

printout

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

Searching for Malware

Malware may be stealthy, intended to steal information or spy on computer users for an extended period without their knowledge, or it may be designed to cause harm, often as sabotage, or to extort payment. 'Malware' is an umbrella term used to refer to a variety of forms of hostile or intrusive software

This is exactly what happened at Hollywood Presbyterian Hospital in Los Angeles. According to officials, about a month ago, their computerized medical records were locked up by one of these malicious programs, and a hacker demanded \$17,000 in ransom to unlock them.

During this time, medical staff were forced to use paper and pen for their record-keeping, but they say no patient files were compromised. The hospital decided to pay the ransom. Their computers were unlocked, and the FBI is now investigating.

Tom Owad will talk about searching for malware on your computer.

He doesn't recommend installing dedicated programs to monitor for malware. They can significantly slow your computer as they check every file and email that is downloaded, uploaded, or opened.



Meet us at

Bethany Village Retirement Center

Education Room

5225 Wilson Lane, Mechanicsburg, PA 17055

Tuesday, March 15 2016 6:30 p.m.

Attendance is free and open to all interested persons.

Contents

Search for Malware	1
Keystone MacCentral Minutes	3
OS X Hidden Treasures: Services <i>by Josh Centers</i>	3 - 5
Beware Nasty Auto-Download Music Bug in iOS 9 <i>by Kirk McElhearn</i>	5 - 6
What "Error 53" Means for the Future of Apple Repairs <i>by Josh Centers</i>	6 - 7
Software Review	8

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 © 2016, Keystone MacCentral, 310 Somerset Drive, Shiresmanstown, PA 17011.

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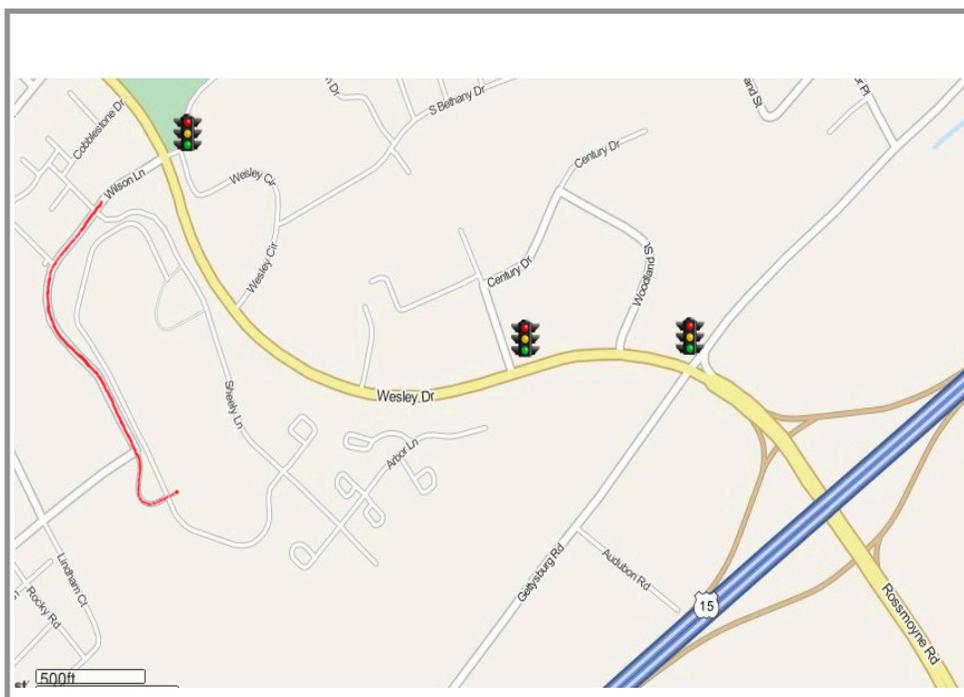
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Keystone MacCentral Minutes

February 16, 2016

The meeting was cancelled due to weather.

