

LATEST GAMES FOR YOUR MAC

THE WORLD'S BEST-SELLING APPLE MAGAZINE

Macworld

SEPTEMBER 2017 ● IDG

FROM IDG

BACK TO SCHOOL

Best Mac for students



SAVE MONEY:
How to get an education discount

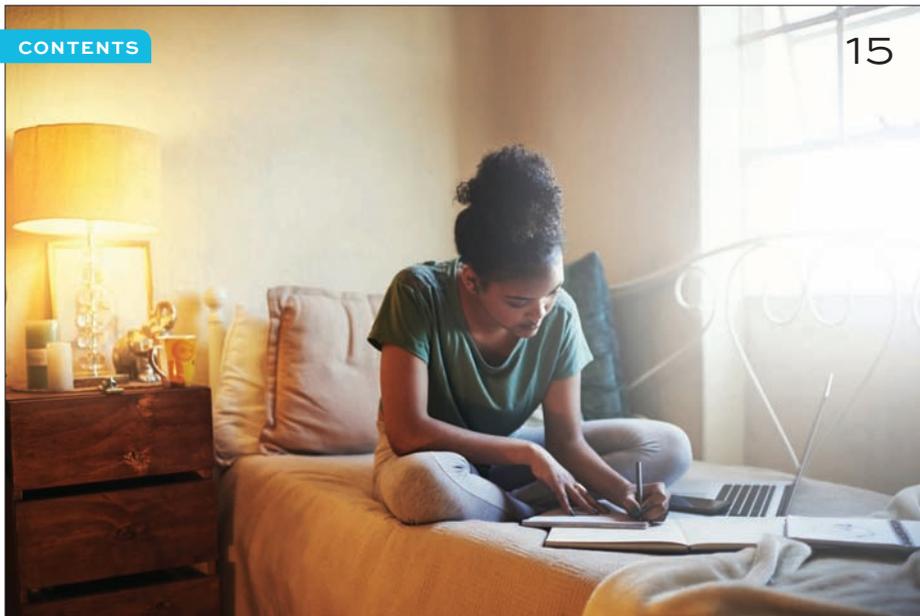
10

iPhone 8 details
we learned from
HomePod leak



CONTENTS

15



NEWS

- 4** Apple's Q3 earnings soar
- 7** Highlights of Tim Cook's Q3 call to analysts
- 13** Apple discontinues iPod nano and iPod shuffle

4



BUYING GUIDE

- 15** Best Mac for students
- 25** Apple's Education store

31



FEATURES

- 31** HomePod leak reveals details of next iPhone
- 38** Apple's risky balancing act with the next iPhone
- 45** Hoping for a small Mac mini revival
- 50** Three features Apple's HomePod needs

Keep updated with all the latest Macworld news, by following us on Twitter and Facebook



CONTENTS



FEATURES

- Looking to iOS 11 [55](#)
- Tracking in High Sierra [61](#)
- Help Desk [69](#)

ROUND-UP

- Latest Mac games [83](#)

HOW TO

- Turn on Night Shift on Mac [94](#)
- Adjust the spellcheck language [97](#)

OPINION

- Why now is the time to return to desktop Macs [99](#)

Apple's Q3 earnings soar

Booming iPad sales boost results, reports [Michael Simon](#)



No new iPhone, no problem for Apple's bottom line. The company just reported its third quarter results for fiscal year 2017 and they're awfully good: \$8.7 billion profit, or \$1.67 per share, on revenue of \$45.4 billion.

That breaks down to 41 million iPhones, a slight increase from the third quarter of 2016, when Apple moved more than a little more than 40 million

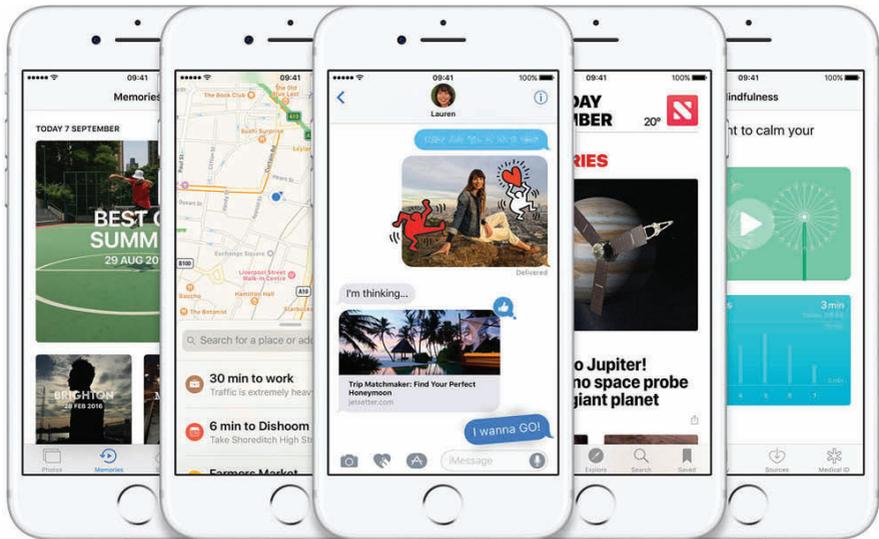
handsets. Sales were down when compared to last quarter's 50.7 million, however.

But the big surprise was the iPad. On the back of the new 10.5in iPad Pro released at WWDC in June, Apple moved 11.4 million tablets, its biggest non-holiday quarter for the tablet in more than two years. That's an increase of nearly 30 percent from last quarter and 15 percent from Q3 2016. However, revenue from tablet sales was only up 2 percent, suggesting people may be opting for cheaper models. Apple's stock spiked more than 5 percent on the news.

The quarter ending June 30 also saw releases of new MacBooks and iMacs, but the new products didn't have as much of an effect on Apple's bottom line. During the previous three months, Apple moved 4.3 million Macs, roughly the same as it sold last year.

Apple CEO Tim Cook highlighted Apple's Services revenue, which pulled in \$7.3 billion, an increase of 22 percent from the same quarter last year and a record high: "With revenue up 7 percent year-over-year, we're happy to report our third consecutive quarter of accelerating growth and an all-time quarterly record for Services revenue," he revealed.

In a conference call, Cook praised Apple's results, saying the company enjoyed growth in all product categories. In particular, the iPhone 7 was a strong performer, with sales of the Plus model up "dramatically" over the same quarter last year and showing "strong double-digit growth" for the



family. Consequently, the iPhone's average selling price increased to £650.

He also spotlighted iPad sales, saying more than half of customers were buying their first Apple tablet. Additionally, the Mac was a big hit in China and Japan, with the two countries posting record unit sales.

While Apple doesn't break out its watch sales, Cook said sales were up over 50 percent year over year. Looking ahead to the fourth quarter, Apple expects revenue between \$49 billion and \$52 billion, suggesting the usual iPhone launch toward the end of September.

Highlights of Tim Cook's Q3 call to analysts

Apple's CEO had plenty to say, reveals [Jason Snell](#)



Every 90 days there's a new Apple financial quarter, a new raft of federally-mandated financial disclosures, and another hour-long conference call that lets us hear Apple CEO Tim Cook (and CFO Luca Maestri) take questions from inquisitive Wall Street analysts.

Earlier this summer Apple announced its quarterly earnings and followed it up with that exciting phone call. (If you'd like to read a

complete transcript, I made one.) Here are seven highlights that I gleaned from Apple's quarterly exercise in extremely limited disclosure.

1. Cook didn't defend the iPad

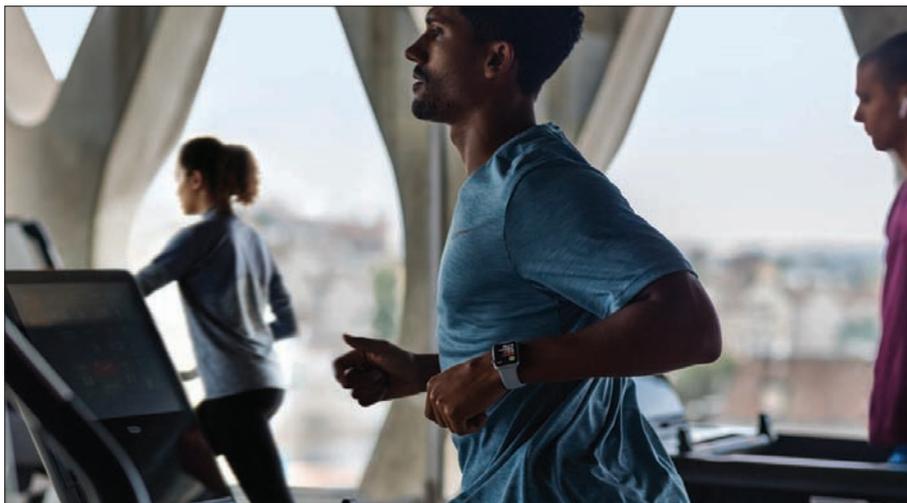
For the first time in a while, Tim Cook didn't have to express publicly his belief that everything will be just fine with the iPad. That's because, for the first time in three years, iPad sales grew when compared to the year-ago quarter. Cook even said the iPad has "a lot of momentum," not something that anyone's said lately.

As already mentioned, iPad sales were up and grew across all of Apple's geographic segments. According to Cook, more than half of iPad sales in China and Japan were to first-time iPad buyers, and in the US education market, iPad sales were up 32 percent versus the year-ago quarter.

2. The Apple Watch is doing well, but no details

The Apple Watch isn't a large enough product to require its own disclosure line in Apple's financial results, so it's rolled into the Other Products category and we're left guessing about how well it's doing.

Other Products had a good quarter, which suggests it was a good quarter for the Apple Watch, unless there was a shocking flurry of Apple TV sales. (There wasn't.) Cook gave a little more detail during the analyst call, saying that Apple Watch sales were up 50 percent – presumably over the year-ago quarter? – and that it's the top-selling



smartwatch in the world “by a very wide margin.” How many Apple Watches does that mean? How many of them are now out in the world? We can only make educated guesses.

3. Cook is really excited about AR

Have you seen all those videos of demo apps that developers are building using the new ARKit frameworks Apple unveiled at WWDC in June? Tim Cook has too, and he’s really excited. “Just take a look at what’s already on the on the web on terms of what people are doing, and it is all over the place, from entertainment to gaming,” he said.

Cook called AR “big and profound and one of those huge things that we’ll look back at and marvel on the start of it... I couldn’t be more excited about it.” And of course, Cook pointed out that when

iOS 11 ships, Apple will immediately become “the world’s biggest augmented reality platform.”

4. Big and expensive iPhones? They sell

For all the worry about Apple potentially releasing a third iPhone this fall with plenty of souped-up features and a higher price tag, nobody seems to be mentioning the curious case of Apple’s iPhone product mix lately. In this latest quarter, the average selling price of an iPhone increased to £650. According to Maestri, that’s because there’s strong demand for the iPhone 7 Plus, which represented a higher percentage of the product mix than the 6s Plus did last year.

Apple never breaks down the sales of individual iPhone models, but it’s clear that the larger, more expensive phones are selling better than ever – and perhaps even better than Apple anticipated. That might be an indication that iPhone customers are plenty willing to pay for bigger or better technology.



5. Greater China is a mixed bag for Apple

To hear Tim Cook tell it, Apple's sales in China were flat "if you look underneath the numbers." (Be sure the numbers give consent first.) Cook blamed Hong Kong, saying it was continuing to "drag down" the rest of the China segment, and he didn't sound optimistic about that changing.

Cook was also asked about WeChat, because lately there's been a lot of analysis that since Chinese users love WeChat as a platform, and it's basically the same on iOS and Android, it's a liability for Apple – because switching platforms isn't a big deal if all you care about is WeChat.

Cook flipped the story, suggesting that since Apple doesn't have anything remotely approaching a majority of the phone market in China, the pre-eminence of WeChat meant Apple had an opportunity to more easily convert people to the iPhone from Android. That's an interesting bit of spin.

6. Big, beautiful plants

The President of the United States recently told the *Wall Street Journal* that Apple was building "three big, beautiful plants" in the United States. People in the know responded: Say what now? Fortunately, analyst Steve Milanovich of UBS asked Cook directly about it on the call.

"Let me just take this question from 'what are we doing to increase jobs,' which I think is probably where it's rooted," Cook said, redirecting the question away from the claim of new plants. Cook

cited, among other things, \$50 billion it spent in the US on goods and services, including a “significant portion” that were manufacturing related. He cited Apple’s \$200 million investment in a Corning glass plant in Kentucky, part of a \$1 billion advanced manufacturing fund. And then he said, “I think there’s probably several plants that can benefit from having some investment to grow or expand or even maybe set up shop in the US for the first time.”

So perhaps those three big, beautiful plants aren’t ones Apple’s building, but perhaps they’ll be built by manufacturers Apple is investing in.

