

printout

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

TIPS AND TRICKS

The October meeting will be our first meeting in the Educational Training Room at Bethany Village West. A map and directions can be found elsewhere in the newsletter. We will take a look at iOS 8. Jim Carey has Reflektor installed on his laptop so we can display iOS 8 installed on an iPhone or iPad screen for a brief demonstration. Tom Owad will talk about 1Password, an app used to securely store all of your passwords and other data you need to keep secure.

Jim mentioned issues he had heard about regarding transferring photos from iPhoto in iOS 7 to Apple's new Photos app in iOS 8 at our October board meeting. He will relay that information to members and show them how to save their older files so they do not get lost in the transfer. Eric will talk about charging problems he has encountered with his iPhone 6.

We will look at a video with instructions on retouching photos of older people to make them look more natural. Jim can also demonstrate Amazon Prime, time permitting. If Apple has more announcements to make before the October meeting, we will also discuss those. If that's not enough, we also plan to distribute some giveaway items at the October meeting.

We hope you can attend our October meeting. The new room is large enough to accommodate all who want to attend and it offers fast, reliable internet access to enhance our presentations. ☑

**Check page 15 for maps to
Bethany Village Retirement Center**

Meet us at

Bethany Village Retirement Center

Education Room

5225 Wilson Lane, Mechanicsburg, PA 17055

Tuesday, October 21, 2014 6:30 p.m.

Attendance is free and open to all interested persons.

Contents

| | |
|--|----------------|
| TIPS AND TRICKS | 1 |
| Keystone MacCentral Minutes by Gary Brandt | 3 |
| iCloud Flaw Not Source of Celebrity Photo Theft by Rich Mogull | |
| FunBITS: Get The Most Out Of Your iPhone's Music | 4 - 5 |
| With CanOpener by Steve McCabe | 5 - 7 |
| Apple Pay Aims to Disrupt Payment Industry | |
| by Adam C. Engst and Rich Mogull | 7 - 8 |
| FunBITS: Hosting Backyard Movie Night by Julio Ojeda-Zapata | 9 - 11 |
| Rumors and Reality by Tim Sullivan | 11 - 13 |
| September Software Review | 14 |
| Maps to our new meeting room | 15 |

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 © 2014, Keystone MacCentral, 310 Somerset Drive, Shiresmanstown, PA 17011.

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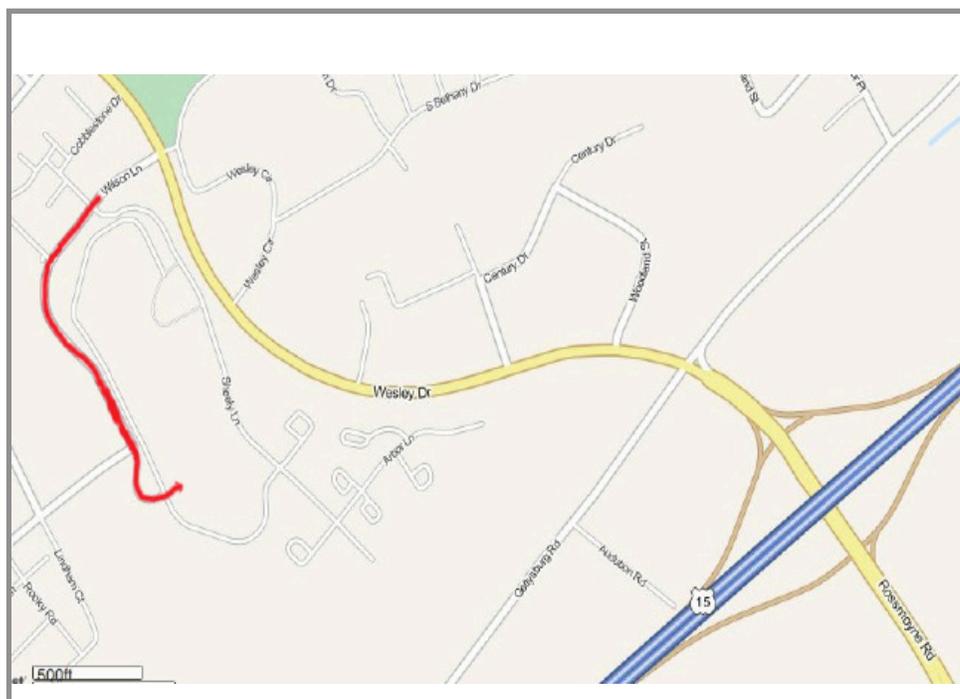
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Keystone MacCentral Essentials

Meeting Place

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

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<http://www.keystonemac.com>

Mailing Address

310 Somerset Drive
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Keystone MacCentral Minutes

September 16, 2014

Business Meeting

President Linda Cober welcomed us to the September meeting of Keystone MacCentral. She announced our switch of meeting rooms to Bethany Village West for the October meeting. Members will want to enter through Door 21. You can find more information and a map in the Printout and on our web site.

Q&A & Comments

Connie Siegel spoke about the Uber ride sharing program. He suggested we contact our state representatives who were going to vote on allowing such services in Pennsylvania. Lyft and Via are other services. Dennis McMahon mentioned that he uses the Parking Panda app to find open parking spaces in Baltimore, which is available for some other cities.

Gary Brandt reported having the black screen problem with his iMac. This is a manufacturing defect not acknowledged by Apple caused by a bad solder joint. Gary's iMac screen goes black after heating up. Someone suggested taking it to Sunrise Computers for the repair.

Eric Adams has a broken USB cable hard-wired to his keyboard. He asked if it could be repaired. Tom Owad suggested using a wire stripper and then crimping the wires together. It was noted that a new Apple wired keyboard costs about \$50.

Linda Cober's MacBook Pro sometimes starts up displaying random artifacts on its screen until startup is completed. This might be caused by low battery voltage. It was said that OWC sells replacement batteries cheaper than Apple.

Eric asked if there was any way to speed up the club's computer. Tom Owad said it was probably a hard drive issue. We checked disk space which was quite full. Thomas Bank II suggested running disk maintenance. Those routines are run automatically, generally when the Mac is on overnight. Programs like OnyX can be used to run them manually. A closer look at Activity Monitor showed that Sophos Anti-Virus might be slowing things down.