by Josh Centers

OS X Hidden Treasures: Services

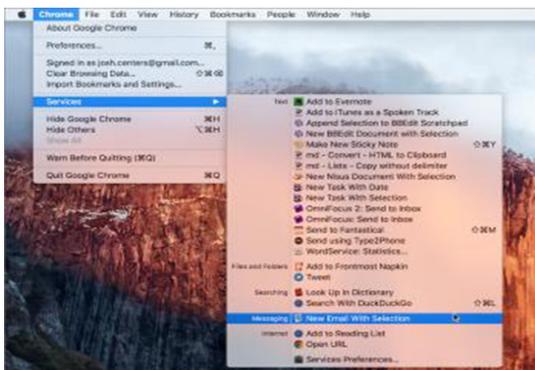
Services are one of the oldest ways of extending OS X's capabilities, dating all the way back to NeXTSTEP, the operating system Apple bought in 1997 and turned into OS X. But there's a good chance you're not aware of services, or have forgotten about the Services menu, since it's easily missed, tucked away as it is in the application menu for most apps. Since that menu mostly contains command like About, Preferences, and Quit, many people never look through it closely.

The simplest way to explain services is that they're a way to invoke features of one app from within another app. Here's an example. Let's say you want to email a snippet of text (like a passage from a helpful TidBITS article on our Web site) to a friend. Here's how most people would do that:

1. Select the text.
2. Copy the text.
3. Switch to Mail.
4. Create a new message.
5. Paste the text into the body of the message.

Here's how to perform that same task using a service. In this example, I'm viewing the desired text in the Google Chrome Web browser, but this built-in service works in most OS X apps:

1. Select the text.
2. Choose Chrome > Services > New Email With Selection.

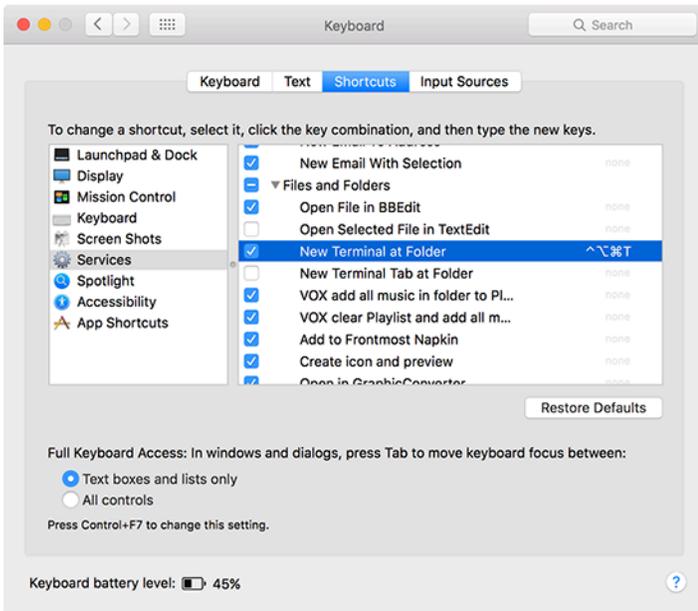


This creates a new message in Apple Mail with the selected text, in fewer than half the required actions.

What's great about services is that they work in many OS X apps and with all sorts of objects, like selected text, graphics, files, and folders. The Services menu is contextual, so what you see in it depends on what's selected. In the Finder, the Services menu also appears at the bottom of the contextual menu that appears when you Control- or right-click on a file or folder.

Managing Services — To see and manage all services, open System Preferences > Keyboard > Shortcuts > Services. Apple presumably chose this somewhat odd place for services because services can also be invoked with keyboard shortcuts.

Once in the Services view of the Keyboard preference pane, you can check and uncheck services to enable or disable them. To save even more time, you can add keyboard shortcuts to commonly used services. Select a service, click Add Shortcut, and press the desired keys. It can be tough to find a simple keyboard shortcut that isn't already claimed by the Finder or another app, but I've found that Command-Option-Control, followed by a letter, usually works. Some services come pre-configured with their own keyboard shortcuts, which can be annoying if the service's shortcut takes over from a command's shortcut in a particular app — just redefine the service shortcut to resolve the conflict.

