## The iPad: What you need to know

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Anytime Apple releases something new, the questions soon follow. That's especially the case when it's an entirely new product like the iPad released by Apple this week. A tablet that blends elements of Apple's iPhone and iPod mobile devices with the Mobile Mac experience, the iPad doesn't fit neatly into Apple's existing product line. Combine that with the rush to declare this device either a dream ("It's revolutionary and magical!") or a dud ("It's nothing more than an oversized iPod!") before Apple has even shipped a single device, and you've got an atmosphere ripe for more confusion than clarity.

We'd like to help you separate the signal from the noise. We've taken some of your iPad questions, added a few of our own, and then set out to provide some answers based on Apple's presentation Wednesday and our own hands-on time with the device. Surely, more information about the iPad will come out between now and when the device finally arrives in March, but this guide should tackle some of the more immediate questions about Apple's latest device.

### Pricing and availability ...What's the iPad going to cost?

Pricing depends on two factors: the amount of storage the iPad includes, and whether or not it has support for 3G networks. An iPad equipped only with Wi-Fi connectivity costs $499 (16GB), $599 (32GB), or $699 (64GB). The Wi-Fi-plus-3G version costs $130 more at each size—$629 (16GB), $729 (32GB), and $829 (64GB).

### And all models will be available at the same time?

No, Apple said that the Wi-Fi-only models should go on sale in 60 days, but the ones with 3G won't be available for 90 days due to FCC approval and such. So that means the Wi-Fi only iPads should arrive by the end of March, with 3G-enabled devices coming a month later.

### But if I wait an extra month and pay more for the 3G model, I get free 3G access, right?

No, the extra cost is ostensibly to cover the extra hardware required for 3G connectivity. You'll still need a data plan if you want to use 3G.

### And what's that going to cost me?

Apple has struck a deal with AT&T that lets you pay either $15 a month for 250MB of data, or $30 a month for unlimited data. But unlike with the iPhone, a 3G plan isn't mandatory, and there's no contract involved—it's pre-paid and on a month-to-month basis. So you could, say, activate 3G service for your iPad before your vacation and pay just for that month, canceling when you return.

### How about if I'm willing to sign a contract—will AT&T subsidize the cost of the iPad like it does with the iPhone?

Apple made no mention of any such plans this week, and it seems unlikely. What about if I already have a data plan for my iPhone. Does that count? We don't know for sure, but we'd guess not. Considering that AT&T hasn't even allowed tethering your iPhone to your computer yet, sharing data plans between devices seems highly unlikely.

## How to protect your reputation online

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Kristin Burnham , CIO

*Editor's Note: The following article is reprinted from CIO.com. Visit CIO's Macs in the Enterprise page.*

Several months ago when Twitter introduced its lists feature, social media consultant Allen Mireles checked to see which lists included her. "I wanted to see if the lists I was on were a reflection of how I wanted to be viewed on Twitter," she says. She found two surprises: A porn star had included her on a list and another user listed her under "people I've seen naked"-a surprise, she says, because she had never met the person.

Mireles responded immediately. First she blocked the porn star on Twitter, which automatically removed her from the list. Then she sent a direct message to the owner of the other list and explained that she uses Twitter for business purposes and didn't think it was appropriate to include her on it. "He very kindly took me off the list and apologized, saying he had been trying to make some of his lists 'more interesting,'" Mireles says.

Joe Laratro, president of Tandem Interactive, an online marketing solutions company, experienced a similar situation. About a year ago, Laratro received a Google Alert that included a link to a post from a blogger who commented negatively on Laratro's handling of work with a client.

Laratro, too, decided to contact the source to respond to the blog post. "I thought I was being proactive with the blogger by engaging with him and being friendly and trying to continue the conversation," he says. "But once I had his attention, he wanted to further attack me. When I realized communicating with him had backfired, I stopped commenting and let it go away."