7. Nice try, Amit

Almost every analyst call, someone tries to trick Apple’s executives into revealing all their secret plans. (No need – Apple’s firmware team is on the case.) This time it was RBC Capital Markets’ Amit Daryanani, who essentially asked if we should believe “blogs and... component suppliers” that the new iPhone might be delayed, despite Apple’s solid revenue forecast for the current quarter, when the iPhone has traditionally gone on sale.

“We have no comment on anything that’s not announced,” Cook said.

To which Daryanani replied, “Fair enough – I figured it’s worth a shot.”

The microphones in Cupertino picked up an entire roomful of Apple executives laughing out loud. It’s only fair that they get something out of these analyst calls, too.

Apple discontinues iPod nano and iPod shuffle

The iPod line-up now consists of the iPod touch only, which gets a price reduction, writes [Roman Loyola](#)



Apple has removed the iPod nano and iPod shuffle from its website, signalling that the company has discontinued the two portable audio players. The iPod line-up now consists only of the iPod touch. “Today, we are simplifying our iPod line-up with two models of iPod touch now with double the capacity starting at £199 and we are discontinuing the iPod shuffle and iPod nano,” Apple said in a statement.

Apple moved on from the iPod as a featured product a long time ago, but until this summer the company still made the two iPods available for purchase. The iPod nano was Apple's smallest touchscreen device, while the shuffle had no screen at all, relying on a circle of click controls that you use to navigate through a playlist of songs.

The iPod nano and shuffle were last updated two years ago with new colours. The original iPod nano was released in 2005, and was designed as a smaller, thinner version of the iPod classic. Apple released the touchscreen iPod nano in 2012. The iPod shuffle made its debut in 2010, and maintained its clip-on design throughout its lifespan.

In its quarterly financial results, Apple groups the iPod in an 'Other Products' category, so there's no public information that tells how much revenue the iPod brings Apple, or how many units Apple sells. The \$2.9 billion that the Other Products brought in during Apple's second quarter of 2017 was probably due to the Apple TV, Apple Watch, and Beats products.

Apple also updated the prices and available models of the iPod touch: £199 for a 32GB model, and £299 for a 128GB version.



Best Mac for students

Whether you're off to college or back to school choosing the best Mac can be tricky. [Martyn Casserly](#) is here to help



At first glance Macs might still seem expensive, especially when compared with the £300 laptops that you'll find on offer in Tesco and PC World, but while those cheaper machines are built down to a price, Apple believes firmly in creating devices that are powerful and meant to last.

A Mac you buy for university should quite happily see you through all the adventures of your course

and still be something you'll want to carry on using for a few years afterwards.

But deciding which model is best for you can be tricky. Some of this depends on what type of student you are, and of course your budgetary arrangements will be a significant factor.

To help you buy the right model we've gathered together all the facts you need to know and created a student's guide to buying a Mac. We'll consider what students are likely to need from their Mac, and what features you should pay more for.

We then take a closer look at Apple's range of Macs and the built to order options available that might be useful. Plus, we've also collected together some accessories, software and services that could come in handy during your course.

The first thing we want to mention before talking about anything else is Apple's Education Store (tinyurl.com/y8o3gbbm). We look at this in more detail on page 25.

As the student life involves a far amount of mobility – travelling to lectures, libraries, the occasional coffee shop, and so on – it makes sense to consider a laptop rather than a desktop device.

While the screen sizes in MacBooks are smaller than iMacs, you can always find an inexpensive screen, or even your TV, and connect that to your MacBook when you need a larger display. Then once you're done with the big screen, you still have your mobile powerhouse machine and all your files.

One Mac that's easy to take off your shopping list is the Mac Pro (if you haven't done so already).

At £2,999 (from fave. [co/2t3dKRO](https://www.apple.com/uk/macbook-pro/)) it's overkill for nearly all student tasks and unless you are involved in some heavy number crunching or professional-level video editing, you won't value its power.

Even in a field like computer science or 3D animation you will get by on a high-end MacBook or iMac. In the vast majority of cases you would be better served saving the money and opting for a cheaper model, especially when you consider that you'd need to buy a screen, keyboard and mouse for the Pro.



Apple's line-up

If you're looking for stability and a reliable operating system that won't crash each time you try and save your work, then the MacBook range of laptops is truly impressive. Given Apple's pricing strategy, it might seem like they are expensive versus their Windows alternatives, however the added premium is justified.

MacBook Pro

Starting with the MacBook Pro, these laptops are seen as the most expensive and powerful Mac



laptops. Apple updated the range earlier this year to add more power and efficiency thanks to new Intel chips, so now's a great time to buy, too.

The range starts at £1,249 (from fave.co/2t3gPS7) for the 13in non-Touch Bar version and goes up to £2,699 (from fave.co/2tJWXjO) for the top-of-the-range 15in Touch Bar version.

The Touch Bar, while stunning, is still largely a gimmick that most students can do without. If the 13in display is big enough for you and you're set on the MacBook Pro, we'd recommend opting for the model priced at £1,449 (from fave.co/2t3eUNg).

That model has Intel's 7th Generation Kaby Lake dual-core i5 processor clocked at 2.3GHz, with 8GB RAM and 256GB SSD storage. There's Intel Iris Plus Graphics 640 and two Thunderbolt 3 (USB-C) ports. USB-C does cause a bit of an issue because it replaces USB-A, but there are adaptors available that will help.

MacBook Air

If you're looking for a MacBook that doesn't break the bank, but still offers good portability, then the Air might be the perfect fit.

It has a 13in screen, and comes equipped with a 1.8GHz Intel i5 processor, 128GB or 256GB of storage, and 8GB 1,600MHz RAM. It costs £949 (from fave.co/2t2PZtf) for the base model, or £1,099 (from fave.co/2sOU67Z) for the 256GB model. View in the Apple Store [here](#).

The Air features the right ports too, with two USB 3.0 ports, a Thunderbolt 2 port, an SDXC card slot and a MagSafe 2 power port. This makes the Air cheaper than other Macs while also being very portable, and therefore more practical for students to take to lectures.

One the downside, it has a slower processor than the MacBook Pro and significantly less graphics power, but it's unlikely you'll notice a difference in everyday tasks.



12in MacBook

Along with the MacBook Pro and MacBook Air, Apple also offers a laptop that's simply called MacBook. This 12in MacBook is actually thinner than the MacBook Air and features a gorgeous design. But is it the right option for students?

Starting at £1,249 (from fave.co/2sZW1Lc), the MacBook is more expensive than the Air, even though it has a weaker processor. The base model offers a dual-core 1.2GHz Intel Core m3 processor, 256GB of storage, 8GB of RAM and Intel HD Graphics 615.

It does have its design going for it though, as its incredibly thin and lightweight, just 13.1mm at its thickest, which is 24 percent thinner than the Air.

The next model in the range costs a cool £1,549 (from fave.co/2tJhLs4) and bumps the



internal memory of the MacBook up from 256- to 512GB. Its processor is also given a slight bump up to 1.3GHz from 1.2GHz, but everything else (including its 12in screen) stays the same.

As mentioned above when we discussed the MacBook Pro, the fact that you'll have to buy an adaptor to use any external hard drives, USB sticks, or even a wired Internet connection with your MacBook, and the fact that there are more powerful (and cheaper) laptops available, makes it difficult to recommend the MacBook for university studies. Get a cheaper, or more powerful, Air instead.

iMac

The iMac might be one for consideration for a student, but it's not a portable computer, which might deter many students from purchasing one. You won't be able to take it with you to lectures, but you will be able to work more efficiently through its bigger 21.5- or 27in screen.

The cheapest model comes in at £1,049 (from fave.co/2sPpkfr). It has a 2.3GHz dual-core Intel Core i5 processor, 8GB RAM, a 1TB hard drive, Intel HD Graphics 6000 and a 21.5in 1920x1080 sRGB display. We find the hard drive its weakest point, as it slows down everything on the Mac – from saving a document to powering the Mac on. We would suggest paying an extra £90 for a 1TB Fusion Drive or even an additional £180 for 256GB flash storage – this will greatly improve performance.

The slightly more expensive iMac (£1,249 from fave.co/2sPn6wE) is a much different proposition.



It has a 3GHz quad-core Intel CPU, 8GB RAM and a 1TB hard drive (we'd still recommend a Fusion Drive update if you can afford the extra £90). It's a great Mac for graphic designers and video editors alike, as it combines a lot of storage with a good processor and the '4K' screen is excellent.

For £1,449 (from fave.co/2t3csqa) you can get a 21.5in iMac that's even faster, with a 3.4GHz

quad-core Intel Core i5. It also has 8GB RAM and this time offers a 1TB Fusion drive. The price is nudging upwards, but it's a beautiful machine.

At the top of the tree are the beautiful 27in iMacs with 5K Retina display, which are hugely powerful, elegant, and costs upwards of £1,749 (from fave.co/2wt8vcp), which isn't bad for what you get, but we feel this is above the budget and overkill for a lot of students.

Mac mini

We have mixed feelings about the Mac mini. On the one hand it remains an excellent low-cost Mac, while on the other hand the recent upgrade has



taken away some of the things that made it such an attractive Mac.

Still, the entry model Mac mini is only £479 (from fave.co/2sPo4JI), which makes it the most affordable Mac by quite a distance. It houses a 1.4GHz Intel i5 CPU, that feels perfectly fine for everyday tasks.

If you are on a real budget this is the way to go. Get an entry-level model and ask around for an old keyboard, mouse and monitor.

You may be using second-hand accessories but your Mac will sit at the heart of it all. You could also plug the Mac mini into your TV, although we wouldn't recommend writing your dissertation on a TV screen.

Which Mac should you get for university?

Last year the best all-round choice for students was the MacBook Air, and this year it's still our top recommendation. It's light, fast, and at £949 for the entry model it offer good value for an excellent machine. If you're looking to save a few pounds, then keep an eye on the Apple Refurb Store (tinyurl.com/ybopp226). Airs turn up with great



frequency, and you can typically get £50 to £100 off. Refurbished Mac models are fully checked and come with a one-year guarantee.

The MacBook Air, might not seem like a worthwhile purchase for most, given the Pro and regular MacBook offer something extra in either build or performance, but with its included USB-A ports, lightweight design, cheaper price, the MacBook Air is our top recommendation.

If you can afford more, we would opt for the non-Touch Bar MacBook Pro model.

Apple's Education Store

Students, teachers and lecturers all qualify for an education discount if they buy from Apple. [Lucy Hattersley](#) reports



Apple is keen to make inroads into the education market, and students are a big market for the company. To this end, the firm has an entire separate Education Store (tinyurl.com/yd9rjzw9) that offers a hefty discount on Mac computers and iPads.

At the time of writing, Apple is offering free Beats wireless headphones when you buy a Mac or iPad Pro through the store until early October. That's on top of the huge student discount you'll already get

if you shop there, so it's well worth investigating. Most Apple customers aren't aware of the Education Store, or don't think it applies to them. This is a mistake because the education net is quite wide, and chances are you can easily pick up a Mac from the education store and get the discount.

Education discount

Anybody who works in an education environment qualifies for a discount on Apple computers. It's not just limited to students, teachers and lecturers, but also covers administrative workers and other staff members. In essence, it's anybody who works for a school, college or university.

Parents of schoolchildren do not qualify (when buying for themselves), but you can pick up a discounted Mac for your child from the education store. The Apple terms and conditions state:



Those eligible to purchase from the Apple Store for Education Individuals include teachers, staff, students and parents as follows:

Employees of any education institution: Any employee of a public or private education institution in the UK is eligible.

Post-secondary Education Students: Students attending or accepted into a post-secondary education institution in the UK are eligible to purchase.

Parents of post-secondary students: Parents purchasing on behalf of their child, who is a student currently attending or accepted into a public or private post-secondary education institution in the UK, are eligible to purchase.

Purchases from the Apple Store for Education Individuals are not for institutional purchase or resale.

How to get an Apple student discount

If you think you qualify for an education discount then you should pay a visit to the Apple Store for Education. You'll need to use UNiDAYS to get access to the Apple Education Store. Signing up is easy – simply enter your email address and a password, then your name, institution, subject of study, year of study and course length. You'll be required to prove your identity, then you're away.

Note that if you're thinking of buying a Mac, not for yourself or your child but for the institution itself (for students to work on), then Apple has other stores for you to use. You can visit the Apple Store for Schools here and Universities at tinyurl.com/jduwep6. You'll need to register with Apple before you can make any purchases. Alternatively, you can call Apple direct on 0800 912 0207.

Shopping at the Apple Store for Education is much like shopping at the regular Apple Store but with different pricing. It's usually best to log on from your university network if you can, but be prepared for Apple to ask you for some form of official identification that proves you're a student, the parent or guardian of a student, or a teacher, or otherwise involved in the educational



establishment. Your student ID is typically the best way to do this.

Alternatively, if you don't want to register on one of the verification sites, you can also call Apple, use Apple's Chat online feature, or visit an Apple Store. The staff there will guide you through the process.

