KEYSTONE MacCentral

printout

We're on summer break
until September

Just hanging out...

Meet us at

Bethany Village Retirement Center
Education Room
5225 Wilson Lane, Mechanicsburg, PA 17055

Tuesday, September 17th 2019 6:30 p.m.

Attendance is free and open to all interested persons.

Contents

Keystone MacCentral Essentials

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

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by Chris Zacharias

A Conspiracy To Kill IE6

The bittersweet consequence of YouTube's incredible growth is that so many stories will be lost underneath all of the layers of new paint. This is why I wanted to tell the story of how, ten years ago, a small team of web developers conspired to kill IE6 from inside YouTube and got away with it.

I do not recall the exact triggering event that led to our web development team laying out plans to kill IE6 over lunch in the YouTube cafeteria. Perhaps it was the time I pushed out a CSS stylesheet that included an attribute selector on a semi-supported HTML element. Any reasonable web developer would expect this to be ignored by browsers not up to the task. This was not the case with older flavors of IE. Under very specific conditions, an attribute selector on an unsupported HTML element in IE would create an internal recursion that would at best, cause the browser to crash and at worst, trigger a blue screen of death. Or perhaps it was the hundredth time one of our software engineers had innocently pushed out an <img> tag with an empty src attribute. Nobody joining the team could be expected to know that in early versions of IE, the browser would load the root path "/" for empty src attributes. The <img> tag would suddenly behave like an <iframe>, loading our homepage and all of its dependent resources in what could become an exponentially expanding recursive loop. Whenever an empty image tag found its way on to the homepage, it was all-hands-on-deck emergency to locate and replace the offending code before we melted our servers into paperweights.

Regardless of whatever the event at that time was, it had been brutal and it had been IE6 related. IE6 had been the bane of our web development team's existence. At least one to two weeks every major sprint cycle had to be dedicated to fixing new UI that was breaking in IE6. Despite this pain, we were told we had to continue supporting IE6 because our users might be unable to upgrade or might be working at companies that were locked in. IE6 users represented around 18% of our user base at that point. We understood that we could not just drop support for it. However, sitting in that cafeteria, having only slept about a few hours each in the previous days, our compassion for these users had completely eroded away. We began collectively fantasizing about how we could exact our revenge on IE6. One idea rose to the surface that quickly captured everyone's attention. Instead of outright dropping IE6 support, what if we just threatened to? How would users react? Would they revolt against YouTube? Would they mail death threats to our team like had happened in the past? Or would they suddenly become loud advocates of modern browsers? We openly daydreamed about cubicle workers around the world suddenly inventing creative "business" reasons for needing upgraded browsers. Grandparents would hold

their technically savvy grand-kids hostage, demanding they fix their "YouTubes". What had begun as a team therapy session started to materialize into an actual plan, a plan we quickly realized we were uniquely positioned to execute on.

The plan was very simple. We would put a small banner above the video player that would only show up for IE6 users. It would read "We will be phasing out support for your browser soon. Please upgrade to one of these more modern browsers." Next to the text would be links to the current versions of the major browsers, including Chrome, Firefox, IE8 and eventually, Opera. The text was intentionally vague and the timeline left completely undefined. We hoped that it was threatening enough to motivate end users to upgrade without forcing us to commit to any actual deprecation plan. Users would have the ability to close out this warning if they wanted to ignore it or deal with it later. The code was designed to be as subtle as possible so that it would not catch the attention of anyone monitoring our checkins. Nobody except the web development team used IE6 with any real regularity, so we knew it was unlikely anyone would notice our banner appear in the staging environment. We even delayed having the text translated for international users so that a translator asking for additional context could not inadvertently surface what we were doing. Next, we just needed a way to slip the code into production without anyone catching on.
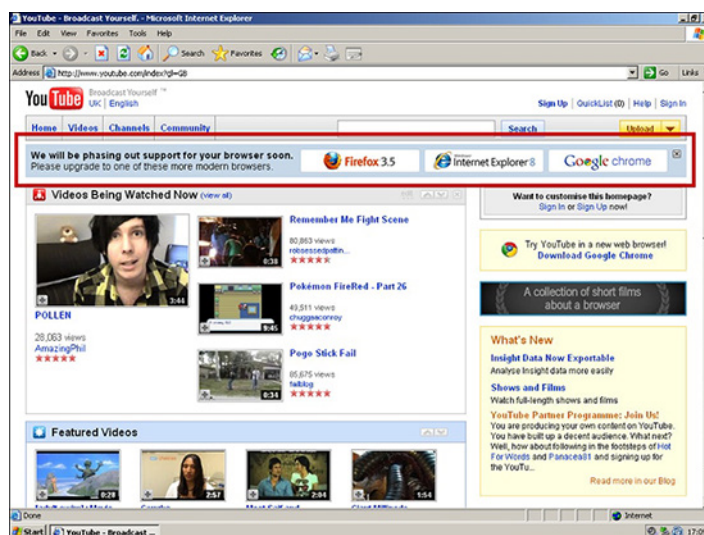
The IE6 Deprecation Banner on YouTube in 2009

It turned out that a handful of us had entered YouTube at an interesting time… several months after YouTube had been acquired by Google but before Google had begun deeply integrating YouTube into their larger organization. The early YouTube engineers were rightfully territorial and initially hesitant to adapt to Google's infrastructure and

norms. With their penchants for gray-hat hacking, fast cars, and hard whiskey and an uncommon number of piercings, tattoos, and minor arrest records, many had been rejected during previous Google interviews. Ending up at YouTube instead, they found themselves breaking their backs to stay ahead of exponentially growing traffic while having to constantly defend against critics explaining how Google Video would imminently kill them. By the time they were acquired into Google, many of these engineers had come to view their outcast identity as a critical component of their eventual success.

