 3 May, costing an eye-watering €2,000 (around £1,700). The Huawei Mate Flex is expected around the middle of the year for an even more wallet-busting €2,299 (roughly £2,000) and the V50 ThinQ should arrive before October for around £1,000 (lower priced because it's not strictly foldable).

Can I buy anything right now?

Well, users in China can snap up a Royole FlexPai (www.royole.com/flexpai) which



folds outwards, offers a 3,970mAh battery and is powered by a 2.84GHz Qualcomm Snapdragon 855 processor. However, it currently suffers from 'lag', doesn't fold flat and is apparently clumsy to hold.

When will Apple catch up?

We can't see it happening this year, but 2020 could see Apple enter the market, especially given the slow sales of the iPhone XS. The danger is that an iPhone with a larger screen could dent iPad sales, but since Apple has already made patent applications for flexible-display devices, it certainly looks like the company is interested in the technology.

So are foldable phones the future?

Not necessarily – it's still very early days. The obvious benefits are that foldable phones allow for greater multi-tasking and more pleasurable larger-screen viewing, while also giving early adopters the kudos of tapping into a technology that will impress friends and colleagues. But if buyers were put off by the iPhone X's £1,000 price tag, then we can't see them flocking to buy handsets at nearly twice the price.

Potential owners may also want to ensure that app developers support the new format and make good use of it. Oh, and imagine how you'd feel if you damaged one of those pricey screens.



Huawei unveiled its foldable Mate X phone at Mobile World Congress

WILL WE SEE FLEXIBLE WATCHES?

Funny you should ask! The flexible Nubia Alpha touchscreen smartwatch (www.nubia.com) has a 4in wraparound, wide-banded OLED screen with a resolution of 960 x 192 pixels. Able to withstand being bent 100,000 times, it offers fitness tracking, voice calls, a five-megapixel camera and even the ability to watch films. Its 500mAh battery life is said to last up to two days. The watch will



arrive in Europe in April and cost £390 but, it has to be said, it is rather ugly so we won't be rushing out to buy one!



You'll pay dearly for damaging the screen of your Samsung Galaxy Fold

Banish Built-in BLOATWARE

**COVER
FEATURE**

Uninstall all the unwanted software installed on your PC and phone, and you'll keep them running smoothly for longer. **Nik Rawlinson** shows you how to detect and remove redundant junk



New PCs rarely come with just Windows installed, and smartphones and tablets often run more than Android or iOS, even on their first boot. Manufacturers love to preinstall all manner of applications, from antivirus trials to limited-level games, on their hardware. Frequently, these are described as bonuses, but more often than not they're just the opposite. We call them bloatware: unwanted applications that gobble up hard-drive space and valuable system resources.

Usually, such apps are installed for one simple reason:

the PC manufacturers are paid to put them there. Camera and printer companies aren't much better, often slipping in a couple of extra tools when you install a driver, such as software that helps you get creative with your printer (so you use a lot more of the manufacturer's ink).

In this feature, we show you how to uninstall these unwanted applications – from manually removing individual items to implementing Microsoft's 'nuclear' option – so your PC, smartphone and tablet run even better than they would in their 'factory-fresh' state.

BLITZ BLOATWARE FROM YOUR PC

Unwanted programs and services

One of the most common preinstalled programs is antivirus software. This isn't bad in itself – we should all be protected – but your PC manufacturer's preferred provider might not have been your first choice. It's easy to switch, since many antivirus applications are free to download, and – as we explained in last issue's cover feature – Windows' built-in Defender tool now provides excellent protection.

Before uninstalling third-party anti-malware suites, make sure Defender is running by opening the Windows menu, typing defender and clicking 'Windows Defender settings'. Click 'Virus & threat protection', followed by 'Virus & threat protection settings'. Make sure the switches below both 'Real-time protection' and 'Cloud-delivered protection' are on.

Always check what an unrecognised application actually does before you uninstall it. Previously, we would have recommended installing Should I Remove It (www.shouldiremoveit.com) but it's temporarily unavailable while being rolled into Reason Antivirus. If it's not reappeared by the time you read this, check out its comprehensive online database of apps and what they do at bit.ly/should471.

Alternatively, tap into the collective wisdom of Windows' enormous user base. Download, install and launch PC Decrapifier (www.pcdecrapifier.com) and click the Analyse button. This free program interrogates your system to draw up a list of its installed applications and tools, organised into three categories: Recommended, Questionable and Everything Else.

Apps that appear on the Recommended

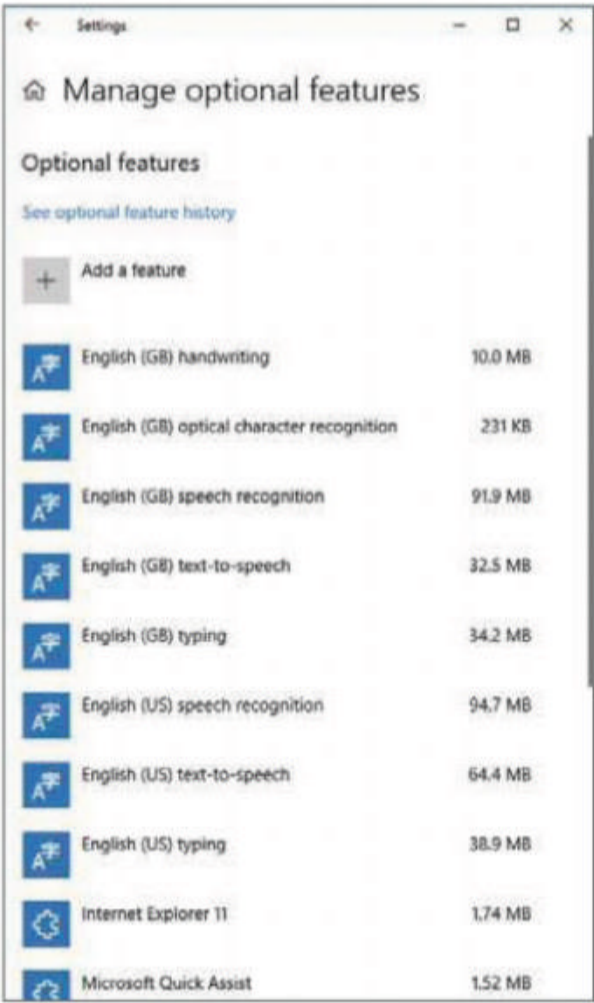
list are most frequently removed by other PC Decrapifier users, while those on the Questionable list are sometimes left in place, and Everything Else is a list of the applications about which it knows too little to pass judgement. You should treat these with caution and only uninstall them if you know for sure what they do.

Junk that's not in the Control Panel

If you're ever unsure what to uninstall, the safest course of action (although not always the most efficient) is not to touch applications installed by Microsoft itself. Open Control Panel and click 'Uninstall a program', then check the Publisher column and avoid removing anything with Microsoft Corporation against its name

Control Panel only gives you half the picture, though, and misses out almost all the Modern UI apps that make Windows 8 and 10 distinctive. To grapple with these, open Settings by clicking the cog on the Windows menu, then click Apps. Default applications such as Weather and Camera, along with any you've installed yourself, are listed here. Click each one to reveal an Uninstall button.

That's simple enough, but Windows includes a lot of other tools that don't appear in this list. Click 'Manage optional features' in the 'Apps & features' section and you can turn off optional tools such as Windows Media Player (if you'd rather use VLC), 'English (US) speech recognition' (if you also have the British version installed) and even Internet Explorer 11 if you're happy (as most web users are) with an alternative browser such as Firefox, Edge or Chrome.

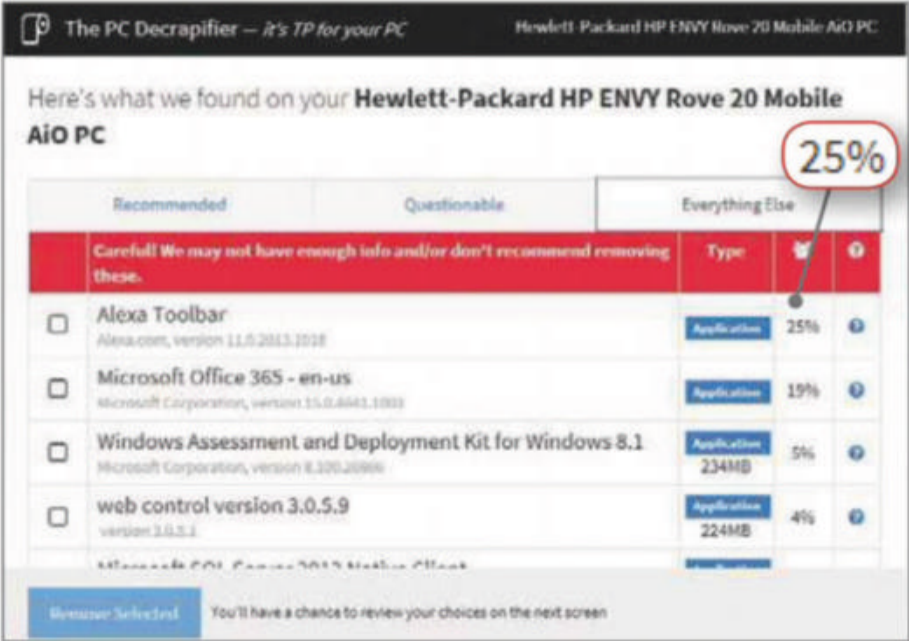


Use both Control Panel and Settings to hunt down preinstalled Windows 10 tools

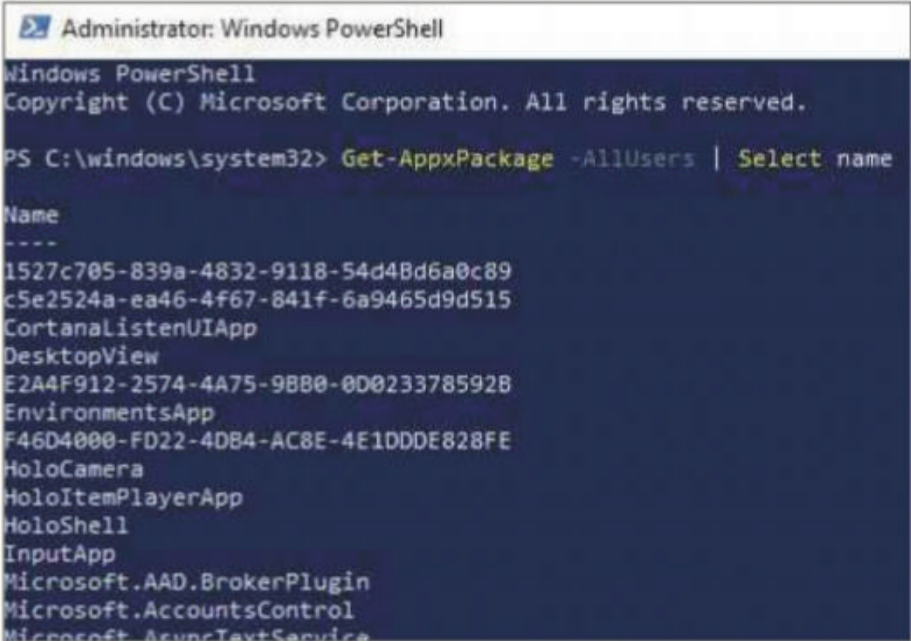
Microsoft's own preinstalled bloatware

For a really thorough clean, you also need to weed out any hidden Microsoft applications, as well as those installed by your PC's manufacturer. If you know exactly what they are, you can remove them using PowerShell, but be warned – the process is a bit convoluted.

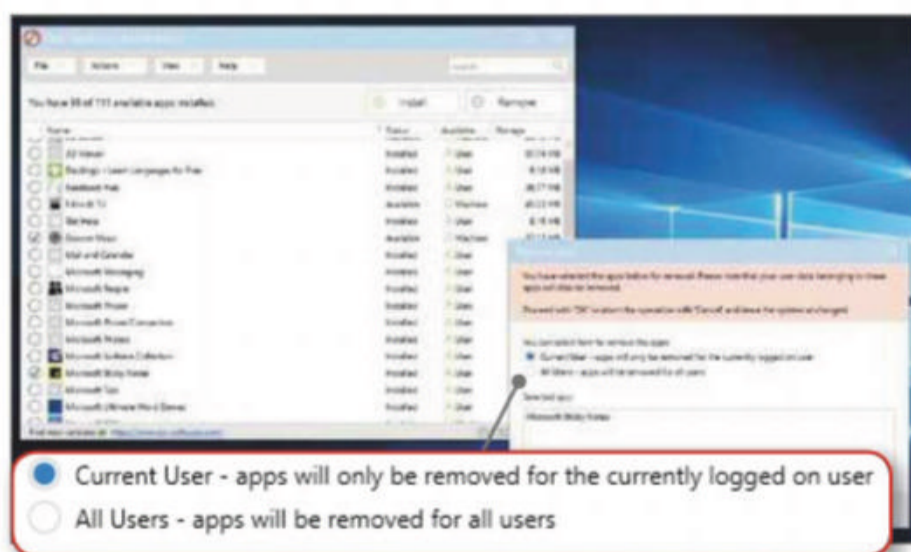
Open the Windows menu and type PowerShell. Right-click the top result and select 'Run as administrator'. When Windows asks whether you're happy for it to make changes to your device, click Yes and, when the PowerShell prompt appears, you can remove unlisted applications using the following formula:



PC Decrapifier ranks applications according to the percentage of users who uninstalled them from their systems



Windows' built-in PowerShell tool lists and lets you remove Microsoft's own bloatware, but it's fiddly to use



AppBuster can make applications inaccessible to the current user or remove them for all users on a Windows PC



Microsoft's own Signature Edition PCs don't include any free trials or third-party bloatware

```
Get-AppxPackage -name
"Microsoft.[application-name]"
| Remove-AppxPackage
```

In each instance, replace [application-name] with the app's name. So, for the Windows calculator, you'd use:

```
Get-AppxPackage -name
"Microsoft.WindowsCalculator"
| Remove-AppxPackage
```

The trouble with uninstalling applications in this way, aside from the fact that it's a major hassle, is knowing the correct formula for each application. To call up a list of all applications installed on your system, and the way they need to be referenced in the formula, type:

```
Get-AppxPackage -AllUsers |
Select name
```

An app to slay all apps

We prefer O&O AppBuster (see Best Free Software on page 30) to PowerShell, in part because it's a free download from bit.ly/appbuster471, but also because it can be run without being installed, so it won't contribute to your existing software bloat.

Download and launch AppBuster, click the radio button beside each application you want to remove, then click the Remove button at the top of the window. You'll need to specify whether you want an app to be removed only for the 'Current User' (yourself) or 'All Users' (which will put it out of reach for every user account that can log in to your PC).

If you're overwhelmed by the number of applications it's found, click View and uncheck the categories you don't want to work with. Start by clearing everything other than Hidden Apps to see which of the applications you haven't yet found by other means could still be removed.

Third-party trials and demos

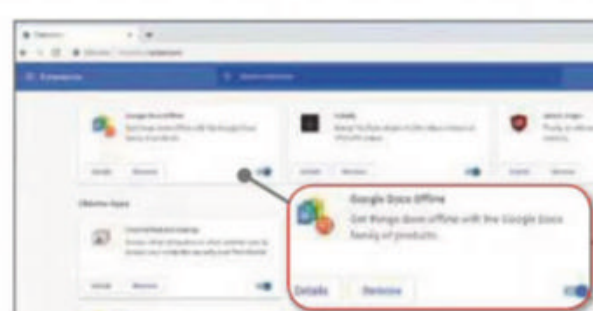
Fortunately, most third-party trials and demos can be uninstalled via the Control Panel. But if you want to avoid them in the first place, check out your chosen PC manufacturer's policy on bundling trials before placing your order.

If you buy direct from Microsoft, you'll receive a Signature Edition PC, which will be "clean, fast and protected". These machines don't include any free trials or third-party bloatware, and rely on Windows Defender rather than commercial anti-malware programs for protection. Because they're running fewer background processes, Microsoft also claims that battery-driven Signature PCs last an average of 28 minutes longer than their rivals. Find out more at bit.ly/signature471.

Browser toolbars and adware

Browser toolbars take up space in your browser window and some of them also watch what you're up to and report your online activity to their creators. The same is true of bundled adware. Fortunately, both are easy to remove.

In Chrome, toolbars and adware are installed as extensions. Open a new browser window and type `chrome://extensions` into the address bar. A page loads showing all your installed add-ons. Click the switch in the bottom-right corner of each card to deactivate



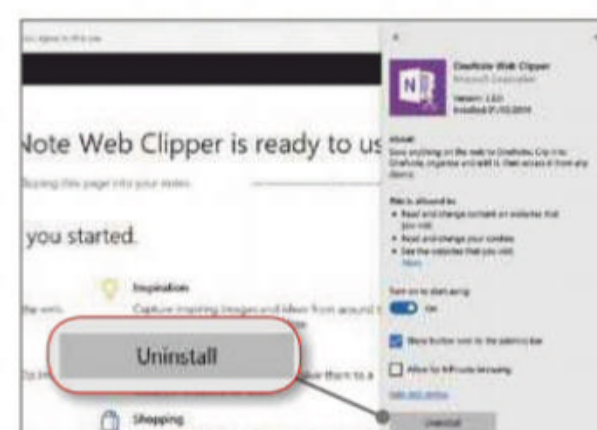
All browsers use extensions to add tools but they are easy to disable or remove

any you want to suspend - or click Remove to delete them entirely.

In Firefox, open a new window and type `about:addons` into the address bar, then click Extensions in the sidebar to view what's been installed in your browser. You can suspend or delete extensions by clicking Disable or Remove as appropriate. If you want to delete all your unwanted add-ons in one fell swoop, type `about:support`, scroll down to Profile Folder and click Open Folder. Navigate to the 'extensions' subfolder in the Windows Explorer window that opens and delete its contents.

Firefox also uses Plugins, which are helper applications that make the browser more versatile. They can't be deleted in the way extensions are removed, but you can disable them. On the 'about:addons' page, click Plugins in the sidebar, then use the drop-down menu to the far right of each one to select Never Activate.

Extensions are placed front and centre in Edge. Click the three-dot icon on the right-hand end of the menu bar and select Extensions from the menu. To suspend any add-ons you no longer want to use, click the switch beside their name. To remove them completely, click the cog on the right, followed by Uninstall on the next screen.



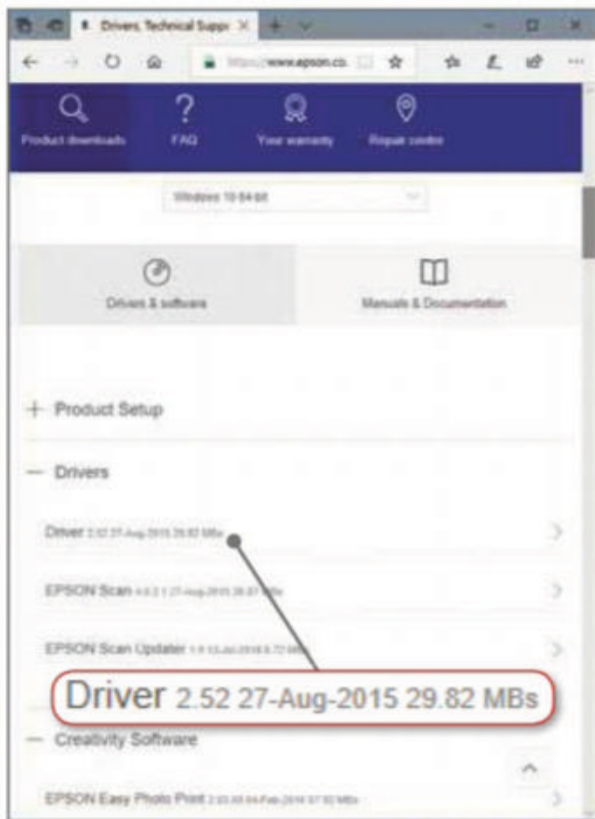
Extensions are easy to locate in Edge - and just as easy to disable or delete

REMOVE BLOATWARE FROM OTHER DEVICES

**Printer and scanner bloatware**

The best way to avoid supplementary applications that come with your printer or scanner is to avoid installing them in the first place.

If you've just bought a new device and it comes with a bundled CD or DVD, ignore it. Instead, switch on your device, plug it in and head for the Control Panel. Click 'Add a device' under 'Hardware and Sound' and let Windows search your system for compatible peripherals.



You can often download the drivers for a manufacturer's products from its website

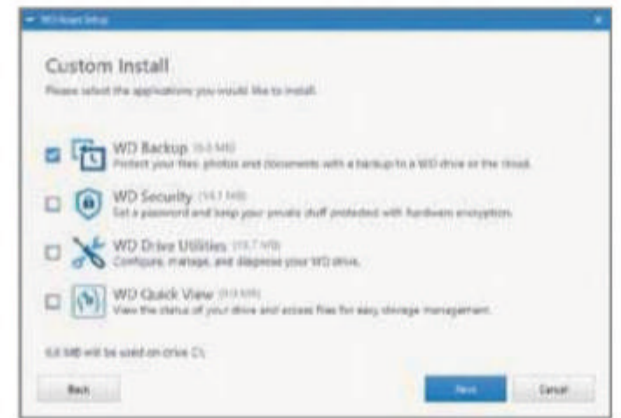
Select the device you want to set up, then click Next – Windows will search for up-to-date drivers, without downloading any accompanying applications.

If Windows can't find a driver, head to the manufacturer's website. These frequently separate drivers from the software that's bundled as part of the disc-based installer, partly because it makes the download smaller but also because many users will be looking for updates, rather than an initial installation.

There may still be times when you have no choice but to rely on the installation media that was included in the box. In these instances, make sure you check every screen of the installer for 'custom install' options. True, stepping through the defaults is easier, but it's also a shortcut to filling your hard drive with bloatware. Taking the custom option if it's offered usually lets you sidestep accompanying applications, and sometimes opt out of Start menu items, desktop icons and default installation locations.

**External hard-drive junk**

If you thought only computers, phones and tablets came bundled with bloatware, you'd be wrong. It's loaded on external and network-attached hard drives, too.



Western Digital includes extra tools with its external drives, but you may not need them

To pick just one manufacturer, Western Digital (WD) bundles WD Discovery, WD Backup, WD Security and WD Drive Utilities with its external My Book devices. If you install it, WD Discovery sits in the Windows system tray and displays a list of connected WD drives. Clicking one opens it in Windows Explorer, which strikes us as an unnecessary intermediate step.

WD Discovery also gives you access to WD Backup to simplify backing up your data (although Windows' built-in backup tools are just as straightforward – open Settings, click Update & Security, select Backup in the sidebar and click the switch below 'Automatically back up my files' to get started).

WD Drive Utilities, meanwhile, "allows you to keep your drive performing at its best, and includes sleep, health, RAID settings, and drive erasure features".