What discounts can you expect

Apple doesn't offer a stock discount ratio (such as 10 percent) but instead sets different prices for each product range. The discounts are only currently available for Mac computers (iMac, MacBook Air, MacBook Pro and Mac mini) and iPads – there are no special discounts for other Apple products.

Mac

You can save up to £434 on a MacBook, MacBook Air, MacBook Pro, iMac or iMac with Retina 5K display when purchased with AppleCare via the Education Store. Plus, if you buy a Mac from the Education Store and you'll get Beats wireless headphones thrown in. See tinyurl.com/y7a9qrgw.

iPad

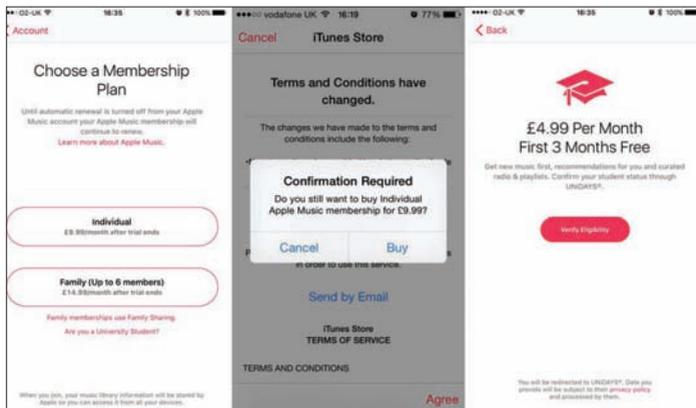
You can also get a small discount on iPads from the education store. Apple offers up to £59 off the iPad Pro, iPad and iPad mini 4. Take a closer look at the prices in the Apple Education Store at tinyurl.com/ya9hdghd. Just as when you buy a Mac from the Education Store, you qualify for a free pair of Beats headphones.

Apple Music

Apple has launched a student membership scheme for Apple Music, whereby those in full-time education can get a 50 percent discount on the music-streaming service's subscription costs. (You can still get three months for free, but students will pay less after the trial period expires.)

This brings the monthly cost of Apple Music membership down from £9.99 to £4.99. To qualify, you'll need to prove that you're enrolled at an eligible university or college. Apple will be using the verification system run by UNiDAYS (tinyurl.com/ybrfu3x9).

Visit Apple's site (tinyurl.com/ya6a2r8x) for more details and to sign up. If you're a student and signing up for Apple Music on your iPhone or iPad, tap where it says 'Are you a University Student?' and you'll be directed to a verification system – if your college or university is eligible you'll get the reduced subscription rate.



HomePod leak reveals details of next iPhone

It's like the iPhone 4 all over again, writes [Michael Simon](#)



If you were following Apple back in 2010, you remember the infamous iPhone 4 leak. The handset that introduced the world to FaceTime, the Retina display, and a stunning design that lives on to this day in the iPhone SE was plastered all over Gizmodo some two months before its formal

introduction. Even in the age of rumour sites and Reddit, it was a rare red-faced moment for Apple.

And from the looks of it, it has happened again. No, the iPhone 8 wasn't left in a California bar by an absent-minded Apple employee, but a ton of information about the next iPhone was inadvertently leaked by an unwitting engineer. A pre-release version of the HomePod firmware was accidentally uploaded to a public server recently, and naturally, developers quickly downloaded it and starting digging for clues. And boy were there a lot of them.

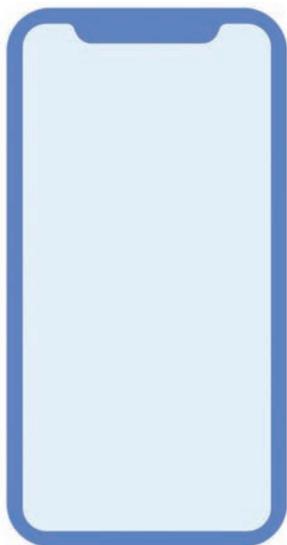
1. The bezels are shrinking, big time

The very existence of the iPhone 8 in an 'S' year tells us that it will be a radical change from the current iPhone design, but Apple has all but confirmed just how different it will look. According to a scalable vector image spotted by developer Steven Troughton-Smith, the new handset design matches up with the rumours of an all-screen front that dispenses of the Home button. The picture isn't very detailed, but it does show a design somewhat reminiscent of the LG G6, but with uniform skinny bezels all around.

2. There will be a camera notch

One of the defining – and likely controversial – aspects of the new iPhone appears to be a notch at the top of the screen for the camera and sensors. And Apple isn't trying to hide it. In the iPhone 8 icon discovered inside the firmware, the crude drawing

Credit: Steven Troughton-Smith



clearly shows a notch jutting into the top of the screen. We've seen a similar design in the upcoming Essential phone, though Apple's is far more pronounced.

Purists might balk at the seemingly un-Apple-like decision, but it might not be so bad in practice. Troughton-Smith found references to a new 'split' status bar that would presumably place the battery and Wi-Fi icons around the notch, and he also notes that the status bar "seems a lot more complex and powerful in design, maybe even interactive".

3. The screen will be even better

Ever since the iPhone 4 introduced us to the pixel-less world of Retina displays, nearly every Apple display has shifted to the eye-friendly standard (sorry MacBook Air fans). But now it seems as though the iPhone will up the ante again. During his code spelunking, Troughton-Smith found references to a new screen resolution of 2436x1125 with a robust 521ppi pixel density. The would represent a healthy bump from the 1334x750 and 1920x1080 resolutions in the iPhone 7 and 7 Plus, respectively.

4. AR is a big deal

Apple is killing it when it comes to augmented reality. While its ARKit platform was only just released at WWDC in June, developers have

already made some truly amazing things with it, and it's clear that Apple has big plans for AR. But it will be the iPhone 8 that fully unlocks its potential. We've already read rumours of a 3D laser system and a depth-sensing camera, but Troughton-Smith also spotted a curious reference to 'ARFaceAnchor' in the HomePod firmware. This suggests that there will be specific AR features tailored for the iPhone 8.

5. Touch ID likely out, Face ID definitely in

Rumours have already suggested that Touch ID will be going away in the iPhone 8, and Troughton-Smith's probing seemingly confirms it. Not only did he not find a single mention of the under-the-display 'ultrasound' Touch ID we were all hoping for, he discovered a trove of 'BKFaceDetect' references inside the BiometricKit framework, alluding to a new system of unlocking the phone using our mugs rather than our fingers. Based on his findings, Troughton-Smith has surmised that the new system, code named Pearl ID, will support multiple faces and use an infrared sensor for low-light situations. And there's also a 'passbook.payment.contactlessinterface' reference suggesting Apple Pay support as well.

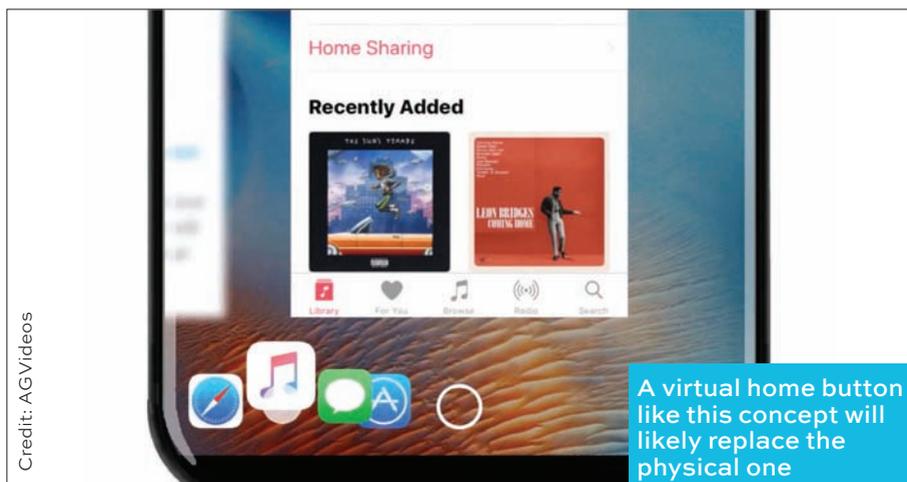
6. A tap will wake the screen

Without a home button on the front, we're going to have a harder time unlocking our iPhones when they're resting on a table, but Apple has apparently solved that problem. Troughton-Smith spotted a

reference to tap-to-wake, meaning you'll be able to tap or double-tap on the screen to bring it to life. Android phones have enjoyed the feature for years, but it would be a new – and welcome – addition to the iPhone.

7. The home button goes digital

Without a physical home button, Apple will need to go the Android route and make a virtual one on the screen to aid with navigation. So it's no surprise that Troughton-Smith found repeated references to a 'home indicator' that will seemingly only appear when you need it. What's more, the previously rumoured 'function area' looks to be legit. The resolution Troughton-Smith unearthed suggests apps will only take up a 5.15in portion of the rumoured 5.8in screen, presumably leaving an area at the bottom for buttons and shortcuts.



8. There will be three new models

Among the goodies uncovered in the HomePod is the code name (or number) for the iPhone 8: D22. This isn't random. The iPhone 7 and 7 Plus were code named D10 and D11, respectively, so naturally the 7s and 7s Plus would be D20 and D21, and the new model D22. (For reference, the iPhone 6 and 6 Plus were branded N60 and N61, while the 6s and 6s Plus were N70 and N71.)

And Apple might have tipped us off to the release date, too. In its fourth-quarter guidance, Apple expects between revenue between \$49 billion and \$52 billion, significantly higher than the \$46.9 billion it reported in the same quarter last year. That likely means Apple is planning on shipping a pretty good amount of iPhones before 30 September.



9. You won't have to plug it in

We've been hearing for months that wireless charging will finally arrive with the iPhone 8, and now there's confirmation that Apple is indeed working on a new charging system. There are two clues here. The first is a new battery icon specific to the iPhone 8. While that could be written off as a simple design decision, a Redditer also found references to 'charge inductive' and 'high voltage' in the code. That likely means Apple will introduce fast charging and wireless charging in the iPhone 8, though we've heard whispers that it won't be ready at launch.

10. The camera will be smarter

It's not a surprise to hear that the camera will be getting an upgrade in the next iPhone, but the HomePod firmware gives us a hint as to how much better it will be. Developer Guilherme Rambo found a reference to a new SmartCam mode that will presumably be able to detect your surroundings and fine-tune the exposure, focus, and white balance accordingly. Among the modes he spotted are baby, pet bright stage, fireworks, sky, snow, and many others. It might not seem like much, but it could end up being the most used feature of the iPhone 8 – and based on what we know, that's saying something.

Apple's risky balancing act with the next iPhone

The idea Apple might make an high-end phone with a huge price tag has rubbed many the wrong way. [Jason Snell](#) reports



As there always are at this time of year, there are lots of rumours out there about what the next iPhone will be. This year we're hearing that Apple is going to release a high-priced, next-generation phone in addition to the expected iPhone 8 models. The idea

that Apple might make an ultra-high-end phone with a huge price tag has rubbed many people the wrong way. Daring Fireball's John Gruber did the math, and while this potential move makes a lot of sense, it's also a gamble on Apple's part. But if Apple didn't release a next-generation phone this fall, it would also be risking the fortunes of both its brand and its most important product.

The trouble with the cutting edge

In the early days of the smartphone market, every new phone model brought huge leaps forward in functionality. But these days it's tougher to make major advances that motivate users of older phones to upgrade. Still, Apple's got to sell new iPhones – so in secret product labs in Cupertino, Apple's designers and engineers are always trying to figure out what's next. Apple's well-earned reputation for bringing cutting-edge technology to the masses is on the line with every release.

While Apple made some major improvements between 2014's iPhone 6 and 2016's iPhone 7 – dual cameras on the plus model and huge processor and graphics updates under the hood, just to name a few – the fact is that the outside design of the iPhone hasn't changed in nearly three years. Meanwhile, Apple's competitors are releasing new designs with big screens and reduced bezels that make the front of the phone appear to be almost entirely taken up by a screen.

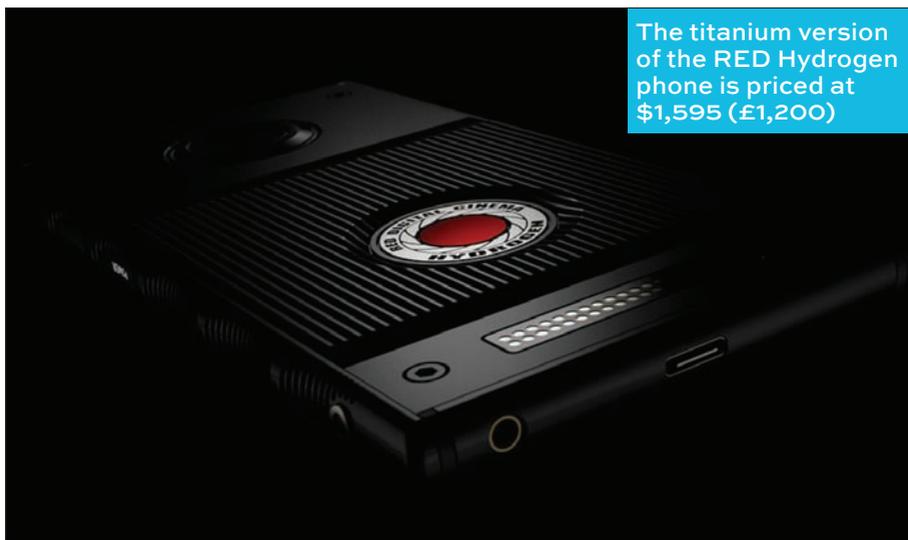
By most accounts, Apple's next-generation iPhone will offer a similar design. But also, by many

accounts, Apple is struggling to create that product – and when it arrives, it may be expensive, late to ship, and supply constrained.

