



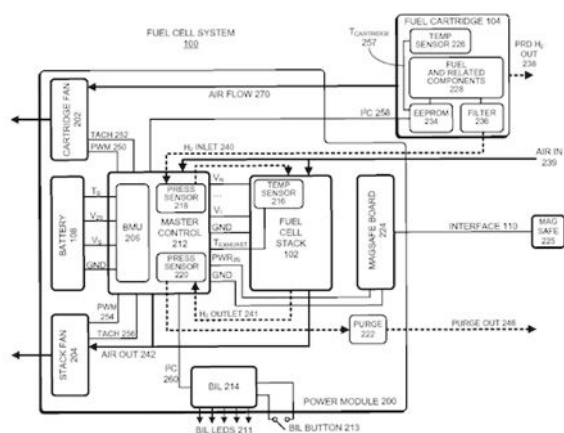
# The GAB'er

The Newsletter of the Greater Albany Apple Byters

Volume 28, Number 5 - January 2012

## Apple May Switch From Battery Power to Fuel Cell Power in MacBooks

by James Plafke



Ever feel like MacBooks could be even smaller and lighter? Sure, the MacBook Air is floating around out there, as thin as thin could be, but if two recently discovered patents have anything to say about it, as thin as thin could be isn't thin enough. The Apple patents focus on employing the use of fuel cells to power a "portable computing device," and if they replaced the current batteries used to power the portable computing devices, the devices could become even smaller and more efficient than they currently are.

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## Coordinator's Corner

by John Buckley



### Firefox 9.0.1



This month we will look at the newest version of Firefox by Mozilla. Firefox 9.0.1 is the latest version of the web browser. While Safari is the standard web browser for the Mac, many Mac users as well as other web savvy users use Firefox. See what is new in the

latest version and the direction in which web browsers are moving to the future.

Also we will set the schedule for the remaining demonstrations. In addition, we will take a closer look at what is available on your Mac without adding any software

To find out what's happening, GAAB is the place to be. So be sure to be at our January meeting and every meeting to find out the best information about the Mac.

The January meeting will be held at St. Mary's Hospital in the Leonard Board Room on Wednesday, January 11, 2012.

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**Next GAAB Meeting**  
**January 11, 2012**  
**Firefox 9.0.1**  
**7:00 p.m.**  
**St. Mary's Hospital**  
**Troy, NY**

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*Serving the Apple Computer User Community Since May 1984*

The Greater Albany Apple Byters is an Apple Computer User Group. Meetings are held the second Wednesday of each month (except July and August) in Room 212 of Troy High School, located on Burdett Avenue, Troy, NY.

Annual membership fee is \$10.00. 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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#### Officers & Special Interest Group Leaders

Program Coordinator  
John Buckley  
272-7128

Membership Director  
Cecilia MacDonald  
872-0823

Treasurer  
Cecilia MacDonald  
872-0823

Public Domain Librarian  
Bill Shuff  
393-9753

Newsletter Editor  
Roger Mazula  
466-7492

Education SIG  
John Buckley  
272-7128

Internet SIG  
Lou Wozniak  
465-2873



## Apple Ambassador

by John Buckley

### Apple and Solid State Drives



Since the following article was published, the purchase of Anobit by Apple has been confirmed. Flash memory is used in iPods, iPads, and as the hard drive replacement in Mac Book Airs. Flash drive storage is also as a replacement option for hard drives in Mac Book Pro's and Mac desktop machines. The big advantage is that it eliminates moving parts and extends the battery life of devices that use the solid state drives. Solid-state drives have no moving parts and are capable of accessing data at speeds up to 215MB per second, which is up to twice the speed of hard drives

There are certain disadvantages to SSD's including a recording limit. Machines with Solid State Drives (SSD acronym in English) are increasingly present in the market. Because they use a different technology than common hard drives, this type of device does not need to be defragmented ever. They use exceptionally random access operations and therefore the organization of data is not really useful for SSD's.

With respect to the recording limit, an SSD has a life expectancy of about 10,000 read/write cycles before it becomes unusable. That is frequent defragmentation will use up some of these and bring no benefits to this type of disc, so you better save time and disc life by avoiding it.

Anobit's controllers are used to increase the reliability of the SSD's.

**Apple's Purchase of Anobit Would Give it a Leg Up on Rivals. Anobit Would Allow Apple to Use the Least Costly NAND Flash.**  
by Lucas Mearian, December 27, 2011 (Computerworld)

Apple's buyout of Israel-based solid-state drive (SSD) manufacturer Anobit Technologies will give the company a significant technological boost in the mobile market, and the deal could yield huge cost savings.

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In their second No. 1 hit single, the Rolling Stones asked us in no uncertain terms to get off of their cloud. In 2012, Apple, Amazon and Google are inviting you to climb on to theirs - and they'd like you to bring your music library.

It's all about Internet - or cloud-based - music storage. It's becoming the new norm. But as free-spirited as that sounds, there's no real opportunity for experimentation here. You'll be making a commitment of sorts. Who knows how interchangeable they'll be in the future? So let's look at how to determine which service is right for you.

Apple just a few weeks ago released iTunes Match, which stores your music on the cloud and streams it to your gadgets. Google started selling digital music in November and also offers cloud storage. Amazon pioneered the option of cloud-based delivery and storage back in March.

These three heavyweights are all competing for the estimated \$7 billion per year spent on online music. All three services are good, but each has quirks, too.

Deciding which to use starts - at least for now - with your choice of media player and your listening preferences. While iTunes Match is probably slightly better in the balance, that isn't going to matter if your smartphone or tablet is an Android, for instance.

iTunes Match for Apple's iCloud and iTunes is \$25 a year. With iCloud and the latest version of iTunes, Apple started moving away from syncing devices. When you download a new song, book or TV show, it automatically appears on all your Apple devices.

To take advantage of this, you have to get your music library on iCloud. When you subscribe to iTunes Match, it

scans every song you have in your iTunes library, including songs you've imported from CDs.

It looks for matches from the 20 million songs in the iTunes store and automatically adds those matches to iCloud. Songs are immediately available to all your Apple gadgets.

If you have a few songs that Apple doesn't, iTunes uploads them from your computer. Apple provides 5 gigabytes of iCloud storage free for those replacement files. If you have a lot of music it doesn't recognize, you can add more storage for a yearly fee.