We looked at the maps Tim Sullivan prepared for Bethany Village West. Take Wesley Drive to Wilson Lane which is

past Health South. Use lot D for parking and enter through Door 21. You may have to ring the buzzer to get the door unlocked. After entering go left to the end of the hall and then right to the Education Training Room. Residents of Bethany Village are welcome to attend out meetings.

Program Notes

We watched portions of the latest Apple keynote address announcing iPhone 6 and iPhone 6 Plus. They have retina displays with 4.7 and 5.5 inch screens respectively. They are a little thinner than previous iPhones with an A8 64 bit chip for up to 25% faster CPU performance and 50% faster graphics performance. They are also 50% more energy efficient than the A7 chip models. They have faster Wi-Fi with a Wi-Fi calling feature. A new 8 megapixel camera with new sensors provides faster autofocus. The iPhone 6 has digital image stabilization and the 6 Plus has optical image stabilization. You can take HD video at 1080p at 30 or 60 fps, with a slow-mo video option at 240 fps. There is also a new FaceTime HD camera.

The new iPhones have iOS 8 installed, with an updated Messages app and a new Health app. The new OS will be available September 17 and will run on iPhones going back to the iPhone 4S. Touch ID will be usable with some third party apps.

Apple Pay will allow the user of the new iPhones to pay for goods and services at participating vendors without needing a credit card swipe. The new iPhones come with NFC and a secure element chip to securely transfer payment data to the vendor. You add credit cards to the iPhone 6 with its iSight camera to create a device only number for fast, secure, and private payments. over 80% of current credit cards will work with Apple Pay, which launches in October 2014. Many vendors will allow online payments payments with Apple Pay.

The Apple Watch was also announced during the keynote address. It is precise and customizable and it works seamlessly with an iPhone. Apple says it is a comprehensive health and fitness device. A digital crown translates rotary movement into digital data. Sensors on the back of the watch can measure your pulse. The Apple Watch will be available in early 2015 in three models: Apple Watch, Apple Watch Sport, and Apple Watch Edition. The Apple Watch will work with iPhone 5 models. 📱

iCloud Flaw Not Source of Celebrity Photo Theft

On 31 August 2014, [disturbing news broke](#) that criminals had pilfered the private photos of certain celebrities, posted some online, and offered more up to the highest bidder. It is one of the deepest, most disturbing violations of privacy possible, and while this incident focused on the famous, the crime is neither new nor limited to those living public lives. As speculation swirled around the source(s) of the photos, [reports emerged on Twitter](#) of the existence of a public tool to brute force iCloud passwords, which may have been involved in the crime.

[Apple denies](#) that the iBrute tool was used in the celebrity attacks:

After more than 40 hours of investigation, we have discovered that certain celebrity accounts were compromised by a very targeted attack on user names, passwords and security questions, a practice that has become all too common on the Internet. None of the cases we have investigated has resulted from any breach in any of Apple's systems including iCloud® or Find my iPhone. We are continuing to work with law enforcement to help identify the criminals involved.

As is nearly always the case in a big security story, it takes time for the facts to emerge. Apple likely didn't know for sure if iCloud was involved at all, and only after intense investigation was able to better understand the attack.

Thus, despite even my own suspicions that iCloud must have been involved, it appears that some celebrities were deliberately targeted and had their iCloud accounts compromised — not due to the recently patched flaw, but rather by the attackers guessing passwords and/or answers to security questions.

Passwords at the Root — Based on Apple's statement and similar previous incidents, the criminals appear to have individually compromised a set of targeted accounts. A variety of techniques could have been used, including using one compromised account to attack other celebrities with a relationship to the victim.

At this point, speculation about the exact nature of the attack is just that, and Apple may still hold some responsibility. For example, although Apple supports two-factor authentication, it doesn't directly restrict the ability to set up a new device with access to your iCloud account (I suspect this will be changed quickly). That doesn't make Apple responsible (though the company doesn't make [two-factor authentication](#) easy to set up, either), but

two-factor authentication is one of the only viable options to protect accounts in a world where passwords are increasingly difficult to manage.

Even if Apple didn't make any significant security mistakes, as seems to be the case, that doesn't mean we shouldn't hold them (and all cloud service providers) to a higher standard as we place more and more trust into our devices and the cloud.

iBrute Limited — On 30 August 2014, someone using the name "hackapper" released a tool called [iBrute](#) on the GitHub code sharing service. The tool attacked an account by iterating through the 500 most common passwords (obtained from a large repository of stolen passwords) that met Apple's password requirements. It did this via a direct connection to iCloud over an application programming interface (API) for Find My iPhone, enabling it to blast through all 500 passwords relatively quickly.

This is known in security circles as a brute force attack, since it doesn't bypass the password, but merely tries as many passwords as it can until it hits the right one.

Normally, these attacks are thwarted by limiting the number of times passwords can be tried before the user is locked out of the account. In this case, Apple seemed to allow a higher number of password attempts (some claim there is no limit, but I've been given conflicting information, and can't test now that the flaw is fixed).

[Apple patched this vulnerability](#) on 1 September 2014, limiting the damage, although we don't know how long the vulnerability existed or how widespread abuse may have been before the tool was released.

But based on Apple's statement, the iBrute tool or some other direct attack on iCloud or Find My iPhone in general was not the source of the celebrity photo theft. That statement, however, was carefully constructed in case conflicting information later emerges in the investigation.

This is a terrible situation, and possibly one that started with criminal attacks months or years ago. The only ones to blame are the criminals who stole the photos, and those that support them by looking at or even purchasing the photos.

But Apple, like all major cloud providers, needs to step up its game, especially since it wants to store (or is already storing) our email, chats, photos, medical data, and payment information in the cloud. These kinds of attacks are only

going to increase, and cloud services need to make it easier for users to implement higher levels of security, without destroying the user experience. It's the kind of challenge well suited to Apple's strengths; now it's time for the company to apply its vaunted design and user interface chops to the problem.

In the meantime, I recommend following Glenn Fleishman's directions for setting up two-factor authentication with your Apple ID, as outlined in "[Apple Implements Two-Factor Authentication for Apple IDs](#)," (21 March 2013).

