The GAB'er

The Newsletter of the Greater Albany Apple Byters

Volume 33, Number 7 - March 2017

WWDC 2017 Set for June 5-9, Moves to San Jose

by Jeff Gamet, macobserver.com

Apple's annual Worldwide Developer Conference will run from June 5th through June 9th this year, and is getting a change of venue. For 2017, WWDC will be held at the McEnery Convention Center in San Jose instead of Moscone West in San Francisco.

WWDC 2017 runs June 5-9 at the McEnery Convention Center in San Jose

WWDC is Apple's own conference where iOS and macOS developers get a glimpse at the company's roadmap for the year, and get face time with the engineers creating Apple's operating systems and other software. Apple typically uses WWDC to show off previews of the next iOS and macOS versions.

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March 2017 GAAB Meeting

The next GAAB meeting will be Wednesday, March 8, 2017.

Meeting: Wednesday, March 8, 2017
7:00 PM - Panera Bread
161 Washington Ave Ext, Albany, NY

A map can be found at the GAAB website at http://applebyters.com/index.php/meeting-information/meeting_map/

GAAB Meeting Agenda:

- Greetings and Dinner
- Topics to be presented by members
- News from Apple, including MacOS and iOS updates
- The GAAB Help Desk: Bring your questions to the meeting

Next GAAB Meeting

March 8, 2017
7:00 p.m.

Panera Bread
161 Washington Ave. Ext.
Albany, NY

Featured in this Issue

The Greater Albany Apple Byters is an Apple Computer User Group.

Membership privileges include this newsletter, access to a large public domain software and video/audio tape library, local vendor discounts, special interest groups, and other special offers.

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Apple Ambassador

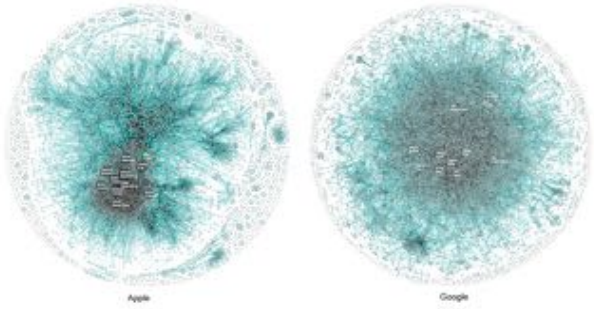
by John Buckley

The Difference Between Apple and Google

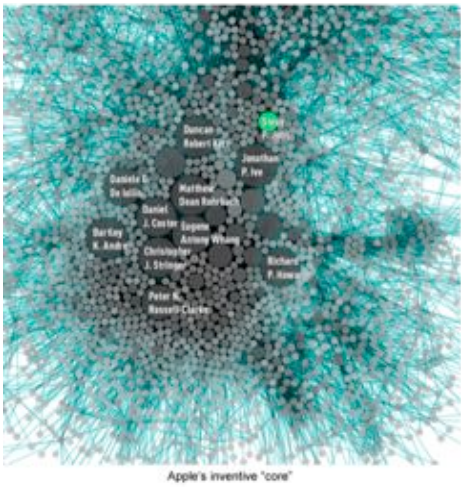
by Mark Hibben, Premium Research

Visualizing Inventiveness
Source: Co.Design

Co.Design has some very interesting graphic visualizations of patent filings by Apple (NASDAQ:AAPL) and Google (NASDAQ:GOOG) (NASDAQ:GOOGL). The visualizations (like the one shown above) were generated by Periscopic and are called "Innovation Signatures."



In the visualizations, each blob is a patent inventor, and the size of the blob is proportional to the number of patents the inventor has. Since many patents have multiple inventors, lines indicate common patents between co-inventors.



Apple's inventive "core"

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Internet SIG

5 Secrets to Find Deals on Amazon.com

by Kim Komando, Komoando.com

It might be easier to ask, "Who among us does not use Amazon.com?" Let me tell you, shopping on Amazon the right way is more than clicking items and loading up your cart.

Once you learn a few tricks, you'll find sales and price cuts that you never imagined possible. Here are five insider secrets to save money on Amazon.com.

1. Shop the Amazon Warehouse and Outlet

Some of us like to browse. We prefer used bookstores, vintage clothing shops, and second-hand furniture stores. Amazon Warehouse is just that kind of place. Here you'll find returned and lightly used products that are still functional but don't qualify as "new."