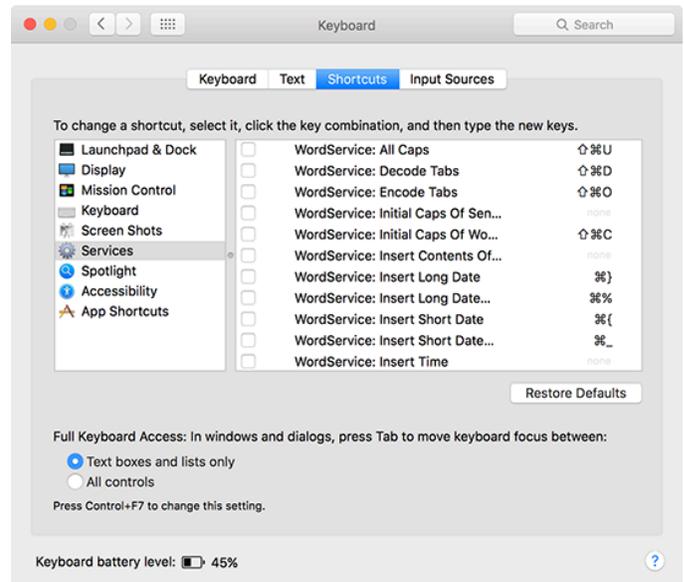


If you want to get rid of a service entirely, so it no longer shows up in the list in the Services view of the Keyboard preference pane or in Services Manager, Control-click it in either, and choose Show in Finder / Reveal in Finder. For services that are Automator workflows, the ~/Library/Services folder will open, and you can just move that service to the trash (Services Manager also has a Move to Trash command in its contextual menu). But for services provided by apps, choosing Show in Finder identifies the app containing the service, and the only way to eliminate the service is to delete the app. You also can't delete services built in to OS X.

Adding More Services — OS X ships with quite a few services, but if you want to expand the number of services in your Mac's repertoire, the good news is that you often don't have to do any extra work to install them, since many come with apps. Here are just a handful of apps that include their own services: BBEEdit, Ember, Evernote, GraphicConverter, Nisus Writer Pro, TextExpander, Scrivener, Twitter, and Vox. There are undoubtedly hundreds or even thousands more.

Unfortunately, it's easy to end up with services that are broken, due to having been installed by old or obsolete apps. For instance, I discovered an Open with Pixelmator service, which was exciting because Pixelmator is my second-favorite image editor (after Preview). Sadly, Pixelmator's service doesn't work, but I'll explain how to work around this.

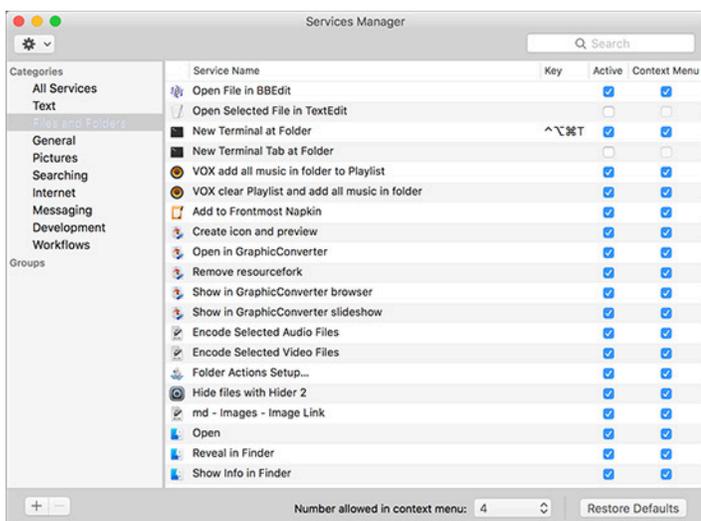
You can also download and install standalone services. One of my favorites is DEVONtechnologies' free [WordService package](#), which includes a slew of useful services for working with text, things like changing the case of selected text, inserting dates, trimming lines, and showing statistics. Download the WordService package, expand the .zip file, copy the WordService app to your Applications folder, and finally double-click the WordService icon to install the necessary services. You can then enable the included services in Services Manager or System Preferences > Keyboard > Shortcuts > Services, under the Text heading.