## AT&T doesn't have good 3G coverage where I live, work, and travel—will it work with Verizon or T-Mobile instead?

Not at the moment. Although the 3G-enabled iPad will ship unlocked—meaning it won't be tied to a particular network—the device uses a GSM chip that's incompatible with Verizon's 3G network. T-Mobile is a GSM network, but its 3G data runs at 1700MHz; the iPhone's 3G components support 850, 900, 1800, and 1900 MHz GSM/EDGE, and 850, 1900, and 2100 MHz UMTS/HSDPA. Bottom line: the iPad won't work on T-Mobile.

Beyond that limitation, the 3G-enabled iPad requires a micro-SIM card for mobile-network access; currently, AT&T is the only U.S. carrier using these cards. (Other international carriers also use mini-SIM cards).

## Are they any other differences between the Wi-Fi and 3G models?

Besides price, there are a few physical differences. The 3G models weigh an extra tenth of pound, and have a black antenna window that covers part of the top and stretches onto the back of the iPad. The 3G models also include GPS functionality (which we'll discuss in further detail below).

## I don't live in the U.S. Will everything be available to me, and at the same time?

Steve Jobs said that the Wi-Fi models will be available worldwide in 60 days, but that details for international 3G users won't come until June. In addition, Apple's iPad Website states that the iBooks app and store will be available only in the U.S. We assume that the iBookstore will follow the path of the iTunes Store, which debuted in the U.S. before rolling out to other countries.

## Hardware and design

### What if I don't want to use the on-screen keyboard to type in long e-mails?

One of the accessories Apple showed off was the iPad Keyboard Dock, which includes a full-size keyboard—similar to Apple's current aluminum keyboard, but with a few iPad-specific keys—that you can use for input. In fact, when using the external keyboard, the iPad's onscreen keyboard disappears, letting your document fill the entire screen.

The iPad also supports Bluetooth keyboards, so you can type without having to physically connect the iPad to a keyboard—though you might want to prop the tablet up somehow so you can actually see what you're typing.

## Does the iPad have a built-in GPS (Global Positioning System) receiver?

The 3G version does; the Wi-Fi version does not. As far as we can tell, the 3G-capable iPad uses the same Assisted GPS technology used in the iPhone 3G and 3GS. (Despite how it sounds, "Assisted GPS" is not a lesser form of GPS. "Assisted" means the device can use other cues—such as the location of nearby cellular towers or Wi-Fi networks—to speed up the initial GPS "fix" compared to using the GPS circuitry alone.)

## How hot will it get?

We won't have a good answer to that until the iPad actually ships, unfortunately. During the hands-on time following Apple's press event this week, reporters didn't have an opportunity to sit with the iPad in their laps a la Steve Jobs during much of Wednesday's iPad demo, so we have no indication of how well the device disperses heat. We imagine it will be more like an iPhone, which gets warmer mainly when it's put to heavy use, than a MacBook or MacBook Pro, which can feel quite toasty the longer you work.

## Is there any way to get files off of the device? Can I access the filesystem when it's docked?

We don't yet have all the details about how the iPad will differ from the iPhone in this respect. There is a file-sharing feature built into the iPad and used by Apple's iWork apps; this suggests that the iPad will offer a space where apps can write data and that Macs or PCs will be able to mount and access like a shared folder. We're not sure if this sharing will happen over Wi-Fi, when connected to a computer via USB, or both.

## Will it stream video and audio podcasts from the iTunes store?

Since the iPhone already does this, we assume the iPad will do it too.

## Will I be able to print from the iPad?

Believe it or not, there are some iPhone apps out there right now that will let you print, so it's not unreasonable to think that someone will come up with an app that lets you print any document the iPad knows how to read. And given that Apple is touting iWork for iPad, it's possible that the iPad itself may include some sort of printing service, although we don't know of any such feature right now.

## E-books

### Will iBooks and the iBookstore save the newspaper and magazine industries?

It appears that iBooks—that's the free e-reader app previewed by Apple this week—and iBookstore are exactly what they say: a system for users to purchase and read books. Not magazines, not newspapers, but books. The only signs of books or magazines during Apple's demonstration of the iPad were in the Safari browser and in the New York Times presentation of its own custom-built app.

