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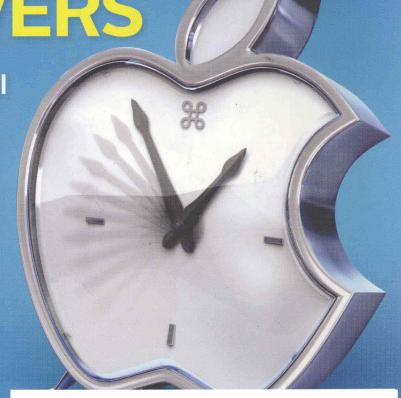
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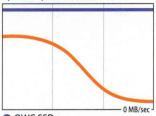
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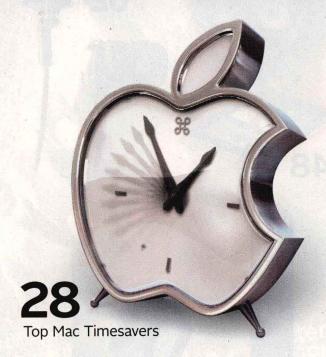








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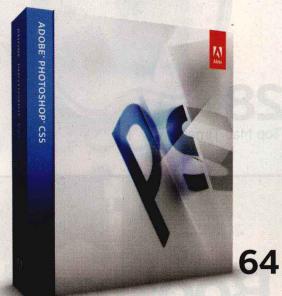
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### iPad Cases and Bags

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Macworld Podcast: Inside the iPad (macworld.com/6102).

Macworld Podcast: Macworld Pundit Showdown VI (macworld.com/6103).

Macworld Video: Five Cool iPad Games (macworld.com/6104).

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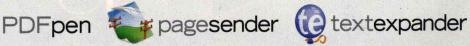


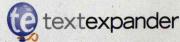
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# **A Seaworthy Community**

Eight years of floating Mac conferences reveal how far we've come

'm writing this column from the deck of a ship bobbing up and down in the Atlantic Ocean. I'm a speaker on the latest MacMania cruise-slashconference; because Macworld coproduces the event, this is the sixth time I've done it.

More notable than the fact that I'm with a ship full of Apple fans and experts like Andy Ihnatko and David Pogue is that MacMania has been around for most of a decade that's seen a sea change (sorry) in the Mac community.

### **Then and Now**

The first Mac cruise was in May 2002. The ships are still the same. You can still find hot dogs, burgers, and taco fixings next to the pool on the Lido Deck. But everything else is different.

Back then, Apple was just beginning its turnaround. The company had introduced the iMac and the iBook, the latter with built-in AirPort wireless networking. There was Wi-Fi on the first cruise because we brought our own AirPort Base Stations and attached them to the ship's network. Today we take wireless networking for granted.

On the first voyage, users of Apple products were an isolated tribe. Our fellow cruise passengers looked at us like we had boarded the wrong ship. But as I walked around the decks in 2010, I discovered Apple products everywhere-and not just in the hands of the hundred-plus members of our MacMania group.

In the ship's coffee bar, you couldn't use an iPad for five minutes without someone stopping to ask you for a demo. One of the event's speakers ended up grabbing two iPads and walking through a dozen apps for a retired doctor and his wife. They were soon deep in a game of iPad Scrabble.

If you're one of the Mac users who have joined the tribe since the introduc-



### The us-against-theworld feeling is gone, but the sense of community remains.

tion of the iPod-which was also brand new on that first cruise (I brought my first-generation model with me)-Apple's near-death experience back then probably seems more like an ancient myth than a historical fact.

### **Rebels No Longer**

What really struck me on this year's cruise is that, although the us-againstthe-world feeling of the first event has vanished, the sense of community remains strong. What holds users of Apple products together today isn't rebellion—the whole world seems to have embraced Apple—it's just our shared enthusiasm about technology.

Even in a place like Bermuda (this year's destination), enthusiasm for Apple products runs high. The local cellular shops advertise iPhones. The iStore, an Apple reseller just two blocks away from where we docked, is busy, staffed by bright folks, and serving a market that seems to be hungry for the latest and greatest from Apple. (That's more than a bit of a trick when you're on an island

that's not at the top of Apple's international product-rollout plans.)

