

printout

Keystone MacCentral Macintosh Users Group ❖ <http://www.keystonemac.com>

KeyMac August Board Meeting (Everybody-is-invited meeting)

Topic: KeyMac August Board Meeting
Time: Aug 4, 2020 06:30 PM Eastern Time (US and Canada)

Join Zoom Meeting
<https://zoom.us/j/94625094525?pwd=a1FJOVRhUmV3Sm9FdEVjMExMODNMZz09>

Meeting ID: 946 2509 4525
Passcode: 533371
One tap mobile
+13017158592,,94625094525# US (Germantown)
+13126266799,,94625094525# US (Chicago)

Dial by your location
+1 301 715 8592 US (Germantown)
+1 312 626 6799 US (Chicago)
+1 929 205 6099 US (New York)
+1 253 215 8782 US (Tacoma)
+1 346 248 7799 US (Houston)
+1 669 900 6833 US (San Jose)
Meeting ID: 946 2509 4525
Find your local number: <https://zoom.us/u/aboYlXHU1>



Contents

August Meeting	1
Beware! iCloud Backups Deleted after 180 Days By Adam Engst .	3 - 4
Logitech Combo Touch: Love at First Type By Josh Centers	4 - 6
Big Sur Makes Changes to Many Apple Apps and Basic Features <i>By Glenn Fleishman</i>	7 - 11
What the HEIC? Apple's Highly Compressed Image Format <i>Still Confuses By Glenn Fleishman</i>	11 - 12
Rumors and Reality	12

Keystone MacCentral is a not-for-profit group of Macintosh enthusiasts who generally meet the third Tuesday of every month to exchange information, participate in question-and-answer sessions, view product demonstrations, and obtain resource materials that will help them get the most out of their computer systems. Meetings are free and open to the public. The *Keystone MacCentral printout* is the official newsletter of Keystone MacCentral and an independent publication not affiliated or otherwise associated with or sponsored or sanctioned by any for-profit organization, including Apple Inc. Copyright © 2020, Keystone MacCentral, 310 Somerset Drive, Shiresmanstown, PA 17011.

Nonprofit user groups may reproduce articles from the Printout only if the copyright notice is included, the articles have not been edited, are clearly attributed to the original author and to the Keystone MacCentral Printout, and a copy of the publication is mailed to the editor of this newsletter.

The opinions, statements, positions, and views stated herein are those of the author(s) or publisher and are not intended to be the opinions, statements, positions, or views of Apple, Inc.

Throughout this publication, trademarked names are used. Rather than include a trademark symbol in every occurrence of a trademarked name, we are using the trademarked names only for editorial purposes and to the benefit of the trademark owner with no intent of trademark infringement.

Board of Directors

President

Linda J Cober

Recorder

Wendy Adams

Treasurer

Tim Sullivan

Program Director

Dennis McMahon

Membership Chair

Eric Adams

Correspondence Secretary

Sandra Cober

Newsletter Editor

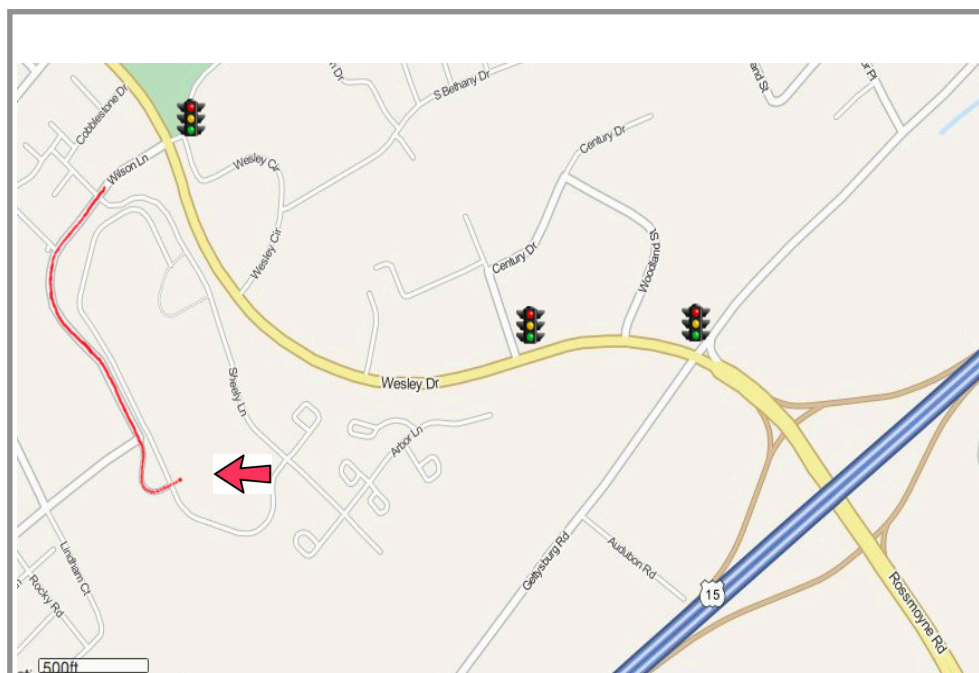
Tim Sullivan

Industry Liaison

Eric Adams

Web Master

Tom Bank II



Keystone MacCentral Essentials

Meeting Place

Bethany Village West
Maplewood Assisted Living (Bld 21)
5225 Wilson Lane
Mechanicsburg, PA 17055

Web Site

<http://www.keystonemac.com>

Mailing Address

310 Somerset Drive
Shiresmanstown, PA 17011

Beware! iCloud Backups Deleted after 180 Days

TidBITS reader Walter Ian Kaye had a simple question: “Did you know Apple deletes iCloud backups over 180 days old? I didn’t. :((”

I’m always bemused when I discover myself adopting one of my son’s expressions, and my immediate reaction was a teen-speak refrain from his high school years: “Wait, what?”