So far as we can tell, what this means is that book publishers will be able to supply ePub-formatted books for sale in Apple's iBookstore, but that magazine and newspaper publishers will need to find their own way onto the device, either by building their own apps or by contracting with an app developer or service to publish their content via a third-party app.

## How much will books cost?

From what we know so far, it looks like "hardcover" books will cost between $13 and $15, but the truth is that prices will probably vary widely. Amazon's Kindle book prices may be a bit cheaper, but that's often because Amazon is selling the books at a loss—there's currently a bit of a battle between Amazon and publishers over the company's pricing policies. It's unclear how that debate might shake out, and how it might affect Apple's deals with the publishers.

## Can the iBooks app display PDFs or ePub files that didn't come from the iTunes store?

In the case of PDFs, probably not. Since iBooks reads ePub files (all of Apple's books will be in ePub format), it's possible that the app would also read DRM-free ePub files from other sources. But

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it might not. Still, fear not—undoubtedly there will be other apps on the iPad that will read those formats.

## Will books purchased through iBookstore have digital-rights management restrictions?

Almost certainly, and most likely it will be Apple's own FairPlay DRM, linked to your iTunes account.

## Other Software

## How about apps? Is the iPad going to require developers to completely rebuild their iPhone apps?

Apple says pretty much all existing iPhone applications will run on the iPad in one of two modes: a version that displays the app at the size it would appear on the iPhone, surrounded by black space, and a "pixel-doubled" (technically, the image is quadrupled in size—twice as wide by twice as tall) version that scales the image up to fill the iPad's screen.

However, if developers want to take advantage of the iPad's particular specifications, they will have to spend some time altering their apps. During the iPad announcement, Apple offered a number of demos from iPhone developers who had altered their applications for the iPad in just a couple weeks, and the interface choices there suggested that, for most developers, it will be worthwhile to update their applications.

## So how will that work? Will the App Store offer two different classes of apps—iPhone and iPod touch apps on one side, and iPad-optimized apps on the other?

While Apple hasn't explicitly said how this will work, it appears that developers can choose to write either a hybrid application that figures out which device it's running on, showing the appropriate interface, or code an entirely new version of their application for the iPad and distribute it separately. It will be interesting to see how this shakes out. On the one hand, having a single app that works differently on different devices could be pretty nifty. On the other hand, having two separate apps allows developers to generate more revenue—by charging users once each for the iPhone/iPod touch and iPad versions of their apps.

We'd also imagine that this situation might need a few months to shake out. It's possible that the iPad and iPhone will be running different versions of the iPhone OS when the iPad ships in late March. We might have to wait for a future iPhone OS release, possibly even iPhone OS 4.0 (presumably this summer or fall) before everything syncs up. There are a lot of moving parts here; hopefully we'll learn more in the next 60 days.

## Will I be able to move the apps I've already bought for my iPhone onto an iPad?

During his presentation, Jobs alluded to the fact that plugging in an iPad to your Mac or PC would automatically transfer existing music, videos, and applications that you'd purchased. However, unless the app in question has been updated for the iPad, you'll get only the iPhone version.

## Is there any way to get apps on the device that don't come through the App Store?

The iPad is just as locked down as the iPhone and iPod touch—all apps are App Store apps approved by Apple. (Try saying that one five times fast.)

## When I visit a Web page via the iPad's browser, does it default to the mobile version of the site if there is one?

It depends on how the iPad's browser describes itself when connecting to a Web server. When we visited macworld.com during our hands-on time with the iPad after the announcement, the iPad went straight to our standard home page, not the version we serve up to iPhone, iPod touch, and Android phone users. We're not sure if the iPad's browser was posing as a Mac, or if our filters just didn't catch it and re-route it. But after seeing how good our full-fledged site looked on the iPad, it's unlikely that we'd force iPad users to view the iPhone version of our site. However, every Web publisher will likely be able to make this decision for their particular site.