To cement their authority over the YouTube codebase during the integration into Google, the early engineers created a specialized permission set called "OldTuber". OldTuber granted you the ability to completely bypass the new Google-oriented code enforcement policies, enabling anyone holding it to commit code directly to the YouTube codebase, with only the most glancing of code reviews from anyone. No need for code readability. No need for exhaustive tests. No need for maintaining code coverage. If you broke the site by improperly wielding OldTuber status, it was on your head and you would lose the privilege immediately, if not your job. So you just had to be a good citizen and never break the site. Our boss, an early YouTube engineer himself, had gone out of his way to ingratiate the web development team with the rest of the early YouTube engineers. Through his efforts, a couple of us eventually found ourselves in possession of OldTuber status, despite never having been a part of the original team. It was like we were just walking down the street when someone mistook us for valets and handed us the keys to their Ferrari. For better or for worse, we were not exactly the types to just hand the keys back and walk away. We saw an opportunity in front of us to permanently cripple IE6 that we might never get again. If this went at all wrong, a number of us would surely be fired. Our most renegade web developer, an otherwise soft-spoken Croatian guy, insisted on checking in the code under his name, as a badge of personal honor, and the rest of us leveraged our OldTuber status to approve the code review. The code merged into production and our banner went live a few days later.

The first person to come by our desks was the PR team lead. He was a smart, dapper man who was always bubbling with energy and enthusiasm. Except this time. This time he was uncharacteristically prickly. He had come in on an otherwise normal day to find email from every major tech news publication asking why the second largest website on the planet was threatening to cut off access to nearly a fifth of its user base. Fortunately for us, the publications had already settled on a narrative that this was a major benefit to the Internet. By their call, YouTube was leading the charge towards making the web a faster, safer experience for all of its users. The entire PR team had Macs running Chrome and could not even see what we had done, let alone issue comments to the press on any of it. They were caught completely unaware. We eagerly told them everything about what we had launched and helped them craft the necessary talking points to expand on the

narrative already established by the media. Satisfied that he could get back in front of the story, the PR team lead turned and warned us to never do anything like this without telling him first. He did not want to let great public relations opportunities like this slip by ever again.

Next came the lawyers. Two senior lawyers sprinted over to our desks in a state of buttoned-down panic. They immediately demanded that we remove the banner. We explained how we would need the SREs to do an emergency push and that it would take at least a few hours to do. Frustrated, one of the lawyers asked "Why did you have to put Chrome first?" Confused, I explained that we did not give any priority to Chrome. Our boss, in on the conspiracy with us, had thoughtfully recommended that we randomize the order of the browsers listed and then cookie the random seed for each visitor so that the UI would not jump around between pages, which we had done. As luck would have it, these two lawyers still used IE6 to access certain legacy systems and had both ended up with random seeds that placed Chrome in the first position. Their fear was that by showing preferential treatment to Chrome, we might prick the ears of European regulators already on the lookout for any anti-competitive behavior. While the lawyers conceded that nothing we had done would have likely risen to that level of offense, it had happened on their watch and they did not appreciate that. I repeatedly cleared the cookies in my copy of IE6 and showed the browsers reshuffling with each refresh. Content with the demonstration, the lawyers quickly retreated back to their desks without any further concerns.

I expected the next people to be the engineering managers and that they would be the angriest given how clearly we had abused our OldTuber status. Suspiciously, nobody came by that day. The next day, a handful of engineers stopped by to congratulate us on the launch of the banner after reading articles around the Internet, but that was it. I asked my boss if he was getting any blowback and he shrugged, indicating that nobody had pulled him aside yet. It seemed that for the moment we were in the clear. Surprised and unable to make sense of this, I probed one of the managers about what he thought about the banner launching. He responded "Oh, I just figured you guys copied the banner that Google Docs had put up." I was confused. How could Google Docs have beaten us to the punch on this? I opened up Google Docs in IE6 and sure enough, a banner very much like ours was showing at the top. It implored their users to upgrade to avoid breaking features in terms similarly vague to ours.

I had met a few engineers on the Google Docs team while working on some shared Javascript libraries. I reached out to one and asked how they had arrived at the decision to launch their own banner. He explained to me that they had been wanting to deprecate IE6 support for a long time but their managers would not let them for the same reasons we had always heard. One of their engineers testing in IE6 had noticed the YouTube banner pretty shortly after it went live and immediately took it to their manager as evidence as to why they should do the same. Shortly thereafter, the Google

Docs engineers whipped up their own IE6 banner and pushed it into production, presumably under the mistaken assumption that we had done our diligence and had received all of the necessary approvals. The first time many Googlers heard chatter about IE6 banners was from email threads where other teams had begun asking if they could deprecate IE6 like Google Docs had. Luck would have it that this had included many of our managers. Amazingly, we had somehow bypassed detection as the originators of the IE6 banner inside of Google.

Eventually the YouTube engineering management did ask themselves how the decision to deprecate IE6 was ultimately made, given it happened so quickly and seemed conspicuously premature for a media site of our scale and with such a wide user base. Once they realized what had happened, they cornered our boss for details, grappled with the consequences of our actions and begrudgingly arrived at the conclusion that the ends had justified the means.

Between YouTube, Google Docs, and several other Google properties posting IE6 banners, Google had given permission to every other site on the web to add their own. IE6 banners suddenly started appearing everywhere. Within one month, our YouTube IE6 user base was cut in half and over 10% of global IE6 traffic had dropped off while all other browsers increased in corresponding amounts. The results were better than our web development team had ever intended.