This is one of those areas where Apple may be the victim of its own success. The iPhone is so popular a product that Apple can't include any technology or source any part if it can't be made more than 200 million times a year. If the supplier of a cutting-edge part Apple wants can only provide the company with 50 million per year, it simply can't be used in the iPhone. Apple sells too many, too fast.

Contrast that to Apple's competition. On the smaller end, former Android chief Andy Rubin announced the Essential phone, but even Rubin admitted that he'd only be able to sell in thousands, not millions. Same for the RED Hydrogen One – groundbreaking phone, hardly likely to sell in any volume. The Google Pixel looks like it's in the one million range. Apple's biggest competitor, Samsung, has to deal with a scale more similar to Apple's – but it's still only expected to sell 50 or 60 million units of the flagship Galaxy S8.

Now, it's entirely possible that Apple's apparent difficulties with its next-generation phone model are in part the fault of designers and engineers who bet that new technology would be available – at scale and at the prices necessary for Apple to maintain its profit margins – in order to ship this new phone in the fall of 2017. But it's also true that most cutting-edge technologies are going to cost more and initially be available in limited quantities, unless Apple makes huge investments



in equipment and manufacturing and corners the world's supply of those parts, which it has done on more than one occasion.

One way to work around the challenge of the iPhone's scale is to add a new, high-end model that's not expected to carry the burden of the entire iPhone market – something more likely to sell 30 or 50 million units, rather than 200 million. (Even the iPhone SE probably sells in greater quantities than any smartphone not made by Apple or Samsung. Apple is big.) If you're Apple, you raise the price – to limit demand, yes, but possibly also to offset the expense of the new cutting-edge tech being used in the product.

So that's the speculation for this fall: that Apple will release the iPhone 7s and 7s Plus,

with modest improvements in functionality and little to no change in external design, and expect those phones to soak up most of the demand, while the new high-end phone sells in smaller numbers up at the high end.

That scenario makes sense, more or less. It's still a risky move for Apple to make.

Why buy the rest when you can buy the best?

The iPhone is Apple's most important product, by far. iPhone revenue made up 63 percent of overall Apple revenue during its last financial quarter. The risk Apple takes in monkeying with the iPhone product mix is that it will do something to suppress iPhone sales.

It's worth asking the question, then: If Apple released minor iPhone 7s and iPhone 7s Plus updates and simultaneously released a sent-from-the-future iPhone Pro with a bunch of great new features for a high price, what would you



do? Some people will buy that expensive cool phone, to be sure – no matter how Apple prices that device, I suspect they’ll sell them as fast as they can make them. But if you’re ready for an upgrade and either can’t get one of those high-end iPhones or simply don’t want to spend that much on a phone, then what?

The risk Apple is taking is that the mere existence of a top-of-the-line iPhone will make the iPhone 7s and 7s Plus look dull, boring, and unworthy of desire. Up until now, pretty much everyone who buys a new iPhone has received the same model, excepting some colour and storage variations. Even the iPhone Plus line is largely a scaled-up version with an improved camera. But in a world where there’s an amazingly cool iPhone, will people stop buying the ‘boring’ models?

If that happens, Apple could end up with long waits for the expensive phone and a glut of iPhone 7s and 7s Plus models... and a drop in overall iPhone sales. That would not be good.

So why would Apple take the risk to change its iPhone product mix and release an expensive top-of-the-line model that could potentially suppress sales of its most important product? The risk of doing nothing is that Apple will, for the third consecutive year, have released iPhone models that look more or less like the previous year’s model, and all the while, its competitors are releasing new phones with exciting new features, including edge-to-edge displays and bright OLED screens. I am not one of those people who believes

that Apple's entire product strategy is about being cool, and that people only value Apple stuff for the cachet it brings its users. And yet, I can't deny that one of the defining aspects of the Apple brand is an expectation that the company will bring the masses the coolest, most cutting-edge technology around. The last thing Apple wants is for the iPhone to be perceived as a laggard, eternally behind faster movers like Samsung and Google.

I can write all about Apple's issues with building products at scale all I want, but billions of smartphone buyers don't care about that. All they care about is the product itself. And if Apple can't make a cool iPhone, for whatever reason, it risks the long-term reputation of the iPhone and Apple brands.

That's why (assuming that the rumours are true) Apple is willing to make this risky move to offering a high-end iPhone that makes the regular iPhone pale in comparison. The company might even see a short-term drop in sales of the cheaper iPhone. But if the new iPhone truly shines, Apple will have reclaimed the high ground in the smartphone category.

I'm sure Apple would have preferred that it could release a cutting-edge phone as the only iPhone this year, but the rumours suggest that didn't work out. The company's choice, then, is to let it all ride another year or do something dramatic – despite the risks. The people who are the market for a new iPhone this fall will reveal to us whether Apple's gamble was the right one.

Hoping for a small Mac mini revival

Jason Snell hopes Apple will give the mini a new lease of life



A funny thing happened to the Mac mini recently. The single Mac model that's the most long in the tooth surpassed 1,000 days without an update. But this shouldn't be too surprising to Mac mini fans: that update, in October 2014, was 723 days after

the previous Mac mini update, in October 2012. The quad-core Mac mini released in 2012 (and discontinued in 2014) still stands as the fastest Mac mini ever made, since the 2014 models maxed out at two processor cores.

What I'm saying is, the Mac mini hasn't been loved by Apple for a long time. And yet it lingers as an active Apple product, with no promise of a future update like the one Apple gave the Mac Pro in April. ("The Mac mini remains a product in our line-up," said Apple SVP Phil Schiller that day, thereby confirming its existence and nothing more.)

So why does the Mac mini remain a product in Apple's line-up?

Proof of life?

I like to be an optimist when I can muster up the energy for it. The Mac mini serves a useful purpose for Apple as an all-purpose Mac that can be dropped into just about any scenario. It's never going to be a huge seller like a MacBook or an iMac, but there are hundreds of different niches for which the Mac mini is suited. I have used Mac minis as servers and as set-top boxes. I've seen them attached to computers in libraries and schools. And, yes, for £479 (from fave.co/2sPo4Jl) you can still plug one in to any old keyboard and monitor and get someone to make the switch from Windows to Mac, just the same way Steve Jobs described it when he launched the original model.

So I'd like to believe that Apple keeps the Mac mini around – on a two- or three-year update cycle

The Mac mini isn't Apple's most powerful Mac, but it may be its most versatile

– because it's useful to have it around, but not particularly essential. I'd certainly be sad if it went away, since I've had a mid-2011 model running as a home server for the past six years.



(For the record, because people inevitably ask: Originally my Mac mini was an email and web server, but I offloaded those functions to dedicated servers outside of my home network many years ago. The current model hosts a huge disk array that I use for backup and archiving of big files, connects to my home weather station and outputs web pages with my weather data, serves as my definitive local iCloud Photo Library repository, and acts as a helpful emergency Mac – via a remote-desktop app such as Screens – in case I'm travelling with only an iPad and get stuck not being able to do something without a Mac handy.)

But I don't think the Mac mini is going away. I suspect that at some point we will see a new model based on an updated Intel chipset and supporting Apple's latest connection technologies – and that

model will probably also sit without an update for a few years. This seems to be the Mac mini's lot in life.

The future is NUC

I suppose it's possible that Apple will release a new Mac mini one day in a version of its familiar aluminium enclosure, the same general look it's had since it was first released in 2005. But once I got a look at an Intel NUC (short for Next Unit of Computing), my belief in a next-generation Mac mini got a lot stronger.

The Intel NUC is a miniature PC created by Intel and powered by a tiny 4x4in board. Intel sells them in customizable kits. These things are tiny, but powerful – you can get an Intel NUC powered by a modern Intel Core i5 processor, with multiple USB ports, HDMI, ethernet, and even Thunderbolt 3. They're not particularly attractive to look at – as my friend Russell noted after he bought one, it's got coloured ports on the front, which is very un-Apple.

But leaving aside the ports for a second... these things are complete Intel-based PCs, with solid-



Intel's NUC mini-desktops with 7th Generation Kaby Lake chips will have 4K capabilities

state storage and plenty of RAM, and they're the size of an Apple TV. The first time I looked at one, I just knew that this would be the way for Apple to make a new Mac mini that advanced the promise embedded in the name of the product. An entire Mac in the palm of your hand, to do with however you see fit. What a great way to launch a revised Mac mini, allowing Apple to do something more exciting than simply improve the specs on the same old Mac mini enclosure.

Do I need my next Mac mini to be the size of an Apple TV? Well, no, but I kind of want it to be that. (Other people want it too – which is why they've managed to install macOS on them.)

The Mac mini is never going to be Apple's top seller. It's never going to be the centre of a major ad campaign. At best, it's going to be a versatile team player that helps fill out Apple's line-up of devices, so that the Mac can go anywhere users envision – while the iMac, MacBook, and MacBook Pro serve the vast majority of uses.

I still have hope that Apple is planning something small, but great, for the Mac mini. Having a PC that fits in the palm of your hand is great. Having a Mac that does would be even better.

Three features Apple's HomePod needs

The HomePod needs to shine in a few key areas if Apple wants it to make a splash. **Dan Moren** reports



It's pretty clear that the HomePod was one of the star attractions of this year's WWDC. For a product that had little in the way of actual stage time (and even less in terms of what was demonstrated to journalists) and won't ship for several months yet, it certainly grabbed a lot of the airtime directly following the event. And in that, it follows in the merry tradition of products like the original iPhone and the iPad.

But it's hard to tell from the meagre time devoted to it just how important Apple thinks the HomePod is. Its 'kicker' placement at the end of the keynote would suggest that the company thinks the device is positioned to make a big splash, but the intense focus on music also seems to point to more of a niche utility for many.

So, which is it? Is the HomePod a product on the same level of importance as the iPad or Apple TV, or is it simply a souped up version of the iPod hi-fi?

WYSIWYG

First off, let me say that I'm a firm believer that with Apple what you see is generally what you get. So the rumours that the HomePod might contain some significant hitherto unseen functionality, like a replacement for the AirPort Extreme, seem to me entirely fanciful. There may be small implementation details or features that we haven't seen yet, but what Apple is selling is a high-quality networked speaker with Siri built-in. Anything more than that is pure conjecture.

That's not nothing. As Sonos has proved, there's a market for high-quality networked speakers. If there's room in that market, it's largely because as popular as Sonos is among a certain class of people, it doesn't have the brand reach that Apple does.

Plus, that dedication to music and audio is something that runs deep in Apple's product line. Yes, the iPod hi-fi might not have been a big hit in its day, but I know a few people who still have

them, and the complaints certainly aren't about the sound quality of the device. I have no doubt that the HomePod will prove to be an excellent speaker – the question is, well, everything else.

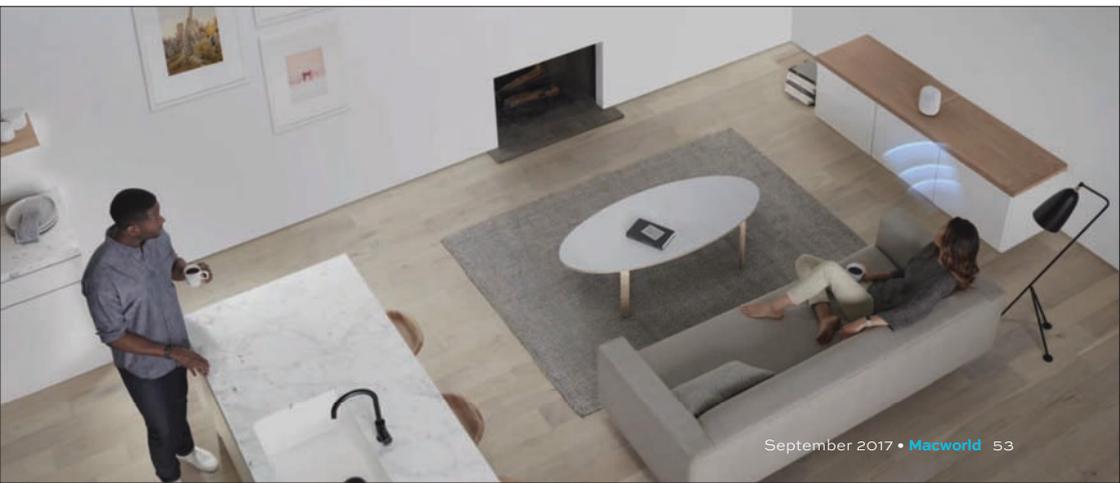
Questioning Siri

The HomePod sweet spot is exactly where Apple thinks it is: combining the features of a Sonos and a smart speaker like the Amazon Echo or Google Home. The company is right that nobody has managed to put both of those things together yet – as an owner of multiple Echos, a Google Home, and a couple Sonos speakers, I wholeheartedly agree that it would be great to streamline that setup into a single convenient package. Just as when Steve Jobs announced that the iPhone was a widescreen iPod, a revolutionary mobile phone, and a breakthrough Internet communicator in a single device, virtual-assistant-powered speakers and great networked speakers should really be one and the same.