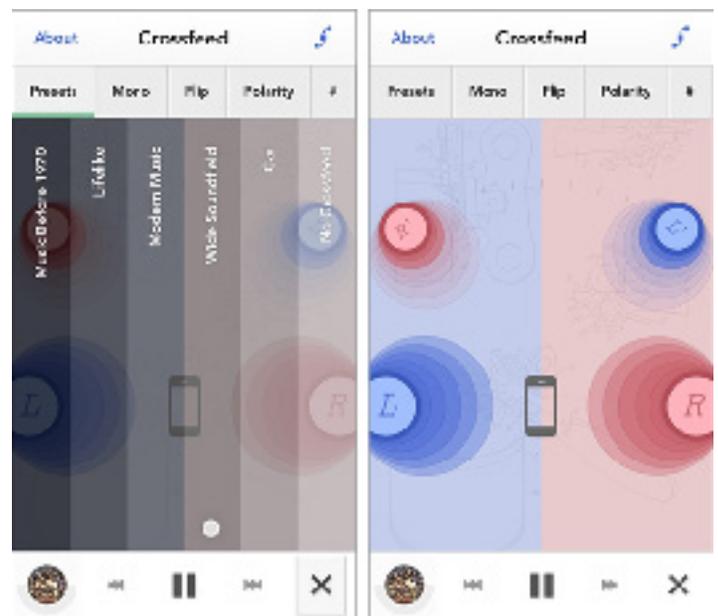
by Steve McCabe

FunBITS: Get The Most Out Of Your iPhone's Music With CanOpener

Apple introduced the [EarPods](#) with the iPhone 5 in 2012, to generally positive response — the clarity of the sound they reproduced was better than their predecessors (see "[iPhone 5: The Best Yet, But Still an iPhone](#)," 26 October 2012). But no matter how well a set of earbuds or headphones might reproduce the sound they receive, even the most high-end headphones can do only that: reproduce an audio source. If you want to enhance the sound quality of the music you play on your iPhone, you'll need to work on the quality of the signal sent to your cans.

The iPhone's native Music app plays music, and offers a few equalizer presets, but that's all it does to your music. The \$2.99 [CanOpener – For Headphones](#), is an excellent, if awkwardly punctuated, app from GoodHertz that provides a significant boost to the iPhone listening experience.

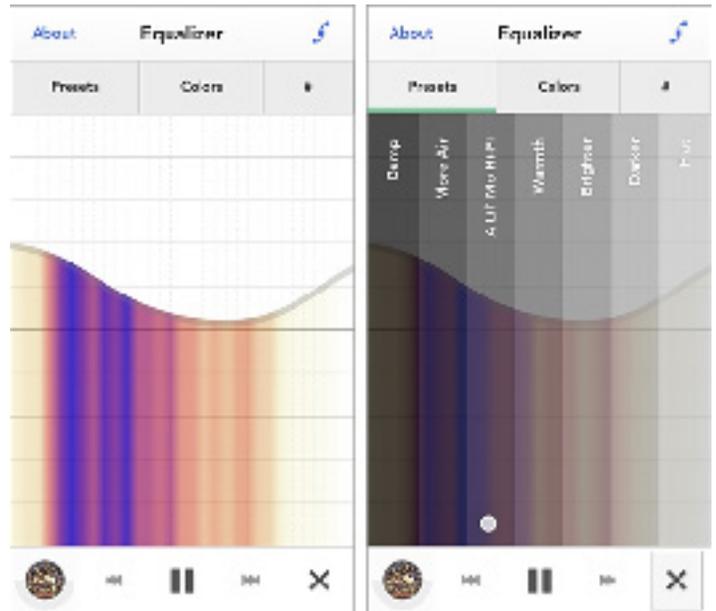
CanOpener's primary trick is crossfeed. Listen to music on full-sized stereo speakers, and while you notice clear separation between the outputs of the two speakers, each ear also hears the opposite ear's sound; your right ear, for example, hears the right-hand speaker's signal loud and clear, but then, a fraction of a second later, also hears the left-hand speaker's output. Headphones don't provide this [crossfeed](#) without additional signal processing, and as a result, the sound you hear on even the very best headphones will sound slightly less rich and full than the music you can enjoy with full-sized speakers. Crossfeed adds warmth, which is good for enjoyable listening, at the cost of crispness, which is more important for audio production.



The enhancement that CanOpener provides is subtle but noticeable, especially on older recordings with a less dynamic soundstage than is standard today. As I write, I'm using CanOpener to listen to the marvelous [Sympathy for the Devil](#), the Rolling Stones' 1968 masterpiece, and I've selected CanOpener's Music before 1970 preset. Keith Richards's thrilling bassline fills the soundstage; Charlie Watts's cymbals shimmer with clarity and sharpness; Mick Jagger's sneering vocals spread over the full range of both speakers, lending a new dimension of malice to the song — the overall sound can only be described as richer and fuller. While there is, by definition, less stereo separation with crossfeed applied, the sound feels stronger, more powerful, more intense. CanOpener includes a bypass button; tap it and you can hear the song without any processing applied, and suddenly everything is a little duller — Keef's bass stays firmly in the left channel, and there's something missing in the middle.



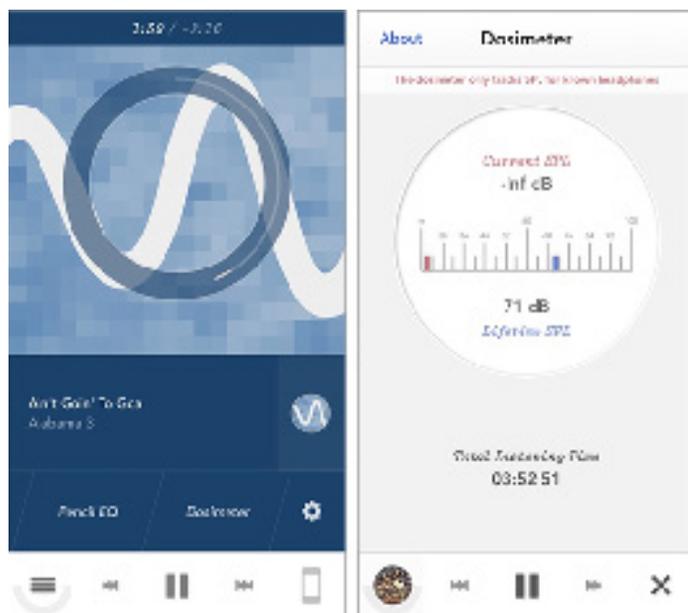
While CanOpener includes only six presets, compared to the myriad options you can access via Settings > Music > EQ when you're playing your music in the Music app, it has another significant benefit — you don't need to leave the app to change your EQ setting.