We somehow got away with our plan to kill IE6 without facing any meaningful corrective action. Few people even knew we were involved at all and those that did, did not want to bring attention to it or risk encouraging similar behavior. At a beer garden in San Francisco, our boss, winking his hardest, made us swear to never do anything like this again. We agreed, toasted IE6 falling into single digit percentages, and never snuck anything into production again. ♻

by Josh Centers

Apple Announces iOS 13 and Breaks Out iPadOS

As expected, Apple announced iOS 13 (there's no room for superstition in Cupertino) at today's WWDC keynote, but the surprise was the announcement of iPadOS (no version number yet). iPadOS isn't quite the radical rethink that the new name might indicate, but it is a reflection of how the iPhone and iPad have been moving in different directions.

The two might split further apart in the future, but for now, iPadOS is basically a superset of iOS 13, enjoying iOS 13 benefits such as 30% faster Face ID recognition, 50% smaller app downloads with 60% smaller updates, and app launches that are up to twice as fast. However, unlike iOS 12, iOS 13 isn't primarily a performance update.

Here are some of the new goodies coming later this year.

Dark Mode

Taking a page from macOS 10.14 Mojave, iOS 13 will be gaining Dark Mode despite the productivity hit it can engender — see "The Dark Side of Dark Mode" (31 May 2019). Although Dark Mode is iOS 13's marquee feature, there isn't much to say: it makes apps dark, at least Apple's built-in ones. Third-party developers will surely spend the summer adding support to their apps. You'll be able to turn it on manually in Control Center or set it to turn on automatically at night.

Dark Mode may be more controversial on the Mac, but in iOS, it will be welcome to those who use iOS devices in dark rooms. It should also offer some battery life benefits on OLED-based iPhones like the iPhone X.

Reminders

The Reminders app has always been frustratingly weak, so it's exciting that Apple is overhauling the app. Apple was light on details, but the screenshots look cool, assuming you can read them in Dark Mode.
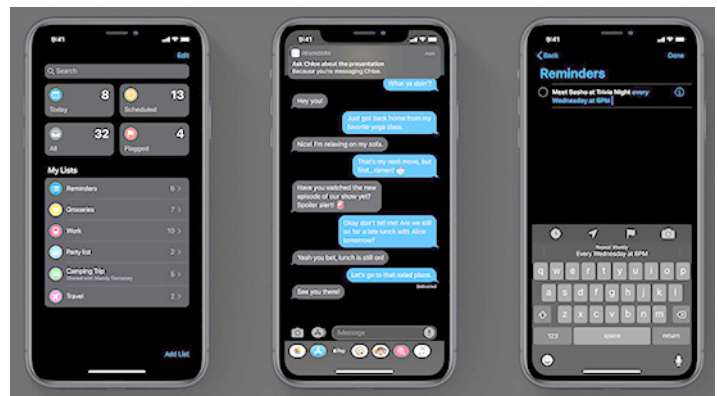
One thing Apple is promising is that the new Reminders app better integrates with other system apps like Calendar and Messages. For example, you can tag a contact in a Reminder and you'll be notified of that reminder when in an iMessage conversation with them.

A new QuickType toolbar above the keyboard lets you add times, dates, locations, and even photos and scanned

documents to reminders. And machine learning will supposedly help organize your lists intelligently, though we'd settle for simple sorting (see "Bad Apple #4: Reminders Stinks at Sorting," 3 May 2019).

Maps

Apple is rebuilding its Maps app and underlying database from the ground up in its attempt to catch up with Google Maps. The company has sent cars to drive more than 4 million miles around the United States, an effort it hopes to complete by the end of 2019, with select other countries being completed in 2020. The new maps are significantly more detailed, and we hope that carries over to more reliable navigation.
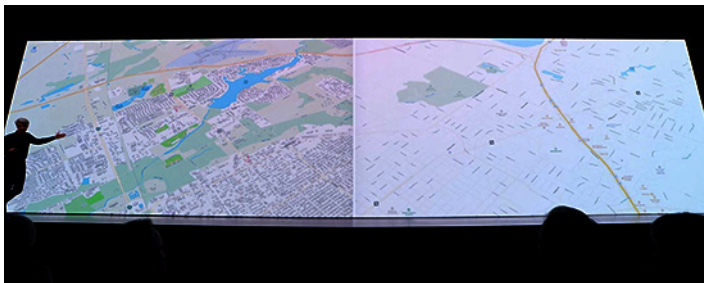

Part of Apple's remapping effort is a "new" feature called Look Around, which presents a street-level photographic view of map locations — just don't call it Street View. As you'd expect from Apple, Look Around seems to work more smoothly than Google's Street View.
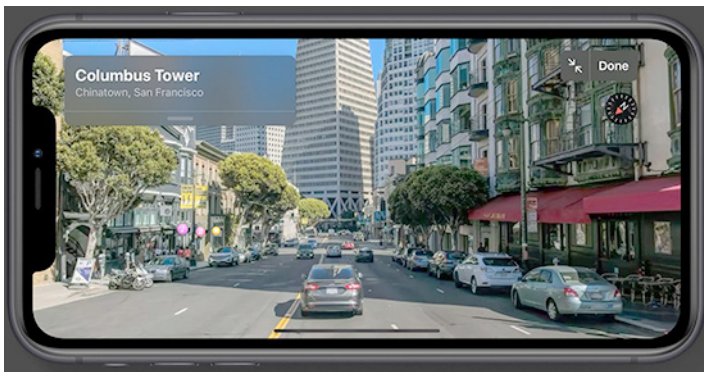
Maps offers app-level improvements as well. Favorites are available when you tap the Search bar, making them easier to find. You can also corral favorites into collections, which you can then share with friends. Apple also mentioned a new feature that lets you share an updated ETA while en route to a destination.