I had no idea that Apple deleted iCloud backups after 180 days, and a quick poll in the TidBITS Slack channel showed that it wasn’t common knowledge among other TidBITS staffers and contributing editors.

But a quick Google search revealed that the policy is far from new — I see [perturbed iCloud users](#) complaining as far back as 2014, and Take Control author Kirk McElhearn mentioned the fact in a [2013 Macworld article](#).

Apple does document this fact in various places, including in the [iCloud User Guide](#), the [Manage Your iCloud Storage](#) support document, and the [iCloud Terms and Conditions](#). But if you were expecting that you might be warned about such a limitation in the iOS interface, such as on the screen where you enable iCloud Backup or learn more about what’s backed up, you’d be disappointed. Apple’s acknowledgment

of the deletion policy is not quite as hidden as the plans for demolishing Arthur Dent’s house in *The Hitchhiker’s Guide to the Galaxy*. But the effect is roughly the same if you were planning on restoring from your iCloud backup, only to discover that Apple had deleted it, with the only warning being in support documents you’ve never read.

Douglas Adams, The Hitchhiker’s Guide to the Galaxy

“But the plans were on display...”

“On display? I eventually had to go down to the cellar to find them.”

“That’s the display department.”

“With a flashlight.”

“Ah, well, the lights had probably gone.”

“So had the stairs.”

“But look, you found the notice, didn’t you?”

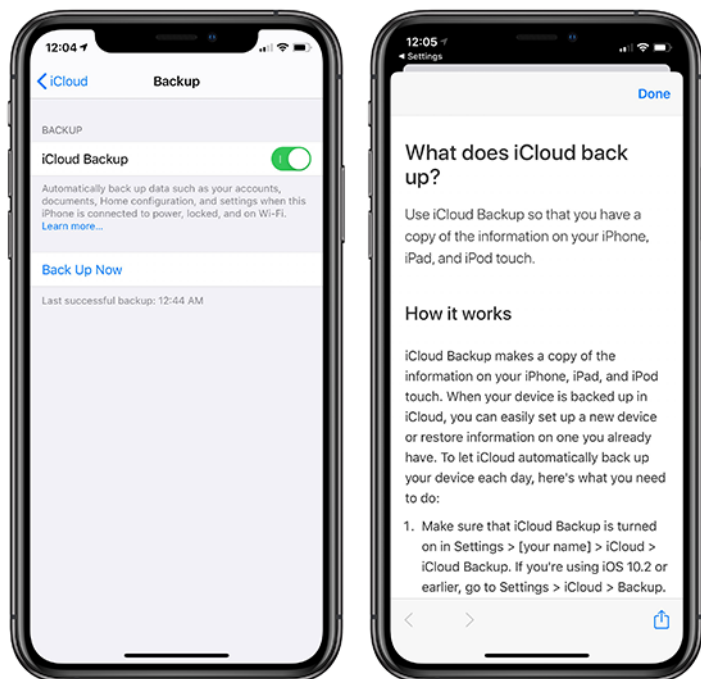
“Yes,” said Arthur, “yes I did. It was on display in the bottom of a locked filing cabinet stuck in a disused lavatory with a sign on the door say, ‘Beware of the Leopard.’”

On the one hand, it makes some sense that Apple would want to delete device backups — which can be quite large — that no one is ever going to want to use again. With hundreds of millions of devices backing up to iCloud, the storage requirements boggle the mind.

But on the other, what was Apple thinking?!? Deleting a user’s one and only backup, particularly without clear documentation in the user interface and express warning of the pending deletion, is simply unacceptable.

Of course, most people will never run into this problem. It’s unusual that someone would make a backup and then let it sit for over 6 months before wanting to restore. Unusual, but far from impossible. Walter had backed up a dying iPad and was saving the money to replace it, assuming that he’d be able to restore because he was paying Apple every month for 200 GB of iCloud storage space.

Apple clearly already has a scheduled process that checks backup age and deletes backups over 180 days old. It can’t



be that difficult for Apple's engineers to adjust that process to send out an email message to the user saying:

Your iCloud backup for "Adam's iPad 2" made on January 1st, 2020, expires on June 30th, 2020. It will be deleted after that unless you make another backup using that device before then.

Even better would be to include in that email message a link the user could click to reset the 180-day counter. That would let people like Walter prevent the backup from expiring until they could restore it.

In the meantime, if you want to ensure that an iOS device backup sticks around indefinitely, you'll need to [back it up to your Mac](#), using either the Finder in macOS 10.15 Catalina or iTunes in previous versions of macOS (there are [other differences](#) between the backup types as well, though the 180-day limit isn't mentioned). Unfortunately, local backups can consume significant space (my iPhone 11 Pro's backup is over 67 GB). Plus, they must be stored in `~/Library/Application Support/MobileSync/Backup/`, which is problematic for those with small boot drives — that was why Walter was using iCloud Backup in the first place. 🗑️

By Josh Centers

Logitech Combo Touch: Love at First Type

Apple's sudden announcement of trackpad support in iPadOS and the Magic Keyboard for the Face ID models of the iPad Pro came as a surprise (see "[Hell Freezes Over: Apple's New iPad Pro Supports Trackpads](#)," 18 March 2020). New hardware is always tempting, but I still have a Touch ID-based 10.5-inch iPad Pro and don't have much reason to upgrade, so I decided to try the [Logitech Combo Touch](#) keyboard case, which is also equipped with a trackpad.