You can have up to 25,000 songs on iTunes Match. Anything bought from the iTunes store doesn't count against this storage total. An advantage is that matched songs play back at a high-quality bit rate of 256kbps, even if your original copy is lower quality.

Although iTunes and iTunes Match work fine on a PC laptop or desktop at home, they're really meant for Apple gadgets. The service won't work at all with Android smartphones and tablets. Amazon's MP3 store rivals iTunes, with more than 17 million songs. Its biggest strength: The songs will work on any computer or gadget.

Amazon's Cloud Drive basic service is free and gives you 5GB of storage, good for about 1,000 songs. Adding 20GB of extra storage costs \$20 per year. Songs bought from Amazon's MP3 store can be automatically added to Cloud Drive, and they don't count against your storage limit.

Unlike iTunes Match, you must manually upload your existing music - a time-consuming process. It also means you'll fill up your cloud storage much more quickly.

Once the songs are uploaded, you can stream or download them with other gadgets. Streaming saves space on your mobile device, but your playback could stutter if you're moving in and out of Wi-Fi coverage.

*Continued on page 10.*





## Education SIG

### The Top 5 Ed Tech Developments of 2011 That Weren't by Christopher Dawson

The following two articles by Christopher Dawson who has his own consulting business and is now the Vice President of Marketing for WizIQ, Inc., a virtual classroom and learning network provider. His roles with WizIQ and writing about educational technology for ZDNet Education (<http://www.zdnet.com/blog/education>) allow him to continue helping students and teachers add value to education with technology rather than merely adding to the bottom line.



2011 was a pretty wild ride for tech in general. Android exploded, tablets finally took off in a big way (although the iPad still reigns supreme both for consumers and in ed tech), HTML5 gained some real traction, “social” in all its forms went completely mainstream, Google Apps gained even more legitimacy (along with plenty of other cloud technologies), and the Mac vs. Windows debate was replaced by real market differentiation. There are a few things that a lot of us in the field expected would be revolutionary in education that just sort of fizzled.

#### Android

Android was supposed to usher in ultra-cheap tablets for everyone. “A tablet in every backpack” could have been the slogan at the end of 2010 when most of expected costs to drop so significantly in this space that our view of 1:1 would be fundamentally altered. It would be the rule instead of the exception and it would happen on cheap Android tablets.

It turns out, though, that the big winner in education remains the iPad and even that remains a dubious distinction with the cost of Apple’s devices still being too high for widespread adoption and a dearth of solid pedagogy around the devices. The Kindle Fire is getting us there, at least in terms of price, but that only appeared on the market a month ago and still lacks a management or content ecosystem that would allow it to head for backpacks in the way that we expected.

Speaking of ecosystems, although both Apple and Android now have reasonable tools for management of the devices and for pushing content to them (especially Apple), Android’s fragmentation and flirtation with tablet-only versions (Honeycomb) that never made it to many tablets did nothing to help its case outside of consumer and, to a lesser extent, enterprise IT.

And those ultra-cheap Android tablets? It turns out that they stink.

#### Electronic textbooks

All of those cheap Android tablets were supposed to usher in great, interactive textbook applications. The EPUB standard has evolved, Adobe released awesome PDF and tablet-centric technologies, and publishers started pushing out electronic versions of their textbooks for download or rental, but the content never really appeared. As we mentioned above, neither did the inexpensive devices on which students could read and interact with the texts.

Don’t get me wrong. Cengage made some real progress with MindTap and even the textbook giant Pearson started creating custom texts from proprietary and open sources that could be distributed electronically. But prices haven’t come down far enough, interactivity hasn’t increased enough, and the chicken-or-egg problem of cheap tablets/e-readers hasn’t helped anything either.

#### PCoIP

Thin computing has continued to evolve with advancements in small deployments around Windows MultiPoint server and enterprise technologies for desktop streaming and sharing trickling down to education. The potential was there, but the investments needed to set up mini-data centers in schools and districts that would efficiently and (in terms of TCO) cheaply power desktops in labs and classrooms never got off the ground.

Even more interesting was the idea of PCoIP (PC over IP). Complete PCs living on blades could be centrally managed and provide the experience of full, high-powered desktops without exposing expensive machines to the prying hands of students or the dust and nastiness of regular classroom use. Another take on this idea, delivering a full virtualized PC via the cloud to students on thin clients, laptops, or other non-





school devices, also seemed poised for real success. And while there have been successful deployments, they have generally been isolated case studies and not the real time-, energy-, maintenance-, and/or money-saving ventures they should and could have been.

## **BYOD**

The bring-your-own-device (BYOD) movement remains alive and well among its proponents and an increasing number of school administrators are realizing that 1:1 computing won't be successful or sustainable without allowing (or requiring) students or parents to participate by supplying computing devices for their kids. Alive and well, however, hasn't translated into widespread practice.

Unfortunately, the combination of a miserable economy that has seen too many parents without the means to supply devices and too many schools without the means to provide scholarships for needy students has torpedoed many BYOD 1:1 initiatives. Combine that with the continued reluctance of system administrators to embrace the idea because of security worries and, again, a lack of funding to install robust back-end systems to manage those security risks and you have a very workable idea that just hasn't worked (yet).

## **Tech-centric pedagogy**

There are great teachers doing great things with tech-enabled and hybrid learning models around the world. These folks are the standouts that get held up on blogs and get awards from Intel and Microsoft and Google. There are others who are just as amazing in quieter ways pulling tech into their curricula every day in really relevant ways to teach students about information access and communication that matters in the 21st century.

That being said, most teachers with access to the right technologies continue to use them in the same way we've used paper and pencil for the last few hundred years (OK, maybe quill and parchment, but you know what I mean). All too often, we apply a thin veneer of tech over the same old ways of teaching and call it 21st century learning. Usually this is through no fault of the teachers. The right professional development, along with the right technology and related resources, needs to be in place to do something bigger, better, and bolder.

Regardless of the reason, though, 2011 should have been the year when the state of the art in tech-centric and tech-enabled teaching should have been drastically advanced. After all, nobody had any money to buy much technology and so, instead, we should have been focusing on using what we had in transformative and powerful ways.

The good news is that 2012 is just around the corner. The opportunities for changing the way we do business are still here and are easier to access and understand than ever.

