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9:41 AM 100%

FLUME

2:36 -1:17

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Flume — Skin

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Tim Cook reaffirms Apple's commitment to the Mac, in response to growing doubt

No major upgrades are planned for 2017.

BY CAITLIN McGARRY

The Mac Pro and Mac mini have languished for years. The iMac faces increased competition from rivals like Microsoft's Surface Studio. The MacBook (go.mac world.com/mcbktouch) is thinner and lighter than ever, but not more powerful. Critics say it's clear that Apple has put the Mac on the back burner. In a memo to employees, CEO Tim Cook said nothing could be further from the truth: "We have great desktops in our roadmap," he wrote, according to Tech-Crunch (go.macworld. com/tc161219). "Nobody should worry about that."

But it's not that simple. A recent report from Bloomberg (go.macworld.com/ bb161220) outlined the internal troubles facing the Mac team at Apple and spilled the updates coming next year. Spoiler alert: They're minor. The iMac is getting a new AMD graphics processor and USB-C ports, while the MacBook and MacBook Pro will see slight processor upgrades.

So what's going on at Apple? There seem to be a few problems, according to Bloomberg.

There's just one software engineering team working on both macOS and iOS, and most of those engineers prioritize iOS, which means the iPhone and iPad have

outsized influence. This isn't necessarily a bad thing—those two product lines account for 75 percent of Apple's worldwide revenue. But the lack of focus on the Mac has led to the departure of many Mac hardware designers, who noticed that design chief Jony Ive and his team were no longer interested in weekly check-ins to review Mac concepts or check out prototypes.

There's just one software engineering team working on both macOS and iOS, and most of those engineers prioritize iOS, which means the iPhone and iPad have outsized influence.

Before the iPhone and iPad became Apple's top priority, there was a singular vision for the Mac (go.macworld.com/ macevo). Now, the team works on multiple prototypes with different features simultaneously, which means no one concept has the full attention of anyone at Apple.

THE COMPUTER IS POLITICAL
The Mac is also caught in the crosswinds of political change. President-elect Donald Trump has promised to bring manufacturing jobs back to the United States and has criticized Apple for making its devices in China. Apple did produce the Mac Pro in the U.S., but had to make its own assembly

tools and train production staff on how to make the computers, which slowed down the manufacturing process.

Cook may be hoping to stave off future criticism from Trump by meeting with him. Cook was part of the group of tech leaders who sat down with Trump recently. In his memo to employees, Cook explained that job creation, tax reform, renewable energy, and human rights are a few of the issues that will be affected by the incoming administration, and that it's important for Apple to be at the table when conversations about those issues take place.

"Personally, I've never found being on the sideline a successful place to be," Cook wrote. "The way that you influence these issues is to be in the arena. So whether it's in this country, or the European Union, or in China or South America, we engage. And we engage when we agree and we engage when we disagree. I think it's very important to do that because you don't change things by just yelling. You change things by showing everyone why your way is the best. In many ways, it's a debate of ideas." ∎

What the Mac needs in 2017

Apple should stop neglecting its desktop Macs, give users more control over data usage, say goodbye to spinning drives, and more.

BY JASON SNELL

A s sure as the Earth sweeps through its orbit around the sun, the changing of a calendar year is a time to reflect about what's happened and ponder what's to come. Last year I made a list of things I wanted to see (go.macworld.com/201mac) from the Mac in 2016; the results were fair to middling (go.macworld.com/2016grade).

Truth be told, 2016 was a rough year (go.macworld.com/2016bad) for Mac watchers. There were new MacBook Pros

and a slightly updated MacBook, and of course OS X became macOS, but there were no new Mac desktops for the first time in a long time.

Keeping in mind that these lists are always a mixture of informed guessing and sheer wishcasting, here's a list of some of the things I hope we see from the Mac in 2017.

MAC PRO: WANTED, DEAD OR ALIVE

The all-new Mac Pro was unveiled in 2013, a groundbreaking new design with a near-silent fan and loads of CPU and GPU power. Phil Schiller boasted about Apple's Mac innovation. It was an interesting, if controversial, approach to a high-end computer.

And then: nothing. For three years, the Mac Pro has sat on Apple's price lists with no price or specification changes to speak of. At some point, it becomes embarrassing to even attempt to sell such an out-of-date product at the full price set in 2013.

You could argue that Apple crossed the line into embarrassment in 2015, but it's certainly reached that point now. This needs to end, one way or another. Either it's time for the Mac Pro to be discontinued and shown the door, or it's time for Apple to update it—either by keeping the existing

design but with the latest Intel hardware, or by tossing the "trash can Mac" into the trash and doing something new.

Which will happen? It depends on which tea leaves you read, apparently. I'm inclined to be optimistic: If Apple truly wanted to kill the Mac Pro, wouldn't it be dead already? The lingering suggests to me that Apple really is working on a replacement, and delays have left the company in this embarrassing position. Also, I think there's a place in the Mac product line for a Mac that can fulfill needs that an iMac simply can't match. I'm pretty satisfied with my 2014 5K iMac (which, last time I checked, was still faster than the

> You could argue that Apple crossed the line into embarrassment in 2015, but it's certainly reached that point now.

lowest-end Mac Pro models), but there are some people who really want lots of processor cores and workstation performance. It would sure be great if Apple could please them—but at this point even admitting they won't ever be satisfied would be an act of mercy.

THE MAC MINI, DEAD OR ALIVE

Speaking of Macs that need a final disposition: What's up with the Mac mini? It's been the most neglected Mac in terms of
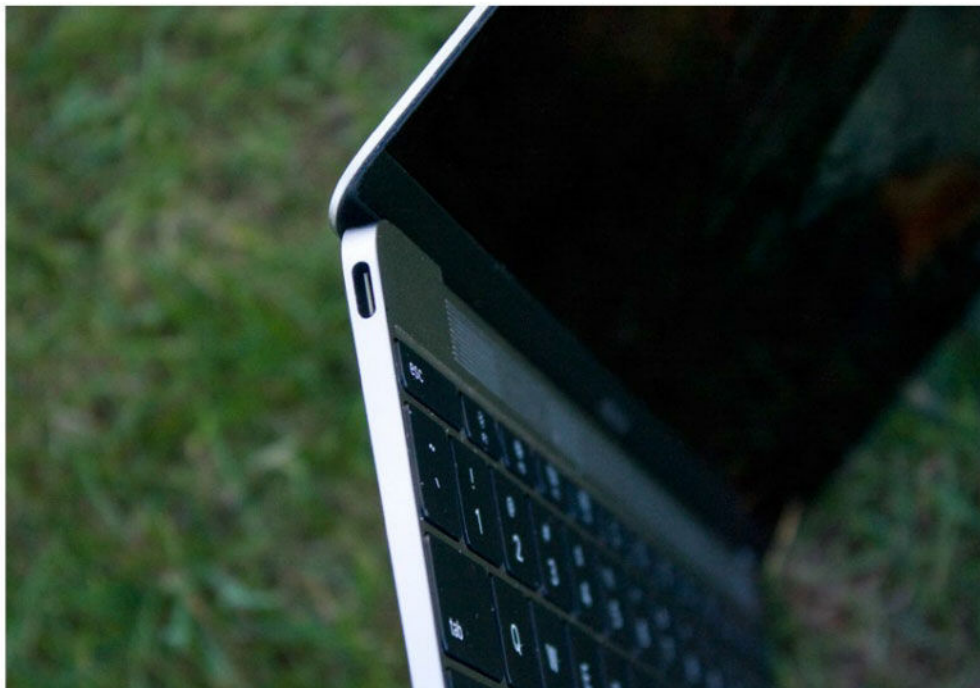
Second port, please.

updates for a long time, but it seems like it's past time for one. The Mac mini is never going to be a huge hit, but it's a useful product for schools, as a server, attached to TV sets, and all sorts of other wacky places. I've had a Mac mini running in my house for more than a decade now. I'd like the little guy to survive.

Or maybe Apple should solve both of these issues with a single new product: a desktop Mac without a display that can be outfitted with processors from the mid-range to the high end, something that's

more like a Mac mini at its base price but more like a Mac Pro at the high end. Unreasonable? Probably. Unlikely? Certainly. But if it happens, I'm going to point at this paragraph and nod like I knew it all along.

This was on my list last year, and I'm bringing it back until I get satisfaction: I'd like to see Apple take a second crack at the MacBook, two years after introducing it. Adding support for Thunderbolt 3 would be swell, and adding a second USB-C or Thunderbolt 3 port would be even better.

While Apple's at it, how about some more color in the Mac line? The Mac-Book—already available in gold, rose gold, space gray, and silver—seems like the best place to start. I'd like a metallic blue MacBook, myself.

BITE THE BULLET AND ELIMINATE THE SPINNING DISC

Another item I'm replaying from my 2016 wish list: Apple needs to clear spinning-disc hard drives out of the iMac line. I know that flash storage is expensive and the drives are small—that's why I consider the Fusion Drive an acceptable transitional form. But it's absolutely criminal that the base-model 4K iMac is still sold with a spinning disc rather than a Fusion Drive. The Mac experience is vastly improved with fast storage; those slow spinning drives in the low-end iMacs don't cut it.

iMAC REVISIONS— AND TOUCH ID

After major revisions in the falls of 2014 and 2015, Apple's iMac line went untouched in 2016. That needs to change in 2017. As with all Macs in 2017, I'd expect these new iMacs to feature USB-C/Thunderbolt 3 ports rather than traditional USB and Thunderbolt ports. (It's possible that Apple will also offer some older ports for
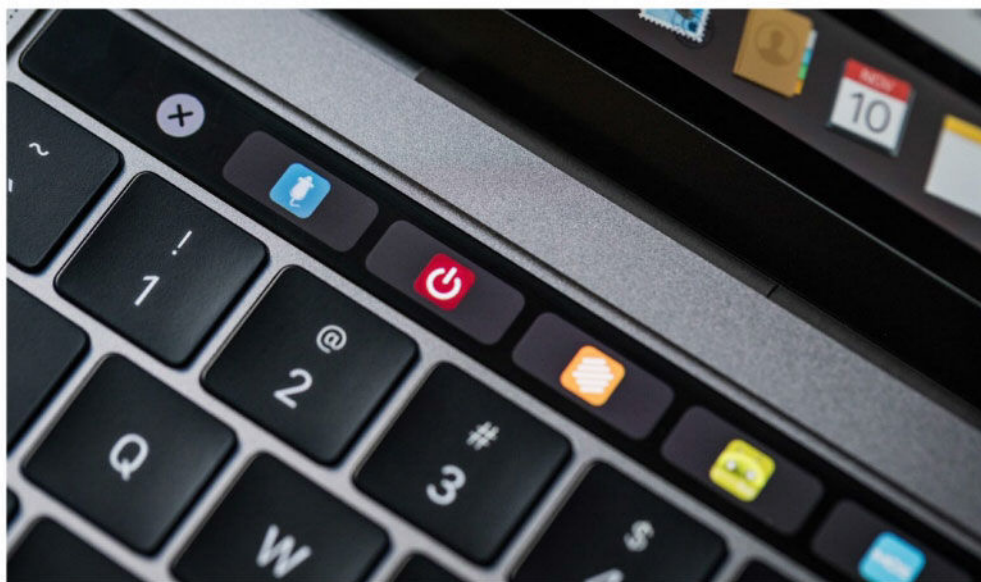
I don't know if the Touch Bar would be as good on an external keyboard, but let's see.

transitional purposes, but I wouldn't count on it! A clean break seems far more likely.)

Now that Apple has introduced the Touch Bar and Touch ID on the MacBook Pro, it's hard to imagine one or both of those features coming to the iMac. Touch ID is a natural. I'm not sure if Apple would release a new external keyboard with an onboard Touch ID sensor, or integrate Touch ID into the iMac hardware itself– touch the Apple logo to identify yourself?– but once you've unlocked 1Password for Mac with a fingerprint, you really don't want to go back.

My dream would be a Magic Keyboard, or equivalent, with both a Touch Bar and a Touch ID sensor. But would the ergonomics of the Touch Bar work when your computer's display isn't right above your keyboard like it is on a laptop? And would the battery life be remotely decent? And would Apple foist the new MacBook Pro keyboard design on all of us and kill the existing (and quite nice) Magic Keyboard design? All good questions that I hope 2017 will answer, one way or another.

A macOS THAT KNOWS ABOUT NETWORKS AND BATTERIES

Most of the new features in macOS the past few years have taken their inspiration from iOS. So let's continue down that line with a new version of macOS that is much smarter than its predecessors when it comes to networking and battery use.

On iOS, the operating system and apps are able to vary their behavior based on network status. If you're on Wi-Fi, a podcast app might download a bunch of episodes, but it might refrain if you're on a metered cellular connection. This awareness is incredibly useful for cellular connections with bandwidth caps.

But guess what happens when you're on a Mac and you tether to an iPhone or a mobile hotspot? The Mac will suck as much data as possible, because it has no awareness of what kind of network it's on. The iPhone, becaue it was designed for mixed networking, doesn't do this (except when there are bugs, of course). You can

> My dream would be a Magic Keyboard, or equivalent, with both a Touch Bar and a Touch ID sensor.

also use the Settings app to bar apps from using cellular networking entirely. Users have a lot of power and control over how their apps behave.

It's time for Apple to bring that understanding to the Mac. We tether our laptops to cellular connections all the time these days. (Especially since there are no cellular-capable Macs–presumably because

macOS has been unable to behave responsibly on those networks.)

While we're at it, how about adding a Low Power Mode in the style of iOS to macOS? Low Power Mode would be a signal to the operating system and various apps that the user is trying to eke out as much run time as possible with whatever battery life is left.

FEATURE PARITY WITH MESSAGES FOR iOS

Stickers and effects and all the other fun stuff in Messages for iOS 10 can be seen, but not sent, by macOS. 2017 is the time for that to change. (And while we're at it, Apple, can we get a major update to the emoji picker for macOS? Yours is still not great go. macworld.com/findemoji).

A NEW GENERATION OF USER AUTOMATION

In 2016 we learned that Mac automating product manager Sal Soghoian (go. macworld.com/soghoian) was laid off from Apple and his team scattered. It's a sad situation, but I'm going to (again) try to be optimistic and hope that Apple has a new approach to user automation on the horizon.

There are plenty of languages out there on which to build an entire new scripting framework. JavaScript seems to make a lot of sense, and Apple already built one approach that uses it, but maybe Swift is the one that would have the most political benefit inside Apple? I don't really care, so long as someone at Apple is pointing at the Mac and suggesting that it's worth automating tasks and letting users wire different apps together in interesting ways.

Alas, I don't think I can call this one a prediction, more like wishful thinking. Apple hasn't shown a whole lot of interest in making its own apps scriptable, let alone building a whole new generation of automation support inside macOS. iOS automation happens largely in spite of Apple, rather than being enabled by it. I don't think it's likely that this will change in 2017, but you've got to have hope. ■

How *Rogue One: A Star Wars Story* is connected to the Mac

One particular name in the credits of *Rogue One* should be familiar to longtime Mac fans.

BY JASON SNELL
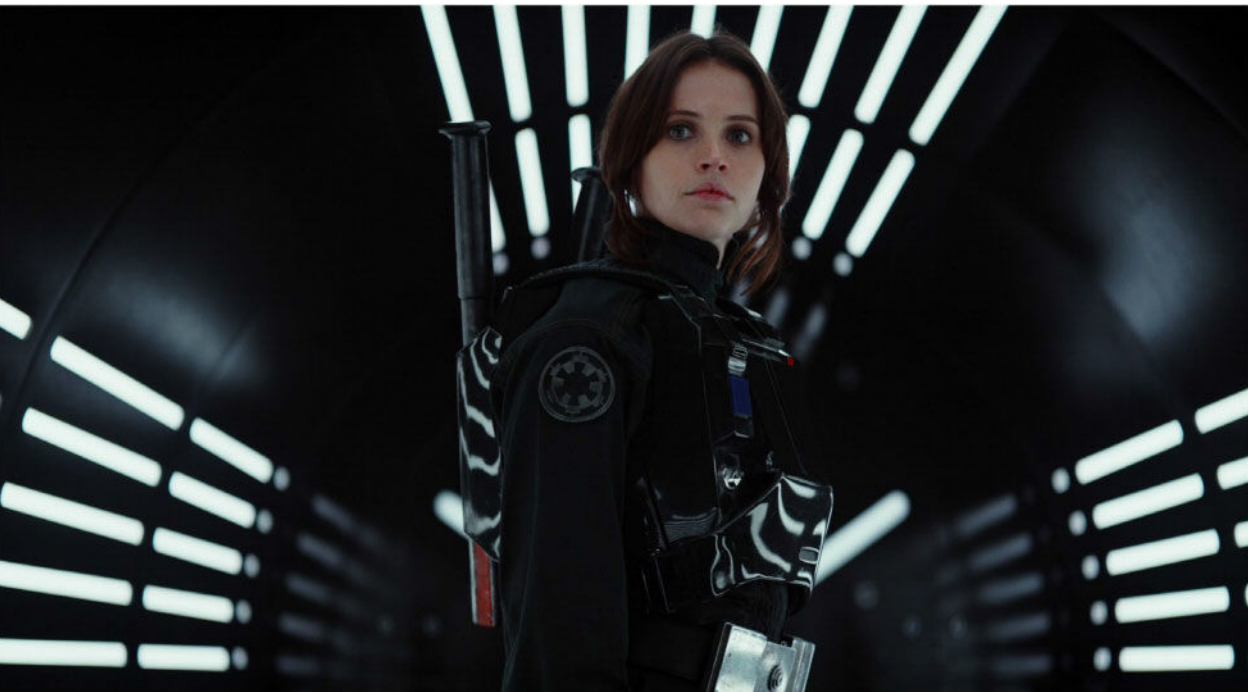
What do *Rogue One: A Star Wars Story*, opened in December, and the Mac have in common? John Knoll.

John Knoll is chief creative officer at Industrial Light & Magic (ILM), the division of LucasFilm that has been a leader in creating special effects for decades. And, yes, ILM is responsible for the special effects in *Rogue One*.

But beyond his role as a leader at ILM, John Knoll is the executive producer of *Rogue One*, and the film's story is credited

to him (imdb.com/name/nm0461306). When Disney bought LucasFilm and announced that it would be making annual *Star Wars* films, including ones that weren't the continuation of the story from *Return of the Jedi*, Knoll pitched an idea he had (go.macworld.com/knollrogue) that had its origins in the opening crawl of the original 1977 *Star Wars*.

That pitch, about the group of rebels who manage to steal the plans for the Death Star so that Luke Skywalker can be sent to blow it up in the climax of *Star Wars*, turned into *Rogue One* (go.macworld.com/knollvisual).

So where does the Mac intersect with this story? At a few places, but most notably with one of the most important apps ever written for the Mac, or any computer: Photoshop. Because the fellow who came up with the story for this year's *Star Wars* movie also happens to be the co-creator of Photoshop (go.macworld.com/buzzknoll).

Back in 1987, John Knoll's brother Thomas was a Ph.D. student at the University of Michigan. He wrote an image-display app—imagine a very primitive version of Preview—and sent it to John, who was already working at ILM at the time. John and Thomas began expanding the program, adding other image-edit-

ing features. Thomas was reluctant to turn the project into commercial software, but John convinced him that it had huge potential.

Though the brothers shopped the program—which Knoll had nicknamed Photoshop—around to numerous Silicon Valley software companies, it was first released to the public as Barneyscan XP version 0.87 (go.macworld.com/barneyscn), image-editing software included with scanner hardware. John Knoll contributed several image-editing features to the product, inspired by the workstation tools he was using at ILM. He would go on to add more features by creating Photoshop plug-ins, making the

> Because the fellow who came up with the story for this year's *Star Wars* movie also happens to be the co-creator of Photoshop.

Knolls' program one of the first apps with a plug-in architecture.

In the fall of 1988, John Knoll demonstrated Photoshop for a group of Adobe officials, including CEO John Warnock. After 15 minutes, Warnock was convinced Adobe should acquire Photoshop. Adobe ended up licensing the software from the Knoll brothers, and Photoshop 1.0—minus a few advanced color-management features—was the result. (Photoshop 1.x

source code go.macworld.com/ps1x is now available from the Computer History Museum.) With version 3.0, Adobe bought out the Knolls, and Thomas went to work at Adobe while John continued to work at ILM.

Adobe tried for a very long time to find a better name for the product, but nothing ever stuck, so the company reluctantly went with "Photoshop." The rest is history—and now *photoshop* isn't just a program, it's a verb.

John Knoll has another interesting connection to the Mac: As a fan of using graphics apps on Macs, he thought he could do a better job of remaking the special effects for the original *Star Wars* on his Mac than a team of ILM artists. As the story goes, Knoll managed to create shots on his Mac in a few days, while ILM officials waited weeks for shots from an ILM team that never arrived.

If you've ever looked at the Special Edition version of *Star Wars* and wondered why the effects look like they were made on a Mac in the mid-90s, well, that's because they were. John Knoll's Mac.

John Knoll went on to be the effects supervisor for the *Star Wars* prequels, won an oscar for a *Pirates of the Caribbean* film, and was named Chief Creative Officer of ILM in 2013. And now his story, generated from a glint of curiosity when reading those first paragraphs of the opening crawl of *Star Wars*, is being screened in front of millions of people in theaters all over the world.

It's heady stuff. But how heady can it be, really, when you and your brother invented Photoshop nearly 30 years ago (go.macworld.com/ps20)?

[Some of the information in this story came from Inside the Publishing Revolution: The Adobe Story *(go.macworld.com/adbestory) by my old boss at MacUser magazine, Pamela Pfiffner.]* ∎

IMAGE: LUCASFILM

UTILITY

PASTEBOT 2: MAC UTILITY COMBINES A DEEP CLIPBOARD WITH CLEVER CONVERSIONS

A new utility has features for managing copied items found elsewhere combined with unique additions that help in a world of text.

BY GLENN FLEISHMAN

I still miss the Scrapbook (go.macworld.com/scrpbk) that was part of the pre-OS X chain of Macintosh system releases. It was like a super clipboard that let you hold several items; you could scroll through, pick a "scrap" to copy, and then paste it into a program. Since the inception of OS X, many utilities have sought to replicate and expand Scrapbook. But for my money, I'm not sure any has brought the concept fully forward and updated it for modern needs until Pastebot 2 (tapbots.com/pastebot) ($20 on the App Store go.macworld.com/pbotapp). (Pastebot was in

a long beta, and its maker opted to number it "2.0" as a result.)

In February 2015, Joe Kissell wrote a thorough round-up of clipboard-managing utilities (go. macworld.com/ clipboard), some of which have a lot of non-scrapbook functions, too. Pastebot 2 has the best features shared among those, and adds more by offering customizable filters and a clipboard "accumulator" that I'll explain later in this review.

SCRAPBOOK LIVES

Once installed, Pastebot captures everything that you copy or cut to the system clipboard. You can access this deep scrapbook from either a system menubar item or the app, where the clippings appear in reverse chronological order. Each clipping is marked by type—text, http, image, RTF, and more—and
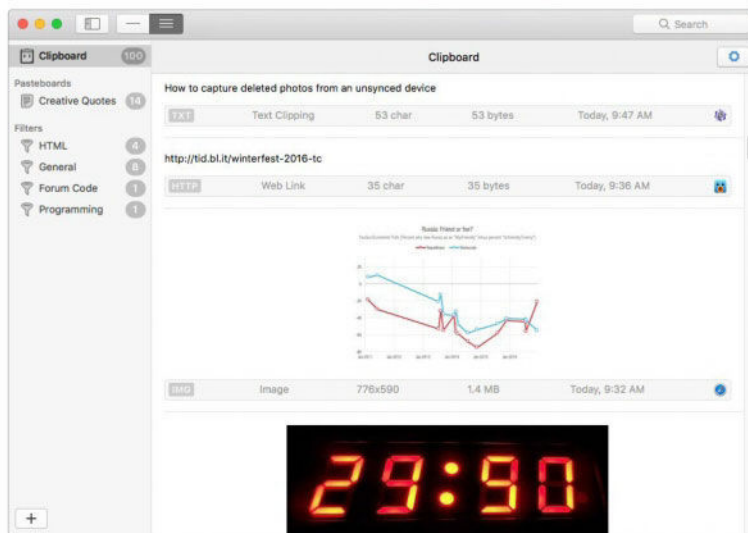
The Pastebot app previews everything you've copied and captured.

shown in either a one-line or thumbnail preview. You can opt to show the full

contents of clippings, too, as a view option, and you can use a Quick Look-style spacebar press to show a larger or full preview. The clippings also record the source, length, date, and application of origin.

You can choose how deep the backlist goes, from 50 to 500 entries. And you can opt to exclude extremely large items by specifying a threshold in megabytes; the default is 25. That's useful if you're copying large images or datasets within

Pastebot 2.0

PROS
• Deep clipping retention
• Multi-step filters for processing text, including find and replace
• Handles and retains formatting or file type for all kinds of text and media

CONS
• Keystroke assignment makes features available without invoking app
• Sequential paste queue needs more controls to be broadly useful

PRICE
$20

a program. Paste-bot also includes a Blacklist tab in Preferences so you can exclude the clipboard from apps you specify, like those that manage passwords (1Password, Last-Pass, Keychain, and so forth), and those for which you'll never want to capture the clip-board, which can include image and video-editing programs.

The Quick Paste Menu lets you paste recent items by number.

With an iCloud account, you can sync items across all your Macs. An iOS version that interoperates with the macOS Paste-bot isn't out yet. But Pastebot for macOS works just fine with the Universal Clipboard available in Sierra and iOS 10 to let you sync something you copy from Paste-bot to an iPad or iPhone.

I've already found it handy just in testing to recover lost pasted items, which happens to me when I'm managing multi-ple windows and projects at once. You know the problem: you cut (not copy) something from a document intending to paste it elsewhere in a moment, but then a distraction emerges, such as another

problem in the same text. You copy and paste there—and realize you've lost your previous clip-board. You can furiously press Undo if in an app with many layers, but then you've lost your new changes. Pastebot lets you walk back in time for acci-dents, but you can also use it this way intentionally. It has a full-text search feature if you don't want to scroll through and scan for the entry you need.

> Pastebot lets you walk back in time for accidents, but you can also use it this way intentionally.

Clippings in Pastebot can—of course—be copied in a variety of ways from the main app window and the Quick Paste Menu, invoked from the system menubar or with an optional keystroke. In the main app, you can double click or select and press the right arrow to copy. With the Quick Paste Menu, however, the last ten
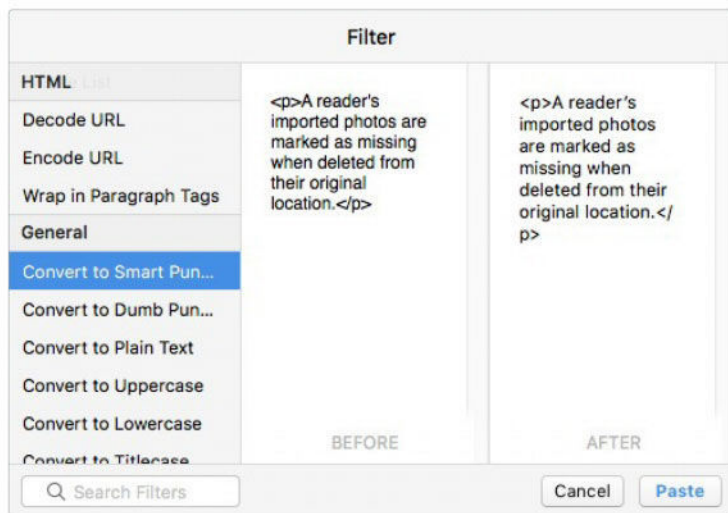
Filters transform text, including into HTML, and let you see a preview of the results before pasting.

release those keys.