### **A Thank You in Return**

Because MacMania cruises are primarily promoted through Macworld itself, these events are populated almost entirely by readers of the magazine. I probably talk to more loyal readers of Macworld on these cruises than I do at Macworld Expo. And the words they had for the magazine were kind indeed. After they recognized me based on my column photo, they would tell me about their love for the magazine. They praised our writers and all the tips and reviews. But most of all they told me about the delight they had going through the pages every month.

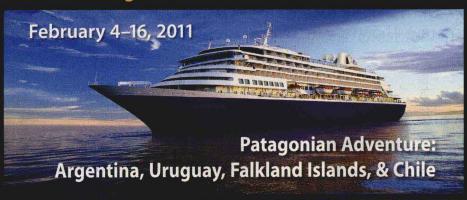
For those of us who work on Macworld, it's awfully easy to lose sight of the big picture. We come to work every day and toil at the mundane business of 21st century publishing: talking to writers, assigning stories, wrestling with print and online production systems that are alternately infuriating and exhausting. It's easy to lose sight of why we're doing it. But after spending a week with a bunch of voracious Macworld readers, I got to see what happens when the fruits of our labors reach our readers. It's a beautiful thing.

So I say to all of you Macworld readers, whether at sea or on dry land: Thank you. Thanks for reading us every month. Thanks for e-mailing or posting on our forums or sending me something on Twitter when you've got something to say. And thanks to those of you who don't do any of those things, but who still read us regularly. We wouldn't be here without you.

Editorial Director Jason Snell has taught classes on six MacMania cruises, most recently MacMania X. For more information about MacMania, visit insightcruises.com. E-mail him at jason\_snell@macworld.com, or follow him on Twitter at twitter.com/jsnell.

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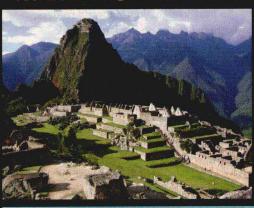


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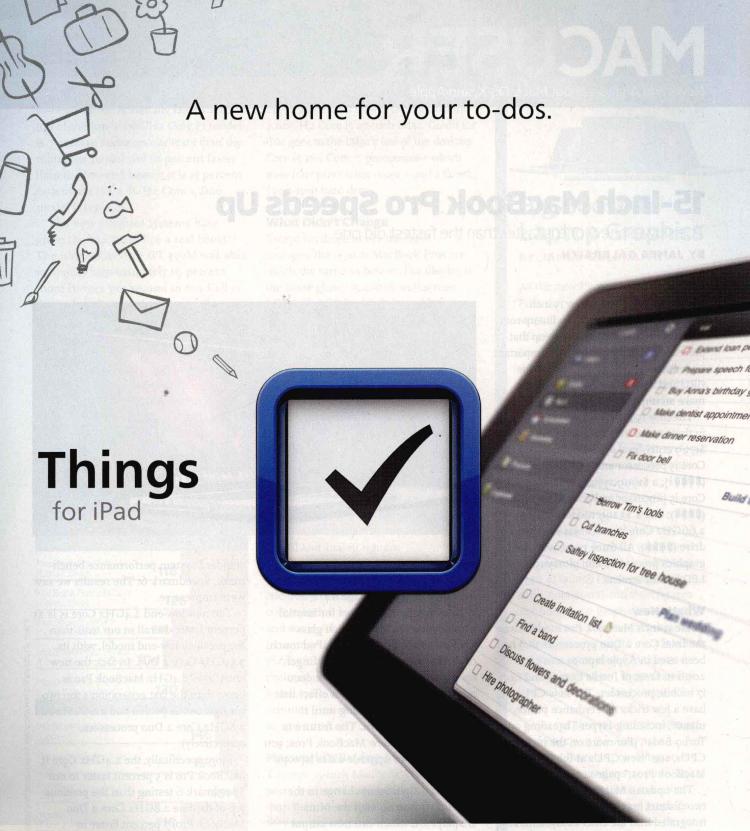
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# 15-Inch MacBook Pro Speeds Up

The slowest new one is faster than the fastest old one

BY JAMES GALBRAITH

Apple's new 15-inch
MacBook Pro lineup may
look just like the mid-2009 lineup that
preceded it, but thanks to some important
under-the-hood changes—to both the
CPU and the GPU—the new laptops

make an impressive leap in performance.