## **Top 5 Ed Tech Predictions for 2012** by Christopher Dawson

Summary: Here's hoping I'm more accurate than I was last year.

Earlier this week I wrote about five major technologies that should have had real impacts in education this year, but which never amounted to much. I called more than one of them out a year ago, when all signs pointed to their potential for disruption and transformation in 2011. I can't resist giving it another shot this year, though. Here are my top 5 predictions for the state of the art in Ed Tech in the coming year.

### **Analytics and BI will go mainstream**

In a former life, I was a SAS programmer doing data management and statistical analysis for clinical trials. SAS is still going strong in large-scale, mission critical statistical programming, but much of its business focus is now on analytics and business intelligence (BI). IBM just launched an initiative to promote education, training, and research at the university level in the fields. For those not familiar with them, BI and BA apply complex business rules and enable decision-making based on the analysis of very large data stores.

Both companies (and many others, although SAS and IBM are arguably the market leaders) have products geared towards making these tools available, relevant, and usable in the education space, where the amount of data we now collect on our students is growing exponentially, both because of federal and state requirements and because most educators realize that data-driven instruction is a powerful tool for improving outcomes. In education, these tools can pick out at-risk students based on wide-ranging data before they ever hit the radar of a guidance counselor.

The data are in place, the technologies are in place, and NCLB and RTTP have conditioned educators to think about data (no matter what else, good or bad, you may think of them). 2012 will see an explosion in the real use of analytics to assist schools and districts in improving quality and outcomes. I'm not talking about reviewing yearly standardized test scores here. I'm talking about the confluence of formative and summative assessments, demographic data, and many other bits of information, all of which are now available electronically and ready to be mined. It's worth noting that EDUCAUSE was filled



with vendors holding up the latest and greatest tools for data mining, aggregation, management, and analysis and Oracle resorted to showgirls standing next to geeks demoing software at both BBWorld and EDUCAUSE.

### **Google's tablet will *NOT* be the holy grail of 1:1**

A reader emailed me the other day and asked me if I thought that Google's tablet, expected for release before fall 2012, would finally make tablet-based 1:1 initiatives a reality. The answer was no. Although I'm sure the tablets will be great pieces of hardware and software and I'm sure that I'll get one, the predicted \$500 price point is just too high. Sure, Google Apps integration will be very strong, as will the management features that go with it, but at that price, you could have an iPad.

While I'm not saying that iPads are better for education than other tablets, I am saying that they have a major foothold in the growing market. Even iPads, though, are only making it into well-funded districts at scale. The only thing that could disrupt the current market and current trends in 1:1 would be a very inexpensive tablet (<\$300) with all the management features and a content ecosystem that would finally make the ideal of a "tablet in every backpack" a reality.

Google's move to drop the price of Chromebooks this year and provide enterprise, web-based management consoles for the slick little laptops suggests, as well as innovative rental models for schools and businesses, however, suggests that they may have a few tricks up their sleeves. The Google tablet won't be the holy grail of 1:1, but I'm hopeful that it will be a step in the right direction.

### **BYOD will make 1:1 possible in a big way**

In the face of miserable budgets and no end in sight to a stagnating economy, school/state-funded 1:1 will not be sustainable in the majority of school districts. Worldwide sales of Classmate PCs to education ministries remain strong, but this relies on a very different educational model than that employed here in the States. At the college level, where a computer is a necessity for students, only a tiny fraction of schools supply a laptop as part of a student's tuition. Instead, students bring their own, often selecting from specially negotiated prices with major OEMs. It's time K12 schools followed suit.

Again, there is a confluence of factors that will make BYOD the 1:1 model of choice for 2012 (a model, by the way, that will get devices onto a lot more desks and into a lot more student hands in the classroom this year). The emergence of inexpensive devices like the Kindle Fire, despite its lack of manageability, means that tablets will become increasingly

commonplace for students, making instant access to the Internet and a variety of content easily achieved. AMD is promising inexpensive alternatives to Intel's ultrabooks and prices continue to fall on remarkably usable laptops.

Similarly, great platforms for e-learning, ranging from Moodle 2.3 to the new and improved Google Apps, to a growing ecosystem of tablet apps mean that schools have more reason than ever to leverage all of those devices that are sitting in student bedrooms but often aren't allowed in classrooms. Finally, robust security and filtering solutions (including tablet integration) from companies like LightSpeed mean that the risks formerly posed by outside devices are increasingly being mitigated both on-off-campus.

Khan Academy, et al, will give publishers and mainstream educators a run for their money

### **We will say goodbye to a lot more libraries and hello to a lot more information**

A local prep school dumped its library about two years ago in favor of a media center replete with computers, Kindles, and an espresso bar (yes, an espresso bar - it's a prestigious school). Administration took a lot of flack, not because the library was well-used (it wasn't) but because a lot of people didn't like the idea that the notion of a library was changing. Now, with far less controversy, Johns Hopkins University is closing its historic medical library in a few short days. Library staff had already transitioned from traditional librarian roles to that of so-called "informationists." Modern library science degree programs are far more concerned with accessing information than the Dewey Decimal System.

Add to that growing space constraints, emerging 1:1 programs that are far easier to justify if they can reduce reliance on dead trees, and nearly ubiquitous availability of journals and books in electronic formats and you have a recipe for converting libraries as we know them now to anachronisms. This isn't a bad thing as long as the mission of school libraries can be to make students discerning seekers and users of information. In fact, moving to information-based rather than book-based models could cause a renaissance for libraries. This renaissance simply doesn't need to involve acquiring larger expensive collections of paper; it needs to involve drastically increasing the amount of time students spend in libraries developing their critical thinking and information access skills.



# I Was Wrong About Apple's iWatch

by Mike Elgan, [cultofmac.com](http://cultofmac.com)

In September of 2010, I wrote a column in this space deflating the idea that Apple would ever make and sell a wristwatch.

I still think my reasoning was sound. But I didn't know then what I know now. Specifically, two Apple technologies have become central to Apple's long-term strategy. These two products — Siri and iCloud — change everything.

And because of this new information, plus a few new things we've learned about Apple in the past year, I'm completely reversing my opinion. I now believe the current rumors that Apple is getting into the wristwatch business.



I even think we can accurately imagine what Apple is likely to do in the wristwatch department.