Conditions range from "Refurbished," "Like New," "Very Good," all the way down to "Acceptable" and the product information includes notes on what defects or blemishes to expect on a particular item.

As you might expect, you'll find a treasure trove of electronics from video games and widescreen TVs to smart watches and Bluetooth speakers.

For example, **Bowers & Wilkins P5 Wireless Headphones** have $400 MSRP and are currently on sale for $300. But check the used section for this item and there is "Used - Good" Amazon Warehouse Deal for $213.39. The used headphones have small cosmetic imperfections, but at a 44-percent discount, it's a bargain.

This marketplace does have its risks. On the one hand, the items aren't in perfect condition, and most electronics do not come with warranties. Amazon does honor a generous return policy, and you can sometimes procure a warranty or protection plan from Square Trade, depending on the item.

Amazon Warehouse lets you use Amazon Prime for free deliveries. You can also visit Amazon Outlet, a similar market for clearance and overstock items. **Click here to learn more about Amazon Warehouse and Outlet deals and gotchas**.

2. Find Amazon coupons

The word "coupon" conjures up images of cutting apart newspapers at the kitchen table. Amazon coupons are much simpler than that. You don't have to collect and organize little slips of paper the way your grandmother does. Instead, you can just visit Amazon's coupon site, collect the ones you want, and redeem them with a click. Your savings will be applied automatically to the final bill.

You can also use the coupons' subscription service to keep the discounts flowing. The word "subscription" may sound suspect, but there is no additional fee. Amazon will help you keep track of your coupons on products you regularly buy. This is particularly convenient for cyclical household items like diapers, toothpaste and tortilla chips.

Just like old-fashioned coupons, Amazon offers a wide range of savings, and Prime members receive especially appetizing offers that others do not. **Click here to get instant savings by using Amazon's coupons**.

3. Get mail-in and online rebates

Perhaps you remember when we'd send a slip of glossy paper bundled with receipts to some random address and waited for weeks to get a rebate. Those days are long gone.

Amazon makes this process much faster and more predictable, and with so many holiday promotions running, it's a great time to check for any possible rebates.

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Education SIG

Redefining Literacy in the Digital Age

by Ruth Reynard, Ph.D., Campus Technology

The literacy challenge here in the United States has been with us for some time. Several sources indicate that the percentages of adult illiteracy have not changed in 10 years:

The Huffington Post notes: According to a study conducted in late April by the U.S. Department of Education and the National Institute of Literacy, 32 million adults in the U.S. can't read. That's 14 percent of the population. 21 percent of adults in the U.S. read below a 5th grade level, and 19 percent of high school graduates can't read. The current literacy rate isn't any better than it was 10 years ago. According to the National Assessment of Adult Literacy (completed most recently in 2003, and before that, in 1992), 14 percent of adult Americans demonstrated a "below basic" literacy level in 2003, and 29 percent exhibited a "basic" reading level. Additional statistics from the Literacy Project Foundation reinforce the reality and extent of the challenge.

Additionally, ProLiteracy provides a percentage breakdown of the areas of illiteracy and emphasizes the impact of unemployment and poverty on the issue.

While these statistics are powerful, it is important to realize two issues: 1. There are many challenges that impact illiteracy, not just general education; and 2. There are currently many different types of literacy and so the scope of the challenge has increased and is not being fully assessed or evaluated.

We hear K–12 teachers say on a regular basis that literacy remains a huge challenge for their students. We also hear college instructors talking about how current students seem to have graduated from high school and cannot read or write well. Often, college classrooms and online groups have to spend time addressing literacy skills as well as content. While there are many economic and educational factors involved, it is clear that a collision of conventional and digital literacy has both challenged and redefined what literacy should be and just how it must be taught in any curriculum.