THE BLOATWARE HALL OF SHAME – 5 NOTORIOUS OFFENDERS

■ Lenovo preinstalled Superfish visual-search software on some of its PCs five years ago. Unfortunately, this made them vulnerable to digital eavesdroppers. We're sure Lenovo didn't deliberately put its customers at risk, and neither did the third-party software houses whose apps simultaneously installed the same software on other machines, but the US Department of Homeland Security nonetheless described it as 'spyware', and recommended that users uninstall it (bit.ly/superfish471).

■ A preinstalled copy of Microsoft Office sounds like a bonus when you first boot your new PC, until you realise it's not a full version at all. To edit your documents, spreadsheets and presentations after the first 30 days, you'll have to sign up for Office 365. Office isn't hard to find (try office.com), so anyone who wants to

buy a copy can easily download it. The rest of us might prefer to give over that space to a free alternative such as LibreOffice, or use Google's excellent online Docs/Drive office suite instead.

■ Microsoft may have removed Media Center from Windows 10, but that still doesn't mean you need to rely on preinstalled third-party DVD playback tools. Download VLC Player instead (www.videolan.org), which is free and not only plays back from network media drives but can also stream videos from your PC to a Chromecast for viewing on your TV. See Issue 469 of *Web User* for our



ultimate guide to using VLC.

■ Third-party alternatives to default apps are frequently unnecessary – Windows and Android have excellent built-in applications for email, maps and more. Manufacturers who install their own alternatives are wasting valuable space and potentially sucking up processor cycles without our permission. You can easily find alternatives to default applications in the Android and iOS app stores.

■ Any antivirus application you didn't request or install yourself should be considered bloatware, too. Yes, it's convenient to not have to download an antivirus suite on day one, but we'd rather make our own choice than have it decided on our behalf, on the basis that one manufacturer paid more than its rivals.

These may sound useful but ask yourself how often you'll use them before you commit to installing the app.

Finally, WD Security "implements password protection and the 256-bit hardware data encryption capabilities of your supported WD hard drive". This latter feature may be the most tempting of the lot, but you could use Windows' built-in BitLocker tool to encrypt the drive instead.

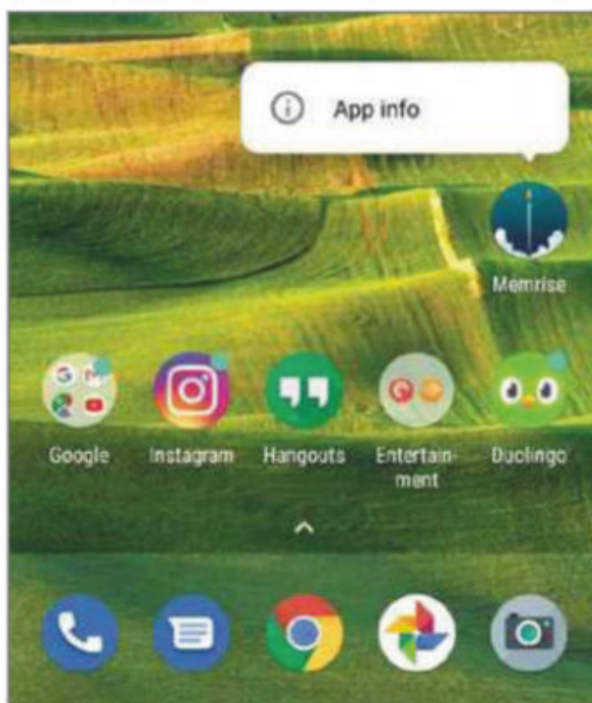
We're not singling out WD for criticism. Many manufacturers include their own utilities with hard drives and other peripherals, and WD's hardware works fine, even if you choose not to install the bundled apps. With this last point in mind, then, the best advice is to see how well a product works stand-alone, and only install the bundled software if the extra features it enables seem like a fair swap for the drive space and processor cycles they'll consume.

Preinstalled Android apps

Phone and tablet manufacturers are free to adapt Android as they see fit, and many of them see this as an opportunity to preinstall a host of third-party applications alongside their own alternatives to Android's defaults.

Long-press the icon of the app you want to remove and tap 'App info' when it pops up a second or so later. If the app can be deleted, you'll see an 'Uninstall' button. Tap this to complete the removal.

Not all apps can be removed, and for these you'll see a Disable button



Most Android apps can be deleted with a long-press for App Info, then Uninstall

instead. Tapping this frees up any memory they may have been using but doesn't actually remove them, so while it may improve your phone or tablet's performance, it won't claw back any internal storage. Apps in this category include the Android calculator, Gmail and Chrome.

If you're happy to get your hands dirty and risk voiding your warranty, you can usually uninstall even the most stubborn apps by rooting your phone – although we wouldn't recommend it. Rooting removes the protections that stop you damaging the operating system and installing apps and media you're not authorised to access. The rooting process varies between manufacturers and is illegal in some

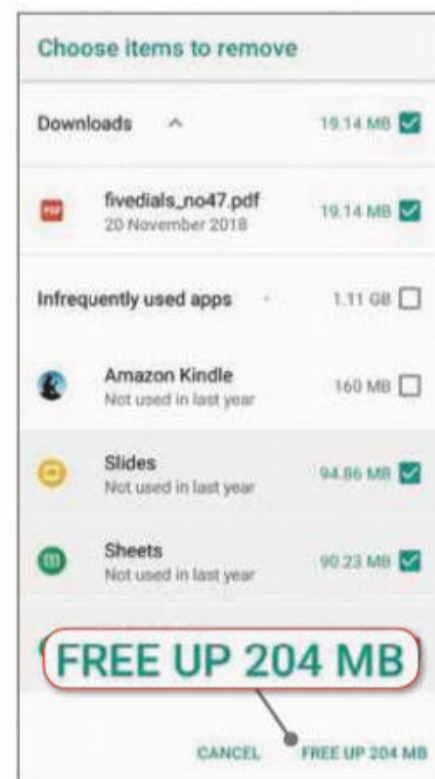
countries, but this hasn't stopped the instructions being easy to find through search engines.

Delete Android apps in one go

Deleting apps individually is a slow process, but Android can help speed things up. Open Settings and tap through to Storage (use the search box at the top of the Settings app if Storage doesn't appear in the first menu), then check for an option to free up space.

On our Motorola G6 Play, there's a large green button marked 'Free up space', which is missing on our Huawei MediaPad.

Tapping this lists the apps installed on our device. Once we've selected what we want to remove with the tick boxes, tapping the 'Free up' button removes them in a batch.



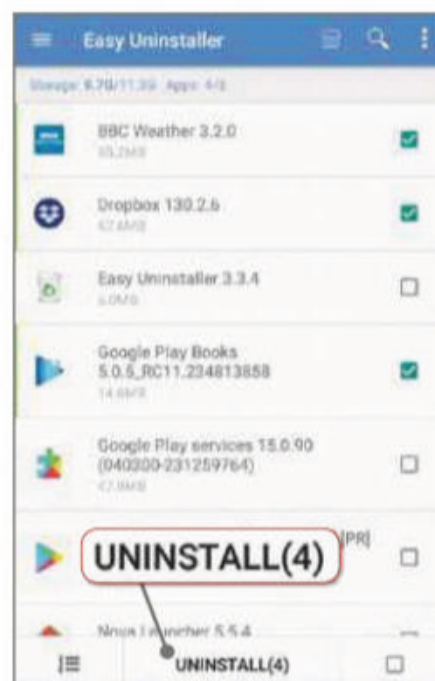
Most Android phones and tablets let you delete multiple apps at once

Use an app to delete other apps

Installing a new app to delete your old apps might sound like a backward step, but it can be a significant timesaver.

Install Easy Uninstaller (bit.ly/uninstaller471), launch it and select the apps you want to delete from the list of detected applications. Tap Uninstall at the bottom of the screen and Easy Uninstaller will run the uninstall process for each app

Use Easy Uninstaller to batch-remove apps, then set it to delete itself



THE BIGGEST BLOAT OF ALL... WINDOWS ITSELF

If you've upgraded to Windows 10 from a previous version, the installer

will have stored a backup of your old configuration so you can reinstall it if you have problems.

If your up-to-date Windows installation is working well, you can safely delete this bit of bloat, which can easily occupy 20GB.

Click the Windows menu and type 'Disk Cleanup', then scroll through the list of found files. If you find 'Previous Windows installation(s)', check the box to its left, then click OK to remove the archive.



in turn. Just tap OK in each instance to confirm its removal.

Once it's finished, you can even step back to the apps list and select Easy Uninstaller for removal, for the ultimate cleanup job.

Remove built-in apps from iOS

Apple's mobile operating system, iOS, is generally clean because Apple is the only company that can install it on any device, and it doesn't tend to bundle third-party apps that it doesn't think would be useful.

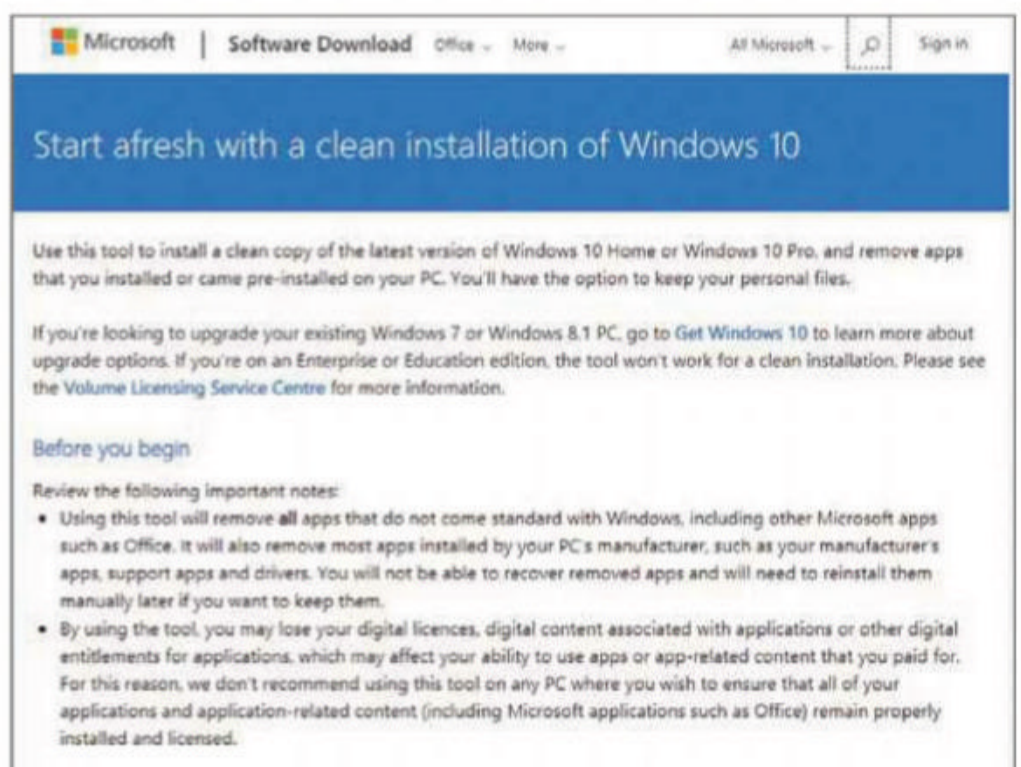
However, Apple does have some apps of its own that you might never use. If you don't have an Apple Watch, you don't need the Watch app; you can hide Stocks if you've never bought shares; and if you don't have Wi-Fi light bulbs or plugs, you can safely hide Home. Notice we said 'hide' because when you 'delete' a preinstalled app, it remains on your iPhone or iPad and is simply removed from the Home screen.

If you're running iOS 10 or later, long-press the app you want to hide until it starts shaking, then tap the 'X'



Some iOS apps, such as Clock and Health, can't be hidden from the Home screen

If removing bloatware manually is too much hassle, you can use Microsoft's 'nuclear' Start Fresh option



that appears in the corner, just as you would for regular applications.

Some apps, such as Clock, Wallet and Health, can't be removed because Apple considers them core to iOS. For the full list of 23 applications that you can remove from the home screen, check out the support article at bit.ly/iosapps471.

If you want to reinstate a hidden app, open the App Store on your iPad or iPhone, search for it by name, then tap the cloud beside it to reveal it again on your device.

Take the nuclear option

Windows 10 includes a feature called Start Fresh, which installs an unadorned version of its latest build. It's often a better option than installing from the restore partition that your PC's manufacturer created on your hard drive, since the version of Windows stored there may not be the most up to date, and may include copies of the bloatware you're trying to avoid.

Note that Start Fresh removes all your applications along with drivers you need to access your peripherals and digital licences for third-party apps, so before you start, back up any vital data and locate your Windows product key – if you have one. If you bought a PC with Windows 10 preinstalled, this will probably be stuck to the machine itself on a Certificate of Authenticity; if you bought Windows 10 as a download, or upgraded from Windows 8 or 8.1, you won't have a Certificate of Authenticity because your licence to run Windows will be tied to your Microsoft account. In the latter case, Windows will be reactivated as soon as you log in after reinstalling.

When you're ready to return Windows to its factory-fresh condition, check that you have 3GB of available hard-drive space and an active broadband connection. Open a new browser window, go to bit.ly/fresh471 and click the 'Download tool now' button at the foot of the page. ■

NEXT ISSUE

on sale Wednesday 3 April 2019

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Share massive files for free

There are lots of free services that let you share large files with other people without having to create an online storage account.

Andy Shaw picks his six favourites and puts them to the test, to see which one works best



Smash | fromsmash.com | ★★★★★
FEATURES ★★★★★ PERFORMANCE ★★★★★ EASE OF USE ★★★★★

**WebUser
GOLD
AWARD**

What we liked:

As one of the newest large-file-transfer services to launch, Smash has pushed the boat out with its free offerings: there's no limit to the size of files you can send and it keeps them available for 14 days. However, if your file is larger than 2GB, the free service puts the processing of your file on the back burner, slowing things down to make way for paying customers. If you're not in any particular hurry, it's no big deal, but it took over an hour to upload a 4GB file. That said, this wasn't unusual in our tests.

Unlike WeTransfer, there are no fancy wallpapers with Smash, just a large pulsing icon in the middle of the web page. Click it to choose a file or drag one to the icon from File Explorer. As with all the services we've reviewed here, you get a basic form where you can choose whether to email the file or send a link (Smash also supports Slack, should you use it).

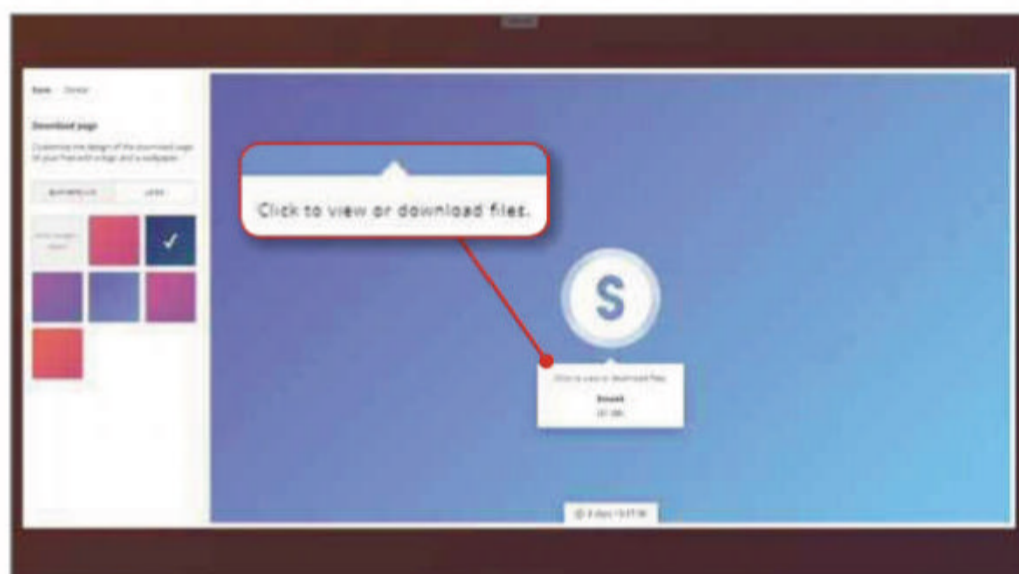
The link option is particularly handy, because you can customise the suffix to make it more memorable, for example 'fromsmash.com/fromandy'. From here, you can also add more files, if you want to send more than one at a time.

At the bottom, next to the Smash button (which might have been more sensibly labelled Send or Upload), you'll find a row of icons. Here, you can add a password, control the number of days the file will exist (up to 14 in the free version), change the background colour and control whether you get alerts when people download your files.

If you're willing to pay (€12 per month or €72 per year, which converts to around £10.32 and £62 respectively), you can upload your own backgrounds and leave custom messages for the recipients of your download.

How it can be improved:

The paid-for version is expensive, but given Smash's generous free options, we can't see much reason for upgrading, unless you need faster



access to uploading very large files and therefore want the throttle removed from the free version. In the grand scheme of things, it's a small niggle that you'll probably never have to worry about.

OUR VERDICT

Smash is a new service in a field populated by old hands, but it's joined the fray with an enthusiastic and youthful swagger. We love that it places no limit on the size of files that you can share for free – which is just as well because the paid-for version isn't cheap.

WeTransfer | wetransfer.com | ★★★★★
 FEATURES ★★★☆ PERFORMANCE ★★★★★ EASE OF USE ★★★★★

WebUser
SILVER
AWARD

What we liked:

We love WeTransfer. Launched in 2009, it has a decade of experience under its belt and does a fantastic job of quickly

and easily getting large files to other people. However, this also makes it a huge target, and every copycat service that's launched since has made sure it trumps the free version of WeTransfer in some way.

For basic requirements, though, WeTransfer is simple to use and enhanced with imaginative and inspiring wallpapers. It's form-based interface is easy to fill in – just enter an email address or two, depending on how you're sending the link to the file, and add a message. As long as your file is 2GB or smaller and you don't need any clever embellishments, such as password protection, then WeTransfer does a great job. Its smaller size limit means that some of the restrictions imposed by other services aren't present: we particularly like that you



can upload as many files as you like and it will keep them available for a week.

How it can be improved

WeTransfer may have originally set the bar on file-size limits but almost everyone now offers more than 2GB, which is beginning to look a bit mean. There's no password protection and you can't change how long a file is stored unless you pay. It even limits sending an email to just three addresses.

OUR VERDICT

WeTransfer is a capable service but has considerable restrictions on its free version, and its paid-for option isn't cheap. But for simply sending large files, it's more than sufficient.

SendGB | www.sendgb.com | ★★★★★☆
 FEATURES ★★★★★ PERFORMANCE ★★★★★ EASE OF USE ★★★★★

WebUser
BRONZE
AWARD

What we liked:

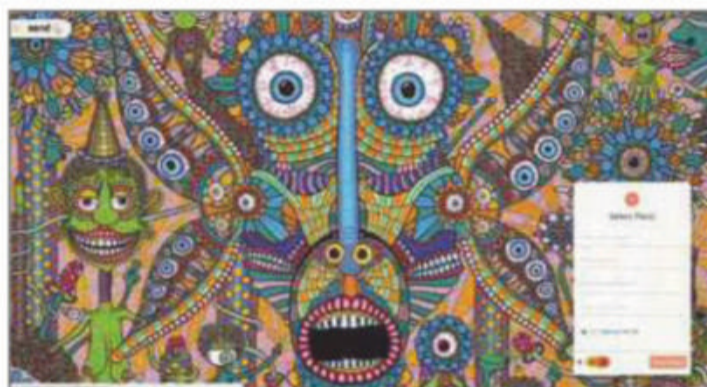
If you like WeTransfer's arty wallpapers but prefer Smash's attitude to giving more away for free,

SendGB sits comfortably between the two. The images here are adverts for artists and photographers, but they're invariably striking and colourful.

SendGB's service (and the form you need to fill in to operate it) is a little more sophisticated than WeTransfer's. You can enter up to 20 recipients' email addresses or simply get a link to send to as many people as you like.

You can also protect your file with a password, to stop anyone intercepting a message or link that they shouldn't be able to access; and you can set the file to self-destruct once the last recipient has downloaded it.

SendGB is completely free, with no paywall, because its costs are covered by ads (70% of which are 'socially responsible' and for artists).



How it can be improved:

Files can be up to 4GB in size – twice what WeTransfer's free version offers – but if you want to send anything larger, you'll have to use another service because there's no paid-for option. Also, you can only add up to 500 files at a time, and they will be deleted automatically after seven days.

OUR VERDICT

You can't upgrade SendGB's limits, even if you want to. On the upside, you'll never hit a point where your options are blocked by a paywall, but there's nowhere to go after 4GB.

BEST OF THE REST

pCloud Transfer transfer.pcloud.com

pCloud Transfer is another service that doesn't have a paid-for version. It lets you upload files up to 5GB in size but you can

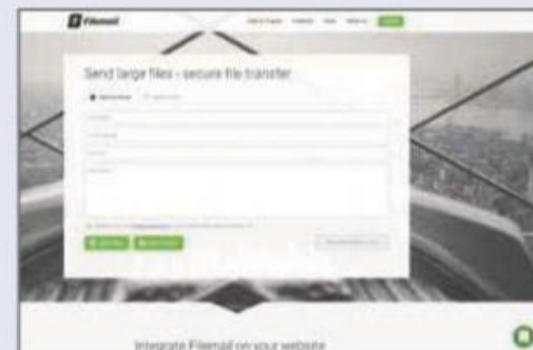
only send them via email – there's no option to just send a link. Uniquely, it lets you encrypt files, which is a bonus if what you're sending is particularly private.



Filemail

www.filemail.com

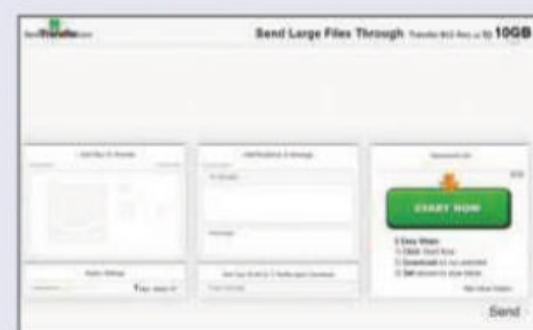
Filemail lets you send entire folders as well as files; they can be a massive 50GB in size but you can only send two files every 24 hours. You can download apps for your devices to speed up the process of transferring files to the service, but this is possibly missing the point – what we love about large-file-transfer services in general is that they don't require any extra software or signing up to accounts.



SendTransfer

www.sendtransfer.com

SendTransfer has the least attractive interface of the services we reviewed but you may prefer its plain no-nonsense look if you find the visuals of other services fussy and distracting. It lets you send files up to 10GB in size and keeps them for up to 14 days. Like SendGB, the service is completely free, so you'll never get stuck on an option that you have to pay to access.



Stream fantastic films ...for free!