Other presets offer differing degrees of crossfeed: Lifelike reduces the extent of crossfeed, while Wide Soundfield simulates speakers placed further apart. Any of these effects can then be modified and customised further in a user-friendly interface, about which more presently.

CanOpener also features a noise dosimeter to measure the sound pressure levels that are being applied to your ears as you listen to your music. It tracks the current pressure level of your music, as well as the typical sound pressure levels you've exposed your ears to over the total time you've been listening to CanOpener, which the app also conveniently tracks for you.

In addition to the Pencil equalizer, CanOpener offers two more features as in-app purchases, Speaker+ and Hi-Fi Pack. The Pencil equalizer allows fine tweaking of the app's audio output, and many users will, I'm sure, find it a worthwhile purchase. It's harder to make a case for the \$2.99 Speaker+, which purports to enhance the output of the iPhone's built-in speakers, but since I rarely listen to my phone this way, I've been unwilling to spend as much as the total cost of the basic app for one additional feature that seems to be of marginal utility. I've similarly shied away from the Hi-Fi Pack; I have no need for an add-on that claims to resample sounds recorded at a 192KHz/24-bit sampling rate. I'm happy with the boost my music receives from CanOpener, and I'm satisfied that it has been worth the \$2.99 price, but in-app purchases that bring the total cost up to almost \$15 seem significantly less essential. The Pencil equalizer at least offers three-minute trials before you buy; with Speaker+ and Hi-Fi Pack, you're taking your chances sound unheard.



CanOpener also offers a well-designed and powerful graphic equalizer. Its presets contain half a dozen usual suspects: Bump is, essentially, a bass booster, while More Air and Brighter lift the high end to varying degrees. I tend to favour A Lil' Mo Hi-Fi, which lifts both bass and treble. Pencil equalizer, a graphic equalizer with a drawing interface that marries sound-shaping with vector graphics, is powerful but available only as a \$3.99 in-app purchase.

CanOpener is almost as much fun to look at as it is to listen to. In equalizer mode, its spectrum analyser provides its information via colour, rather than the more typical wave-form shapes. Navigating through a song is also unusual — scrubbing is done in a circular motion, rather than in a straight line, as though one were using an original iPod. A lot of thought has gone into the design of the interface of this app.

CanOpener has full access to the music files on your iOS device, playing MP3, AAC, and Apple Lossless files. It can also — appropriately enough for an app aimed at music lovers looking to get the best sound possible from their music — handle FLAC files, setting it apart from Apple's Music app. Add FLAC files to your desktop iTunes library

and send them to your iPhone via a sync, and while the native Music app won't know what to do with them, CanOpener will add a FLAC tab alongside those for artists, playlists and so on.

What CanOpener can't do is play streaming files, so it can't work its musical magic on, for example, streamed music from iTunes Match, iTunes Radio, or independent services like Spotify, Rdio, and Pandora. There is a potential work-around for services that offer APIs — the app Djay, for example, can work with music from Spotify, so CanOpener's developers could in theory incorporate a similar capability.

by Adam C. Engst and Rich Mogull

Apple Pay Aims to Disrupt Payment Industry

Apple CEO Tim Cook concluded Apple's special event last week by bringing U2 on stage, but the theme song for the middle part of the presentation could have been ABBA's "Money, Money, Money." As the 1970s Swedish supergroup sang, "It's a rich man's world," and nowhere was that truism more apparent than in Apple's announcement of the [Apple Pay](#) mobile payment system, due in October 2014 as a free update to iOS 8.

With Apple Pay, Apple's self-described mission is to replace your wallet, enabling you to pay a bill by holding an iPhone 6 or 6 Plus, or the forthcoming Apple Watch, up to a payment sensor. No more fumbling with credit cards and signing receipts, or worrying about having enough cash. In theory, at least, Apple Pay both improves the payment experience and brings new levels of security and privacy to credit card payments.

(Not to quibble too much, but replacing a wallet is a much larger task, given that carrying official identification — such as a driver's license — is mandatory or at least a good idea in many countries. Plus, we're still a ways off from a truly cashless society.)

Apple Pay Payments — The comment about it being a rich man's world relates to Apple being perhaps the only company that's sufficiently large and powerful to entice both the financial industry and enough major retailers to support a new payment system. The concept is far from new, and even companies as large as Google and PayPal have tried and largely failed to create mobile payment systems. The problem is one of size and coherency, and overcoming the inertia of the existing credit card system. The previous attempts at solutions weren't enough of an improvement, due to the fuss of setup and never knowing which retailers would accept your particular system's technology or app.

For Apple Pay, Apple has lined up support from Visa, MasterCard, and American Express, and is working with a number of large banks to cover 83 percent of all credit card

It might seem a little strange to try to produce audiophile quality sound with headphones connected to a smartphone or a tablet playing compressed audio files. But CanOpener does a surprisingly good job of wringing the last bits of detail out of a song, and as I listen, over my Sony MDR-V6 studio monitor headphones, to the Cowboy Junkies' unspeakably beautiful [Postcard Blues](#), from their wonderful 1988 album "The Trinity Session," I can close my eyes and believe I'm in Toronto's Holy Trinity Cathedral. It's that good. 🎧

use in the United States. (Apple said they were "working hard to bring Apple Pay to even more countries."). Even more important, Apple has convinced numerous major retailers that already support contactless payments to work with Apple Pay, meaning there will be at least 220,000 stores taking Apple Pay at launch. Some of the retailers include the Apple Store (of course!), Disney, Macy's, McDonald's, Nike, Panera Bread, Petco, Sephora, Staples, Subway, Walgreens, and Whole Foods, among others.

Apple is also taking advantage of its ecosystem to enable developers to add Apple Pay directly to apps, which will provide one-touch (with the Touch ID sensor in the iPhone 6) checkout of orders made within apps. Apple's SVP of Internet Software and Services Eddy Cue talked about it working within the Apple Store app, as well as apps from Groupon, Major League Baseball, department store Target, and ride-sharing service Uber. Most interesting was the mention of the restaurant reservation service OpenTable; at participating restaurants, you'll be able to both book a table via the OpenTable app and pay your bill when you're done eating. We expect that most apps doing payment will support Apple Pay quickly; the payment-processing company Stripe has announced that [apps that use Stripe will be able to accept payment via Apple Pay](#) once it launches.

Nothing was said about making it possible to use Apple Pay within a Safari-hosted Web page, but it would seem logical for Apple to attempt to crack that nut.