Literacy Skills: Conventional and Progressive

As we likely all realize, the conventional idea of literacy concerns reading and writing. For generations, we have focused on the reading and writing skills of students through the entire educational process. More recently, though, linguistics has influenced the literature to include listening and speaking as key literacy skills (e.g., see the work of the Hanen Centre, a nonprofit organization focused on extreme literacy issues in children). As linguists (Krashen, 1987, 1988 and others) have made us aware, language skills must include all four of the literacy skills — reading, writing, listening and speaking — in order for adequate language "function" to be achieved. That is, the acquisition of language use is critical over the learning of passive grammar and structure. The accuracy of language is influenced still by reading and writing; however, listening and speaking are essential for fluency. Fluency in a language is influenced by all four skills and, in turn, it influences the overall understanding or meaning. Theorists have provided ample research data to demonstrate that understanding must be reached if language has been appropriately used: The innate reason for language is to exchange meaning (Chomksy, 1957, 1988). Additionally, if listening and speaking have been focused on more than reading and writing, then language accuracy is lacking.

The growing challenge over the last several decades is that new technology and various new media have altered how meaning is constructed — how language is used, and therefore, what literacy involves. Socio-economic differences have also influenced who has access to the tools that are changing these realities. While everyone is experiencing these changes, not everyone has access to the technology that supports the new skills required. This has resulted in the generational and social gaps growing faster — not only between those who have technology and those who do not, but also between literacy and language and, ultimately, the transfer of meaning itself. Along with the conventional generational differences between what is

current and what is passed, we now also have a growing difference in the exchange of information and what is understood. Language is to be used appropriately, however, rules of appropriateness and accuracy are changing, and what may seem to be lacking in conventional terms is indeed the "new norm" in many instances. With that is also the reality that those changing rules are continuing to change and at an even faster rate.

Ultimately, if we are trying to evaluate literacy using old rules, old functions and old meaning, we are really not evaluating literacy as it exists now.

Applied Skills

We now have younger students who can decipher meaning from short visual cues, modified text and only when the media are mixed. That is, long scrolls of text are not read, but hotlinks are used to web out the logic and to create an understanding that is not dependent upon conventional literacy skills but a new literacy that exchanges meaning differently and, as such, uses language differently. In addition to various "threads" or logical flow of information, "multi-view" provides a multilayered schema of information that necessarily must be processed simultaneously in order for any kind of understanding to be reached.

In a 2009 article, I discussed the challenges to teachers and students — and thinking or cognition as a way in which some of this growing gap may be closed. Additionally, there is a generational gap that is growing between students and teachers, and learning outcomes are often still based on older uses of literacy rather than current skills. This means that most students disengage and drop out of the learning process, preferring opportunities that suit the skills they have. Unfortunately, those opportunities often still require formal education that depends on conventional literacy skills. Therefore, I would suggest that we do not have true data on literacy as we are essentially "comparing apples and oranges," so to speak.

General Lack of Understanding

What is becoming clear is that increasing numbers of students do not have the skills required to understand conventional information sources and media, and older generations of people do not understand newer informational environments or exchanges. So, when folks are encouraged to "read" websites, that is not happening by individuals on either side of that gap. Books are increasingly of the "e" variety; however, they are still linear and text-based. Most current students do not like to use e-books and prefer conventional textbooks — analogous to how, when visiting a museum, patrons prefer environments within which the antiques are displayed contemporaneously. In other words, what students are really saying is not that they prefer print copy books, but that if the style and flow remains in a conventional style, then please use the conventional tool.

However, current students prefer information in completely new and "mixed" formats, rather than in stylized books of any sort. Each generation has different literacy skills, unable to process information the same way. We're increasingly becoming people who only watch and listen – a characteristic reminiscent of medieval times. Gone is the view that it has to be written or printed in order to be a valued source. Currently, if it is heard or seen, then it has value. A great example of this is the smartphone's increased usage for all life contexts and to capture instances to share with the world.

So what does current or new literacy look like? What does it involve and how can we bridge some of these growing gaps in processing and understanding information?

New Literacy

I do not pretend to provide exhaustive answers in this short article, but I would suggest that we accept the realities before us and create and develop new ways to validate information and to adequately communicate and debate. We must value ways of thinking over linear text and provide ways to evaluate understanding in terms of its innovation and flexibility – even for conventionally "highly regulated" professions. Additionally, as conventional jobs are diminishing and new jobs are emerging, we cannot and should not continue to evaluate literacy and learning as before. New emerging jobs will require new skills, and education should be pushing forward rather than trying to regain something that existed previously.