Fancy a movie night that won't cost you a penny? **Jane Hoskyn** reveals where to watch blockbusters, Oscar-winners and classic films online – legally and for free



Watch films from TV channels

The BBC iPlayer's Films category (bit.ly/bbcfilms471) offers about 50 movies at a time, all free to stream with the usual iPlayer benefits – great picture quality, configurable subtitles and a Download option so you can watch without buffering. But the default 30-day time limit means there's a fast turnover. *La La Land*, *Dom Hemingway* and *Whitney: Can I Be Me* are all currently available, but they'll be gone in a few days.

Channel 5's offering (bit.ly/5films471) is the best of the rest, but even when it throws up a gem – such as *The African Queen* – it litters it with ad breaks, so you're better off elsewhere. Same goes for ITV Hub (bit.ly/itvfilms471).

Channel 4's All4 service doesn't let you watch films at all. You can live-stream movies without ads via Film4 (bit.ly/f4live471) and click Restart Programme to watch from the beginning, but there's no on-demand content.



Discover the best-ever documentaries

Documentaries can be the jewel in the crown of a TV channel's streaming service. The BBC's collection (bit.ly/beebedocs471) includes classics new and old, including *Billy Connolly: Made in Scotland* and Clive James' 1991 *Postcard from London*, both available for months to come. Also check out the 'Arena at 40' collection (bit.ly/arena471), home of unmissable Elvis doc *The Burger and the King*.

Channel 4's Factual selection (bit.ly/factual471) has a few must-watches, including *The Interrogation of Tony Martin* and 'Cheddar Man' film *The First Brit: The 10,000 Year Old Man*, without an expiry date in sight. To skip the ads, let the documentary play through while you do something else, then come back and click Restart Programme.

But the best place to watch factual films online is Documentary Heaven (documentaryheaven.com), which hosts a huge viewer-rated collection of factual films embedded from YouTube, Vimeo

and Dailymotion, including BBC classics you can no longer find on the iPlayer.

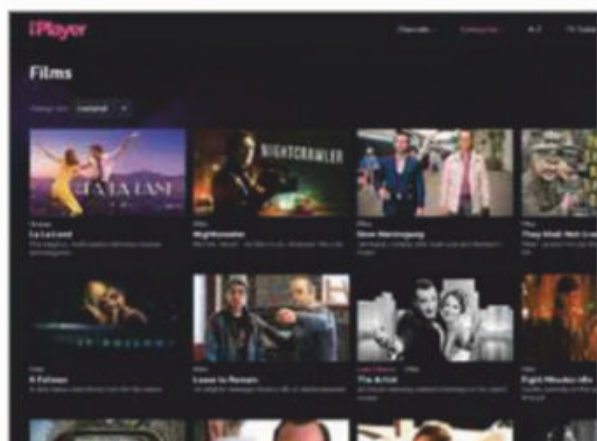
Documentary Heaven's current highlights include Stephen Fry's *Secret Life of the Manic Depressive* (bit.ly/fry471), via YouTube, and the extraordinary *Terry Pratchett: Choosing to Die* (bit.ly/pratchett471), via Dailymotion. Picture quality and player options are at the mercy of the original uploader and source site, and occasionally you'll get 'Video not available' when a film has been removed or geo-blocked. But it's well worth a rummage, and has much less conspiracy rubbish than other documentary sites.



Stream classic movies

For every film with an iPlayer expiry date so tight it whistles, the web has a thousand out-of-copyright classics available to stream forever.

YouTube has everything from *Nosferatu* (bit.ly/nosferatu471) to *His Girl Friday* (bit.ly/friday471), but its search tool is a scatterbrained mess.



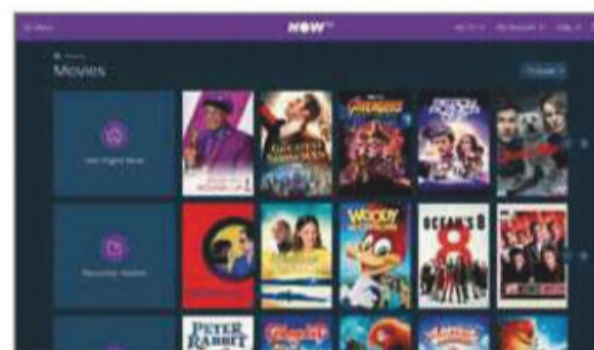
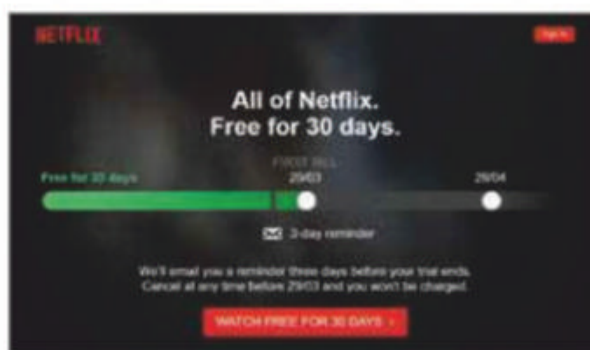
The iPlayer is the best TV site for watching films, but it imposes tight time limits



Documentary Heaven embeds free streams of landmark documentaries



Black And White Movies lets you watch classics in a retro-style TV player



Get months of free blockbusters by stringing a few free trials together – but set a reminder to cancel before you're charged

Instead, use Black And White Movies (www.bnwmovies.com). You don't have to register to watch anything, or even to create Wish and Watched lists (memo to Netflix: separate wish and watched lists make much more sense than one 'My List'). Just click a film to get a fast-loading stream that you can watch full screen or download for free, with optional subtitles where available. It's hard to pick highlights from this wealth of wonders, but *12 Angry Men*, *Metropolis* and the 1935 *Les Misérables* went straight on our list.

Free Classic Movies (free-classic-movies.com) has even older obscurities. Our top pick is *A Terrible Night*, an 1896 experimental "moving picture" about a giant spider (bit.ly/night471). Find more cult curios in The Internet Archive Movies collection (bit.ly/archive471), where top treats include Roger Corman's 1960 *Little Shop of Horrors* with a young Jack Nicholson (bit.ly/shop471). All these out-of-copyright films can be downloaded free, with torrent options to ease the bandwidth burden.



Play smart with free trials

String a few subscription trials together and you can watch the latest blockbusters online for months, completely free. Just remember to cancel before you're charged!

Now TV's Sky Cinema Pass is free for a fortnight before the £9.99 per month charge kicks in (bit.ly/nowcinema471). Plenty of time to wallow in Oscar winners (*The Shape of Water*; *Call Me By Your Name*), blockbusters (*Star Wars: The Last Jedi*; *IT*) and classics (*The Sting*; *This is Spinal Tap*). You can even download films for free using the new app (Android bit.ly/nowdroid471, iOS bit.ly/nowios471).

Amazon's 'Included with Prime' selection (bit.ly/primefilms471) offers *You Were Never Really Here*, *Moonlight* and *I, Tonya*, and you get 30 days free before paying £7.99 per month. Netflix also gives you 30 days to enjoy Netflix Original films such as *Roma*, *Bird Box* and *The Ballad of Buster Scruggs*, along with other cinema releases, before charging £5.99-plus per month.

Other free trials worth signing up for include the BFI Player (bit.ly/bfi471), which gives you 14 days of arthouse films for free before charging £4.99 a month. Highlights include 1987 classic *Wings of Desire* and Ryan Gosling's first Oscar-nominated role in 2006's *Half Nelson*. MUBI (mubi.com) is similarly classy but only gives you seven days free before charging £9.99 a month. Elsewhere, Curzon Home Cinema (www.curzonhomecinema.com) offers your first film free then charges £5 per view, so there's no subscription to cancel.

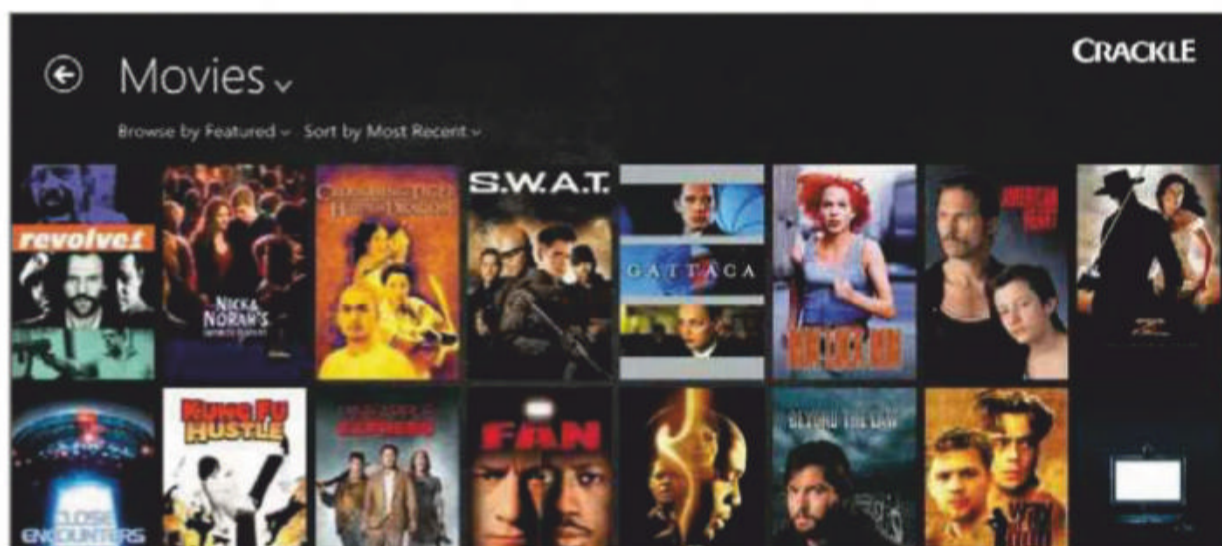


Use a VPN to unlock overseas streaming

Extend your geographical reach with a VPN to add even more free films to

your streaming kitty. IMDb's Freedive service (www.imdb.com/freedive) is currently US-only, but if you disguise your IP address as a Stateside one, you can stream *Memento*, *The Illusionist* and *True Romance* in your browser or via Amazon Fire TV devices, albeit with ad breaks.

Sony's service Crackle (www.crackle.com), officially limited to the US and Australia, also litters its free films with commercials (seven three-minute breaks in *Shaun of the Dead*, for example), but may be worth a look if there's a specific film you're after. Same goes for YouTube Movies, whose 'Free to watch' playlist has a few ad-free gems including *Dirty Rotten Scoundrels* and *Get Shorty* (bit.ly/freetube471). ■

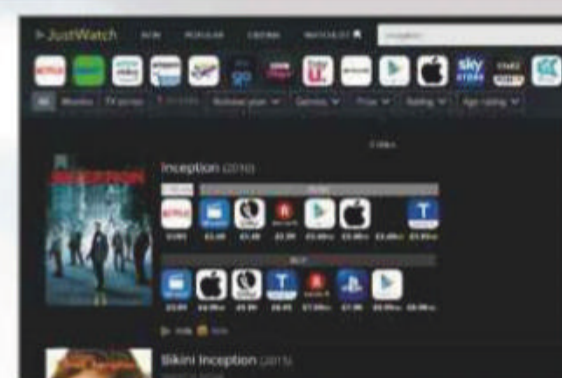


Nip over to the US or Australia courtesy of your VPN to watch free films on Crackle

FIND A FILM ONLINE – FAST

There's a scene in *Mid Morning Matters* where an exasperated Alan Partridge says "*Inception*" repeatedly to an automated phone service (bit.ly/alan471). If only he'd used JustWatch (www.justwatch.com/uk), which instantly reveals that *Inception* is streaming on Netflix and numerous pay-per-view services including Apple TV (£3.49 in 4K) and Google Play (£3.49 in plain old HD), and tells you that Rotten Tomatoes awarded it a respectable 86.

Film Finder from Which? (bit.ly/whichfinder471) also reveals where you can stream and rent films, but failed to include Netflix in our *Inception* results. Decider ([decider](http://decider.com)

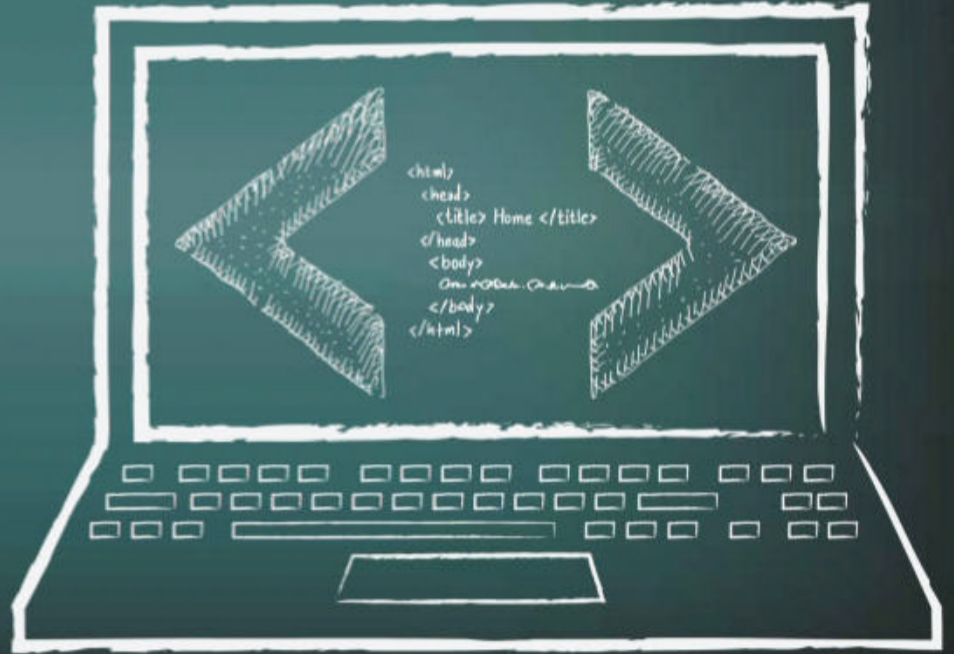


JustWatch reveals where a film or show is streaming and how much it costs

[.com](http://decider.com)) offered oodles more results but can get confusing because it includes US-only services such as Hulu and BritBox (see page 21 for details of the UK launch of this BBC and ITV service).

Teach yourself to code - for free

Whether you want to build a website or program an app, you're never too old to learn how to code. **Steve Clark** reveals the best ways to start developing your coding skills for free



Every coding language is different, and deciding which code to learn starts with knowing what you want to create: HTML and CSS are used to build static web pages, and they're also the most beginner-friendly languages, while JavaScript is used to tell websites how to behave. Java (no relation to JavaScript), Python and C++ are three of the most popular 'all-rounder' languages – you can use them to create anything from web apps to mobile apps to video games.

GOOGLE GRASSHOPPER

grasshopper.codes

Skill level: ★

Good for: Specialising in JavaScript

- Focusing strictly on JavaScript, Google's entry-level Grasshopper app



Google Grasshopper offers the best way to begin coding

for Android and iOS is built for beginners and kicks off with a friendly quiz ('What is code?') to acquaint you with the basics.

If you've ever tried the language-learning app Duolingo, you'll feel right at home as this playful app holds your hand through the basic tasks through to more

advanced skills, such as animations. Beneath a preview box, where your creations are displayed, you'll see a series of commands – tap the correct one, for example `drawBox` (yellow) : to see that command come to life. This method makes easy work of learning the core terminology and how it needs to be ordered.

There's also a handy glossary for exploring the meaning of commands and how the code translates them into images and actions, as well as hidden hints for when you need an extra push. If you're keen to maintain a daily coding habit, don't forget to set a reminder in the app, too.

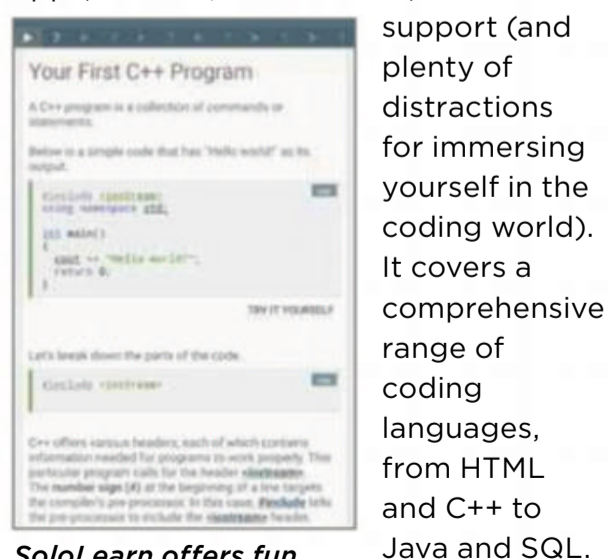
SOLOLEARN

sololearn.com

Skill level: ★

Good for: Community learning

- SoloLearn is an excellent all-in-one app (Android, iOS and web) with offline support (and plenty of distractions



SoloLearn offers fun incentives to progress

for immersing yourself in the coding world). It covers a comprehensive range of coding languages, from HTML and C++ to Java and SQL. Simple and

effective, SoloLearn lets you graduate to the next course module by completing quizzes and exercises, such as reordering text boxes to craft working code. Use the code playground to work on your own projects and share them with other users, or tweak users' codes to understand 'behind-the-scenes' workings.

The gamification elements are also well crafted: as with video games, you win 'badges' for completing tasks, which offers a sense of achievement and progression. Most useful for someone who is already a whizz at certain coding languages, the app features a Take A Shortcut option that lets you skip over modules, provided you prove that you know your onions.

GA DASH

dash.generalassemb.ly

Skill level: ★★

Good for: Website development

- Calling all would-be website builders, GA Dash is one of the best places to learn all the skills you need. There are six projects to learn, including



Whatever type of site you want to build, GA Dash shows you how

JavaScript animations and Tumblr themes, each broken down into four manageable stages to build different types of websites.

Courses take place in a three-pane window with a text editor, preview pane and PowerPoint-style slideshow that you click through to see each step. It's a method that lets you move at your own pace. Once you've begun your web-building project, you can toggle between mobile and desktop view with a click of the switch, to check that your creation is responsive to different devices.

If you're stuck, the misleadingly titled 'Q&A Forum' links you to the Facebook group where you can post a help request.

FREE CODE CAMP

www.freecodecamp.org

Skill level: ★★★

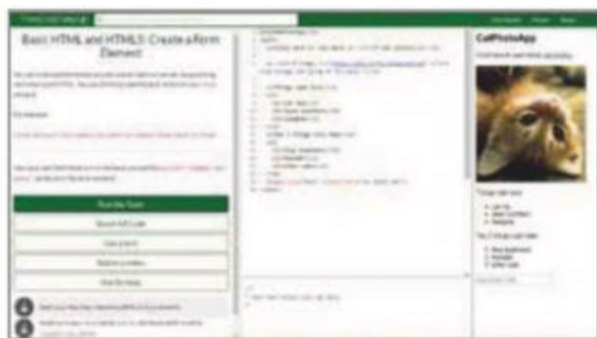
Good for: Real-world applications

- A non-profit website run on the donations of 'campers', Free Code Camp features thousands of lessons for wannabe coders.

Ease yourself in with a basic HTML course, then head to learn.freecodecamp.org to earn certificates for completing exercises on CSS, APIs, data visualisation and JavaScript algorithms. The three-pane set-up mirrors GA Dash, but features more in-depth course information.

This is an impressively user-friendly website with a comprehensive amount of assistance for beginners, so if you're finding any exercise a struggle, click the 'Get a hint', 'Watch a video' and 'Ask for help' buttons.

Best of all, once you're awarded a certificate, you can join community coders in helping to develop software for non-profit organisations – so try Free Code Camp if you want to practise your skills in the real world.



Earn yourself a certificate and join the ranks of the happy campers

CODE ACADEMY

www.codecademy.com

Skill level: ★★★★

Good for: Bite-size learning

- There's not much you can't learn at this browser-based school. When you first visit, the site helps determine what



Code Academy leads you through a high-level course at your own pace

you want to learn by asking why you're here – we chose 'play around', but it also includes options for levelling up your career and brushing up on old skills.

Progression is evenly paced, with bite-size courses that won't overwhelm beginners but still offer some depth, explaining the whats and whys of a coding language before letting you loose in the code playground.

If Google Grasshopper is primary-school level, Code Academy can be compared to graduating from college. Just make sure you avoid anything labelled Pro because these courses cost an arm and a leg.

THE ODIN PROJECT

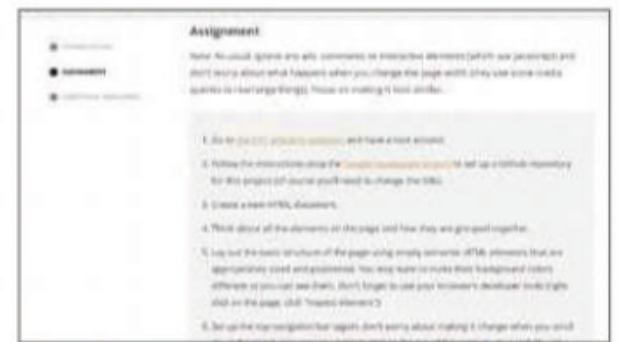
theodinproject.com

Skill level: ★★★★

Good for: Building a portfolio

- The Odin Project is an online academy devoted to HTML, CSS, Ruby and JavaScript. With an emphasis on start-to-finish education – from beginner tutorials to getting hired for your work – it's ideal for creating an impressive GitHub portfolio. The site isn't as slick as many rival apps and sites, and lacks interactivity, opting for detailed onscreen instructions that guide you through every line of code.

Beyond the extensive lessons, there's a fountain of resource links to expand your knowledge-base. The site is strongly driven by community contributions (sign up at bit.ly/opcon471), and you can join The Odin Project's Discord chat room



The Odin Project is one of the best resources for beginners and veterans alike

(bit.ly/discord471) for additional support and discussions.

CODE WARS

codewars.com

Skill level: ★★★★★

Good for: Coding challenges

- Code Wars takes a different approach to learning: its courses are more akin to going to the gym than sitting in a classroom, as you 'train' against other 'warriors', solving community challenges known as 'kata' that see you rise to the rank of master.

Start by choosing a code to train in; you'll find 20 of the top programming languages, including Python, Ruby, PHP and SQL. Before starting, you'll need to prove that you have some basic coding knowledge by resolving a simple coding error. This exercise opens the doors to more complex tutorials.