The huge question is whether Apple is taking a percentage of each transaction that runs through Apple Pay. This wouldn't be the 30-percent chunk that Apple extracts as a transaction fee for all sales through the App Store, Mac App Store, and iBooks Store. But it could be along the lines of the 2.9 percent and 30 cent fees that companies like PayPal and Stripe charge. We're seeing conflicting reports about this. Benedict Evans of the VC firm Andreessen Horowitz [said on Twitter](#) that "Apple does not charge users, merchants or developers to use Apple Pay for payments." That may be true, but Bloomberg is reporting that [Apple will be charging banks a portion of the so-called](#)

“swipe fees” that they collect from merchants. Swipe fees account for \$40 billion annually, so even a small percentage of that could add up fast for Apple. The BankInnovation blog is also reporting that [Apple has negotiated with the banks for lower “card present” rates](#) for payments via Apple Pay, which will result in Apple saving roughly 10 percent on the processing fees it pays.

Apple Pay Security and Privacy – The Apple Pay system relies on near-field communication (NFC), a technology that uses extremely short-range radio waves to establish a two-way communications channel. This is unlike RFID (the technology used to tag pets) which works in only one direction. NFC has been used for payments for a number of years, but typically with stand-alone dongles kept on your physical keychain. This isn’t the first time we have seen NFC on a phone, but never at this scale.

More important is how Apple architected Apple Pay to ensure both security and privacy (and they’re very different). On the security side, Apple relies on the combination of the device and their back-end payment system: the device to handle the secure request for payment, and the back-end system for the secure processing of the payment, all without exposing your identity or credit card details.

When you enroll a credit card on your iPhone 6 (by taking a photo of it), your card number is associated by the credit card company with a unique payment token that is then stored in the secure element of your iPhone. The card number itself is never stored on the phone.

This approach, called “tokenization,” changes the payment process. Instead of sending the credit card number to the merchant, Apple Pay sends the token, which the merchant then transmits to the payment processor, who matches it up with the actual credit card number in their highly secure back end to complete the transaction.

Tokenization has been around for quite a few years, and has grown in popularity since it reduces the risks of card breaches (and especially the compliance costs for merchants). Your actual credit card number is never exposed during a transaction, merely a token that can be regenerated whenever necessary, without forcing you to re-enter your card number for all your recurring bills.

In Apple’s case, it seems the token is tied to a specific device. Lose it, and you can wipe the token using Find My iPhone. Then, just take a picture of your cards to re-enroll them on your new (or recovered) phone. This dramatically reduces your risk since your card numbers are never exposed, not even to the merchant. If a merchant is breached, I suspect Apple will either ask you to regenerate the token, or handle it on the back-end system.

Apple’s Eddie Cue also mentioned that a one-time code is used in the transaction, which could be a more complex form of tokenization that protects both your card and the token associated with your device. That likely eliminates the risk of a lost token being used like your credit card for fraud.

Keep in mind that, as a credit card customer, you have zero liability for fraudulent purchases, but those costs are pushed onto merchants and banks, especially when the bank needs to reissue a card. Also, believe it or not, fraud rates are at near-historic lows, but have been creeping up recently due to the larger breaches.

In terms of privacy, Apple Pay doesn’t go as far as the anonymity of cash, but it’s a lot better than today’s credit card world. First, with Apple Pay, cashiers won’t even see your name, credit card number, or security code. And Apple doesn’t know what you buy, where you buy it, or how much you paid. It’s not as private as cash because the purchase information is still recorded by the merchant and your bank, but it’s better than where we are today with credit cards. It is also consistent with Apple’s unofficial policy of collecting as little personal information on customers as possible.

A Significant Disruption – Apple Pay has the potential to disrupt the existing payment industry (one Rich deals with extensively as a security analyst). It is likely the largest deployment of both tokenization and NFC technologies we’ve seen. Although Apple Pay will initially be limited to those who buy the iPhone 6 or 6 Plus, the Apple Watch will expand the audience to anyone who has an iPhone 5, 5s, or 5c as well, since the Apple Watch will work with those models and includes NFC and Apple Pay support. And with millions of customers in play, merchants will have more and more incentive to buy into NFC readers, which will in turn benefit other NFC-based payment systems.

The payment industry has attempted to change consumer, merchant, and banking behaviors as we’ve entered the digital era, due in large part to increasing concerns over card thefts and fraud. Apple Pay’s combination of improved user experience, reduced risk, and increased consumer privacy could shake up how we buy things, both in person and online. 🗑️



by Julio Ojeda-Zapata

FunBITS: Hosting Backyard Movie Night

I've wanted to host movie nights with a projector and screen in my backyard all my of life. Alas, as a longtime condo and apartment dweller, I did not actually have a yard.

That changed recently when I moved with my family into a nice St. Paul, Minnesota, house with a big yard suitable for all kinds of social gatherings.

Hello, movie night.

Jumping at the chance to create a memorable event for friends and neighbors, I set out to acquire and master the technology required for this.

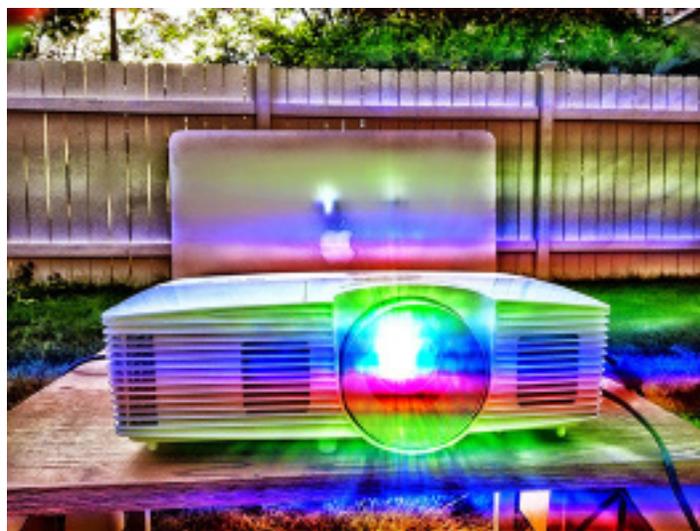
I ended up putting on three movie nights, the first two screening "Frozen" for kids in my social circle, since these tykes skew female and Elsa-obsessed, and the third a showing of "The Matrix" for my 16-year-old son.