## Will the iPad display Web content made using Flash?

As with the iPhone, the iPad's version of Safari doesn't support Adobe's Flash technology. During Steve Jobs's presentation of the device, one Web page he visited showed the blue "plugin missing" icon instead of a Flash animation. Given Apple's low regard for Flash—two years ago, Steve Jobs was openly dismissive of Adobe's

offering at an Apple shareholders' meeting—we wouldn't expect that to change. Adobe says that apps produced with its upcoming Packager for iPhone development tool, which lets developers convert Flash programs into iPhone apps, will run on the iPad, though they won't initially be able to take advantage of the iPad's larger screen size. That won't necessarily impact Websites with embedded Flash, but it's something.

## Apple tweaked iWork to run on the iPad—why not iLife?

At the moment, the iPad seems more focused on media consumption than media production. You can view your photos and videos, listen to music, read books, surf the Web, and so on. While the iPhone 3GS's built-in camera takes pictures and records videos, there's no similar way of creating media with iPad. As such, iLife programs like iMovie, GarageBand, iDVD, and even the editing capabilities of iPhoto are all absent. iTunes's capabilities are mostly duplicated by the combination of the iPod application and the iTunes storefront application.

While it seems likely that the iPad will feature more media-creation tools (if not from Apple, then from third-party developers), it's possible Apple chose not to focus on that aspect of the device because it was more complicated to develop the interface for media creation than it was to do so for media consumption.

## How does Photos on the iPad compare to iPhoto?

Photos acts mostly as a photo browser. You can browse through albums and—if you're syncing with iPhoto—Events, Faces, and Places. You can peek inside any collection of photos by reverse-pinching it in the photo browser—you'll be presented with a thumbnail overview of each image in that set. However, Photos does not offer any of the editing capabilities of iPhoto: you'll want to do your color-correcting, cropping, and application of filters on your computer before syncing the photos to your iPad.

## What's the relationship between the Calendar and Mail apps on the iPad and their iPhone and Mac counterparts?

The iPad's version of Calendar and Contacts may look somewhat different from their

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iPhone counterparts, but the functionality seems to be much the same. You can sync e-mail accounts, calendar events, and contact information over-the-air using the device's support for Apple's MobileMe or Microsoft's ActiveSync technologies—if you don't have access to either of those, you can still sync the information from your computer via iTunes.

## The big question

### I already carry an iPhone and a laptop. Why do I need a third device?

When you get right down to it, that's the central issue surrounding the iPad. Apple touts its tablet as something that goes in between those devices. Not everyone will want one, but the theory seems to be that many people don't really need a laptop for a lot of tasks. A simpler device like the iPad could better fit into people's living rooms, or into their bags for commuting or long trips. But it's definitely a leap of faith by Apple. Whether users will buy the iPad and integrate it into their lives, either replacing or complementing their existing devices, remains to be seen.

# Walt Mossberg talks with Charlie Rose about Apple's iPad

Walt Mossberg is the author and creator of the weekly Personal Technology column in The Wall Street Journal, which has appeared every Thursday since 1991.

He is also the co-creator and co-producer of the technology industry's most prestigious annual conference, **D: All Things Digital**, and is the co-executive editor of the technology web site, allthingsd.com, which extends the experience of the D

# How to protect your reputation online

As social sites with user-generated content such as Facebook, Twitter and WordPress continue to grow in popularity, and with Google's announcement of real-time search, you must be aware of and manage your online reputation carefully now. "Social media has made our lives very transparent," Laratro says. "If you maintain a professional persona, this can be something positive, but if you're unaware of comments or pictures online that you wouldn't even want your mother to see, it can be terrible."

Several free tools can help you keep tabs on what's being said about you online. One of the most popular tools is a Google Alert for your name, which will automatically inform you when you're referenced on a website.