There aren't many products that I try and instantly say, "Wow, this is awesome! I can't wait to tell TidBITS readers about it." But the Combo Touch, which comes in models appropriate for the seventh-generation iPad, third-generation iPad Air, and 10.5-inch iPad Pro, is one of those products. It's sold out on the Logitech site, but [Apple has some in stock](#).

Logitech Combo Touch versus the Magic Keyboard

Strangely, the Combo Touch isn't available for the 11-inch or 12.9-inch iPad Pro. A little birdie told me that Apple discouraged Logitech from supporting those models so as not to compete with the Magic Keyboard. After just a few hours with the Combo Touch, I see why Apple might have been worried about the competition, and I think a lot of iPad Pro users will be envious of those of us who can use the Combo Touch.

Let's start with the price. The Magic Keyboard is either \$299 or \$349, while the Combo Touch costs only \$149.95. Despite being half the cost, the Combo Touch doesn't feel at all cheap. The case is covered in a fabric material that feels nice and sturdy.



Another win for the Combo Touch is that it includes function keys for Home, brightness, the onscreen keyboard, Spotlight search, keyboard brightness, media controls, volume, and locking the screen.



- | | |
|---|---|
| 1 - Home: go to home screen | 5 - Key brightness: adjusts key backlighting up or down |
| 2 - Screen brightness: adjusts brightness up or down | 6 - Media controls: Back, Play/Pause, Forward |
| 3 - Virtual Keyboard: shows/hides the onscreen keyboard | 7 - Volume controls: Mute, Volume up, Volume down |
| 4 - Search: brings up iOS search field | 8 - Screen on/off: locks iPad (7th Generation) |

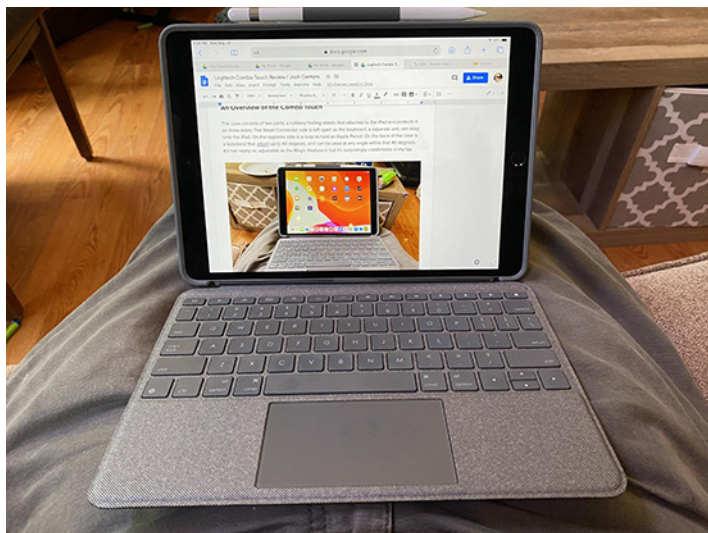
In terms of flexibility, the Combo Touch beats the Magic Keyboard. While the Magic Keyboard forces you to use the iPad in landscape orientation, the Combo Touch lets you switch between landscape and portrait orientation without removing the iPad from the case.



An Overview of the Combo Touch

The Combo Touch consists of two parts: a back cover and the keyboard. The rubbery plastic cover fits around the iPad and protects the back and three edges. The edge with the Smart Connector side remains open, so the keyboard, a separate unit, can snap onto the iPad. On the opposite side is a loop to hold an Apple Pencil.

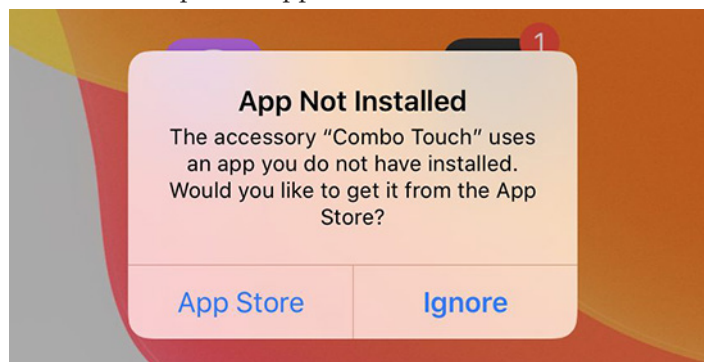
A kickstand on the back of the case adjusts up to 40 degrees and can be used at any angle within that 40 degrees. The Combo Touch is not nearly as adjustable as the Magic Keyboard, but it's still surprisingly comfortable in my lap.



You can also bend the kickstand the other way to prop the iPad up like an easel.



The keys are backlit, which makes the Combo Touch easier to use in a dim room. A [Logitech Control](#) app lets you set five levels of brightness, and you can turn off the backlight entirely if you wish. iPadOS prompted me to install the app, which was something I hadn't seen before with a hardware companion app.



Some may be sad that the Combo Touch lacks an Escape key. Instead, you'll find a Home key where Esc would normally be. I like the Home key because it enables me to keep my fingers on the keyboard and away from the screen. If you need an Escape key, which isn't generally used in iOS, you can redefine another key, like Caps Lock. Do this in Settings > General > Keyboard > Hardware Keyboard > Modifier Keys.

As far as the feel of typing on the keyboard goes, it's fine but nothing special. The chiclet keys are neither spongy or especially clicky, and the keycaps feel just a bit rubbery. The keys don't wiggle and feel solid when you press them.