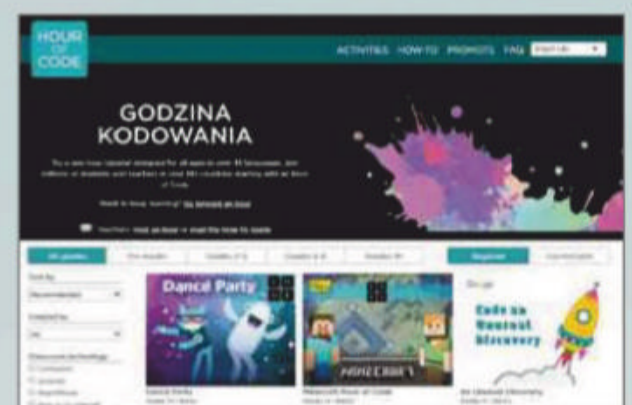
Once you get going, Code Wars is a highly addictive way of enhancing your existing skills – but it's strictly for people with intermediate or advanced knowledge in coding. ■



Train to become a code warrior - but be aware this is no place for beginners

JOIN THE CODING REVOLUTION

There's been a recent drive to bring coding to a wider audience in the UK, for all ages, starting with National Coding Week (codingweek.org) which runs from 16 September, with schools, businesses and libraries joining forces to teach digital skills to anyone who wants to learn. You can get stuck in right away, with the year-round Hour of Code (hourofcode.com). There are bags of online courses, ranging from creating a Flappy Bird-style game



to coding your own Google Doodle. See the full list at bit.ly/hour471.



Practical WebUser

16 pages of workshops, tips, projects and problem solving

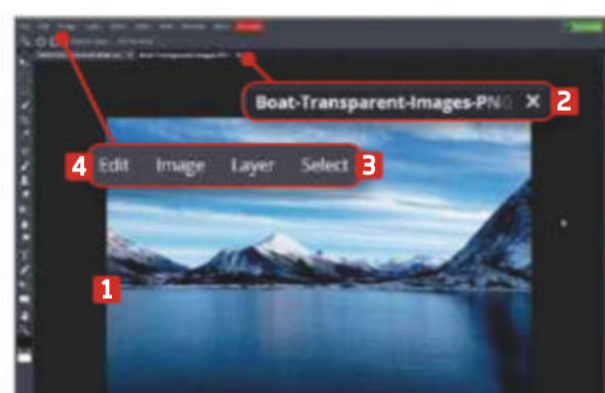
Master PhotoPea's layers tool

PhotoPea is a web-based Photoshop clone that offers a number of professional features, such as advanced layers. Here's how to use them

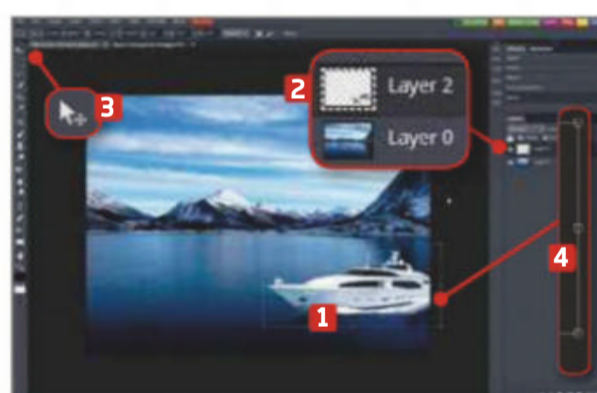
PhotoPea: www.photopea.com | 20 mins | **Any browser**

We're big fans of PhotoPea and dedicated a workshop to using the web-based photo editor at the end of last year. There's much more to the tool than can be covered in a single workshop, however, which is why we're taking a second look – this time, focusing on one of the app's most useful features: layers. Layers are essentially

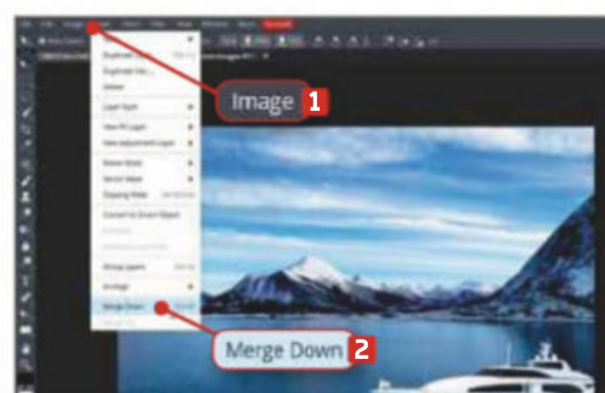
separate image elements layered on top of one another. They let you make creative changes without impacting the original photo. You can add multiple layers and reorder them, clicking and dragging them in the Layer pane, to make different details visible in your photo. You can also create layer masks, which show or hide elements.



1 Here's a straightforward landscape scene. **1** We can make it more interesting by dropping in a boat. We'll use a free image with a transparent background (to save us cutting it out). Open the image in a new tab, **2** then go to Select, **3** All (or press Ctrl+A), followed by Edit, **4** Copy (or Ctrl+C).



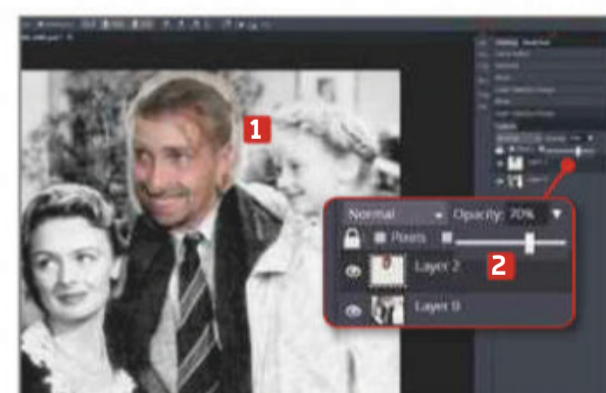
2 Switch back to the main image and go to Edit, Paste (or press Ctrl+V). The boat will be placed on top of the original picture **1** in a new layer, as you can see in the Layers panel. **2** You can reposition it using the Move Tool **3** and resize it by going to Edit, Free Transform and dragging the handles. **4**



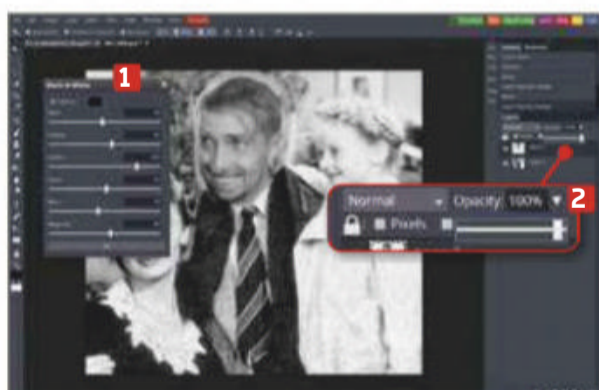
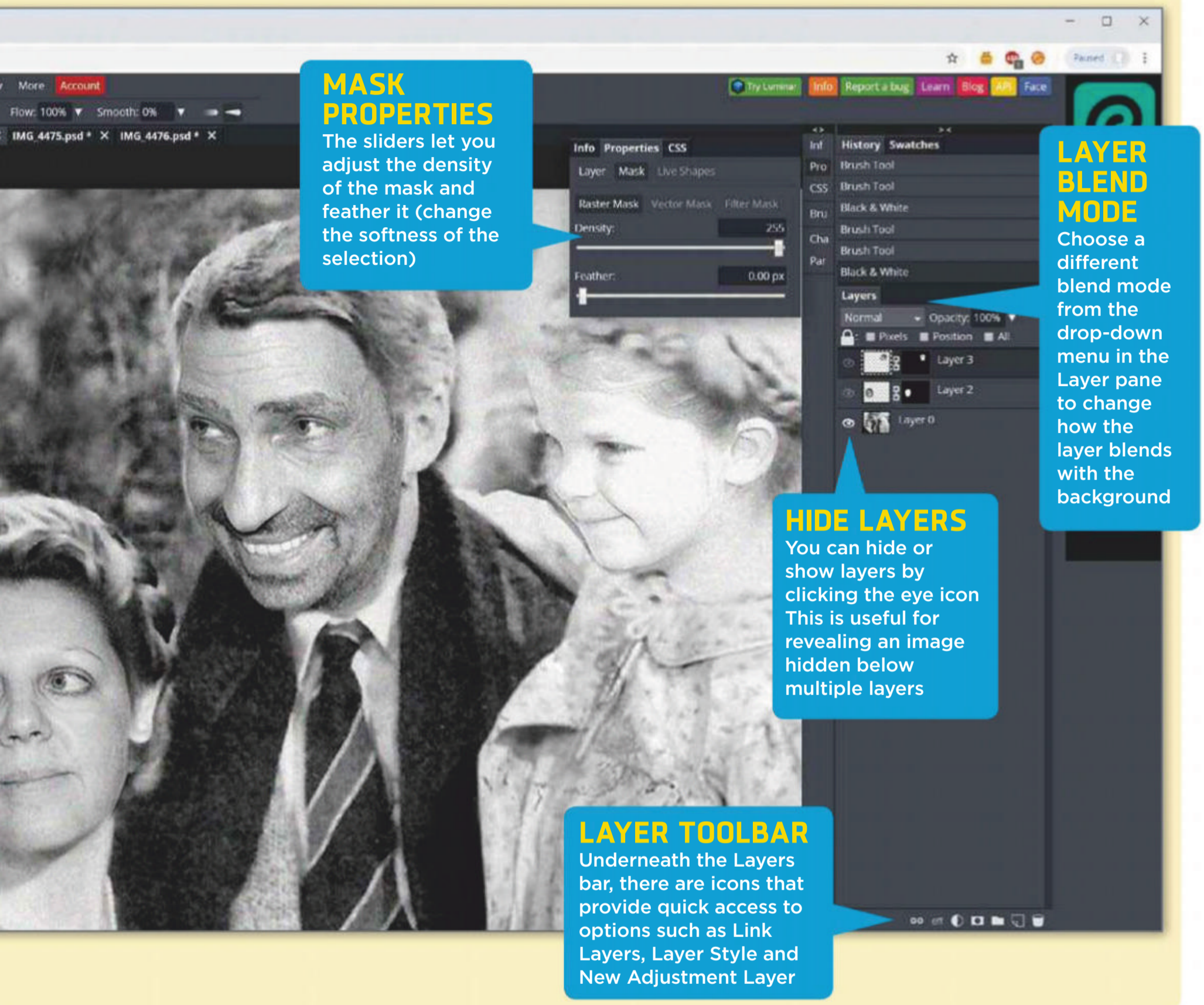
3 Use the Image menu **1** to adjust the boat's brightness, contrast and tone to match the background. Once you're happy with how it looks, you need to flatten it. This basically combines all the visible layers into one background layer. To do this, go to Layer, Merge Down. **2** You can now make any additional edits.



4 Let's try something more complicated. We're going to replace the actors' faces in this still from the classic movie *It's a Wonderful Life*. **1** Start by taking a photo that matches the angle/expression of the face you want to replace, then use the Lasso Select Tool **2** to circle the area you're working on.



5 Copy and paste the cut-out over the main image **1** and use the Free Transform Tool to resize it. Use the opacity slider on the right **2** to see the original through the new layer, so you can match it as closely as possible – the size of the head needs to be correct, with the eyes in the same place.



6 This is a black and white still, so we'll remove the colour from our new layer by going to Image, Adjustments, Black & White and using the sliders **1** to tweak the look until it matches as closely as possible. Now increase the opacity to maximum. **2** The next job is to remove the surplus parts of the new layer.



7 We could cut around the head more closely or remove unwanted parts with the eraser tool, but instead we'll go to Layer, Raster Mask, Hide All. The background and foreground colours in the toolbar change. **1** Click the D **2** to ensure only the black and white are shown. Click Swap Colours next to it. **3**



8 Select the Brush Tool **1** and begin to paint over the face. This will reveal the new layer over the top. **2** Change the size of the brush as needed. **3** If you reveal too much, swap the colours again and paint over the area you want to remove to show the layer with the original photo.



Find, download and update all your drivers

DriversCloud: bit.ly/drcl471 | ⌚ 20 mins | 🖥️ Windows 7, 8, 10



EXPERT TIP

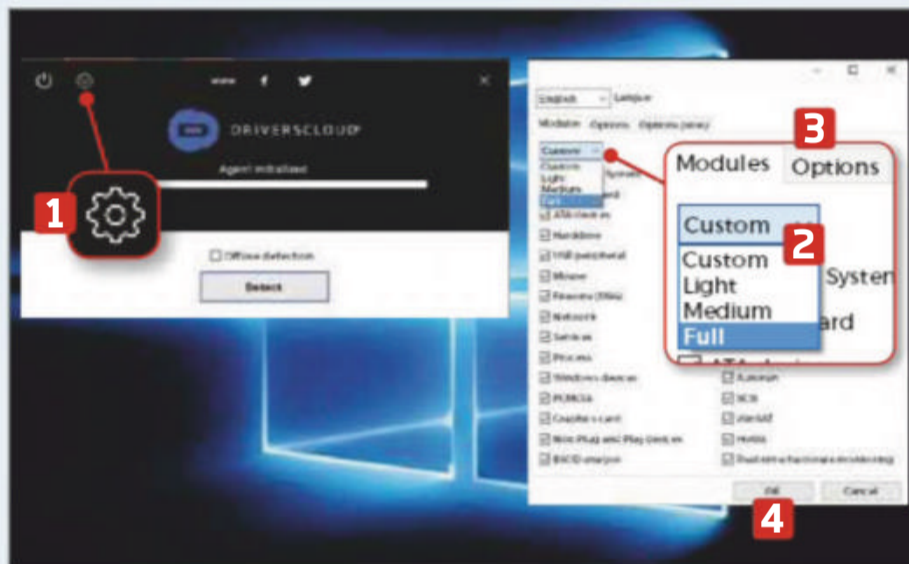
Steve Clark says

You should sign up for a DriversCloud account before running driver detection – without a profile to store results, configurations are only saved for about 20 minutes. While you must be connected to the internet to identify the latest drivers, you can run the tool, tick ‘Offline detection’ and choose Detect to create and save a report of your configuration, then upload it to bit.ly/dc471 when you’re next online.



DriversCloud is detailed enough for professionals and simple enough for beginners. This clever all-in-one driver updater checks your PC configuration to see whether your hardware has the latest drivers, then offers quick links to the most up-to-date ones from manufacturers and DriversCloud’s own servers.

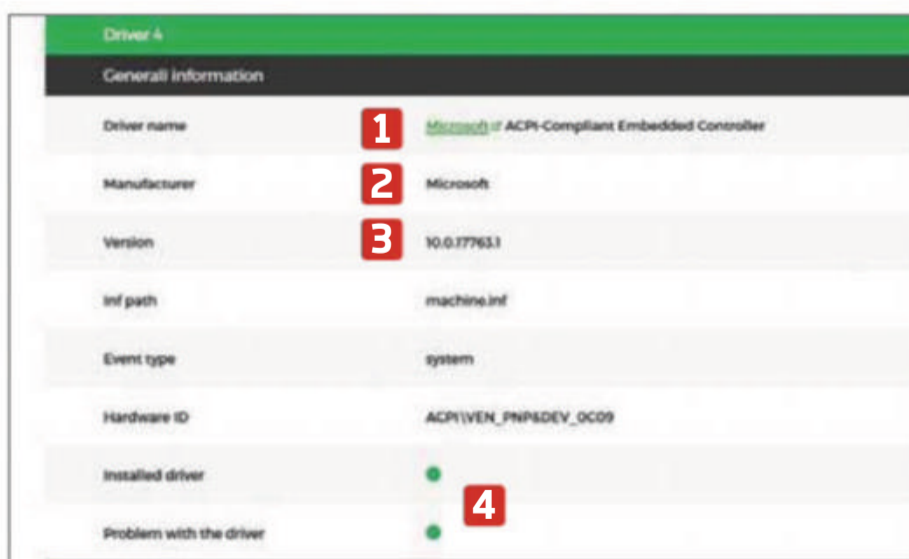
After you download and run the program, the whole scanning procedure takes place in your browser (with support for Chrome, Edge, Safari, Firefox and Opera), making it simple to keep almost any Windows PC updated. Running a scan lets you explore your computer’s setup, from listing every installed program and device to monitoring your PC’s temperature and power. As always, we recommend you make a full backup of your PC before experimenting with this software – just in case something goes wrong.



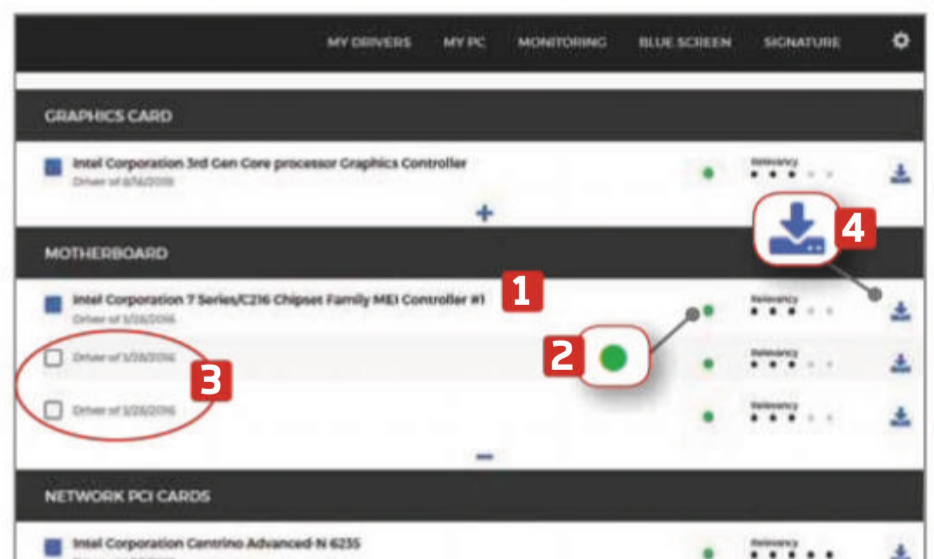
1 As soon as DriversCloud loads, click the Settings cog. **1** This lets you select which modules to scan, either by ticking each box or by using the drop-down menu to choose a Custom, Light, Medium or Full scan. **2** This is plenty in most cases but if you want more depth, click the Options tab. **3** Once you’ve made your selections, press OK. **4**



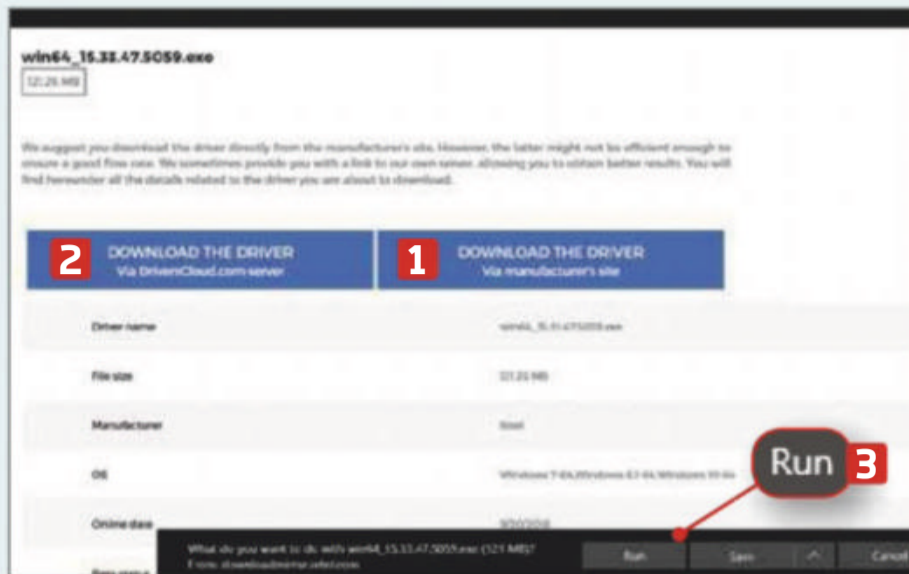
2 Click Detect to begin the scan. Results open in a browser window, with a list of components in a sidebar. **1** Click Summary **2** for an overview of your PC and click the cog beside each section **3** to refine what the tool reports on: tick each box **4** and click Validate **5** to confirm. These details are now listed alongside the base information.



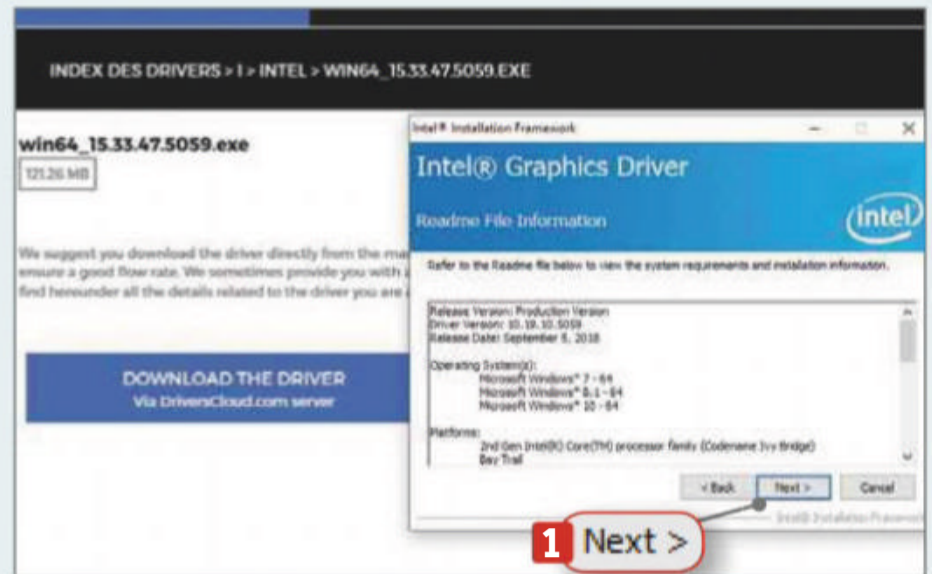
3 To see which drivers are already installed, scroll through the sections on the sidebar – for instance, under ‘Device manager’ and Peripherals. These sections display the driver name, **1** manufacturer **2** and version. **3** Some may also show a date. The tool operates a traffic-light system: green means a working driver is installed; **4** red indicates a problem.