## What to do when there's dirt on you

But what do you do once you've found an accusatory comment or inappropriate picture online? As Laratro discovered, connecting with the blogger-or the webmaster, if that's the case-may not always be successful. And don't look to Google for help-it won't remove content from its search results (but does make a few exceptions).

Instead, you can attempt to bury the search results, says George Brown, an online media consultant who has worked with clients to improve their online reputations. "The goal is to get the negative results from appearing in the top 20 hits," he says. "People rarely look that far down when they search for you."

There are two easy ways to do this, Brown says, and they're applicable not only to people who have been associated with inappropriate or false content, but

Conference to the Web. In both ventures, he partners with the prominent blogger and author, Kara Swisher.

View his interview with Charlie Rose about the iPad at:

**mossblog.allthingsd. com/20100205/mossberg-ipad-on-charlie-rose-show/?mod=ATD_rss**

also to people who wish to proactively manage their reputations.

First, Brown says, "grab your name" on social media sites. That is, sign up for a Facebook, Twitter, MySpace, YouTube and LinkedIn account.

For Facebook and LinkedIn, learn how to claim your vanity URL here and here, respectively. With YouTube and Twitter, be sure to choose a username as close to your real name as possible. MySpace will give you the option of obtaining a vanity URL when you register.

If you're concerned about the time it might take to keep up with all these profiles, don't be: Brown says that in updating them only once a month, Google will consider you an active member and will consistently rank these results high, since they're some of the most-visited sites on the Web. In addition to joining these social media sites, Brown also recommends creating a Google Profile, which also will rank high.

Another way to increase your "positive" search results: Purchase a domain with your name (which can run around $5 per month), Brown says. He recommends "shelving" this site-i.e. design it to say, "This site is being held for Your Name. To contact me, e-mail me at YourName@domain.com." If you discover online content with which you don't want to be associated, you can use this site to build additional pages, all of which will rank high on a Google search of you, since it contains your name in the URL.

"The bottom line is that you need to be aware of your personal brand," Mireles says. "Think about what you stand for, and determine whether that's what other people see when they search for you. You're going to create controversy in life because you can't please everyone, so taking the time to see what's out there and acting accordingly can be worth it."

# Five secrets of "Open" and "Save" dialog boxes

Sharon Zardetto, Macworld.com

It's easy to never go beyond the basics of Open and Save dialog boxes, despite their being perhaps the most-used feature of the Mac interface. Instead of simply working with the basics, make these dialog boxes work for you. (The last two tips here are Snow Leopard-only.)

## 1. Use Spotlight to search for missing files

You go to open that Quarterly Report you just copied over from a thumb drive, but you've totally forgotten where you put it. Let Spotlight come to the rescue, right in the Open dialog box. You don't even have to reach for your mouse: Activate the Spotlight field by pressing Command-F, and then type in the search term for a file or a folder that you've misplaced. (There's a Spotlight field in the Save dialog box, too.)

Using Spotlight keywords makes searching from within these dialog boxes even more efficient. These special terms limit your searches so that you don't get as many unwanted results. For example, instead of typing quarterly in the search field when you're looking for that report, type name:quarterly so you won't find documents that simply contain the word quarterly. (When you use keywords, make sure there's no space between the keyword and the colon that follows it; you can leave a space after the colon.)

The two keywords I use most are name and kind. Use name to limit a search to only file names (instead of also looking through a document's contents). Use kind to specify the file type. When I'm looking specifically for a folder, I type kind:folder FolderName or FolderName kind:folder to avoid scrolling through a long list that includes files with similar names.

## 2. Customize your sidebar on-the-fly

The Finder's sidebar gives you one-click access to items you use frequently: Click on a sidebar folder, and the folder opens. You'll find the same click-and-you're-there convenience in every Open and Save dialog box. But it's there I often notice a sidebar organizational problem. ("I need this new folder in the sidebar"; "This

folder should be at the top now because I'm using it so much"; "I haven't used that folder for weeks, it's in my way.")

