

THE APPLE BARREL

the **JOURNAL** of the **HOUSTON AREA APPLE USERS GROUP**

Volume 38 · Issue 10

October 2016

A New Mountain Range for Macs

macOS Sierra Ships with Siri, Universal Clipboard, and More

by Ryan Eisworth, page 2

Three Tips for watchOS 3

by Josh Centers & Michael Cohen, TidBITS, page 5

Apple Memorial City Reopens

submitted by Jim Connell, page 6

October Meeting News

Next Meeting: October 15, 9 AM to 1 PM
SIG schedule and venue information on *page 4*



The Apple Barrel
is a monthly publication of
The Houston Area Apple Users Group (HAAUG)
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Houston, TX 77257-0957

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Houston Area Apple Users Group is Houston's oldest and largest Apple User Group. If you are interested in joining HAAUG, please call the HAAUG hotline at (832) 305-5999 or sign up via our web site at www.haaug.org.

Annual membership is \$35 for regular members, and \$10 for

student members (limited to students enrolled at a high school, community college, or university.) The Hotline is also the Mentor line if you need help. Guests are welcome to attend one or two meetings to get acquainted with HAAUG, but participation in certain activities may be limited to members only. For a full list of membership benefits as well as a form to join HAAUG by mail, see the Membership Benefits page later in this issue.

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by Phil Booth, 2016 HAAUG President

- 1 Boss HAAUG Speaks**
by Phil Booth
- 2 Apple Ships macOS Sierra**
by Ryan Eisworth
- 4 Club and Meeting News**
- 5 Three Tips for watchOS 3**
by Josh Centers, TidBITS
- 6 Memorial City Apple Store
Opens with Renovations**
Submitted by Jim Connell
- 7 Board of Directors
Meeting Minutes**
August 2016
- 8 Membership Benefits**

Moderate temperatures have arrived and it is pleasant to go outside. For a while Houston should be bearable. Fall has become the traditional time for Apple to release new versions of the iPhone and updates to both iOS and newly-titled macOS (RIP OS X).

Apple does not release iOS code names so there is no catchy marketing name for iOS 10. The Mac OS X started using big cats for their marketing names, but switched to California place names for the last three releases. The new version, nicked-named Sierra, was released on September 20th. If you watched the keynote from the World Wide Developer Conference you will know that this version (macOS 10.12) did not break any user interface ground; is a refinement on the last two versions of the Mac operating system.

The Mac now has Siri on the desktop and I have enjoyed asking her the score of the Astros game. I was not happy with the score but it is nice to have this service available. I am not a software engineer and I am sure that there are many improvements under the hood; things that make the system run faster and with fewer errors.

I told people in my office that I dove off the high dive into the shallow end by upgrading my phone to iOS 10. This is a day after there were reports that the upgrade “bricked” people’s phones. Thankfully nothing happened. My phone still functions and I am getting used to the subtle changes to the user interface. My iPad is not supported by this version of iOS so I will need to determine if I need a new iPad.

When it comes to upgrading my iMac, I cheated. Using the better Internet at work, I downloaded the 4 GB installer and, using a disk building utility, created a USB thumb drive install disk. The install went well and since there are no major UI changes, the difference was hardly noticed. The one casualty is that my Mid-2009 MacBook Pro is not supported, so I will be looking for an upgrade in hardware. The machine still works, but Apple said that the hardware will not support the new OS.

So some of my Apple devices are now running the latest and greatest versions of the respective OS. Stay tuned to see how I am coming with the new versions of Apple’s operating systems.

The leadership of HAAUG will be asking for folks to serve on the board. Please consider putting your name up for some leadership position. I am very thankful for the HAAUG members who have served several terms on the board.

Apple Ships macOS Sierra

by Ryan Eisworth

On September 20th, Apple released the newest version of their desktop operating system, now called “macOS.” The naming and stylization change has been received by various commentary; for me it is a welcome return to a familiar term and feels a lot better than when Apple dropped “Mac” from “Mac OS X” as they did for versions 10.8 through 10.11. I don’t think that the change from OS X to macOS was necessarily an effort to emphasize the Mac brand so much as it was to bring the name into consistency with iOS, watchOS and tvOS, but I’ll take it.