For example, it is likely that new jobs will not require task-based skills, but rather critical thinking and problem-solving skills — not to solve problems of the past, but to solve new problems emerging from new uses of technology and new realities. Therefore, new literacy should also include innovation and flexible and adaptable solutions. If we continue to validate literacy and understanding using only standardized evaluation based upon current and past knowledge and practices, we will continue to fall short in terms of preparation and actually in literacy skills. Alec Ross (2016) suggests:

Today's youth who will enter tomorrow's workforce will need to be more nimble and more familiar with the broader workings of the world.... Tomorrow's labor market will be

increasingly characterized by competition between humans and robots. In tomorrow's workplace, either the human is telling the robot what to do or the robot is telling the human what to do. (p. 247)

Of course, "today" and "tomorrow" are highly generic terms. The gist, however, is that change is happening quickly and we are all trying to make sense of it. While it is a given that technology has completely changed much of society and it is increasingly changing practices and norms, it is not a given that educational content, processes, assessments, applications etc. are changing anywhere near quickly enough to meet societal changes or, as Ross points out, global markets and employment changes.

Rather than focus on illiteracy only, we must evaluate education itself and its view of the kind of world students will have to address. Issues of global poverty, global communication and markets continue to require our attention as well as socio-economic marginalization of communities here in the U.S. I would suggest, however, that if we can rethink the impact of new technology and future technology, we have the potential to include more people in the dialogue if we realize in time that the dialogue has changed: It is not about illiteracy as much now as it is about regression. I encourage all educators everywhere to become learners again and to be willing to redefine and value the skills we all need for the future.

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Chomksy, N. (1957). Syntactic Structures. The Hague: Mouton. Chomksy, N. (1988). Language and the Problem of Knowledge. MIT Press. Krashen, Stephen D. (1987). Principles and Practice in Second Language Acquisition. Prentice-Hall International. Krashen, Stephen D. (1988). Second Language Acquisition and Second Language Learning. Prentice-Hall International. Ross, A. (2016). The Industries of the Future. Simon and Schuster. NY, NY.

About the Author

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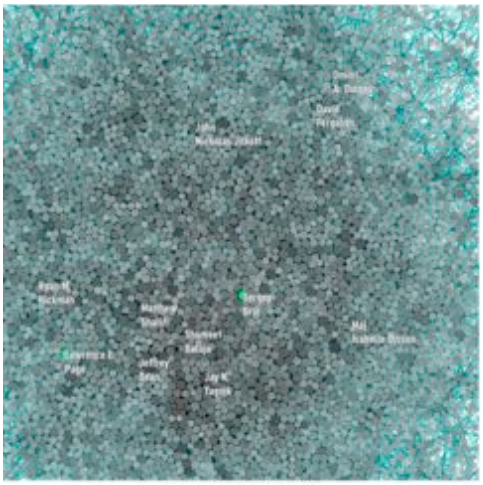
Apple Ambassador

Continued from page 2.

The visualizations for the respective companies suggest a deep-seated cultural difference, but what that might be is open to interpretation. Co.Design thinks the visualizations indicate more centralized control on the part of Apple management over the R&D process.

They give as an example the fact that Steve Jobs was granted 347 patents over a period of a decade compared to Sergey Brin and Larry Page who have a combined total of 27 over the same period.



Google's inventive "cloud"

While patents and by inference innovation appear to be more concentrated in the hands of the few at Apple, patents are more broadly dispersed at Google. This suggests that Google's organizational structure at least for R&D is flatter and less centralized than Apple's.

Co.Design points out that many of the prominent names in the Apple close-up above are subordinates of Jony Ive, such as Eugene Whang, Christopher Stringer, Bart Andre and Richard Howarth. Clearly, a very small group is generating a relatively large number of patents and this group is centered around the hardware design of Apple's products.

I find it curious because Apple is generally regarded as having a relatively flat managerial structure. Yet when it comes to R&D, innovation seems to be focused in a small group. This seems to be more a function of Apple's design focus than organizational structure.

Likewise, the large number of patents for Steve Jobs shows how important he was as Apple's de facto Product Architect. Jony Ive's prominence on the innovation map suggests that he has certainly tried to step into that role.

The innovation maps of both companies are surrounded by thin shells of patents disconnected from the central mass. This shell reflects patents owned by companies that were acquired by Apple or Google.

Overall, Apple has been more efficient in its innovation, generating 10,975 patents with a team of 5,232 inventors compared to Google's 12,386 patents generated by a team of 8,888. I believe that also reflects the impact of Steve Jobs. I have observed that the genius of Steve Jobs was in recognizing the marketable product latent in a given research project. Or, conversely, recognizing when research wouldn't lead to a product.