Fortunately, the sidebar in an Open/Save dialog box is not merely a static reflection of the one you set up in Finder windows. Redesign the sidebar's Places category from within a dialog box just as you would in the Finder. Add a folder by dragging it from the window's list to a spot in the sidebar. Reorder items by dragging them up or down to new positions. Remove an item by dragging it out of the sidebar and letting go.

## 3. Save time by opening multiple items at once

You need to open three items in Microsoft Word, or two in Adobe InDesign, or any number in some other application. Unfortunately, you're already in the Open dialog box and don't want to switch into the Finder. No problem. If you can see the items you want to open, select all of them, and then press Return or click on the dialog box's Open button to open all the files at once.

If you use List view in the Open dialog box, you can Command-click on files in different folders to open them at the same time.

How you select multiple items depends on what Finder view (Icon, List, and Column) you're using in the dialog box. (Change your view by clicking on the small buttons at the top of the dialog box, or by pressing Command-1, Command-2, or Command-3.) If you're in List or Column view, you can click on the first item and then Shift-click on the last to select them and everything in between. Alternatively, Command-click to select noncontiguous items. In Icon view, you can also drag a selection rectangle around icons to select them, using a Shift-click afterward to add an item to, or remove it from, the selection.

Tip If you're in the List view, you can select and open multiple items that aren't

even in the same folder, as long as you can expand the folders to a level that displays all the items you want.

## 4. Take advantage of Quick Look

When you want to preview a file without opening it, nothing beats Quick Look. Luckily, you can use Quick Look when you're in an Open dialog box. This is especially helpful if you need to see a file that the application you're in doesn't open, such as when you're placing a document into InDesign or a graphic in a Word document.

In Leopard, you need a special Automator droplet described in Mac OS X Hints (now available for download here). But in Snow Leopard, you can use Quick Look the same way you do in the Finder. Just select an item in the dialog box and then press the spacebar. If you select multiple items, the Quick Look window provides a slideshow option. But, as in the Finder, you don't need the slideshow to easily see a sequence of files: use the Up or Down Arrow key to select the previous or next item in the dialog box's list, and the Quick Look window updates immediately.

## 5. Customize the columns you see in List view

Feeling restricted by the same old three-column setup in your Open and Save dialog boxes? Although the default columns—Name, Date Modified, and Size—are useful, sometimes you'd benefit more from a Date Created or Last Opened column. You can have these columns, and a few more, in Snow Leopard. With the dialog box in list view, Control-click on a column header for a contextual menu of column choices.

The addition of column headers in Snow Leopard's Open and Save dialog boxes isn't just cosmetic: Control-click on the header to access a contextual menu that lets you choose which columns will be displayed.

Once you have the columns you need, sort, rearrange, and resize them the same way as in a Finder-window list view. When you need more room in the dialog box to see all your columns, drag the bottom-right corner to resize it. These changes are application-specific, so you have to design your dialog boxes for each program; but, once you set them, they remain that way until you change them again.

TarMac Tips

# Rotate user images in many OS X apps

02.04.10
Rob Griffiths, Macworld.com

There are a few spots in OS X applications where you have the ability to choose a photo to use as a representation of you—Address Book and iChat are two that come to mind. In Address Book, click on your entry, click on Edit, then double-click on the picture box next to your name.

This brings up the picture selection window, where you can take a picture with a connected camera, insert an image from a file, or paste an image from the clipboard. While these features may be well known, this one may not be: you can also rotate any image, once it appears in this box.

## Twist your image

To do so, just hold down the Option key and then click-and-drag with your mouse or trackpad. As you drag with the Option key held down, you'll see the image rotate, along with an overlaid clock face of sorts (see picture below) to help you align the rotated image.



You can't use your multitouch trackpad's twist gesture, though—only the Option key with click-and-drag will work. This trick, pointed out by an anonymous Mac OS X Hints contributor, should work in any program that uses this standard picture-choosing interface.