There are a few simple new features in Sierra: Siri is finally on the Mac, bringing the feature into parity with all of Apple’s other devices. Continuity now includes Universal Clipboard, allowing copying and pasting across devices, and Apple Watch users can configure their Macs to automatically unlock when they are nearby and wearing their Watch.

I suspect Apple really wants us to try Siri, given that after updating, I had a Siri icon in both my Dock and menu bar, as well as mapped to a keyboard shortcut (which by default is Cmd+Space—the same as Spotlight, but the keys are held down to activate Siri rather than the press-and-release used for Spotlight.) There is little difference between the functionality of Siri on the Mac versus Apple’s other platforms, but there are a few Mac-specific commands, some of which invoke Finder or allow changing system settings. For a full list, ask Siri, “What can I say?” One interesting feature I did notice is that some of Siri’s responses (for example, try asking what the weather is like outside) have a small “plus” button in their upper-right corner. Clicking this button will pin that response in the Today screen of the Mac’s Notification Center.

There are also some more complex additions. When I upgraded my machines to the new OS, I was asked if I wanted to store my local documents and my desktop folder in my iCloud Drive, allowing for those items to be synchronized across all my Macs (like iCloud Photo Library, but for Mac documents.) This is certainly a power-

ful and useful feature that will bring convenience, reduce Mac users’ dependence on third-party cloud services like Dropbox, and increase the marketability and utility of iCloud Drive. I’m not without my reservations though—an upgrading user who hurries through the setup assistant with the check box ticked could unknowingly and inadvertently start pushing several gigabytes (or more) of data to Apple’s servers. For users with lots of local documents and a metered Internet connection, it could be an expensive mistake with the potential to rack up data overage charges quickly.

There are also questions I have about how the new feature will handle sync conflicts, updates of large files, and if any compatibility issues will arise between the new feature and specific applications. I haven’t had a chance to test this feature extensively but for the time being I think it would be wise to exercise caution if you’re using it along with complex or database-driven applications that store information in the Documents folder. Always have a backup!

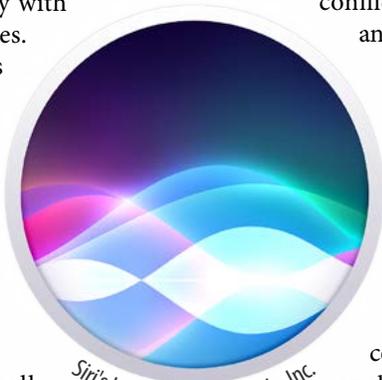
Mac users who find themselves tight on disk space may enjoy the new storage management features in Sierra. New tools allow you to automatically cull iTunes movies and TV shows that you’ve watched, and to keep only recent Mail attachments on disk (or none at all.) If you use the aforementioned iCloud Documents and Desktop feature, you can also have the system keep only recently-opened files on disk, with the full repository of documents remaining in iCloud. Users who opted for the smaller storage option on their machines might really enjoy this; it takes the manual labor out of keeping a reduced set of documents on a portable computer, as long as you have the iCloud storage space to hold your entire collection of Documents. *(On that note, take a moment to check your iCloud storage plan; I found that I was signed up for an obsolete 25 GB plan for \$11.99 per year, when there’s a 50 GB plan for \$0.99 per month available. I doubled my iCloud storage space while saving eleven cents a year!)* Just be sure to double check that your Mac really has copy of whatever documents

you’re planning to work on if you’re taking a trip somewhere without Internet access. The Mac also now has built-in functionality similar to but not as comprehensive as programs like [Grand Perspective](#), [DaisyDisk](#), or [OmniDiskSweeper](#), which help find and delete large files and folders taking up your Mac’s disk space. Apple’s interface shows a listing of large files (50 MB or more) in your Home folder, and gives you immediate access to show the file in Finder or delete it from the disk. The interface (which you can get to by clicking the Apple Menu choosing *About this Mac*, navigating to the *Storage* tab, and clicking *Manage...*) must be used with care, however, as files deleted through it bypass the Trash and go straight into oblivion.