Jobs gave Apple the ability to get by on R&D budgets that were relatively small compared to Apple's industry peers. Following the departure of Jobs, Apple had to expand its R&D spending to compensate, and it has. Apple's R&D spending for fiscal 2016 was up 25% compared to 2015. This has given rise to concern that Apple might not be spending its R&D money efficiently, and probably Apple isn't as efficient as it was under Jobs.

Short of finding another Steve Jobs, Apple really had no choice but to take a "shotgun approach" to R&D. What's disturbing about the chart is the concentration in the design area given the fact that the design language of Apple's products hasn't changed much in recent years, and product designs have become very evolutionary. The design concentration of the innovation map suggests that Apple may not be efficient in its approach to visual design.

The innovation map also suggests that while Ive has stepped into the role of Product Architect, he has only emphasized the visual design aspects, according to his predilections and abilities. In that regard, I continue to think that Apple is still missing a true Product Architect in the Jobs' vein. The Product Architect that Apple needs is a technologist, but also a generalist, someone who cares about the underlying technologies as much as physical design, someone who cares as much about software as hardware as much about functionality as appearance.

GDC Culture Clash

Another sort of culture clash was on display at the Game Developers Conference. This was a clash between personalities and corporate culture, between Red and Green, between AMD (NASDAQ:AMD) and Nvidia (NASDAQ:NVDA).

Raja Koduri, head of AMD's Radeon Technology group presented at GDC. I find Koduri very likeable as a fellow engineer. He clearly enjoys explaining the technology behind AMD's forthcoming high performance graphics architecture, code named Vega. He was in his element speaking to other software engineers.

In contrast, CEO Jen-Hsun Huang's presentation later that evening was all about achieving certain business objectives. One objective was to highlight areas where the current generation Pascal graphics cards may have some advantage compared even to AMD next generation Vega (more about that below), but most importantly his objective was to launch the GTX 1080 Ti. The 1080 Ti is Nvidia's answer to Vega in the near term.

Insofar as the 1080 Ti, it was a very straightforward pitch. The 1080 Ti would offer a 35% performance boost compared to the initial GTX 1080. Huang also claimed it would be faster than the Titan X, although he didn't say by how much. Huang pointed to hardware improvements as part of the reason for the performance gain.

For some time, I've been saying that Nvidia would have to respond to the Vega threat, and now we know what the near term response is at least. The 1080 Ti will be available to purchase next week, well before Vega is expected to launch in Q2.

Unfortunately, Koduri really didn't offer anything by way of Vega performance, let alone a specific launch date. Demonstrations have suggested that Vega would outperform GTX 1080, so the performance claim for the 1080 Ti was clearly aimed at heading off the Vega threat.

Huang conceded that not all the speed gains for the Ti were hardware related, and that some of it was due to driver improvements. But AMD will also be able to take advantage of driver improvements before it launches Vega. We won't really know how Vega and the Ti compare until products are shipped to third parties for testing, so I'll withhold judgment.

Perhaps recognizing that the Ti will have to compete on price, Huang made sure that everyone knew that the Ti would cost $699. He also announced a price reduction for the 1080 to $499. Given that Vega uses High Bandwidth Memory, which is a very expensive process that Nvidia only uses for its GP100 server accelerators, I suspect that AMD will have a tough time beating Nvidia's prices, and if it does, profitability may suffer.

Returning to the possible performance advantage of the 1080 Ti, Nvidia highlighted its work in advanced physics modeling through a demonstration of real time fluid dynamics simulations. One demonstration was sloshing water in a tub. Gamers will recognize this as a very difficult simulation to do well. In general, games don't do particularly well simulating water.

What Huang showed was truly impressive, especially since it wasn't just a video playback but a real-time demo. It's the best simulation of water I've seen. A similar demonstration of flame and smoke from a fire was also the best I've seen. It was especially impressive to see realistic shock waves form

in the flame as a result of projectiles passing through it, as seen in this still from the demo:

Although AMD and Nvidia seem to be comparable in terms of visual detail and rendering quality, it seemed to me as I watched the demos for the respective companies that Nvidia had the edge in physics modeling and simulation.