# Apple inside: the significance of the iPad's A4 chip



01.29.10
Nicholas Bonsack, Macworld.com

Just one day after the unveiling of the iPad, Apple's long-rumored tablet has ruffled feathers and turned heads. With a familiar interface, Apple's momentum, iTunes integration, and a price that the even non-geek can easily fall in love with, it has all the makings of a hit. But deep inside lies something even more revolutionary.

At the heart of the iPad lies a tiny sliver of silicon. A game changer within a game changer. That's Apple's A4, a system-on-a-chip (SoC) that reportedly combines a low-power CPU, a graphics processing unit (GPU), and other hardware, much of which is still confidential. What we do know is that it finds an almost ideal balance between battery life and speed, such that the iPad can animate and zip about at a pace that iPhone 3GS users could only dream of.

## History behind the "magic"

The roots of the A4 begin in 2005 with a then three year old startup called PA Semiconductor. At the 2005 Fall Processor Forum, PA Semi outlined a vision for a SoC PowerPC architecture, the G5-derived PWRficient family. As the name implied, the focus was on designing a high-performance multicore PowerPC chip that was ideal for mobile devices.

That very same year, Apple had to deal with what executive Tim Cook called "the mother of all thermal challenges"—putting a G5 processor into a PowerBook. IBM had never intended for the G5 to operate in a machine as thin as a notebook, leaving Apple with nothing but the old PowerPC G4 chips for the remainder of the PowerBook line. With PC notebooks outpacing Apple's own technology, Apple had to look for solutions, and fast.

It was in these dire circumstances that Apple took notice of PA Semi, and the two became close partners in plotting out the future of PowerPC for Mac hardware. Then came Apple's fateful WWDC 2005 announcement, that the switch to Intel was now in progress; future relations between Apple and PA Semi appeared to be severed.

But PA Semi's 150 engineers still delivered on their promises. The sole member of the PWRficient family was released in February 2007, first to the company's closest partners, followed by a wider release later that year. It boasted a very impressive set of specs, including two 64-bit PowerPC G5 cores with two DDR2 memory controllers on a single chip. It ran at 2.0 GHz with an average of 13 watts of power consumption and a peak of 25 watts. Meanwhile, Intel's more traditionally-designed Merom Core 2 Duo LV L7700—the closest competition at the time—could only run at 1.8 GHz with a max of 17 watts.

Early the following year, Apple quietly purchased PA Semi, with many in the tech press speculating that Apple's intent was to put its newly-acquired talent to work on chips made for future mobile devices, such as iPods and iPhones. Then came a long period of silence that has lasted until now.

## CPU/GPU hybrids today

Now we have the Apple A4, a brand new design for a SoC produced and owned by Apple, using the same ARM architecture that powers the iPhone. The A4 runs at 1 GHz and supposedly helps the iPad achieve a maximum battery life of 10 hours, thanks to its tight placement of circuitry and small form factor. In integrating a CPU with a GPU, it follows in the footsteps of other energy-efficient SoC processors, like Nvidia's Tegra.

Until recently, the CPU and the GPU of a computer were separate pieces of hardware, often found on different boards or positioned far apart on the same motherboard. Through SoCs and more ambitious designs, attempts have been made to fuse the two components together.

Intel's Larrabee project tried to tie a GPU so closely to one of its own future desktop/laptop CPUs that a discrete GPU would become not only obsolete, but impossible to add to this design. Tragedy struck, and Intel missed its benchmarks. Now Larrabee has been reduced to such a degree that it will never see a wide release.

Intel had a another project up its sleeves, an SoC that wedded the Atom CPU to a GPU for LG-branded smart phones, called Moorestown. But that project has only just been shown off at CES and is still a ways away from hitting stores.

## iPad's A4 chip

Nvidia's Tegra, on the other hand, has seen applications in portable media players, the Google Chrome OS-based netbook, and the Boxee Box. While all of these products are interesting designs, Nvidia is only a chipset provider. It cannot dictate the exact specifications of any of these devices beyond what's supplied by its very own Tegra.