If you wish all software had tabs like Safari (and now Finder) you’ll be glad to learn that Sierra tries to implement the feature for every application on the system. The feature works well for all of Apple’s apps that I have tried it with, including Pages, Numbers, and Mail. I’ve had mixed luck using tabs with third-party applications. Tabs are created by choosing *Merge All Windows* from the *Window* menu. This option just isn’t there in any Microsoft Office apps, nor Fetch. I was able to use tabs in my older version of GraphicConverter, though. When the feature is available it works very well and gives more options for organizing your windows on-screen. Over time I expect third-party apps that don’t work with the feature will be updated, but I suspect that older Carbon apps can’t be made to utilize tabs without a complete rewrite in Cocoa.

Another small user interface enhancement is “sticky” windows. Dragging a window near another window’s edge or a monitor boundary will make the window “snap” to the edges of the other window or monitor, allowing for easy, neat arrangement. This feature as grown on me, and while minor, it’s probably the main thing I would miss if I moved from Sierra back to El Capitan.

Sierra brings Apple Pay to the Mac in the Safari browser. You can use Apple Pay to pay for online purchases if the retailer’s web site accepts it as a payment option. I have yet to buy anything on a site that utilizes Apple Pay but it has the potential to help reduce online fraud as retailers would not have access to your credit card



Found on the web

iFixit Tears Down the iPhone 7

The folks over at [iFixit](#) have already voided the warranty on a brand new iPhone 7 Plus for your amusement and curiosity. To see the photos and tear down process, [click here](#).

The History of Apple Keynotes

Bryan Chaffin at [The Mac Observer](#) writes about a fun and information-filled web page compiling data about every Apple keynote since 1997. The information cataloged on the site, [NotesKey.com](#), is exhaustive. You can filter presentations by topic, the venue where the presentation was held, if there was swearing audible during the presentation (I'm not kidding!) and more. The site even catalogs every person who has spoken at the keynote events, offering hundreds of people, sorted by company or affiliation, to filter by. Be sure to check it out if you have a few minutes (or hours) to kill!



iPhone 7 Waterproofing Tested

Apple has touted the water resistance of their newest iPhone, so of course the Internet has tested the claim to extremes. [9to5Mac links](#) to a few videos of the iPhone 7 being tested against hot coffee, fizzy orange soda, and sea water. The good news: iPhone 7 really does seem to handle liquid abuse. Still, don't try this at home!

Discover something to share?

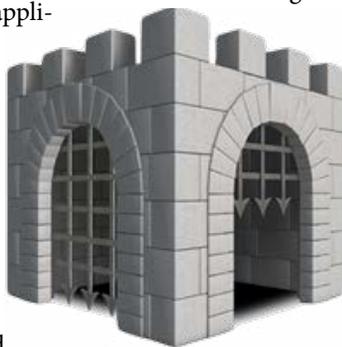
If you stumble on an interesting article that you want to share with the group, send it by email to editor@haaug.org!

number. When using Apple Pay in Safari, you complete the purchase by using Touch ID on your iPhone or iPad, or by approving the charge on your Apple Watch.

Aside from the widely-publicized user-facing features in Sierra, there's an interesting new security feature that I ran into called Gatekeeper Path Randomization (which I'll shorten to GPR from here-on; I've also seen it referred to as App Translocation.) GPR is designed to help secure the Mac from running unsigned code from software downloaded from the Internet. When you launch software downloaded from the Internet (or a few other sources) Gatekeeper first copies the application bundle to a read-only temporary space, and runs it from there. This prevents the application from having access to unsigned external resources that may have been distributed along with the application.