The Combo Touch is necessarily a small keyboard, which entails a few sacrifices. I'm not crazy about the arrangement of the arrow keys, which follow Apple's old and much-maligned butterfly keyboard convention of half-size keys for the Up and Down arrows and full-size keys for Left and Right. The backtick, bracket, and backslash keys are also narrow, which is less of a problem.



But the keyboard isn't what makes the Combo Touch interesting.

Let's Talk Trackpad

I've heard little good about the [Brydge Pro+ trackpad case](#) from Brydge, which made me a bit nervous about the Logitech Combo Touch, but there was no need to worry. The Combo Touch's trackpad is a bit small, as is the one on the Magic Keyboard, but it's plenty responsive, and all the expected gestures work. I measured it at 3.8 inches (9.5 cm) wide and 2.1 inches (5.4 cm) high.

Unlike [Jason Snell's poor experience with the Brydge Pro+](#), using the Combo Touch trackpad is as smooth and precise as the Magic Trackpad 2 on my iMac. Swipe with two fingers to scroll up and down a Web page, swipe up with four fingers to bring up the app switcher, or swipe left or right with four fingers to switch apps. It's a trackpad that lives up to Apple's high standards.

The Combo Touch's trackpad might be a bit small, but it's just big enough for four-finger gestures with my average-sized hands. If you have [Jack Reacher hands](#), it might be a bit too cramped for you, but if you think the MacBook Pro trackpads are too big, you'll probably love it.

The trackpad functionality does a lot to make the iPad feel like a "real" computer. I'm typing this review while leaning back on the couch, and I hardly have to reach for the screen at all. But when I want to reach out and touch something or scribble with the pencil, I can.

What's funny is, despite my total lack of drawing skills and handwriting that would make a doctor wince, I find myself using the Apple Pencil a lot more with the Combo Touch. Not for drawing or writing but as a pointing stick to tap onscreen elements so I don't have to reach for the screen. Using the Apple Pencil this way feels just as intuitive as

using the trackpad. The Combo Touch makes the whole iPad package really sing, letting me effortlessly mix keyboard, trackpad, touch, and pencil input.

Minor Annoyances

When I sat down to write with my new Combo Touch, I was frustrated by its inability to type an apostrophe. Bizarrely, the double-quote, which is on the same key, worked fine. At least that indicated that it wasn't a hardware issue.

After a bit of research, I learned that this problem has afflicted previous Logitech keyboards as well. The fix is to go to Settings > General > Keyboard > Hardware Keyboard (which appears only if a hardware keyboard is attached) and change English (US) from Automatic to U.S. or your preferred language. Of course, if you are outside the United States or use a different language, those options will be a little different. That fixed it.

With that solved, my only real complaint is that the keyboard's Smart Connector magnetic connection isn't as strong as I'd like. Pick up the whole assembly by the iPad, and the keyboard will fall off. Needless to say, I recommend closing everything up before moving it to avoid potential drops to the floor.

I also find that the pencil loop can get in the way when using the iPad in portrait orientation, and I worry about the loop's long-term durability. But I'm just happy to have a case that keeps the round Apple Pencil from rolling away.

So Good It'll Make You Want an iPad Air

I heartily recommend the Logitech Combo Touch. It will breathe new life into your iPad, and it's so good that it makes Apple's current iPad Air significantly more attractive in comparison with the iPad Pro.

My wife recently decided to replace her nearly decade-old MacBook Pro with an iPad. After just a few minutes with the Combo Touch, she declared that she preferred the Combo Touch and wanted an iPad Air instead of a much more expensive iPad Pro and Magic Keyboard combination. That saved us about \$450. If Apple's plan was to discourage Logitech from making an iPad Pro keyboard in order to sell more Magic Keyboards, it may have backfired.

So now I have not just one, but two Logitech Combo Touch keyboards in the house. 🍷



Big Sur Makes Changes to Many Apple Apps and Basic Features

macOS will have a different overall look and feel in Big Sur (see “[Apple Takes macOS to Big Sur... and to 11](#),” 22 June 2020), but [Apple hasn’t ignored its key apps](#). Maps and Messages get long-overdue overhauls, while Safari adds privacy-reporting features and more locked-down extensions, and Photos and other apps receive minor tweaks. A grab bag of other changes will appear, too, such as facial recognition in the Home app that links the Photos app and home security cameras.

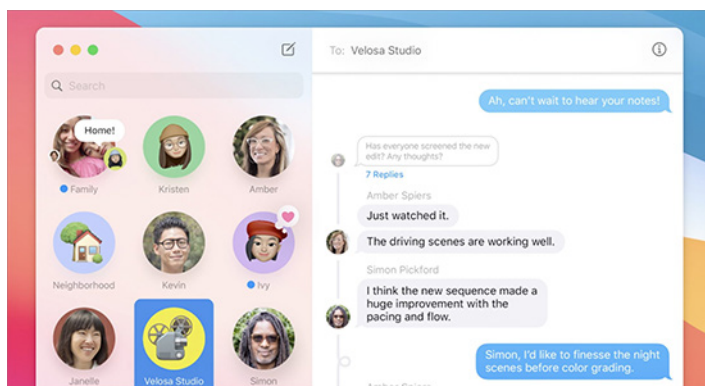
We assume Mail for Big Sur will change somewhat, too, based on details shown for Mail in the iPadOS preview. But Apple didn’t demonstrate Mail for macOS in the keynote or include it in the initial feature list.

Messages

In many ways, Messages hasn’t changed much from its long-ago origins. Apple has tweaked elements and tacked on new features, but Messages remained a list of conversations at left and individual messages at right.