Tapbots has built these features out in an easy-to-use and generally explicable manner, though it provides a brief and well-written online manual as well, a nice plus in an era of apps with no documentation at all. However, Pastebot does well when you look beyond these basics that are shared among most clipping utilities.

clippings are assigned a number in ascending order from 1 through 9 and ending with 0 as the 10th. Press the appropriate number key, and the item is copied, the window dismissed, and the item is pasted at the current foreground app's insertion point or accepted as a pasted item.

I expect most people will spend most of their using the Quick Paste Menu, the behavior of which can be customized, too. Instead of appearing in a fixed location, you can choose to have it always pop up behind the current mouse pointer location. You can also set it so that you hold down the invocation keys, set to Command-Shift-V by default, and select an item that's automatically pasted when you

CUSTOM FILTERS AND A SEQUENTIAL PASTE QUEUE

While many competitors offer text filters, Pastebot not only has a number of prefabricated conversions—such as decoding URLs and converting rich text to plain text—you can create new, multi-step filters that would otherwise require using something like text factories in BBEdit or a set of macros in something like Keyboard Maestro.

For example, if I copy a URL, I might want to clean it up, change the http:// to https:// (to ensure a secure link), and then

encode the URL to make sure none of the characters I copied have special formatting that won't work as text. That's three simple steps in a filter, all available from popup menus. Pastebot also includes some helpful HTML formatting, such as creating a list.

Filters can be invoked by right-clicking an item in the Pastebot app, and by clicking a Filter icon in the Quick Paste Menu, from which you can select the filter. Even better, filters can have an assigned keystroke, letting you invoke a filter against the text currently held in the system clipboard. And, to top it off, you can add a keystroke to enable a global feature that invokes the last filter you used to apply

> Even better, filters can have an assigned keystroke, letting you invoke a filter against the text currently held in the system clipboard.

against the current clipboard contents.

The Sequential Paste queue requires a little explanation before explaining how it works. It's an answer to the situation you may encounter when you have a set of data in one place you need to copy to another, which comes up for me all the time with Web forms. Instead of "switch to tab, copy, switch back to tab, find the field, paste," you can copy everything as separate items to the queue. The queue can hold up to 25 items.

Then you can paste items from the queue into a new place. For instance, might want to copy the
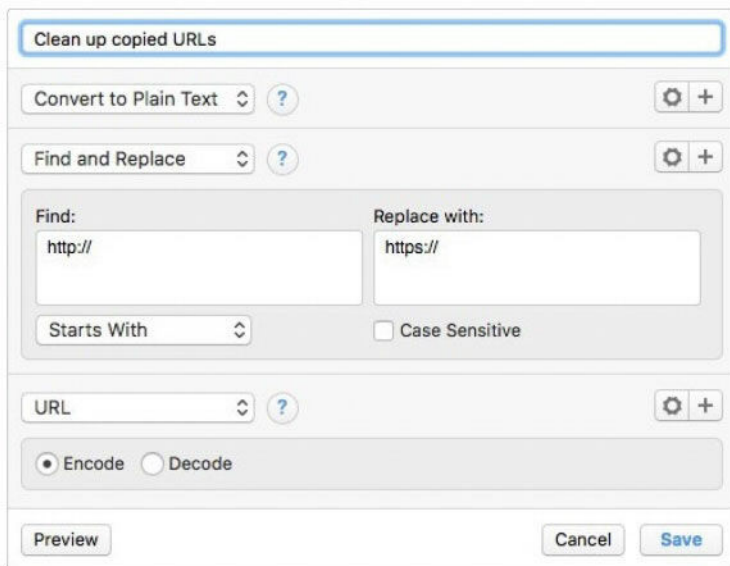
Creating a filter is straightforward, and can have multiple steps.

name, mailing address, phone number, and email address of a contact as separate items from an email, Web page, or your contacts list, because you have to enter them as individual items on another form.

The queue can't be edited or the order of items pasted out of it changed. I hope that's improved in a future release.

Pastebot also lets you create Paste-boards, which are persistent collections of clippings. The app comes with a set of inspirational quotes. Persistent clippings can have keyboard shortcuts attached, blurring the line between Pastebot and some features in TextExpander and Keyboard Maestro. (Keyboard Maestro and the app-launcher-and-much-more app LaunchBar have some clipboard features, so the line can be very blurry across utilities.)
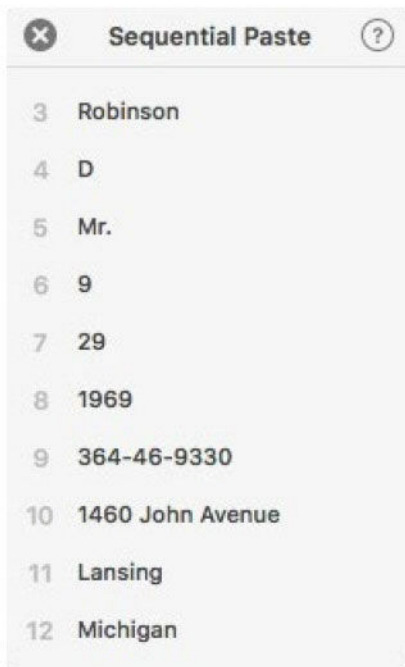
The Sequential Paste queue makes it easy to copy many items from one place and then paste them in order somewhere else, as in a form.

BOTTOM LINE

If you find yourself wishing you didn't have just a single level of clipboard depth, or yearn for the sweet return of Scrapbook, Pastebot 2 provides that in an efficient way with lots of options for customizing to work best with you. The combination of being able to assign keystrokes and change basic behavior while retaining a deep backlist of clippings means you can retain the history of what you've cut and copied and find and apply it easily.

While Pastebot's basic features are well implemented and work as expected, it shines in the extras, especially the robust but not overwhelming filter editor. Transforming text, HTML, and URLs, and removing the "richness" from rich text remain remarkably common tasks for many people, judging by the support email I receive from readers. ∎
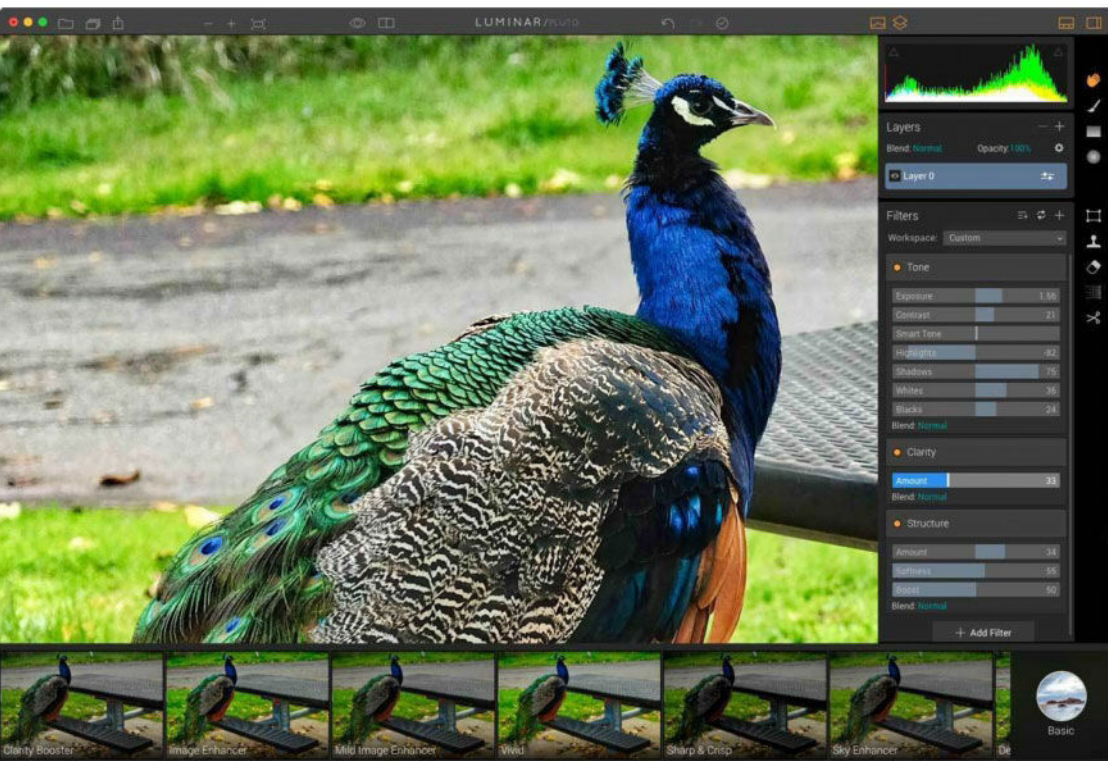
LUMINAR: A SERIOUS CHALLENGER TO THE REIGNING PRO APPS FOR PHOTO EDITING MASTERY

New Mac app shines as a standalone or plug-in to major competitors Photoshop and Lightroom.

BY JACKIE DOVE

Luminar 1.1.0 (go.macworld.com/luminar), Macphun's brand new flagship photo app, is the company's answer to Photoshop and Lightroom for photographers. It's a universal, non-destructive general photo editor that sits atop an impressive assortment of specialized Mac-only image apps and plug-ins like Creative Kit 2016 (go. macworld.com/crtvkt), Aurora HDR 2017 (go.macworld.com/arrhdr), and others.

With Luminar, Macphun now aims to conquer the complexity of general image
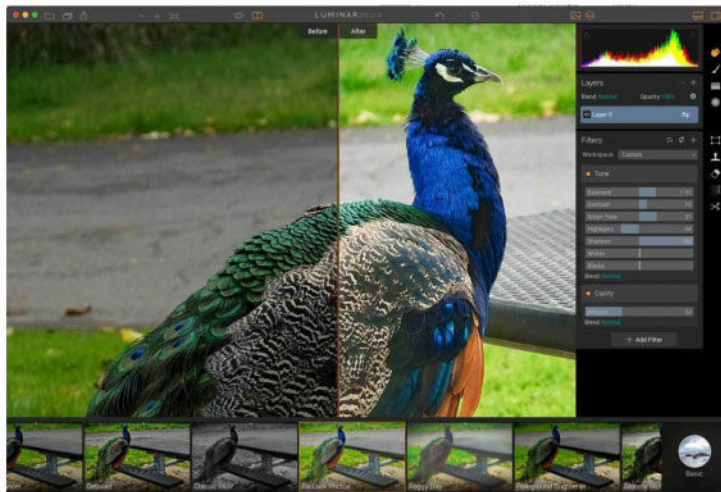
Multiple user-friendly controls make Luminar easy to learn.

a pro app in consumer disguise.

The app's interface is flexible, intuitive, and simple. Want to see only the editing controls? Click to hide the preset panel. Want to work with layers, the Transform tool, or brush in edits using a mask? Click to hide the side panel. One click hides or shows the histogram, a before/after view, masks, zoom, history, and undo-redo. The app provides advanced editing with layers, blending modes, compositing features, and raw white balance correction features, and offers Touch Bar support.

WORKSPACES

Luminar's Workspace is a flexible feature that offers customized photo editing tools for broad photo categories like Universal, Black & White, Landscape, Portrait, and Street, with a set of discrete controls for each. You can create your

editing for amateur and pro users who capture photos with a variety of devices from DSLRs and mirrorless cameras to high-end smartphones. Whereas photographers who rely on Photoshop quickly encounter its famously steep learning curve, Luminar provides the tools for similar editing results with a much easier, Apple Photos-style effort. Its concentration on photo editing and styling, combined with a massive number of slider-based tools, is designed for all skill levels, giving users plenty of headroom, flexibility, and variety. It's

Luminar 1.1

PROS
- Easy to use and learn
- Offers progressive levels of sophistication
- Can be used as a standalone app or plug-in
- Supports the new MacBook Pro Touch Bar

CONS
- No asset management
- Certain windows can't be moved
- Does not offer certain Photoshop functions

PRICE
$59

You can correct white balance on raw files.

own customized Workspace from scratch with tools you use most frequently, or just tweak one of the app's pre-defined Workspaces and rename it.

This is my favorite way to work because I almost always want to enhance clarity, structure, dehaze outdoor shots, and remove color cast, and I want all my favorite tools available immediately rather than picking through the software's default idea of what I want to do with a landscape or a portrait.

As you add filters to your Workspace, the software gives a brief description of the effect it will have on your photos. The beauty of the Workspace is that it lets you assemble all your favorite tools in one place, but you can still use each one at your discretion, or not at all.
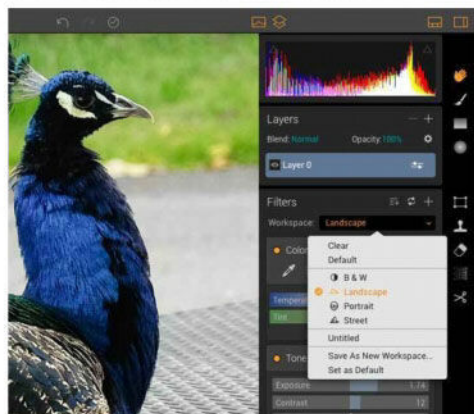
Default Workspaces let you choose controls according to the type of image you're editing.

PRESETS

Presets are a hallmark of Macphun's editing apps, and Luminar follows in that tradition. Brand new users (and even experienced photographers) can immediately leverage Luminar's more than 50 quick presets in categories like Basic,

Street, Dramatic, Portrait, Outdoor, and Travel, complete with instant full-window previews.

And if that's not enough, three additional preset packs designed by professional photographers are immediately available as a free download from within the app after purchase.

Mostly, I find category-based presets limiting, but the app lets you override the categories to access all the presets at once so you can quickly click through previews regardless of category. You can

Adjust the size and other attributes of Luminar's brushes for editing precision.
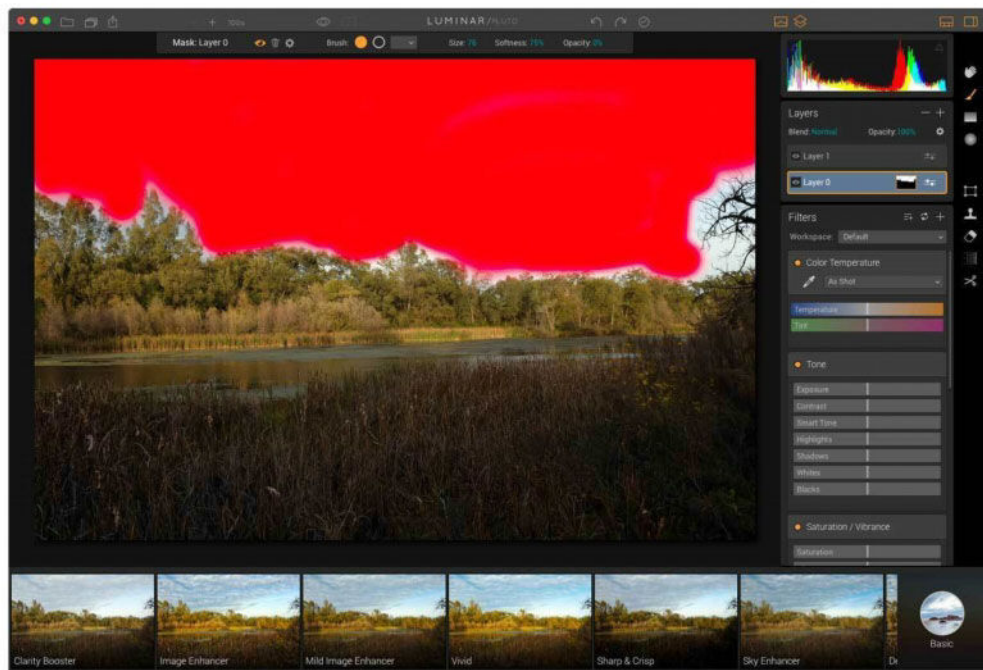
With the Layers function, you can mask and paint edits or presets on specific parts of the picture, while leaving the rest untouched.
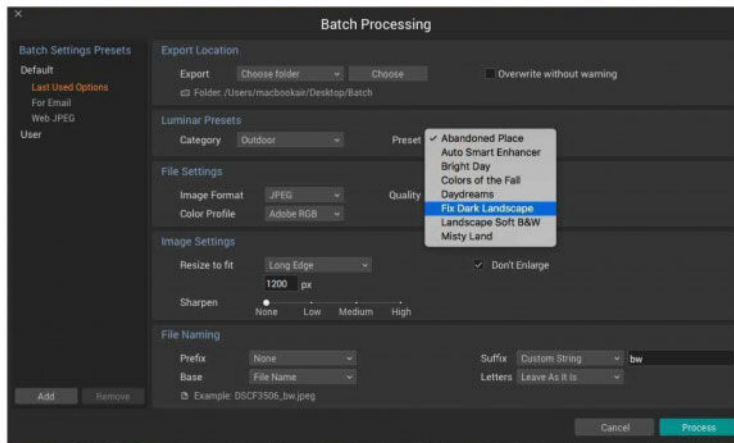
I batch processed12 raw photos in three minutes on my late-2013 MacBook Air.

also create your own customized presets.

STANDALONE OR PLUG-IN

Luminar is flexible: You can launch it as a standalone app, or as a plug-in to Photoshop, Lightroom, Aperture, or as an Apple Photos extension. The interface in all cases is exactly the same, as the app launches in its own window. Luminar can be used alone or in conjunction with Macphun's other editing apps.

One major new convenience not present in Macphun's previous apps is a multi-image tabbed interface, like Photoshop's, which lets you click to choose different images within the main window. However, you can only access the tabs function after launching the app.

Luminar's batch processing feature,

available from the opening screen or from within the interface, lets you gather multiple photos together for a single editing operation. It accepts all the supported image formats, including raw, and proved fairly speedy: It took about three minutes to process 12 raw photos. My only beef is that the batch window opens smack in the middle of the screen and cannot be resized or relocated.

SOME DOWNSIDES

Elegant and polished as it is, Luminar currently lacks an asset management system, so users will have to rely on their existing photo libraries in Lightroom, Adobe Bridge, Apple Photos, or other utilities to organize and survey images. The company says it plans to eventually add that important feature in future versions.

The app's opening screen, an unassuming small window, launches in the middle of the monitor and like the batch processing window, cannot be moved. I appreciate that Macphun is trying to keep
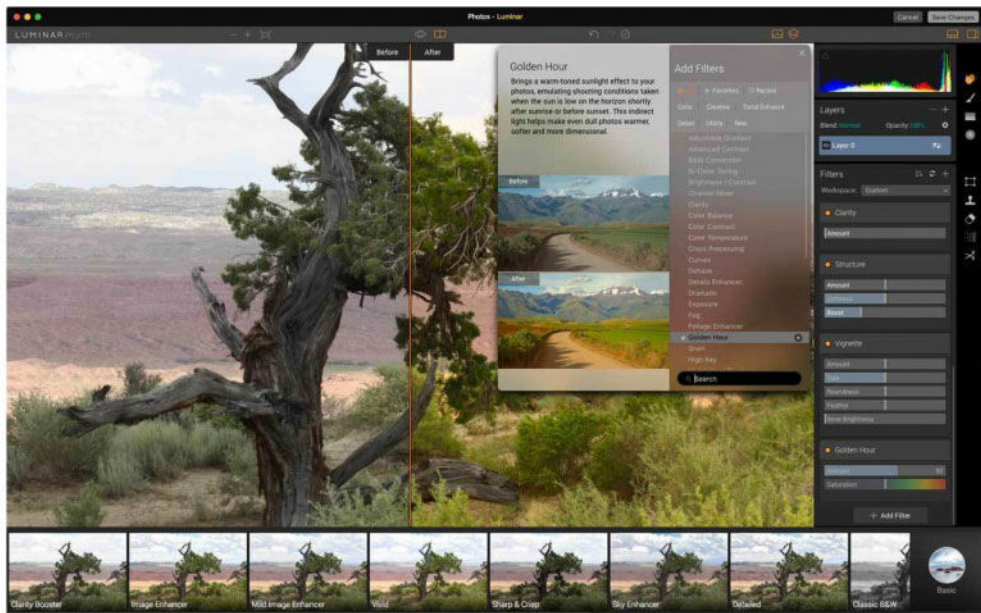
Every hour can be the Golden Hour with this special filter: No waiting. This image was edited directly within Apple Photos using Luminar as an extension.

it simple, but it's disconcerting not to be able to relocate the window until after you navigate to and open your image.

Despite its many pro features, Luminar is not entirely a substitute for Photoshop because it is solely concentrated on photo editing—that's not a bad thing, just a distinction. If you're looking for CMYK four-color separation, a variety of print output options, or text capabilities, it's best to hang on to Photoshop with Luminar as a plug-in.

BOTTOM LINE
Macphun has covered some major photo

editing territory with Luminar 1.1.0, its new flagship general photo editor. It's accomplished that feat while at the same time promoting the app as a plug-in to its major competitors: Lightroom, Photoshop, and Photos.

If you're already familiar with Macphun's other apps, you'll catch Luminar's drift in a jiffy, as its interface sports a similar signature look and feel. If you're looking for a serious photo-centric editor with a polished and well-tested interface, deep functionality, and room to grow, Luminar is an outstanding choice. ∎
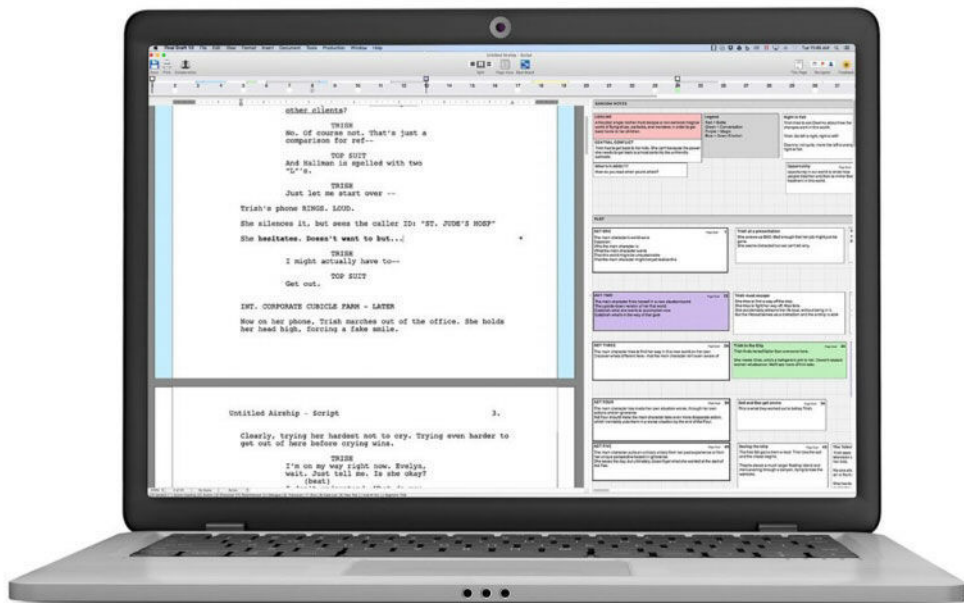
FINAL DRAFT 10: NEW WAYS TO PLOT YOUR NEXT OSCAR-WORTHY SCREENPLAY

With more than 100 templates specifically tailored for stage and screen, Final Draft 10 is the leading screenwriting software used in film and television productions.

BY J.R. BOOKWALTER

For moviegoers, the cinematic experience begins with buying a ticket at the box office. But for filmmakers, it's a story that was years in the making—a communal voyage that began with a writer extracting ideas from their head and turning them into descriptive words and colorful dialogue that would act as a blueprint for the entire production.

Since 1991, Final Draft has been the word processor of choice for most screenwriters. The software is now in use by a large majority of film and television
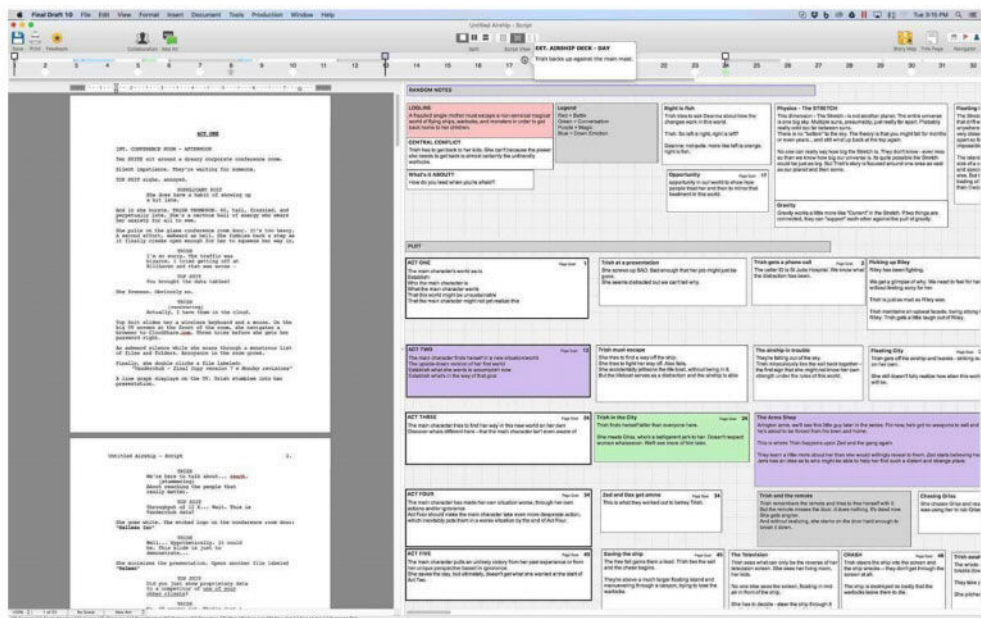
Final Draft 10's Story Map adds a visual representation of where scenes fall across the entire page count for quickly navigating a script.

productions, and with good reason: It not only eases the burden of formatting scripts to the rigid standards of Hollywood studios, but introduces new ways to visualize ideas.

FADE IN

Celebrating a silver anniversary in 2016, Final Draft 10 ($250, finaldraft.com) comes on the heels of a modest version 9.0 over two years ago, a release designed to address glaring oversights like watermark and revision color options with PDF exports, as well as Retina Display support. The biggest improvement was a

redesigned navigator that made it easier to browse scenes, ScriptNotes, or characters.

By comparison, Final Draft 10 offers six marquee features, most of which make it easier to keep tabs on the direction your story is heading. Beat Board is designed to help brainstorm ideas prior to committing them to virtual paper, allowing writers to rearrange the progression of beats in a story without a lot of old-school cut and paste.