Frankly, the built-in interface is pretty bad, because you can't expand the System Preferences window to accommodate a lengthy list of services or long service names that end up being cut off. Happily, there's an alternative, a utility called Services Manager from [MacOSXAutomation.com](#). It's old, and thus a little fussy to install, but it still works fine.

Once you've downloaded and expanded the file, Control-click the Services Manager Installer.pkg, and choose Open from the contextual menu. This is necessary if you have Gatekeeper set to allow only apps from the Mac App Store and identified developers. Once you allow it to run, you can work your way through the installer, which places the Services Manager app in the Utilities folder inside your Applications folder.

Launch it, and you can see that it offers a simple interface for enabling and disabling services and assigning keyboard shortcuts. Since its window is resizable and you can show only services in specific categories, it's far easier to use than the standard interface.



For fans of the Markdown text markup language, Brett Terpstra (with help from Joe Workman) offers [Markdown Service Tools](#) that help you create links, format text, and even convert between HTML and Markdown.

Installing Markdown Service Tools is a bit more involved than WordService. After unzipping the package, open the MarkdownServiceTools2.12 folder. You'll see a whole mess of services, 33 all told. To install just a few, select them, and either double-click one or press Command-O. For each, OS X asks you if you want to install it or open it in Automator. Alternatively, in the Finder, press Option and choose Go > Library, and then open the Services folder. Drag the services you want to install from the MarkdownServiceTools2.12 folder. Either way, I recommend installing only those you need and understand, because otherwise the list is overwhelming.

Make Your Own Services — If you can't find a service you want, you may be able to make your own if you're handy with Automator. In Automator, select File > New, and when prompted to choose a type, choose Service. The possibilities here are nearly endless, but you don't have to memorize Joe Kissell's "[Take Control of Automating Your Mac](#)" to get started (although it's an excellent reference if you want to learn more).

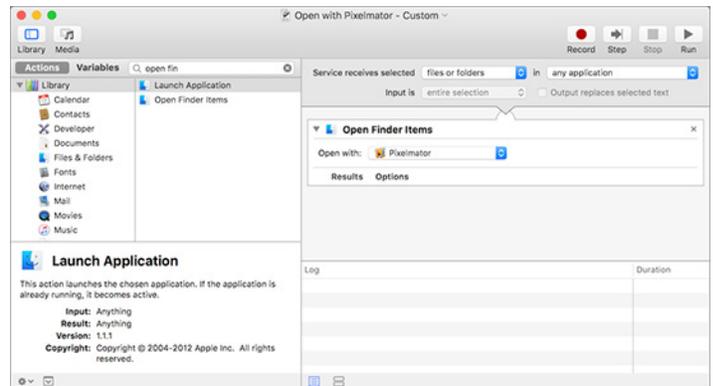


Here's how to recreate that aforementioned Open with Pixelmator service:

After you've started a new service in Automator, search for the Open Finder Items action and drag it into the right-most pane.

Set the Service Receives Selected pop-up menus to "files or folders" in "any application."

In the Open Finder Items action, choose Pixelmator (or whatever app you choose) from the Opens With pop-up menu. If you're confused, just mimic the screenshot below.



Save your service and give it a descriptive name. I named mine "Open with Pixelmator — Custom" to distinguish it from the broken one that ships with Pixelmator.

Now, when you select a file or folder in the Finder and open the Services menu, "Open with Pixelmator — Custom" will be an option. You can also assign a keyboard shortcut to your new service too. I set my shortcut to Command-Option-Control-P, so I can select an image in the Finder and press that hotkey to open the image in Pixelmator. Again, you can modify this simple Automator service to open selected files in any application you choose.