The new 15-inch MacBook Pro comes in three standard configurations: a \$1799 entry-level system with a 2.4GHz Core i5 processor and 320GB hard drive (\*\*\*\*\*\*); a \$1999 system with a 2.53GHz Core i5 processor and 500GB hard drive (\*\*\*\*\*); and a \$2299 model with a 2.66GHz Core i7 processor and 500GB drive (\*\*\*\*\*). All three come with dual graphics processors and glossy 15.4-inch LED-backlit screens.

### What's New

These 15-inch MacBook Pro models drop the Intel Core 2 Duo processors that had been used in Apple laptops since late 2006 in favor of Intel's Core 15 and Core 17 mobile processors. The new CPUs have a few tricks that enhance performance, including Hyper-Threading and Turbo Boost. (For more on the improved CPUs, see "New CPUs at the Core of MacBook Pros," page 14.)

The updated MacBook Pros also offer two distinct graphics systems: one that's integrated into the CPU subsystem, and another that Apple added; previously, the entry-level 15-inch MacBook Pro had integrated graphics only. The new laptops can use the Intel HD integrated graphics for general-purpose apps, but when they need to run more graphically intensive programs, they can switch over to the faster nVidia GeForce GT 330M graphics system. That switchover is man-



aged by a new technology developed by Apple. (For more on that, see "Big Boost in Laptop Graphics," page 11.)

Also new is the support for inertial scrolling on the Multi-Touch glass trackpad. As on the iPhone, iPod touch, or iPad, when you swipe your finger up or down to scroll through a document, there's a momentum effect that keeps the screen scrolling until it appears to slow down. The feature is available on the new MacBook Pros; you won't be able to upgrade older laptops to get it.

The last significant change in the new line has to do with the Mini DisplayPort, which can now output multichannel audio and video. (You have to use a Mini DisplayPort to HDMI Adapter that supports the new MacBook Pro's audio and video signals.)

### **The Speedy Results**

To see how these internal improvements affected performance, we ran the new MacBook Pros through our standard system performance benchmark, Speedmark 6. The results we saw were impressive.

The new low-end 2.4GHz Core i5 is 23 percent faster overall in our tests than the previous low-end model, with its 2.53GHz Core 2 Duo. In fact, the new entry-level 2.4GHz MacBook Pro is faster than the last generation's top two configurations (which had 2.66GHz and 2.8GHz Core 2 Duo processors, respectively).

More specifically, the 2.4GHz Core is MacBook Pro is 5 percent faster in our Speedmark 6 testing than the previous top-of-the-line 2.8GHz Core 2 Duo MacBook Pro, 7 percent faster in Photoshop, 17 percent faster in our Cinebench CPU test, 16 percent faster on MathematicaMark 7, and 19 percent faster running Aperture.

On average, the new midrange 2.53GHz system is only slightly faster—about 3 percent—than the entry-level model. In some tests (Aperture and Compressor), the

P PETER BELANGER; MACBOOK FAMILY PHOTOGRAPH COURTESY OF APPLE

low-end model is actually faster. The top-of-the-line 2.66GHz Core i7 model is 7 percent faster on our tests than the midrange model and 10 percent faster than the low-end laptop; it is 15 percent faster than the 2.8GHz Core 2 Duo model it replaces.

The new graphics systems have given the MacBook Pro a real boost. The nVidia GeForce GT 330M was able to display approximately 19 percent more frames per second in our Call of Duty tests than the last generation's nVidia GeForce GT 9600M. Even bumping the resolution from 1024 by 768 (our standard for Speedmark 6) up to 1440 by 900 didn't impede the system's performance.

Comparing the new MacBook Pros to iMacs that also use Core i5 and Core i7 processors shows that you still pay a premium for performance in a portable. The high-end 2.66GHz Core i7 MacBook

### **Macworld Lab Test**

Speedmark 6 Test Results

13-INCH LAPTOPS	
MacBook Pro/2.4GHz (Core 2 Duo)	118
MacBook Pro/2.66GHz (Core 2 Duo)	126
MacBook/2:26GHz (Core 2 Duo; late 2009)	111
MacBook Pro/2.26GHz (Core 2 Duo; mid 2009) <b>1</b>	04
MacBook Pro/2.53GHz (Core 2 Duo; mid 2009)	120
15-INCH LAPTOPS	
MacBook Pro/2.4GHz (Core i5)	146
MacBook Pro/2.53GHz (Core i5)	150
MacBook Pro/2.66GHz (Core i5)	161
MacBook Pro/2.53GHz (Core 2 Duo; mid 2009)	118
MacBook Pro/2.66 GHz (Core 2 Duo; mid 2009)	127
MacBook Pro/2.8GHz (Core 2 Duo; mid 2009)	139