That sounds like a bucket of jargon; let's look at a simple example. You download a ZIP file that extracts a folder with an application and another folder inside. That other folder might contain Read Me files or a PDF manual, but it also might contain executable code. When you launch the application, Gatekeeper checks its signature and allows it to run, but it doesn't check the code that the app might run from the other folder. An application might run code from an external resource completely innocently, but what's to stop someone from replacing that external code with some form of malware and distributing the modified ZIP file on the Internet? Gatekeeper would not complain that the application's signature was invalid, because the application itself was never modified.

The new GPR feature would make it so our application in the example above would have no access to those external resources. While this might break some apps, there are simple workarounds. GPR is disabled after a user moves an application bundle. Simply dragging the application to the



Gatekeeper has new ways to protect your Macintosh in Sierra.

Applications folder (or anywhere else on the disk) will allow it to function just as it did before Sierra. Developers can also either internalize external resources into the app bundle (where they can be Code Signed and checked for integrity by Gatekeeper) or distribute their application in a signed disk image, which ensures the integrity of the entire contents of the disk image rather than just the application. One important note though, is that GPR is not disabled for an application if it is moved out of the downloads folder inside another folder. The application itself must be dragged and dropped, or GPR will keep doing its thing.

As the Mac grows in market share, it will continue to become a more attractive target for malware developers. It's good to see that Apple is continuing to implement new safeguards on the Mac.

All said, my experience with Sierra has been mostly positive. For the most part there isn't much of a difference between Sierra and the previous release, El Capitan. I have had a few "glitches" that I expect will be resolved in an update soon. I have received errors that applications can't open because they're "damaged or incomplete."

Restarting the application fixes this issue. I haven't figured out the cause yet but my suspicion is that it has to do with some new security protection and is caused by a race condition. Sometimes apps in my dock lose their icons (reverting back to that generic application icon that makes long-time Mac users wonder if they've fallen back in time and need to rebuild their desktop file) but removing the app from the dock and re-adding it fixes the issue. Adobe InDesign seems a bit crashier on this release of macOS, but since none of my other applications have had issues, this is probably an Adobe issue rather than an Apple problem. Other than that, everything is working well on my 2011 iMac and 2015 Retina MacBook Pro, so I can't complain!

Club and Meeting News

Coming Soon...

October's speaker is pending confirmation and will be announced shortly.

Saturday, October 15

Bellaire Civic Center

7008 South Rice Avenue, Bellaire, TX 77401

9 am - 1 pm

	Main Room	2nd Room	3rd Room
9:00 am	Mac 101 and Fundamentals SIG Jonathan Magnus	iOS SIG Rick Roberts	Photography SIG Phil Booth
9:30 am			
10:00 am			
10:30 am			
11:00 am	TBA		
11:30 am			
12:00 pm			
12:30 pm			
1:00 pm			
1:30 pm			Board of Directors Meeting
2:00 pm			

Special Interest Groups

Mac 101 and Fundamentals with Jonathan Magnus: The SIG for basic to advanced Mac topics.

iOS with Rick Roberts: Discuss all things iPhone, iPad, iPod, iTunes, and iCloud.

Photography with Phil Booth: For all interests related to digital photography.

Special Interest Group and Ad Hoc Meetings: Groups are welcome to use the casual spaces to meet on other topics. Scheduled SIGs take precedence. If you have an idea for a SIG, email the HAAUG SIG Coordinator at SIG_Coordinator@haaug.org!

Upcoming Events

November 19, 2016

Raf Batista, Houston FileMaker Developers, Users and Trainers

January 21, 2017

HAAUG Semi-Annual Swap Meet

Join the HAAUG Board of Directors!

We will soon be asking for members to volunteer to serve on the Board of Directors. Please consider putting your name up for a leadership position. For more information, talk to any board member at a meeting or send an email to president@haaug.org.

Swap Meet Registration Starts Soon

Registration for the January 21, 2017 swap meet will open soon. Now is the time to start gathering your unused computer and electronic equipment, clearing your personal data off hard drives, and tracking down those power supplies and cables you've misplaced!

Meetup Group

The Houston Area Apple Users Group is now on Meetup.com! Click here to visit our group's Meetup page and join. We will of course continue to publish all meeting news on our website at haaug.org, to our Facebook group, and all other outlets as usual; this is simply an additional way to market our organization to the local community. If you are already a HAAUG member and join the Meetup group we will mark your dues as paid on the Meetup website, so you won't have to pay HAAUG dues twice!