Story Map provides a high-level view of scenes as they're being written. Enabling this feature adds a horizontal grid sandwiched between the toolbar and page
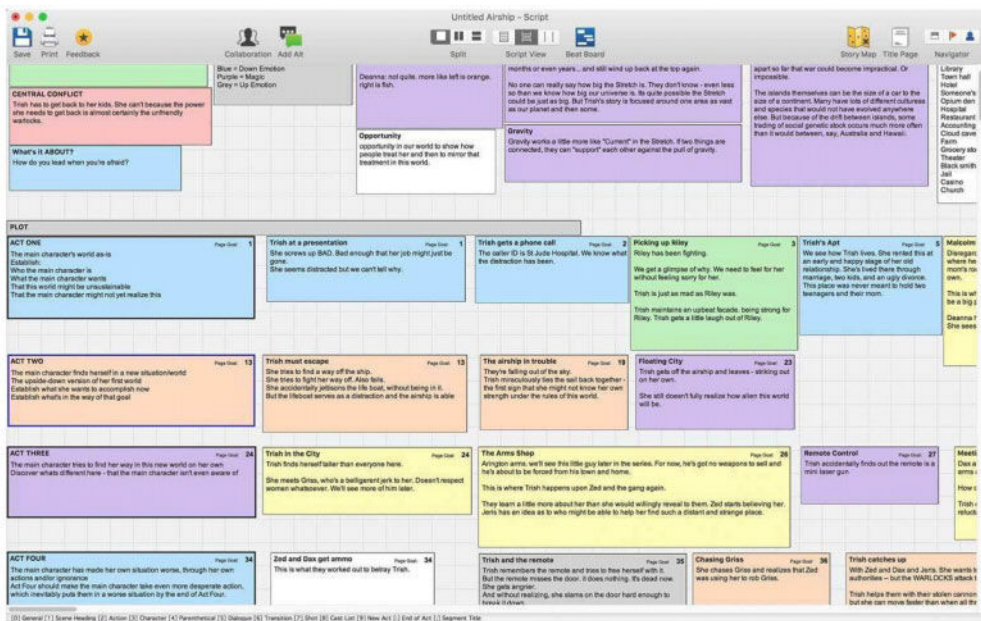
Beat Board provides a visual way to lay out key plot points, which can then be used to keep your screenwriting on track.

ruler, with grey markers denoting where scenes are located across the entire page count. Hovering the mouse over a marker displays a small pop-up preview; double-clicking jumps directly to that scene. You can also plan backwards by setting the target length for a script, which helps establish where acts and key plot points should take place.

Beat Board entries appear as diamond-shaped

markers on Story Map, alongside another new feature called Structure Points. Those are virtual thumbtacks to help chart a character's emotions or keep track of where the overall narrative is heading. Collectively, it's a powerful trio of features designed to help writers keep their story moving in the right direction.

BETTER TOGETHER

Final Draft 10 introduces an improved way for two or

🌀🌀🌀🌀 ½

Luminar 1.1 Cast & Crew Entertainment Final Draft 10

PROS
• Beat Board, Story Map provide more ways to map out a script's plot
• Real-time collaboration, at last
• Alternate dialogue

CONS
• No support for trackpad gestures

PRICE
$250
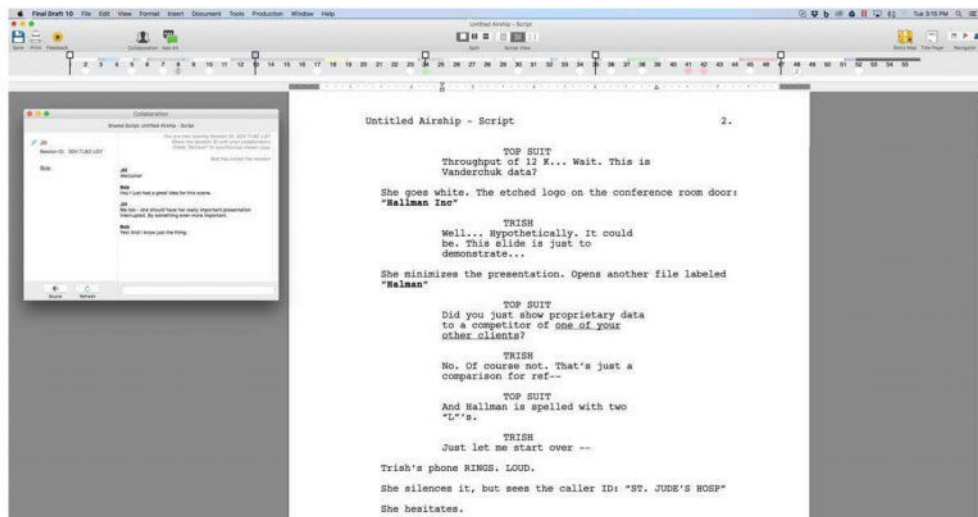
At last, true real-time collaboration arrives with Final Draft 10, even if your co-writers are halfway around the world.

more writing partners across town or halfway around the globe to collaborate on a script in real time. This requires the host to first share a Session ID number with colleagues, who then use their own copy of Final Draft 10 to join in. By default, collaborators are restricted from making changes to a script until the host gives them permission to join in the fun. It's a huge improvement over the half-hearted collaboration tools in earlier versions.

Although not lofty enough to gain marquee status, the smaller improvements make a bigger impact in your daily work-flow. My favorite allows you to save alternate lines of dialogue inside the same script file, great for writers who want to play with a few variations before commit-

> My favorite allows you to save alternate lines of dialogue inside the same script file, great for writers who want to play with a few variations before committing to just one.

ting to just one. Once added, you can easily cycle through alternates without cluttering up the formatting.

Should you be fortunate enough to get a script into production, scene numbers
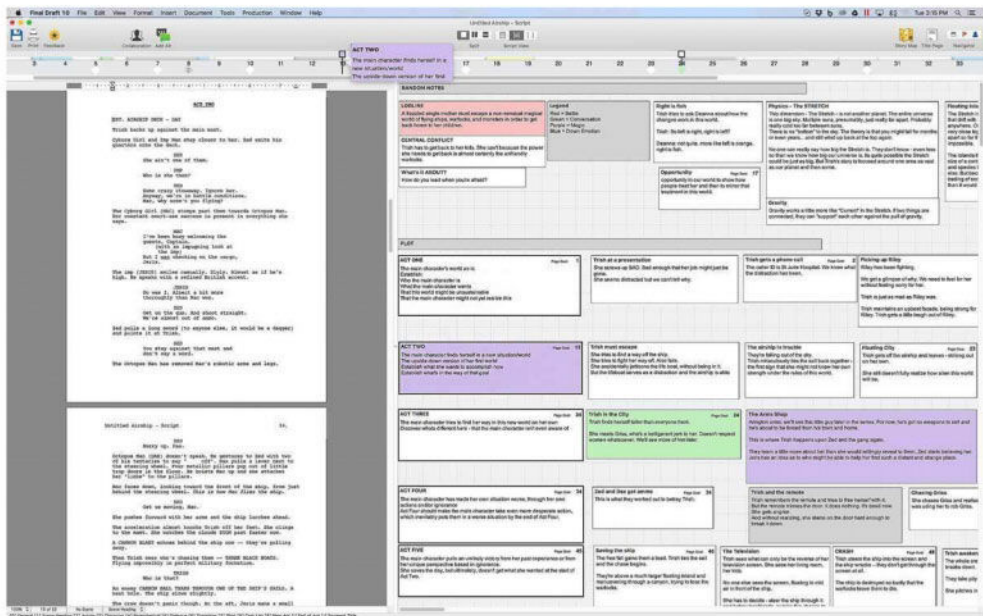
Structure Points are pins that can be added while in Beat Board or Story Map modes as a visual reference where acts or other key plot points should take place.

have also been overhauled in Final Draft 10, with more robust numbering schemes and the ability to number from the current scene. Finally, file names can be automatically added to headers or footers, and bold text styling is now an option in the revision menu.

These enhancements add up to a worthwhile update (downloadable upgrades are $100), especially for those who skipped the previous version. As a proud Magic Trackpad owner, there is one thing still on my wish list: Gesture support, such as pinching to zoom in or out of a

page like Microsoft Word already does. Also, full-screen implementation remains awkward, with the Navigator window stubbornly hovering over the main window and no way to temporarily merge both windows in one harmonious union.

BOTTOM LINE
Final Draft 10 introduces several legitimately cool new features like Beat Board, Story Map, and real-time collaboration to make up for the last ho-hum update, but there's still no support for gestures or true single window full-screen mode. ∎

GRIDS 4.0 FOR INSTAGRAM: POST PHOTOS FROM MAC, BUT SHARING IS LIMITED

Grids for Instagram brings your favorite social media images to the Mac in a beautiful way, now with the ability to upload and repost photos.

BY J.R. BOOKWALTER

A year ago, I reviewed the third version of a Mac application called Grids (go.macworld.com/gridsrev), one of those rare native solutions for viewing Instagram posts on the desktop without a web browser. With support for multiple accounts, developer ThinkTime Creations had an early leg up on the mobile app at the time, but the inability to upload new content meant this third-party software was strictly a view-only experience.

HERE'S THE STORY

I'm happy to report Grids 4.0 for Instagram (thegridsapp.com) not only carries forward

all the conveniences of the previous version (stuff like multiple layouts, keyboard shortcuts, and push notifications) but is also now capable of posting images or videos with optional tags and location data. Although Instagram remains stuck with traditional square photos, Grids will offer to add white space to non-square images before they're uploaded, a handy feature I took advantage of quite frequently.

In addition to posts, Grids also supports the social network's implementation of Snapchat-style Stories, those funky self-destructing slideshows that vanish after 24 hours. I'm not a teenager and therefore have little use for this kind of thing, but the feature otherwise works fine, despite the lack of text and drawing tools found in the mobile implementation.

Grids for Instagram 4.3

PROS
- Post Instagram photos, videos, or Stories on the Mac
- Automatically add white space to non-square images when posting
- Support for multiple accounts, reposting

CONS
- Still no macOS share extension support
- Can't zoom into opened photos
- Price increase from previous version (free update for existing users)
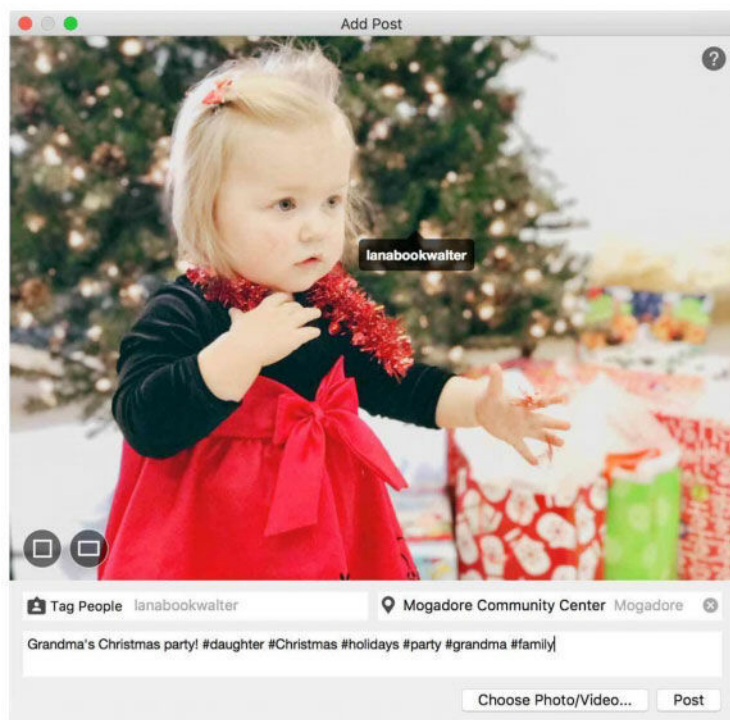
Grids 4.0 can finally post photos and videos to Instagram, even if they aren't in the service's traditional square format.
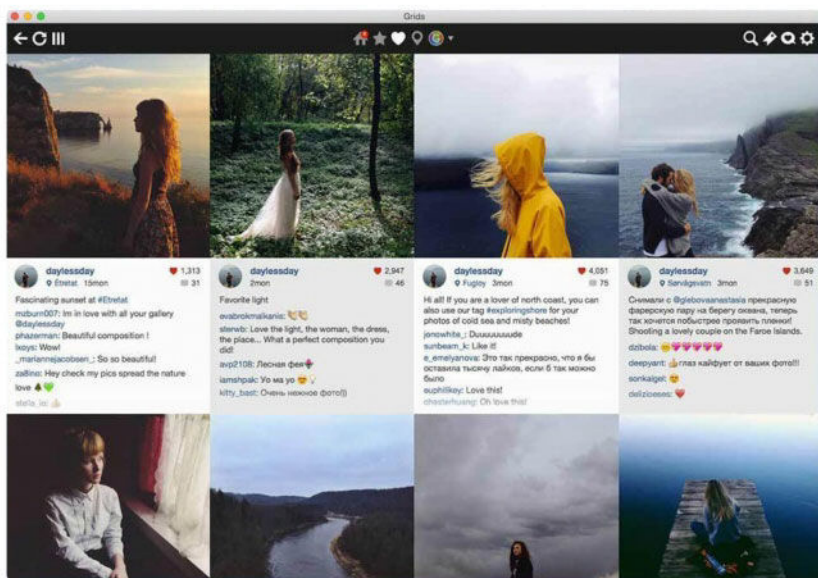
With an $8 in-app upgrade, Instagram users can view feeds on the Mac in one of four different ways.

DARE TO SHARE

Despite the ability to post new content, Grids 4.0 for Instagram has made little progress on other missing features noted in my earlier review. For example, you still can't zoom into an opened photo, a particularly grating limitation now that Instagram finally allows this in the official mobile app.

Another feature still missing is macOS sharing extension support. There's no one-click way to share Instagram posts via email, other apps, or other social networks without copying and pasting a URL. However, you can easily repost items from another user's feed onto your own, and saving images to disk remains an option.

It's worth nothing Grids comes in two flavors: A free version requiring an in-app upgrade for multiple accounts, uploads, direct messaging, and Stories; and another that costs $8 up-front with these features already enabled. That's a $3 increase from the prior version, but it's a free update for existing customers, and still a bargain for the convenience of posting photos on the Mac alone. (A Windows version is also available.)

BOTTOM LINE

The ability to post photos or videos to Instagram from the Mac makes Grids 4.0 a worthwhile purchase, but sharing to other social networks remains limited. ∎

Hot Stuff

HENGE DOCKS TETHERED DOCKING STATION

hengedocks.com

If you're hesitant to get a new MacBook Pro because you hate the idea of using all kinds of adapters to connect the laptop's Thunderbolt 3 ports, you can start reconsidering. The $199 Tethered Docking Station is a brand-new product from Henge Docks, and it features a design that's somewhat akin to other Thunderbolt docks: it's an external box that you connect all your devices to, and then you use a single cable to connect your laptop to the box. It has a wedge shape, so you can rest your laptop on top of it. The dock has three USB 3 ports, two Mini DisplayPorts, gigabit ethernet, an audio port, an SD card slot, and a Thunderbolt 3 port for connecting to the MacBook Pro. The Tethered Docking Station also has an 85-watt power supply for charging your laptop. **—ROMAN LOYOLA**

Hot Stuff

WATCHAIR SMART ANTENNA

watchairtv.com

Cord cutters, this one's for you. The $239 WatchAir is a thin (0.57 inches), stylish-looking HDTV indoor antenna that promises 60-mile, triple-band coverage (high-band VHF, low-band VHF, UHF), requiring only AC power and an available wireless network to stream live programming to a variety of devices.

It measures 18.1 inches across and 3.7 inches high that attaches to a vertical base measuring 2.7 inches wide and 7.6 inches tall.

Weighing 11.1 ounces, the antenna mounts upright using included screws or 3M VHB tape, or sits flat on a table when connected to an existing external antenna. There are still a few bugs to be worked out, but WatchAir has the potential to become the most promising product for cord-cutters since Aereo. And since you own the antenna, broadcasters won't be able to shut this one down so easily.

—**MICHAEL BROWN**

PLANTRONICS BACKBEAT PRO 2

plantronics.com

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Plantronics has redesigned its premium noise-cancelling headphones, the BackBeat Pro, into a slimmer, sexier model. The new $200 BackBeat Pro 2 headphones have all the features we loved about the original BackBeat Pros: Good active noise cancellation, 24-hour battery life, and a "smart" headband that can tell when the headphones are on your head versus sitting around your neck. The new head-phones are smaller and lighter, with oval-shaped ear cups and slightly less-obtrusive on-the-cup controls. Plantronics is a headset company, so there a few nice calling features (you know, aside from a micro-phone) built into the head-phones, including an inline option that lets you hear your voice while you're talking.

—**SARAH JACOBSSON PUREWAL**

family is why.

As a mom, we know your family is why. Why you work so hard to make healthy choices every day so you can experience more of life's precious moments together. We've got your back; to make sure more of those moments happen. But we can't do it without you. While you're serving more fruits and veggies at home, we're impacting laws that help shape healthier communities — and it doesn't stop there. You see, together we can make an extraordinary impact. Because when moms unite, real change happens.

Join other moms and together let's create a healthier generation of families. Life is Why.

Unite for change at **LifeIsWhy.org/Moms**

#familyiswhy

American Heart Association | American Stroke Association.

life is why™

A wish list for the iPhone in 2017

Every iPhone gets a better
camera, but Apple needs to
reconsider iCloud storage,
improve Family Sharing, and
come up with a VR plan too.

BY JASON SNELL

There was a time when the iPhone wish list was miles long. In the early days of the smartphone, there were so many clear gaps that it wasn't a question of what features needed to be added, but in what order.

But since the announcement of the iPhone ten years ago, the wish list has dwindled. The gaps have been filled in. The smartphone is amazing, essential, and a bit boring.

Still, we can dream, can't we? And so here's a list—both mundane and fantastical—of the iPhone features I'm dreaming of for 2017.

MORE CAMERA IMPROVEMENTS

Phone cameras can always get better, so I'd like to see Apple keep the ball rolling in 2017 when it comes to iPhone camera updates. As a fan of the smaller phone model, I'd like to see it add the second camera currently only offered on the iPhone 6 Plus.

More innovation when it comes to

IMAGE: APPLE

mingling hardware design with software would be great, too. Can iOS provide more fun effects when it's got access to two high-resolution still and video cameras? Could it combine the front and rear cameras to create something that approaches a 360-degree view? What about the ability to shoot video horizontally and vertically and choose which orientation you'd prefer to share after the fact?

I'm sure Apple's photo team has a bunch of ideas. I'm looking forward to seeing what they pull out of the hat next.

Apple loves its services revenue line, but there's a difference between add-on services and fundamental features of your hardware. For too many years Apple has skimped on the cloud storage you get when you buy an iPhone, and that needs to change.

With the release of new iPhones in the fall, I'd love to see a revamped approach to iCloud storage. Sure, that could be as easy as raising the free tier of iCloud storage from 5GB to 10 or 15 or even 20GB. Even better would be granting an

additional amount of storage to your Apple ID every time you add a new iOS device. Those grants could be limited to a couple of years, if necessary.

But when I buy an iPhone, the cloud storage that allows me to use it safely and replace it if it's stolen and upgrade to a new phone when I'm ready should be part of what I'm buying. I'll pay extra to store documents or my entire photo library online, but backup should be covered.

People should never have to see a warning that threatens to discontinue backup unless they pay Apple money for more storage.

FAMILY SHARING FIXES

Speaking of Apple IDs, a few years ago Apple introduced Family Sharing—and hasn't really improved it since. It's past time. It's time for families to be able to access a shared iCloud Photo Library, for instance.

IMAGE: APPLE
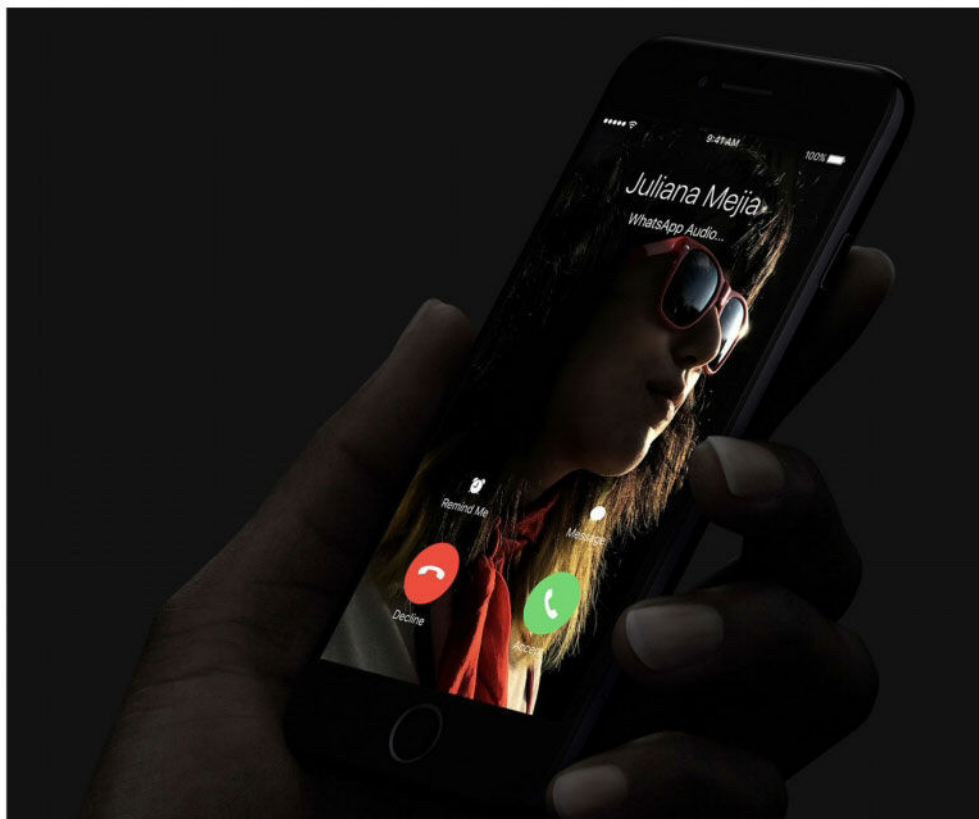
Families should be able to share iCloud storage space too, so I don't have to buy a terabyte for myself and then spend another $12/year for my wife's devices to back up separately.

SYNCING PHOTOS DATA

The latest improvements to the Photos app use machine learning to let you search for objects in your photos without any manual tagging. It's pretty cool, but every time you set up a new device, it has to scan your entire library anew.

2017's software update should allow photo metadata to ride along with the photos in iCloud Photo Library, so that when I buy a new iPhone it doesn't spend a couple of nights getting very warm while it re-scans the photos that all my other devices have already scanned four or five times.

A BETTER SCREEN

The iPhone's screen is great, but it could always be better. As much as it's improved, glare in bright sunlight is still an issue. The screen could always be brighter.

And of course, everyone would prefer if the screen was even harder to scratch and less breakable if you drop it. It may be a long time before there's a truly unbreakable iPhone, but every year Apple should try to get closer.

IMPROVED WATERPROOFING

The iPhone 7 is the first iPhone to claim water resistance, but it's still not exactly safe to take it in the pool and take underwater photos. Today's iPhones should survive a brief dunking but officially they're just "splash-proof"—and if your phone's seals fail, you will discover that Apple's warranty doesn't cover water damage.

Let's get there! Apple should keep pushing its waterproofing tech. The more moisture it can survive, the better.

> The iPhone 7 is the first iPhone to claim water resistance, but it's still not exactly safe to take it in the pool and take underwater photos.

A BETTER SETUP EXPERIENCE

Apple should make the act of buying a new iPhone one that's pure pleasure. Unfortunately, too many times the iPhone setup experience can be frustrating.

Apps take forever to restore, data has to slowly crawl over iCloud (or iTunes). The easier Apple can make this experience, the better. (Ensuring everyone's iPhones are properly backed up by granting more iCloud storage space is a part of this.)

A NEW iPHONE SE

I suspect the iPhone SE is going to be an every-two-years sort of update, but I'd love to see a new iPhone SE—this time with iPhone 7-caliber hardware—released this spring. A lot of people really like the smaller-sized iPhone, and the iPhone SE has proven to be surprisingly successful. Keep the ball rolling.

AN ANSWER FOR DAYDREAM VR

Okay, this is a ridiculous one and I think there's no way it's going to happen, but I'd love to see Apple take on VR headsets by creating its own version of [Google's Daydream View]—in other words, an accessory that lets you use an iPhone to create a virtual-reality headset. The iPhone already has most of the necessary processing power and sensors to be a VR rig. All that's needed is some tools for developers and an Apple-built accessory that brings it all together.

The truth is, Apple is probably more focused on augmented reality than virtual reality, so a pure VR headset seems like an awful stretch. But let me have this one. After all, what better time to dream about the future than when we're on the precipice of a new year? ∎

IMAGE: ADAM PATRICK MURRAY

Apple's AirPods survive tough workouts with no sweat

AirPods stay securely in your ears—yes, even on the treadmill.

BY CAITLIN McGARRY

W hen Apple announced its totally wireless AirPods (go.macworld.com/arpdfaq), the only question on my mind was: Will those things survive a run? It seemed impossible. I can barely get a pair of high-end Bluetooth buds with foam or silicone tips to fit comfortably in my ears and stay there while I work out, let alone a pair of hard plastic earphones. And the EarPods Apple includes right out of the iPhone box fall out of my ears if a breeze wafts near them just so.

None of the early AirPods reviews addressed their fitness potential, so I snagged a pair in-store recently and put them to the test.

The good news: These things don't budge. I ran on a treadmill at 6mph to see if the impact would dislodge them, but to no avail. I hit the elliptical to keep the sweat momentum going. Gross, I know, but I had to see if the AirPods (go.macworld.com/arpdrev) would slip out. Nope.

To listen to the podcast, go to go.macworld.com/pd539

Then I headed out into the elements for my usual 3+ mile morning run through Brooklyn on a mix of sidewalks and park trails. There's wind to watch out for, New Yorkers to dodge, and hills to jog up and then back down. The AirPods are so lightweight I barely felt them as I was running, but they didn't move an inch. In fact, the only time an AirPod has fallen out of my ear is when I knocked it out with my own hand.

Like the EarPods, the AirPods are not mar-keted as water-resistant, so sweat could eventu-ally cause some prob-lems. That's something to consider, although I have pairs of EarPods that have survived regular workouts for years. But EarPods come free in the box, and AirPods are $159. If you're concerned about water damage, find a pair of sweat-proof Bluetooth 'buds to exercise in.

AIRPODS + APPLE WATCH + APPLE MUSIC = FREEDOM

If you already own an Apple Watch and pay for an Apple Music subscription, prepare for the AirPods to dramatically upgrade your workouts.

The Apple Watch has room for 2GB of local music storage, or about 250 songs. You can sync songs that you've purchased on iTunes, or if you're an Apple Music subscriber, you can sync any playlist you've created or saved to your library. Open the Watch app on your phone, then tap through My Watch ➜ Music ➜ Synced Music to select which playlists to sync to your watch. This functional-ity has been built in since the Apple Watch's debut, but to listen to your locally

> If you already own an Apple Watch and pay for an Apple Music subscription, prepare for the AirPods to dramatically upgrade your workouts.

stored tunes, you need a pair of Bluetooth earphones.

I've used other, sportier Bluetooth 'buds with my Apple Watch, but AirPods offer the best experience. It's all about ease. You don't have to power up the

IMAGE: APPLE

AirPods, then check your Bluetooth settings on your iPhone to make sure they're paired. Just take them out of their charging case, pop them in your ears, and they'll automatically pair to your watch.

Leave your phone at home and work out with the playlist you synced to your watch by opening the watchOS Music app. Choose the playlist you want to listen to and then switch the source from your iPhone (the default option) to the watch.

Just take them out of their charging case, pop them in your ears, and they'll automatically pair to your watch.

Open the Workout app or a third-party fitness-tracking app like Runkeeper (go.macworld.com/rnkpr), choose your exercise, and get going.