Longer bars are better. Reference systems are in *italics*. For complete benchmark test results for the 15-inch MacBook Pros, please visit macworld.com/6124. For complete benchmark test results for the 13-inch MacBook Pros, please visit macworld.com/6125.—MACWORLD LAB TESTING BY JAMES GALBRAITH, CHRIS HOLT, LYNN LA, AND MEGHANN MYERS

Pro is 24 percent slower overall than the 2.66GHz Core i5 27-inch iMac. Credit for that goes to the iMac's use of the desktop Core i5 and Core i7 processors—which have four processing cores—and a faster, 7200-rpm hard drive.

### What Didn't Change

Except for those under-the-hood changes, the 15-inch MacBook Pros are much the same as before. The display is the same glossy 15.4-inch widescreen LCD with LED backlighting and 1440-by-900-pixel resolution. (An antiglare, high-resolution [1680-by-1050] option is available for an extra \$150; a glossy high-resolution display is available, too, for an additional \$100.)

The unibody case is unchanged. There's still a backlit keyboard, a Multi-Touch trackpad, and an 8X. DVD-burning SuperDrive. On the sides, you'll find two familiar USB 2.0 ports, one gigabit ethernet jack, and one FireWire 800 port; an SD card slot; a MagSafe power port; and audio line-in and line-out ports that support optical digital and analog signals.

Although the new MacBook Pros have the same nonreplaceable battery as the late-2009 models did, smarter power consumption by the graphics systems and some subtle changes to the battery have improved battery life. In our movie playback tests, (a worst-case battery-draining scenario), the three new laptops lasted, on average, for 4 hours and 35 minutes—an improvement of between 10 and 25 percent.

### **Macworld's Buying Advice**

The new 15-inch MacBook Pros are better performers and have better battery life than their immediate predecessors, but they are priced similarly to them. The extra \$100 for the new low-end system seems like an especially good bargain when you consider the discrete graphics, bigger hard drive, and new 2.4GHz Core i5 processor.

Note that we didn't receive the 17-inch MacBook Pros in time to include reviews of them in this issue; look for summaries of those reviews in next month's issue.



### Big Boost in Laptop Graphics

BY JAMES GALBRAITH

All the new 15- and 17-inch MacBook Pros come with two graphics systems. They use integrated Intel HD graphics for everyday applications like iTunes, Mail, and Safari. But if you launch a more graphically intensive app, they will automatically switch to the dedicated nVidia GeForce GT 33OM graphics system. (Most of the last-generation MacBook Pros also had two systems; the entry-level 15-inch came with integrated graphics only.)

The switchover from one graphics processor to another is managed by a new technology developed by Apple. It looks for frameworks needed by individual apps at launch (such as OpenGL and Core Animation) and then figures out how much graphics processing power those frameworks require. Previously, you had to decide which graphics you wanted to use; and switching between them required you to log out and then log back in to OS X.

You can turn this functionality off by unchecking the Automatic Graphics Switching checkbox in the Energy Saver preference pane. Doing this forces the system to use the less-powerful integrated graphics only; there's currently no way to force the new laptops to use the more powerful subsystem.

In the new 13-inch MacBook Pros, Apple has replaced the last generation's GeForce 9400M processor with the GeForce 320M. The 320M has three times as many processing cores (48) as the 9400M, and it's also more energy efficient.



The Canon EOS 7D. The first EOS to combine an all-new 18 Megapixel APS-C size CMOS sensor, 8 fps shooting, and Dual DIGIC 4 Image Processor. Not to mention, 1080p Full HD video that shoots at 24p [23.976 fps] and 30p [29.97 fps] with an array of manual controls, so you can shoot beyond the still with incredible detail. Visit <u>usa.canon.com/bee</u> to see what lies beyond this still. Inspired. By Canon.