### New Frontiers Ahead

With the A4, Apple still maintains its long-standing relationship with ARM while delivering on performance, with a design that no competitor can use in its own products. More to the point, the A4 puts a very critical part of Apple's iPad under its very own control. And that move is unprecedented.

Going back to the earliest days of the Mac, Apple chose Motorola's 68k series of chips to power its Macs because they offered better performance than Intel's equivalent technology. In the early '90s, the company migrated its Macs to the PowerPC architecture when Motorola couldn't deliver a 68k processor as fast and as energy efficient as Intel's Pentium series. Then, when the major vendors behind the PowerPC couldn't keep pace with Intel's Pentium IV and AMD's Athlon series, Apple switched its Macs once more—this time to Intel's own Core series.

Today, Macs remain beholden to Intel's specifications. If Intel can't keep pace, Apple will have to find yet another vendor for CPUs. But now, with the iPad's A4, Apple has demonstrated a new option: It has the ability to take existing designs and repurpose them to give its own products better performance than the competition.

It's extremely unlikely that Apple could leverage ARM architecture for the Mac, as those processors are specifically made for low-power devices, not high-performance workstations or general computing. However, if it could make headway through patents and cross-license agreements, Apple may someday be able to do this with another architecture, such as the now-standard x86-64.

While this fits in well with Tim Cook's declaration that Apple believes in controlling the technologies that run its own products, we're still a long way away from returning to the days when a vendor made every single component of the computer by itself. Economically, it doesn't make sense for one manufacturer to have that kind of overhead. That's how prices remain low, and why IBM doesn't produce every single component of the PC all by itself.

But it does demonstrate a brighter future ahead for Apple, and many in this industry have been shaken by the possibilities. While the idea of Apple exerting even more control over its products is a fascinating possibility, there's also an undercurrent of concern. An Apple that possesses firm control of every component of its devices has the potential for greatness—but with great power comes great responsibility.

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## Survey Results are in. New things coming.

02.08.10
Frank Smith, Vaporware Gazette editor

The 5 question survey in last month's Vaporware Gazette resulted in nine replies. If anything can be garnered from the replies is that the Gazette is well received. The nine replies all answered "yes" to questions one, two, three, five. No one indicated any deficits (#four) and the idea of using the newsletter as a way to answer specific computer questions (in the next issue) was put forth. (The questions are at the end of this article.

We will try this idea with a twist. When someone sends in a question it will be published in the Gazette and the first person to send the correct answer back to me will get a buck off the next meeting's dues.

Also, we will try something else. Submit your favorite computer related tip to me and I will select the best one each month and the winner will get a buck off the dues as well. It isn't the lottery but a buck is a buck. Let me know what you think of these schemes and you can still take the survey too. Send your responses to smittysprintshop@mac.com.

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### Survey Questions:

1. Do you read the Gazette monthly?
2. If so, is it timely?
3. Are the "TarMac Tips" useful?
4. What is lacking?
5. Is electronic distribution OK?

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## Possibly reduce iPhoto launch times

02.02.10
Rob Griffiths, Macworld.com

If iPhoto is slow to launch on your machine, as in taking over a minute to load, including visits from the spinning beach ball, here's a possible fix that also happens to be a simple one. Once the application finally launches, open its Preferences by hitting Command-, (that's Command-comma), then click on Sharing.

In Sharing, see if either the "Look for shared photos" or "Share my photos" boxes are checked. If they are, and assuming you're not using these services, uncheck those boxes. If you are using the sharing features, you may still be able to remove the check mark from one box—if you never access other shared libraries from the current machine, remove the check mark from the "Look for shared photos" option, for example.

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## TarMac
### Tidewater Area Macintosh User Group

**TarMac "Control Panel"**

Tom Davis, president
Ray Kallman, vice-president
Jan Cook, treasurer
Brian Fountain, user group ambassador
Frank Smith, newsletter editor      **other panel members**

Eleanor Cavin
Gary Gobel
Nancy Goldstein
Cindy Huffman
Lynn McAlpine

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If you speak up you're an officer
If you stand up you're the president

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