I've been longing for an easy way to work out without my iPhone 7 Plus close by. Apple Watch Series 2 (go.macworld.com/watch2) made that easy. AirPods make it easier. ∎

AirPods teardown reveals the magic and glue that make Apple's wireless earphones work

Apple's AirPods are a nice idea, but repairing these things is hopeless, according to iFixit.
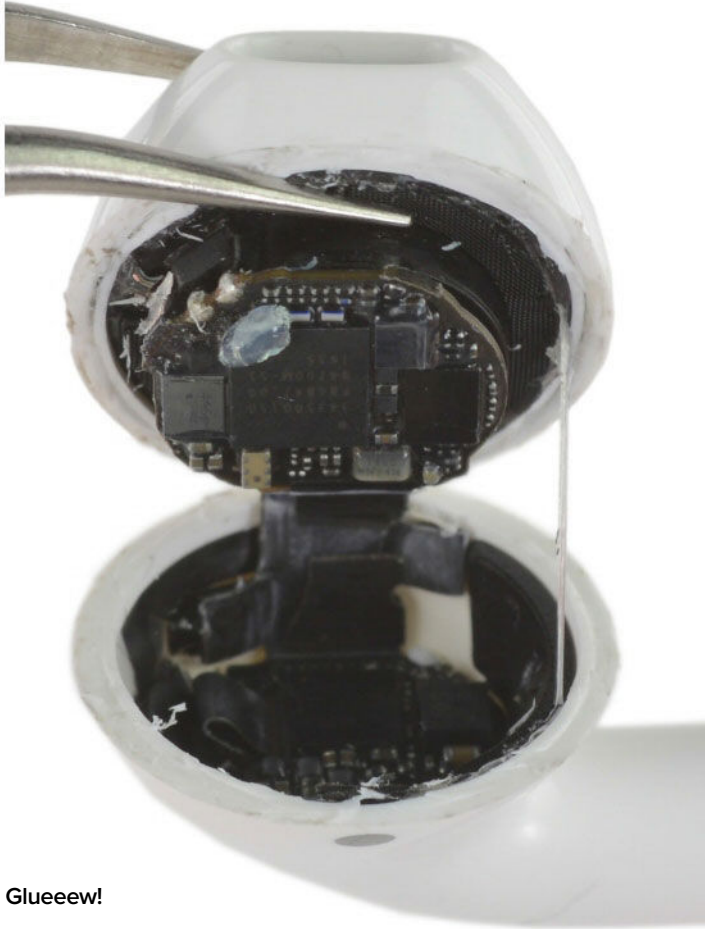
BY IAN PAUL

Sometimes it's just not worth it to peek behind the curtain and find out how the magic happens. That's the feeling you get from iFixit (go.macworld.com/apdtrdwn) after the teardown champs took on their latest challenge: Apple's AirPods (go.macworld.com/arpdrev).

These tiny wearables pack a lot of power into a small space. They've got

IMAGE: ADAM PATRICK MURRAY

Glueeew!

parts technology and glue. Or as iFixit puts it: "If jamming complex components into a small form factor and sealing it with a copious amount of glue were a game, Apple would be winning."

The impact on you at home: The reality is that if you break either of these little dangly headphones, you won't be repairing them. iFixit gave the headphones a repairability score of 0 out of 10. That's not really a huge surprise though, is it? How many types of wired earbuds are repairable save for perhaps snapping them back together if they come undone? Not many. The AirPods are expensive earbuds, but they're still earbuds.

Bluetooth, beamforming microphones, optical sensors, a motion accelerometer, a 93 milliwatt battery (we'll get to that), and speakers. It's no surprise there's little room among all those components for grace and an easy entry point.

In fact, the AirPods appear to be equal

That means if you break an AirPod you'll be shelling out at least $69 to replace it (go.macworld.com/lostap). To sum up: AirPods may not fall out of your

ears in most situations, but you'll still want to be careful not to lose or damage them.

Despite waging war with adhesive, iFixit did find some interesting technical points inside the AirPods. For starters, the battery is tiny. It's not Apple Pencil tiny, but it's still a pretty small power pack. That's not such a big deal, however, as those 93mW still give you five hours or more of music playback.

The iFixit teardown also found a technical reason as to why the AirPods look more or less like regular Apple earbuds with the wires cut off. That

To sum up: AirPods may not fall out of your ears in most situations, but you'll still want to be careful not to lose or damage them.

boom-like extension is there not only to provide balance, but as a home for an antenna in order to deliver better reception. ∎

Look at that carnage.

WATCH ACCESSORIES

KANEX GOPOWER WATCH AND ZENS POWERBANK FOR APPLE WATCH: CONVENIENT CHARGING

These portable Apple Watch batteries let you leave your charging cable at home.

BY SUSIE OCHS

Part of the experience of having an Apple Watch is the daily ritual of making sure it's charged. Apple includes a charging cable, of course, but it's on a 1-meter cord, which isn't the most travel-friendly length and still limits where I can set up a charging station.

So I'm really into the trend of portable Apple Watch chargers with built-in batteries. The power bricks themselves charge over micro-USB and then hold enough juice to recharge an Apple Watch multiple times, anywhere and everywhere. Several are on the market now, but of the four I've tested so far, I'm partial to two.

chamz) is just over 3 inches square by 1 inch high, a nice compact little brick, although it isn't as small as some of its competitors. I don't mind though, because it has a clear, easy-to-read LED indicator that shows how much charge is remaining, plus it has a USB port with 1-amp output for charging other devices, like your iPhone. And at a hair under 5 ounces it's easy to pack when traveling.

KANEX GOPOWER WATCH

Kanex's GoPower Watch ($100 list price, go.macworld.com/gpwtch; but offered for less on Amazon, go.macworld.com/gpwt-

Great for the nightstand!

The 4000mAh battery is plenty big—my first-generation, 38mm Apple Watch only has a 205mAh battery inside. The GoPower Watch can charge it nightly for nearly a week—Kanex says "up to six times" before it needs to be recharged itself. The Apple Watch sits on top, and the charging pad is magnetic just like Apple's charging cable, so the watch sticks to the pad just right. It works just as well with a band you can unfasten all the way and simply drape over the battery (like the Sport Band) as it does with a closed band like the Milanese Loop, which you can simply wrap around the charger as if it were your wrist.

You do have to press the button on the side of the charger to start power flowing to the watch, and the button is surrounded by a ring of four blue LEDs that indicate how much battery capacity is left. The GoPower Watch charges over micro-USB, with a cable included.

The generous capacity, extra USB port, and LED lights make this one the winner for me. I've been using it as my daily Apple Watch charging dock, and topping it off every five days or so—unless I

The generous capacity, extra USB port, and LED lights make this one the winner for me.

happen to "borrow" some extra juice for my iPhone in the meantime.

ZENS POWERBANK FOR APPLE WATCH

This little guy is so small, I've been keeping it in my backpack, so I'm ready to charge my Apple Watch anywhere. The Zens PowerBank for Apple Watch ($50, available on Amazon go.macworld.com/pwrbkamz) has a smaller battery than the Kanex charger, and no USB port for charging other devices. But it's downright pocket-sized at 1.5 by 1.5 inches square and 1 inch tall. It weighs 2.5 ounces. You'll forget you're carrying it.

The 1300mAh battery can charge an Apple Watch up to 3 times, and this charger also has four LEDs to show you how much battery capacity remains. The device itself recharges over micro-USB, and a cable is included.

I've used the PowerBank to charge my Apple Watch with both the Sport Band and the Milanese Loop. The Sport Band is a little easier since it just

GoPower Watch

AT A GLANCE

The GoPower Watch packs enough juice to keep your Apple Watch ticking almost a whole week.

PRICE

$100

PowerBank for Apple Watch

AT A GLANCE

So small you can take it anywhere, the Zens PowerBank charges your Apple Watch up to three times before needing to be recharged itself.

PRICE

$50

drapes across the top, but the Milanese Loop can be cinched tightly around the whole thing. And it's possible to rest the PowerBank on its side so you can see the time on your Apple Watch while it's charging, which Apple calls Nightstand mode.

Zens sells a larger PowerBank for the Apple Watch and iPhone (go. macworld.com/ pwrbk), which lists for $70 (available on Amazon, go.macworld.com/ pwrbk2amz) and contains a 4000mAh battery and a USB port for charging your phone and Apple Watch together. But I prefer Kanex's version because it's easier to tell

The LEDs light up when you press the button, to indicate the battery's remaining capacity.

how much power is left.

BOTTOM LINE

Either of these solutions is preferable to toting the long charging cable on trips—I hate how it gets so tangled in my bag. That said, a spare Apple Watch charging cable (in 1-meter or 0.3-meter length) is $29, so keeping one in my suitcase and one on my night- stand would be cheaper. But I appreciate these for the cordless conve- nience and portability, and either would make an excellent gift for an Apple Watch owner. ∎

MINECRAFT APPLE TV EDITION: BLOCK BUILDING ON THE BIG SCREEN

It's the best reason to date to buy a gamepad for your Apple TV.

BY ANDREW HAYWARD

Minecraft is the biggest (paid) gaming sensation of the last decade, racking up more than 100 million downloads across platforms and still growing in popularity after several years. It's hugely popular with young kids, has a vibrant fan community, and even is used in classrooms for educational purposes (go.macworld.com/mcedu). And now you can play it on the Apple TV.

Released right before Christmas, Minecraft: Apple TV Edition (go.macworld.com/mcapple) is essentially a big-screen conversion of the Minecraft: Pocket Edition (go.macworld.com/mcpocket) you might

Be friendly with the blocky wildlife...or punch them until they turn into beef and leather.

know well from the iPhone and iPad. It's not only the biggest game to hit the Apple TV to date, but also simultaneously the highest-profile game on the device to *require* a game-pad—you won't be able to play with the Siri Remote. And that's for the best, because it means that Minecraft isn't diminished in this new incarnation.

BLOCK BY BLOCK

Minecraft on Apple TV offers essentially the same experi-ence as Pocket Edition, which itself follows the same core

🎮🎮🎮🎮½

Minecraft: Apple TV Edition

AT A GLANCE
Mojang's blocky sensation is now one of the Apple TV's best games, provided that you have a gamepad handy—or are willing to buy one.

PROS
• Loose, open-ended structure begets creative fun
• Online play brings communal fun and new experiences

CONS
Lacks Realms and Xbox Live support for now

Same as Pocket Edition, but is a $20 stand-alone purchase

PRICE
$20

tenets as the original Minecraft on Mac and PC: it's all about little blocks. Like a modern-day digital take on LEGO, you'll wield pixelated blocks of all sorts—dirt, sand, iron ore, and much more—in your charmingly jagged world. You can use them to build a house, a city, a detailed re-creation of the Millennium Falcon...or anything else, really.

You'll also bash the blocks to bits as you dig into the ground and mountains, explor-ing beneath the surface to mine all sorts of minerals. And then

you'll craft, of course, using the myriad blocks you've accumulated to build swords, shovels, pickaxes, fishing rods, and other tools to help you in the lo-fi wilds. As ever, Minecraft is about as loosely structured as a game can be. You're dropped into a world with no tutorial, a minimal on-screen interface, and no objectives or storyline. It's up to you to find meaning and fun in each randomly generated world you enter.

Like a modern-day digital take on LEGO, you'll wield pixelated blocks of all sorts—dirt, sand, iron ore, and much more—in your charmingly jagged world.

Luckily, that's not difficult: the allure of freeform, trial-and-error exploration reveals surprises and secrets along the way, especially as you learn the ropes in the Survival mode, and there's real joy in forging your own adventure in the face of

The Apple TV Edition comes with a pretty cool bonus bundle of Christmas content right now, even if its immediate relevance has passed.

unexpected challenge. With vicious block monsters appearing every night, you'll need to utilize the resources around you to build shelter, craft better tools, and ultimately find your way to the final realm, called The End.

Meanwhile, in Creative Mode, you have all of the tools, blocks, and resources ready in your arsenal, and you can even soar through the air—all of which allows you to build massive structures and create your own experiences along the way. And you can also connect to online servers for multiplayer in either mode, and play with fellow fan-made maps and makeshift minigames.

Playing Minecraft with a proper game-pad is so much better than using virtual buttons on your iPhone or iPad. While that's adequate enough, there's nothing quite like the steady, tactile sensation of feeling an analog stick and buttons under your thumbs, not to mention having an unencumbered view of the game on your TV. I'm using the SteelSeries Nimbus ($50, go.macworld.com/stlnimbus), which is still the best of the bunch with Apple TV (go.macworld.com/bestatv) and iOS MFi gamepads, and Minecraft plays as well here as it does on other consoles and computers. While it'll take a fairly sizable investment to start playing, it's the only

Dig into the earth to find rare minerals. Ooh, redstone (and lava, too)!

option that makes sense on the Apple TV: trying to comfortably squeeze all of the controls onto the limited Siri Remote seems an impossible task.

DOUBLE UP?

Minecraft: Apple TV Edition is almost identical to Pocket Edition in nearly every respect. It has the same content as the recent 1.0 release of Pocket Edition, which also supports gamepads. However, the Apple TV Edition lacks a couple of features right now: support for Realms, the official service for setting up and running private Minecraft servers, as well as the ability to sign into Xbox Live and add friends via the service. Both of those features are in development, which is great, but it's no surprise that the Apple TV Edition's $20 price tag is throwing some Pocket Edition owners for a loop.

While many purchased iOS games are then free to download on Apple TV, Minecraft: Apple TV Edition has its own $20 price tag that is separate from Pocket Edition's paltry $7

charge. Seven bucks for Minecraft on your iPhone is a steal, while $20 for a home console version feels spot-on. However, given that you're essentially getting a blown-up version of Pocket Edition, it seems strange that you're asked to pay again, not to mention at a much higher price.

Playing Minecraft with a proper gamepad is so much better than using virtual buttons on your iPhone or iPad.

SteelSeries Nimbus Wireless Controller

It's a matter of Mojang and Microsoft following their usual playbook here, in which console versions of Minecraft cost $20, while Apple's shared platform could
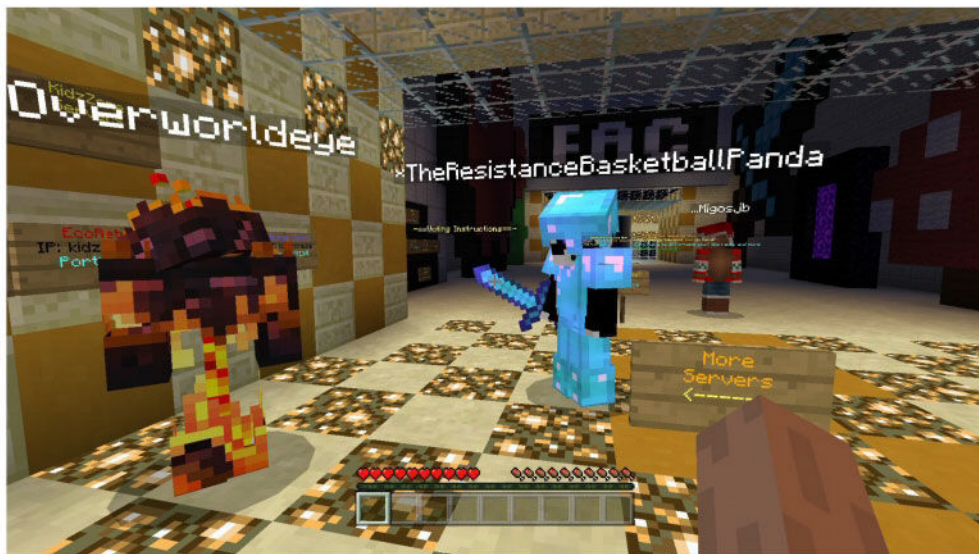
Connect to online servers to play with friends or other random fans.

allow for one purchase to cover iOS and Apple TV versions alike. But that's their choice to make, and now it's yours too. At least early buyers get a free add-on pack bundle that brings in a Christmas-themed environment, costumes, and other small digital goodies.

The Mac version is a bit more feature rich than this one (and is $27 by comparison), but playing on a TV with a gamepad is definitely preferable to using an iOS device. If you or your kids are still over the moon about Minecraft—or haven't played and think it could be up your alley—then this may be $20 very well spent. Minecraft is infinitely replayable and Mojang keeps expanding its feature set, while online servers offer further modes and experiences. On the other hand, if you have Pocket Edition and are either perfectly content with it or don't play much anymore, then there's little point in buying the same game again at three times the cost.

BOTTOM LINE

Minecraft shines on the Apple TV, as playing on a big screen with a comfortable controller is even more alluring than playing on your iPhone or iPad—and it's about on a par with the Mac version in terms of overall experience. However, the price discrepancy with the Pocket Edition and need to buy this version separately may throw some fans for a loop. ■

WHAT'S NEW AT THE
APP STORE

TRAVELEAR

Recently, Detour (detour.com) was named one of the best iOS apps of the year for taking users on a walking tour of some of the world's most beautiful cities. Travelear (free, iPhone and iPad, thetravelear.com) does the traveling for you—stay at home and listen to "soundscapes" recorded by professional audio engineers. Say the makers: "Let our sounds immerse you into an environmental narrative and make you feel like you are actually there."

Just Sing

Just Sing! (free, iPhone and iPad, go.macworld.com/justsing) comes from the makers of Just Dance! It's iOS-based video karaoke—pick from 10,000 tracks, sing or lip-sync along, then create a music video to complete the project. You can collaborate with other users, or spend hours watching the creations they've made. And, of course, you can share your own videos with the crowd.

Djay Pro

Djay Pro ($5, iPhone and Apple Watch, algoriddim.com=djay-pro-iphone) is finally available on the iPhone, complete with the DJ interface, Spotify integration, four-deck mixing and more that made its big brother app on the iPad so popular.

Handle

Handle (free, iPhone, iPad, Apple Watch, handle.com) brings together your Gmail, calendar, and to-do list into a single app. Version 1.3.9 launched with a number of new features, including a new widget, planning tool improvements, a condensed calendar view, and a new drag-and-drop feature in calendar view. **—JOEL MATHIS**

iOS Accessories

This February's roundup includes 360-degree HD video, a blood pressure cuff, a game contoller, a light meter, a gimbal and a spontaneous pop-up display—all for your iOS device. **By Joel Mathis**

GIROPTIC

giroptic.com

—

We've moved on from live video on social media. The newest thing? Video that gives you a 360-degree HD view of the scene. Giroptic IO ($249 MSRP) is built to deliver the new hotness: It features high-quality twin custom lenses and connects to your phone or tablet so you can easily provide live, immersive video to your friends.

MOCACARE

mocacare.com

The MocaCuff ($69 MSRP, preorder for $49) is a blood pressure cuff that, with the tap of a button, syncs your measurements to your iPhone, letting you track your health history and make new fitness goals.

GAMESIR
go.macworld.com/gamesir

The M2 Gamepad Controller ($49 with a Kickstarter pledge) turns your iPhone into a handheld game console. It looks like a standard game control with an iPhone mount sticking out of the top. Pair the devices together via Bluetooth and you're ready for some gaming fun.

LUMU

lu.mu

Lumu Power ($229 MSRP) is a light meter to help you craft the very best pictures on your iPhone; the meter plugs into the phone and helps you determine the color and exposure of your digital photographs. The device was born as a Kickstarter project; it ships this month.

AROVIA SPONTANEOUS

go.macworld.com/spudtv

—

The Spontaneous Pop-Up Display (a $349 pledge on Kickstarter) is a nifty idea: It lets you create a large, desktop-monitor-sized display for your iOS device or MacBook—but does it with a device that's a bit like a pop-up tent, meaning it's very portable, easy to set up and break down. Apparently it's a popular idea: The makers had a Kickstarter goal of raising $33,000 to get the SPUD into production. They've already raised more than $440,000.

FLOWMOTION

go.macworld.com/flowmotion

Tired of shaky iPhone videos? FlowMotion ($169 pledge on Kickstarter) combines the best qualities of a gimbal and selfie stick to provide smooth, cinematic videos from your phone. The production goal was $30,000—the FlowMotion has already attracted more than $200,000 in pledges. The product is expected to ship in February.
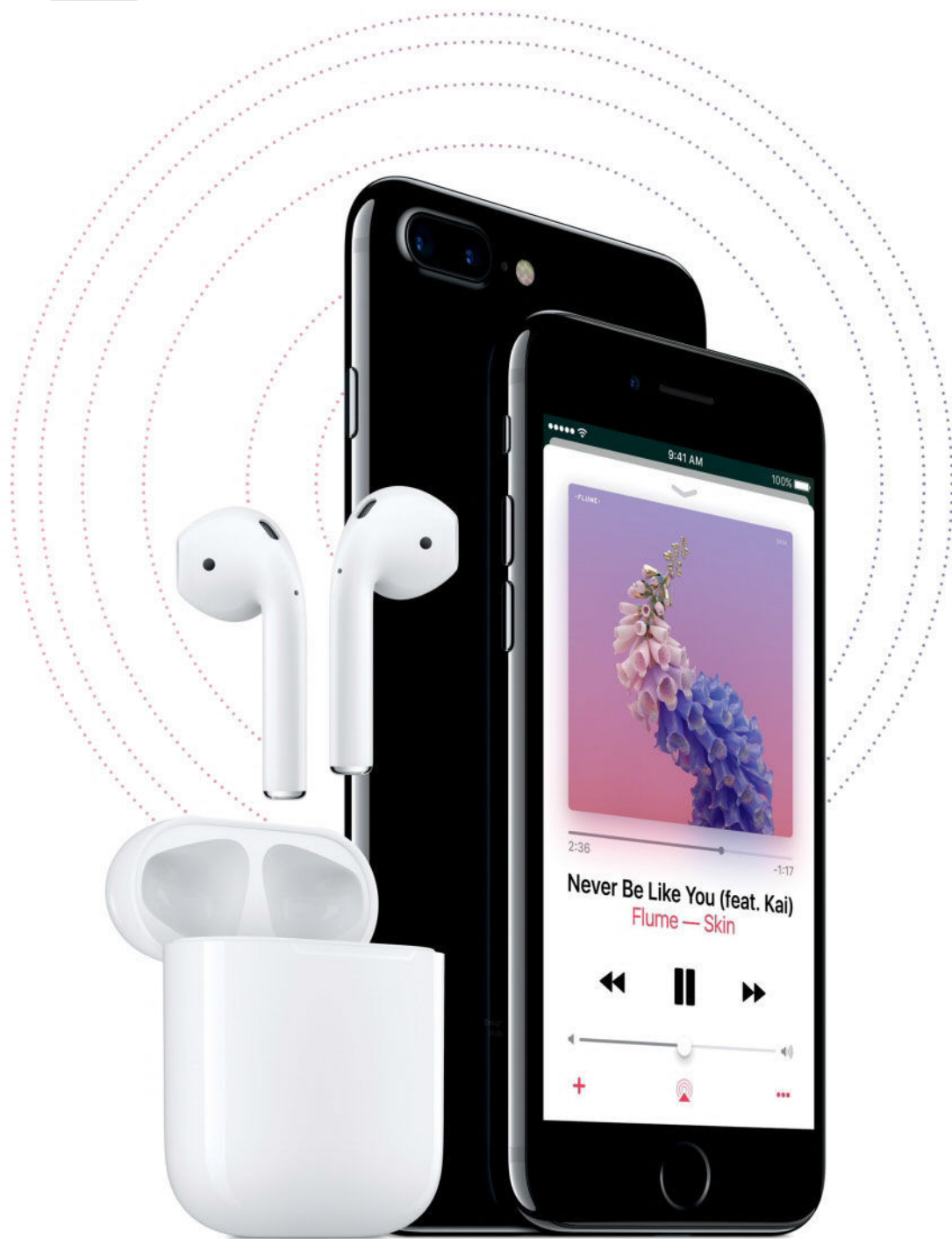
AIRPODS REVIEW:

They sound great, but Siri holds them back

iPhone fans will love the sound and design of Apple's wireless earbuds, and no, they won't fall out of your ears.

By Susie Ochs

When Apple pulled the headphone jack off the iPhone 7, it also unveiled a new set of wireless earbuds called AirPods, and claimed they were so great, users wouldn't mind the missing headphone jack. The AirPods didn't come out for nearly three months after the new iPhone's release, but now that they're here, they've solved every problem an iPhone 7–using music lover could have, right?

Oh, heavens no. Like so many Apple products before them, the AirPods bring with them as many problems as they solve. With no onboard buttons, the AirPods require users to ask Siri to do everything, from changing a track to adjusting the volume. What's more, Siri doesn't have the same abilities in all music apps—an arbitrary restriction set by Apple to steer you toward Apple Music.

THE FIT

But let's start with the first question every-one has about the AirPods. Aren't you worried they will fall out of your ears? As soon as they were announced, even Conan O'Brien had to make fun, producing a parody of the old iPod commercials (youtu.be/z_wlmaGRkNY), only with Air-Pods flying off in all directions with the slightest move of the dancers' heads.

That's funny, but it's bull. The AirPods stay put when I'm dancing, head banging, jogging, hanging upside down, riding my stationary bike, sprinting to catch the bus, and shaking my head around smacking my temple like I'm trying to dislodge water stuck in my ear. Really, they aren't going to fall out. Check the video (go.macworld. com/arpdvid) for proof.

My skin is on the oily side, and some-times in-ear 'buds with silicone tips get a little oily, and I have to wipe them off or keep shoving them further into my ears for a good seal. The wired Apple EarPods
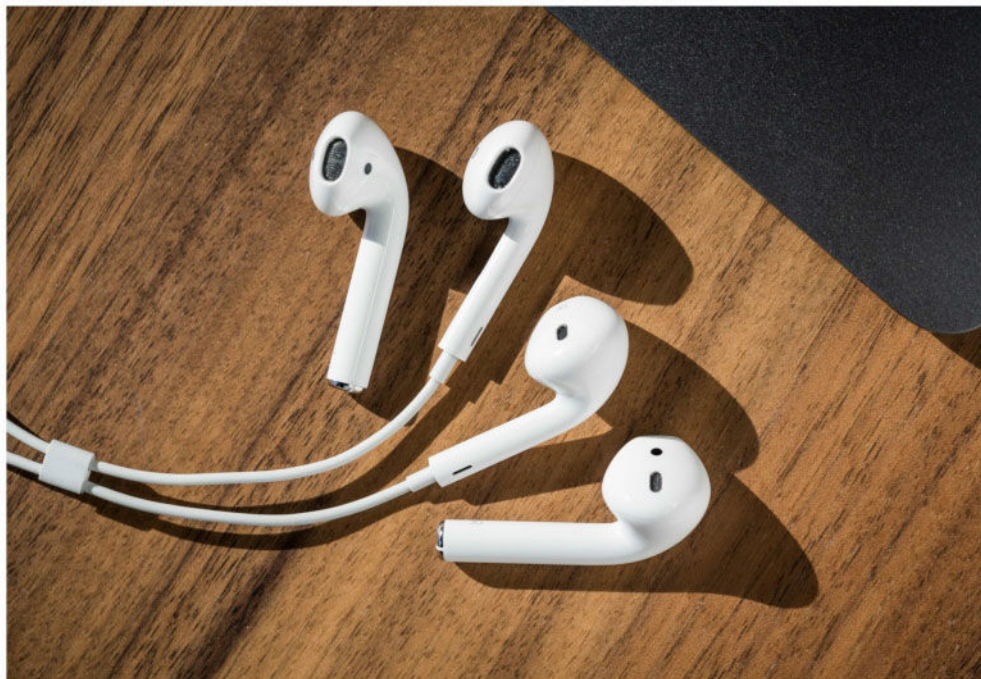
The wireless AirPods resemble the EarPods, but the AirPods have a heftier, more substantial design that stays put in my ears.