Camera and Photos

Many of us don't look at old photos because it's an overwhelming task. Apple tried to address this with Memories, but we doubt they were as helpful as Apple hoped. Now Apple has borrowed a page from Google Photos and, instead of just dumping a grid of photos in your lap, Photos intelligently organizes them into collections based on days, months, and years. Machine learning also helps remove duplicates and clutter, and highlight your best shots.
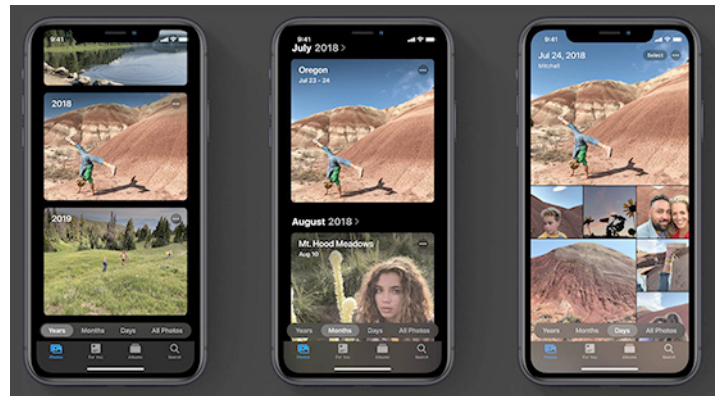
The photo editor has been redesigned to give you tap-and-drag access to all effects, including many new ones. And — finally! — all photo editing options are available with videos as well, including cropping and rotation, so you can fix videos accidentally taken in the wrong orientation without resorting to iMovie on the Mac.

Finally, the Camera app offers a few Portrait Mode tweaks, including a new high-key mono effect and a way to adjust portrait lighting.

Privacy Features

One of the major announcements from the keynote was the new Sign In with Apple feature, which will compete with single-sign-on solutions from Facebook and Google. The concept is simple: you can log into an app with the device's associated Apple ID, but unlike Facebook and Google, Apple will not share your personal information unless you explicitly allow it. In fact, Apple lets you create a temporary, anonymous email address just for that app. The only question is if developers will choose to use it, and it seems like Apple won't give them a choice. It wasn't clear if Sign In with Apple might also become available for Web sites, where it would be even more welcome.

iOS 13 will also offer improvements with respect to location tracking. You'll be able to let an app view your location just once, you'll receive alerts about apps tracking your location, and Apple is even limiting access to Wi-Fi and Bluetooth data so developers can't infer your location using those technologies.

Other Stuff

iOS 13 is bringing a bunch of other miscellaneous features as well. Here are a few of them:

New Share sheet: Apple has overhauled the Share sheet, adding new features like suggested sharing options.

Mail: For the first time, Mail in iOS offers "desktop class" text formatting, with options for things like font size, style, color, alignment, and lists.

Notes: The Notes app at long last offers shared folders, as well as a gallery view for your notes.

Files: The Files app will support connections to SMB file servers, iCloud Drive folder sharing, and external drives like SD cards and thumb drives.

HomeKit: HomeKit-enabled cameras from Arlo and Logitech will support Apple's new HomeKit Secure Video, which will securely store video in iCloud instead of on third-party servers. Apple is also partnering with router manufacturers Eero, Linksys, and Spectrum to firewall individual HomeKit devices on a network.

AirPods: AirPods gain two neat new features: Siri can automatically read incoming messages through them, and you can pair two sets of AirPods to one iPhone, a feature called Shared Listening.

Keyboard: The built-in keyboard now supports swipe-to-type functionality, which Apple is calling QuickPath.

Text editing: iOS 13 overhauls text manipulation. You can drag a cursor directly to where you want it. You can also drag your finger over text to select it. A double tap selects a word, a triple-tap selects a sentence, and four taps select a paragraph. Pinch up with three fingers to copy, pinch up with three fingers twice to cut, or pinch down with three fingers to paste.

Find My: Find My Friends and Find My iPhone are being combined into a single app that displays the location of your people and devices.

Gaming: Like tvOS 13, iOS 13 supports Xbox One S and PlayStation 4 controllers!

iPadOS

So what is iPadOS? It's essentially iOS 13, with special iPad-specific tweaks that optimize the experience so that the iPad isn't just a "big iPhone." Here are some of the features that set iPadOS apart from iOS 13:

Home screen: The iPadOS Home Screen is better optimized for the iPad. You can fit more icons on the screen, and you can pin Today View widgets on the Home screen.

Safari: Perhaps the most important iPadOS feature is a desktop-class Safari, which Apple claims will support complex Web apps like Google Docs, Squarespace, and WordPress. It also features a download manager that lets you download files directly into the Files app.

Multitasking: Apple extended iOS 12's current multitasking features so you can switch between multiple apps in Slide Over, work with the same app in Split View, and use App Expose to navigate among your app combinations.

Keyboard: iPadOS gives you the option of using a one-handed keyboard (about the size of the iPhone's keyboard) that you can drag around the screen.

Font management: iPadOS offers full-featured font management. You will be able to obtain new fonts from the App Store.

Supported Devices and Availability

Unfortunately, iOS 13 and iPadOS do not run on all the devices that support iOS 12. On the iPhone side, the iPhone 5s, iPhone 6, and iPhone 6 Plus have all been dropped, leaving the iPhone 6s, iPhone 6s Plus, and iPhone SE as the oldest iPhones supported Similarly, the only iPod touch that can run iOS 13 will be the recently released seventh-generation model.

As for iPads, the original iPad Air, iPad mini 2, and iPad mini 3 have been abandoned, leaving the following models capable of running iPadOS:

All iPad Pro models

iPad (5th and 6th generation)

iPad mini 4 and iPad mini (5th generation)

iPad Air 2 and iPad Air (3rd generation)

Apple said that betas of iOS 13 and iPadOS would be available to developers immediately, and we anticipate public betas in July. The final release will likely coincide with Apple's usual announcement of new iPhones in September. ✧

by Adam Engst

No Mac Is an Island
with macOS Catalina

Let's face it. Macs users are adrift in a sea of iOS devices. Waves of iPhones and iPads break around us, and even an occasional iPod touch floats by. So it shouldn't be at all surprising that the forthcoming macOS 10.15 Catalina focuses on changes that bring the Mac and iOS closer than ever before.