In my old post, I wrote that Apple is unique in the industry in that it has three criteria for entering an entirely new market:

1. There are glaring problems or inadequacies among all major players in the market that can be solved by Apple's core competency of elegant design.
2. The new market area enables Apple to control a new platform that supports an ecosystem of content, such as media or apps.
3. Both the potential market and the marketplace for content must be huge, mainstream and central to how most people live.

I then went on to say that the iWatch idea fails all three criteria: 1) existing watches can be awesome and elegant; 2) wristwatch-specific apps would be too small a market for Apple to bother with; and 3) an iWatch could never find the massive penetration of the iPhone, or even the iPad, given that most people consider wristwatches a fashion accessor, which they tend not to buy from computer companies.

All this makes sense — if you think of an iWatch as a wristwatch and a stand-alone device. But that's not what the iWatch will be.

## What the Rumors Say

The New York Times' Nick Bilton blogged this week that Apple is considering a wide range of wearable-computing ideas, including a "curved-glass iPod that would wrap around the wrist; people could communicate with the device using Siri."

Yes, this is just a rumor. But I believe they will build exactly this. Here's why.

## The iWatch Will Be a Siri-Based Remote-Control for iCloud

A stand-alone Apple wristwatch makes no sense. But an elegant remote control, lashed to the wrist, that enables Siri commands to bring things down from the cloud makes all the sense in the world.

Apple is already aggressively moving toward an iCloud-centric Appleverse where whatever iDevices you have connect and share with each other via iCloud. Take a picture on your iPhone, and it shows up on your iPad. Watch half a movie on the iPad, then zap it over to the TV via Apple TV.

Your music is in the cloud. Your movies are in the cloud. Your documents are in the cloud.

Apple is also aggressively promoting Siri as the friendliest of friendly user interfaces. Siri is clearly here to stay as the central interface for current and future iPhones. Rumors suggest a coming tsunami of Siri-based TVs, iPads, MacBooks and iMacs.

Steve Jobs' eponymous bio suggested that Apple had made some kind of breakthrough in the improvement of the TV experience. Many have suggested Siri control is that breakthrough, and I think that makes sense. However: How do you talk to a TV that itself is blasting speech, and closer to the microphone than you are?

The answer is: You don't. You talk to a device near to you.

I think it makes sense that future Apple TV or iTV (the rumored integrated TV from Apple) will come with a Siri-



capable remote control unit. Or, you can use your iPhone. Or your iPad. Or your iWatch.

And why control just the TV? Why not also remote-control your iMac in the same way? Or your iPad? Or your iPhone?

As iCloud becomes central, we will come to view ourselves as being “iCloud users,” who have a wide range of choices about which devices we use iCloud with. They all talk to iCloud. Actually, we talk to iCloud. Siri is the voice of iCloud. And it doesn’t really matter which device we speak to Siri through: iMac, MacBook, iPad, iPhone or iWatch.

Over time, of course, Siri will gain a lot more agency, meaning that we’ll be able to request that Siri actually do more things — buy plane tickets, buy flowers and have them delivered, make sure the car is locked.

Theoretically, this kind of voice-command agency doesn’t even require an Apple gadget at all. It could all take place from any telephone.

I don’t know if Apple will ever enable phone-based Siri interaction. But such action could easily take place through a wristwatch, operating through another Apple device, such as an iPhone.

At minimum, a Siri-base iWatch would need to be little more than a Bluetooth headset with a loudish speaker shaped like a watch. But I think it will be much more than that.

### **Apple Has Fallen In Love with Wristwatches and Curved Glass**

In the past year or so, Apple has gone through two big experiences that seem to have enamored Steve Jobs and the Apple team of both wristwatches and curved glass.

When Jobs announced the newest nano, he suggested that it could be used as a wristwatch. Weeks later, the world was flooded with third-party watchbands that turned nanos into watches. (I wear one myself.)

Apple doesn’t even try to hide its approval of this trend — in fact, the company actively supports it. Apple sells wristbands in its stores, and even rolled out an appealing line of watch faces to be used in nano wristwatches.

There’s just one problem. The nano wristwatches have sharp square edges that make the watch a bit clunky and bulky looking. The whole watch part of the combined nano-

and-band setup sticks out too far from the wrist, and has four sharp edges. And that’s why I think Apple is probably going to slim it down and curve the edges.

At the very least, Apple will optimize a nano for wearing on the wrist. Why wouldn’t they? And curved glass is the most elegant and Apple-like way to do that.

According to Jobs’ presentation before the Cupertino City Council while introducing a new global headquarters building, he pointed out that the new “spaceship” campus building has no flat glass. It turns out that Apple intends to actually build a factory to manufacture curved glass for the building.

Apple started work this week on a new “prototype concept” Apple Store in Palo Alto, California. Its most conspicuous design feature will be a curved-glass ceiling and roof.

A normal company would put flat glass on their buildings. It would be far less expensive. And you can make roughly curved wall and ceiling shapes with flat glass. But Apple seems to have become seriously focused on the curved-glass concept as a signature design element.

There are also reports coming out of Taiwan that Apple has purchased equipment necessary for the manufacture of curved-glass products.

As an owner of the 27-inch iMac, I can tell you that the current size is close to a maximum size before using the edges of the screen become uncomfortable to look. The angle of my gaze at the center of the screen is perpendicular to the screen. But the farther out I look toward either edge of the screen, the greater the angle. If the screens get any bigger, it’s going to be uncomfortable to look at. (First-world problem, I know.) Still, Apple wants to keep making screens bigger, and users want bigger screens.

One solution for larger screens is a display that curves around, similar to a concept mocked up (not by Apple) called the iView.

I think we’re going to be seeing a lot of curved-glass devices emerging, not just from Apple but from other companies as well.

Call me fickle for reversing my prediction. Call me gullible for believing the iWatch rumors. But I believe a curved-glass, Siri-controlled, iCloud-centric wristwatch is exactly the kind of thing Apple can, should and will pursue in the next two years.





# Steve Jobs' 7 Best Keynotes

from [AppleGazette.com](http://AppleGazette.com)



If Steve Jobs was a maestro, the keynote speech was his symphony. No one in the world could deliver what was basically a glorified powerpoint presentation with the commanding presence that Jobs possessed. He was smart, relaxed, focused, and best of all, entertaining. Here are his 7 best and most memorable keynote presentations.