(you know, the cheap pair that comes with your iPhone) fit me OK, and I've been wearing them since the iPhone 7 launch. But the EarPods wire does trip me up from time to time, getting snagged on armrests when I'm on the bus, or requiring adjustment when I'm wearing a scarf.

So I wanted to go wireless, and knew the AirPods had to be comfortable enough to wear all day, and not fall out. It turns out they're very comfortable, virtually the same shape as the EarPods but with more heft. They perch right in my ear openings and stay put

AirPods

AT A GLANCE
The AirPods have good battery life and great sound, and the integration with iOS can't be beat, but if you listen to your music with third-party apps, Siri is only half as helpful as she could be.

PRICE
$159

better than the EarPods or silicone-tipped earbuds.

THE SOUND

I care more about comfort than sound because I'm not an audiophile. I listen to tons of music, and can tell good earphones from terrible ones, so Apple's bundled free EarPods suit me just fine for streaming music and podcasts. I used to rock a $130 pair of Bose MIE2i (go. macworld.com/mie2i) in-ear 'phones (since discontinued) when my iPhones had jacks for them, and I expected the AirPods to fall

somewhere in between these earphones and the EarPods. Well, I'm happy to report the AirPods sound great—just as good as the Bose set, with full, detailed sound and plenty of volume.

The AirPods sound better than the EarPods, but they have that same kind of fit, where the bud itself just rests in your ear opening, instead of going way down into your ear canal. And since they don't have a silicone or foam tip like the 'buds that get shoved more deeply into your ear, they don't seal off outside noise as fully. But their impressive volume quickly drowns out your surroundings. Once my iPhone is at about 60 percent volume, I can no longer hear myself speak at a normal volume while I'm wearing the AirPods.

The white stems that hang down from the AirPods hold the microphone, which you'll need for voice calls, and speaking with Siri. I used Siri to make a voice call both indoors and outdoors, and the people I chatted with reported a slight echo-y sound common to Bluetooth phone calls, but only when I really pressed them to evaluate my sound. All in all, the sound was good enough for calls.
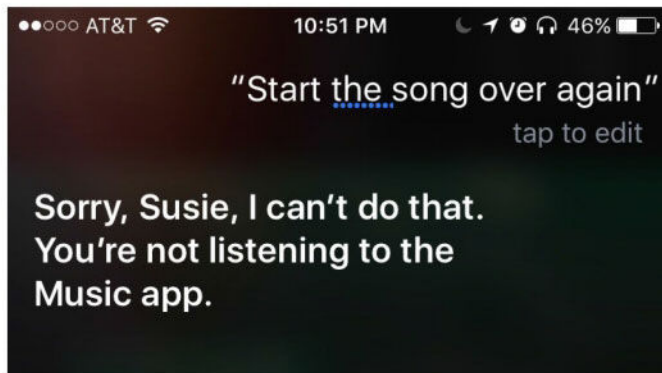
In this case, "Go back a track" would start the current song over, but who wants to engage in trial-and-error with laggy Siri when you used to have a button for this?

THE CONTROLS

Speaking to Siri, though, somewhat mars the AirPods experience. To turn up the volume with the free EarPods, you simply click a button on the inline remote. With the AirPods, however, you have to double-tap one AirPod, wait for your music to pause and the Siri chime to sound, and say "Turn it up" (or, even better, "Turn up the volume," just to make sure Siri will understand). Then you wait another couple of beats for your music to resume, now two notches louder. If you say, "Turn it up to 50 percent," the volume still gets turned up two notches louder. It's an annoying process, so you're better off using the volume controls on your phone—if your phone is within arm's reach.

Siri can also control Apple Music and your own music collection stored in

The EarPods are easier to control. But the AirPods never tangle, so...

Apple's Music app. But Apple chose not to give full Siri control to third-party music apps, and that's a huge bummer when you try to use earbuds that require the use of Siri. In Spotify, I could turn the volume up and down, and skip to the next track. But to start a song over (three clicks on the EarPods remote, thank you very much), I couldn't say, "Start this song over," though "Go back one track" was more responsive. And, obviously, I couldn't call up specific artists, albums, playlists, and songs. The AirPods are at their best when you are all-in with Apple

devices *and* services. If you're a die-hard user of Spotify or Pandora, these might not be the headphones for you.

But either way, Siri is just too slow and buggy to be a rock-solid control set. I

> I quickly found myself wanting to just use the controls on the iPhone itself.

quickly found myself wanting to just use the controls on the iPhone itself. As a side note, I've never appreciated iOS 10's Raise To Wake feature so much until I got my AirPods, since I can bring up the lock

A little LED inside the case glows green when the AirPods are mostly charged, orange when they need charge. A more accurate meter is on the iPhone.

screen play/pause, forward, and rewind buttons so easily, and leave Siri out of it.

You can also go into Settings ➜ Bluetooth, hit the little *i* button next to your AirPods, and change the double-tap gesture to Play/Pause or Off. A second gesture would still be helpful. I'd love an experimental mode that apes the click patterns on the EarPods remote (single to play/pause, double to advance a track, triple to back up).

The auto-pause feature does work well, and mostly seamlessly across apps.

When you are listening to the AirPods, and you take one out of your ear, the sound pauses. When you put it back in your ear, it starts playing again. While the feature is mostly solid, it isn't a sure thing. A few times the music would start playing again after I'd stuck one AirPod in my jacket pocket while talking to a cashier. Other times, taking an AirPod out would pause a podcast in Pocket Casts, but putting it back in wouldn't start it playing again. Instead, I had to hit Play on the iPhone itself. If you do want to play music

on only one AirPod for some reason, you can just press Play on the iPhone after taking one out.

Even with a little finicky behavior, I love this feature. I'm also testing a pair of Libratone wireless headphones right now, and they have a feature where you can *mute* the sound by cupping your hand over one ear. I'm glad companies are thinking about easy ways to silence the sound so you can say hi to neighbors or conduct a transaction politely. But pausing is better than muting, especially for podcast fans, so AirPods have the edge there.

THE LITTLE THINGS

Because Apple makes these, the AirPods are locked in to iOS 10 like no other headphones will ever be. You can check the battery life in the Battery widget in Notification Center. Even just opening the charging case with the AirPods inside will pop up a notification on your phone showing the charge level of your AirPods (left and right batteries—strangely, they don't wear down at exactly the same level) and the case.

The charging case is brilliant. It's small and white and easy to stash in a pocket or

This button lets you pair to a non-Apple device, *if you must*.

bag. It kind of looks like a fancy package of dental floss, with a top that flips open and shut with a tight magnetic click. The AirPods charge inside this case, so if you keep them there when they're not in your ears, and then remember to charge the case now and then, keeping the AirPods charged isn't too much of a burden. The case itself charges via a Lightning port, so I just try to remember to top it off while I'm using the AirPods at my desk.

In my tests, the AirPods easily get Apple's stated 5 hours of music time per charge. I'm at 5 hours on my stopwatch right now, in fact, and the AirPods have 12 percent charge left according to the Battery widget in iOS 10. Apple says the case should have about 24 hours of battery life in it, and just 15 minutes in the case can power your AirPods for three more hours (it got me from 4 percent to 79). The AirPods make a sad little sound when they reach 10 percent so you'll know they're almost out of juice.

Connecting the AirPods to an iPhone for the first time is as easy as opening the case. A message pops up on the iPhone offering to connect, and when you do, the AirPods also appear in the Bluetooth menu of any Macs (running macOS Sierra) you use with the same iCloud account. Switching to an iPad and Apple Watch

with the same iCloud account is similarly easy, and you don't have to trick your iPhone into unpairing with the AirPods to

> In my tests, the AirPods easily get Apple's stated 5 hours of music time per charge.

listen to them on a different device. They're always paired to everything, and you can just select AirPods on that thing and press play.

The back of the charging case has a round white button that's barely visible. With the AirPods in the open case, you can press and hold that button to turn a tiny LED in the case white. That means they're in pairing mode, and you can pair them to an Android phone or another Bluetooth device, but without Siri or the extra features. I haven't experimented with that for this review, but we'll do a follow-up soon.

BOTTOM LINE

The three-button remote on wired earbuds is a much faster, easier way to control your music than double-tapping one ear and then trying to get Siri to do what you want. But I can't help liking the AirPods—the cool design and powerful sound just keep me coming back. I just wish they had another gesture, or smarter/faster Siri, to be as convenient as what they're replacing. ∎

Make sure you know where to find your family in an emergency

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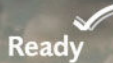
START YOUR PLAN AT READY.GOV

MOM

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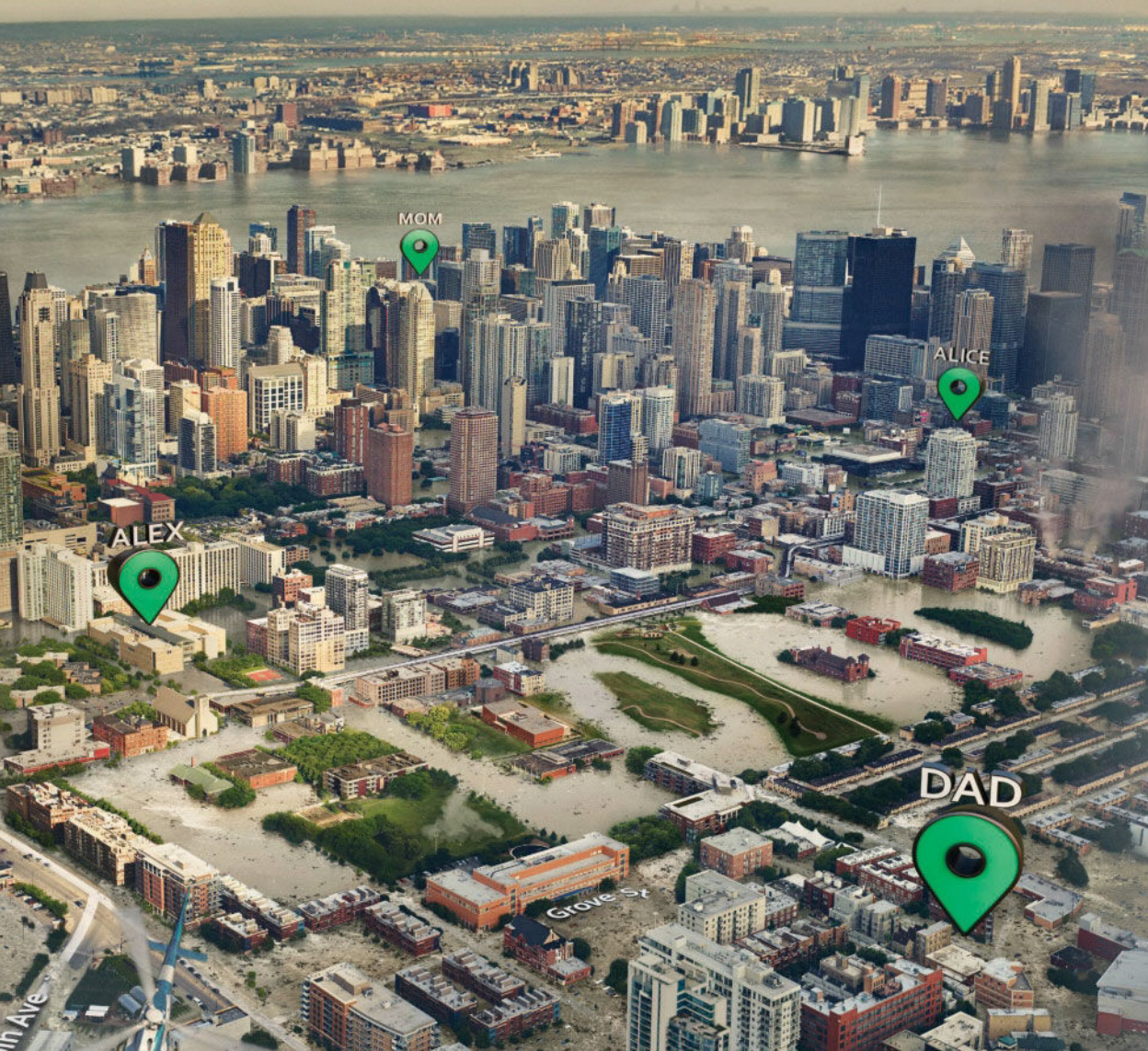
THE 10 MUST-H
FOR MACOS SI

As Apple has tweaked and improved its Mac operating system, the need for third-party utilities just shifted—it never went away. A lot of the fiddly missing stuff we used to need an app for is built in, but Apple aims for the simplest experience for the most people, which leaves more advanced users or those that want a choice of how they carry out a task looking for alternatives.

HAVE UTILITIES
ERRA

For the least frustration and most efficiency on your Mac, install these handy extras.

By Glenn Fleishman ILLUSTRATION BY JOHN UELAND

I've used many hundreds of Mac utilities over decades, and still rely on them to make my computing life better. Here's the top 10 I recommend, a mix of free software, donationware, and inexpensive paid products. (I've cheated a little; I list more than 10, as I offer a couple of alternatives.)

Some of the paid products might seem pricey on their own, and the price tag altogether may be too much for many people's budget to buy all at once: it's over $300 if you purchase all my main recommendations. Opt for the alternative recommendations of utilities I've offered and omit a couple you don't need, like file-transfer software, and the price tag comes down closer to $100. (Always look for discounts on the more expensive products: some appear regularly in charity and seasonal bundles, and some Apple-oriented sites offer significant membership discounts on popular software.)

However, I like to think of these utilities as having a return on investment, as I believe my time (as well as yours) has value. Some apps estimate how much time you saved, and others reduce clutter and frustration, which can make you work more efficiently. In some cases, you have to purchase a tool, because there's no alternative. I'm confident I've saved hundreds of hours over a decade in sub-second and multi-second increments.

DEFAULT FOLDER

I can't remember how long I've been using Default Folder ($35, go.macworld.com/dfx), because it's been a constant companion since I first discovered it years ago. Default Folder enhances every open and save dialog in macOS, as well as offering a system menu-bar item and options to add navigation in Finder windows.

You use Default Folder to navigate to standard macOS locations, frequently used directories, and recent folders without having to use an endless sequence of Command plus Up and Down arrows, Spotlight, or folder-menu navigation. The app lets you more effectively organize items in folders, because you can so efficiently access those folders later.

The utility wraps itself around open and save dialogs, and offers buttons with drop-down menus. You can click and

I'M CONFIDENT I'VE SAVED HUNDREDS OF HOURS OVER A DECADE IN SUB-SECOND AND MULTI-SECOND INCREMENTS.

access the top level of any mounted drive and common Home folder areas, favorites that you've set, any window open in the Finder, and folders that you've recently opened items from or saved items to. Want to open the current view in a dialog as a Finder window? Press one keystroke.

Another keystroke lets you rotate among recently used folders.

Default Folder seemed like it might be a casualty of System Integrity Protection (SIP) introduced in El Capitan, but the developer wrote a complete overhaul of the app to work within Apple's limits, and the new version now exceeds the previous one. (Read our review at go.macworld.com/dfxr.)

Whenever I have to use a Mac that doesn't have Default Folder installed, I'm reminded of how frequently I use it and how much I rely on it. It has a very shallow learning curve.

TEXTEXPANDER

Computers are meant to reduce tedious repetition, and yet we often find ourselves acting like a computer in our work. TextExpander is a text-expansion utility, letting you type a few keystrokes and have them "expanded" to be something else. It turns the computer back into a repetition-avoiding machine. I can type two or three charac-

1 DEFAULT FOLDER

Default Folder adds super-intelligence to navigation windows.
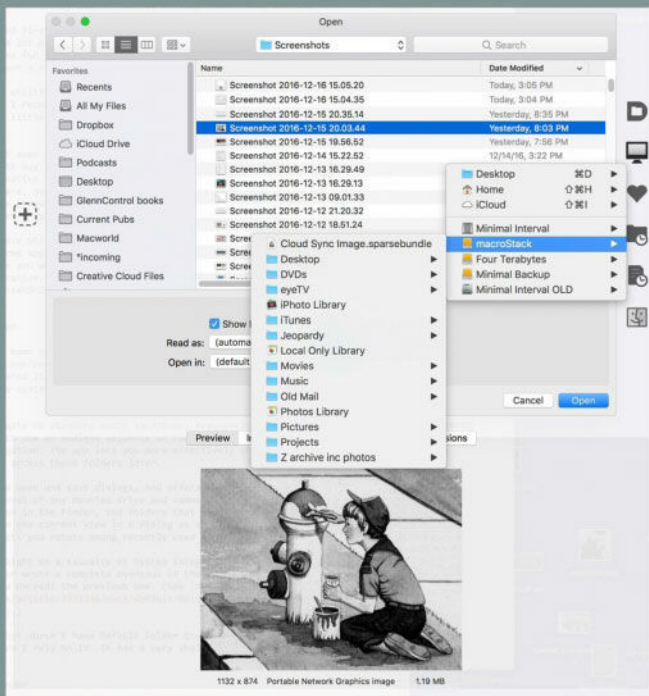
ters, and TextExpander drops in my email address, phone number, or mailing address.

With wildcards and placeholders, you can also have TextExpander type out the current date and time, or use the clipboard's contents alongside other manipulations, including a few keystrokes (like Tab and Escape) and cursor movements. It also allows you to create forms with pop-up options for standard replies.

TextExpander supports AppleScript and other system scripting integration, and includes a few scripts for things like turning the current contents of the clipboard into a bit.ly shortened URL. One of the

TEXTEXPANDER IS A TEXT-EXPANSION UTILITY, LETTING YOU TYPE A FEW KEYSTROKES AND HAVE THEM "EXPANDED" TO BE SOMETHING ELSE.

app's gimmicks is tracking estimated time saved. It's apparently bought me 10 hours of my life back between July and December of this year.

TextExpander had a kerfuffle this year (go.macworld.com/tek) when its maker switched from flat-rate pricing for version 5 to subscription pricing for version 6 (including software updates, cloud sync, and snippet sharing). We have reviews of both version 5 (go.macworld.com/v5) and version 6 (go.macworld.com/v6). You can still purchase the fully featured version 5 (go.macworld.com/v5x), compatible with macOS Sierra, for a flat $45, or subscribe to version 6 for $4.16 a month or $40 a
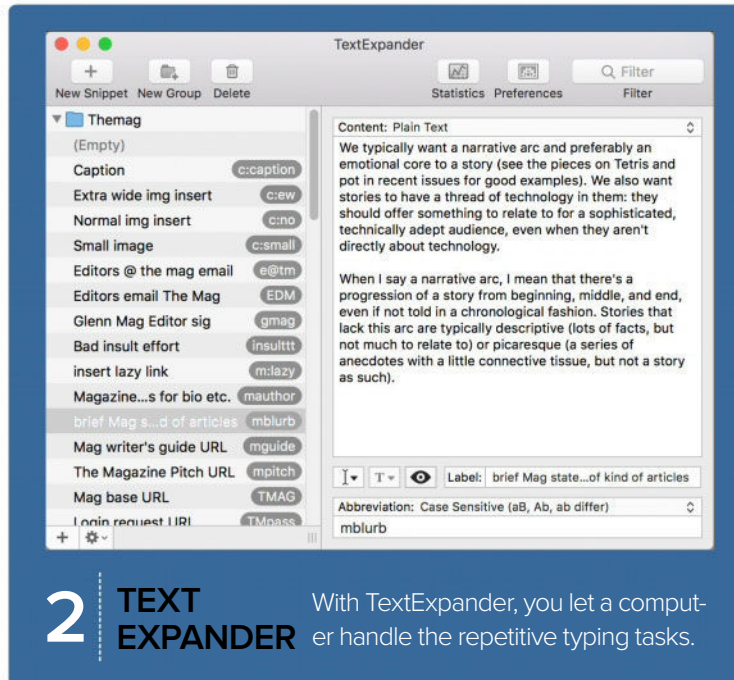
2 **TEXT EXPANDER** With TextExpander, you let a computer handle the repetitive typing tasks.
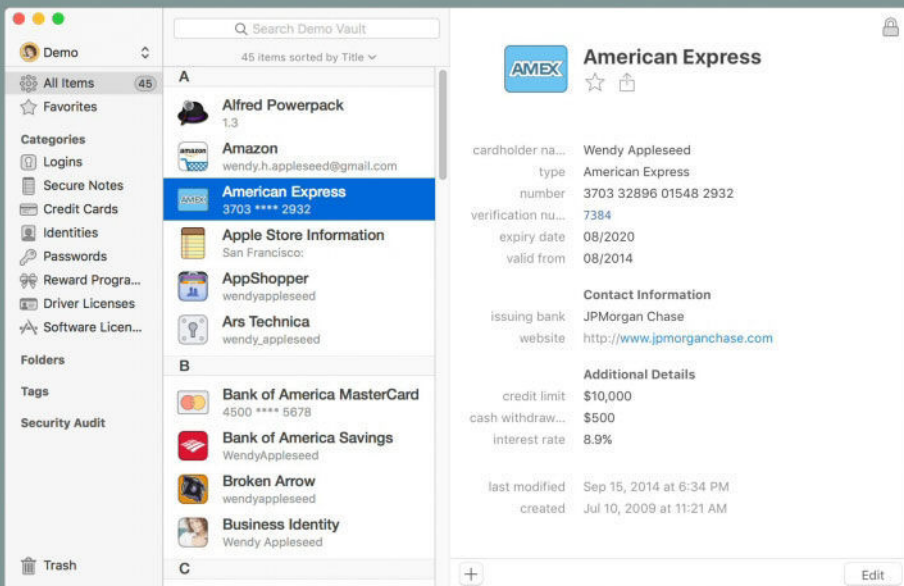
3 | **1PASSWORD** | 1Password lets you generate unique passwords within a browser, fill in credit card information, and manage it all with aplomb.

year ($3.33 a month).

While I'm a long-time TextExpander user, some people prefer Keyboard Maestro ($36; go.macworld.com/kbm), which has text-expansion features like TextExpander, but also can directly manipulate the mouse and menus in macro sequences and has clipboard-history management.

1PASSWORD

In these days of constant password breaches at major and minor websites, having unique strong passwords is a must. 1Password (1password.com) not only stores passwords, but creates them, and through browser plug-ins can create and drop them into a form and store them in just a few fluent clicks.

Because 1Password has extensions or plug-ins for all the major browsers, you never have to switch to it to drop passwords into a form to log in. And it can also store in a structured form all sorts of other things, like

credit cards, bank accounts, and licenses. 1Password can fill in credit-card information into forms. You can also save all the entries in a form from a webpage, which is invaluable in inventing fake answers to security questions and storing them so you can remember them later. (We reviewed version 6.0 [go.macworld.com/1p6]; it's now up to 6.5.)

(Tip: You can use 1Password to create unique random gibberish for questions like "What is your first pet's name?" and as long as you store it, a hijack of that site's list of such questions doesn't compromise your accounts elsewhere that would otherwise share security answers.)

I like that its creator, AgileBits, added a few months ago the ability to generate multi-word passwords. These are easier to remember and to type and, as long as they are sufficiently random and long enough, just as resistant to brute force as the most ridiculous looking password with an unnecessary mix of letters, numbers, punctuation, and Egyptian hieroglyphics.

1Password added subscription-based options this year that include continuous updates and a family version that allows secure sharing of passwords. It's $36 a year for a single user or $60 a year for up to five users in a family. This price includes free use of clients in macOS, Windows, Android, and iOS.

The stand-alone 1Password for macOS is $65; the complementary iOS version is free for everyone, but some not-critical Pro features cost $10 to unlock unless you're a subscriber, in which case they're part of the subscription.

LastPass (lastpass.com) is a widely used alternative to 1Password, although LastPass stores passwords centrally. It's been hacked once (go.macworld.com/lph), but the care with which they secured their database rendered that theft essentially useless to the attackers. That resiliency is a plus. I prefer, however, using 1Password either on storage I control or with AgileBits' partitioned cryptographic approach, which stores your data centrally in a way that the company never directly handles your password.

LastPass's key advantage? The standard version is free across platforms; it's $1

4 BARTENDER Declutter an unusable system menu bar with Bartender.

5 | LAUNCH BAR

LaunchBar can open apps, find files, perform calculations, play music, and much more.

a month for a premium flavor that includes family sharing and priority tech support.

BARTENDER

My system menu bar is a mess! I've tried scrubbing, I've tried washing, and nothing works! Bartender ($15; macbartender.com), take me away!

If you're anything like me, you have a slightly ridiculous number of drop-down and status menus in your system menu bar from Apple and third-party apps and system components. Some of Apple's items you can't hide, even if you want to. Even on the wider of my two displays, an app's menu items often crowd out the leftmost menu-bar icons. (Read our review at go.macworld.com/br.)

Bartender 2 brings a delightful and simple management approach. With this

app, you can choose to leave a menu-bar item alone, hide it entirely, or drop it into a secondary drop-down Bartender menu. Even if you're hiding the item, you can set Bartender to show it whenever the icon displays activity.

The app was another one that people worried El Capitan's SIP would render impossible to update, but the developer thoroughly revised it to work in the new model, and released a Sierra update in a timely fashion, too.

LAUNCHBAR

I have many, many apps installed on my Mac, and my preferred way to launch them isn't by invoking Spotlight and typing part of the name and selecting a result, or using Mission Control or the Applications folder. LaunchBar ($29; (go.macworld.com/lb) makes launch-
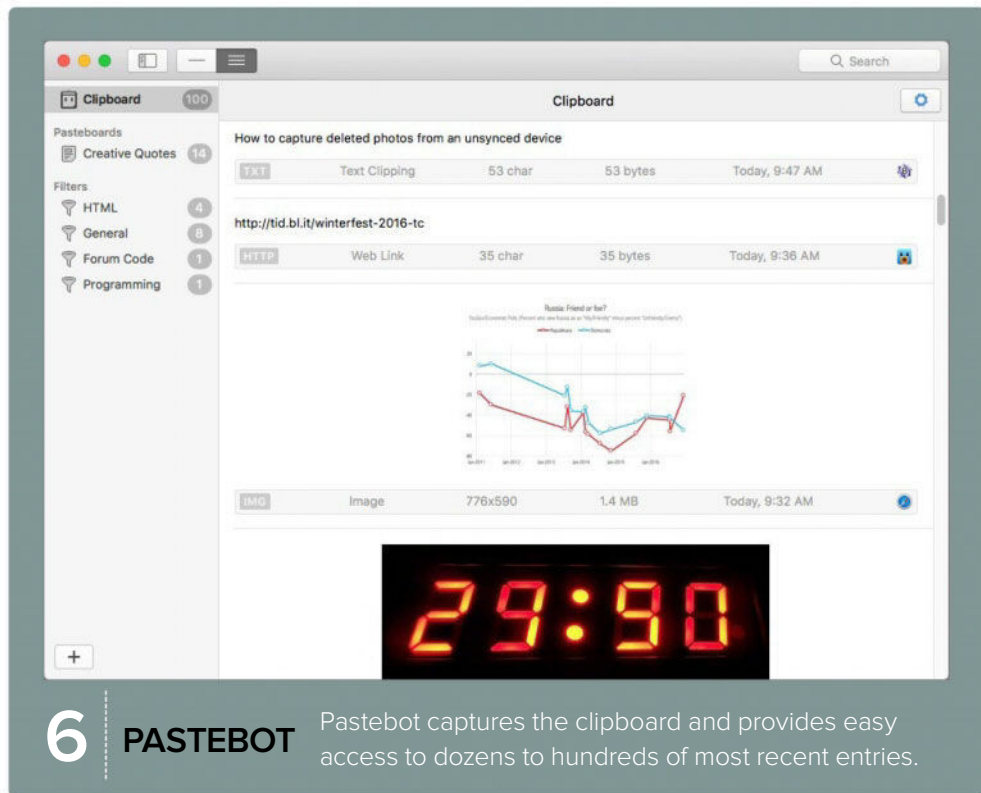
6   PASTEBOT   Pastebot captures the clipboard and provides easy access to dozens to hundreds of most recent entries.

ing quick work: tap a keyboard command to bring it up and then type a few characters or use arrow keys to select from a set of options.