But those smarts are where the biggest risk comes in. There's certainly been a perception that Siri has been slower to advance, especially as competition from Amazon and Google has become stronger. A recent report suggests that consumers are using Siri less often; while those types of surveys are best consumed with a grain of salt, let's set aside for the moment whether or not Siri is actually less capable. I'd argue the important issue to take away from that is one of context. Yes, we've heard the argument that a virtual assistant

in a mobile device that goes everywhere with you is more useful, but I'm not so sure that's true. I use the virtual assistants that are tethered to my home far, far more than I use Siri on my phone. A not insignificant part of that is reliability: I find that they are more consistently responsive than Siri. But a bigger point is, once again, context. I'm far more comfortable talking to a virtual assistant in the comfort of my own home than I am when I'm in public with my phone. Not to mention that home, my phone is often somewhere that Siri won't work – in my pocket, or in another room – whereas the Echo and the Google Home don't require me to fumble around looking for a device.

Of course, putting Siri into a home context could mean that people end up using it more, which could in turn trigger more rapid development on the assistant. Ultimately, the only way Siri gets better is if people try to use it more. In the end, Apple is focusing on music because it's an easy entry point for most people, and it's closely tied to the device – in a way, Apple is using voice control of music as



a Trojan horse to get people acclimated to its voice assistant, and then branching out from there.

The price of admission

The other big risk for Apple is on the price side. The company has already made the argument that a HomePod is cheaper than buying both an Echo and a Sonos speaker, and sure, that's fair. But the virtue of the Sonos is the way they work together. You want to buy two HomePods and you're talking about £700 – not an inconsiderable amount of money. Certainly putting a HomePod in every room of your house quickly becomes an expensive proposition – perhaps even more so than equipping your home with Sonos speakers and an Echo.

But Apple has never shied away from offering what it sees as premium product for a premium price, and the HomePod is no exception. That's a strategy that has largely worked out for the company to date. The real question is whether or not the consumers will consider a smart-assistant combined with a networked speaker to be as essential a purchase as the devices that have come before. If the Echo and Google Home are any indication, my bet is that those who do take the plunge will quickly consider it indispensable, while those who haven't yet seen it in action will be more sceptical. Even at its best, the HomePod isn't likely to reach the sales heights of the iPhone, or even the iPad or Mac. But put it in the same league as the Apple TV, Apple Watch, and even the AirPods and, well, that will be nothing to sniff at.

Looking to iOS 11

iOS 11 brings iPad multitasking improvements along with a few quirks, writes [Jason Snell](#)



This summer, iPad users who are testing out the iOS 11 Public Beta are getting their first taste of the future of iPad multitasking. From a redesigned app switcher to an entirely transformed Dock, iOS 11 will make things quite different.

While so many of these changes are welcome – I’ve been running iOS 11 on my iPad Pro since

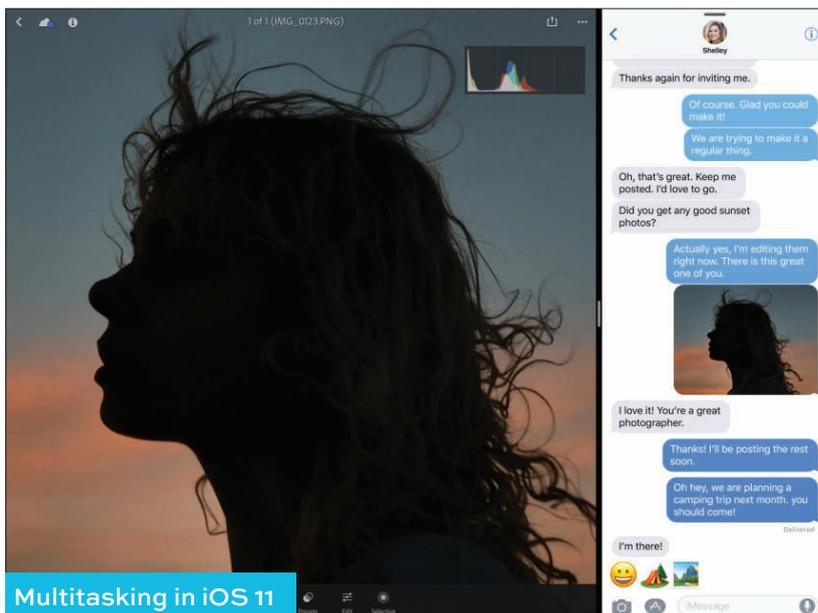
the very first beta release because I've been so desperate for some of these improvements – there are still some interesting wrinkles. It remains to be seen just what will change before iOS 11 goes final this fall, but here's a look at where we are today, and where things might go in the future.

The Dock is... different

Since the early days of iOS, the Dock has been nothing more than a tray on which you could place frequently-used apps so that they'd be within reach no matter what page of your home screen you were currently viewing. With iOS 11 on iPad, the Dock is entirely different, and this means your approach to what apps you put in the Dock should be different too.

In iOS 11, the Dock pops up with a quick swipe from the bottom of the screen while you're in any app. You can switch to another app by tapping on one of the apps, or tap and drag out an app to add it to Split View or Slide Over multitasking.

In the current iOS beta, you can stick 15 apps into the Dock, so you can get a whole lot of icons down there if you want. But what I've realized after using iOS 11 for a few weeks is that what I really want the Dock to be is a place to prioritize two kinds of apps. The first group is the apps I use all the time, which is basically what I used the Dock for before. But the second group is the apps I use in multitasking mode. Those need to be in the Dock, because it's much less efficient to add an app to a multitasking mode if they're not in the Dock. As a result, the



text editors I use to write articles now live in my Dock, as does the new Files app.

(Also, you'd better be quite familiar with the icons of the apps you put in the Dock: they no longer display names below them.)

One feature I've come to appreciate in the Dock is the app suggestions section, which takes up the three rightmost icons on the Dock. These are generally the three apps you've used the most recently, which makes it awfully convenient to switch between apps using the Dock rather than bringing up the much more complicated view that encompasses both Control Centre and the multitasking view.

Every app needs a friend, but only one

After the celebrations over multitasking coming to the iPad with iOS 9 died down, I came to a realization: I was spending a lot of time switching between one set of Split View apps to another, because iOS 9 only had the concept of a single app on the right side of Split View. Every time I wanted to switch from one pair of apps (Editorial and Safari, let's say) to another pair (Slack and Twitterrific), it was a multi-step process that involved switching the left app and then sliding away the right app and picking its replacement.

In iOS 11, this approach has been changed – when you set up two apps in Split View, they stay together. It's great. Now it's easy to toddle between different pairs of apps as you work. It's a huge advance.

That said, when the celebrations over iOS 11 die down, I think we're all going to see the limitations of this approach. Most specifically, apps can only be paired a single time. If I want Safari to ride along with a couple of different apps in Split View, I can't. When an app is added to a Split View in one place, it disappears from the others. (A workaround would be to use Slide Over for such apps, since Slide Over is persistent, but it's not always the right choice.)

I can see why Apple has taken this approach. When you tap an app icon (in the Dock) that's open in Split View, it opens that app and its Split View buddy together. If that app was 'open' in a few different pairings, which one would open? Things are already a bit complicated. In the current iOS 11

betas, you can add an app in Slide Over that's also available in Split View. When you choose that app from the home screen, it opens with its buddy, but when you choose it from the Dock within another app, it just slides in from the side.

Some of this may get worked out during the iOS 11 beta, but the larger issue still remains: Can apps only ever exist once? That doesn't seem right – there are plenty of instances where you might want to pair an app with a few different buddies. But that adds complications for app switching.

Drag-and-drop apps

iOS 11 adds drag-and-drop support between apps for data, which is great. But it also uses the drag-and-drop metaphor to implement multitasking. To create a Split View, you drag an app out of the Dock until open space appears to the right of a running



app, and then drop. To create a Slide Over, you drag the icon a bit more centrally and let go.

It's a visual, tactile, and simple to understand interface. However, things can get a bit weird in a few contexts. You can drag out of the home screen, use another finger to launch an app, and then drop the first app icon into a Split View. You can drag an app out of a Spotlight search window, but the Spotlight search doesn't disengage, so you're left to drag an app icon above search results while the app running beneath it opens up space for Split View. And you can't drag out of the command-tab app switcher at all.

Again, these inconsistencies may get ironed out in the latter weeks of the iOS 11 beta, but they highlight the complications that are created as a result of the new features of the system.

I have no regrets about jumping to iOS 11 on my iPad. The new multitasking features are going to be great. They may have their quirks, but in time, those can get ironed out. With any luck we won't have to wait until iOS 12 or 13 to see iPad multitasking get even more refined.

Tracking in High Sierra

The new Safari takes steps to reduce persistent user tracking, but is it enough? **Jeffery Battersby** reports



In macOS High Sierra, third parties will have a more difficult time sharing any tracking information via Safari. It's all part of Apple's approach to privacy, and it's not just lip service. While such policies certainly helps the company from a marketing standpoint, they're also routinely turned into product features.

The new feature seems to have the potential to make it harder for unrelated sites to follow you around the Internet. But some experts believe that, while a noble technology to deploy, the action has

already shifted to a different front that Apple can't help with directly.

You are the product

Apple has long taken the stance that it doesn't treat our private data and online behaviour as property it can sell or lease to others. This notion is partly in reaction to Google, Facebook, Amazon, and others who make their money in different ways than Apple, all of which have led them to push at the legal and ethical limits of harvesting our personal lives.

When was the last time you remember any of those sites making a change that you felt increased your privacy? Meanwhile, you can list court cases, features, options, and under-the-hood technology that Apple has pursued to prevent unwanted or unwarranted access to your data and private life.

In iOS 9, Apple added content-blocking Safari extensions, and brought the same technology to macOS in Sierra the next year. App developers could create rulesets that prevented content from specific domains, containing certain formatting elements, or in various media formats from loading at all.

This seemed like an awfully hostile move, even though 11 percent of all Internet users currently use ad-blocking software, according to PageFair. But ad blocking largely isn't about advertising. Rather, it's about page bloat, load time, popovers, auto-play videos, bandwidth usage, a site's usability, and unintentionally delivered malware. Most users don't necessarily complain about all these factors

at once, but those who install Ghostery, 1Blocker, and other desktop and mobile filters do so from frustration. (Yes, some people just object to ads qua ads, but ads pay the bills.)

Apple's latest move, announced at WWDC, doesn't block ads at all, but it tries to prevent unwanted pathways between user behaviours and tracking, often used for targeted advertising. Those pathways allow tracking systems to follow you by storing information in your browser that the browser then sends when you visit other sites that use the same trackers.

Intelligent Tracking Prevention (ITP) is Apple's term for the new technology going into WebKit, the open-source engine Apple developers that underlies Safari for macOS and iOS, as well as



third-party browsers. At this stage, Apple has discussed ITP only as a macOS feature.

Trackers work by generating a unique token stored in the browser. This is typically done with cookies, but tracking systems that are nominally scrupulous may use other storage mechanisms, too, creating ‘evercookies’. These drop tracking IDs in all the nooks and crannies in a browser that allow any form of data storage or caching, making it almost impossible to root out. The only way to avoid them in Safari is by using private browsing.

ITP attempts to recognize tokens designed to identify you across sites, rather than those used for routine single-site-based interaction. It watches how remote resources are loaded, and how you interact with them, including whether you tap, click, or enter data into forms. Because it’s Apple, the statistics and actions gathered aren’t sent back to the cloud, but are stored locally to build up a profile for your Safari on your Mac. (It’s possible Apple will send certain limited and anonymized data back using differential privacy, but that wasn’t announced.)

The system is smart enough to differentiate between first-party and third-party visits. A first-party visit happens when you go directly to a site, like macworld.co.uk; a third-party visit counts any non-macworld.co.uk scripts, images, video, or other resources that load from macworld.co.uk.

ITP does allow limited use of cross-site tracking for the first 24 hours after you visit a first-party site. Apple’s example is a site called Account.com that



handles the logins for SiteA.com, SiteB.com and SiteC.com. Visiting Account.com and logging in sets a cookie at Account.com that the other sites can retrieve by loading a script from Account.com, letting them validate your login.