The key takeaway from Nvidia's GDC presentation was that unlike Intel (NASDAQ:INTC), which seems ludicrously blasé about the Ryzen threat, Huang wanted to demonstrate that Nvidia was ready to fight for market share.

The 1080 Ti may only be a stop gap. Last year, at Nvidia's GPU Technology Conference, Huang unveiled Pascal. At GTC this year, in May, Nvidia could unveil the next generation Volta GPUs.

WWDC

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This year, Apple will most likely show off iOS 11 and macOS 10.13, watchOS 4, and tvOS 11. Apple occasionally announces new hardware at WWDC, but so far there isn't any strong indication that will happen this year.

WWDC's Big Move

Apple has hosted WWDC at the Moscone West Convention Center in San Francisco since 2003. The conference isn't, however, a stranger to San Jose. Apple hosted the event at the San Jose Convention Center from 1988 when it started up through 2002.

To get tickets you'll need to be a registered Apple Developer Program and Apple Developer Enterprise Program member as of February 16, 2017, by 5:30 AM pacific time. That means if you aren't already in Apple's developer programs, you don't qualify for a conference pass.

Ticket sales for the 2017 WWDC start on March 27 at 10 AM pacific time. Like previous years, Apple will issue tickets through a lottery system.

Internet SIG

Continued from page 3.

When you request a rebate, you just enter your order number and your email address and the system will track the rebate for you. If you're concerned whether the rebate will work, you can track the status instantaneously. It really makes it super simple to get a rebate. **Click here to learn more about mail-in and online rebates available at Amazon.com**.

4. Check for price drops

Many customers don't realize that many Amazon prices fluctuate, based on supply and demand. Unlike a brick-and-mortar store, there's no banner over the front door to announce a major sale, so unless you're paying close attention, a sudden drop in prices can be difficult to spot.

That's where CamelCamelCamel comes in. The website tracks the ever-changing prices on Amazon. With a free account, you can set up notifications on your favorite items. The moment a coveted pair of shoes or toy dips in value, you'll know when to place your order. **Click here to learn more about the benefits of CamelCamelCamel**.

5. Price-matching TVs

This game is a little trickier. First, you have to be in the market for a new television. Second, you have to do your research. But because Amazon has a low-price guarantee, it's possible that you could nab an incredible deal on your next TV.

Here's how it works: You buy a television from Amazon, and you jot down the price. For the next 30 days, you can visit the websites of qualifying Amazon competitors, like K-Mart or Sam's Club, and find the same make and model of television.

If you find a lower price, contact Amazon and you will be refunded the price difference. **Click here to learn more about saving money using Amazon's price matching guarantee**.

Freshen Up Your Older Mac and Make It Feel New

by Jeff Butts, macobserver.com

Not all of us can rush out and buy the latest Apple hardware every year. For most folks, the fact that Macs hold their value is owed to how long the computers last. Even so, we can recognize the signs of a Mac that's not quite in its prime anymore. Booting it up seems to take forever, the latest features of macOS just aren't enjoyable, and modern software seems to drag. Don't rush right out to buy a new computer when that happens, though. There may be a few things you can do to an old Mac to make it feel new again.

Recognizing When Your Older Mac Isn't Worth the Upgrade

First, let's set the record straight. I'm not saying you can revitalize that old PowerBook G4 and run macOS Sierra. There are limits, after all. You should start off by ensuring your Mac is on the list of models supported by macOS Sierra. You'll also want to make sure you have at least 2GB of memory and 8.8GB of storage space. Check out your Mac's specs from **About This Mac** from the Apple menu.

About This Mac will tell you how much memory and storage space your older Mac currently has.

Upgrade Your Hard Drive to SSD

If your older Mac still has a mechanical hard drive, the best upgrade you can make to revitalize it is to replace that disk with a solid-state drive (SSD). SSD drives don't have any moving parts, so they're exponentially faster than their older counterparts. Upgrading to an SSD drive might not be cheap, but it's less expensive than purchasing a new Mac. You'll reap the benefits of an SSD in a number of areas – booting up, opening apps, and moving files around.

Make sure you can make the swap without too much trouble. You should also be sure to pick an SSD that's compatible with Mac. Crucial's Mac SSD compatibility page is a good place to start, as is Other World Computing. Both sites offer installation guides to help you know what's involved in the job.