That's not to say that Apple is trying to replace the Mac with iOS or remove those unique capabilities of the Mac that make it special. The Mac and macOS remain first-class, vibrant Apple hardware and software platforms. But what we're not going to see, at least from Apple, are new technologies that set the Mac further apart from its iOS brethren. When it comes to operating systems, it's safe to say that it's one for all, and all for Apple.

In the Worldwide Developer Conference keynote, Apple's Craig Federighi whipped through the major changes, most of which revolved around individual apps. Unsurprisingly, those changes largely reflect or are matched by similar changes in the iOS versions, but there were Mac-specific enhancements as well.

Ding, Dong, iTunes Is Dead

Federighi had a fabulous riff where he discussed all the features Apple was planning to add to iTunes — Calendar! Mail! A dock!—before acknowledging that iTunes is dead, Jim. (Cue the music from the Wizard of Oz.) Or rather, it's dead on the Mac — iTunes will continue to exist, zombie-like, for Windows.

Instead, to match iOS, Apple has split the iTunes feature set into three new apps, called Music, Apple Podcasts, and Apple TV. (In fact, Federighi called Music "Apple Music," but Apple's preview page for Catalina calls it just "Music," which is good since otherwise we'd be talking about subscribing to Apple Music in Apple Music.)
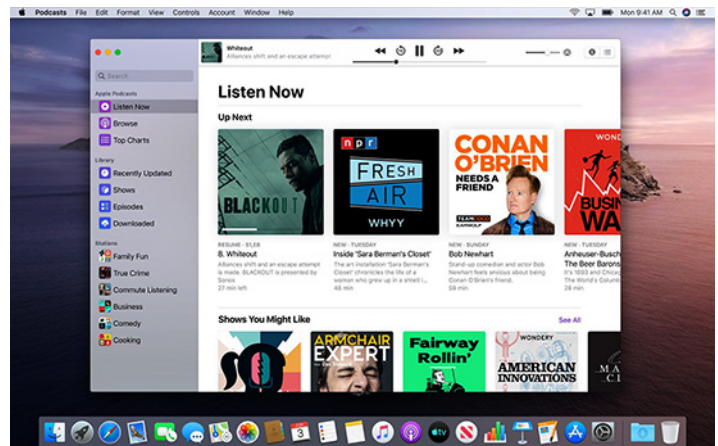
As far as we could tell from the quick presentation, the three apps are similar to their iOS counterparts, although Federighi did say the Apple TV app on the Mac would support 4K HDR video with HDR10 and Dolby Vision and Atmos on sufficiently capable Macs. One new feature — albeit one that extends to the iOS and tvOS versions as well—the Music app's player can show lyrics in real time as music plays.

What about the syncing features of iTunes? macOS Catalina builds them into the Finder. Attach an iOS device to a Mac and it appears in a Finder window's sidebar. Select it and what looks like the standard iTunes sync settings screen appears in the window. You won't get syncing or management of iOS apps, but you'll be able to back up, update, and restore devices from the Mac.

In the "one more new app" category unrelated to iTunes (and again mirrored in iOS), a new Find My app combines the capabilities of Find My iPhone and Find My Friends to display the location of both devices and people. Location-based notifications can now be scheduled for different days of the week and provide more useful place names. Most interestingly, a missing Mac that's asleep can still report its location via Bluetooth (in a completely encrypted, anonymous way) to nearby Apple devices.

App Enhancements

Catalina brings enhancements — some significant, some not — to many of Apple's included apps. Again, for the most part, these changes also exist in the iOS versions.

Photos

Apple continues to tinker with Photos, this time trying a new browsing experience with a lot of machine-learning underpinnings. Previews are now larger to help you distinguish between shots, Photos learns who is in your photos to highlight important shots, and new Day, Month, and Year views summarize what you've done in those time frames by eliminating similar pictures and focusing on key images.
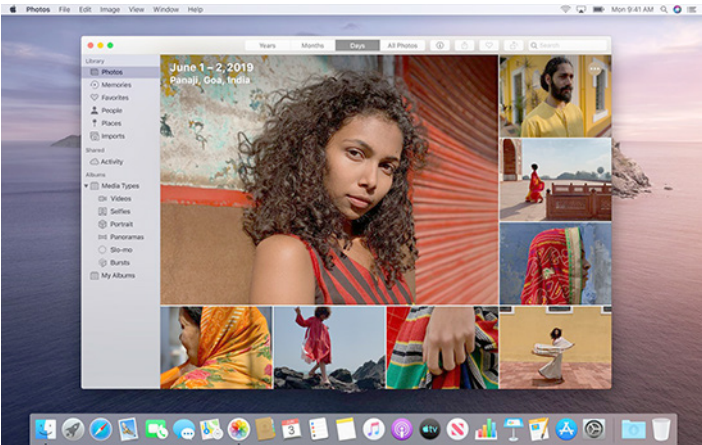
Live Photos and videos now begin playing as you scroll, making them easier to identify and bringing your library to life. You'll also be able to view Memory movies on your Mac and edit the duration, mood, and title—your edits will sync to other devices if you use iCloud Photos.

Reminders

We've criticized Reminders a number of times (see "Bad Apple #3: Reminders Doesn't Listen to Siri," 6 April 2018, and "Bad Apple #4: Reminders Stinks at Sorting," 3 May 2019) and while it remains to be seen if Apple has addressed those issues specifically, the company has significantly updated the app. A few of the main changes include:

Adding times, dates, and locations no longer requires opening another screen.