## 1) iPhone Introduction (2007)

[http://www.youtube.com/watch?feature=player\\_embedded&v=6uW-E496FXg](http://www.youtube.com/watch?feature=player_embedded&v=6uW-E496FXg)

He was in top form, never better. Pundits had speculated for years that Apple was working on a mobile phone, but no one had any idea the game-changing bombshell that Jobs was about to drop on the world. No one but Jobs, that is. He had a revolution waiting to begin, and he knew it, because he was on fire. “We’re going to make history today,” he declares near the beginning of this keynote, and as usual, he was spot-on.

## 2) iPad Introduction (2010)

[http://www.youtube.com/watch?feature=player\\_embedded&v=ITNbKCAFHJo](http://www.youtube.com/watch?feature=player_embedded&v=ITNbKCAFHJo)

I can’t help but contrast this one against the iPhone’s introduction, because it was an equally revolutionary device. But the differences in the presentations couldn’t be more potent. Jobs was as close as he ever got to downright giddy when he debuted the iPhone, but endless leaks made it impossible to keep the iPad under wraps. So he toned down the dramatic flair — toned it WAY down — and made a much more understated presentation. The public’s response was much more guarded this time as well, with people calling it an “oversized iPod Touch” or cracking jokes about the name’s similarity to a Maxipad. But when people finally got their hands on the iPad for the first time, they realized that this was something new that would change modern computing forever. Did Steve know at this keynote? Hard to say, because he plays it much more guarded. Either way, lowering expectations with a dazzle-free event was a smart instinct.

## 3) iPod Introduction (2001)

[http://www.youtube.com/watch?feature=player\\_embedded&v=ibdik2c0zak](http://www.youtube.com/watch?feature=player_embedded&v=ibdik2c0zak)

It was the music shot heard round the world. A moment in time that changed entire music industry forever. And it’s a brilliant example of Jobs’ dynamism on stage. Very possibly his defining moment as an orator. He doesn’t merely unveil or demo a new product, he tells a story. He hits the big talking points, emphasizes the soundbites for media to repeat (“1,000 songs in your pocket”). (This video continues with Parts 3 onward.)

## 4) iPhone 4 vs. Gizmodo (2010)

[http://www.youtube.com/watch?feature=player\\_embedded&v=I1edQuxclUs](http://www.youtube.com/watch?feature=player_embedded&v=I1edQuxclUs)

One of the most dramatic news stories in Apple history was the fight that took place between Cupertino and news blog Gizmodo over the infamously lost iPhone 4 prototype. Apple had become synonymous with secrecy over the years, and was playing its cards close about the next big release of the iPhone. But one very unlucky Apple employee took his prototype iPhone 4 to a bar, and accidentally left it behind. It was found by another patron and eventually sold to Gizmodo (at a hefty price tag) for an exclusive story that would bring the blog into the public eye like never before. Things spiraled downhill fast, with Steve, once an avid fan of Gizmodo, enlisting the help of the police to raid the home of Gizmodo’s EIC to get their missing device back. (To this day, Gizmodo is still banned from all Apple events.) When Steve finally took to the stage to “unveil” the iPhone 4 — a device that pretty much everyone had already seen — all eyes were on him, because it was the first and only time he would address the big news story in public. There was electricity in the air and in the audience, and you can still feel it when you watch this video.

## 5) OS X Introduction (2000)

[http://www.youtube.com/watch?feature=player\\_embedded&v=6-fkYFV7rOY](http://www.youtube.com/watch?feature=player_embedded&v=6-fkYFV7rOY)

Even at this early point after his return to Apple — this is the same keynote where he announced that the “Interim” had been removed from his title as CEO — Steve Jobs had this crowd eating out of his hand. Looking back at this unveiling of OS X to the world for the very first time is quaint, as Jobs takes the time to explain little graphical interface elements that we take for granted today — and the audience gasps and applauds frequently, like he’s David Copperfield.



## 6) MacBook Air introduction (2010)

[http://www.youtube.com/watch?feature=player\\_embedded&v=SHIHK\\_hKFxY](http://www.youtube.com/watch?feature=player_embedded&v=SHIHK_hKFxY)

I had to include this one because, well, it's just so darn CUTE. Anyone that knows anything about Apple at all knows that Steve had a major thing for technology that was ultra thin. He loved talking about how thin new products were or THINNER updated products had become. It could be considered a weakness on his part — frankly, thinner ISN'T always better — if it didn't tap into that same “science fiction becomes real” cool factor that always wows consumers. When the MacBook Air was launched, Apple had achieved something that until then seemed downright futuristic: a laptop so thin it could fit into an envelope. Who even knew if there was an audience for a device that looked like you could break it over your knee like a twig? But at this keynote, that was kind of beside the point. He saved the announcement for his trademark “One more thing...” over an hour and ten minutes into the presentation, but even at that, Steve had a killer new toy, and he clearly couldn't wait for everyone to show it off. The MacBook Air was a product that hit Steve's personal sweet spot, and it showed.

## 7) OS X Lion, iOS 5, & iCloud (2011)

[http://www.youtube.com/watch?feature=player\\_embedded&v=3lsMFzxtSZ8](http://www.youtube.com/watch?feature=player_embedded&v=3lsMFzxtSZ8)

This in-depth introduction to OS X Lion, iOS 5, and iCloud from earlier this year is historic because it marks Steve's last keynote presentation ever, and his last major public appearance before his passing. And even in these last months of his life, when he was thinner and frailer than he'd ever been, he still owned the stage. This song and dance was so old hat to him by now, he could have phoned it in and still made headlines, but he was as lively and entertaining as ever.

### New Apple Battery

*Continued from page 1.*

Both patents sure point toward Apple working on a system to employ the use of these fuel cells as a power source. Even going by the names of both patents, “fuel cell system to power a portable computing device” and “fuel cell system coupled to a portable computing device,” the goal here seems pretty obvious.

Apple notes that using hydrogen fuel and hydrogen fuel cells are not only more efficient in terms of being a renewable energy resource, but using this kind of fuel cell could allow a portable computing device to operate for days or even weeks without having to refuel.

A cleverly devised system, the patent for the actual system describes a device that can both provide power to, and receive power from, a rechargeable battery within the portable computing device. Something like circular breathing, but for batteries. It is proposed that the fuel cell system could include a fuel cell stack which would convert fuel into electrical power — kind of the whole point.