HAAUG Website Updates

If you haven't visited the [HAAUG website](http://haaug.org) recently, stop by and check it out. Learn more about the organization, get up-to-the-minute news and updates, and browse the Apple Barrel archives, dating back to 1996!

Submit Your Content to Apple Barrel!

Have you tried a new Mac or iOS application? Found a neat accessory for your iPhone? Want to share a cool tip you've come across? Write about it, and send your column to editor@haaug.org. You can help make the Apple Barrel a better publication while providing valuable insight and opinion to your fellow HAAUG members.

Three Tips for watchOS 3

by Josh Centers and Michael E. Cohen

Look at the time — watchOS 3 has arrived! You can install the 561 MB update by opening the Watch app on your iPhone and navigating to My Watch > General > Software Update. To install the update, the Apple Watch must be near the iPhone, the iPhone must be connected to Wi-Fi, and the Apple Watch must be connected to its charger and have at least a 50 percent charge. You also must have iOS 10 installed to perform the update. Note that in our testing, the update took a very long time — perhaps start it before bed. We've also heard that you may need to unlock the watch manually to complete the update.

We covered the new features of watchOS in [“Why watchOS 3 Will Be Nimble and Nifty”](#) (13 June 2016), but here are the high points for the update:

- Glances are gone. Now, when you swipe up from the bottom of the screen, you reveal Control Center.
- The Friends view has been replaced by an app dock. Apps placed in the dock load almost instantly.
- You can switch between faces by swiping from the left or right edge of the watch screen.
- The new Breathe app reminds you to take a short meditation break during the day.
- The Messages app offers some new features; most notably, the new Scribble option, which lets you manually enter a message by drawing one letter a time.
- You can press and hold the side button to initiate an emergency call — 911 in the United States.
- watchOS 3 comes with new built-in apps: Reminders, Home, and Heart Rate. The Heart Rate app replaces the equivalent glance in watchOS 2.
- Watch faces can display new complications, such as Weather Conditions, Home, and Remote.

Overall, we've appreciated Apple's changes in watchOS 3, which significantly refine what was previously a rather rough experience. Annoyances remain — for instance, the app cloud is nearly impenetrable for those who don't interpret icons well or whose vision isn't perfect. Here are three quick tips for using watchOS 3 effectively:

Set Up Faces — In watchOS 3, you can easily switch between watch faces, each with its own set of complications. With a bit of thought, you can set up a few favorite faces for different uses. Here's what Josh Centers is exper-

imenting with:

- One face for business, with the Modular face and date, Calendar, Mail, Reminders, and Messages complications.
- A Mickey Mouse face for chilling on the couch, with Home, Remote, and battery life complications. In Apple's ongoing quest for diversity, watchOS also now features a Minnie Mouse face!
- A tip: Once you've added the Mickey or Minnie face via the iPhone Watch app's Face Gallery, tap the face in My Watch > My Faces, scroll down and enable Tap to Speak Time. Then, as long as your Apple Watch isn't in silent mode, tapping Mickey's or Minnie's nose will cause them to speak the time out loud.
- An Activity Digital face, with Heart Rate, Workout, and Apple Music complications.
- A Utility outdoor face, with complications for moon phase and weather.
- A Simple watch face for nights out on the town, with complications for weather conditions, weather, Messages, and Maps.

Don't worry about removing faces that you don't use, since you can add any of them back from the Face Gallery in the iPhone's Watch app.

Tweak Your Dock — The new Dock that replaces the circle of friends formerly available from the side button is great, as it holds up to ten of your most commonly used apps, ready to run. You should see fewer delays when loading apps in watchOS 3 generally, and even fewer delays when you load them from the Dock.

To use a Dock app, press the side button, swipe left or right to the app of your choice, and then tap the app thumbnail. Any app you launch that isn't already in the Dock gets added to the end... as long as you haven't reached the maximum of ten docked apps. To remove an app from the Dock, swipe to it, and then swipe up to reveal a remove button.