You can add attachments such as photos, documents, scans, and Web links.

Smart lists automatically organize upcoming reminders from different lists into categories like Today, Flagged, and Scheduled.

Siri can now suggest reminders when you're making plans in a Messages conversation, and if you tag someone in a reminder, the next time you chat with them in Messages, the reminder will alert you.

You can group multiple lists and capture tasks that are associated with a top-level reminder

For added visual interest, you can customize lists with 12 colors and 60 symbols.
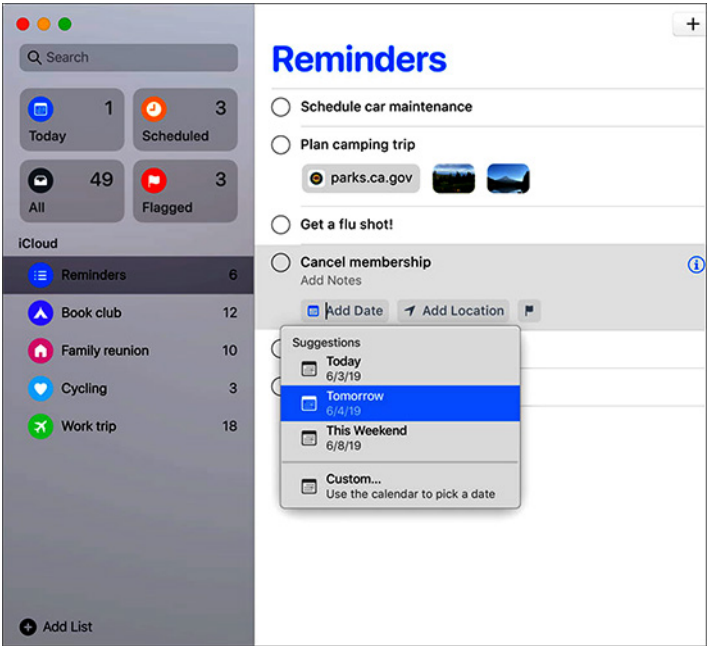
Notes

Apple's Notes app will feature a new gallery view that displays notes as thumbnails, which could help if your notes are largely graphical. It also offers new checklist options that make it easier to reorder checklist items and reuse checklists without having to uncheck each item individually.

Sharing in Notes will improve as well, with a view-only option that lets you share items so everyone else can see what you do without being able to make changes. And

if you do a lot of sharing, you can share entire folders rather than just individual notes, either with full access or view-only permissions.

Safari

Not much has changed in Safari, but Catalina brings an updated start page, makes it easier to enable Picture in Picture, warns you about weak passwords, and directs you to open tabs that match the URL of a site that you're typing.

Mail

As with Safari, Mail's changes are fairly minor. It will be able to block all messages from specified senders and move their messages to the trash. Or, if that's too extreme, you can mute threads that are being overly active. Finally, mailing list messages will get an Unsubscribe link above the header.

Screen Time

Another technology that Apple is bringing from iOS to macOS with Catalina is Screen Time, which tracks and reports on your usage, and lets you set usage limits. It's a welcome move since parental controls in macOS had been ignored for years. Screen Time on the Mac will provide the same set of Downtime and App Limits as in iOS, and if you use iCloud, it will sync the same settings across all your devices. A feature that seems to be new is the concept of "combined limits" that bring together a combination of app categories, specific apps, and Web sites.

Parents will appreciate Screen Time's new capability to manage contacts and set communication limits, and if you have Family Sharing turned on, you'll be able to configure and manage Screen Time from any device for your kids on all their devices.

Everyone who uses Screen Time limits will like the new "One more minute" option that gives you another 60 seconds to finish up what you're doing.

Sidecar

With the new Sidecar feature, Apple is bringing Macs and iPads closer together… literally. Much like solutions such as AirDisplay, DisplayLink, Duet Display, and Luna Display, Sidecar lets you turn an iPad into a secondary display and graphics tablet for your Mac. (Our condolences to the developers of the other screen-sharing apps, who have just been Sherlocked.)

Sidecar will work wirelessly or over a wired connection, and our bet is that the latter will provide better performance. You can use it either to extend your desktop for more screen real estate or to mirror your screen so others can see what you're doing.

If you use an Apple Pencil with your iPad, you'll be able to use it with tablet-enabled Mac apps, and regardless, Apple says you'll be able to write and sketch on PDFs or mark up documents with the Apple Pencil, a feature called Continuity Markup. Or, with Continuity Sketch, just sketch with the Apple Pencil and insert it into any Mac document.

Standard Multi-Touch gestures will work on the iPad while it's displaying text from a Mac app, even the new text-editing gestures in iPadOS. And finally, apps with Touch Bar support will display Touch Bar controls at the bottom of the iPad screen even on Macs that don't have a Touch Bar.

If you're looking forward to Sidecar, you may want to pick up something like a Mountie (see "Attach an iPad to Your MacBook as a Second Display with Mountie," 22 February 2019).

Project Catalyst

With Mojave, Apple gave us Mac versions of Home, News, Stocks, and Voice Memos, thanks to a technology codenamed "Marzipan" that made it easy to convert an iOS app to macOS. That was the first phase of Apple's master plan, and with Catalina, we're moving into the second phase. The technology now has a real name — Project Catalyst — and this year developers are getting access to the Catalyst technology to create Mac versions of iOS apps.

Several prominent third-party developers were quoted on stage as to how quick and easy it was to make a Mac version of an iPad app, maintaining a single code base and with the same development team. I expect nothing less from a keynote.

What remains to be seen, however, is if Apple has enhanced the Catalyst technology sufficiently so the Mac apps built with it don't suck. Home, News, Stocks, and Voice Memos run, but they're lousy Mac apps.