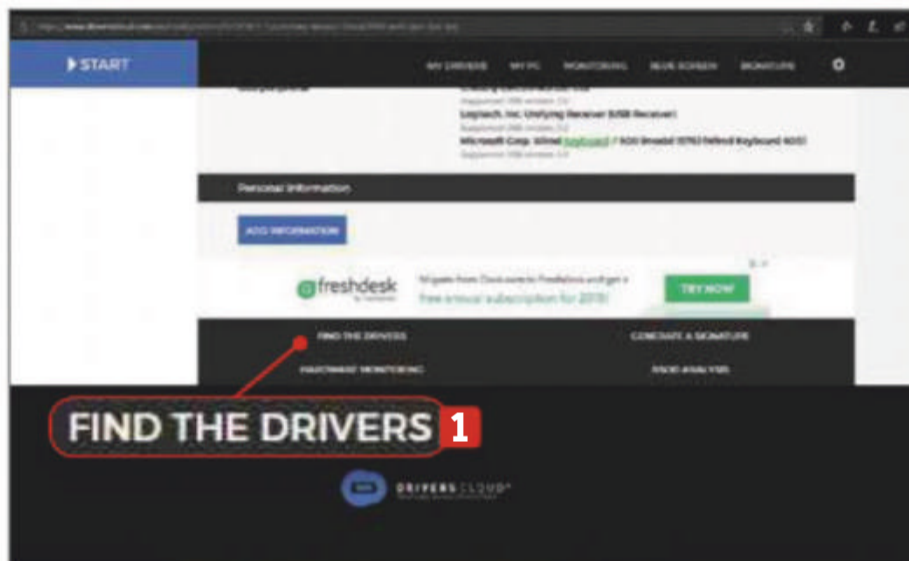
4 Click Find The Drivers at the bottom of the page to see which drivers need an update. New drivers **1** need to be downloaded individually, while the traffic-light system **2** lets you know if a driver is older or newer than the one you have installed. Click the plus sign to show mirrored and older versions. **3** Click the Download icon **4** for your chosen driver.



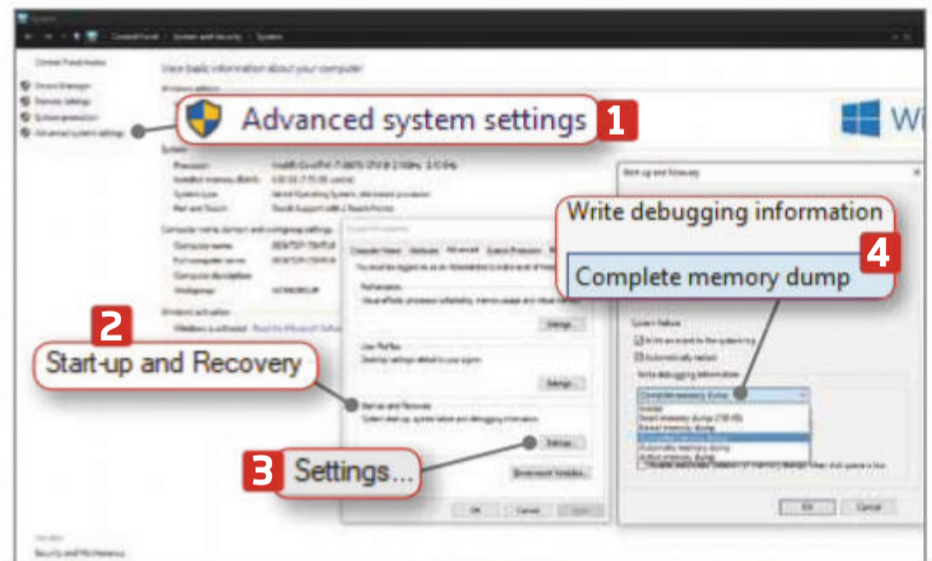
5 We recommend downloading drivers from the manufacturer's website, so choose that option if it's available. **1** Otherwise, click the option to get it from the DriversCloud server. **2** Now Run the EXE file **3** or open the Zip file. When asked, let your driver 'make changes to your device' by clicking Yes, before launching the driver installer.



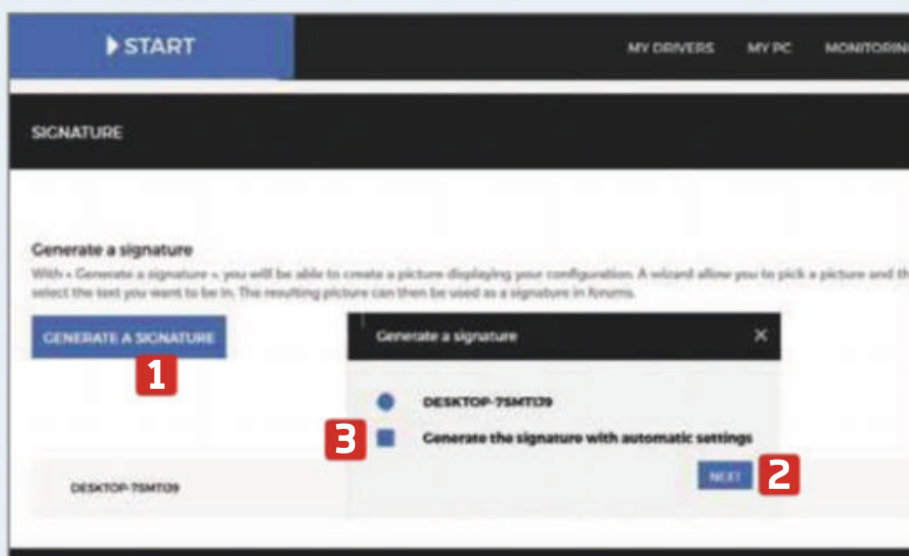
6 EXE files run automatically, but Zip files need to be extracted and opened manually. Click Next **1** to begin the process and agree to any terms and conditions that appear. Choose your configuration – Standard or Typical is a safe bet – then click Install. Finish the driver installation and, if prompted, download any further updates.



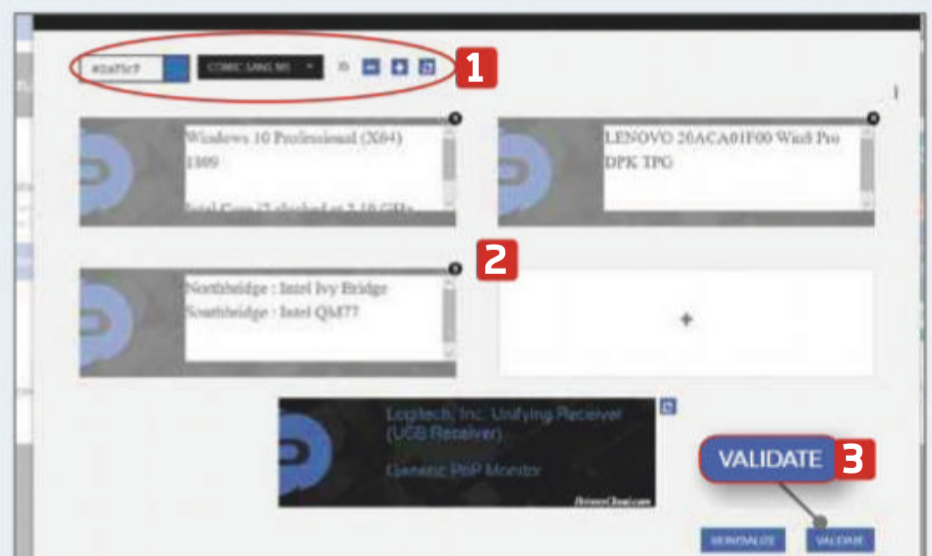
7 To check the driver has successfully updated, run the DriversCloud detection again before heading to the Find The Drivers page. **1** Updating to the latest version means the driver no longer appears in the list. Now, repeat steps 5 and 6 to download and update each driver in turn. Run your PC for a while after each update to check it isn't causing problems.



8 BSOD Analysis shows if drivers are causing crashes. Ensure Windows logs these events by right-clicking This PC and choosing Properties. Open 'Advanced system settings', **1** Advanced, 'Start-up and Recovery' **2** and click Settings. **3** In the 'Write debugging information' menu, choose 'Complete memory dump'. **4** Restart your computer.



9 If you're logged into DriversCloud, create a handy image of your current PC configuration by clicking Generate A Signature, **1** then do the same on the following page. These images can be used to share your configuration online. In the pop-up, click Next **2** to instantly make a default signature or untick 'Generate the signature...' **3** to create your own.



10 To design a custom signature, select the size, click Browse to upload a small background image, then press Next. Use the selection box to set where on the image the system settings are displayed. Click Next to choose font options **1** and use the boxes **2** to decide if that info is displayed. Click Validate **3** to generate a link and HTML codes.



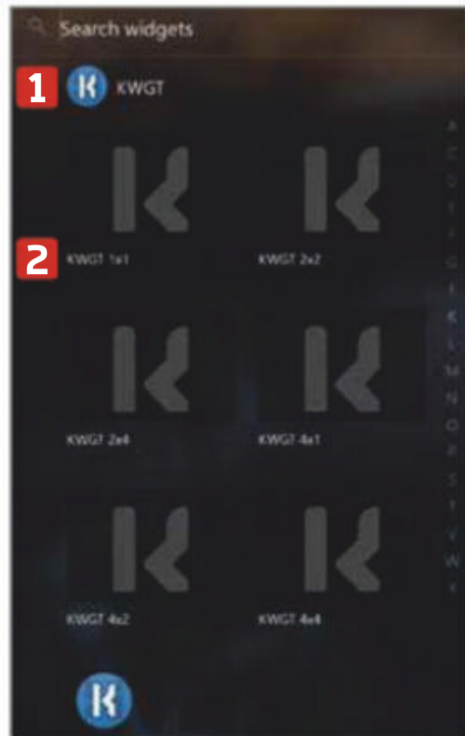
Create your own customised Android widgets

Widgets are useful applications that live on your phone's home screen, providing at-a-glance info and easy access to apps. Sadly, many of them are poorly designed. KWGT Kustom Widget Maker makes it easy to create

stylish widgets that do exactly what you want them to do. In this workshop, we show you how to make your own personalised widget from scratch.



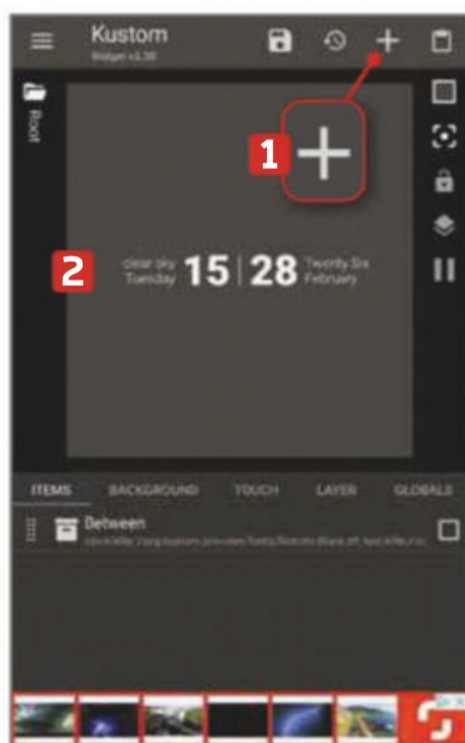
KWGT Kustom Widget Maker: bit.ly/kustom471 | 10 mins | Android 4.4+



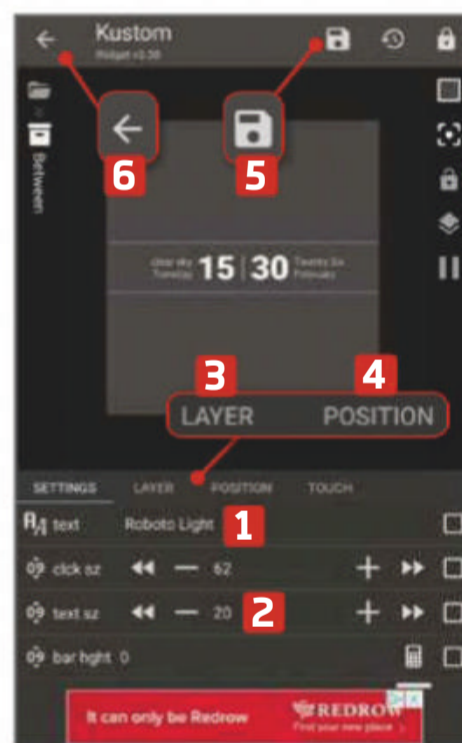
1 Start your widget creation with a long-press on your phone's home screen – we're using MS Launcher, but the process is the same for most Android launchers. Tap 'Add widgets', then scroll to the KWGT section. **1** Select a widget template based on size, **2** but make sure there's enough space for it.



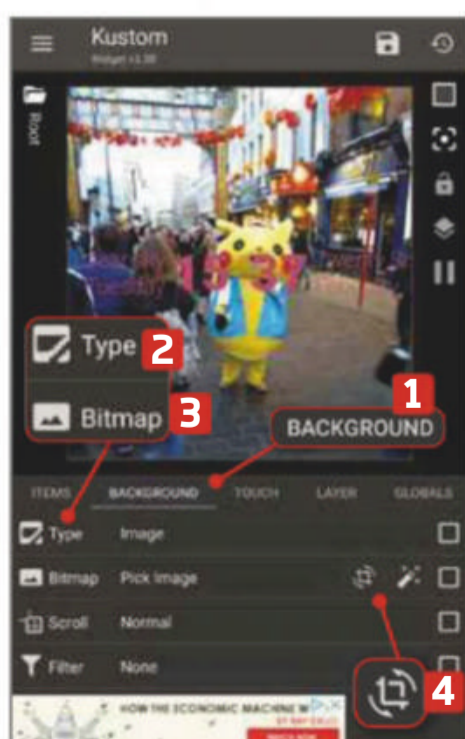
2 Once the widget template is placed on the home screen, tap it to begin setup. The Installed and Featured tabs **1** present a variety of pre-built packs showing information such as battery stats, calendar and clock. To create your own fully customised widget, tap the 'new page' icon. **2**



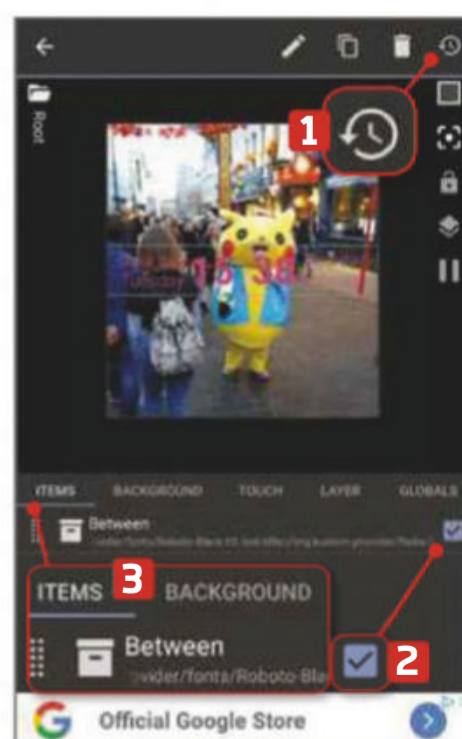
3 With the blank canvas open, press the plus sign **1** to choose a widget type – for this workshop, we've selected Komponent. Select the widget's function, such as media playback controls, weather or clock. This places a default design on the customisation canvas. **2**



4 Under Items, tap the widget type to customise the font, **1** size **2** and colour. Tap Layer **3** to determine when your widget is visible, and which time zone and location is used. Options under the Position tab **4** let you move the 'komponent' around the widget tile. Tap the Save icon, **5** then tap Back. **6**



5 Tap Background, **1** then Type. **2** To set a coloured background, choose Solid and select your colour from the palette. Alternatively, tap Type, Image, Bitmap **3** and choose a photo from your media gallery. Press the rotate icon if required. **4** You can modify the photo's appearance by scrolling down and using the arrows beside Blur and Dim. Tap Save.



6 You can tweak your creation at any time: from the home screen, tap the widget to open the editor. Pressing the clock icon **1** lets you restore a previous version, while ticking the box **2** next to an entry in Items **3** lets you edit the widget's name, make a copy or delete it.



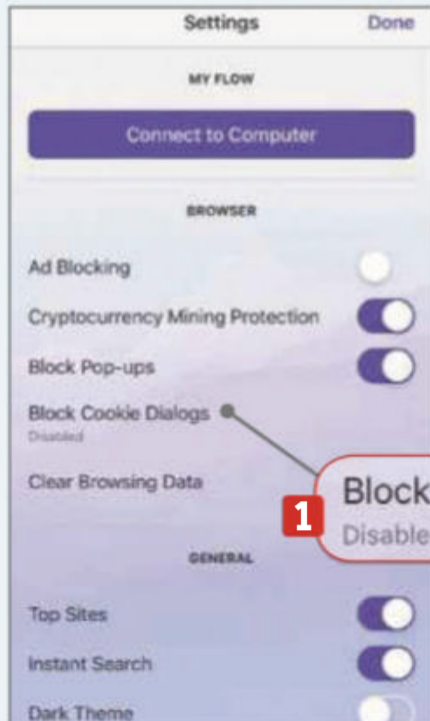
Block cookie warnings in Opera Touch

Most websites nowadays pop up a cookie dialogue box, which blocks your screen and requires an extra time-wasting click to get to your favourite sites.

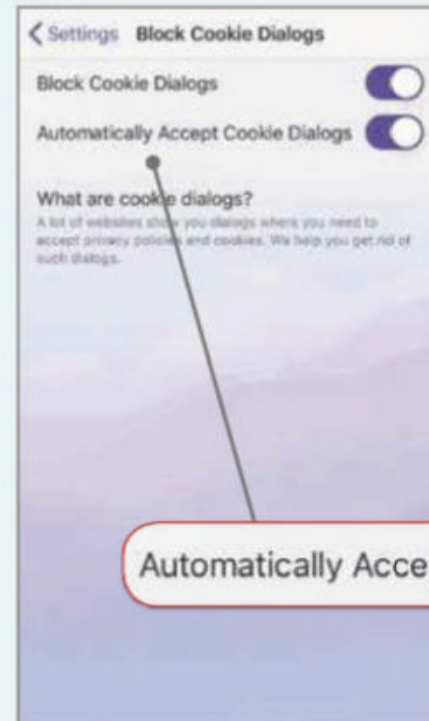
Opera Touch, the mobile browser for Android and iOS, has

Opera Touch: bit.ly/opto471 | 10 mins | **Android 5.1+** **iOS 11+**

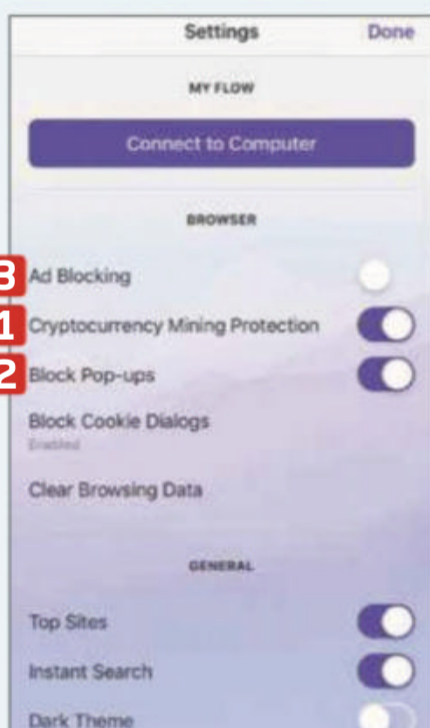
just introduced a handy tool that zaps these annoyances. In this Workshop, we show you how to block cookie pop-ups and use some of the other handy new tools in Opera Touch.



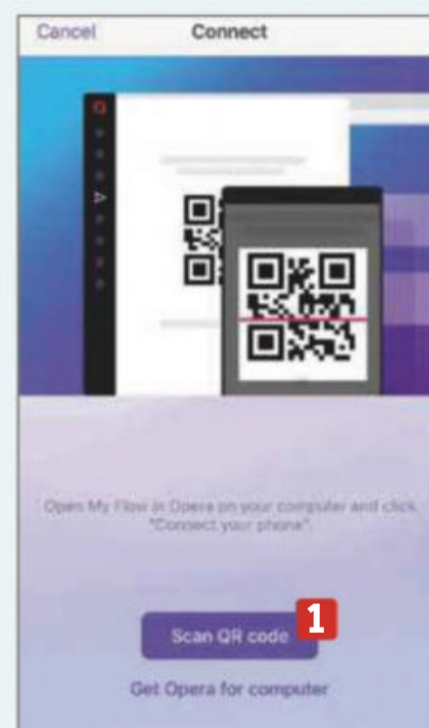
1 Blocking cookie dialogue boxes is a new feature, so it's still switched off by default. In the Opera Touch browser, tap the three-dot menu and choose Settings. Tap Block Cookie Dialogs. **1** On the next screen, toggle the Block Cookie Dialogs switch to On.



2 You can choose whether or not to Automatically Accept Cookie Dialogs. **1** Many people accept, to make sure that a site's functionality doesn't deteriorate. If you'd prefer to have more anonymity and don't want sites following you (even with useful things such as shopping carts), switch it off.



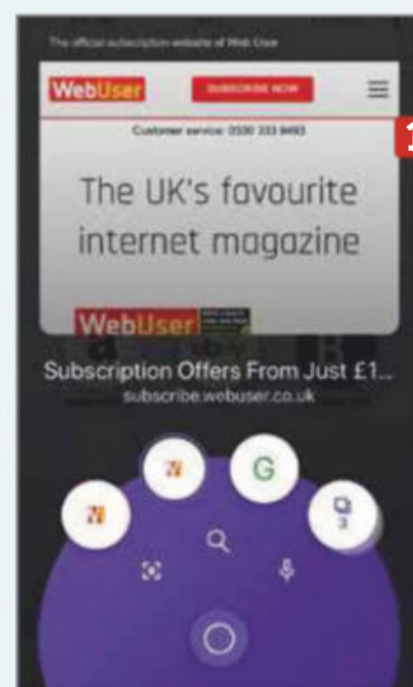
3 There are a number of other security tools you can control from Settings. Cryptocurrency Mining Protection **1** and Block Pop-ups **2** should already be selected (unless you've switched them off), but you might also want to use Ad Blocking, **3** particularly if you need to save data while you're browsing away from Wi-Fi.



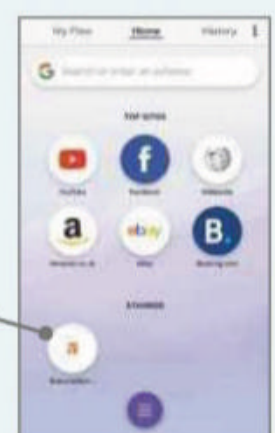
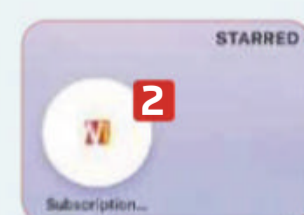
4 One of the best features of Opera Touch is how well it integrates between devices. If you have Opera installed on your computer, open My Flow to get a QR code. On your mobile device, open Settings and tap the 'Connect to Computer' button. Tap the Scan QR code button, **1** allow it access to your camera and hold the device up so it captures the QR code displayed on your computer screen.



5 Opera Touch on an iPad has an extra setting. The Fast Action Button is positioned in the middle of the screen on Android and iPhone, which places it out of reach of your thumb on an iPad. An option in Settings lets you move it to the left or right, **1** depending on your preference.



6 There's now a tab preview on the Fast Action Button. Tap and hold it to expand and, when you move your finger over one of the tab icons you get a preview of the site, above. **1** Also, if you add a star to a site from the menu button, it now appears on the Home screen. **2**



Weekend Project

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



How to...