The nights were magical, with the little girls in princess outfits and glow-stick headbands singing along to "Let It Go" and the other "Frozen" tunes.



These were Apple-flavored shindigs, too, with a classic [Apple iPod Hi-Fi boombox](#) providing surprisingly rich and powerful sound, along with my MacBook Air to run "Frozen" during one of the showings (for the other, I harnessed a Microsoft Surface Pro tablet).



But figuring out the tech was not always easy. Here are my takeaways for anyone who might wish to take advantage of a warm summer night.

Pick Your Projector Wisely – For my movie-night experimentation, I borrowed a pair of projectors: [Acer's \\$549.99 H5380BD DLP Projector](#) and [Epson's \\$799 PowerLite Home Cinema 750HD](#). They connect to my computers via an HDMI-to-DisplayPort adapter.



Both turned out to be pleasant surprises. Neither suffered from the dreaded dimness that plagued mainstream projectors years ago. Even at dusk, with a streetlight adding to the ambient illumination, the projectors pumped out more than enough light to show three Pixar shorts prior to the main feature.



The Epson projector proved to be problematic because its audio output options don't include an auxiliary port, which is what my iPod Hi-Fi required. Thankfully, the Acer projector has that port.

On the plus side, the Epson has duplicate sets of controls: one set on its remote and one on the main unit. In contrast, Acer users are dependent on the projector's remote for many of the projector functions.

Don't Overreach — My wife and I initially planned to build a screen using white fabric and plastic pipes which would have meant hours, if not days, of toil.

Then she stumbled on a Best Buy 113-inch collapsible screen with tripod-like legs for a reasonable \$100. It's smaller than our handmade screen would have been, in all likelihood, but it took only a few minutes to set up. It's currently out of stock at Best Buy, but [Amazon offers it](#) for \$109.

This is a modest setup compared to that of my friend and Apple troubleshooter Mark Fawcett of St. Paul, who told me he once used an old highway billboard as the display

centerpiece for his tricked-out movie night, an event attended by neighbors for blocks around. I'm not that ambitious (well, not yet).

Allocate Plenty of Setup Time — Since I had never tackled anything remotely like this, I needed a ton of time — several evenings prior to each of the movie nights — to experiment and perfect my setup.

Just setting up the screen ate up a lot of time. It tended to flap and twist in the wind, so I anchored it to the ground from either side using twine pulled taut (if you need help with this, Knots 3D is a useful app that Josh Centers profiled in "[FunBITS: Learn Knot Tying the iPhone Way](#)," 22 August 2014). Getting the projected imagery to be perfectly rectangular, and to fit precisely within the screen, was another ordeal. Fortunately, both projectors make compensating for angled "keystone" or "tombstone" distortion relatively straightforward.

I'm a raging neatnik with OCD overtones, so I wanted my setup arranged just so with the unsightly cords tucked out of sight, the projector aligned precisely with the iPod Hi-Fi, and so on. This took a while, but I felt oh-so-much-better for it, and I didn't have to worry about my young moviegoers tripping over cables and potentially hurting themselves or the equipment.

Keep Your Stuff Organized — I was surprised at how many items I had to juggle — cables, adapters, chargers, and so on — and how easily things could go missing in the grass. I even managed to lose the remote for the Acer projector at one point.

It's a good idea to use a duffel bag or cardboard box to keep all your materials consolidated — with cords wound and wrapped with twist ties or packing tape. I used a little messenger bag to organize my gear for the second showing, which was a big stress reducer.

Let It (The Internet) Go — My Surface Pro was about halfway through its "Frozen" showing when a "[Sex with Emily](#)" Gmail notification popped up on the lower-right corner of the screen... and stayed there for several minutes until I noticed it.

I'm not embarrassed about subscribing to an email newsletter from Emily Morse, the sex and relationship expert, but it's not the kind of thing I want appearing on my projection screen during a kid movie night.

I publicly professed not to be mortified, per the tweet below, but, truthfully, I was, a little bit. On the bright side, I learned I have super-cool neighbors.



The moral of the story is that I should have switched the Surface tablet to airplane mode. On a MacBook Air or other laptop, it would have been wise to deactivate Wi-Fi. (An app like CoverDesk may have helped, as well.)

Don't Stop! – The “Frozen” nights went so well that we decided we were not done for the year.

Giving the big kids their turn, we helped our 16-year-old son organize a screening of “The Matrix” and a bonfire to enjoy with friends (no adults allowed, except for his parents on A.V. and snack-server duty).

This event was also a smash success — except for the surprise return of Minnesota’s state bird, the mosquito, which had been mysteriously absent from the “Frozen” screenings. When we ran out of bug spray, my wife had to make an emergency Target run.

And in a few weeks, my friend and “[Minimal Mac](#)” blogger Patrick Rhone and I will be hosting a backyard “Phantom Edit” screening with a version of the vile “Star Wars: The Phantom Menace” that [has been re-edited](#) to be, I have been led to understand, actually enjoyable.

Thanks to these movie nights, this has shaped up to be one of my best summers ever. 🍷

by Tim Sullivan

Rumors and Reality

Around Apple

– **The word of the day** is “security.” Apple introduced an optional two-step verification for your Apple id. It requires you to verify your identity using one of your devices before you can take any of these actions:

- Sign in to [My Apple ID](#) to manage your account
- Make an iTunes, App Store, or iBooks Store purchase from a new device
- Get Apple ID related support from Apple

For more informations, checkout [Apple’s support page](#).

– **iPhone 6** can bend (permanently.) Be careful of sitting on it. Apple is not likely to replace the iPhone.

iOS8 requires up to 5.8GB of storage to load.

Apple users can avoid the need to free up storage space before installing the latest update by upgrading their soft-

ware via iTunes on a Mac or PC, instead of through the phone or tablet itself.

If you have installed iOS8, check here. It contains helpful hints for rough spots in the new system.

Medical ID in iOS8: One of the biggest new additions in iOS 8 is “Health,” a new application that will serve as a central place for users to track and organize all of their health-related data. With it comes a new Medical ID that could help first responders make life saving decisions in the event of a medical emergency.

Tap Medical ID. Then tap Edit to add information such as birthdate, height, weight, and blood type. You can also add emergency contacts.

Turn on Show When Locked to make your Medical ID available from the Lock screen. This lets people helping you in an emergency get important information about you.

They'll also be able to contact people you've entered as emergency contacts.