In Big Sur, Messages changes its focus from text messaging to something akin to threaded group-messaging software—it begins to look much more like Slack. You can @mention someone in a group chat to highlight them and set up your own notifications to get alerts only when you’re @mentioned. Replies can be threaded in groups, too. Groups can also get their own avatar, which can be a photo, Memoji, or emoji, and it’s shared across all group members.

Instead of a simple chronologically organized list of conversations at left, you can now pin important conversations at the top—a total of nine that sync across iOS, iPadOS, and macOS. As actions happen in pinned conversations, indicators—including the Tapback reaction icons—appear above the pin. In a group chat, messages since you last checked are indicated by a ring of icons corresponding to other members in that conversation’s list item.



Search has been a wasteland in Messages for a long time, and Apple has brought finding text (including phrases), links, and photos into a more comprehensive and usable set of results.

Messages adds a missing feature by letting you share your name and photo with another party who doesn’t have you listed by your iMessage email or phone number in their contacts. It has always been mystifying to people who receive their first iMessage from you, even an expected one, in that way. You’re given a variety of options to control how you share that information: you can disable it, share it with everyone, or just with people in your contacts (who ostensibly lack you in theirs). You can also choose to push it to another party when you start a conversation or only after they reply to you.

Because Messages is used heavily for social and family purposes, Apple has boosted the fun quotient, trying to meet features found in other popular messaging apps. A sort of “intensity” control lets you can control how “loudly or gently” you send a message to produce a similar effect on the recipient’s side—teens can “slam” a message to their parents, which I am sure will be greatly appreciated. (Insert sarcasm emoticon here.) Apple also lets you add popular images that are trending on social media, something familiar to Twitter and Giphy users. Memoji have become more nuanced, letting you design one that resembles you even more closely than in previous iterations, as well as creating stickers you can share and use. To fight fire with fire, whatever.

Finally, the media picker in macOS in general and Messages in particular has been poor for some time. Apple has enhanced that to make it easier to select recent photos and albums to share in messages.

Maps

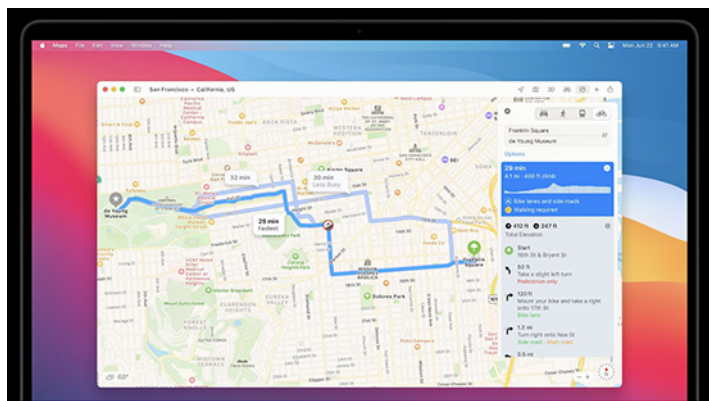
Apple has focused more on improving its Maps app and mapping data in iOS and iPadOS, which makes sense given those devices are mobile. This has left Maps for macOS trailing behind. Big Sur pushes Maps into something closer to parity with its mobile siblings, while adding new features that will be found in all operating systems.

This lets you take better advantage of a large screen for research and previewing. When you go mobile, you can shift routes or details to your mobile device, or pull it up via iCloud syncing.

Many changes relate to planning and visualizing your route or the area you’re heading to before you begin a trip.

Electric-vehicle drivers can plan a route that both includes charging stations and calculates charging time. With iPhone and electric car integration, Maps for macOS can provide more precise information based on current charge and the type of charger used by your car. We're uncertain if this will require dropping tens of thousands of dollars on a new car, as so often seems to be the case with freshly integrated automotive features.

Cyclists get a promotion to first-class citizens, including details of how busy streets are and elevation, necessary calculations for riders. You can transfer planned routes to an iPhone for navigation while riding.



In the future, when we once again travel recreationally, new Apple Guides created by partner travel companies offer shopping, food, cultural, and entertainment suggestions. You can also create your own and share them with people you know. One of the best ways I've found to prep for a trip is to get some ground-level views. For some cities, Apple now offers interactive 3D 360-degree panning around and along city streets.

The new Maps incorporates indoor features, too, so you can figure out where in a mall—to the extent that malls continue to exist—you can find a given store. Apple highlights the issue, too, of figuring out if a restaurant or airport is located before or after security.

As more cities manage traffic with congestion zones, which can limit which cars may drive on certain days or include tolls for entering the zones, Maps now includes them—and lets you route around them where possible. In China, you can enter your license plate number to check if you have access to drive through urban areas that restrict entry. (Apple noted that license plate data is stored securely and only locally within the Maps app.)

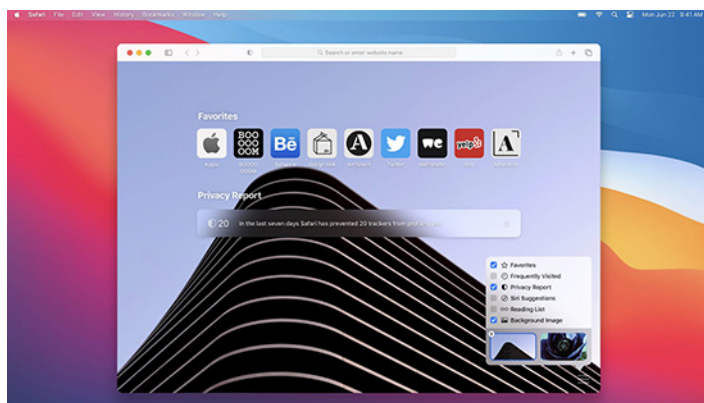
Maps for macOS also gains an iOS 13 feature to share your ETA. You can tell other people when you expect to arrive, and they can receive an updated time and follow your journey with your permission. While you're highly unlikely to lug an active laptop with you while in transit—even tethered via an iPhone or iPad—this addition lets you start sharing from your Mac and then handle location updates from your mobile device.