The goal of the design is not only to find a better renewable source of energy, but to reduce the size, weight and cost of the fuel system, which would remove the need of a heavy battery.

### Music in the Cloud

*Continued from page 3.*

Signing up with Amazon Cloud Drive is a must if you have the Kindle Fire tablet. Amazon designed the Fire for its vast online library of music and other content.

With the Amazon MP3 app, you can get the service on other Android tablets, too. You can also access the Cloud Player from any Flash-enabled browser.

However, until Amazon releases an app, there is no easy way to access Amazon's Cloud Drive on your iPhone or iPad.

Google Music could be your best choice if you and your friends are on Google+. When you buy a song from Google Music, you can post it and let friends give it a listen for free.

Google Music is quickly approaching 13 million songs from artists on Sony, Universal and EMI. However, it doesn't have an agreement with Warner yet. And, I promise, some of your favorite artists are on Warner.

Google doesn't charge for cloud storage, and you can upload up to 20,000 songs for free. High-quality 320kbps MP3s purchased from Google don't count against that total. Like Amazon, however, you have to upload your library.

Google Music works best with Android phones and tablets. Download the Google Music app, and you're ready to stream or download. It works fine on PC or Mac computers. Like Amazon, support for iOS gadgets is non-existent.



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# 10 Cool Places to Learn the Art of Photoshop

from [LightStalking.com](http://LightStalking.com)

The great thing about the internet is how much people are willing to share a heap of valuable information. When it comes to our favourite post-processing software, then it's staggering the amount of great information on Photoshop if you know where to look. Well, now you do know!

[Adobe TV with Julieanne Kost](#) – Julieanne Kost is makes a heap of tutorial videos for Adobe themselves and this is where you will find them! Hundreds of hours of free video tutorials that are well worth watching can be found here.

[DEKE](#) – A fantastic blog that is regularly updated and is hugely informative for anybody curious about Photoshop. Goes into some detail about design too.

[Digital Mastery](#) – There's a lot of cool and free stuff (especially in Ben's "Insight Injections") that will keep you busy learning for a very long time. Ben also does tours and courses!

[John Nack on Adobe](#) – This is a blog on all things Adobe that is worth keeping an eye on – sometimes for tutorials and sometimes for discounts on Adobe products!

[NAPPCS5 Learning Center](#) – Some very cool videos from Scott Kelby and the folks at Photoshop User. These should be on your "must see" list.

[Photoshop CS5: A Sneak Peek](#) – Here are a heap of great videos covering the major components of Photoshop CS5. It also covers what CS5 does differently to previous incarnations of our favourite editing tool

[Photoshop Insider](#) – This is Scott Kelby's blog (if you don't know who he is and you're trying to learn about Photoshop, then you soon will). Filled with all types of PS goodies as well as general photography goodness.

[Photoshop News](#) – As the name suggests, there is a lot of news on this site, but it's also filled with tuts and videos that will help you learn PS. The amount of great content on this site is insane.

[psd tuts+](#) – From the folks at Envato, the tut + network is one of the best websites on the whole internet when it comes to learning anything about Photoshop or design and photography in general. This is their specialist Photoshop hub.

[The Russell Brown Show](#) – Russell is the Senior Creative Director at Adobe and this is where he keeps a lot of his goodies. Don't miss this one.



## Apple Ambassador

*Continued from page 2.*

Apple is the industry's largest NAND flash consumer, so acquiring Anobit gives it a means of addressing the reliability problems that arise as solid-state memory shrinks in size.

According to published reports, Apple will pay around \$500 million for Anobit. It sees the purchase of a NAND flash technology developer as key to its product strategy going forward. The acquisition of Anobit would be Apple's largest purchase since it bought NeXT in 1996. NeXT, which produced high-end workstations, was founded by Apple co-founder Steve Jobs after he was fired from Apple in 1985.

Apple has been using NAND flash memory in its products since 2005, when it began selling the iPod Nano media player. It has continued expanding its use of flash with an all-flash MacBook Air, the iPad tablet and SSD options for its MacBook Pro line of laptops.

The purchase of Anobit addresses several issues for Apple. It frees the company from dependency on flash component makers such as Samsung and Intel, which lead the market in NAND flash production. Using Anobit's controller technology -- a type of error correction code (ECC) -- would allow Apple to choose the cheapest NAND flash chip inventory available for its products.

"It could ultimately impact the cost of the NAND flash they buy if they're able to continue to develop [technology] that allows them to use the cheapest flash possible," said Michael Yang, a memory and storage analyst at market research firm IHS iSuppli.

Industry analysts said they weren't surprised by Apple's move, noting that it follows an industry trend. In March, SSD-maker OCZ Technology Group signed an agreement to acquire privately held Indilinx, a maker of popular NAND flash controllers, for \$32 million. In October, fabless semiconductor maker LSI Corp. announced it was acquiring flash controller maker SandForce.

Neither Apple nor Anobit have confirmed the sale, and neither company responded phone calls or emails seeking comment.

Objective Analysis analyst Jim Handy said Apple won't be saving much money by owning its own controller technology. "These controllers cost from \$5 to \$20. The

NAND flash in most SSDs is significantly more expensive than that," he said.

Joseph Unsworth, a Gartner analyst specializing in NAND flash and SSD, said that "if this acquisition was to take place" it would support Apple's strategy of using technology that allows it to innovate and differentiate itself from competitors with flash management and system software. He added that it would also enable Apple to use the cheapest flash available, and that should help boost the company's profit margins.

"That's why Anobit is interesting," Unsworth said. "This is about flash management and the integration of this technology into their greater ecosystem" of both hardware and software. Noting that intellectual property "is always important," he added, "having it is always better than not."

Unlike LSI, which said it would continue to sell SandForce's technology to other equipment makers, Unsworth said it's highly unlikely Apple will allow Anobit to court competitors. "I see no value for Apple in doing this. Why share their secrets?"

"This is NAND management technology, not actual flash chips. So to me this makes little sense when considering other [system manufacturers]," Unsworth added.

Handy agreed, adding, "I think the door will be shut. Apple very infrequently shares technology."

Anobit has produced two generations of its Genesis SSD technology. The intellectual property that sets it apart from other SSD manufacturers is its controller, which uses firmware it calls Memory Signal Processing (MSP), a type of ECC.