Here's how to access Medical ID when your device is locked:

- Swipe to unlock. It's not necessary to actually unlock your phone
- Tap Emergency.
- Tap Medical ID, on the emergency dial screen.

Don't renew you Macworld subscription. They are dispensing with the print edition.

Worried about the security of iCloud storage? A friendly reminder: You can manage iCloud storage by going to Settings > iCloud.

Only a day after a British hospital reported that its practice of using iPad and iPods to monitor patients' health had led to lower mortality rates, a new crowd-funded project has popped up on IndieGogo claiming that Apple's iPhone might be able to help wipe out malaria on the Indonesian island of Bangka.

The team, known as IanXen, plans to use Bangka as a testing ground of sorts before tackling more ambitious projects over in Africa. The team will use a IanXen RAPID kit that will outfit an iPhone with a portable microscope, a lancet pen, and blood slides, thus allowing them to use the microscope to examine the slides with a microscope and make diagnoses within five seconds. The key attraction of the process is that it's relatively cheap, and could therefore make more headway in regions ravaged by malaria than conventional equipment.



According to the project's IndieGogo page, "3.3 billion people live at risk of malaria across 106 malaria-endemic countries. Although the risk is widespread, cases and deaths are concentrated in Africa. In 2010, over 80 percent of 216 million estimated cases and over 90 percent of 655,000 estimated deaths occurred in Africa. Prompt diagnosis and effective treatment are the cornerstones of malaria case management; patients recover rapidly if diagnosed and treated early."

Sound like a cause worth fighting for? You can help out the team with a starting donation of £5 (\$8.50), which will net you a mention on the project's Twitter feed. You can, of course, donate even more.

That little USB plug that is used to attach to all kinds of electronic equipment has an dark side. Inside that little square plug is a controller chip which regulates the function of the USB.



Basically, every USB device has a class — a classification that defines the device's function. Some common classes are human-interface devices (HIDs [Human Interface Devices] such as keyboards, mice), wireless controller (Bluetooth dongles), and mass storage (thumb drives, digital cameras). On the host (your PC, your smartphone) there are class drivers that manage the functions of that particular class of devices.

The controller chip contains a program that allows the USB plug to do what it does. That program can be modified and turned into an analog of Frankenstein's monster. (The articles that I've used for research aren't very clear how that is accomplished. I suspect that some sort of downloaded malware would be involved.)

A couple of points that have some people really worried:

- It's impossible to spot the modified firmware unless you know exactly where to look.
- The only way to eliminate that changes in the device are to destroy the device.

If you want to worry a lot about this sort of thing, search for BadUSB.

OS X 10.10 Yosemite, following on from Mavericks, is to be offered as a free upgrade for existing Mac users of any OS X version from 10.6.7 Snow Leopard onwards. Snow Leopard 10.6.7, Lion, Mountain Lion and Mavericks all have the Mac App Store, which is a requirement for the digital download delivery mechanism to install OS X 10.10 Yosemite.

As of its beta release, OS X 10.10 Yosemite is compatible with all Macs that are capable of running OS X Mountain Lion (and some earlier systems). The compatibility list is very similar to that for the release of OS X Mavericks, last year.

- iMac (Mid-2007 or later)
- MacBook (13-inch Aluminum, Late 2008), (13-inch, Early 2009 or later)
- MacBook Pro (13-inch, Mid-2009 or later), (15-inch, Mid/Late 2007 or later), (17-inch, Late 2007 or later)

- MacBook Air (Late 2008 or later)
- Mac Mini (Early 2009 or later)
- Mac Pro (Early 2008 or later)

In order to run OS X 10.10 Yosemite, the Mac must have at least 2GB of memory. Beta testers recommend that 4GB being an absolute minimum for Mavericks, which will run very slowly indeed.

Ideally, you should look at 8GB RAM being the minimum to run Yosemite and install more if you can afford it. One good place for memory upgrades for a Mac is [Crucial](#).

To check to see if how much memory is installed in the Mac, click on the Apple at the farmost left of the menu bar and select About This Mac then click More Info followed by the Memory tab.

Not all software is forward compatible with new systems. If you have some favorite software that you can't live without, consider setting up a bootable external drive with your current system. Carbon Copy Cloner or SuperDuper can clone your operating system and applications.

I really like Siri, but I think I'm in love with Viv.

Siri is a lot of fun, but she is at the mercy of Apple's programmers. If you were to ask her for something other than what she has been programmed for, you will be disappointed. Ask her to book a plane trip and she can point to travel websites — but she won't give flight options, let alone secure you a seat. Putting different pieces of information together is, at the moment, beyond her.

Viv, still in the design and development phase, breaks through those constraints by generating its own code on the fly, no programmers required. It is able to access a variety of different data bases to create a solution. Take a complicated command like "I'm drunk." Without any elaboration, Viv would contact the user's preferred car service, dispatch it to the address where he's half passed out, and direct the driver to take him home. And it can do all of this in a fraction of a second.

This new program, they say, will be able to teach itself, giving it almost limitless capabilities. In time, they assert, their creation will be able to use your personal preferences and a near-infinite web of connections to answer almost any query and perform almost any function.

I didn't know that: the dictionary application has all sorts of interesting information. Launch Dictionary. Select Go > Front/Back Matter.

Besides several Guides, there is

- The History of English
- States of the United States of America
- Presidents of the United States of America
- Declaration of Independence
- Constitution of the United States of America
- Countries of the World
- Chemical Elements

- Standard Weights and Measure with Metric Equivalents and Conversions
- Metric Weights and Measure with Standard Equivalents and Conversions
- Alphabets

Using your desktop: I don't keep many files or folders in my Desktop. The Desktop is a folder in the users portion of your computer. Stuff in there shows up as icons on your screen.

There is an app named WindowServer that is always running when your Mac is on. It manages the windows and icons on the desktop. With today's speedy CPUs it probably doesn't really use that many CPU cycles. But WindowServers does still use a little bit of CPU time. When Macs were slower it was more of a consideration.

Apparently there is a more pressing reason to limit the number of files and folders in the Desktop folder. Apple has a feature called Quick Look. It allows you to select an item and preview it with a quick tap of the spacebar. It supports many file types.

Quick Look stores previews of Desktop files in memory. As memory fills up, speed slows down.