Safari

Safari has seen more updates than nearly any other Apple app for macOS in recent years, with consistent streams of largely under-the-hood improvements, particularly in restricting unwanted tracking and ad-technology targeting. Big Sur goes deeper on privacy, but adds support for a new category of extensions—or, rather, welcomes them back—and has a number of more modest interface changes, too.

Apple's privacy features in Safari are extensive but largely hidden. A big chunk of my book [Connect and Secure Your iPhone and iPad](#) picks apart all the features and explains how they work, as there's little way to see them in action. With Big Sur, Apple added privacy reports, so you can understand exactly what actions Safari is taking on your behalf.

A general Privacy Report shows the last 30 days of trackers that Safari has blocked with Intelligent Tracking Prevention, which blocks trackers intended to follow you across different Web sites. You can also look at a summary for each site you visit, which lets you understand—and potentially complain about—practices engaged in by the site. Apple notes you can add a Privacy Report as a start page and see it every time you open a new window or tab.



Safari now integrates with a not-yet-disclosed tracking database of password breaches, and it alerts you if any account for which there's a password stored in Safari is connected with data breaches that have become public. Billions of account records have been disclosed in recent years, and many people reuse passwords across accounts, as much as we don't recommend it. Safari includes tools for updating passwords found in breaches. (Apple, like 1Password, may be relying on the massive database run by [Have I Been Pwned](#), an Australia-based effort [operated by a security researcher](#).) The new Safari can also import saved passwords from Chrome, along with bookmarks and your browsing history.

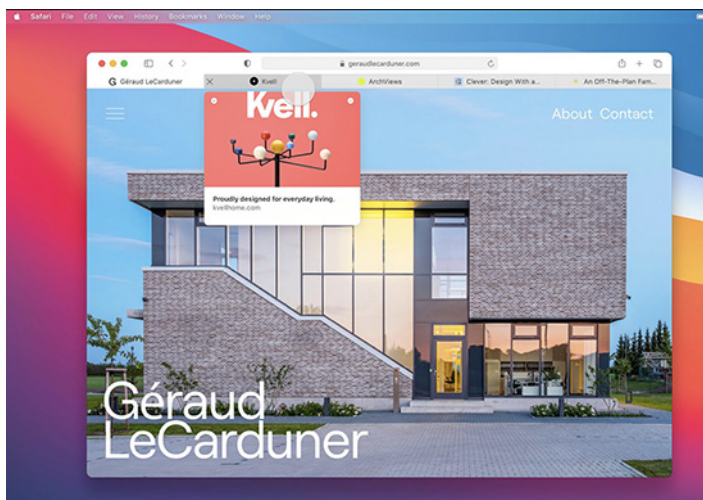
Apple has shifted its approach on third-party extensions to Safari once again in Big Sur. Its first formal system in 2014 relied on JavaScript and Web technologies, making it accessible to a larger group of programmers than those developing Mac apps with Objective C. For security and other reasons, Apple started restricting this approach in 2017 and eliminated it in September 2019 with the release of Safari 13 for old macOS releases, and shipped the next month as part of 10.14 Mojave.

In Big Sur, Web extensions are back—and seemingly far better than before. Apple says it [has adopted common specifications](#) from the three other major browsers—Chrome, Firefox, and Edge—and will offer conversion tools for developers of extensions for those browsers to bring them easily to Safari for macOS. (Safari 14 will also support these extensions in Mojave and earlier compatible macOS releases.)

Apple will continue to support native extensions for Safari and will spotlight them with a separate section on the Mac App Store. Currently, extensions are mixed in with other software, and it can be hard to find them. These native extensions can access more advanced capabilities than Web extensions and, like all App Store items, pass Apple's review process, are cryptographically signed, and are delivered only by Apple.

Instead of allowing extensions to work everywhere by default, Safari in Big Sur adds them to site-specific controls. You can approve extensions to work on a site-by-site basis, like pop-up windows, downloads, and location acquisition. This includes a pop-up menu that explains the access you're granting to an extension, which is currently found only in Safari's site preferences. An extension grant can, like location, be for a day or forever. Access can be revoked through preferences, too. (We haven't seen the precise settings yet, but it's likely you can mark an extension as approved for all sites, too.)

For those of us who like to keep only one Safari window with many dozens of tabs open, Big Sur lets you hover over a Safari tab to see a quick preview of the hidden page. Safari also displays tabs more efficiently, letting you see more at a glance in a single window. Apple promoted in its Big Sur announcement the appearance in tabs of favicons—the tiny icons Web sites show as little logos in the Location field. However, that has been a feature since Mojave, turned off by default. As far as I can tell, it's now just turned on.



Safari also improves performance, with Apple claiming it's now 50% faster at loading pages than Chrome on frequently visited sites. In another dig, Apple says Safari is "optimized specifically for Mac"—as opposed to developed in

cross-platform environments—allowing for substantially less power consumption for video and somewhat less for general Web browsing than Chrome and Firefox.

An interesting new feature available in beta at release lets you translate pages within Safari, instead of visiting a third-party site or copying and pasting text. A translation icon appears for sites that note in their underlying HTML code they're in a language other than the one set for your operating system. Click it to translate into English, Spanish, Chinese, French, German, Russian, or Brazilian Portuguese.

A Potpourri of Improvements to Other Apps

Apple doesn't leave other apps behind, though it's likely the list of apps and changes to them will grow en route to Big Sur's eventual release.