Increase Your Mac's Memory

The next best upgrade you can perform on an older Mac is to upgrade the system memory. An SSD improves performance in just about every aspect, but more RAM will allow you to have more apps running at once without slowing things down. You can find out how much memory you already have by looking back at **About This Mac**.

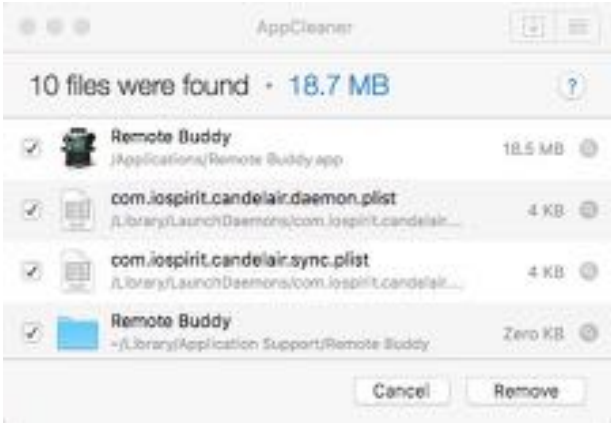
EveryMac's Actual Maximum RAM page will tell you how much you can upgrade. Apple's official specifications are sometimes understated. If you have a MacBook Pro Retina from 2012 to present, you won't be able to upgrade the memory at all. Once you've determined whether you can upgrade your Mac's memory, check out either Crucial's Mac memory finder page or Other World Computing.

Clear Out the Apps You Don't Use

This tip won't cost you any money at all. If you've been using your older Mac for a while, you probably have quite a few applications that you installed but never use anymore. It's a good idea to do "spring cleaning" once in a while to clear out those apps and their associated library and preferences files.

Removing these unused and possibly outdated applications could even give you a performance boost, since those apps

might still be loading files in the background. For sure, they're taking up precious hard drive space. Make sure they're completely cleared out by using a tool that hunts down all of the extra files associated with those apps. I like the free and simple-to-use AppCleaner. All you have to do is drag the unused apps onto the window, and AppCleaner does all the rest.



AppCleaner in action.

Do a Clean Install of macOS Sierra

Finally, you might consider doing a fresh install of the operating system. Windows users do this more often than Mac, but it's still an option that can sometimes give you even more of a performance boost. As John Martellaro points out, this is often unnecessary and is always a time-intensive process, but you might decide to forge ahead with it anyways. Be sure to read his entire article before you begin, since he outlines the best way to accomplish the clean install.

A Brand New Mac, Almost

After upgrading your memory and swapping to a SSD, your older Mac should feel new again. You'll be able to get a bit more time out of your Mac, and it's a less expensive option than buying a whole new computer. Of course, Apple continues to blaze forward, and might "sunset" your Mac with the next version of macOS. Weigh the pros and cons of upgrading versus buying new. If your Mac is from 2012 or later, you'll probably find the upgrades to be the wisest investment.

Apple's Massive Spaceship Campus Will Open in April

by Seth Fiegerman, cnn.com

Apple's biggest new product is almost here -- and no, it's not a device with a screen.

Apple's massive new headquarters will open to employees in April, nearly six years after its late founder and CEO Steve Jobs publicly unveiled plans for the building's "spaceship" design.

The 175-acre campus is officially dubbed "Apple Park," will include a 2.8 million square foot main building made from curved glass as well as a large fitness center, thousands of trees and an auditorium called the Steve Jobs Theater.

The campus will also be powered by 100% renewable energy, according to the company. Much of the project is being framed by Apple as a tribute to Jobs, who died in 2011.

"Steve's vision for Apple stretched far beyond his time with us. He intended Apple Park to be the home of innovation for generations to come," CEO Tim Cook said in a statement.

Jobs told his biographer his goal was "to leave a signature campus that expresses the values of the company for generations."

But that ambition didn't come cheap. The cost for the Cupertino campus reportedly jumped from $3 billion to nearly $5 billion -- though that's still pocket change for a business with nearly $250 billion in cash sitting around.

The campus isn't just for employees, however. Apple's executives also have high hopes the campus, equipped with a visitor center and public cafe, will become a new tourist attraction in California.

"I really think it's going to become like a national landmark," Luca Maestri, Apple's CFO, said at a conference earlier this month. Maestri said the campus has already garnered "a lot of interest from tourists."

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