Play any game on your biggest screen

You don't need a console to play video games on a big screen. **Wayne Williams** shows you how to enjoy PC and mobile games on your TV

If you're a hardcore gamer, then you probably already have a games console such as a PS4, Xbox One or Nintendo Switch. But you're also likely to have favourite games you play elsewhere, too, such as on your PC or mobile device. If you don't own a console or you'd like to enjoy some of your other games on the big screen, you'll be pleased to hear you can play them on your TV without paying a penny.

For this Weekend Project, we look at various ways to do this using hardware you probably already own – such as a mobile phone, tablet, Raspberry Pi or set-top box. There's a wealth of fantastic games available to play, too, ranging from the latest AAA titles to retro classics.



Use the Steam Link app for Raspberry Pi

If you're an avid PC gamer, you'll already know about Steam (store.steampowered.com), the online gaming platform that lets you buy and play games on your PC. Valve, the company behind Steam – along with classic games such as Half Life – used to offer a little set-top box called Steam Link, which beamed games from your Steam library to your TV.

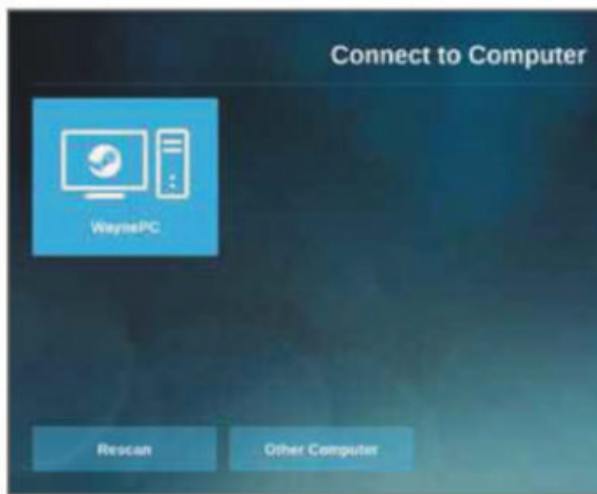
The company pulled the plug on the device last November, but the good news is it has released a free app that lets you turn a Raspberry Pi 3 (or newer, www.raspberrypi.org) into a DIY Steam Link.

Your Pi will need to run the Raspbian Stretch operating system (bit.ly/rasos471) and you'll also need a PC with Steam installed on it. Setting everything up is a very straightforward process and – best of all – the app supports Xbox One and

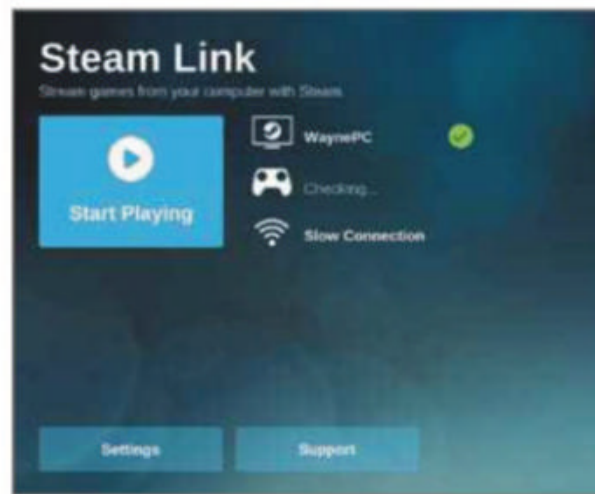
Steam controllers.

Valve recommends you stream your games over a wired Ethernet connection where possible, because this will deliver the best results, but if you want to use Wi-Fi you can. Check the dedicated page at bit.ly/stli471 for advice on how to improve wireless connectivity.

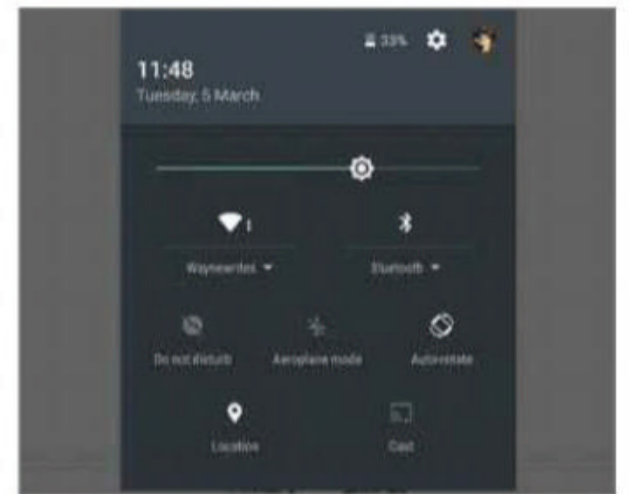
To install Steam Link on a Pi, type the following commands into the operating system's Terminal (the Linux equivalent



Link your Pi to a PC running Steam on the same network



Click the Start Playing button to make the connection and play a game



If you have a Chromecast, use it to mirror games on an Android phone to your TV

of Command Prompt):

```
sudo apt update
```

```
sudo apt install steamlink
```

Once Steam Link is installed, you can run it from the Games menu. You need to pair your controllers and then connect to the PC that's running Steam, which has to be connected to the same network. When prompted, you need to install drivers for Steam on your PC.

Further information on getting started and using Steam Link is available from the community at bit.ly/slcom471.



Once you've connected your Pi to your PC, you can play the games in your library

Cast games from an Android device

If you own a Google Chromecast and an Android phone, you can use them to cast games directly to your television. The option isn't available on every Android phone but it's very easy to set up if your device has it. We found that the performance of screen mirroring is surprisingly good, provided your phone doesn't struggle to run the game you want to mirror.

Make sure your Chromecast is set up, then pull down the notification bar to reveal the Quick Settings panel. Tap the Cast button and select your Chromecast. If the Cast option isn't available on your phone, you need to take a different approach and use the Google Home app instead.

Once you are mirroring your device's screen on your television, launch the game you want to play. Because the activity is mirrored on both the TV and your phone, you can look down and check that your fingers are in the correct position for the controls.

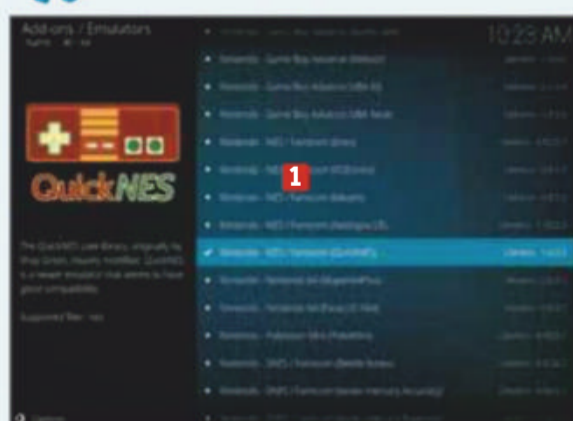
Play iPhone games on the big screen

There are a couple of ways to mirror your iPhone or iPad's screen, so you can play your mobile games on a TV. One option is to connect your phone to the set using an HDMI adaptor. Apple offers its own solution for a rather pricey £49 (bit.ly/ahdm471) but the reviews for it aren't great. You can get a cheaper third-party version from Amazon for £18 (bit.ly/amhd471), which has more positive reviews. Connect the adaptor to your device, then add an HDMI cable and plug this into your TV.

Unquestionably the best way to stream or mirror iOS games on the big screen is to use Apple TV and the AirPlay protocol. Apple TV costs £149 (bit.ly/atv471), so it's not worth buying specially for this purpose, but if you already have one then it's a simple matter of making sure that Apple TV and your phone are on the same wireless network. Open the control centre on your iOS device, tap the Screen Mirroring button and select your Apple TV in the list.



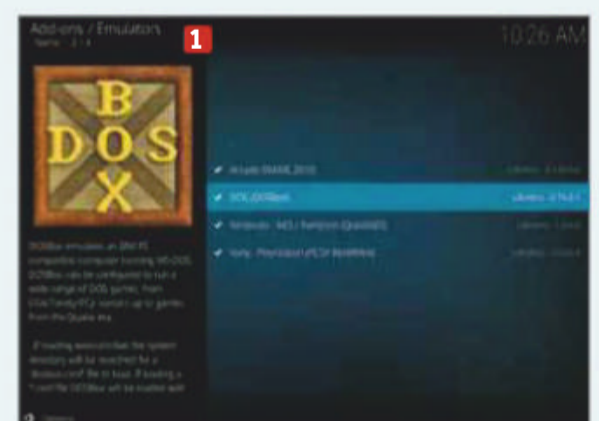
MINI WORKSHOP | Install game emulators in Kodi



1 The first thing you need to do is install an emulator. From Kodi's front screen, click Settings, then Add-ons (the open box) and select 'Install from repository'. In the list, find and click 'Game add-ons'. On the next screen, click the Emulators link. You're presented with a long list of supported emulators. **1**







2 For some consoles, there are multiple emulators available. For the original Sony PlayStation, for example, PCSX ReARMed is the best choice. Select it in the list and, on the next screen, click the Install button. **1** You're shown what other add-ons will be installed alongside it (typically for controller support).



3 If you want to play games from different systems (PC, arcade machines and so on), go back and install more emulators. To see which ones you've installed, go to System, Add-ons. Click the dots at the top if you need to get back to the first menu, then go to My Add-ons, 'Game add-ons', Emulators. **1**

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| 3 |  | First Utility: First Broadband | £18.99 | 18 months | 11Mbps avg. speed | ∞ unlimited | £227.88 |
| 4 |  | Virgin Media: Player Bundle + Fibre Broadband + Weekend Calls | £33.00 (£51 after 12 months) | 12 months | 54Mbps avg. speed | ∞ unlimited | £396.00 |

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Data supplied by www.broadbandgenie.co.uk. Correct as of 4 March 2019.

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PLUS: WINDOWS 10 UPDATE SURVIVAL GUIDE

**On sale
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This adapter from Amazon offers a way to connect an iOS device to your TV

Play games through your TV browser

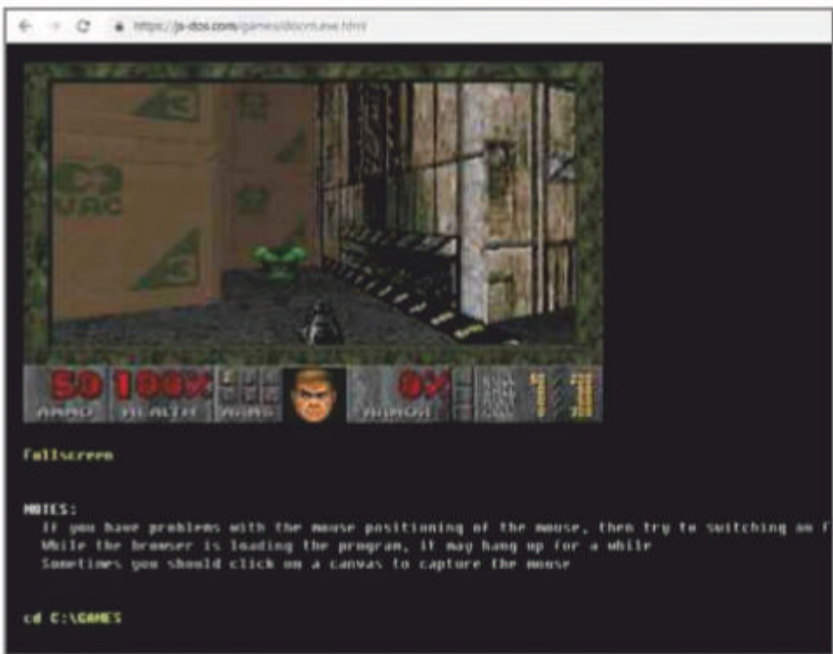
If you have a smart TV or a streaming set-top box with a web browser, you can use them to play games. Simply open the browser and navigate to one of the many websites offering playable games. There are, however, some issues to be aware of – some of the available games might require a particular browser, such as Chrome, to work properly, and you may also need to consider how a game is played. If the only controller you can use is your TV’s remote, then you’re going to struggle with a lot of games. For example, the browser-based version of classic first-person shooter Doom (bit.ly/dm471) displays and runs perfectly on our 4K Panasonic TV, but working out how to start a game and control it with a remote is almost impossible.

Doom runs well in a browser, but you’ll struggle to play it using a TV remote

Play vintage games in Kodi

Kodi 18 ‘Leia’ (kodi.tv), the latest version of the hugely popular home-theatre software, has introduced a new feature that lets you play classic games using emulators. This includes releases from previous games consoles, such as the NES, SNES, Gameboy, PlayStation One and Sega Saturn, as well as DOS games. Support for more games systems will be added in the future. You can also sync and configure controllers in Kodi. We show you how to install and play emulators and games in Kodi in our Mini Workshops on page 59 and below.

It’s worth pointing out that when playing games in an emulator, you are technically breaching copyright law if you download and play a game that you don’t



already own. However, all the vintage games in the Internet Archive Game Launcher mentioned below are exempt from copyright restrictions.



You can play old classics such as Street Fighter from within Kodi

MINI WORKSHOP | Install and play games in Kodi

1 The Internet Archive Game Launcher (IAGL) is a great way to get the games to play in your emulator. To install it, you first need to download the Zach Morris Kodi Repository from bit.ly/zach471. In Kodi’s Add-ons Browser select ‘Install from zip file’ **1** and find and install the repository you downloaded.

2 Navigate to the Add-ons section’s root and select ‘Install from repository’. You will see a new Zach Morris Add-ons section. Click this, then on the next screen select ‘Game add-ons’ and then ‘Game providers’. You’ll now see Internet Archive Game Launcher **1** listed. Select this, then click Install and OK.

3 Once it’s installed, you’re ready to find and play some games in Kodi. Go back to the very first screen, hover your mouse over Games and then select Internet Archive Game Launcher. Agree to the terms, click ‘Browse by Category’ and select a game to play. Click Launch **1** and it will download and open in your emulator.

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- STEP 3** Choose whether to create an optional **Zinio** account
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Web User Masterclass

Take control of your home network

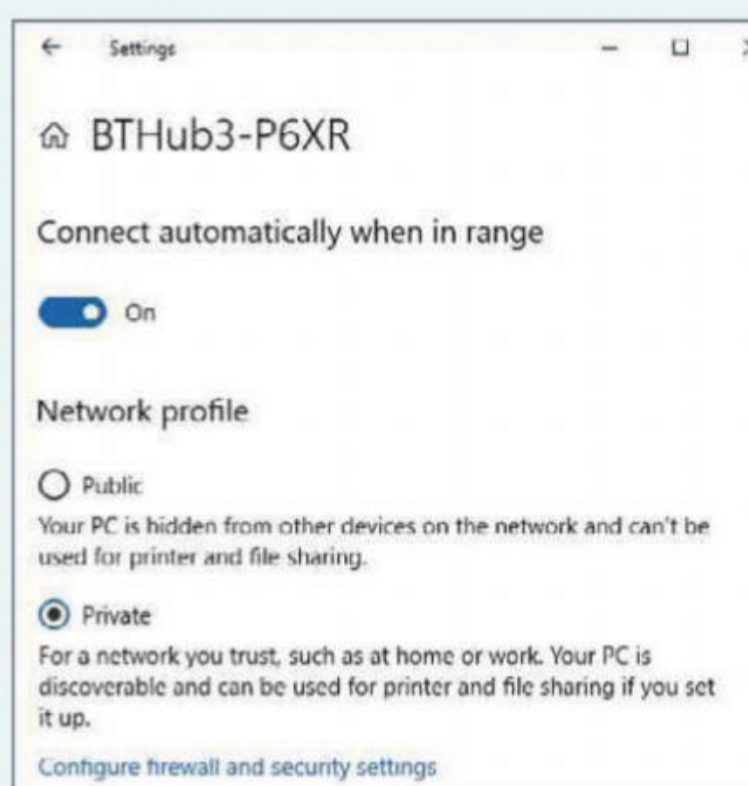
Configure public and private networks

Windows classifies a network as either 'public' or 'private' and uses this classification to apply security features, such as the firewall, and the sharing of hard drives, folders, printers and so on. Private networks have all sharing options enabled, while public networks disable anything that might be a security threat.

When a computer connects to a network, the appropriate public or private settings are selected. If you are having problems with sharing files or connecting to printers, it may be because the public network settings have been activated, which locks everything down.

In Windows 10, open Settings (Windows+i) and click 'Network & Internet'. Select 'WiFi' on the left, then click the network you're connected to on the right. If you're at home and you trust all the other devices and people that might be connected to your network, select Private in the 'Network profile' section.

Select the Private network when you're at home to enable printer and file sharing



Use Ethernet when possible

Ethernet or LAN (Local Area Network) sockets look a bit like a larger, squarer version of the telephone socket that your landline plugs into. They're a standard feature in many PCs, and allow you to make a wired connection between your computer and other network devices. Your router will almost certainly have its own set of spare Ethernet sockets (usually around four), so if your PC is in the same room, it's a good idea to use an Ethernet cable to connect them directly. No software or setup is required – Windows will automatically sort it all out for you.

A direct Ethernet connection to your router offers advantages of speed and reliability. Standard 'Fast' Ethernet is rated at 100Mbps (Megabits per

second), but if both your computer and router have 'Gigabit' (1Gbps) Ethernet sockets, the connection is much faster than Wi-Fi, even at close range. It's also more reliable and doesn't suffer from interference, which can be a problem if your neighbours have strong Wi-Fi or you live in a densely populated area.

The drawback to a 'wired' Ethernet connection is that you need to be able to string the Ethernet cable between your devices without it getting in the way. This is usually feasible if your device is in the same room as your router, but gets messy if you need to trail cables beyond.

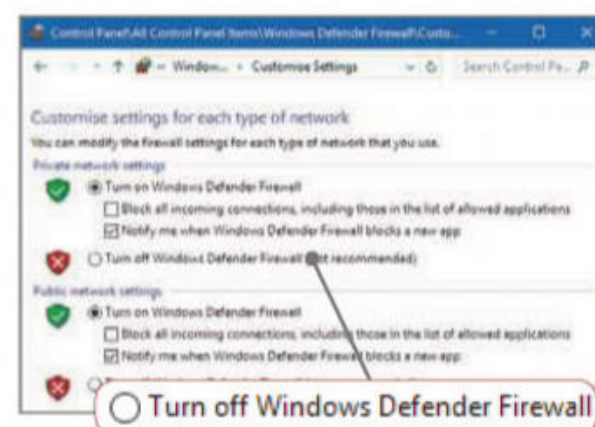
Enable the firewall

If you don't have a firewall enabled as part of a paid-for security suite, it's essential to get the Windows version configured. A firewall keeps out any hackers and malware that try to gain access to your computer through the network, so you should have a firewall enabled by default. You can check this from the Control Panel. Open Windows Defender Firewall (it used to be Windows Firewall). If it says 'These settings are being managed by vendor

application' followed by the name of your security software, then everything's fine. Otherwise, turn it on for Private and 'Guest or Public' networks.

Disable the firewall

If you're having trouble setting up a wireless printer, streaming to a Chromecast or connecting to another PC or other network device, it may be because the firewall is blocking you. You can temporarily disable the firewall while you get the network device working, then enable it again after everything is set up and you know it's working.



Temporarily turn off Windows Firewall when setting up new network devices

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.

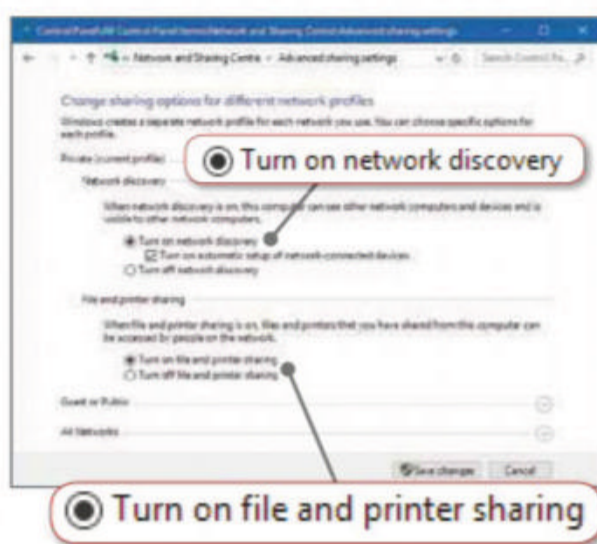


Share and discover

Your network can be used to connect one computer to another, to share access to files and folders. For this to take place, certain features need to be enabled in Windows. Open the Control Panel and choose 'Network and Sharing Centre', then click 'Change advanced sharing settings'.

This page should say that the Private profile is active. Expand it to see 'Network discovery' and 'File and printer sharing'. Turn them both on and also enable 'Turn on automatic setup of network-connected devices'.

Expand the All Networks section and turn on public folder sharing, use 128-bit encryption and turn off password-protected sharing.



To share files on PCs on the same network, enable these Control Panel options

Connect to another PC

Connecting two Windows PCs on the same network is a straightforward process. With the Private network selected and the sharing options switched on, open Explorer and select Network in the sidebar. You'll see that the PCs on the network are listed. Double-clicking one makes a direct connection with it.

If you want to keep out unauthorised people, open the Control Panel, choose 'Network and Sharing Centre', then 'Change Advanced sharing settings'. Under All Networks, turn on 'Password-protected sharing'. Now, when someone double-clicks this PC on the network, they will be asked for the username and password of an account that has been set up on the PC they are trying to access.

Use the troubleshooter

If you're having problems with networking or network devices – such as wireless printers – it's best to use a troubleshooter. Open the Control Panel, choose Troubleshooting and click 'View all'. Run Incoming Connections, Internet Connections, Network Adapter and Shared Folders.

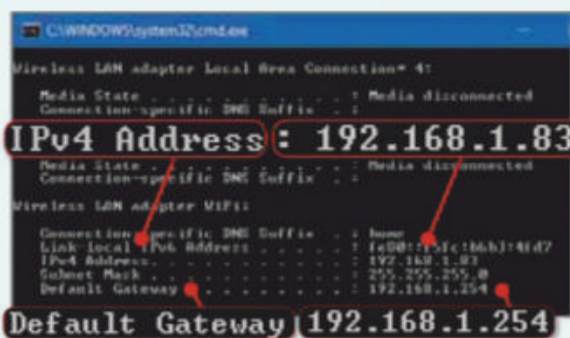
TAKE IT TO THE NEXT LEVEL

More advanced tips for when you're feeling brave

Find your IP address

Every device connected to a network is given an IP (Internet Protocol) address, such as 192.168.2.1. The address is used to direct network traffic to the correct device in much the same way that a postman knows where to deliver letters by using a house number and post code.

Occasionally, you may need your PC's IP address, so it's useful to know how to find it. Press Windows+R, type `cmd` and press Enter. At the Command Prompt, type `ipconfig` and press Enter. Your computer's IP address is listed as the IPv4 Address.