If you want to make wholesale changes to your watch's Dock, you can do it more easily in the Watch app: My Watch > Dock takes you to an editing screen where you can quickly choose, rearrange, and delete apps

from the Dock. Just tap Edit and fiddle to your heart's content!

Get Fit Without Extra Complications — Among the additions to the new faces provided by watchOS 3 are a set of Activity faces. If you've felt limited by having to devote a precious complication slot on a watch face to your Activity rings, one of these faces may be for you. The complete gallery includes both Analog and Digital face versions that include the Activity rings as part of the faces. For example, you can have an analog face with three separate rings included, along with slots for three complications.

Or, if you want a large, easily readable digital face, you might want to try the large print digital version. This face also has three complication slots in addition to the rings that are incorporated into the face.

For added exercise efficiency, you can add a Workout complication to the face so that, with a single tap, you can launch the Workout app. And, as an added bonus, the Workout app lets you specify one of your workouts as a “Quick Start” workout, so you can get moving quickly.

Talk to the Wrist — It's telling that Apple dumped glances and the friend circle unceremoniously, presumably in response to research showing that they were either little used or simply not helpful in the wearable context. We've never seen Apple change interface gears so radically before.

With the new approaches in watchOS 3, Apple has significantly improved the response time and usability of the Apple Watch. We'll see if these changes stick, or if watchOS 4 brings yet another new paradigm.

Regardless, whether you have an original Apple Watch or plan to purchase one of the new Apple Watch Series 2 models (see [“Apple Watch Series 2 Offers GPS, Water Resistance, and More Power,”](#) 7 September 2016), watchOS 3 is welcome.

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Memorial City Apple Store Reopens with Rennovations



Apple Memorial City; Photo by Jim Connell

Jim Connell writes that the Apple Store in the Memorial City Mall (now known as “Apple Memorial City”) has relocated to the Dillard’s wing of the mall. Apple Memorial City reflects Apple’s new retail store design.

Apple Memorial City offers Apple’s Genius Bar, for on-the-spot repair and help with all Apple hardware, Workshops which offer guided learning on a variety of topics, and JointVenture, a new support service that targets business customers.

For more information about Apple Memorial City, to schedule a Genius Bar appointment, or to browse available Workshops, [click here](#).

Other Houston-area Apple Stores include [Apple Houston Galleria](#), [Apple Highland Village](#), [Apple First Colony Mall](#) (in Sugar Land), [Apple Willowbrook Mall](#), [Apple Baybrook](#), and [Apple The Woodlands](#).

Thanks for the update, Jim!

Board of Directors Meeting Minutes for August 20, 2016

Houston Area Apple Users Group - Minutes of the Meeting of the Board of Directors August 20, 2016

Location: Bellaire Civic Center, 7008 S. Rice Avenue, Bellaire, Texas

Attendees: Phil Booth, David Jaschke, Clair Jaschke, Jack Adair, Steve Bridgham, Mike Epstein, Mike King, Ryan Eisworth

Call to Order: By President Phil Booth at 1:09 PM following the conclusion of the August General Meeting.

Monthly Reports

Secretary - Jack Adair: The minutes of the July 2016 BOD meeting were approved unanimously.

Treasurer's Report - Clair Jaschke: Clair reported that our checking account balance as of the end of July 2016 was \$3,140.99. Our savings account balance was \$10,003.55, for total cash on hand of \$13,144.54. All bills have been paid and all monies have been deposited. We did get a check from KAGI at the end of July which covered everything from June. We have a shortage of \$250.00 of membership fees for July which we likely will not see for quite a while due to

KAGI going out of business. We have an outstanding check of \$64.90 which still has not cleared.

Membership - David Jaschke: Dave reported that we ended the month of July with 133 members, which was the same as June, and down from 138 members (a difference of 5 members) from July 31, 2015. We had fourteen transactions in July, 5 of which were by KAGI, 2 by credit card. We had four two-year renewals, two of which were through KAGI.

