Apple Announcements at WWDC 2016

Apple File System

Apple's current file system on the Mac is HFS+, which has been around for 30 years and is showing it's age. HFS+ was never designed for flash storage and is inefficient in it's use of space. Power failures can cause drive damage and require disk repairs to fix. Time Machine is kludgey and unreliable because of HFS+ limitations.

APFS is designed to fix all these problems. Here's how:

•	Dynamically resized partitions. With HFS+ you could partition a drive into more than one volume, but the sizes were fixed and required a complete reformatting to change. With APFS, partitions will grow as necessary.

•	Duplicated files won't take double the space. Changes to one copy are recorded separately, giving you the equivalent of a version history.

•	HFS+ used the add-on File Vault to encrypt the drive. APFS has standard encryption built-in, and you can use it to encrypt individual files.

•	APFS is designed for flash storage and includes TRIM support.

•	Waiting minutes for the Finder to calculate the size of a folder will become a thing of the past.

•	APFS supports snapshots and clones, which will radically change how Time Machine and iCloud storage works.

APFS will become the standard file system sometime in 2017 on all Apple platforms; Mac OS, iOS, TVOS, and WatchOS. The old Apple File Protocol for sharing will be retired and replaced completely by SMB.

http://thenextweb.com/apple/2016/06/14/apfs-macos-ios-watchos-tvos/

Mac OS Sierra

Yes, it's going to be called Mac OS, not OS X. Available sometime in the Fall.

Here's some of the new features:

• Siri on the Mac. Use a function key, click on an icon in the Dock, or click on a microphone icon in the menu bar. It will do practically everything that Spotlight currently does, plus a lot more, although maybe not quite as much as it does on iOS.

• Apple Pay on the Mac will allow you to complete a purchase you found on your Mac by just using TouchID on your Apple Pay configured iPhone.

• Auto unlock your Mac with your Apple Watch without typing a password.

• Universal clipboard lets you copy something on your iPhone or iPad and paste it on your Mac immediately.

• Store your Desktop and Documents folders in iCloud and access them on iOS devices similar to Dropbox.

• Optimized storage will automatically store rarely used files in iCloud, freeing up space on your local drive.

• Safari-like tabs will now be available in most applications.

• Picture in Picture lets you resize a video and let it play while you do other things.

• Photos will improve the location feature by adding a world map, create automatic slideshows called Memories, use intelligent search on the contents of photos like "beach", and create People albums.

• Messages now has large emojis and lets you play video and preview

links right in the conversation.

Not every model that runs OS X El Capitan can handle the upgrade. You'll need a late 2009 or newer MacBook or iMac and a 2010 or later Macbook Air, MacBook Pro, Mac mini or Mac Pro to use this software.

https://www.apple.com/macos/sierra-preview/

http://arstechnica.com/apple/2016/06/the-macos-sierra-developer-preview-different-name-same-ol-mac/

iOS 10

New features:

•   Messages adds a ton of new features like handwriting, animations, invisible ink that you have to swipe to read, tap to replace words with an emoji, stickers, and access to apps in Messages.

•   Third party apps can now integrate with Siri.

•   Maps lets you make restaurant reservations, and search for things along your route.

•   A new Home app will let you control all your HomeKit-compatible home control devices in one place.

•   Music app has been redesigned.

•   Raise to Wake wakes up your iPhone when you pick it up.

•   Keyboards now include contextual predictions and multilingual typing.

•   Photos has the same features as on the Mac like Memories and searches by photo content.

•   Apple Pay works in your web browser.

https://www.apple.com/ios/ios10-preview/

http://arstechnica.com/apple/2016/07/48-hours-with-ios-10s-first-public-beta-build/