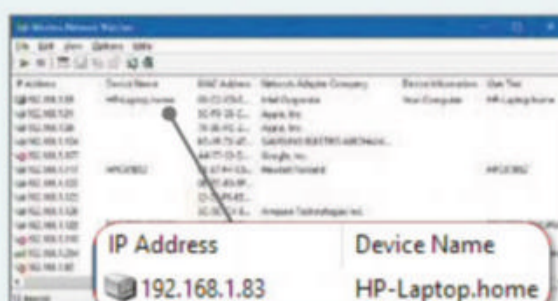
Run `ipconfig` at the command prompt to see useful network information

Get the router's IP address

Routers are often configured by typing their IP address into a web browser. To find this address, follow the same instructions as the previous tip and see Default Gateway.

Get IP addresses of devices

To find the IP address of other devices on your network – printers, tablets, Chromecasts and the like – requires a tool. Wireless Network Watcher (search for it at www.nirsoft.net) tests all possible IP addresses and shows the names of any devices it finds. It displays manufacturer names, so if you have an HP printer, it will be listed as a Hewlett Packard device, while your Amazon Echo will be shown as an Amazon Technologies device. It can be confusing if there are several devices from the same company, though, such as an iPhone and iPad.



Wireless Network Watcher shows the IP addresses of your network devices

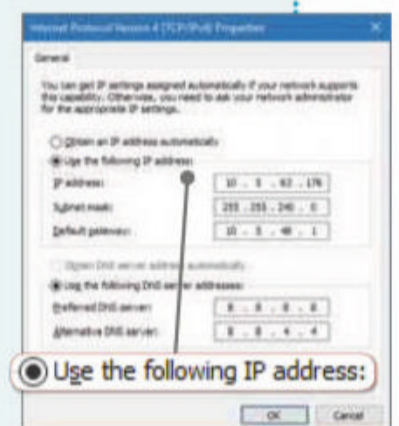
Phone apps, such as Android's WiFiman (bit.ly/wfm471), also scan networks to show devices' IP addresses. Tap the List icon to show Wi-Fi networks, then tap Discovery to show devices on the current network.

Use a static IP address

Your router uses DHCP (Dynamic Host Configuration Protocol) to automatically assign a unique IP address to all devices on a network. Most often, the same IP address is assigned to a device every time it's switched on, but this isn't guaranteed, which can cause problems if Windows, software or a device relies on knowing the IP address.

It's usually best to leave your router to assign IP addresses but if a changing IP address is affecting software or devices, you can assign a static one that never changes. Open Control Panel's 'Network and Sharing Centre' and click the link under Internet. Click Properties, then Internet Protocol Version 4, then Properties again, and select 'Use the following IP address'.

Press Windows+R and type `cmd` then `ipconfig`, pressing Enter after each. Under Wireless LAN Adapter, find the IP address, subnet mask and default gateway, then transfer the numbers to the IPv4 Properties box. Under 'Use the following DNS server addresses', enter 8.8.8.8 and 8.8.4.4 (Google's DNS servers), unless you have another that you prefer. Click OK and the IP address you've set will always be used.



Set a static IP address to stop it changing

If you accidentally give two devices the same IP address, use Wireless Network Watcher or a phone app to show which IP addresses are in use and set an unused one. If your network is on 192.168.1.X, 'X' can be any unused number between 0 and 255.

The Windows 10 Settings app also lets you set IP addresses. Click 'Network & Internet', 'Change connection properties', then click Edit under IP settings. Select Manual, IPv4 and enter the settings as before.

Ask the Expert

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



OFFICE

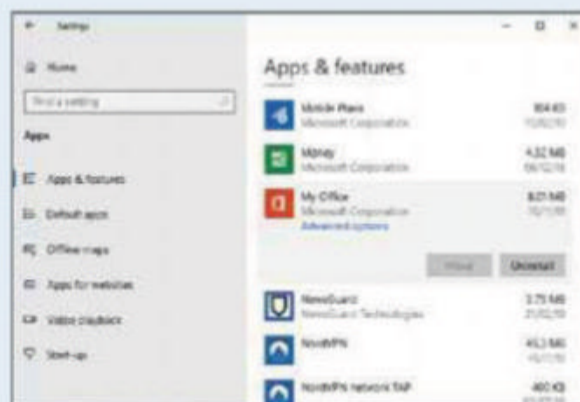
Repair a broken Office installation

Q I recently bought a second-hand HP desktop PC, loaded with Windows 10, Microsoft Office 2016 and other programs. While using Wise Program Uninstaller (bit.ly/wpu471) to remove the programs I didn't want, I found many duplicated security updates for Microsoft Office 2016.

After making a restore point, I used Wise to uninstall the first duplicate. When I then tried to open documents in Word and Excel, I saw the message "The operating system is not presently configured to run the application". I tried System Restore, but it displayed error code 0x80070091. How can I recover Office 2016?

C Vincer, via email

A It's not the first time we've heard of a PC cleaning tool removing essential files. These programs can be useful, but you should make a full



Apps such as Office have built-in repair tools accessible in 'Apps & features'

backup of your PC before you use one. System Restore is a limited type of backup and isn't always sufficient.

Fortunately, Office has a built-in repair tool. If Windows is up to date, right-click Start and select 'Apps and Features'. Select Office, then click Modify. If it says 'How would you like to repair your Office programs?', select Online Repair, then Repair; if it says 'Change your installation', click Repair, then Continue. You may also see a repair option if you go to Control Panel, 'Programs and Features' and choose Uninstall Office.

USB flash drives are incompatible. You may be able to buy an old, low-capacity USB1 thumb drive from eBay or Amazon and use that to transfer your files.

If all your PCs have internet access, you can use OneDrive and Google Drive, which would give you 20GB of free online storage space between them. On the Windows 7 PCs, download the apps from onedrive.com and drive.google.com, and install them. Drag files you want to keep into the OneDrive and Google Drive folders, and they will sync to any other computers you have.

If you have an old version of Chrome installed on the Windows 95 and 98 computers (try www.oldversion.com if you haven't), you could zip your files and upload them to OneDrive or Google Drive through the browser.

Those 95 and 98 computers have IDE hard drives, so you could use an adapter to connect them to a USB socket on a newer PC. Search eBay and Amazon for 'USB IDE adapter' or 'USB IDE converter'. However, this would mean removing the hard drives, which can be difficult on some laptops.

GENERAL PC

Break free of a restart loop

Q Every time I reboot my PC, it gets as far as the little revolving white dots and then seems to get stuck in a loop. I've left it like this for up to an hour to see if it corrects itself, but it never does.

I asked my younger son and his older brother (who works in IT) for a solution, but the latter could only tell me to reboot three times, at which point you see a Help page that lets you reset the operating system, retaining your own files but knocking out all the programs.

This works but I still can't switch off the PC without it looping again the next time I turn it on.

Tony Shapps, via email

A PCs can spend two hours or more updating Windows, during which they show little more than rotating dots, so try leaving your PC overnight to see if it eventually starts. It may simply be very busy, so if you usually stop it after

GENERAL PC

Transfer files from old PCs

Q How do I transfer files from one PC or laptop to another when the PCs in question run Windows 7, 98 and 95? I'd like to take all the personal files off so I can safely dispose of them. All the PCs work but they have different types of connectors. I know I can use a special type of USB or Ethernet cable, but which is best? Can I use my external Western Digital hard drive, which is formatted as NTFS?

Barry Singleton, via email

A Transferring files from Windows 95 and 98 PCs can be tricky because software and hardware was much more limited in those days. The Windows 7 PC is less of a problem.

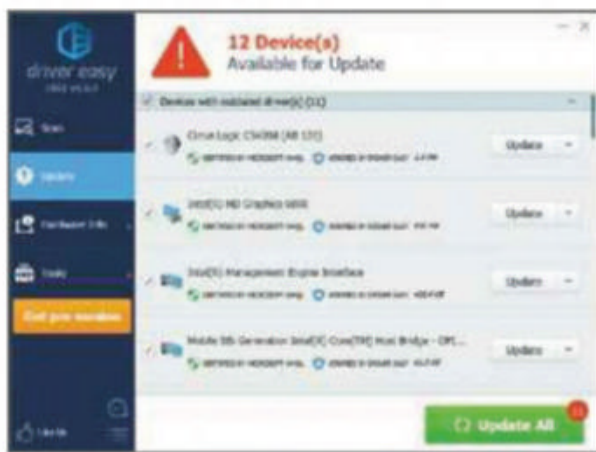
There are several possible ways to transfer files from one PC to another. For example, all the PCs have USB

sockets so an obvious method would be to plug in the Western Digital USB drive. This is fine for a Windows 7 PC, as long as your USB drive has a capacity of less than 2TB. It won't work with Windows 95 and 98 PCs, however, because old versions of Windows don't support the NTFS filing system and can't access drives with such large capacities.

USB support was in its infancy in the days of Windows 95 and 98, so modern



Getting files off an old PC can be tricky, so back them up before it's too late



Use Driver Easy Free to find and update drivers when your PC has a problem

an hour, it may never get the chance to finish what it needs to do.

If you manage to get the PC running again, try holding down Shift as you click Shut Down. This performs a full shutdown, which can fix some problems. Alternatively, avoid shutting down by putting the PC in Sleep mode instead.

Holding down the power button for five seconds cuts the power and switches the PC off immediately. It's not recommended under normal conditions but if you can't shut down any other way, it may help temporarily.

The PC may be waiting for a hardware component to signal that it's ready. If it never receives the signal, there may be a problem with a device or driver. Unplug all devices from your PC and reboot. If it now works, the problem may have been caused by one of the devices you unplugged.

If you can boot your PC to the desktop and connect to the internet, go to the manufacturer's website to find and download the drivers and any other software for your computer. If you can't find the drivers or they don't help, try our driver-updating workshop on page 54 or use IObit Driver Booster Free (bit.ly/iodbf471) or Driver Easy Free (www.drivereasy.com) to update them.

SOFTWARE

Get WinOptimizer for free

Q I recently removed CCleaner from my PC and decided to try the free Ashampoo WinOptimizer PC cleaner. During the download, it mentioned a "Free 30-day trial period". Can you confirm that this software, which was recommended in *Web User*, is totally free or is it just a free 30-day trial?

Ian E Mitchell, via email

A There are two versions of this PC-cleaning tool on Ashampoo's website (www.ashampoo.com): WinOptimizer 16 and WinOptimizer Free (bit.ly/wofree471). The first is available



WinOptimizer is free, so ignore the ads for the paid-for version if you don't want it

as a 30-day trial, but the second really is free. Did you download the free trial of the paid-for version by mistake?

You need to register the free version to get a licence key. However, the website does its best to get you to install the 30-day trial of the paid version, and if you click the wrong button, you may end up with the trial version instead of the free one. Take care to avoid any prompts to switch.

SOFTWARE

Recover a Money password

Q Many years ago I used Microsoft Money to track my finances, but I have since forgotten the password. Is there any way I can find out what it was? I now use a Mac with Parallels to connect to Windows. The files are still there but I can't open them.

Brian Todd, via email



You can't access password-protected tools such as Money without the password

A This old software is no longer supported, so your options are limited. Microsoft Money used two types of password: a standard password and a Microsoft ID. If you're lucky, you used the Microsoft ID, in which case you can use your existing Microsoft email address and password to log in. All Microsoft services use the same username and password, so it should be the same one you use to log into Windows or OneDrive.

If you used a standard password, you have little hope of accessing your account. Try every password you've ever used elsewhere, especially old passwords from years ago. If you have a password manager, try everything in that, too. People often use the same passwords for several services (even though they shouldn't), so you may stumble across it that way.

GENERAL PC

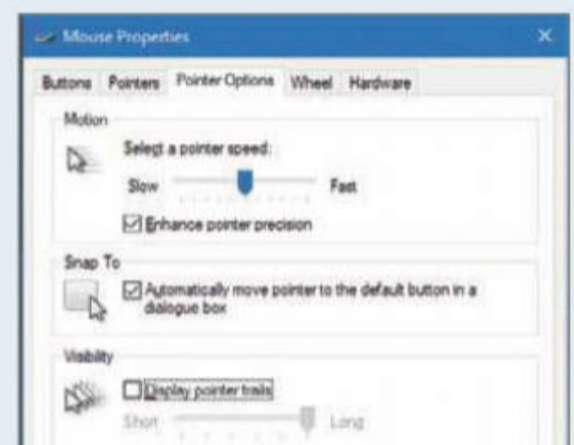
Reveal a hidden Delete option

Q If I right-click a file and select Delete in Windows 10, the delete box comes up as expected. However, when I move the cursor towards it, the box disappears behind the original window. I can still use it, but having to move the window is annoying.

This happens with other right-click options, too. I'm sure it wasn't always like this.

Alan Shore, via email

A This odd behaviour doesn't have an obvious cause, but it may be an accessibility feature that has gone wrong. Open the Control Panel and click 'Ease of Access Centre'. Click 'Make the mouse easier to use', then clear the tick box 'Activate a window by hovering over it with the mouse'. It's possible that as you move the mouse towards the Delete window, it passes over another window, which



You can set your pointer to move to the default button in a dialogue box

brings it to the top and covers the delete window.

Another setting that may help is the one that automatically moves the mouse pointer to a button when a new window appears, such as the Delete window. Open Mouse in the Control Panel, then Pointer Options and tick the box under Snap To.

You could also avoid the problem completely by using your keyboard to delete files. Click a file and press the Delete key, or Fn+Backspace on a laptop if there's no Delete key.



This fortnight Roland almost got a new foldable phone – by sitting on his current one. Luckily there was no damage.

Your Top Tips

Our pick of the best advice from our readers. Please send questions and answers to webuser@webuser.co.uk



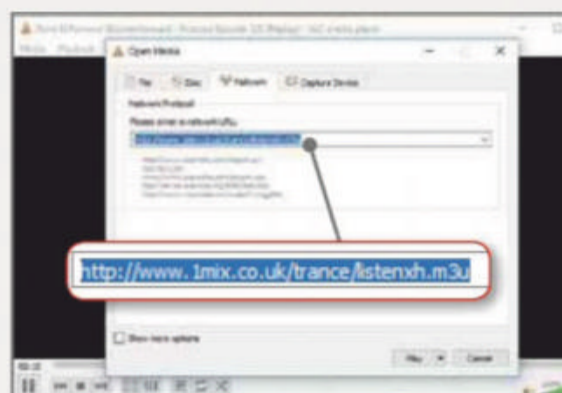
TOP TIP

SOFTWARE

Stream Shoutcast with VLC

A recent article in *Web User* said VLC no longer plays Shoutcast – but it does. Open the Media menu, choose Open Network Stream and paste in the URL of a Shoutcast station. I reckon if VLC is set as the default program for M3U or PLS files, it will automatically open for Shoutcast streams. Test it for yourself by visiting <http://www.1mix.co.uk/trance/listenxh.m3u> (sorry, the link doesn't work if shortened).

Paul Aldridge, via email



Stream radio stations via VLC by manually entering the address

Back Issues disc winner



KINDLE

View Kindle books the right way up

If a Kindle book appears upside down, press the Power button and select Restart. While this happens, turn the Kindle the correct way up and, once it's restarted, everything will be correct.

FratPark, via email

(Windows+i) and go to Accounts. In the 'Sign-in options' section, under 'Require sign-in', choose either 'When PC wakes up from sleep' or Never. It's a choice between convenience and security.

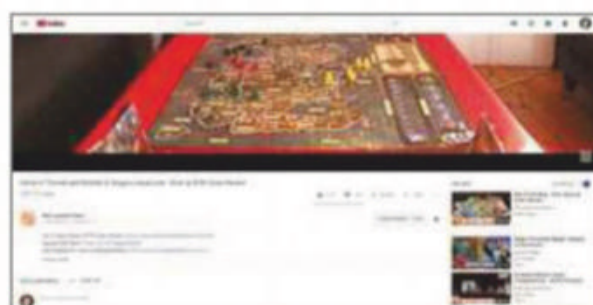
Mark Cannon, via email

VIDEO

Read YouTube comments in full-screen mode

I've just found out you can play YouTube videos full screen and still scroll down to read the comments. When I first watched YouTube videos, full screen stopped you doing anything else – but not anymore. Enter full-screen mode and click 'Scroll for details' at the bottom of the screen. You can scroll down the page, then scroll back up, and your video will still be merrily playing in full screen.

Bob la Torre, via email



Don't miss out on comments when you're watching YouTube in full screen

EMAIL

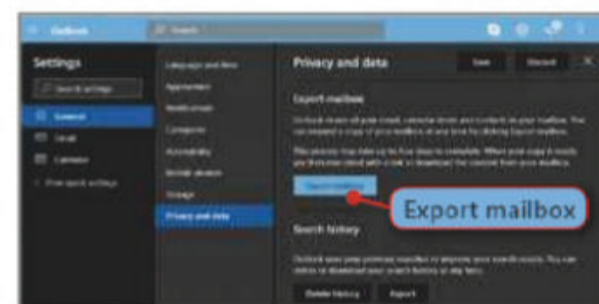
Back up Outlook webmail

Making regular backups of everything

helps me sleep at night because I don't have to worry about a worst-case scenario. If you want to back up your Outlook webmail (outlook.live.com), click the cog icon in the bar at the top, then click 'View all Outlook settings' at the bottom. Select General in the first column, 'Privacy and data' in the second and click the 'Export mailbox' button.

You're warned that this can take up to four days! Fortunately, you don't have to sit and wait – a download link is emailed to you when it is ready. I wouldn't do it every week, but maybe once every month or two. There is so much valuable information in old emails.

John Kelly, via email



It is worth exporting your email occasionally, in case of a disaster

BROWSERS

Set aside your Firefox tabs

One of the best things about Microsoft Edge is the option to 'Set these tabs aside'. You can do this in Firefox, too, by using the Set Aside add-on (bit.ly/aside471). Once installed, it places an icon next to the browser's Minimise button. Click it, and the add-on clears away all open tabs. To reopen them, right-click its icon and choose Show Tabs You've Set Aside. It's very useful for managing cluttered browser space.

Margie Boston, via email

SOFTWARE

Change your QWERTY keyboard layout

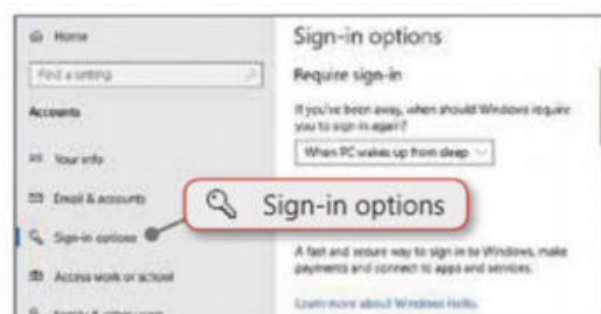
Have you ever fancied trying an alternative to the classic QWERTY keyboard? I was told that different

GENERAL PC

Get sleeping Windows back quicker

Switch off your computer and the next time it is switched on, you'll be asked to enter your password. However, if you're only putting your PC into Sleep mode, you can choose whether or not you'll be asked to re-enter your password when you return. Entering a password is more secure but if you know no one else can access your PC while you're away, it saves time to return straight to the desktop without having to type.

Open the Windows 10 Settings app



Go to the Settings app to choose what to do when Windows wakes up



Discover a more efficient way to type

layouts can improve typing speed and accuracy, because your fingers don't drift all over the keyboard. There are two main alternatives: Dvorak and Colemak. To get the former in Windows 10, open the Time & Language section in Settings, click 'Region & language' and select one of the 'Preferred languages'. Click the Options box to 'Add a keyboard' on the next screen. If you're not keen on Dvorak, or find it too confusing, try Colemak – it's what I'm typing on now, downloaded from colemak.com.

JJ Carlton, via email

MOBILE

Spot fake news on iOS

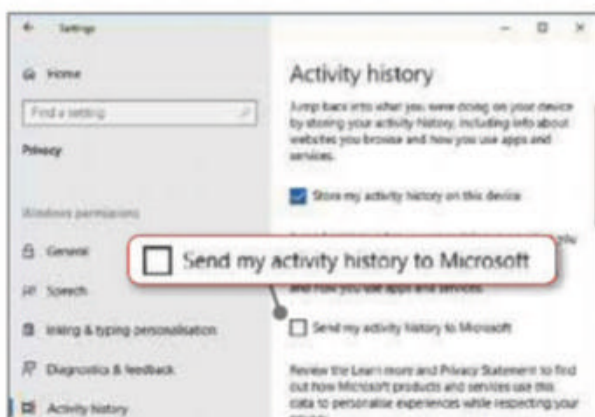
If you have an iPhone, Microsoft Edge for iOS (bit.ly/msedge471) has a trick that Safari doesn't. It can show whether news sites are deemed good or bad, and help you avoid sites that host fake news. I've had Edge on my iPhone for a while but it's only recently introduced this set of great new tools. Tap the three-dot menu in the toolbar at the bottom and open Settings. Press 'News rating' and turn it on. When you visit a news website, a green badge appears in the address box at the top to verify that the site is a reliable source. This turns red on sites with poor quality or misleading news. Tap the badge to see a detailed report of what's good or bad about a site.

Chester Crosse, via email

SECURITY

Stop Microsoft spying on you

Microsoft may be tracking your activities and recording everything you do. To see what's going on, open the Windows 10 Settings app (Windows+i) and click Privacy. The 'Activity history' section has an option to 'Store my activity on this



Hide your activity from Microsoft if you're concerned about privacy

device', which is fine, but below is 'Send my activity history to Microsoft'. Below, it says "Microsoft products and services use this data to personalise experiences". If you don't want Microsoft to see what you do on your PC, clear the tick box.

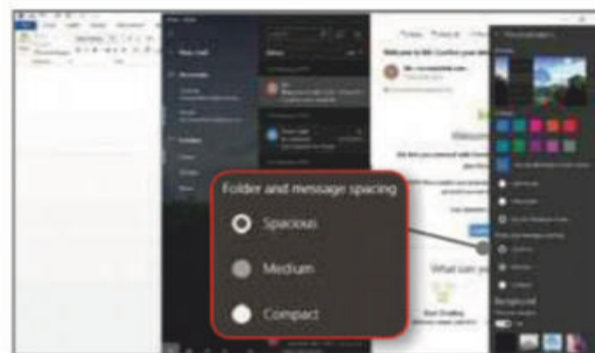
Harry Oliver, via email

EMAIL

Give yourself room to breathe in Windows Mail

If you find Windows Mail is too cluttered, you can alter the density of your messages. The options are hidden in the Settings, Personalisation menu. Under the 'Folder and message spacing' are three options: Spacious, Medium and Compact. Simply tick the box you want and the effect takes place immediately.

Steve Calloway, via email



Unclutter your inbox without deleting anything – just change this setting

MOBILE

Open zipped files on iOS

It recently came to my attention that iOS is absolutely rubbish at opening archived files. I suspect other iOS users have tried and failed to do this, too. If you find yourself in the same boat, I can highly recommend Archives (bit.ly/arch471). This app promises to 'open any format', including 7-Zip, RAR, ISO and EXE.