That will mostly be an issue with productivity apps that we expect to look, walk, talk, and quack like Mac apps. For games and Web apps, just having something native on the Mac rather than having to switch devices or run in a browser tab will be welcome.

Security and Safety

Apple continues to improve the security of its platforms, and Catalina receives some enhancements in that area:

Dedicated system volume: To prevent system files from being tampered with, Catalina runs in a dedicated, read-only system volume. That also keeps it separate from all other data. We're curious how this will impact macOS setup and troubleshooting.

Enhanced Gatekeeper: We're guessing this bullet point from Apple involves notarization, about which Howard Oakley has written a great deal at his Eclectic Light Company blog.

Activation Lock: Macs with T2 chips gain support for Activation Lock, just like iOS devices, so if one is lost or stolen, only you can erase and reactivate it.

Separated kernel extensions: To increase security (and probably reliability), Catalina requires peripherals and low-level apps that relied on kernel extensions to run separately from the operating system. We're betting this will cause compatibility issues with older devices and software.

More data protections: Apps running in Catalina will have to ask for permission to access even more of your data or to perform actions like key logging or video recording that could be privacy violations.

The feature that most intrigues me is that Catalina will let you approve any dialog that asks for your Mac's login password by double-clicking the side button on your Apple Watch. At last!

Accessibility Improvements with Voice Control

In "Nuance Has Abandoned Mac Speech Recognition. Will Apple Fill the Void?" (21 January 2019), I wrote about the problems Mac users faced after Nuance discontinued Dragon Professional Individual for Mac, and TidBITS reader Todd Scheresky called for Apple to add support for custom words, speaker-dependent continuous speech recognition, and cursor positioning and mouse button events.

Happily, it seems Apple was listening, since Catalina features a slew of accessibility improvements, including everything Scheresky asked for. The new Voice Control capability offers full control over your Mac and any iOS devices. You can rely entirely on your voice to navigate an app via navigation commands, names of accessibility labels, numbers pointing at controls, and grids.

Anyone interested in reducing their typing will appreciate Voice Control's enhanced dictation, and it builds in a rich set of text-editing commands that let you correct words, replace phrases by name, select text, or navigate within text. Even better, if you wish to use voice commands to control your Mac, it will seamlessly transition between text dictation and commands.

Frankly, Voice Control may be one of the most important improvements in Catalina and iOS 13.

But that's not all the accessibility improvements in Catalina, others of which include:

The option to tint your entire screen, which could help people with various visual difficulties and migraines — see Charles Maurer's discussion of the topic in "Better than the Printed Page: Reading on an iPad" (15 March 2018)

The capability to use the new text-to-speech Siri voice for VoiceOver and Speech

Hover Text, which displays a high-resolution zoom of text, text fields, menu items, buttons, and more in a dedicated window

An option to use a second display to zoom a portion of the same screen

Simplified tab navigation via VoiceOver

Other Features

As you would expect, Apple has plenty of other small features slated for Catalina. The most interesting ones include:

iCloud Drive folder sharing makes Apple's file sharing solution more competitive with services like Dropbox.

File sharing services gain a new way to integrate with the Finder without needing a kernel extension.

If an update causes problems, you'll be able to use macOS Recovery to restore from an APFS snapshot taken just before the installation. That should reduce the stress involved with installing macOS updates.

Improvements in QuickTime Player include Picture in Picture, movie creation from a folder of sequentially numbered stills, more technical information about movies, and timecode support.

HomeKit Secure Video will record security video to iCloud. Look for HomeKit-enabled security cameras to appear soon.

Unified Apple ID account information will be available directly in an app on the Mac. This is probably another aspect of iTunes that Apple needed to break out.

Details

Betas of macOS Catalina for developers are available now, and Tim Cook said that a public beta would arrive in July 2019, with the final release due in the "fall," probably meaning September of this year.

Catalina has the same hardware requirements as Mojave, running on MacBook Air, MacBook Pro, Mac mini, and iMac models from 2012 and later, Mac Pro models from 2013 and later, and all models of the MacBook and iMac Pro. ⬚

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by Julio Ojeda-Zapata

watchOS 6 Adds an App Store, Expands Health Tracking

With its just-announced watchOS 6, Apple has yet again tapped into a pair of Apple Watch trends that have helped make the device the bestselling tech wearable.

One of these is self-reliance; the Apple Watch is now more independent of the iPhone than ever before, gaining both its own App Store and a nascent library of standalone apps.

The other trend, and perhaps the Apple Watch's highest calling, is health tracking. It is now more versatile in this regard with the capability to protect users' hearing, help women keep track of their menstrual and fertility cycles, and more.

Along the way, watchOS 6 bestows upon its users voice-memo recording, audiobook playback, restaurant tip calculating, Web searching, and other capabilities.

Health and Fitness Features

After its misguided attempt to crack the fashion market at launch, the Apple Watch eventually found its way as a health and fitness device. With watchOS 6, Apple has introduced a handful of new software features that expand the scope of what the Apple Watch monitors in the wellness sense.

Cycle Tracking: The Apple Watch for the first time directly addresses women's health via a new app for keeping track of menstrual cycles. The new Cycle Tracking app lets users predict the timing of their next period and, for those trying to get pregnant, time windows of optimal fertility. (Apple warns that the feature shouldn't be used as a form of birth control.) In addition, a daily log feature allows adding of information such as current period flow and the results of ovulation prediction kits. To make it available to many more users who don't use the Apple Watch, Cycle Tracking is also available in the Health app on the iPhone.

Noise: Incremental hearing loss is a serious problem in our noisy society, and now the Apple Watch can help users detect when audio around them is potentially damaging. As sound levels change, the new Noise app shows a decibel meter that moves in real time. The Apple Watch can also post a notification if the ambient sound level reaches 90 decibels, which is considered harmful with a minimum exposure of four hours a week.