LaunchBar can be set to index all sorts of locations and all sorts of things, so it goes far beyond running apps. It can find system preference panes, contacts, AppleScripts, emoji, URL bookmarks, music tracks, and other items. You can use it as a calculator, to expose file metadata, keep a scrapbook of items pasted to the clipboard, and interact with reminders and events. It runs queries on search engines, too. (Read our full review of version 6.0 at go.macworld.com/lbr; it's up to 6.7 now.)

Add your document folders and enable some indexing rules that are turned off at installation, and you can pull up files in those locations by name, too, or see a list that matches however much of a name you want to type.

For all that it's a Swiss Army knife, you can turn off or leave disabled many features. Some people dive deeply into LaunchBar and use it constantly; others, like me, rely on it for a handful of very common uses.

It has a statistics window like TextExpander, and reports that I've saved just over two hours in the last two and a half years. That's too modest of the developers, though, because I can launch an app in LaunchBar in well under a second; it takes seconds to find and launch an app through any other built-in means.

Several launcher alternatives have their adherents; we published a roundup of several in early 2015 (go.macworld.com/lba), including one that's free. The long-running DragThing app also has its staunch users and defenders, but it hasn't had an overhaul in some time, and its developer hasn't announced plans beyond the current compatibility updates and bug fixes that keep it working.

PASTEBOT

Pastebot ($10; tapbots.com/pastebot) is the newest entrant on my must-have list, and its core features are certainly not unique. In fact, you can find some of them in LaunchBar. But I've never adopted a clipboard manager before, as I didn't find existing implementations fit the way I want to retain, tag, search, and use them. Pastebot just shipped in December 2016 (as version 2, because of a long beta), and it's the best all-around utility for clipboard management and text transformation.

With Pastebot, every time you copy or cut an item using the system editing tools, Pastebot retains a copy. By default, it holds the last 100 items, but you can decrease it to 50 or increase to 500. Everything held in Pastebot retains its native format—whether rich text, an image, plain text, a URL, and so forth—and you can perform a full-text search against the stored items. (Read our review on page 19.)

Pastebot also offers text filters, which can process and transform text, like formatting it as HTML, cleaning up a URL, and changing rich text to plain text. You can build filters, which can have multiple steps in sequence. Filters can apply to a stored item in Pastebot or, via a keystroke you can assign, to the current clipboard's contents.

There's one oddball feature in Pastebot I quite like and am still getting used to: sequential paste. With this option, you can

WITH PASTEBOT, EVERY TIME YOU COPY OR CUT AN ITEM USING THE SYSTEM EDITING TOOLS, PASTEBOT RETAINS A COPY.

copy things in order from one place that you want to paste in the same order elsewhere. It's terrific for forms and contacts, where you're trying to copy a number of disparate items and put them in the same or different fields.

There are many alternatives for managing clipboard history; we published a roundup (go.macworld.com/cbr) in early 2015 that includes one that's free.

BUSYCONTACTS

Apple's Contacts app isn't as bad as it used to be, but it's highly limited in a digital world in which we might have accounts (and thus contacts) all over. I switched a few years ago to BusyContacts ($30; go.macworld.com/bc), which works with the Contacts database to sync with iCloud, but can also incorporate conduits to Fastmail, Fruux, Google, Office 360, and Yahoo, and pull in contact information from Facebook, LinkedIn, and Twitter. It works with generic CardDAV servers and Exchange servers, too.

When you create a contact, you can assign it to one of the various sources with which you're syncing, but you can also move a contact later from one place to another. More powerfully, BusyContacts lets you link cards, so that data from

7 | **BUSY CONTACTS**   Combine all your contact services plus link the same people across multiple services in BusyContacts.

multiple sources appears in one consolidated entry, or link and merge cards, copying information to each of the sources and providing a single listing. For creating contacts, you can add a card and fill it out or use a quick-creation tool that lets you type nearly freeform and have values dropped into the right places.

I particularly like the inclusion of Twitter, as it makes it easy to find Twitter contacts you're connected with in a way that native and third-party Twitter apps don't. (We last reviewed BusyContacts for version 1.0; read it at go.macworld.com/bcr.)

BusyContacts' Activity pane is an additional bonus, and one of its selling points: it can show previews of activity related to all accounts in a contact card. That includes events, matching emails, and tweets.

AIRFOIL ECOSYSTEM

AirPlay was a terrific idea, but Apple never took it far enough, such as licensing it broadly (after an early wave of such efforts) to make it become a necessary included option on stereo receivers and other gear. I'm lucky enough to own a Yamaha receiver made at just the right time that it includes AirPlay support, and some receivers still feature it, but not many.

The Airfoil ecosystem (go.macworld.com/af) lets you extend the utility of AirPlay by creating both AirPlay sources and destinations. With a retired iPhone or iPod touch plus
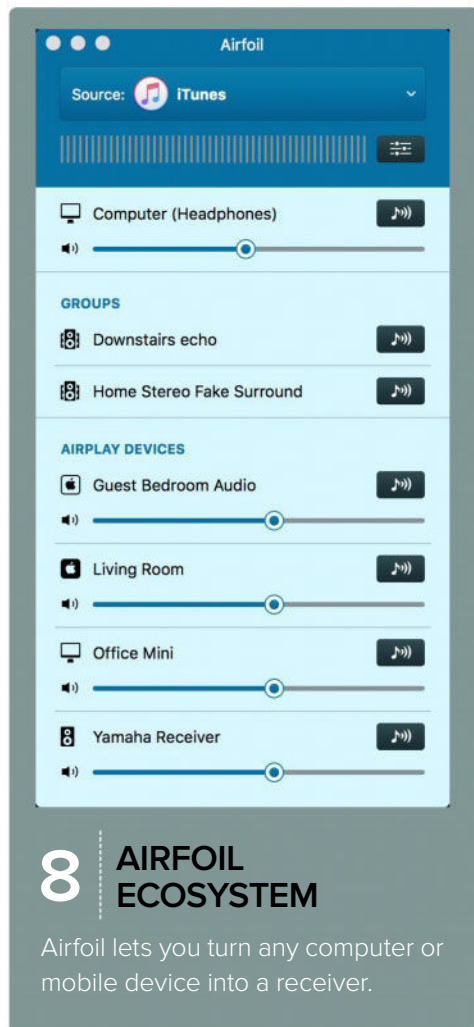
8 AIRFOIL ECOSYSTEM

Airfoil lets you turn any computer or mobile device into a receiver.

Airfoil apps, you can add on AirPlay without any fuss.
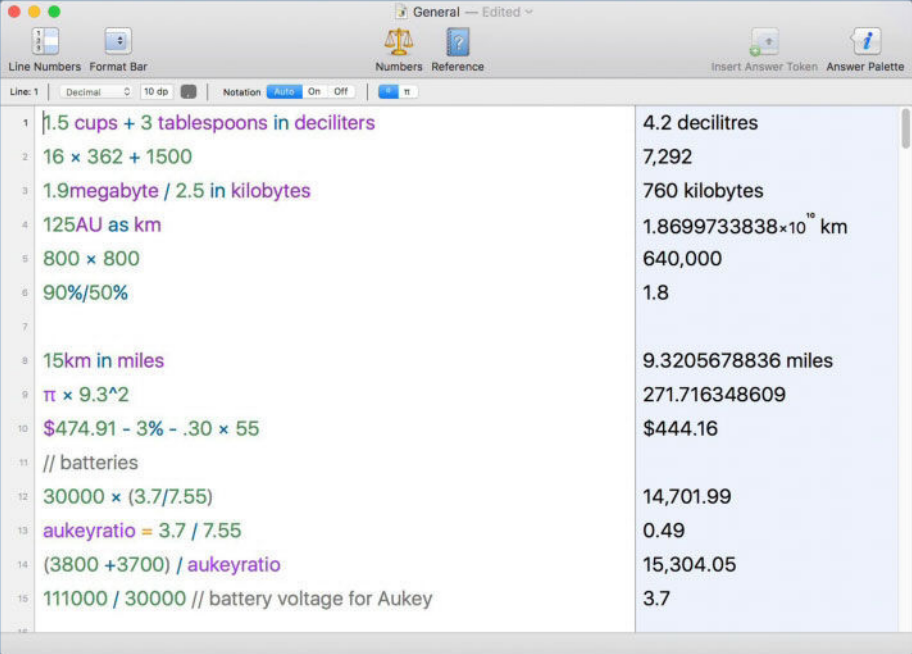
The main Airfoil app ($29) lets you pick a source app or device on your computer and then direct it to one or more destinations. This includes native AirPlay devices, like an Apple

TV, AirPort Express, receivers, and other audio gear. But Airfoil also streams over the Google Cast protocol to Chromecast and TVs and speakers with Google support. And you can stream to Bluetooth-connected devices.

Beyond that whole panoply, the developer, Rogue Amoeba, also makes a series of free "receiver" apps available for Mac, Windows, Linux, iOS, and Android. The Mac and Windows versions turn computers into generic AirPlay destinations, while the Linux and mobile versions act as Airfoil-only speakers.

This can let you set up a really inexpensive multi-room system, streaming from a Mac or Windows system everywhere, by pairing powered speakers with standard audio jack inputs with some of the old iOS gear you know you have lying around. Even if the battery is shot on an iOS device, you can keep it plugged in as a permanent part of your audio setup.

9 | **SOULVER** Soulver allows quasi-natural language entries of calculations including converting units and currency.

SOULVER

As old-school as it may seem, a calculator is a necessity. And you can calculate all over the danged place: Spotlight lets you type in simple calculations and conversions, although it can't handle much deviation. Visit Google, and type a calculation in its search bar and get an answer and often an explication of the math and units involved. Even LaunchBar does math in its input field!

But I want something more for the routine number crunching I have to do that doesn't rise to the needs of a spreadsheet. For that, I turn to Soulver ($12; go.macworld. com/s), a freeform calculating tool that allows you to specify and convert units as well as create basic formulas and perform currency conversion with updated values. Soulver creates calculation documents that can be saved, and can sync with an iOS version or send to other Soulver users.

You can tap out calculations just fine, like **(15 + 12 + 18) / 3**, or access trigonometry and other functions. But I find Soulver best for unit math and conversion. It handles time, mass, volume, data storage terms, power, and others, and lets you specify both the input out and output units. So you can type in **1.5 cups + 3 tablespoons in deciliters** to get a metric answer from different Imperial ones.

As a science and technology writer, it's particularly convenient, because I can type in **1.9megabyte / 2.5 in kilobytes** and get **760 kilobytes** as the answer, or **125AU as km** (AU are astronomical units, or the distance from the Earth to the Sun) and know it's **1.8699733838×10^10 km**.

My favorite, though, is calculating throughput, which is an annoying thing to sort out in most cases. Want to know how much a terabyte would take at 12 Mbps? Enter **1 TB / 12 Mbps in days** and 7.7 days pops out as the result.

The interface for Soulver isn't a traditional calculator approach, and if that's what you prefer, or you need to perform calculations regularly that require entering a lot of numbers, PCalc ($10; pcalc.com) remains the gold standard in that format. It also handles unit conversions, scientific functions, and RPN entry style, and can hand off in-progress calculations among iOS, macOS, and, yes, watchOS!

TRANSMIT

I know I'm old-school when I have to pull up an FTP (File Transfer Protocol) server, but they're still abundant. And am I new-school when I need to access Amazon's Simple Storage Service (S3) cloud-storage service? Fortunately, both very old, somewhat old, and spanking new remote file access can be handled via Panic's Transmit ($34; panic.com/transmit).

Transmit works with a variety of file server protocols, including FTP (which is

insecure and you should really avoid!), SFTP (Secure FTP), WebDAV (a way of file sharing via a Web server in both secure and non-secure flavors), and Amazon S3. A straightforward interface makes it easy to set up connections, store favorites, and drop right to where you need to be. With a side-by-side file view approach, you can drag items from one side to the other for easy copying.

What pushes Transmit to the top, however, is that any remote service you can view in a window you can also turn into a Finder-mountable drive that Transmit manages behind the scenes like any other networked volume.

Using more advanced settings, you can create rules about how uploaded files are tagged when transferred to servers, something that's often required when using Amazon S3 for hosted media.

Transmit is my favorite file-transfer app, but it's a little behind in supporting cloud services and advanced options, and doesn't support cloud services' encryption features. I turn to Cyberduck (free to use, donation requested; $24 via Mac App Store; cyberduck.io) for Google Cloud

10 TRANSMIT For transferring files to and from remote servers, Transmit offers friendly ease.

Storage access. Cyberduck also supports Amazon S3, Backblaze B2 (its cloud storage offering), Microsoft Azure, and others. It's a harder program to master and has more rough edges.

One tier up, with concomitant difficulty in using, is ChronoSync ($50; go.macworld.com/cs), which is a sophisticated file-synchronization app that lets you set data-at-rest encryption options for Amazon S3 and Google Cloud Storage, and also works with SFTP. It's harder to use for simple file transfers, but if you're looking for manual and automated sync with remote servers with robust encryption control, it's the only good choice at present for macOS. ◾

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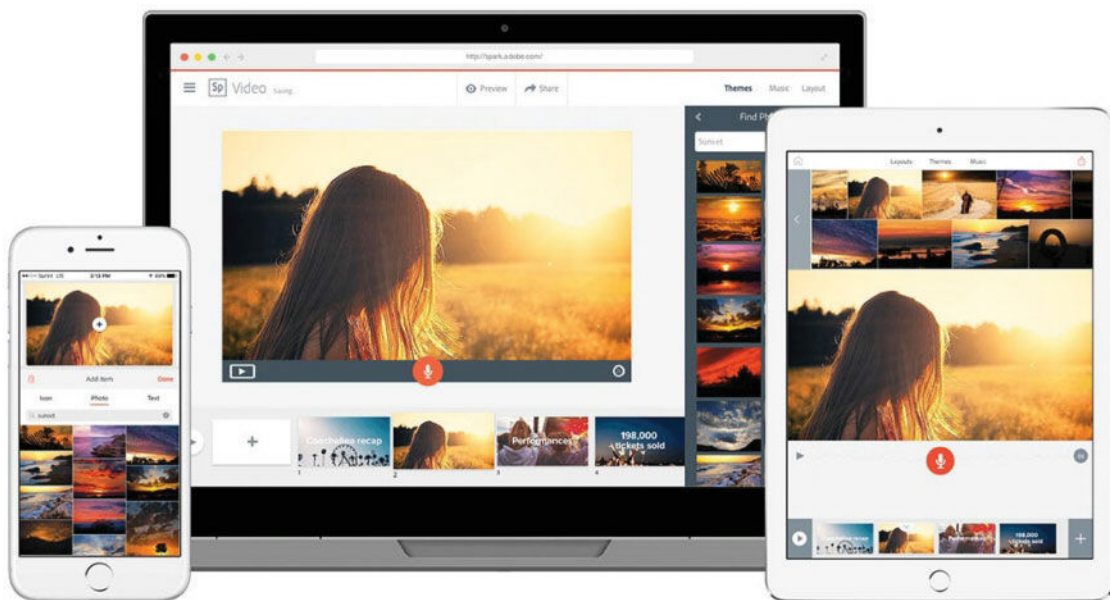
I want to be a hairbrush. Recycle me.

IWantToBeRecycled.org

Ad Council | KEEP AMERICA BEAUTIFUL

How to create powerful presentations with Adobe Spark Video

A new update to Adobe's free social presentation web/mobile app now lets you directly integrate video clips.

BY JACKIE DOVE

With the brand-new version of Spark Video, Adobe continues to lure consumers into photographer and designer territory via its creative mobile and web apps. The Spark collection (go.macworld.com/spk), featuring the newly updated Spark Video (go.macworld.com/spkv), is targeted not to the advanced Photoshop/Lightroom crowd, but to just plain folks—kids, teachers, neighbors, community activists, and small businesses who have something to say.

Spark Video (which began life as Adobe Voice, and earlier this year acquired its current branding) provides the tools to create a sophisticated social media presence complete with presentation prowess for those without an art degree, a pocketful of cash, or time on their hands.
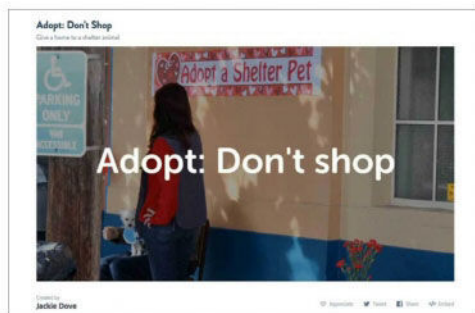
Adobe has updated Spark Video for the web, iPhone, and iPad by adding a video component. Previously, the app let you use a mixture of voice recordings, photos and icons, and a soundtrack to quickly create an inspiring, template-based animated presentation with a combination of your own assets and some help from online royalty-free sources.

If you're intent on creating marketing videos, school projects, product demos, event invites, business or team reports, or just plain storytelling, here's how to do it with the video-enhanced latest version.

Before you begin, sign in with your free Adobe ID or log in using a Facebook or Google account. This lets Adobe publish and host your presentations, so you can easily access and share them. I used an iPad in this demo, but operations are similar on the iPhone and with the online app.

1. CHOOSE A STORY TEMPLATE
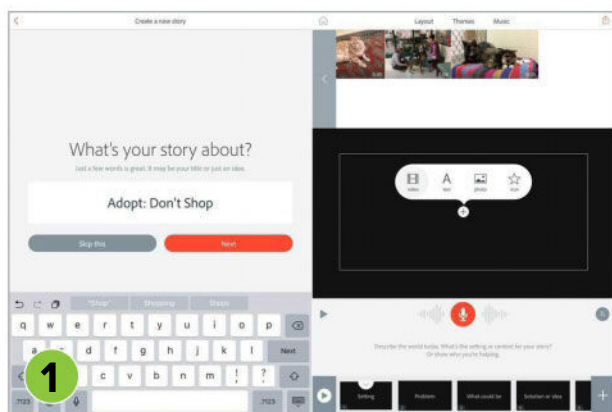
Either pick a story template or start from scratch. Story templates get beginners started with a major concept: Promote An Idea, Tell What Happened, Personal Growth,

from obstruction and that the room has a minimum of distracting noise. You can easily re-record any slide if you're not satisfied with the sound quality. Just navigate to the slide and record it again—the new recording will automatically replace the old one.
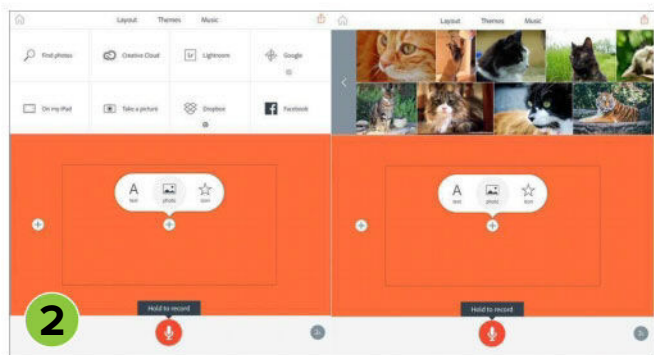
An Invitation, and more. If you're just getting started, using a template is optimal.

2. ADD PHOTOS AND VIDEO

You can use photos that are already on your device, or select them from Google Photos, Dropbox, Facebook, Lightroom, or your Creative Cloud space. You can also use Spark Video's search feature to find Creative Commons licensed photos and icons online. If you are creating your project on an iPhone or iPad, videos must be present on your device.

3. ADD VOICE NARRATION

Adobe Spark Video makes it easy to add voiceovers to each slide. Just press and hold the microphone button. Speak clearly and make sure your mic is clear

4. WORKING WITH VIDEO

Import video into your project just like any photo or illustration. Spark knows it's a video file and immediately offers a way to trim its start and end points. Any clip can be distributed among multiple slides and trimmed to various durations. To do that, tap the Continue button (the middle button on the right side of the frame) to break up a clip into a new slide. The limit is 30 seconds per frame.
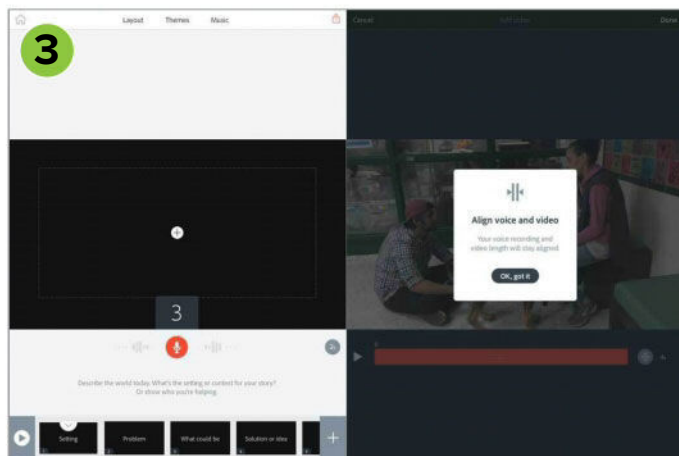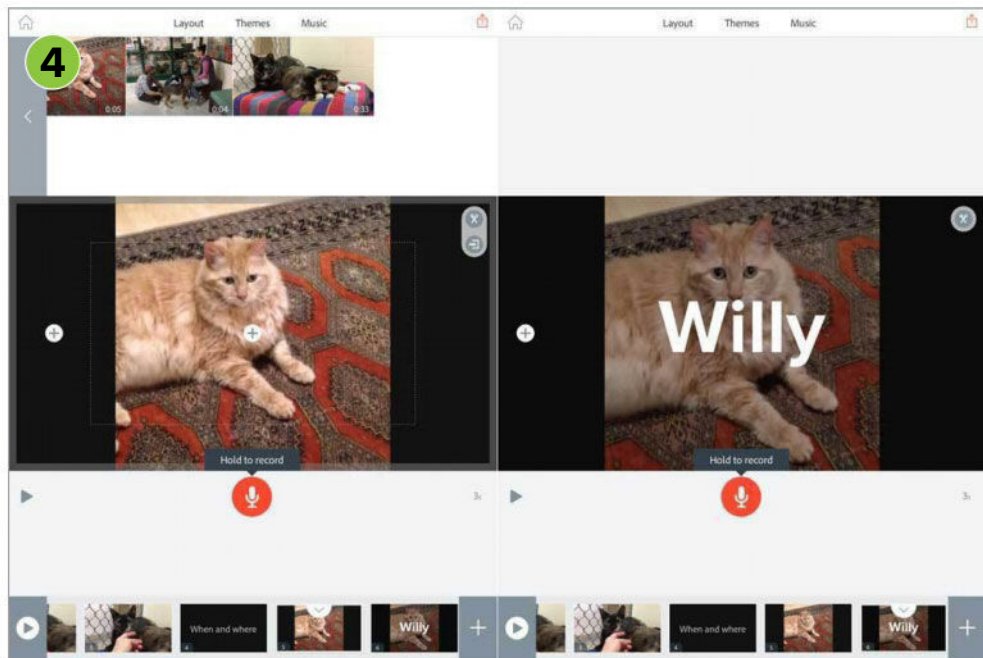
You can adjust the volume or mute a clip with the volume button. Spark can also automatically align the video clip to the length of your narration. Or you can add a music track.

5. FILL THE SLIDES

Each slide of a template presentation gives you a hint of what kind of content it could contain. You don't have to adhere to the formula, but it is helpful for beginners. You can express your idea with video, stills, text, icon, or a combination. Spark Video gives you four layout choices for each slide: Full Screen + Thing, One Thing, Thing + Caption, and Two Things. The first

two can include video, the rest a combination of text, photo, and icon.
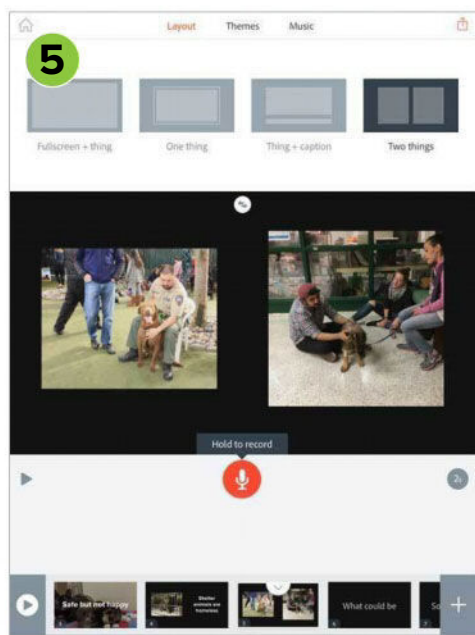
6. ADD A THEME

Themes provide the visual punch of your message. You can add a theme at any point, but waiting until you load all your content may help narrow down the choices among the 32 built-in themes. Tapping each theme gives you a brief preview and you can try out any theme you want before committing to it. The arrow on the bottom left side lets you view your creation with any template and music and switch them around until you like what you see.

7. THEME LAB

Each theme offers various ways to cus-

tomize with different colors, background, icons, main text, and secondary text complete with a dozen font choices. You can apply variations to specific slides or to the entire presentation, though not every variation is available for every theme.
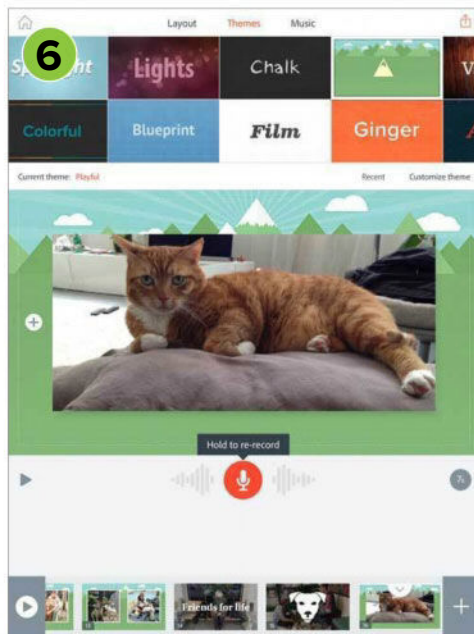
8. ADD MUSIC

Music will likely be the most evocative part of your presentation. Adobe includes a varied selection of instrumental tunes for different moods from happy, playful, and relaxed to rousing, thoughtful, uplifting, and more. Or you can choose from your own music.
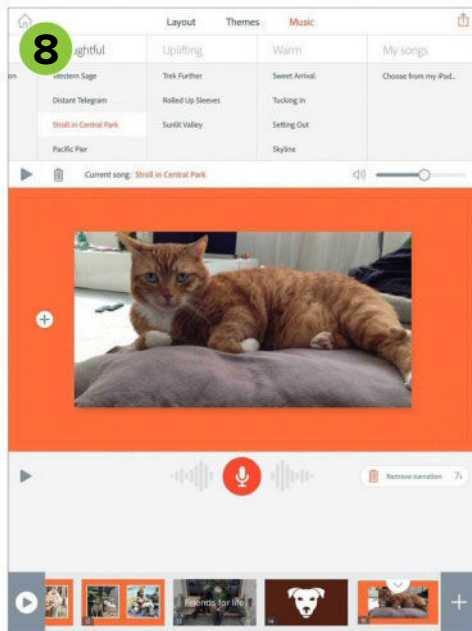
9. TWEAK AWAY

Just because you have filled in the template does not mean the presentation is set in stone. You can easily add, remove, replace, or reorder slides.