Programming Report - Steve Bridgham: Steve reported that we have Reagan Atkinson next month, Raf Batista (FileMaker) in November, Doug Smith in December, a Swap Meet in January 2017, and Bob LeVitus for February 2017. At current, we are open for October. Mike King reported that iOS 10 is a huge change. This would be a good discussion topic assuming that iOS is actually released. Phil said he would make some calls about a possible presenter and communicate with Steve.

HAAUG Electronic Communications Systems - Ryan Eisworth: Ryan is still working on WordPress, and we did get the Apple Barrel out on schedule. A new

Meetup fee may be upcoming soon. If there is a fee involved, we need to find out what it is and get it taken care of.

New Business

Report on KAGI Closing and Exploring Alternatives: We have lost our credit card processor, KAGI, as of the end of July. FastSpring has filled the void for app developers, but they charge 8.9% per transaction, as opposed to roughly 3% for PayPal. This extra 6% does not have any value added for HAAUG. We could put this on our Website to allow folks to pay their membership fees via PayPal. You can request a payout via either cash or via wire transfer to a bank account. The payees do not have to have a PayPal account themselves, but HAAUG would have to have a PayPal account in order to receive money.

PayPal does require an individual's social security number for federal tax purposes. Ryan suggested that Clair set this up. Ryan, Phil, Dave, and Clair will discuss how to pull this off. The board approved making an application to PayPal for an account to take care of credit card processing.

Adjournment: At 1:42 PM

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Membership Benefits

Monthly Meetings

This is where the excitement begins. On the third Saturday of each month, members of HAAUG meet for a day filled with activities, including presentations by major software and hardware vendors, special interest group (SIG) meetings, raffles, and much, much more. Swap Meets are held twice each year, in January and July.

Social Media & Internet Presence

The HAAUG web site at <http://www.haaug.org> is the place to go for up-to-date information on what we are doing. In addition, there is a [HAAUG group on Facebook](#), where people can go to interact with fellow HAAUG members on topics of interest related to Apple and its products.

Club Magazine

Club and industry news, meeting information and special member offers are published in our monthly newsletter – The Apple Barrel, which is available to members on the HAAUG website in Adobe PDF format.

Mentor Program

The HAAUG Mentor Program puts people with hardware, software, system or network problems in contact with volunteers who can provide solutions. Contact with the mentors can be made through the HAAUG Hotline, e-mail, or at the monthly meetings.

Special Interest Groups (SIGs)

People with common interests, including Macintosh and OS X basics, iOS, Internet, games, educational computing, databases, publishing, graphics, desktop video, programming and more gather for in-depth discussion, product demonstrations, tutorials and general knowledge sharing.

HAAUG Hotline

Call the HAAUG Hotline at 832-305-5999 for the latest meeting information and to leave voice mail for officers.

Lots of Fun & Friendships

HAAUG is a not-for-profit volunteer group founded in 1978, three years before there was an IBM PC. Approximately 200 members enjoy the benefits of HAAUG. We range from beginners to experts, but we all know the secret to making our computers more valuable: a HAAUG membership!

Learn more about the benefits of HAAUG membership at www.haaug.org.

Join by Mail

Please print out and complete the following form. Send a check or money order payable to HAAUG and mail it to the address shown below. Dues for regular members are \$35 per year. Student memberships are available for full-time students at a high school, community college or university for the rate of \$10 per year.

Your membership card will be mailed to you. You may pick up your starter kit at the next HAAUG meeting.

First: _____ Last: _____

Company: _____

Address: _____

City/State/ZIP: _____

Home Phone: _____ Work Phone: _____

Cell Phone: _____

Email: _____

Type of Computer: _____

Membership:

New Membership (\$35.00) Renewal (\$35.00)

Two-Year Renewal (\$70.00) Student (\$10.00)

Requires Student ID

Check # _____ Member # (if renewing): _____

How did you hear about HAAUG?

Do you know someone who would be willing to join HAAUG? Y | N

Would you be willing to volunteer in HAAUG?