Activity Trends: This refers not to a new fitness app but to additional functionality in the Activity app. The Trends tab gives exercise-conscious users a long-term view of their activity to help them analyze their progress in categories such as active calories, exercise minutes, walking pace, and more. As a result, downward trends relative to the last 365 days are easier to spot, so users can adjust accordingly.
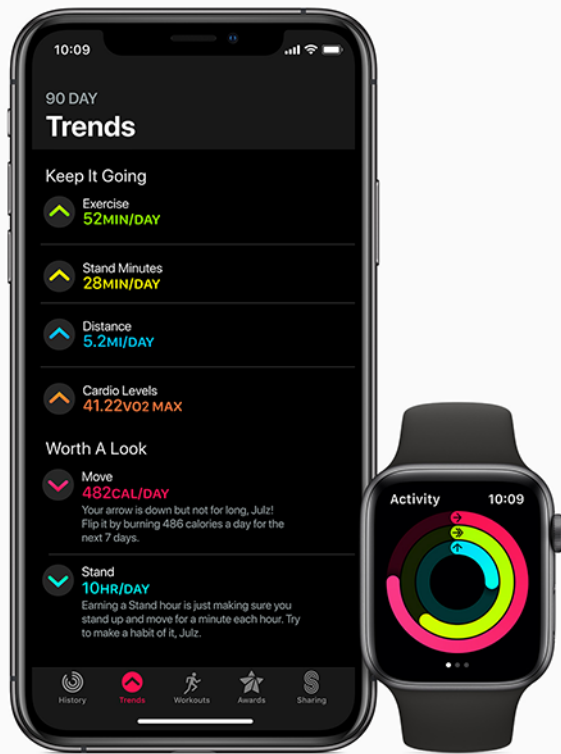
App Store and Standalone Apps

Among Apple's hardware platforms, only the Apple Watch lacked its own app store with a library of standalone apps. With watchOS 6, Apple brings the Apple Watch in line with its other products.

Third-party app developers can now create Apple Watch-only apps that don't require companion iPhone apps. You will be able to download these apps directly onto the watch via a new watchOS App Store that works independently of the iPhone and its Watch app. (We hope that's not required given the awkwardness of using the Apple Watch's tiny screen for most things.)

Searching for apps on the App Store will be possible via voice dictation or Scribble-based composition, and the apps appearing in such search results will have product pages similar to those found on the iPhone and the Mac — only much, much more compact.

Apple also announced a modest complement of new or improved apps that include:

Voice Memos: The familiar iPhone app now has a watch equivalent.

Calculator: A watch version of this indispensable app includes tip and check-splitting computations.

Audiobooks: Audiobook publisher Audible has had an Apple Watch app for a while, but Apple has now brought similar functionality in-house with an Audiobooks app for streaming audiobooks purchased from Apple Books directly from the watch.

Reminders: This app isn't new but gets an overhaul in watchOS 6 to match the iOS and macOS versions.

Animojis and Memojis: These animated iPhone stickers are now available on the Apple Watch for adding to messages.

Faces, Chimes, and Complications

Many Apple Watch users have wondered over the years why Apple doesn't open up watch face development to third parties, something that Google's Wear OS has long allowed. For now, new watchOS faces remain Apple's domain. There are some new options this time around, including:

A Gradient face smoothly animated with the time

A large Numeral face showing the current hour in multiple languages

A modern Digital face in a variety of colors

A rounded, mellow California dial that is customizable with a variety of complications

A solar face that visualizes the sun's movement via a circle-within-a-circle animation

A Modular Compact face that is a space-saving version of the existing, information-rich Modular face

There are a bunch of new complications, too. Now Apple Watch users will be able to see decibel levels, cellular strength, the chance of rain, and more. One fresh complication will begin voice-memo recording, and another will get users back to their current audiobook.

Along with the new faces, watchOS 6 introduces Taptic Chimes that, on the hour, make the watch vibrate and, optionally, play a sound, such as a bird song. Also, holding

two fingers on a face will make the Apple Watch read the time out loud.

Siri Is Smarter and More Capable

Siri gets a bad rap for lagging behind Amazon's Alexa and Google Assistant in terms of smarts and capabilities. With watchOS 6, Apple is narrowing the gap a bit on the Apple Watch with a smattering of new capabilities. These include:

- "What song is this?" Pose that question when you hear a track playing nearby, and Siri will get an assist from Apple's Shazam song-recognition tech to enlighten you.

- Web searches: Ask Siri to search for a topic, and you'll get a scrollable list of Web pages to peruse.

As Usual, Fresh Watch Bands

As usual, Apple has trotted out new bands, including versions of its popular Sports Band and Sports Loop in such eye-catching colors as Dragon Fruit, Cornflower, and Canary Yellow. They are available now.

Finally, in Apple's continuing support of the LGBTQ movement, it's also offering a new Pride Edition Sports Loop with proceeds partially going to advocacy organizations such as Encircle, Gender Spectrum, GLSEN, ILGA, PFLAG, the National Center for Transgender Equality and The Trevor Project. The band's matching face is animated.

Like watchOS 5, watchOS 6 works on the Apple Watch Series 1 through Series 4 (but not the original Apple Watch), although not all features will be available on older models.

Betas of watchOS 6 will be available to developers right away, and it will undoubtedly ship in September alongside iOS 13.

Got an email from Verison this week

The team noticed that you have not logged in for about 90 days and will therefore and not be able to reclaim the email address. In addition:

All your emails are deleted.

All the photos and other email attachments are also deleted.

You should email us as soon as possible

Please reply us.

Regards,
Verison

Thank's

Wait, What!
DELETED. You deleted all my emails AND my email attachments??

Not really sure what Verison wants from me. They already have my email address.
I think I'll just stick with Verizon for now.