Services are an excellent way to tie apps together in OS X, and they're one of OS X's hidden treasures, a feature that too few people think about and that suffers from Apple's benign neglect. Nonetheless, services can make you more efficient with the apps you're already using, and for those of you who already rely on services, let me know in the comments which services you find most useful. 🍷

by Kirk McElhearn

Beware Nasty Auto-Download Music Bug in iOS 9

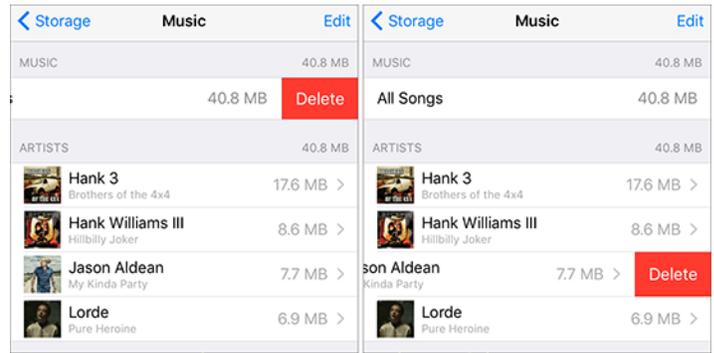
Apple Music, iCloud Music Library, and iTunes have plenty of problems already, but this latest bug is proving costly. Many iCloud Music Library and iTunes Match users are finding that, when they add their own music to their cloud libraries (as opposed to

adding tracks from the Apple Music library), these songs automatically download to iOS devices linked to their accounts. If you have a lot of music and that download happens over a cellular data connection, it could get expensive.

I use a test library for Apple Music, on my MacBook, that links to my iPad and iPod touch. (My main library syncs to my iPhone via USB because I don't trust it to the cloud.) I [first spotted this issue](#) a week ago, when I saw that 4 GB of music that I had added to my test iCloud Music Library had appeared on both my iPad and my iPod touch without my choosing to download it. Since the music downloaded locally over Wi-Fi, it had no effect on my mobile phone bill. However, other users have reported costly data overages on their iPhones, as new music has eaten up their monthly allowances. And even for those people with very large or unlimited data plans, downloading a lot of music could drain your battery at an inopportune time.

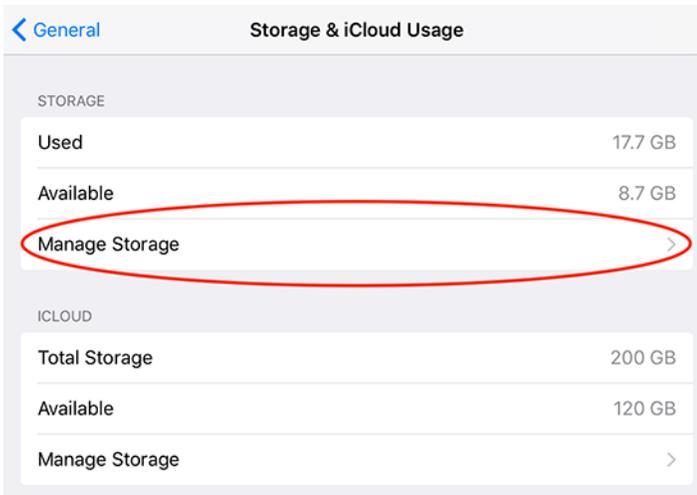
If you use Apple Music or iTunes Match, and add music manually to your library, you should protect yourself against surprises on your phone bill. Go to Settings > Music and turn off Use Cellular Data under Streaming & Downloads. Many people have left this option on in the past, in order to be able to grab an album from the cloud from time to time, or to stream Apple Music. My advice is to leave the setting off until Apple fixes this bug, and turn it on temporarily for those specific purposes.

If you're perturbed by the amount of space that's being occupied by this automatically downloaded music on your device, you can recover space. Go to Settings > General > Storage & iCloud Usage. Under the Storage header, tap Manage Storage, and then Music. You can swipe All Songs from right to left to delete all locally stored music, or you can delete the music for particular artists in the same way.



One user [posted a comment to the article](#) on my Web site explaining how he was able to stop these downloads from happening. It's a multi-step process that involves unlinking the device from iTunes in the Cloud, and performing some other operations. I haven't tested it, so try it at your own risk.