One thing that's a drag: The last slide automatically reads Made With Adobe Spark Video and lists the website URL, which you can't remove—unless you are a Creative Cloud subscriber. This is designed as an exclusive feature for Creative Cloud subscribers, but it is currently available for a limited time to all

users, but only via the web app—not your mobile device.

10. SHARE YOUR VIDEO

When you're satisfied with your work and ready to share it, Spark Video makes it easy to post to Facebook, Instagram, or Twitter, or share via Messages or email, as well as save it to the clipboard or your camera roll. Specify the general target audience by categorizing it as Business, Causes, Education, How-to, Lifestyle, and more. You can add photo and video credits and author credit. You can also toggle on the optional Get Noticed control that allows your project to appear in search engine results and on the Adobe Spark website.

AVAILABLE NOW

Adobe Spark Video is free online and available on the App Store for both iPhone and iPad. You need a free Adobe ID to access the app or update, but you do not need a paid Adobe subscription. If you need more than the allotted 2GB of Creative Cloud file storage, you can enable an in-app purchase of an additional 20GB for $2 per month, which will be automatically charged to your iTunes account. ■

How to use NetSpot to map out your Wi-Fi network

This helpful Mac app can be used to fix weak spots in your wireless coverage.

BY JEFFERY BATTERSBY

T he quality of your Wi-Fi in every corner of your home or office can be a bit of a sticky wicket: Great in the reception area, not so hot by the copier. Mediocre in the boss's office, and absolutely perfect near the last toilet in the bathroom. The question is, how do you figure out what's bad where and why so you can make adjustments and guarantee good Wi-Fi in the places you need it most.

With NetSpot (netspotapp.com), the Wi-Fi network survey tool. The app comes

in three expense tiers: free for non-commercial use, $149 for a one-user-per-device license for the Pro version, $499 for a 10- user-per-device license. The free version is sufficient for most small homes and offices, but you'll want to purchase the profession or enterprise versions if you plan on using NetSpot for anything other than personal use.

MAPPING YOUR NETWORK

NetSpot uses your portable Mac's Wi-Fi and a hand-drawn map or blueprint of your home or office to help you discover the quality of your network. I emphasize portable because when I first bought the app I installed it on my iMac to see how it worked before installing it on my MacBook Air. I ended up having to contact NetSpot support because their licensing rules are very strict and you won't be able to install the app on a laptop if you've already installed the app on another device. Make sure you install the app on the Mac you plan to use NetApp on.

The app offers two modes: Discover and Survey. Discover mode takes a few moments to scan the local area and will give you a list of all the location's Wi-Fi SSIDs (whether you're connected to them or not), the strength of each network, the network band it's running on, they type of security it's using, and the wireless modes it offers. While useful for getting a quick grasp of what your local wireless options are, NetSpot's best feature is its network survey tool.

To create a survey you need to start with a map. If you're fairly adept at drawing you can use NetSpot's built-in drawing tools to create a floor plan of your office. Better yet, if you have any kind of image of your current floor plan, NetSpot can open most any kind of image file, which you can then use as the starting spot for your survey.

NetSpot needs measurements if you're going to create an accurate survey. You'll add these manually if you're drawing your own map or, if your map is an image file, you'll need to provide two points of measurement. Once you do, you'll walk to a point in your office, click that point on your map in NetSpot and the app will spend a few seconds scanning the Wi-Fi network in that area. Once that scan is complete you move to
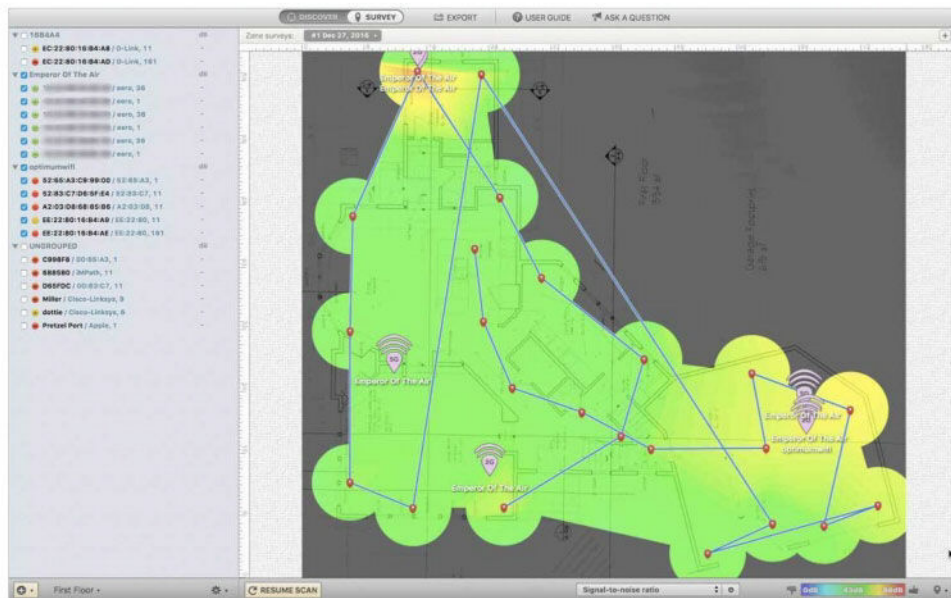
another location and click again, continuing that process until you've touched most every major point in your office and on the map. When you're done you'll see exactly where the best and worst locations in your network are, which will give you guidance on where to add new access points.

After you've created an initial scan of the network you can use that to add to or adjust the placement of hotspots and then rescan your network to see whether those changes have made your wireless network better or not. ■

How to manage your network with iNet Network Scanner

A valuable tool for understanding your network and the devices connected to it.

BY JEFFERY BATTERSBY

n part 2 of *The Indispensables* series (go.macworld.com/idsp), I made mention of a network scanning app called iNet Network Scanner (go.macworld.com/inns). I've used this app on my Mac for years and love it, but it also comes in two iOS versions, which I've only begun using recently.

After that mention, I thought it worthwhile to take a deeper look at how iNet Network Scanner works and why it's worth your while to grab one or all versions of this app.

KNOW YOUR NETWORK

Understanding your network and the devices connected to that network is one of the keys to understanding your network needs and your network vulnerabilities. iNet Network Scanner helps you get a handle on your network by quickly scanning the range of IP address defined by your Mac's IP address and subnet mask. By default the app sorts devices based upon their IP address, but you can also sort by device name or vendor.

The app's initial scan gathers information from each device on your network, gets its IP and MAC addresses, checks to
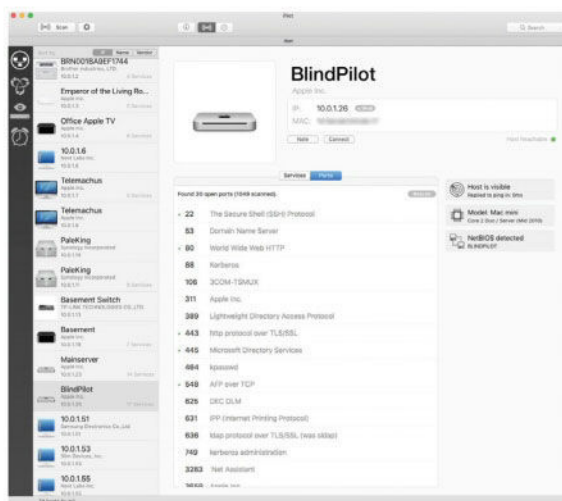
see if it responds to a ping, and checks to see what kinds of services are being offered by the device. So, when connecting to your router you see information about its make and model, if it's an Apple AirPort, whether or not it responded to a ping, rots network traffic and is a gateway for traffic routed out to the Internet.

Regarding AirPorts, if you have any model older than the current 2013 version or an AirPort Express, iNet Network Scanner can provide information about the AirPort, the kind of traffic it's passing and the number and names of the devices connected to it. And for those connected devices you can see the signal and noise level for a selected device, which can give you guidance on the placement of AirPort hardware in your home or office.

You may recall from our series on Profile Manager that it was possible to import devices into Profile Manager as placehold-
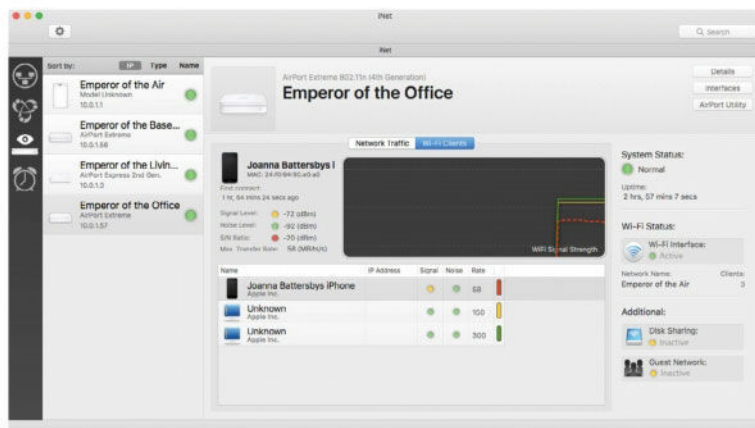
ers for devices once they're enrolled in the service. Once iNet Network Scanner has gathered information on all your network devices you can rename those devices and then export a CSV file that can then be imported into Profile Manager. This file can also be used to gather inventory information and verify that there are no unauthorized devices on your network.

MANAGE YOUR NETWORK

In addition to scanning for network devices, iNet Network Scanner will scan for Bonjour services being offered on the network and allows you to view those services by device. Want to know how many of the computers on your network are offering some kind of Bonjour print service? Use the app's Bonjour scanner to see what devices are offering up the Internet Printing Protocol.

You can also scan ports on every device in your network to see if some device has ports open you weren't expecting it to, or doesn't have ports open you were expecting it to. In short, iNet Network Scanner gives you good guid-

ance into every device on your network.
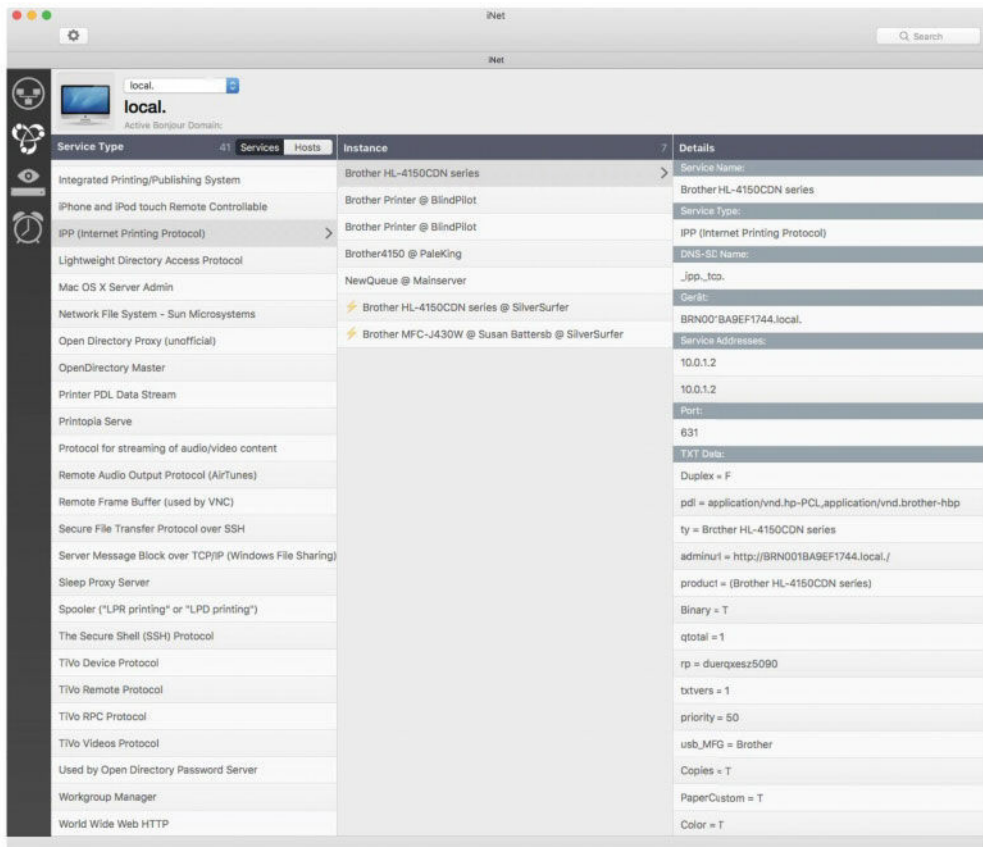
NETWORK TROUBLESHOOTING PSA

One note about network troubleshooting: Firewalls, when troubleshooting, are not your friend. Especially when the firewall isn't responding to ICMP traffic like pings and port scans.

If you're using Apple's built-in Network Utility or the command line to see if a device is alive, firewalls will often keep you from seeing if a device is active on the network, even if it is.

Turn off firewalls when troubleshooting networks. This also highlights an additional iNet Network Scanner benefit: It can still see devices with firewalls using Stealth mode, and it will still let you know which ports are open and which ones aren't. A huge benefit when it seems some computer is lost at sea in your network. ∎

How to replace 5 Yahoo services and delete your Yahoo account

Yahoo's (lack of) security got you down? Here's how to ditch it.

BY IAN PAUL

O h, Yahoo. It was bad enough that the company already announced a breach exposing 500 million user accounts (go.macworld.com/500) two years after it happened. Then late one recent night Yahoo revealed that it had uncovered another unrelated hack exposing the account details of one billion users. It's not clear how much of that is overlap, but at this point does it really matter?

I don't know about you, but I'm done. I wasn't much of a Yahoo user to begin with but the uses I do have for the company are over.

I know that's easy for me to say. I have

a single account that I only use to play fantasy football. But what about those of you who are more fully invested in Yahoo? Here's a guide to replacing Yahoo's major services with alternative options, then deleting your Yahoo account.

YAHOO THE PORTAL

Yahoo's an old-school Internet portal from the days when everyone set a default homepage in their browser. If the most important thing from a new service is that you have a jumping off point from which to access news, weather, stock information, and email then there are two other big-name options.
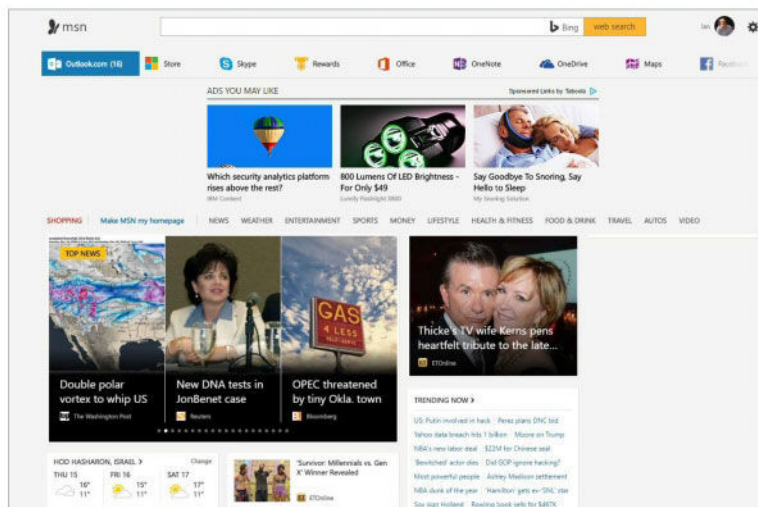
Yahoo's closest clone is Microsoft's MSN.com. It's packed with news, stocks, and weather. At the top you have easy access to everything available in Microsoft's world, including Outlook.com, Skype, Office Online, OneDrive, as well as Facebook and Twitter.

Anyone looking for a more Spartan look to their homepage should check out AOL—the original Internet portal. Here you'll get almost everything you get with MSN and Yahoo, just with a more stripped down aesthetic.

MAIL

The options for switching away from Yahoo are limitless. The more recognizable names include Gmail, Outlook.com, AOL Mail, GMX, and Proton Mail. Really it all comes down to which interface you prefer and whether you're more tied to a specific online ecosystem like Google's or Microsoft's.

MSN

AOL

Microsoft's own built-in Weather app. Anyone already using Outlook 2016 can have weather appear at the top of their calendar by going to File ➜ Options ➜ Calendar ➜ Weather ➜ Show Weather on the calendar.

STOCKS AND FINANCE

Windows 10 users also have a built-in Money app for tracking stocks and getting financial news. If web-based stock updates are more your thing, consider MSN Money, Google Finance, and Seeking Alpha, to name just a few.

Check out our earlier tutorials on how to make the switch (go.macworld.com/swi) to a new email account (go.macworld.com/ema) if you want to make the transition as seamless as possible.
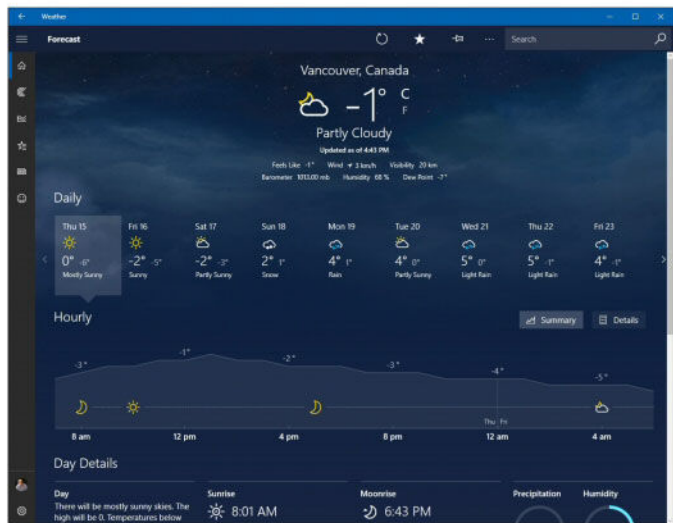
WEATHER

You'll find tons of places with weather updates. They're built into the aforementioned portal sites, but there's also weather.com, Weather Underground, and Forecast.io.

If you'd rather use an app there are a number of them in the Windows Store for Windows 10 users, including AccuWeather, The Weather Channel, and
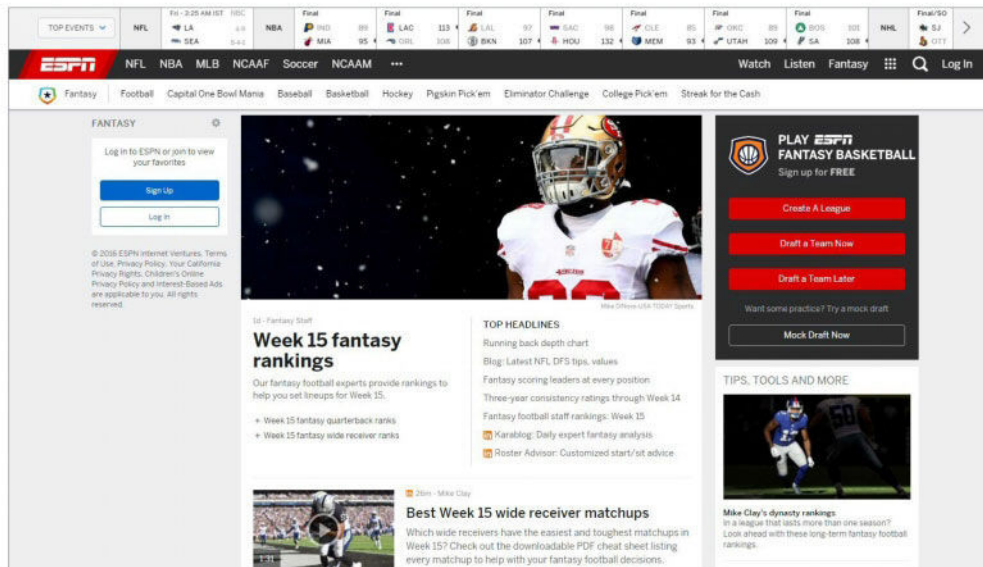

Windows 10 weather.

FANTASY FOOTBALL

For those of you into fantasy sports, there are many Yahoo Sports rivals to choose from. ESPN is the obvious choice since it's already a large fantasy site and covers pretty much every sport, not just football. The NFL has its own fantasy football offering, and CBS Sports is also a good fantasy destination.

DELETE YOUR ACCOUNT

Now that you know how to replace Yahoo, here's how you delete your Yahoo account.

First, go to Yahoo's specialized account cancellation page, which is not accessible through your account settings. Once

you're there, confirm the name of the account you're deleting, read the fine print warning, enter your password, and then fill out the captcha. Once that's done, click Terminate This Account.
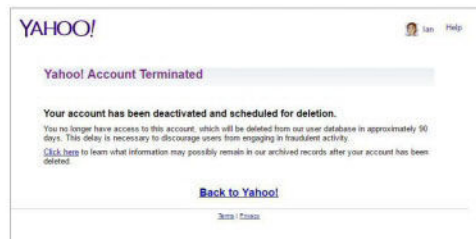
After that, Yahoo will confirm that your account termination was successful. You'll now be locked out of your account, but Yahoo says it will take about 90 days to purge your account data from the system. ∎

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BUZZED DRIVING IS DRUNK DRIVING.

Ad Council

U.S. Department of Transportation

4 secrets for editing images in Apple Photos

Make your photos look their best.

BY LESA SNIDER

As holidays pass, we're often left with dozens of cherished family photos. You certainly want to make them look their best, so here are a few tips for quickly getting dramatic improvements in Photos for Mac and iOS.

ENHANCE TOOL

To quickly improve a picture that looks a little dark, dull, or washed out, press the Return key (Mac) or tap the Adjustments icon (iOS) to make sure you're in Edit mode, and then give the Enhance tool a try. (In Photos for iOS, all you see is a magic wand icon without a label.)

When you do, Photos analyzes the picture's pixels and does its best to improve the image's overall brightness, contrast, and color. This tool also tries to identify areas that are in focus in an attempt to bring out the subject a little

The Enhance tool works particularly well on photos that are a little dark and lack contrast, like the tulip image shown here on the left. In some cases, a single click of the Enhance button may be all your picture needs to look better and brighter, like the right-hand image here.

IMAGE: LESA SNIDER

more, as well as make skin tones warmer and details sharper. Depending on the picture, you can end up with richer and more vivid colors than you started with, as shown in the tulips photos.

To glean a little insight into what the Enhance tool does, click the Adjust icon to open the Adjustments panel and take a peek at the sliders in the Light and Color sections that appear. (To expand those sections and see all the sliders they contain, hover over the section title and click the downward-pointing arrow that appears.) In your image's original, pre-Enhanced state, all the sliders are positioned in the middle of each section. By taking note of which sliders the Enhance tool changed, you can manually adjust them to amplify the correction.

While the Enhance tool can work wonders on some images, it can't fix 'em all. When you use this tool, Photos makes its best guess as to what kind of correction your image needs, but it can't guess at the picture's content or the photographer's intent. In other words, the Enhance tool can't tell if you've captured an overexposed image of a brightly colored flower or a well-exposed image of a pale flower on a cloudy day.

If the image needs more fixing than the Enhance tool applies, reach for the more targeted and powerful controls offered by the Adjustments panel. Just click Adjust at the right of your photo to expose its numerous options, or press the A key on your keyboard.

While the Enhance tool can work wonders on some images, it can't fix 'em all.

To learn how to use the adjustments tools in the iOS version of Photos, see the article at go.macworld.com/iosphotos. Many of its controls work the same way in Photos for Mac.

The Enhance tool is a one-click wonder; it doesn't have any additional controls. That means you can use it while you're cropping a photo or applying a filter, for example.

ADD A CUSTOM DARK EDGE VIGNETTE

You can easily apply a customizable dark edge vignette to any picture. Just open an image in Edit mode and then click Adjust (or press the A key on your keyboard). Next, click the Add button at upper right and from the resulting menu, choose Vignette.
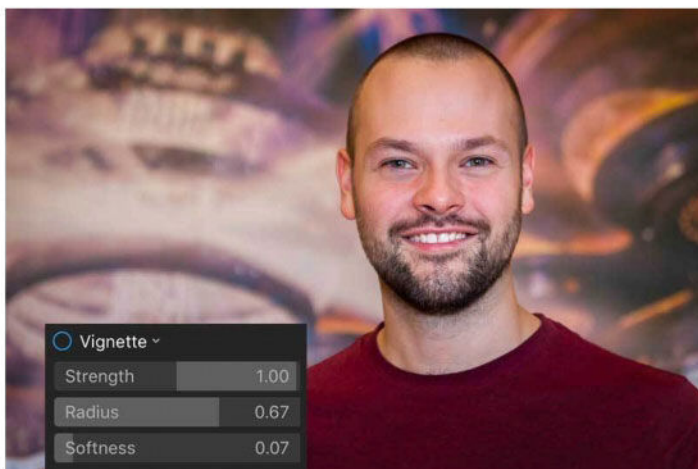
Use the Radius slider to change the size of the vignette or, rather, the size of the area over which it's visible; drag it right to make the vignette bigger or left to make it smaller. Use the Softness slider to con-

trol the width of the transition area between what is darkened and what isn't; drag it right to increase the feather effect, thereby making the transition wider and softer. Click the blue circle with a white checkmark to toggle the vignette off and on to see a before and after.

COMPARING BEFORE AND AFTER VERSIONS

Photos for Mac has a secret keyboard shortcut that helps you assess your edits with a Before and After view of your image—that way you can see how much the picture has (hopefully) improved.

A dark edge vignette (bottom) gives your portrait a classy and elegant final touch, and helps tone down a distracting background.

However, even if you root around through Photos' menus, you won't find it. The trick is to use the M key on your keyboard (iPhoto used the Shift key instead).

To see the before version of an edited photo, press and hold down the M key; release the M key to see the after version. Be sure to memorize this keystroke, because you'll use it a lot.