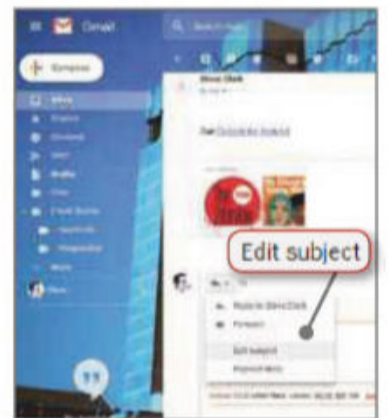
It's opened everything I've thrown at it, and even has a handy preview feature.

Roger Thithe, via email

EMAIL

Change the subject line of a Gmail reply

I've been using Gmail for as long as I can remember, but only just found out how to alter the subject line when replying to emails. It's simple in the Android app because the subject line appears on screen, but in a browser you need to click Reply, then click the reply arrow beside the recipient's email address. The drop-down menu displays 'Edit subject', which lets you change the email's subject line.



Editing a subject line in Gmail is no longer a mystery

Michael O'Hara, via email

GENERAL PC

Run Windows Defender's secret sandbox mode

Running Windows Defender in sandbox mode is useful for preventing any viruses that attack the anti-virus engine from accessing the rest of the system. Open Command Prompt or PowerShell and type: `setx /M MP_FORCE_USE_SANDBOX 1`. After rebooting, open Task Manager and check that the MsMpEngCP.exe is running under the main MsMpEng.exe. To switch out of sandbox, follow the same steps, but change the '1' to '0'.

Mark Jennerson, via email

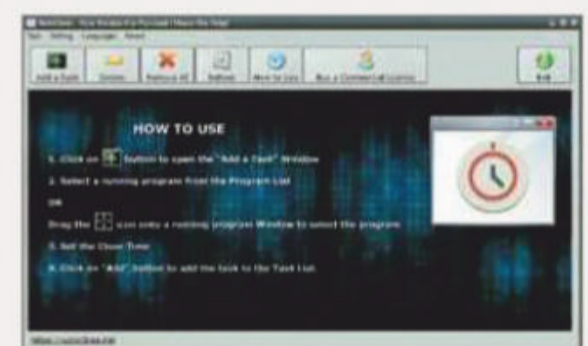
BLUNDER OF THE FORTNIGHT

SOFTWARE

Automatically close programs

I hate leaving my computer on for extended periods of time – I worry that it will burn out. After years of living with this irrational phobia, I thought: "I can't believe someone cleverer than me has not addressed this". Sure enough, I found a tool called AutoClose (autoclose.net), which lets you close programs by selecting a specific time or length of time. If you don't select a time, you're able to close the program instantly.

I now no longer have to leave my PC to do its thing while obsessively



AutoClose lets you schedule when to quit programs

checking its progress, at great cost to my poor electricity bill.

Al Carson, via email

Have you managed to fix a PC-related disaster?

If so, please send your story to webuser@webuser.co.uk



OFFER OF THE FORTNIGHT

Kaspersky Internet Security 2019 - on sale now

Our sister title *Computeractive* is now selling the new and improved 2019 edition of the multi-award-winning antivirus Kaspersky Internet Security at a special discount for readers

WHAT'S NEW IN KASPERSKY 2019:

- ✓ Finds and removes dodgy browser extensions
- ✓ Identifies software that needs to be updated
- ✓ Gives you more control over which adverts are blocked
- ✓ More advanced options to keep malware off your PC



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Three PCs for two years NOW ONLY £39.99
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* while stocks last

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ANTIVIRUS TESTS**



Readers' Helpdesk

Can you help your fellow readers with their computer problems? Send your questions and answers to webuser@webuser.co.uk

GENERAL PC

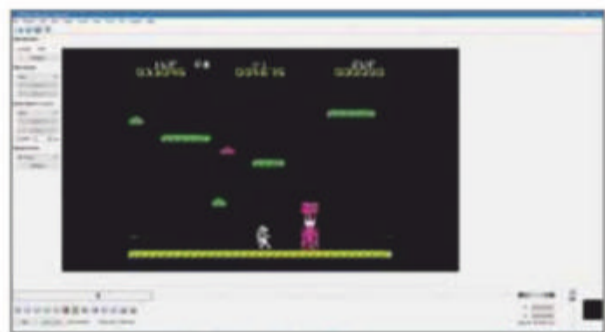
Replace Windows Movie Maker

Q Am I the only one who misses Windows Movie Maker? It was such a simple tool for editing videos and creating photo montages with a little background music. Does anyone know where I can get a copy for Windows 10? Or is there a similarly basic program? I'm afraid most modern free editing software is far too complicated for me.

Larry Cavendish, via email

A It was a sad day when Windows Movie Maker ended up on the cutting-room floor. And while Microsoft insists Windows Photos is the true successor, it's too basic. There are some simple alternatives available, though. Two of our favourites are Avidemux (avidemux.sourceforge.net) and Shotcut (shotcut.org). If you're editing on a phone, we've previously reviewed the excellent Adobe Premiere Clip (bit.ly/clip471), which is very easy to use. Avoid any site claiming to offer the original Windows Movie Maker because these are typically riddled with nasty malware.

Steve Clark, Features Writer, Web User



Avidemux is a solid alternative to Windows Movie Maker

GENERAL PC

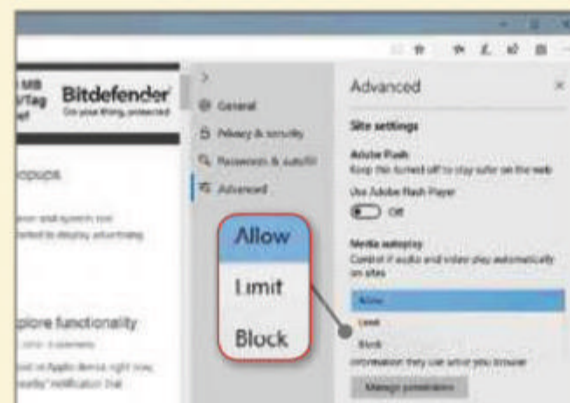
Get predictive text on your PC

Q I find that predictive text makes it so much easier to rapidly type what I'm trying to say, especially when paired with swiping keyboard gestures. I miss it when I use my computer, which, as a one-fingered typist, can be a real slog. I know Gmail offers some manner of

READERS RESPOND

Stop videos autoplaying in Edge

A In Issue 467, Stan McKenzie wondered if there was a way to stop videos autoplaying in Microsoft Edge. Having had the same frustrating experience, I can confirm that there is – so long as you have version 1809. Open the browser, click the three-dot menu and go to Settings, Advanced. Under 'Media autoplay', select Block in the drop-down menu. To let certain sites autoplay videos, visit the specific site and click the address bar's Padlock



Control which sites can autoplay videos in Edge

icon to open 'Website permissions'. Hope that saves your sanity, Stan!

Jess Winston, via email

CAN YOU HELP?

webuser@webuser.co.uk

You can seek help or suggest solutions to other readers' problems by emailing webuser@webuser.co.uk or via www.facebook.com/webusermagazine or twitter.com/webusermagazine.

GENERAL PC

Q My radio station requires that music files have their ID3 tags correctly filled. I can use a batch file to set the file name, but is there a way to copy the artist name and track title to the relevant ID3 tags automatically?

Paul, via email

MEDIA

Q What's the easiest way to make an animated GIF? I'd love to create GIFs using my own photos and videos to share with friends and family, but I haven't the foggiest idea where to start.

Siggy, via email

predictive text, but is there a way to enable this feature elsewhere?

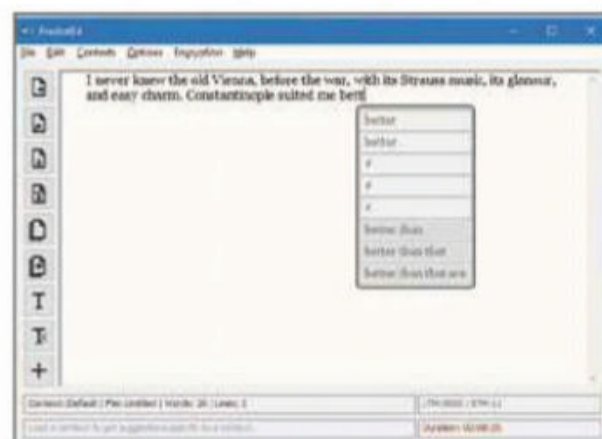
Christopher Altman, via email

A Windows 10 has a so-called predictive text option. To switch it on, open the Settings app (Windows+i) and choose Devices, Typing, then switch on 'Show suggestions as I type'.

For a better option, try the open-source PredictEd (bit.ly/predict471). When you type, the tool suggests up to five individual words and three potential phrases. Press the Tab key to cycle through the choices until the text box displays the word you want. You can even fast-track PredictEd's training by clicking Options, Train and uploading up to 20 existing Notepad text files.

Once you've written your document in PredictEd, you can save it as an RTF or TXT file. Or just copy and paste it straight into the program you're using.

Steve Clark, Features Writer, Web User



Bring predictive text to your PC with PredictEd

Star Email

Local news sites are just trying to survive

I think Barry Collins is rather unfair on local newspapers in his column in Issue 470 ('Local press sites suffer death by pop-up').

Now that many people rely solely on the internet to get their news, sales of local papers have plummeted, and the only way they can make up the shortfall is through their websites. As readers expect to get their news from the web for free, this either means setting up a paywall – which would be fatal for local news operations that have far fewer readers than a national title – or trying to earn revenue through adverts.

So you can't really blame these sites for "stuffing their pages with as many ads as possible", as Barry puts it. Nor can you fail to understand why they



expand their remit to include non-regional news and use clickbait headlines. The more visitors they can attract, the more ad revenue they earn, and it doesn't really matter if many of those people aren't 'local'. It's the only

way such sites can survive, so you can't begrudge them for trying.

I'm not staying that ad-stuffed pages and clickbait content are in any way desirable, but they provide a means by which local newspaper sites can deliver free online content to people in their area, and help to fund their printed versions. The alternative is for them to disappear altogether – both online and off – like dozens of regional titles have in recent years.

I think this would be a great shame. Although the BBC News website provides local news, outside of the major cities this tends to focus on football teams and is hardly a substitute for stories written by and for people in your area.

Keith Broughton, via email

Hooray for the new Yahoo Mail!

Have any readers seen the heavily revised Yahoo Mail layout, which was rolled out in late January (overview.mail.yahoo.com)? For those who don't use Yahoo Mail, it offers (get this!) 1TB of space, whereas Google only offers 15GB in the basic version of Gmail.

I would advise those wallsitters still on the Classic version of Yahoo Mail to look hard at this new version because it has

lots more clarity. It also now has a Gmail-style Drafts feature, which was not in the Classic or earlier versions. I also like the news videos, which fill the empty

space and idle sections of the layout.

Spam is suppressed at server-side level and if you want to block the ads, you can use the Ads Killer Plus extension for Chrome (bit.ly/adskiller471).

Mike Lawler, Facebook

Ad blockers make the web tolerable

What a bizarre Star Email in Issue 470, 'Spotify is right to ban ad blockers'. Without Adblock (getadblock.com)

installed, I wouldn't be able to tolerate going online because there are so many annoying adverts on virtually every website these days.


Adverts used to just sit at the top of the page or down the right-hand side, which wasn't really a problem, but now they follow you everywhere and cover up what you're trying to look at. The worst ones are the video ads that appear in a little floating player and start playing automatically when you scroll down the

page – with sound! If you've got the volume turned up, this can make you jump out of your skin, and even if you close them they just start playing again seconds later.

Spotify should be tackling the issue of why people use ad blockers, rather than just banning anyone who has the sense to do so. Perhaps if its ads weren't so loud and irritating, people would willingly switch off their blockers.

James Archer, via email

Quiz Answers: Issue 470

- | | | | |
|---|----------------|---|---|
| 1 | Sean Penn |  |  |
| 2 | Tom Cruise |  |  |
| 3 | Goldie Hawn |  |  |
| 4 | Cher |  |  |
| 5 | Michael J Fox |  |  |
| 6 | Rowan Atkinson |  |  |

WINNER!

Well done to John Muir who wins a Web User Back Issues Disc



TECH YEAR

1998



Don't dismiss classic BBC shows

I had to laugh at Alan Hill's letter (Inbox, Issue 470) about BBC repeats, especially his complaint about there being too many programmes featuring people who are now dead! Surely the reason the BBC still broadcasts classic shows such as *Dad's Army* and *The Two Ronnies* is because they remain popular with viewers – not just for nostalgic reasons but because they are well-written, well-performed and very funny.

To dismiss enjoyable entertainment because the people involved are no longer alive strikes me as very self-defeating. Does that mean that we shouldn't listen to music by David Bowie, Elvis Presley or Beethoven? Or that nobody should watch *Gone with the Wind*, because all the main cast are dead except Olivia de Havilland? Mind you,

she is 102, so she might be by the time you read this!

There are enough TV services these days for us to watch old and new shows alike, and the BBC is constantly investing in new programmes as well as

broadcasting the occasional repeat.

My 11-year-old grandson finds *Dad's Army* very amusing, but he would never have sought it out on Netflix.

Colin Telford, via email

Macs can get viruses too

I was interested to read your feature 'Do you still need antivirus?' in Issue 470. However, you failed to mention macOS and the fact that many Mac users will smugly tell you that they don't bother with security software because Macs don't get infected.

This is of course incorrect because there have been many instances in the last few years of Mac malware being discovered by security researchers. I have both a Mac and a PC, and I have Avast Antivirus installed on both. It's free, and means I don't have to worry about either computer being infected. It's just not worth the risk to go without protection.

Brian Elder, via email



SAMSUNG HAS UNVEILED A FOLDING SMARTPHONE (bit.ly/samsung471). IS THIS A CLEVER IDEA OR AN OVERPRICED NOVELTY?

Samsung is always one of the first manufacturers to introduce a new product, whether it's a success or a failure.

Brian Brown

I see a very expensive repair job when people are so squeezed by its price and tariffs that they don't buy mobile phone insurance!

Gavin Stephen Green

I think it's great, but how robust it is remains to be seen.

Pamela J Anderson

It's a great idea but a bit overpriced. My only problem is how many folds will it take before the screen feels it? Will it eventually crease or lose pixels?

Cunningham Hutchison @MrChutchy

SOME MANUFACTURERS ARE BRINGING BACK PHYSICAL KEYBOARDS TO PHONES (bit.ly/physical471). DO YOU MISS HAVING ONE?

Well, it depends what you want. If you type a lot of emails, having a real keyboard is better.

Darren Branagh

If I'm trying to write anything more than a sentence, physical keys would be welcome.

Caroline Chapman @cantstopthesgnl

You can't swipe with a physical keyboard. Keyboards can also change according to needs – scientific, emoji, language and so on.

Deafinitely Moi @Gary_Olsen

THE NHS HAS BEEN TOLD TO STOP USING 'OUTDATED' PAGERS (bit.ly/pager471). HAVE YOU EVER OWNED A PAGER?

Instant communication is essential for hospital employees – not just doctors, but staff in the X-ray department, laboratory and more. Pagers are useful and do a good job

Anne Blackwood

15 years ago, doctors used mobile phones around the hospital wards while visitors and patients were told not to use them. I swore at one doctor who told me to stop using my phone, even though he answered a call himself seconds later. He was basically shouting at me.

Dean Stockton

I suppose the problem is not the pagers but that when the recipient phones in, they are probably in a long queue and waste time listening to ghastly music.

Lance Parkington

I've owned several. I think they were BT EasyReach pagers. You could get alerts of goals as they were scored.

Phil Graham

SKY BROADBAND AND TV PRICES ARE SET TO RISE. ARE YOU TEMPTED TO SWITCH?

TalkTalk TV is about £8 a month and you get lots of channels. You can upgrade to Sky Movies and Sports via TalkTalk for less money than Sky do it. We got rid of Sky three years ago, and don't regret it.

Rob Goldring

I left Sky many years ago. I now have Freesat on my PVR, and my main TV has a choice of either Freeview or Freesat. Best move I ever made.

Joe De Broize

I switched ages ago. Loathsome company, and the worst broadband I've ever had.

David Lamb

! Page 404



Barry Collins struggles to understand the economics of phones versus TVs

Screen prices are out of all proportion

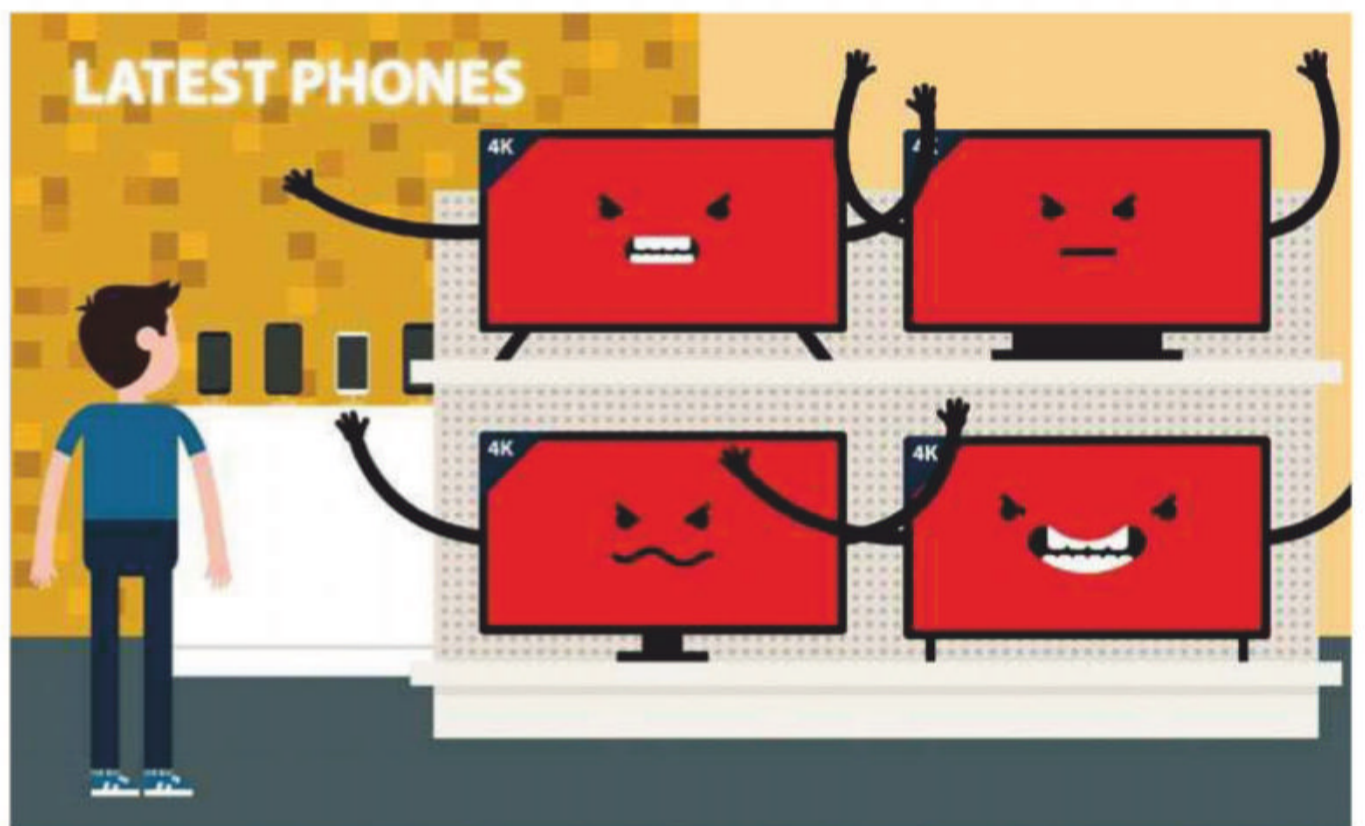
If ever you think you've finally got the world sussed and you're on top of things, take a wander into the electrical department of any high-street store. Within five minutes, you'll leave so dazed and confused that you'll be begging complete strangers to slap you with a haddock and point you in the direction of the nearest asylum.

This was my predicament on a visit to John Lewis at the weekend: there before me were dazzling 4K televisions, some of them bigger than the walls of my living room could comfortably accommodate, for less than £400.

I then turned to the smartphones counter to find similar slabs of glass, a tiny fraction of the size and with lesser resolutions, being sold for more than twice that price. How the Tubular Bells is that possible? It makes less sense than Donald Duck reaching for a towel every time he jumps out of the shower in the old Disney cartoons.

To take one of the John Lewis range at random, let's pick on the snappily titled Samsung UE40NU7120. This is

a 40in screen with more letters after its name than Brian Cox. It's a 4K, HDR10+, Ultra HD certified, TVPlus monster of a television. Remember the days when we used to crowd around an 18in Trinitron to watch the FA Cup Final? This thing is almost a metre wide – and it's an infant compared to some of the other screens in the store. With its stand, it weighs almost 9kg. That may be nothing



compared to the heft of an old cathode tube telly (20 years ago, I almost killed a taxi driver trying to get a 27in TV up three flights of stairs), but it's still a huge chunk of metal, plastic and glass.

“ The main reason the phone costs three times as much as the television is because idiots like us are prepared to pay ”

and still make a profit from £350. At the same time, Samsung's new Galaxy S10 smartphone – a 6.1in slab of glass that weighs 56 times less than the telly, costs three times as much at £999. Don't even get me started on its new foldy-out phone, which doubles the price again.

Naturally, the cost of something isn't directly proportional to its size or the

amount of raw materials used. There are all kinds of other factors coming into play here, including the costs of manufacture, design, research and development, and other components. Indeed, the pixel density on the Galaxy S10 (550 pixels per inch) is significantly greater than that of the telly.

But let's not be hopelessly naïve, either. The main reason the phone costs three times as much as the television is because idiots like us are prepared to pay three times as much for it. And while that TV will probably last you the best part of a decade, you'll trade in your perfectly functional smartphone in only a couple of years' time and replace it with another, more expensive model.

All of which is why Samsung is one of the world's richest companies and I spend my Saturday afternoons having a nervous breakdown in department stores.

Illustration: Andrew Torrens

WebUser

**SUBSCRIPTION
OFFER**
FOR MORE INFO SEE PAGE 62

ENJOYED THIS ISSUE?

GET THE NEXT ONE EARLY!

Thank you for reading this issue of *Web User* – we hope you found the tips and advice useful. The good news is that you don't have to wait too long for the next issue. If you subscribe to *Web User* by **Monday 25 March (8pm)***, you'll receive it through your letterbox before it's available in the shops!

What's inside the next issue:

COVER FEATURE: ACCESS BLOCKED WEBSITES

PLUS:

- Fix security flaws in mobile apps
- Capture screenshots on any device
- Best alternatives to File Explorer

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