I've filed a bug report with Apple, and the iTunes engineers have contacted me to collect log information from my devices. I hope they get to the bottom of this bug soon, although [it still exists in the beta of iOS 9.3](#). For me it was just an annoyance, but it's hitting many other people directly in the wallet. 🗑️



by Josh Centers

What "Error 53" Means for the Future of Apple Repairs

In ["Error 53 Will Kill Your iPhone and No One Knows Why,"](#) (23 April 2015), I reported on the mysterious Error 53, which makes iPhones unusable, with no explanation from Apple. The good news is the community has now

pinpointed the cause of Error 53, and it's easy to avoid. The bad news is that the explanation makes the future of repairing your own Apple devices or using less expensive independent repair services even more dim.

The [cause of Error 53](#) is a failure within the Touch ID sensor in the Home button of new iPhones. When you restore or update to iOS 9, it verifies that the Touch ID sensor is properly paired with the processor's secure enclave. If iOS detects that the pairing has failed, which it might even if only the screen was replaced, Touch ID is disabled to protect the security of Apple Pay, and additional security checks display Error 53 and prevent further access.

Pairing the Touch ID hardware with the secure enclave is a clever security measure that ensures no one can access your fingerprint data or Apple Pay details by messing with Touch ID. The problem is that if an unauthorized repair center replaces your iPhone's Home button, or even an associated part such as the screen, updating or restoring iOS 9 at some later date will render the iPhone useless. If you run into this situation, [Apple says](#) to "contact Apple Support about pricing information for out-of-warranty repairs."

As Daring Fireball's [John Gruber pointed out](#), Apple could have handled Error 53 better. Instead of bricking the iPhone, iOS 9 should just disable Touch ID and Apple Pay, and explain to the user why it did so. In short, there's no reason to throw the baby out with the bathwater.

We reached out to an Apple Authorized Service Provider who is familiar with the matter. While he confirmed that Apple's requirement is a security feature, he also sees it as Apple pushing several agendas: selling AppleCare+, pushing customers into buying new phones after AppleCare+ expires, shutting out non-authorized repairers and suppliers, and shutting out fake devices built from knock-off parts. It turns out that all iPhone screen repairs have to go back to Apple for screen replacements; Apple has a machine that restores the pairing between the Touch ID sensor and the secure enclave.

We also spoke with a technician at a local independent repair shop, who was outraged that Apple was doing this to customers, particularly without warning. He said that his shop is now telling customers that they can either take iPhones that require this sort of repair to Apple or avoid updating to a new version of iOS 9. The tech was in fact performing just such a repair during the conversation, and the waiting customer said that he wouldn't have updated the iPhone anyway, so that limitation didn't bother him.

Apple's handling of the situation has prompted the Seattle law firm PVCA to [file a class action suit against Apple](#); if you've experienced Error 53, consider getting in touch with them.

The Bigger Repair Picture — Apple's discouragement of tinkerers is nothing new. The original Macs were notoriously hard to work on, requiring a long Torx screwdriver to open, and after Steve Jobs returned to Apple in 1997, the company's hardware became ever more difficult for outsiders to service.

A key example is Apple's choice to switch from standard #00 Phillips screws to proprietary pentalobe screws during

the iPhone 4's lifecycle. In fact, if you brought an iPhone 4 with Phillips screws to an Apple Store for repairs, Apple would replace them with pentalobe screws.

The funky screws didn't dissuade most DIYers, and it wasn't hard to replace the battery in the iPhone 4, but Apple continued down the path of making future iPhones even harder to repair, as Adam Engst and I documented in ["Replace a Dying iPhone 5 Battery"](#) (5 March 2014) and ["How to Replace a Cracked iPhone 5c Screen with Screasy"](#) (24 July 2015).

Because of these difficulties, our advice since the release of the iPhone 5 has been to leave repairs to the professionals, even if you think you know what you're doing. Unfortunately, even when going directly to Apple for repairs, things don't always go smoothly, as I detailed in ["Replace a Dying iPhone 5 Battery: Take Two"](#) (28 August 2014). A couple of weeks after having my iPhone 5 battery replaced by Apple, the rear camera stopped working — I suspect due to a bad connection. Thankfully, it was time to upgrade anyway, so I never bothered trying to fix it.