IMAGE: LESA SNIDER

Photos Help

Q Search

Keyboard shortcuts

You can use keyboard shortcuts to quickly accomplish many tasks in Photos. To find the shortcuts for common commands, look in the Photos menus, or use the tables below as a reference.
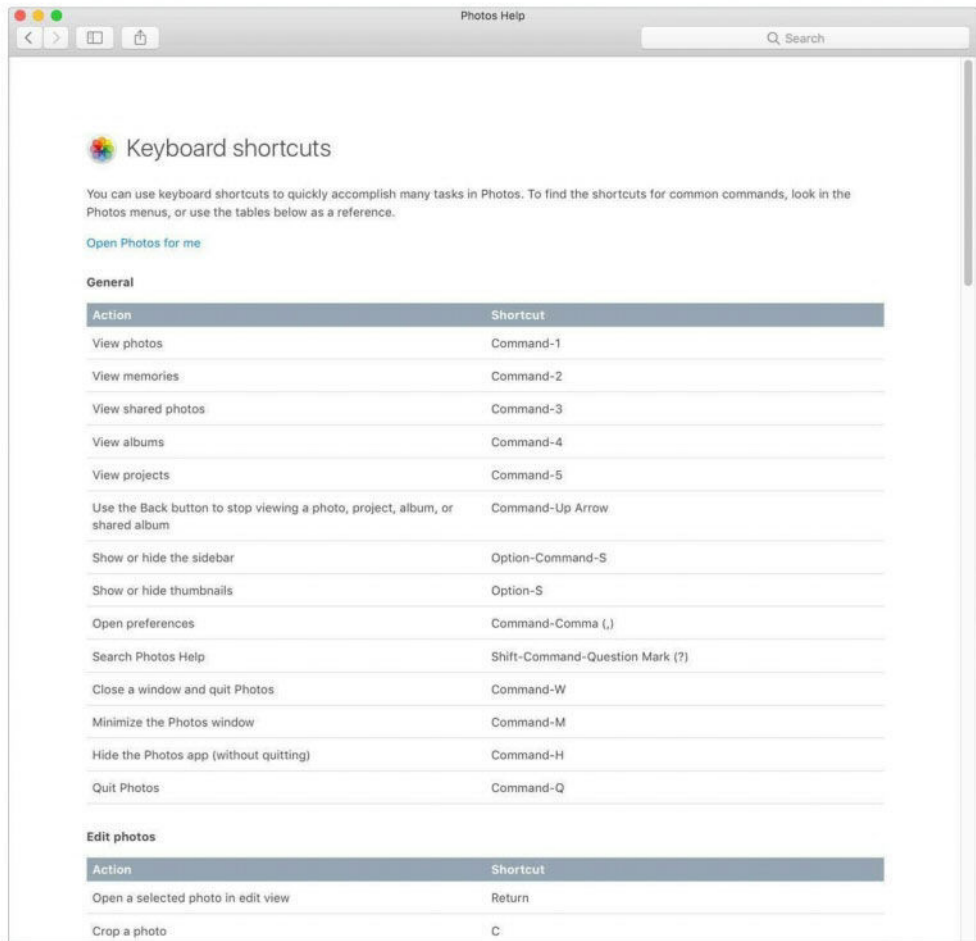
Open Photos for me

General

Action	Shortcut
View photos	Command-1
View memories	Command-2
View shared photos	Command-3
View albums	Command-4
View projects	Command-5
Use the Back button to stop viewing a photo, project, album, or shared album	Command-Up Arrow
Show or hide the sidebar	Option-Command-S
Show or hide thumbnails	Option-S
Open preferences	Command-Comma (,)
Search Photos Help	Shift-Command-Question Mark (?)
Close a window and quit Photos	Command-W
Minimize the Photos window	Command-M
Hide the Photos app (without quitting)	Command-H
Quit Photos	Command-Q

Edit photos

Action	Shortcut
Open a selected photo in edit view	Return
Crop a photo	C

FIND AND PRINT MORE KEYBOARD SHORTCUTS

Photos is riddled with useful keyboard shortcuts. To see a full list, choose Help ➜ Keyboard Shortcuts, and then in the Photos Help window that appears, click Keyboard shortcuts. You may want to print the list and keep it on your desk.

When you're finished, just click the red circle at the window's upper left to close Photos Help.

These are just a few of the powerful image-enhancing features in Photos that give you professional-quality results in seconds. ■

How to use Levels adjustments in Photos and how to use Copy Adjustments to tweak other images

Apple's Photos has powerful tools for making your pictures spectacular.

BY LESA SNIDER

n the preceding article, we revealed some hidden features in Apple Photos that can quickly make your cherished images look their best. Now, you'll learn to adjust brightness in specific areas and copy all your adjustments from one photo to many others.

HOW TO USE THE LEVELS SLIDERS

Photos for Mac sports some seriously advanced image editing controls in its Adjustments panel, the most powerful of which is Levels. Amazingly, while a Levels adjustment in Photoshop or Photoshop Elements has just three sliders, Photos has eight. This gives you precise control over the brightness levels of all the tones in your image. For example, you can control brightness levels in ple, you can control brightness levels in

just the darkest shadows, just the midtones, just the lightest highlights, in the tones that fall between shadows and midtones, and in the tones that fall
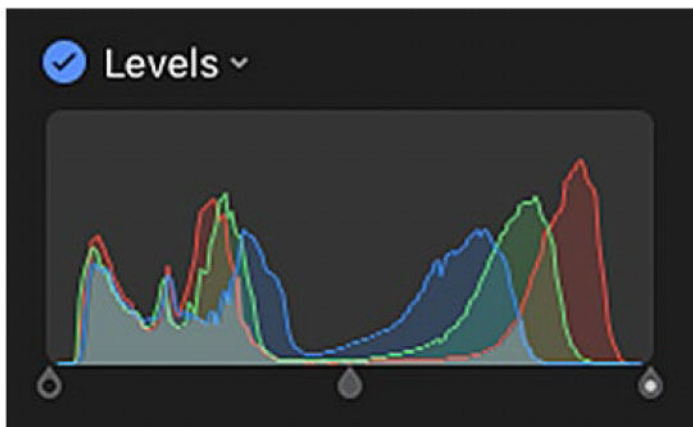
between midtones and highlights.

To open a Levels adjustment for a selected image, first press the Return key to make sure you're in Edit mode, then in the list of tools on the right, click Adjust to open the Adjustments panel. If Levels doesn't appear in the list of Adjustments,

click Add at the top right of the list and choose Levels from the resulting menu.

Hover over the Levels section that appears in the list of Adjustments to see the controls shown in the image on the following page. If you click the Auto button, Photos will try its best to improve all the brightness levels in your image. If you like what you see, you're done.

To adjust the image even further, drag the sliders at the bottom to the right or left to increase or decrease the brightness in each range of tones. To change the range of tones being affected by the bottom sliders, drag the top sliders left or right.

When you move the sliders, Photos adjusts the image's tonal values accordingly. For example, if you drag the Whites slider left to (an imaginary setting of) 85 percent, Photos changes all the pixels that were originally 85 percent or higher to 100 percent (pure white). (Translation: They get brighter.) Similarly, if you move the Blacks slider right to (an imaginary setting of) 5 percent, Photos darkens all the pixels with a brightness level of 5 percent or lower to 0 (pure black). Photos also redistributes the brightness levels between 5 percent and 85 percent, boosting the image's overall contrast by increasing its tonal range.

HOW TO COPY ADJUSTMENTS ONTO OTHER IMAGES

Whipping pictures into shape can involve a lot of time and slider scooting. If you've got a bunch of pictures that require the same fixes—for example, they were all shot at the same time with the same lighting conditions—it'd be tedious to repeat your efforts on every...single...photo.
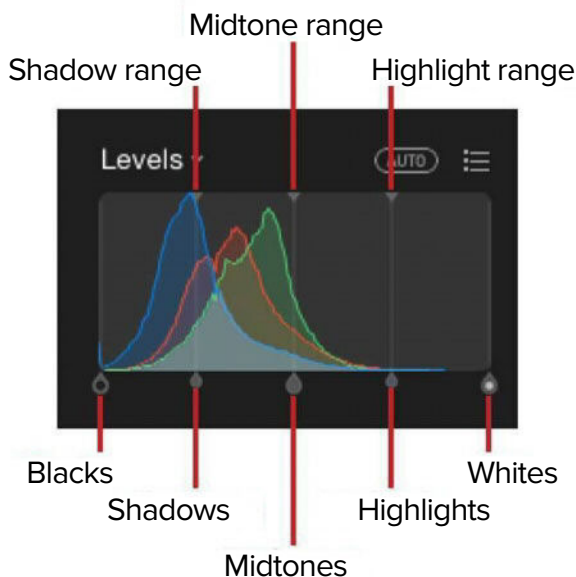
Fortunately, you don't have to do that. You can simply copy your adjustment settings from one photo and paste them onto another. This can be a gigantic timesaver if you have a slew of images

You can simply copy your adjustment settings from one photo and paste them onto another. This can be a gigantic timesaver if you have a slew of images taken under the same lighting conditions.

taken under the same lighting conditions.

Apple put a lot of thought into the Copy Adjustments command. Because you only want to copy and paste general changes—those that affect lighting and color—that's all the command does. In other words, the only stuff that gets copied are the changes you make with the Enhance and Filter tools and the Adjustments panel. Changes you make with the Rotate, Crop, Retouch, and Red-Eye tools aren't included.

To copy a change from one image to another, select your adjusted image (image A) and press Return to switch to Edit mode. Then choose Image ➜ Copy Adjustments or press Command-Option-C. Then, open the other picture (image B) and choose Image ➜ Paste Adjustment or press Command-Option-V. When you do, Photos applies the color and lighting corrections you made to image A onto image B. (Another way to copy or paste adjustments is to Control-click a photo in Edit mode and choose Copy Adjustments or Paste Adjustments from the menu that appears.)

Photos' Levels controls: Use these eight Levels sliders to fix your images.

Unfortunately, you can only paste changes onto one photo at a time; you can't select 100 thumbnails and paste changes onto all of them in one fell swoop. But if you've got a bunch of pictures to paste edits onto, you can speed up the process by opening Photos' thumbnail browser and using the arrow keys on your keyboard to navigate through the pictures. To see the thumbnail browser, choose View ➜ Show Thumbnails or press Option-S. Use the arrow keys to move from photo to photo, and then press Command-Option-V to paste your changes onto each one.

Now that you know how to adjust brightness levels in any area of your photo and how to copy adjustments from one photo to many others, take a break. Breathe. Then come back and apply your newfound expertise to as many photos as you like! ■

How to use Siri in macOS Sierra to find pictures in Photos on the fly

Using Siri is a quick and easy way to find a set of photos.

BY LESA SNIDER

When guests visit, we love having a Photos slideshow (go.macworld.com/sldshw) playing on our Mac. However, if guests show up with little or no advance notice (as they tend to do during the holiday season), you've got little (or no) time to go picture hunting. Happily, macOS Sierra lets you tell Siri to track down certain pictures for you. From that point, all it takes is a couple of clicks to get a slideshow rolling.

MAKE SURE SIRI IS ENABLED

The first step is to ensure Siri is enabled. If it is, its colorful, round icon should be sitting pretty near the far right end of your Mac's menu bar. To summon Siri, either

click the icon or hold down the Command-Space-bar keys for a second or two. A window slides into view from the right edge of your display and you hear a friendly sound to indicate that Siri's listening.

Now speak your command, as explained in the next section. (If you keep holding down


You can use preferences to enable and disable Siri, pick a language, voice, sound input, change Siri's keyboard shortcut, and show or hide Siri's icon in the menu bar.

the Command-Spacebar keys, Siri continues listening. Let go of those keys to signal that you're finished giving it commands.) If Siri isn't enabled, choose Apple ➡ System Preferences and click Siri. In the pane that opens, turn on Enable Siri.

CHOOSE A SCOPE FOR THE PHOTOS

Since your unexpected guests likely have an interest in a small(ish) slice of your life, you need to decide which pictures to ask Siri to find in your Photos app. You can ask for any combination of time, place, people, things, keywords or words in titles and Siri will attempt to identify those objects in your pictures. (This trick works on your iOS

devices, too. Just press and hold the Home button to summon Siri). For example, you may ask Siri to:

> "Create a slideshow of my photos from the past month"

> "Create a slideshow of my photos from last weekend"

> "Create a slideshow of my photos from Portugal"

> "Create a slideshow of my photos of flowers"

You can phrase your question in various ways, too. You can say "create" or "play" or "show" and the result is the same: the Photos app launches, the pictures are tracked down and they begin to play in a soundless slideshow.
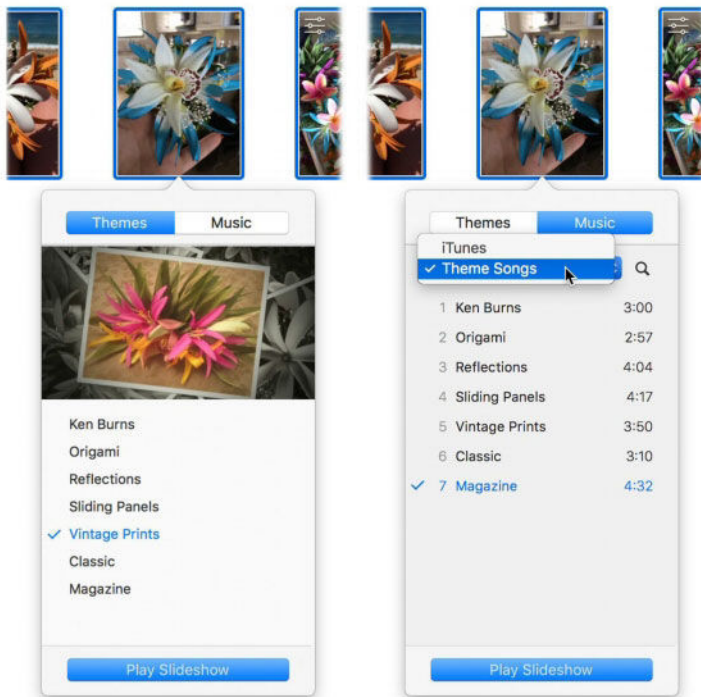
Photos has several slideshow themes, though Vintage Prints is especially beautiful because it slowly zooms in and rotates one photo while stacking the others in black and white behind it (left). You can play the music linked to any of the Themes, too, or you can choose iTunes to see a list of all your songs and pick one or more to play (right).

> "Show me my photos of flowers from 2013"

Thankfully, Apple is constantly improving Siri and Photos, so in the future you may be able to search for additional attributes. Feel free to try anything you can think of.

PLAYING YOUR SLIDESHOW

To play a slideshow of the pictures Siri located for you, select some or all of the pictures in Photos and then Control-click or right-click on one of the selected photos. From the menu that opens, choose Play Slideshow. Pick a theme and music from the next window that opens, as shown. When you're finished, click Play Slideshow to trigger a glorious, full-screen slideshow of the selected pictures.

If Siri has trouble finding your pictures, or if you want to customize how the slideshow plays, try saying "find" or "show me" instead. Photos launches and you see the collection of the photos you requested. For example:

> "Show me my photos of kittens"
> "Find my photos taken this summer"
> "Find my photos of Jay Nelson in Italy"

SAVING YOUR SLIDESHOW

There are some advantages to saving your slideshow before playing it (besides being
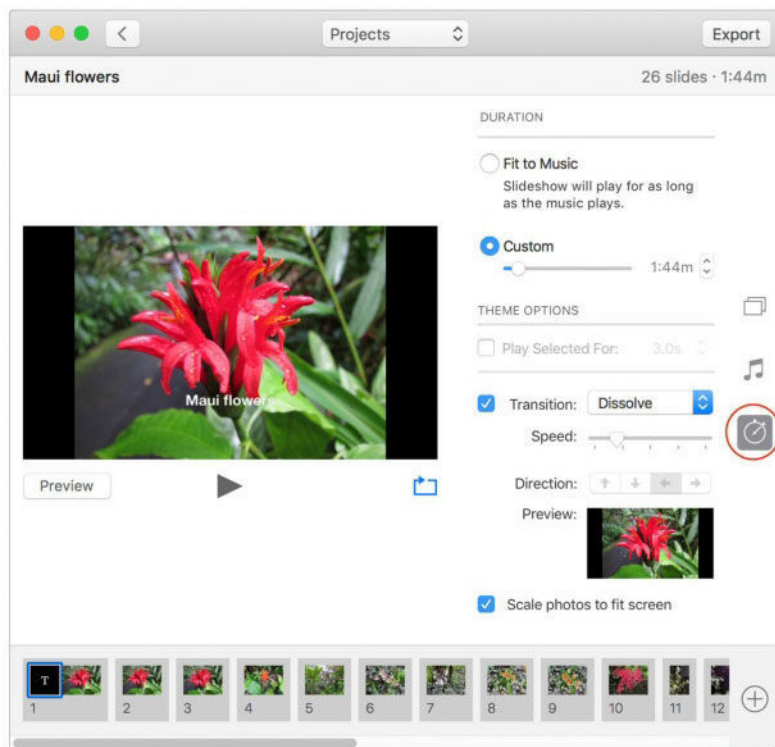
Click the Duration icon (circled) to set slide timing and transition style, and whether the photos are scaled to fit on the screen or not. The other icons let you pick a theme, change or disable the automatic music that plays during the slideshow, or choose songs from your iTunes library.

able to play it again whenever you want). For example, you can control the slide timing and transition style, and choose whether the pictures are scaled to fit on the screen. To do it, choose File ➜ Create Slideshow. A sheet drops down from the top of Photos' window where you can choose to either add the selected photos to a previously saved slideshow, or create and name a new one. Either way, the slideshow opens as a Project in Photos, with icons on the right that let you customize how it plays.

To preview your slideshow inside the project window, click the Preview button at the bottom left beneath the preview area. To repeat the slideshow indefinitely, click the rectangle-arrow at the bottom right so that it turns blue, which turns on looping. To start a full-screen slideshow of the selected pictures, click the triangular Play button.

As you can see, using Siri to find pictures is incredibly fun, and playing them as a slideshow for your guests can be immeasurably rewarding. Until next time, may the creative force be with you all! ◾

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Mac 911

Solutions to your most vexing Mac problems.

BY GLENN FLEISHMAN & MICHAEL CONNELL

How to change your default font in macOS Mail

Q: I would like to permanently change the default font setting from "Helvetica 14pt" to "Helvetica Neue Light 14pt" in my mail application so that my messages appear as this one does.
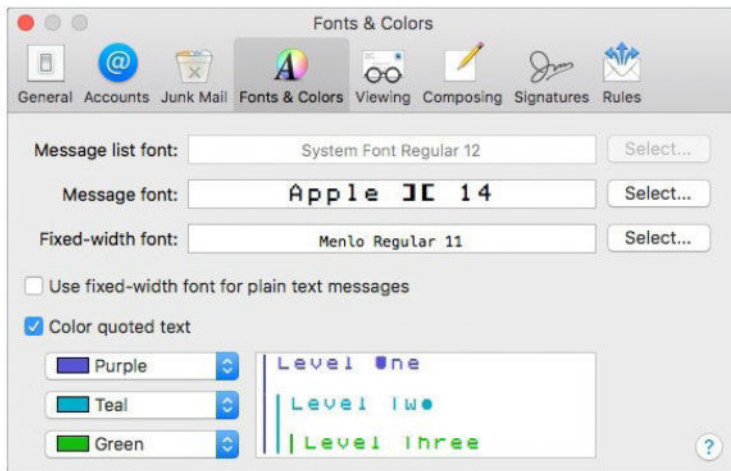
— Mark Chayka

(Trust me that his message did arrive in 14-point Helvetica Neue Light.)

A: I suggested he change Mail preferences: in the Mail app, choose Mail ➤ Preferences ➤ Fonts & Colors, click the Select button next to the Message font item (which shows the currently set font and size), and then use the Fonts selector that appears to choose your new options. (You also need to be sure that in the Composing preferences you set Message Format to Rich Text, not Plain Text, or the font choice won't be set.)

However, Mark tried this, and while changing the Message Font did switch existing email messages' display, it didn't automatically use those font settings when he composed a new message. I tried the same steps on my Mac, and it worked without a hitch.

You can set the default font and size for viewing and other macOS Mail elements.

Forum posts on Apple's site and elsewhere reveal this isn't uncommon. Some number of people can't make Fonts & Colors change the default composition type settings. If you have this problem and want to test whether or not it's system-wide, you can create a new macOS account, log in, set up Mail with an email account for testing, and then see if changing Message Font works for newly composed emails. Mark tried this and had the same problem.

I consulted Apple Mail guru Joe Kissell, who has wrangled Mail for iOS and macOS as much as any human, and he was stumped as well, though he agreed the stationery feature, while clunky, would work. Reinstalling macOS might help (not a clean install, even) by knocking out some setting or kruft that's causing this to happen. Joe has an ebook on upgrading to Sierra (go.macworld.com/kissell) that can help with this.

> I consulted Apple Mail guru Joe Kissell, who has wrangled Mail for iOS and macOS as much as any human, and he was stumped as well, though he agreed the stationery feature, while clunky, would work.

There's a workaround that doesn't require system reinstallation, but which

adds a few steps: use Mail's stationery feature. (Another workaround is to pick an alternate email program!)

1. Create a new email message and set the type and other options the way you want.

2. Type a word both to test that the settings are correct and to leave in place in the template. (If you omit typing something, the stationery doesn't pick up the font change.)

3. Choose File ➜ Save as Stationery.

**4.** Name the stationery descriptively and click Save.

Now, when you want to compose a message, you have to add a couple of steps, but you don't have to make font menu selections:

1. Create a new email message.

2. Click the Show Stationery Pane button at the upper right.

3. From the stationery list, scroll down to show Custom, and click it.

4. Select your custom template.

5. Click the word you typed, and then you can edit the message.

Stationery can only be applied to new messages, not replies.

At one point, at least one Mail plug-in would provide additional template and font features, but Apple changed the app's architecture a few releases ago.
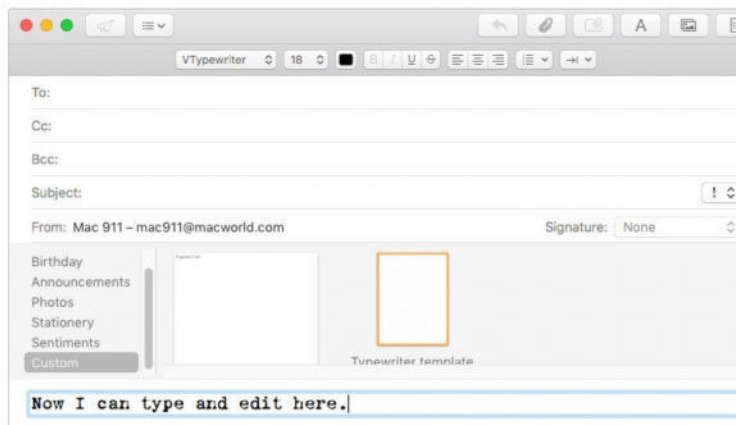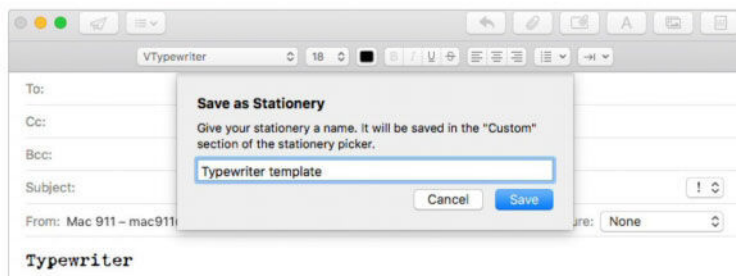

Creating stationery can work around a Mail bug.

Why Photos for macOS can't find an imported image

Q: Occasionally when I receive a photo from someone via email and want to keep it, I have downloaded the image file to the desktop and then imported it into Photos. However, after I delete the photo from the desktop, Photos then reports that the original cannot be found. Why is Photos not importing the original into its database as it does photos from my iPhone?

— Doug Needham

A: The most likely case is that at some point you (or someone else who might be using the same machine?) changed a preference. In Photos ➝ Preferences, if the Copy Items to the Photos Library box isn't
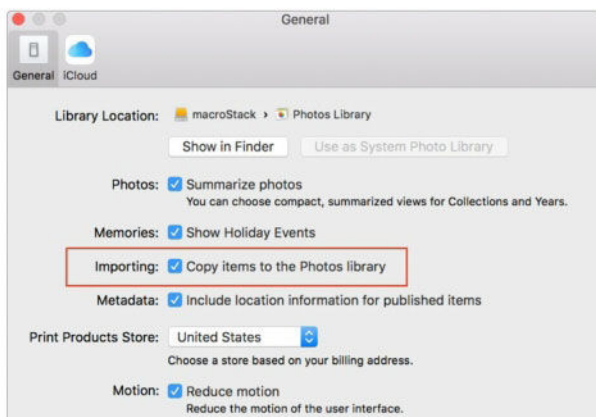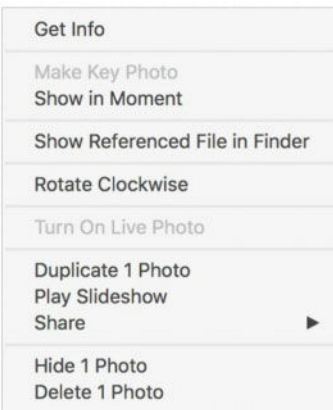

If this box is unchecked, images are referenced by not copied.

checked, then images are referenced rather than copied.

A referenced image is a pointer within Photos to the orignal image in its original location. If you modify the image, Photos does create a duplicate within its current library. Check the box to resume copying images into the Photos library.

You can tell if an image is referenced rather than imported in one of three ways:

> Its thumbnail has a Referenced File icon, which is a square with an arrow coming out of the corner in the upper-left of the thumbnail.

Referenced files are marked in a few different ways.

> Right-clicking the image offers Show Referenced Image in Finder.

> With the image or movie selected, the File menu displays Show Referenced Image in Finder.

You can also create a smart album that contains all referenced images; here's a column that explains how (go.macworld.com/smrtabm) near the end.

If you want all referenced items or those you select to be imported into the Photos library, select one or more of them and then choose File ➜ Consolidate.

Don't delete your photos after turning on iCloud Photo Library

With iCloud Photo Library on, clearing storage space isn't a trivial task.

Don't delete your photos after turning on iCloud Photo Library

I recently wrote a Mac 911 column (go.macworld.com/icdelete) titled, "Yes, if you delete your photos from iCloud Photo Library, they're deleted everywhere." I thought that might close the door on the question. Instead, I continue to get perfectly reasonable variants on it.

If you have iCloud Photo Library enabled, and want to clear out space occupied by photos and other media:

> Do not delete images or videos from iCloud.com.

> Do not delete images or videos from the Photos app in iOS for any device logged into the same iCloud account.

> Do not delete images or videos from Photos for macOS for any computer logged into the same iCloud account.

> Do not go into the Recently Deleted album and delete media.

If you delete in any of the first three cases, your media will be put into the Recently Deleted album and deleted after about a month permanently. If you delete the contents of the Recently Deleted album, they're gone forever.

With that out of the way, Christos Papage did have a unique twist on this question that comes at it from the other direction.

Q: My iPhone's storage space is full. I have bought 50 GB of cloud storage from Apple in order to upload all of my photos/videos to iCloud, and then delete them from my iPhone in order to have some free space available on my iPhone. My question is this; if I delete all my photos/videos from my iPhone will these still be remain in my iCloud account?

A: While this sounds like it's easily covered by the scenarios given, it's not necessarily so. You can use iCloud.com to store photos and, if you upload via iCloud.com and don't enable iCloud Photo Library, you can indeed store the images there and delete them from your iPhone. However, that leaves you with just iCloud as your only backup, and you're relying too much on Apple.

I'd suggest instead of using iCloud, you shift the photos to a computer and use Amazon or Google instead, as they're designed around uploading images, rather than providing a combination of sync and cloud storage. And if you store your images on a computer, it's easier to make a local backup or a backup to a secondary cloud storage space, like a hosted backup service such as Backblaze.

If Christos was really asking the question answered, the correct course is to enable iCloud Photo Library and also set your iPhone to store only optimized images (Settings ➜ iCloud➜ Photos ➜ Optimize iPhone Storage). This will keep the full-resolution

versions at iCloud.com and use just a fraction of the space for thumbnails in iOS, deleting the full-resolution files as needed to free up space for other iOS uses. ∎