Anobit's MSP technology increases the signal-to-noise ratio, making it possible to continue reading data even as electrical interference rises. The MSP controller technology also extends the endurance of standard consumer-grade multilevel cell (MLC) flash from about 3,000 write/erase cycles to more than 50,000 cycles -- making MLC technology suitable for heavy-duty cycle applications, such as relational databases.

Yang said as the density of NAND flash circuitry shrinks, so does its reliability and resilience, making technology like Anobit's even more important.

Anobit does not perform NAND flash fabrication. Instead, it buys cheap NAND flash chips and applies its controller technology to them to increase their performance and reliability.



Today's NAND flash-based chips are created with lithography processes that range typically from 25 nanometers to 34nm in width; a human hair is 3,000 times thicker than 25nm, which approaches atomic levels. As the walls of flash thin out, electrons leak through, creating "noise" and data corruption.

With each new generation of NAND flash, error correction code is required to address the data corruption. MSP error correction code improves the signal-to-noise ratio.

According IHS iSuppli, in 2010, Apple spent \$17.5 billion to purchase semiconductors -- that was an increase of 79.6% from the \$9.7 billion it spent in 2009. Earlier this year, iSuppli figures showed Apple's iPad was leading an almost fivefold surge in NAND flash memory use as consumers gobbled up tablets in increasing numbers.

"Flash memory is not getting better. It's getting worse. So having a controller technology that you work in-house allows you to dictate ... technical specifications as the geometry moves down," Yang said.

Yang said while Anobit's intellectual property is key to Apple, it isn't unique. Flash controller makers Indilinx, Marvell and SandForce all have slightly different ECC technology that accomplishes the same thing: improving the resiliency and performance of NAND flash memory.

"Is Anobit unique enough that Apple has to buy it? I'm not sure," Yang said. "But there are not too many other controller companies left that manage ECC very well as flash shrinks below 20nm. If Apple wants to continue to have an inroad with this technology, it pretty much had to jump into the acquisition mode."

## Program Coordinator

*Continued from page 1.*

The meeting will begin at 7 p.m. [St. Mary's Hospital is located at 1300 Massachusetts Avenue in Troy NY.](#)

However, the best route to take from the Northway is the following:

1. Merge onto NY-7 East from the Northway.
2. Follow Route 7 to Troy where it becomes Hoosier Street.
3. Turn left on Oakwood Avenue (10 Street/NY-40) which is the first light after the bridge and bare right.
4. Turn right on Sausse Avenue. Turn left onto Lindenwood Court. When you come to the first entrance to the hospital parking lot, turn left and park.

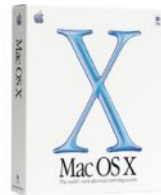
# 10 Not So Insanely Great Things Apple Released Under Steve Jobs

by Shaun Clayton

Steve Jobs is gone. Without a doubt, he will be remembered as a genius and a visionary. He changed the world in more ways than one, and his legacy is obvious in every iPhone, iPad, iPod and Mac computer sold. He will be missed.

However, it's also worth remembering that Steve Jobs was also human, and not some incredibly gifted alien shot into space from his dying planet by his father. While Steve Jobs helped pioneer many gadgets, technologies and even helped create certain markets that didn't exist before, not every thing Apple made under Jobs was insanely awesome. Actually, some Apple products weren't even that good. In fact, some of these things were very, very flawed. So, in the interest of full reflection here are ten things that were created by Apple while Steve Jobs was in charge that were... not so great.

## 10) Mac OS X 10.0 "Cheetah"



Though Mac OS X is a fine operating system now, in the very first release in 2001, it was anything but. Apple had the idea that it was more important to get OS X out quickly rather

than have it be finished, and boy was it unfinished. It was incredibly slow - resizing a window alone was a choppy frustration fest. It's codename of "Cheetah" would only be suitable if the Cheetah was doped up on Klonopin. If you think you hate the spinning beach ball of death now, just think about how bad it was then. Plus, though the new OS had things that the old Mac OS sorely lacked, like protected memory. It also lacked simple things like being able to burn CDs or play DVDs, which in 2001 sucked a whole lot.

## 9) The iSight



While cameras are now small and ubiquitous in almost every piece of computer device, it wasn't always that way. In 2003 Apple decided to help you in this sense by combining a webcam with a microphone and selling to you for \$149.

Eh, even though it was a fantastic webcam, it was still a very expensive webcam, and people decided that a crappy webcam for \$50 would be a little more reasonable. Apple discontinued the iSight 3 years later.





## 8) The Apple TV



Though now it a cheaper, more useable form, the original Apple TV release in 2007 was not. Starting at \$299, the device allowed you to watch... er, not a whole lot. You could see videos downloaded from iTunes, or streamed from YouTube or off your computer and uh, that's it. So it was like a computer, but did nothing a computer did except hook up to your TV really easily. Also misleading is that while people would like an Apple-branded TV, this device also required you to get a TV.

## 7) The Flower Power and Blue Dalmatian iMacs



Having a lot of success with different colorful versions of the G3 iMac, the February 2001 models decided to take it a step up, using a technique of plastic molding that took over a year and a half to perfect. The "Blue Dalmatian" and "Flower Power" designs are as if Timothy Leary's head appeared inside your iMac and then exploded. Though Apple introduced these with much fanfare went back to less "Burning Man after-party" colors for the iMac in July.

## 6) The First Power Mac G4s



There was nothing really wrong with the design of this tower, which came out in September 1999, except that the very next month, all the speeds of the machine were pulled back, so suddenly a \$2,499 450 MHz computer became a \$2,499 400 MHz computer. This was thanks to Motorola both not able to produce enough supplies or in functional quality. You can probably guess how upset people were at this (very). Apple was perhaps even more upset, and this was one of the reasons that in 2005 Apple switched over to using Intel-based processors on all its computers.

**Attention GAAB'er Members**

Please pay your 2011-2012 dues to Cecila MacDonald.

## 5) The 3rd-Generation iPod Shuffle



Apple's decided that those damned buttons right on their smallest and cheapest iPod unit were too intimidating, so they removed them completely. They then added voice control, and a proprietary set of headphones with buttons on them with which to control the unit. So you couldn't use any other third party headphones to control your Shuffle. Brilliant! Now the only thing simple about the iPod Shuffle was that it could be easily swallowed. Apple realized its mistake, at least, and released the 4th-generation Shuffle with buttons back on the unit.