For strategies on dealing with a cluttered Desktop, check [here](#). 🗑️



September Software Review

Apple Updates

Security Update 2014-004 (Lion)

Sep 17, 2014 – 144.5 MB

System Requirements

- OS X 10.7.5

Security Update 2014-004 is recommended for all users and improves the security of OS X.

OS X Mavericks 10.9.5 Update

Sep 17, 2014 – 275.5 MB

System Requirements

- OS X 10.9.4

The OS X Mavericks 10.9.5 update is recommended for all Mavericks users. It improves the stability, compatibility, and security of your Mac.

This update:

- Improves the reliability of VPN connections that use USB smart cards for authentication
- Improves the reliability of accessing files located on an SMB server
- Includes Safari 7.0.6

Security Update 2014-004 (Mountain Lion)

Sep 17, 2014 – 139.3 MB

System Requirements

- OS X 10.8.5

Security Update 2014-004 is recommended for all users and improves the security of OS X.

OS X Mavericks 10.9.5 Update (Combo)

Sep 17, 2014 – 982.3 MB

System Requirements

- OS X 10.9

The OS X Mavericks 10.9.5 update is recommended for all Mavericks users. It improves the stability, compatibility, and security of your Mac.

This update:

- Improves the reliability of VPN connections that use USB smart cards for authentication
- Improves the reliability of accessing files located on an SMB server
- Includes Safari 7.0.6

Security Update 2014-004 Server (Lion)

Sep 17, 2014 – 194.8 MB

System Requirements

- OS X 10.7.5

Security Update 2014-004 is recommended for all servers and improves the security of OS X.

Digital Camera RAW Compatibility Update 5.07

Sep 16, 2014 – 7.3 MB

System Requirements

- OS X Mountain Lion 10.8.5 w/ iPhoto 9.4.3 or Aperture 3.4.5
- OS X Mavericks 10.9 w/ iPhoto 9.4.3 or Aperture 3.4.5

Digital Camera RAW Compatibility Update 5.07

This update adds RAW image compatibility for the following cameras to Aperture 3 and iPhoto '11:

- Nikon D810
- Panasonic LUMIX DMC-FZ1000

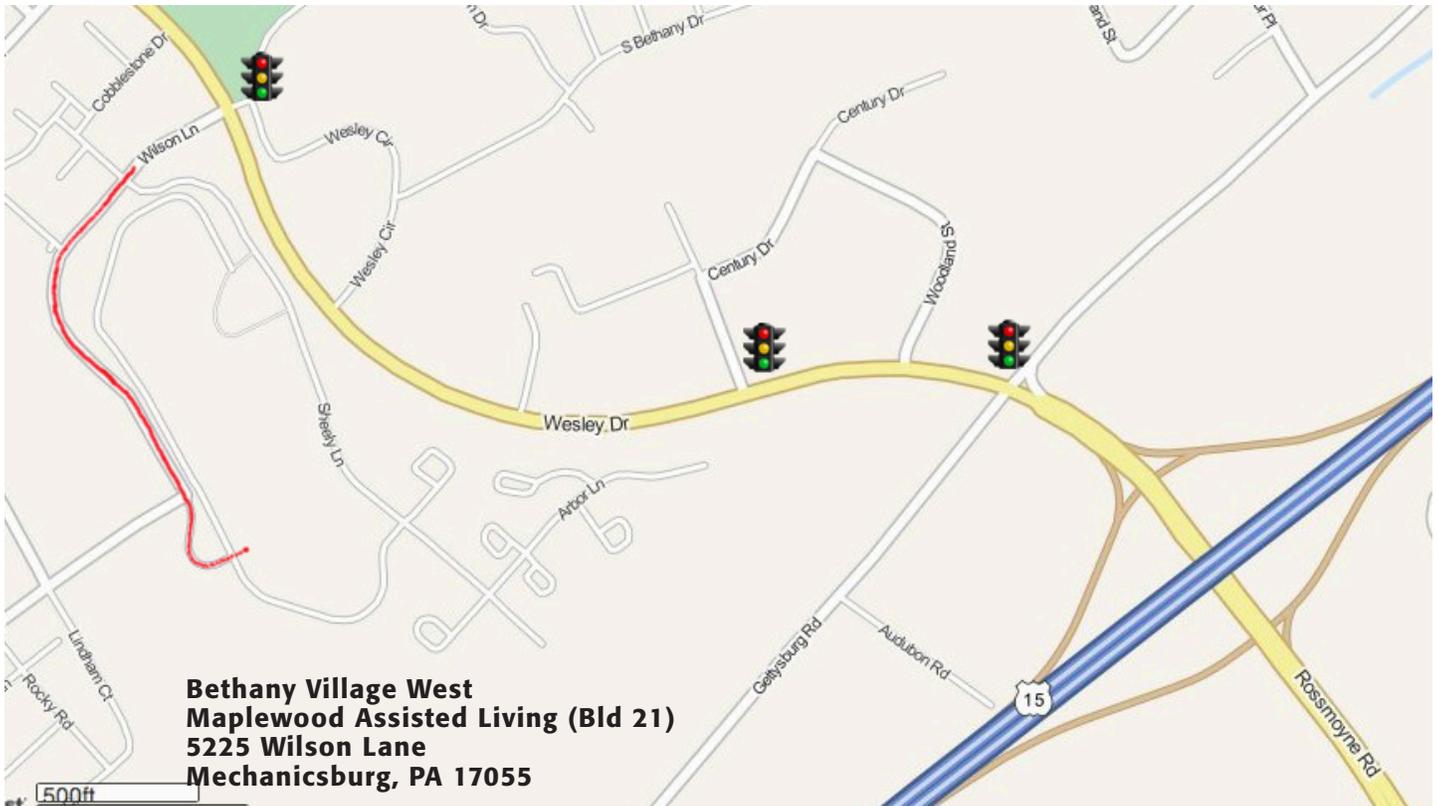
iTunes 11.4

Sep 9, 2014 – 242.92 MB

System Requirements

- OS X version 10.6.8 or later
- 400MB of available disk space
- iTunes in the Cloud, iTunes Match, and iTunes Radio availability may vary by country
- iTunes Radio requires OS X version 10.7 or later
- iTunes Extras requires OS X version 10.9.3 or later

iTunes 11.4 now supports the ability to sync your favorite music, movies, and more to devices with iOS 8. 📱



If the doors are locked, press the "Intercom" button.
Tell them you are attending the Keystone MacCentral computer meeting.
We will be in the Education Training Room.