- **Photos:** Those who are hoping for more out of Photos largely want more performance, better search, and a more reliable experience. Apple didn't mention any of that—the proof will be in the picture of the pudding in the release version—but did say that it has tweaked quite a few individual aspects. Photos will receive a bump in its editor for a few image characteristics, but the biggest change is improved retouching, which switches from pure image analysis to machine learning to fix up problems in an image, like dust and scratches. Video editing in Photos lagged behind photo editing, and the latest version adds controls already available for still images. Apple also promises what it calls "easy, fluid navigation" in finding and viewing media across the many different organization methods found in Photos. While it's not a macOS feature, Apple calls out that "captions"—formerly called descriptions—now sync across iCloud Photos to iOS and iPadOS, which can view and add them, too. The Memories feature of Photos, which uses machine learning to make sense of our grouped days and media and runs a soundtrack under them, receives "more relevant" selections of photos and videos and a great variety of music.
- **Apple Arcade and Game Center:** For Apple Arcade subscribers, the service is more deeply integrated with macOS than before. You can view the entire game category and sort and filter it, interact more fully with friends in Game Center, and examine achievements, progress, goals, and milestones. Game Center now includes a dashboard that appears within Arcade games.
- **Music and Podcasts:** The Music app, new in Catalina, has been tweaked in Big Sur to add Listen Now, which centralizes a lot of different features for discovering and listening to music and interviews in one place. Apple says search has been upgraded to provide more custom results based on what you listen to. A similar feature added to Podcasts also helps advise you on what to play next and discover episodes you haven't heard from podcasts you

already follow. Podcasts also gains editorial suggestions.

- **Reminders:** You can now assign reminders to people, get smart suggestions based on previous reminders for where and when a reminder should get tackled, use emoji and other symbols in your lists, pull in suggestions from Mail, and organize smart lists. Apple has also improved searching here as elsewhere in Big Sur.
- **Voice Memos and Notes:** Voice Memos was more of an application stub in Catalina, and in Big Sur, it grows up. You can mark favorites, organize recordings into static and smart folders, and reduce echoes and noise with a click. Notes similarly gets a few improvements, producing better search results, making it easier to format text quickly, and improving scans when you use Continuity to access an iPad or iPhone.
- **FaceTime:** In a nod to the hearing-impaired community, FaceTime will recognize when a participant is using sign language in a Group FaceTime call and make that person's rectangle larger.
- **Weather:** We see the fruits of Apple's acquisition of machine-learning weather forecasting company Dark Sky with the addition of predictions of rain and snow in the next hour (only in the US). The Weather widget will now also suggest if conditions in the next day will become warmer, colder, or wetter. Severe weather alerts have been added for the US, Europe, Japan, Canada, and Australia.
- **Spotlight:** Spotlight is a much-loved, often-maligned feature, as it's invaluable to search all text, files, folders, and other matter across your drives and bring in external information about weather, sports, general knowledge, and more. But it's often sluggish, and results sometimes feel arbitrarily presented. Apple promises Big Sur's Spotlight is "faster than ever" and streamlines the list of results you see. You can now also use Quick Look within Spotlight, letting you preview the contents of files and manage some aspects of PDFs—including signing them! Spotlight is now the default search technology in Safari, Pages, Keynote, and other apps.
- **Home and HomeKit:** The Home app sees the light with adaptive controls for light bulbs that can use different colors across the day, letting it automatically adjust the color temperature throughout the day—like Night Shift for smart bulbs. Home also lets you match people you've identified in Photos with recognition from video captures by compatible home security cameras and doorbell cams. Cameras that work with HomeKit Secure Video can also now set specific activity zones for notifications or video

capture within the full camera view. Finally, Apple has reorganized Home to provide a graphical dashboard at the top of alerts and status changes.

A Grab Bag of Other Big Sur Changes

Finally, Big Sur brings a big box of miscellaneous enhancements.

- **Privacy:** Apple always likes to stress privacy improvements. The Mac App Store will require developers to provide details on their apps' privacy practices and will display those details in a standard fashion before you purchase, just as the App Store will in iOS 14. Apple relies on self-reported practices from the developers, and we'll see how well Apple can enforce them—and whether we will ignore them quickly, just as almost no one reads a whole EULA before agreeing to a software license.
- **Battery Health:** Apple calls out Optimized Battery Charging for Big Sur, but the feature first appeared in 10.15.5 Catalina (see "[macOS 10.15.5 Update Adds Battery Health Management](#)," 26 May 2020). It's still a great feature: it matches charging to your usage patterns to reduce battery wear that occurs when charging a battery to full capacity whenever it's plugged in.
- **Faster updates:** Big Sur handles software updates largely in the background before a restart, requiring less time to complete. It can manage this by cryptographically signing the system volume, a step up from the read-only separation of system and user data that appeared in Catalina. The digital signature allows the updater to be certain that files exist precisely in the expected location, allowing them to be effectively updated in place while the current system continues to run and be usable. This should reduce the time noticeably that you watch the long progress bar showing a system update.
- **AirPods device detection:** Apple has significantly improved the ability of the AirPods and AirPods Pro to switch automatically across all your devices linked to the same iCloud account. The same is true for all Apple and Beats headphones with the H1 chip. A pop-up banner in Big Sur will show which device is streaming audio to the AirPods.
- **Siri:** Apple claims that Siri has become smarter, able to answer a wider variety of broad questions instead of what seems to be a limited set of specific ones. Apple suggests that Siri can now answer, "How do hybrid cars work?" and "What causes seasons?" We'd settle for Siri just working reliably.
- **Subscriptions and Family Sharing:** You can now share third-party app subscriptions in all App Stores with Family Sharing. Previously, Apple only allowed purchases to be shared from apps that participated—which is most apps—while excluding subscriptions

and in-app purchases. That was particularly awkward, given that Apple encouraged developers to focus more heavily on recurring subscription revenue instead of a one-time app purchase price.