After 24 hours, however, Apple's system will stop allowing those third-party cookies and other data to load. While your browser data related to Account.com itself can be retrieved for up to 30 days through a first-party visit to that domain, the sites with other domains can no longer access that information.

A site developer would need to create a simple redirect to refresh the first-party connection: you'd go to SiteB.com, it would redirect you to Account.com, and then back to SiteB.com. This

should be fairly seamless, and some sites make use of this today. For user tracking, however, embedded scripts and resources in a web page can't create those redirects and thus won't get information after 24 hours.

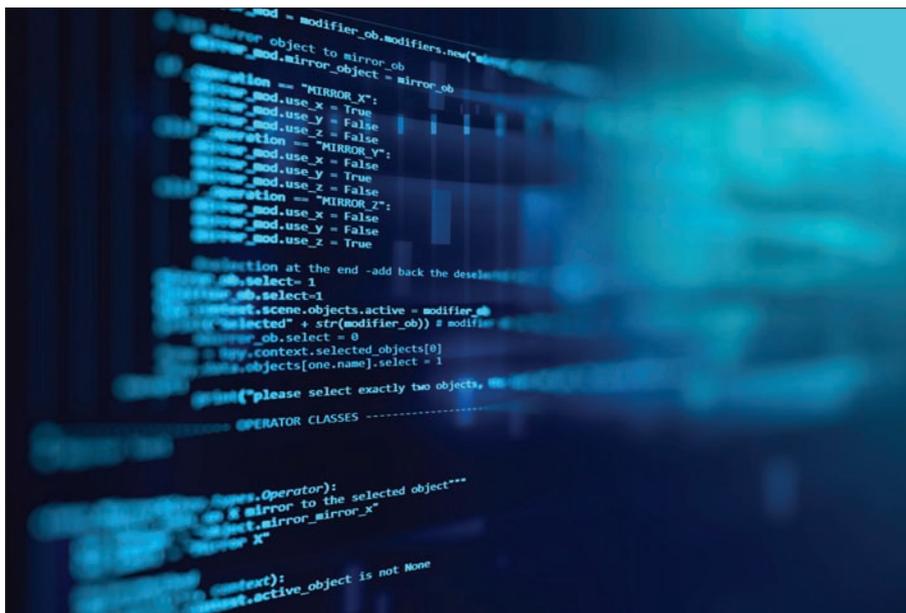
For domains identified as tracking you across sites, Safari will dump all cookies and 'website data' associated with the domain after 30 days with no first-party visit. While Apple hasn't provided details about which data is removed, I hope it's all the locations that evercookies rely upon. Otherwise, this purging doesn't truly stop browser-based tracking. (You can read a more technical rundown on the WebKit site at tinyurl.com/yb9n3rxm.)

This all sounds pretty slick. It allows short-term use of cross-site data for limited purposes and medium-term use for more focused uses, while it rejects data intended to persist over long periods across unrelated parties.

But there's a problem. It's only effective on the browser side.

What lies beneath

Alexander Hanff, a privacy activist, deflated the ITP bubble a bit with a post describing the limits of browser-side control of cross-site tracking. In brief, anything a third-party script or resource loaded on a web page can do, so can the first party serving the page up. Tracking code can be run in such a way that it's handled by the domain that a user is visiting, short-circuiting the utility of blocking third-party tracking.



The first-party site can use the data it acquires and communicate server-to-server with tracking networks to associated a user with other visits. It's not perfect, because it relies on identifying unique session characteristics of the browser and its network location, but it can be used with a high degree of accuracy. Hanff and others note that the trend towards first-party server-side tracking isn't new, and that Apple's move will only accelerate that approach.

That's not to say Apple shouldn't implement ITP, Hanff says and I agree. Not every site has the capability or interest in hosting server-side tracking, and thus ITP can have a broad impact against

casual but widespread unsophisticated tracking. Many sites incorporate analytics, ad-serving, and other tracking code without understanding the privacy implications (or even being aware there are any to think about, depending on the site). And the lack of perfect browser tracking using first-party server tools reduces the value of that tracking, too. Low-hanging fruit can be picked off.

Apple will also add let High Sierra's Safari prevent auto-play videos, the scourge of the net. And an upcoming version of Google Chrome reportedly will block ads that don't conform to an industry consortium's rules for 'acceptable' ads.

Hanff argues that only regulation and enforcement can make a difference, because of the server-side shift. But I believe that the extensive use of ad blockers and these upcoming Apple and Google plans mean that the air supply for borderline and unethical behaviour is being cut off. This, in turn, will lead publishers to make better decisions about what to include on their pages, because it will be a difference between users blocking all advertising or being able to tolerate ads that respect their bandwidth, time, and intelligence. ITP is another piece in this process.

Help Desk

Glenn Fleishman answers your most vexing Mac problems



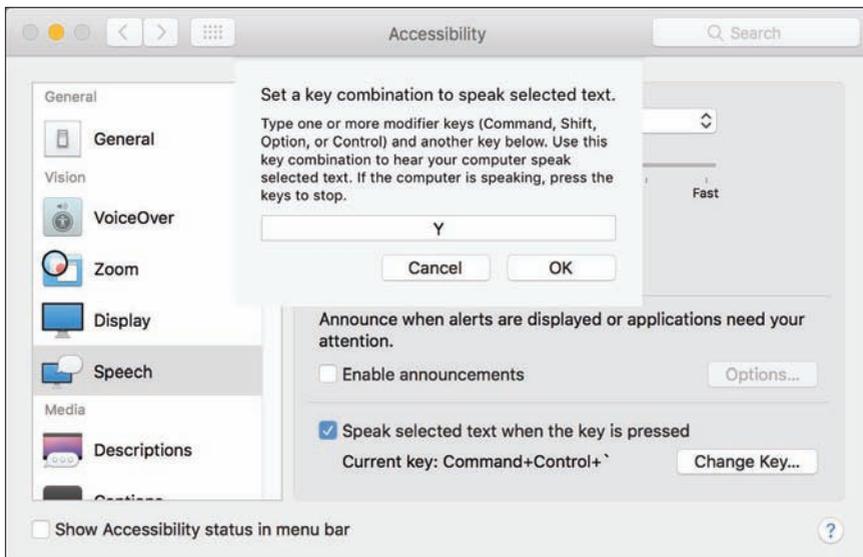
WHEN YOU CAN'T TYPE A CERTAIN CHARACTER ON YOUR MAC, HERE'S HOW TO TROUBLESHOOT IT

Q In macOS 10.12.5, the lower case 'y' is not working in some situations, such as replying to email in Gmail, and when filling out some forms or comments on certain sites. How can I fix this?

A My first reaction was that the reader needed a new keyboard (sorry), but that's probably the last resort. I'd go down this list.

Is it only in a browser this problem occurs? Try a different browser with the same sites. It's possible some setting is grabbing or suppressing y, although I'd be hard pressed to guess what. A text-expansion program or system shortcut would seemingly consistently intercept that letter in all circumstances in a single app or across the system.

If you do find it's only a problem in one browser, then check extensions or plug-ins, depending on the offending browser app, and see if you recognize everything installed. It's plausible that adware you installed along with some third-party app without realizing it is intercepting keystrokes. Disable or remove them and check if the 'y' now works. If that



The Speech section of the Accessibility preference pane could be a clue to a keystroke problem

doesn't work or you actually have the problem everywhere, make sure that the speech settings in the Accessibility system preference pane haven't been modified to use 'y' as the trigger to speak selected text. Some people in years past found that was a problem, but it's a little hard to change that setting without realizing it.

Failing a browser or Speech as the culprit, I'd get another keyboard to test and see if the same thing occurs. If so, it's a keyboard failure and you need another.

After that, I suspect a ghost in the machine. It might at that point be worth reinstalling macOS (not erasing, but installing over your current system) to see if something became corrupted that's causing the problem.

HOW TO BETTER CONTROL THE SIZE OF VIDEO EXPORTS ON YOUR MAC

When you export a video file in Apple's QuickTime Player or iMovie, does the resulting file size leave you confused? Maybe you have had the same experience as reader Rob Dlutek:

First, I took an MP4 file (90.4MB), trimmed it at the beginning and the end and exported to disk, lowering the resolution from 720p to 480p. The resulting file was 132.5MB. Then, I took the original file, trimmed it and saved it (Command-S) without making any adjustments to the size. The result: 88.8MB. That was close to what I expected, but the file was still way too big for using on the web.

Trimming a movie in QuickTime Player and saving it retains the trimmed video data, but marks the points to play. You can see this by playing the saved version in a non-Apple video player, like VLC, which ignores the trim marks.

Ostensibly, using Save As (hold down Option and select the File menu) allows you to save a ‘destructive’ copy in which the trimmed portions are removed. (However, I can’t find a definitive answer in Apple’s documentation, from people’s online posts, or in testing.)

On my Mac, every movie file in any format I open only presents me with File > Save, which indicates the movie has been imported in some form. Even saving the file immediately and opening that resulting file still shows Save, so I cannot test passthrough trim changes. It’s hard to tell whether this is a bug or an unexplained ‘feature’. (Apple’s QuickTime documentation is scant.)

But the more significant issue here is what’s missing entirely: export options. Rob notes he exported his 720p file at 480p, and got a larger file in result. Rob then imported his file into iMovie, chose the lowest resolution of 540p, and got an estimate that the output file would be even bigger: 166.8MB. He asks, “Surely, there must be some catch I don’t know about...” This seems counter-intuitive, but it comes from how video files are stored, played back, and export.

Video is almost universally compressed. In compression, algorithms scan regions of an image or both regions of frames and differences

between frames in video to find patterns or approximations. If a large area of an image or frame is more or less the same blue, with a high level of compression, it becomes all blue and takes just a few bytes to store. The higher fidelity you want, the more tonal and motion variations are preserved, and the bigger the file.

When QuickTime Player and other software plays back a video, it decodes the compression, and modern iOS and Mac (and other makers') devices have built-in chips that handle that decompression for real-time playback, rather than handling it in software. But when you export a clip, the software has to decode it and then re-encode. That decoding restores the original frames as if they were uncompressed, and then applies your new export options. (This is called transcoding if you're converting from one format to another.) The older versions of QuickTime, notably QuickTime 7



iMovie retained thin options for controlling export compared to the robust tuning available in previous releases

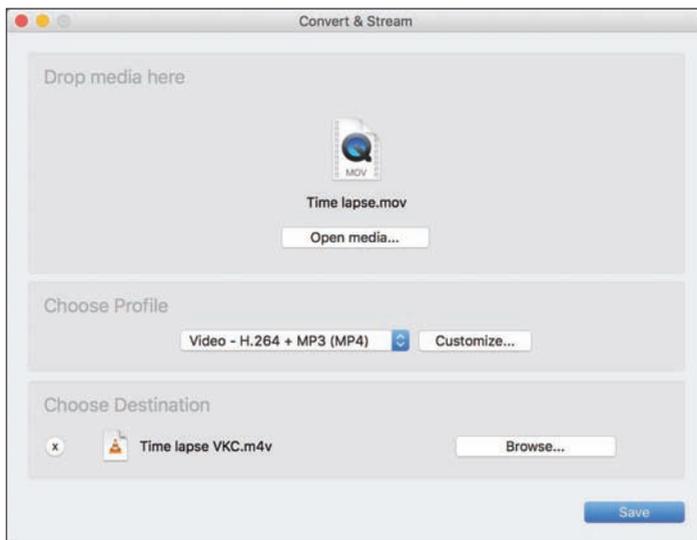
Pro, and older versions of iMovie let you dig into settings much further. This let you fiddle knobs to create a more optimal resolution and compression ratio for your purposes. The newer version have very few options. QuickTime Player doesn't let you control any variables: it just offers several prefab export sizes and destinations. iMovie is a little better, with a slider for compression level, but you can't dig in the way you could.

Rob is getting bigger files because the movie he created was compressed either more efficiently or at a higher compression ratio than the settings used by both QuickTime Player and iMovie to export it.

If you want better options, you have to move up to professional tools, because the inexpensive and free options available for this kind of straightforward operation all seem to have been abandoned. One of the most recommended free tools was last updated in 2012.

There's one exception. VLC (tinyurl.com/k3jyx4d), which is free and open source, has a couple of kinds of video transcoding, but requires a lot of mastery. Unlike Apple's products, there are endless dials to fiddle. I'd recommend using File > Convert & Stream as the most simple approach. I took a 230MB MP4 file and used the prefab profile 'Video - H.264 + MP3 (MP4)' setting, and the output result looked identical to me on a 5K iMac and consumed only 100MB.

If those pop-up options don't do the trick, there's a Customize button next to the pop-up menu. You'll need to devote a fair amount of study to how to



VLC offers transcoding, although you need to study options in depth beyond the presets

adjust those levers to get optimum results. But once you've figured that out, you have a workflow.