So what's the takeaway? Sadly, it seems that the era of repairing your own Apple devices continues to wane; if you can repair an Apple device yourself, it's likely either because it's an older model or a design accident. And as Apple struggles to maintain its revenue growth in the face of slowing sales, the company will try to extract money wherever it can, with repairs and service plans as another means to that goal (ask any auto dealer).

Here's our advice for your future iPhone repair needs:

- Whenever possible, have your Apple products serviced at an [Apple Store or an Apple Authorized Service Provider](#).

If you're at all hard on devices, and particularly for portable devices, think about buying AppleCare coverage to extend your warranty.

- Consider the iPhone Upgrade Program (see ["Comparing U.S. iPhone Plan Costs in a Contract-Free World,"](#) 11 Sept 2015) for your next iPhone purchase, as it includes AppleCare+ and it lets you replace your iPhone every year.
- If a non-authorized repair is unavoidable or vastly less expensive, be sure to keep your original parts in case there's a problem. Historically, Apple won't even talk to you if you have third-party parts installed in your iPhone. And if you do need an independent repair that might cause Error 53, well, avoid updating to iOS 9 or a newer version of iOS 9. Small bug fixes and security risks are better than a dead iPhone.

However, it's not all bad news. In order to deal with unauthorized repairs, Apple has drastically reduced the price for out-of-warranty screen repairs. Without AppleCare+, the company now charges between \$109 to \$149 for a screen replacement, which isn't much more than what you'd pay with AppleCare+. However, if you have AppleCare+, Apple will give you a loaner phone and likely move your repair up in its priority list. 🗑️

Software Review

Some interesting software:

- **Wi-Fi Checker** from Ofcom offers an app to evaluate your broadband connection. Developed in England, it based on the fact that Wi-Fi performance can be affected by lots of things. These can change over time and have a different effect in different rooms of your house. We recommend you try running the Wi-Fi Checker in different rooms and at the times of day when you're most likely to use the internet. Networks are often not set-up correctly or suffer "interference" from electronic goods including baby monitors and microwave ovens - and even festive fairy lights.

The free app, for smartphones and tablets, allows homeowners to test the quality of their internet signal and suggests ways to enhance it.

- If you have invested in the fourth generation Apple TV there is a screensaver worth checking out. It's called Aerial, and it's available for free from [Coates' Github repo](#). Aerial consists of an exclusive set of slow-moving HD video of various landmarks and places in the world. What's most interesting is that the displayed video actually changes over time, as the Apple TV downloads new videos periodically from an online location.

You can preview the videos [here](#).

It appears Aerial streams the videos from Apple's site instead of bundling them (likely for copyright reasons and to keep the screensaver size reasonable) so you will see some network traffic if you choose to use this.

- For a brief diversion the \$3 **Architecture of Radio** by Richard Vijgen might fill the bill. The Architecture of Radio is a 360 degree data visualization of what this world might look like if you could see the data flow around us. It shows the cell towers, GPS satellites and Wi-Fi routers around you that allow us to live our digital lives.

Apple Updates

Pro Video Formats 2.0.4

Feb 5, 2016 – 5.2 MB

What's New in Version 2.0.4

- Support for AVC-LongG, XAVC, and XF-AVC

Pro Video Formats includes support for the following professional video codecs:

- Apple Intermediate Codec
- Apple ProRes
- AVC-Intra
- DVCPRO HD
- HDV
- XDCAM EX / HD / HD422
- MPEG IMX
- Uncompressed 4:2:2

Pro Video Formats also includes the following MXF support:

- Native import, edit, and share of MXF files with Final Cut Pro X and Motion
- MXF share presets for Compressor
- MXF OP1a export 

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How did you hear about us? _____

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**Keystone MacCentral
Membership Chair
310 Somerset Drive
Shiresmanstown, PA 17011**

Keystone MacCentral meetings are held at 6:30 p.m. on the 3rd Tuesday of the month at Bethany Village Retirement Center, 5225 Wilson Lane, Mechanicsburg, PA 17055