Apple says Big Sur will ship “this fall,” with a public beta to come in July 2020. We’re betting on the usual September or October date, and we sincerely hope that Apple has resolved its quality control issues from Catalina (see [“Six Reasons Why iOS 13 and Catalina Are So Buggy,”](#) 21 October 2019). 🐛

By Glenn Fleishman

What the HEIC? Apple’s Highly Compressed Image Format Still Confuses

To store more photos and videos on a mobile device, you can either buy more storage or increase image compression. Apple has enabled both paths. It expanded maximum storage so that a 256 GB iPhone isn’t ludicrously expensive. But that gets you only part of the way there.

In 2017, Apple added support for successors to JPEG for images and H.264 for video:

HEIF (High Efficiency Image File Format) is a container format that allows extensive metadata, still images, and sequences (like bursts or Live Photos) to co-exist in a single file.

HEVC (High Efficiency Video Coding), also known as H.265, can encode video using 40–50% less data than H.264 while maintaining the same quality.

(For the technical nitty-gritty, read [“HEVC and HEIF Will Make Video and Photos More Efficient,”](#) 30 June 2017.)

Despite all of this happening nearly three years ago, we at TidBITS found ourselves scratching our heads recently about HEIF and HEVC. While Apple uses those terms, files created using those schemes are stored, respectively, with the filename extensions .heic and .mov. (This came up because of the College Board mishandling iPhone images. See [“Take a HEIC: Make Sure AP and Other Test Uploads Work from Your iPhone and iPad,”](#) 21 May 2020.)

The former, HEIC, apparently stands for High Efficiency Image Container—more on that in a moment. The latter is potentially even more confusing since MOV files have been around for decades. MOV is a video container format that can hold media encoded in many different ways, including HEVC.

Apple discusses HEIF and HEVC in various places, including in Settings > Camera > Formats, where you choose between High Efficiency for the newer formats and Most Compatible for JPEG and H.264—though H.264 is also stored in a MOV container. But the company doesn’t mention HEIC or the use of MOV for storing HEVC—even on the page on [which it explains HEIF and HEVC](#).

Since we couldn’t easily sort it out despite the fact that we live and breathe this kind of thing, we spent some time teasing it all apart for you.

HEVC

H.265, which is just another name for HEVC, provides substantial improvements in compression by being more clever and versatile in analyzing individual frames of video and then equally smart in storing differences between adjacent frames. HEVC can compress still images or sequences of video.

HEIF

HEIF is a container format developed by the Moving Picture Experts Group, which has created many licensed audio and video formats. HEIF is used for still images. It supports an image stored by itself, potentially with added modification layers from an image-editing program, alpha masking, and depth layers. It also allows for multiple images stored as a sequence (such as a burst mode) or to enable simple animation (as with Live Photos).

You can think of a container format as a sort of folder within a file. Older image formats like GIF, JPEG, PNG, and TIFF pack metadata into the image file, usually at the start. A long-ago change to GIF allowed the integral storage of multiple frames for animations, and TIFF can support multiple pages in a single file. But each of these options requires, in effect, unpacking the entire file. Because HEIF is a container, each discrete image or sequence has its own file within the container, and metadata is stored in separate files as well. It’s a more robust, more compatible way to ensure files can be read across systems, even far into the future.

HEIC



An HEIC file is one specific way to use HEIF, in which the HEIF container relies only on HEVC to encode images. Other operating systems, camera software, and image-editing apps may produce or support variations on HEIF, like AVCI, which uses the AVC (Advanced Video Coding) encoder to store data within HEIF.

With iCloud Photos enabled, you can see the .heic extension on images synced from an iPhone to Photos for macOS. iOS is careful about exporting, however, so your HEIC files may be converted to a JPEG image (for still images) or a JPEG and an H.264 MOV file (for Live Photos) if iOS thinks the receiving device can't display HEIC.

MOV

HEVC videos are packaged inside MOV containers. Without inspecting them further, there's no way to know whether or not they contain H.265 data—which requires iOS 11 or later or macOS 10.13 High Sierra or later—or whether they contain H.264-encoded video that will play on older devices. As with HEIC, iOS may export an H.264-encoded MOV file unless it can determine the destination can read HEVC/H.265.

You can check a MOV's internal encoding formats by opening it in QuickTime Player in macOS and choosing Window > Show Movie Inspector. Under Format, the inspector will display the encoding video and audio formats, as well as dimensions and other details.



I hope that clears things up, at least a little. In short, HEIC is Apple's flavor of HEIF that relies solely on HEVC for compression for still images. For HEVC-compressed video, Apple continues to use MOV containers. 🐼

Rumors and Reality

One more thing to worry about: It is possible to change the firmware on fast chargers. As it happens, the charger needs to know how much battery charge is left, what the temperature is, and what voltage is being applied to the actual charging circuit inside the phone. The charger has a microprocessor and firmware that can collect this information from the phone through the cable. It is possible to update the charger's firmware through the USB port. And thereby causing the firmware to

send way too much voltage to your phone. You will know that you have been attacked when your phone starts popping and burning.

1) Never install apps from shady sources, 2) let Google or another malware scanner do its thing, and 3) accept updates as soon as they are available.

Or maybe just don't use fast chargers — [they are hard on your phone.](#) 🐼