WHAT TO DO WHEN A CALENDAR ISN'T SYNCING TO YOUR MAC

David Farren has a macOS calendar issue. He has two Macs, an iPhone, and an iPad mini, and after using a third-party calendar app for a year, he decided to switch back to Apple's native Calendar apps in iOS and macOS.

On one Mac and his iOS devices, all went well: the entries he'd made in the third-party app for iCloud calendars all appropriately appeared. But his second Mac is throwing up errors.

When I try to prompt it to sync with iCloud, it just brings up a message saying, ‘Cannot connect to cal.me.com?’

All his preferences are the same on both Macs, and all other iCloud-based sync items properly keep up to date. David’s not alone. It’s easy to find several – but not, say, thousands of – other people having this problem across several years. Apple offers a large array of generic advice, but doesn’t address this situation. (It also has a page of in-depth calendar troubleshooting linked from that FAQ, but strangely it’s noted as no longer being maintained.)

No one has a great solution for this, but you can try one bit of troubleshooting and one attempt at eliminating other variables.

First, turn Calendar off and on in the iCloud system preference pane. In some versions of OS X/macOS you might be prompted about saving calendar information as a local copy. Choose Delete if so. If that solves the problem, hurray!

If that doesn’t work, create a new account in macOS for testing, use your iCloud account information, and see if calendar information syncs. If so, it’s not your Mac, network configuration, or other problems. It’s just your particular macOS account, which means there’s an errant file, cache, or misconfiguration in that account’s set of files.

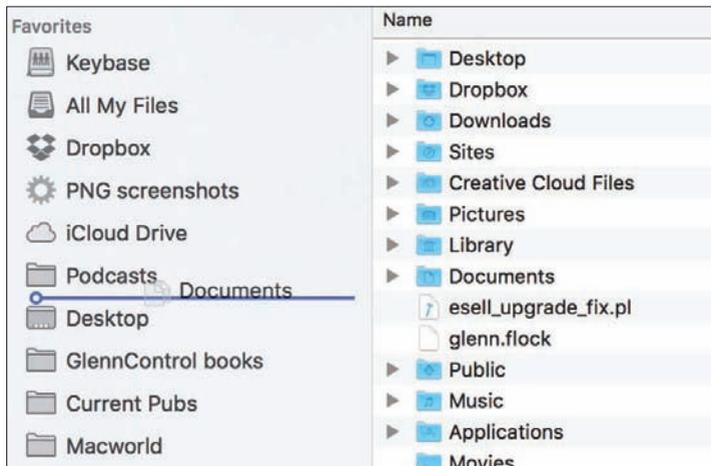
If you can’t get calendar syncing to work in a fresh account or you can but can’t ultimately fix it in your main account, a last resort is to reinstall

macOS without deleting your current system. While that seems extreme, I've had to carry this out several times for various reasons recently, and the process of reinstallation has been much smoother than in years past. Make sure to make a full clone or Time Machine copy before attempting a reinstall.

HOW TO RESTORE ITEMS IN THE FINDER SIDEBAR

Q I somehow removed the Documents category from the Finder's menu list on the far left of the screen on my MacBook Air. How do I get it to display again?

A You have two methods for certain special folders and items. I'll explain the specific first, and then the generic way to add any folder.



Drag an item to the sidebar

1. In the Finder, select Finder > Preferences.
2. Click the Sidebar tab.
3. Check any folder or special item you want in the sidebar, like Documents or All My Files.
4. Drag in the Sidebar to rearrange the order in which items appear.

If the folder you want in the sidebar isn't in that list, you can use this method:

1. Navigate to the directory in which the folder appears.
2. Drag the folder into the sidebar.
3. While still dragging make sure you're seeing a blue insert line, rather than another item's highlight, which would move the folder you're dragging into that other item.
4. Release.

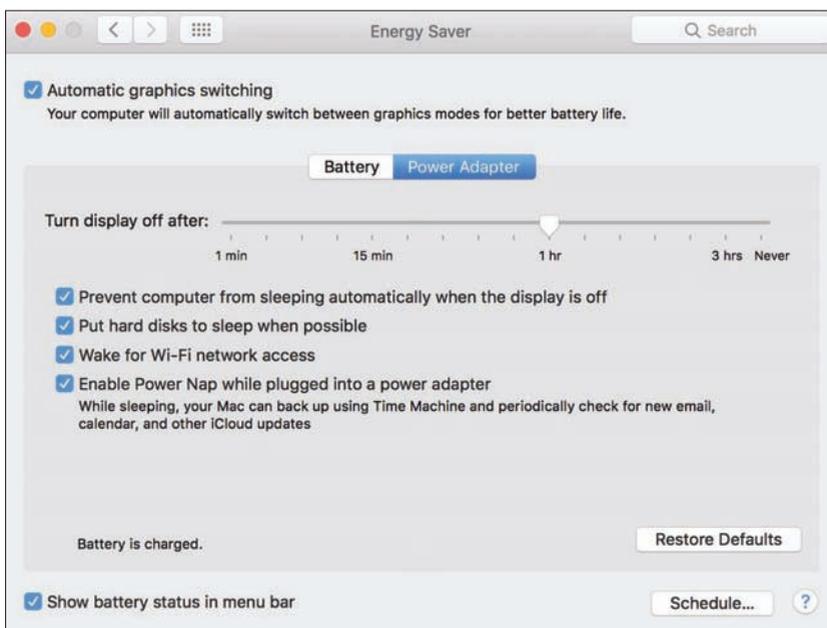
WHY YOUR MAC ISN'T WORKING AS FAST AS IT SAYS IT IS – AND HOW YOU CAN FIX IT

Macworld reader John Smith wrote in with a very interest set of queries about whether his Macs slow down when they're left to complete a task. "Do you know why and whether there is a way to prevent it?" John noted a few different behaviours he'd observed:

- After enabling FileVault on an older Mac, the time noted for completion ballooned dramatically when he'd walk away and come back.

- An animation program estimated completion time after about 5- or 10 percent was done, but on his return long after the remaining part should have been completed, it was still working away.
- Also with that animation rendering, the fans blazed full power until he walked away. Coming back and moving the cursor seemed to put the app back into full-speed mode, as the fans fired back up too.

John adjusted the Energy Saver system preference pane to make sure his Macs aren't



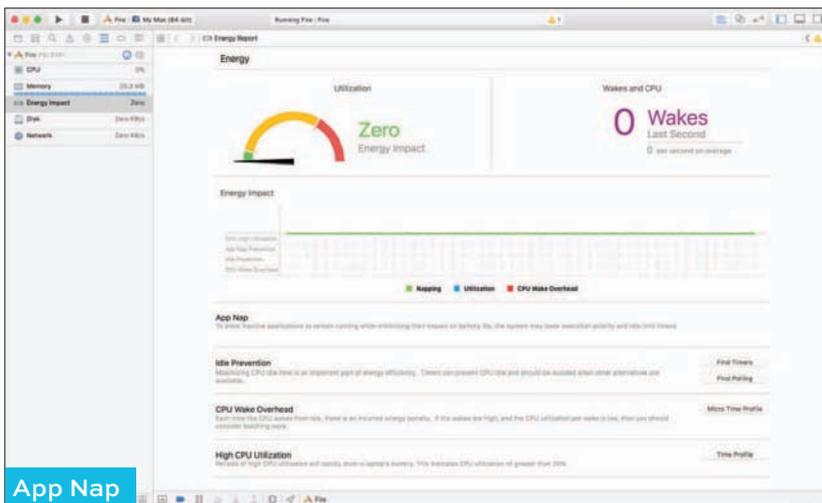
Energy Saver lets you switch to always using the higher-performing graphics system in Macs with two GPUs

going to sleep or engaging other modes. He thinks he found a sweet spot for his animation software, but FileVault remained a slug.

A few things may be going on here. First, progress bars are stinking lies. Some software literally invents the portion of a task completed, as the Atlantic reported. Many of the rest rely on estimating the percentage of something done by the scope of a task, rather than by the analysis of the time required to do each part. Let's say there 20 elements to installing a piece of software. The progress bar often shows 5 percent progress for each, even if one takes 15 seconds and another takes five minutes. Even when a set of linear tasks needs to be performed, progress bars and text displays of the estimated remaining time can be vastly off for reasons that have never been adequately explained.

Secondly, a lot of software from Apple and other companies monitors activity, and devotes different amounts of CPU processing to tasks depending on what's happening in the foreground and what's idle. This can wind up being a problem. You might think about FileVault encryption as being a priority task. But when your Mac decides its idle after a period of no user interaction, other tasks that wait to seize CPU power when a computer is idle could suddenly leap to the foreground. This should be limited to software like Internet backups and services like Spotlight indexing.

But here's the thing: some software also monitors CPU activity levels. So one task might



see an idle computer based on user interaction and grab CPU power; another, seeing CPU usage has gone sky high backs off, even though no user is working on the machine. Check settings in non-Apple software to see if you can tune idle state and CPU availability relationships.

Thirdly, you should check whether App Nap (tinyurl.com/ydhg33jo) is a culprit. Any app that's in the foreground (even when you walk away and a Mac is idle) and especially those performing graphics operations shouldn't slip into this slightly comatose state. App Nap status is shown in Activity Monitor's Energy tab, but using your Mac may change the state apps are in, and thus observation could prevent an accurate answer.

If you want to test whether App Nap is at fault, you can disable the feature without causing

problems. Launch Applications/Utilities/Terminal, and then type exactly the following and press return:

```
defaults write NSGlobalDomain  
NSAppSleepDisabled -bool YES
```

Now restart your Mac normally. After restarting, try the same unattended operation. Did performance change?

To re-enable App Nap, use Terminal to enter this:

```
defaults delete NSGlobalDomain  
NSAppSleepDisabled
```

and once again restart. (You can quit all apps and relaunch, for both disabling and re-enabling, but as with most system settings, the best way to test is a full restart for clarity.)

Fourth, if you have a Mac with two graphics systems and you have automatic graphics switching turned on, it's just possible that idle status invokes the slower GPU. You can test this by disabling automatic switching, which then always uses the higher-performance graphics system. You can check which system is in use at any given time through the Activity Monitor's Energy tab.

Latest Mac games

Andrew Hayward looks at this month's best new releases



Summer is a pretty great time to dig into a new game or two, and this month we've a bunch of exciting new releases. Epic Games' Fortnite is the biggest of this bunch, as this cooperative shooter pairs shooting mutant beasts with building elaborate bases, but there's plenty more worth considering, such as Serial Cleaner, Sundered and Dream Daddy: A Dad Dating Simulator.



1. Fortnite

Price: £34.99 from (tinyurl.com/y92n64g3)

It's rare that the Mac gets a big, multiplayer shooter at the same time as other platforms, so if Fortnite looks remotely appealing, you might want to jump on it now. Developed by Epic Games, the same studio behind juggernaut shooters like Gears of War and Unreal Tournament, this online blaster blends in a bit of tower defence with its gunplay.

You'll team up with three other players in a quest to survive against incoming hordes of zombie-like beasts, but there's more than just endless violence on tap: you'll also have to build and expand your own fort, which helps keep the foes at bay. It's a little bit Left 4 Dead and a little bit Minecraft, and seems like a really intriguing hybrid.



2. Dream Daddy: A Dad Dating Simulator

Price: £10.99 from Steam (tinyurl.com/y8exckub)

As its title suggests, Dream Daddy is a very different kind of dating simulator than most. Here, you'll play as a single dad who moves into a new town – and finds that all of the residents are other hot, single dads who are ready to mingle. Which one will you romance? The bad boy? The teacher? You've got seven distinctive options in the game's city of Maple Bay.

It launched to an enthusiastic audience, quite likely because it's cheeky and colourful, but it's also sweet and sincere, focusing on familiar relationships more than... well, more than just screwing around. Critical reviews are a bit spottier, but the Steam user critiques are mostly positive.



3. Serial Cleaner

Price: £11.99 from Steam (tinyurl.com/y8v4bf7j)

There are plenty of games out there filled with indiscriminate killing, but *Serial Cleaner* is a refreshing change of pace: it's a game about cleaning up after a bunch of killings. You're the best in the biz at this very specific, very disturbing job, and when you get the call, you'll have to spring into action to remove bodies and restore crime scenes to their usual, spotlight form. It takes the form of a stealth-action game, in which you'll zip around each level to vacuum up blood and dispose of evidence, all while evading cops that begin investigating the area. It has a super cool '70s movie vibe, and even has an array of unlockable stages inspired by top crime flicks, such as *Fargo* and *Pulp Fiction*.



4. Sundered

Price: £14.99 from Steam (tinyurl.com/yaacj89r)

So-called ‘Metroidvania’ games built in the mould of classics like Super Metroid can be truly engrossing adventures, and Sundered is one of the most promising entries we’ve seen in a while. Like those games, it’s a side-scrolling 2D game set in a world filled with secrets and upgrades, and one that rewards backtracking and exploration.