## 4) The Apple Display Connector



In 2000, Apple started to use a connector that combined a video signal, power, and USB all in one cable, called the ADC. A nice idea, surely, but it meant that you could only use Apple monitors with Apple computers, which was kind of galling to consumers who were already paying a good deal for a Mac. But the real problem was that the power provided by the ADC was insufficient to power a CRT monitor above 17-inches or a LCD of 30-inches, both of which Apple sold... meaning if you did buy one of these now necessary monitors they didn't work. In 2004, the ADC was quietly replaced with DVI, though you could get a giant brick of a conversion kit for \$200.

## 3) Power Mac G4 Cube



Introduced in July 2000, this was a PowerPC G4 computer crammed into an 8x8x8-inch cube. It had all the power of a G4 tower, which professionals wanted, but unfortunately it neglected to have a lot of expansion ports, which professionals also wanted. It was also more expensive than the entry-level tower at \$1,799. So... not a lot of people wanted them. Oh, also, the capacitance switch for the power would sometimes accidentally get activated, putting the unit to sleep. That and it was designed to be fanless, which some people didn't realize, and stupidly destroyed their machines by blocking off the ventilation. Fortunately Apple learned from this and made the Mac Mini for the entry-level set. but still the Cube comes across as the homecoming queen with severe bipolar disorder - desirable for its beauty, but full of inner darkness.



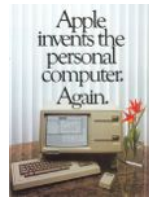
2) The Hockey Puck Mouse



Introduced with the original iMac, this round mouse the first of Apple's to use the USB standard, was naturally difficult to orient and even more difficult to use with big hands. Apple took

their minimalist approach to devices and made a hockey puck a button on it...and colors! Eventually Apple did come out with a pill-shaped "Pro" mouse three years later, but in the meantime, the market for third party mice really took off on the Mac.

1) The Lisa



The Lisa was the first graphical user interface computer; it was also supposedly named after Steve Jobs' daughter. It was definitely priced at nearly \$9,995 when it came out in 1983, which would be about \$21,000 now. Even though it was focused towards large businesses, large businesses said "WHAT???" especially when the much cheaper Macintosh came out. Lisa took such a beating that that was given an emulator to run the Mac OS system and renamed the Macintosh XL shortly before it was discontinued.

**IT Sector to Spend 50 Percent More on Apple Gear in 2012**  
from MacNewsNetwork

Apple's acceptance in the enterprise sector (leading with the iPad and iPhone) has been one of the more surprising changes in the corporate landscape over the past two years, but even more remarkable is data that shows that the revolution appears to be gaining strength. A new global survey done by Forrester Research indicates that the enterprise sector will increase its spending on Apple products by more than 50 percent in 2012.

Despite Apple's nearly-total ignoring of the corporate market, Forrester says the corporate sector will buy \$10 billion worth of iPads in 2012, up from \$6 billion in 2011, and \$9 billion in Macs (up from \$6 billion in 2011). The research firm calls the emerging popularity of Apple products in the enterprise "the big surprise of 2011."

The growth in Apple use in the corporate sector has happened, Forrester says, largely because of the move to BYOD (Bring Your Own Device) as a cost-saving move, which allowed employees to choose what platform they preferred rather than having IT departments dictate to them.

As apps and OS support for enterprise needs expanded, companies were more willing to consider Macs as well as the already-popular iOS devices, led by worker preference.

A second factor was smaller companies buying Macs and/or iPads for employees that could use them both at home and work, resulting in higher employee satisfaction, with a third factor of IT departments encouraging employees to go mobile more easily by providing them with iPads and iPhones. Apple has said in conference calls to analysts

that 93 percent of the Fortune 500 companies are either testing or deploying iPads, with iPhones enjoying even wider acceptance as an option (an area that used to belong almost exclusively to Research In Motion's BlackBerry).

Even more remarkably, Forrester says global corporate spending on Windows-based computers and tablets will decline by small percentages in 2012 and 2013, but that Macs will see an average of 40 percent per year increases during the same period, with iPads enjoying nearly 60 percent average annual increases in spending. The decline in Windows spending may be more due to the increasing percentage of workers who have shifted to mobile devices over desktops rather than any corporate change in OS preferences.

Forrester said it interviewed 46 major IT vendors for the report, and also studied traditionally large corporate or institutional purchasers, including a number of US and international government agencies.



## GAAB Internet Addresses

### Names

### E-Mail Addresses

Aaron Ambrosino.....	aambrosi@mac.com
Gary Blizzard.....	gmbizzard@aol.com
Mark Bogossian.....	mark@castlecomp.com
Steve Bradley.....	ssbradley@adelphia.net
John Buckley.....	jbuckley@nycap.rr.com
Sheldon Carnes.....	sheldoncarnes@hotmail.com
Tina Cook.....	twonotrump@nycap.rr.com
Anthony Eldering.....	tonye11@verizon.net
Trudy Ellis.....	TE52@earthlink.net
Lilajane Frascarelli.....	afrascar@nycap.rr.com
Les Goldstein.....	lgoldst1@nycap.rr.com
Richard Hester.....	hesterfp@capital.net
Ottmar Klaas.....	ottmar.klaas@gmail.com
Michael LaFrank.....	mлаfrank@nycap.rr.com
Thomas Levanduski....	msglevnduski@aol.com
Cecilia MacDonald.....	cecilia@midtel.net
Mike Mannarino.....	rfd230@nycap.rr.com
Roger Mazula.....	aluzam@aol.com
Brendan O'Hara.....	bohara1@nycap.rr.com
Eric/Lee Rieker.....	Erieker@aol.com
AbdurRahman Rozell..	aryr100@gmail.com
Judith Schwartz.....	jfschwartz2@earthlink.net
Saul Seinberg.....	saul.seinberg@gmail.com
Bill Shuff.....	wjshuff@earthlink.net
Shelly Weiner.....	olliedawg@yahoo.com
Lou Wozniak.....	louw@nycap.rr.com

*To start or renew your GAAB membership, see Cecilia MacDonald or send your fees payable to her at the following address:*

*Cecilia MacDonald  
260 Sever Road  
Delanson, NY 12053*



*Visit GAAB on the Internet at <http://www.applebyters.com>*