Unlike those games, however, the world here is procedurally generated, which should boost the replay value, and it has something of a rogue-like twist in that you’ll die frequently. But it’s part of the process here, as you’ll be reborn and can take advantage of character enhancements before you jump back into the world.



5. Minecraft: Story Mode – Season Two

Price: £18.99 from Steam (tinyurl.com/ya7xqye5)

You may know Minecraft as the open-ended, open-world phenomenon that lets you craft and create your own experiences amidst the randomly-generated terrain. But Minecraft: Story Mode is something very different: it's a narrative adventure that finds you making meaningful decisions as you watch the quest unfold across multiple episodes.

And following last year's initial chunk of story, now the second season has debuted. The first episode is available now, and it finds the blocky crew adjusting to fame after saving the world... except now there's a new threat on the horizon. It's similar to Telltale's other episodic games, including *The Walking Dead*, albeit with a lighter tone.



6. Final Fantasy XIV Online: Stormblood

Price: £29.99 from Steam (tinyurl.com/yc6a6ktc)

Square Enix's Final Fantasy series was built on the back of single-player experiences, but the massively multiplayer Final Fantasy XIV Online: A Realm Reborn – the overhauled version, not the original release – maintains a significant following. And now it's apparently even more enticing thanks to the recent Stormblood expansion.

Stormblood adds a heap of new content to the online role-playing experience, including new player classes, a higher level cap for deeply invested players, and an array of tweaks. You'll need the Final Fantasy XIV Online Starter Edition to play, plus it has a subscription fee, but some of the reviews are incredibly glowing.



7. Behold the Kickmen

Price: £2.79 from Steam (tinyurl.com/y7wcgtuy)

Behold the Kickmen is a game of football, but this isn't some grand simulation like FIFA or Pro Evolution Soccer on other platforms. It's a super-simplified, single-player rendition that's light on rules and heavy on silly fun. And that's because Behold the Kickmen is essentially a gag game, inspired initially by a tweet of all things.

Luckily, it's a funny gag game. You'll begin at the bottom of the Big Boring British Football Spreadsheet league with garbage players, and then work your way up to proficiency as you unlock funds and abilities. The story mode looks hilarious, plus you can transform the game into a 'dystopian future blood sport' if you'd like.



8. The Low Road

Price: £14.99 from Steam (tinyurl.com/yyp8g9st)

If the world of corporate espionage sounds intriguing, then you might want to give *The Low Road* a look. This stylish adventure game stars a young graduate from the LeCarre Institute for Exceptional Spies (L.I.E.S), who must use tactics like lying and manipulation to succeed at her new automotive industry job and become a brilliant secret agent. It looks a bit like a classic point-and-click adventure game, as you explore the charming 2D terrain, which has a hand-painted feel and influences from 1970s TV shows. There are light puzzles in the mix amidst the extensive dialogue, and the six chapters should last you a few solid hours here.



9. Ticket To Earth

Price: £10.99 from Steam (tinyurl.com/ycx25ddz)

Can't decide whether to play an XCOM-like tactical action game or a Bejeweled-esque match-three puzzler? Why not play both at the same time? That's the alluring premise of Ticket to Earth, an inspired mash-up that tosses you into strategic battles that take place on a grid full of coloured tiles. It's all wrapped up in a sci-fi narrative, yet it promises speedy missions. That's probably because Ticket to Earth began life on iPhone and iPad earlier this year, where it's only £1.99 for the same game, but the Mac version brings some visual enhancements and other small perks. Only the first episode is out so far, but the others will be added soon at no additional charge.



10. Antihero

Price: £11.99 from Steam (tinyurl.com/y7o9qmof)

Antihero gives you the opportunity to take over a Victorian underworld by any means necessary. And by any means, well, it really runs the gamut: forming gangs, stealing property, blackmailing people, and even ordering assassinations. That's just how it goes in this speedy, digital board game, which has a cartoonish look to offset the grim and unsettling acts you'll carry out along the way. You can play this one in a solo campaign, against the AI, or in online or offline skirmishes, with both live and asynchronous battles available. If the idea of commanding an army of street urchins and thriving via back-stabbing and murder sounds appealing, then Antihero should be right up your alley.

How to: Turn on Night Shift on Mac

Night Shift is a colour-altering screen mode designed to help you get a good night's sleep. [David Price](#) explains how to use it



Night Shift is an optional feature (added in Sierra) that warms up the colour palette of a device's screen, particularly late in the day. It's believed that cooler (bluer) artificial light from a screen can affect a person's circadian rhythms and disturb their sleep, and Night Shift is designed to stop this happening.

It was first made available on iPhone and iPad as part of the iOS 9.3 update, but it's since been added to macOS.

Turn on Night Shift manually

If at any point you decide that your Mac's screen is making you feel tired or straining your eyes, you can switch on Night Shift mode manually. This is very easy to do.

Notification Centre

Open the Notification Centre sidebar by clicking the icon with three dots and three lines at the very top right of your Mac's screen, or by swiping from right to left on your trackpad. Scroll up a little and two toggle switches – Night Shift and Do Not Disturb – will appear above the date (if you're in the Today screen) or the latest notification (if you're in the Notifications screen). Click the Night Shift toggle; it will turn blue, while the whole screen will change to a warmer colour palette.

Siri

This may be the quickest method of all. Click the Siri icon at the top right and say: "Turn on Night Shift."

To switch it off again, you can click the Night Shift toggle in the Siri pane, or activate Siri again and say: "Turn off Night Shift."

System Preferences

Open System Preferences > Displays, and click the Night Shift tab on the far right. Where

it says Manual, tick the box that says ‘Turn On Until Tomorrow’.

Schedule Night Shift automatically

Generally speaking we’d say it’s a far better idea to set Night Shift to automatically follow a schedule – otherwise you’re dependent on thinking about your sleep hygiene at some point late in the day.

As before go to System Preferences > Displays and click the Night Shift tab. In the drop-down menu you can choose the Sunset to Sunrise option or create your own custom schedule. Fill in the From and To fields and Night Shift will come on automatically between those times.

Adjust the colour shift

In the same section of System Preferences (Displays > Night Shift) you can adjust how radically Night Shift will alter the colour balance of your screen. Use the slider labelled ‘Colour Temperature’ to suit your preferences.

As long as you’re holding down the mouse button to move the slider, the screen will change colour to give you a preview; once you let go, it will slowly fade back into the standard setting for right now, whether that’s Night Shift or your conventional colour balance.

How to: Adjust the spellcheck language

macOS has a system-wide spellcheck feature. Fortunately, this can be adjusted by the user. [Glenn Fleishman](#) shows how



Since the spellcheck in macOS is system-wide, you should be seeing this in more than one application if it's happening in Facebook via a web browser.

There is a language setting for your Facebook account, but it doesn't seem to interact with spellcheck, which is a system function. Further, if you change your Facebook language, it changes

its interface to use that language, which would be obvious to you.

You should look in two places to see if macOS preferences changed:

- In Safari or any app that lets you type, click in a field or a page to get a cursor and then select Edit > Spelling & Grammar > Show Spelling and Grammar. This floating palette may be set to Automatic by Language. Set it to UK English and see if that solves the problem.
- In the Language & Region system preference pane, English/English (UK) should appear at the top of Preferred Languages. Drag it to the top of the list if not. You can remove any other languages that you don't speak or want to appear.

Failing that, you can disable automatic spellchecking within Safari (or any app). In an app, choose Edit > Spelling & Grammar > Check Spelling While Typing and Correct Spelling Automatically one after the other to remove their checkmarks.

Why now is the time to return to desktop Macs

2017 is the year of the desktop, argues [Dan Moren](#)



The desktop is back. Okay, sure, technically the desktop never left. But over the last decade, we've increasingly focused on mobile devices: tablets, smartphones, even laptop computers, which make up the bulk of Apple's – and probably other PC makers – sales.

But this year, one message you could have easily taken away from Apple's WWDC keynote is that there's still plenty of love for not just the Mac

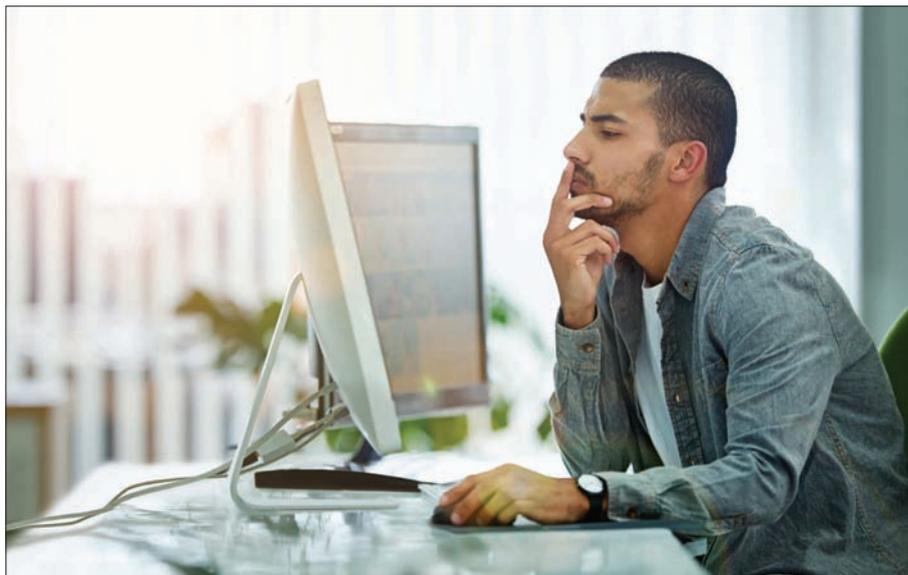
platform, but the desktop computer specifically. Having just purchased a new iMac of my own, I can personally vouch for it: sometimes, there's no replacement for a desktop.

The full desktop press

There hasn't been much talk since that keynote of Apple's commitment to the Mac. It'd be hard to argue against it, given that the company not only announced revisions to an existing desktop Mac line – the iMac – as well as a new tier on top of that – the iMac Pro – but also clarified that the top of the line professional-level desktop that it promised several months back was still in the offing. Put all that together and it's a whole lot of desktop.

And that's surprising, because over the last several years, Apple's Mac sales – like much of the PC market – have skewed heavily towards the portable side. To put this even further in perspective, depending on how you break it down – that is, if you consider the iMac Pro a separate product from the iMac – Apple will soon be selling more lines of desktops than laptops. (Thanks, not-dead-yet Mac mini!)

Granted, pushing hard on the desktop lines could also mean that Apple sees a far better prospect for growth on the desktop side than the laptop side, which is heavily saturated. Apple's also long focused on the consumer market, which has likely been drawn to laptops thanks to their versatility and price. But the company has started to make forays to reclaim portions of the creative professional



market, such as its spotlight on VR developers during the WWDC keynote. It seems reasonable to speculate that users of desktop Macs tend to be professionals, so it makes sense that Apple would want to appeal to them.

Desktop of the line

So why the sudden resurgence of interest in the desktop? The most obvious answer is performance. Without having to engineer to as strict a tolerance as portables (and without having to worry about factors like battery life), you can eke much more horsepower out of a Mac. MacBook Pros are perfectly respectable as far as performance goes, and portability is a major benefit for many

professionals, but with the new iMacs – and with the promise of the iMac Pro and Mac Pro – Apple seems to finally be prepared to deliver on the idea that you don't have to compromise performance on the desktop.

Of course, that's not the only obvious answer. There are still some features you can get on a desktop Mac that simply aren't an option on a laptop, much less a tablet or smartphone. The largest display on Apple's laptops are 15 inches these days – a far cry from the 21.5in basic iMac, much less a 27in model. An external display is an option, of course, but those come with their own trade-offs and limitations.

I can't help but think that pride is a part of the equation as well. The iMac, of course, has a long pedigree. Its roots can be traced back pretty clearly to the original Macintosh back in 1984: the all-in-one desktop that's, more or less, Apple's flagship computer. The line itself dates back to 1998 and it's been through plenty of changes in that time, but it's managed to persist over the last two decades. At this point it's the oldest of Apple's Mac brands, by far, and that longevity and brand recognition is worth something.

Living the desktop life

I had more than a few years when a MacBook was my only computer, but I've greatly appreciated having an iMac over the last six years, so when it came time to bid the old one adieu, I was more than happy to replace it with a newer desktop model.

Part of that is, for me, less about technology than it is about environment. While I can work anywhere, for a lot of what I do, it helps to have a dedicated place to sit down and ‘go’ to work. An iMac on a desk has proven to be just the right kind of setting for a lot of that work. (And yet, not all of it: as I realized recently, pretty much of all of the work I’ve done for my novels has been done on my MacBook Air. The context of portability resonates much more with fiction-writing for me.)

So the desktop is far from dead. Apple’s focus on it means it’s still relevant for a lot of people – especially developers and creative professionals. Then again, in six or seven years – whenever this desktop in front of me gives up the ghost – we’ll see if it merits a replacement with whatever the desktop state of the art is, or whether perhaps the world will have moved on.