Canon imageANYWARE

### 13-Inch MacBook Pro

Of all the new MacBook Pros, the 13-inch models have changed the least from the previous generation

BY JONATHAN SEFF



Although the 15- and 17-inch MacBook Pros use
Intel's new Core i5 and Core i7 mobile

processors, Apple stuck with the Core 2
Duo line of processors in the new 13-inch line: a 2.4GHz dual-core processor in the \$199 model (\*\*\*\*), and a 2.66GHz dual-core processor in the \$1499 model (\*\*\*\*)—up from the previous generation's 2.26GHz and 2.53GHz, respectively.

Some users have wondered why Apple decided to stick with the Core 2 Duo instead of using Intel's new Core i3 CPU. It seems most likely that Apple didn't want to stick with the integrated Intel HD graphics system that goes along with the Core i3. Instead, both new 13-inch models use nVidia's GeForce 320M graphics, which replace the GeForce 9400M system used in the last bunch.

### **Test Results**

Whatever the reason, the new models are faster than the old: The 2.4GHz model received a Speedmark score of 118, the 2.66GHz model a score of 126, The previous generation scored 104 and 120, respectively, and the MacBook got a 111.

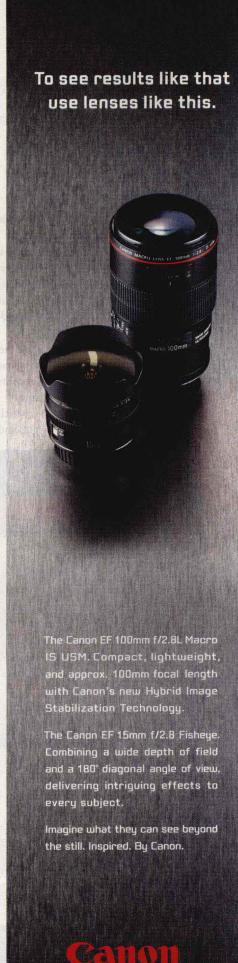
The new graphics chips also deliver much better frame rates than their predecessors: On our Call of Duty test, the new 2.4GHz MacBook Pro delivered 38.9 frames per second, 15.2 fps better than the previous generation's 2.53GHz model.

Battery life is better, too. In our testing (which plays a looped video in QuickTime until the battery dies), the 2.4GHz 13-inch MacBook Pro lasted 4 hours and 19 minutes; the 2.66GHz model ran for 4 hours and 33 minutes. Compare those times to those of the 2009 13-inch 2.26GHz and 2.53GHz models (3 hours and 30 minutes and 3 hours and 38 minutes, respectively), as well as to those of the current MacBook (3 hours and 45 minutes). (Apple's claim of 10-hour battery life is based on an entirely different test.)

In my own informal temperature testing (simultaneously running Windows XP in Parallels Desktop 4, encoding an HD MKV file in VideoMonkey, and streaming a Netflix TV show in Safari), the back of the laptop (where the battery is) got warm, but not uncomfortably so. After running for about 15 minutes, the maximum external temperature (measured by an infrared temperature device) was 107 degrees.

### The Hardware

All the new MacBook Pros have the same Multi-Touch glass trackpad as before. All of them (including the 13-inch models)



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now have inertial scrolling (swipe your finger down the screen, and the page will scroll as if it has momentum).

Both 13-inch models now include 4GB of 1066MHz DDR3 RAM, and support a max of 8GB. There are the usual ports two USB 2.0, one FireWire 800, a Mini DisplayPort, a gigabit ethernet port, and an SD card slot. They also have full-size, backlit keyboards, 8X SuperDrives, built-in stereo speakers (which are quite good), and a built-in iSight camera. The new models include a 250GB or 320GB 5400-rpm hard drive (up from 160GB or 250GB drive, respectively, at the same speeds).

The new 13-inch MacBook Pros use the same LED-backlit 1280-by-800-pixel glossy display as the previous models. (There are no antiglare or high-resolution display options, as there are on the 15- and 17-inch models.) The displays are very bright, and

the viewing angle is respectable in the horizontal direction but not that great vertically-you need to adjust the angle of the display to achieve optimum viewing.

### **Macworld's Buying Advice**

If you already have the previous 13-inch MacBook Pro, there's not much reason to upgrade unless you must have the newest version of everything: Although the new models have improved performance, graphics, and battery life, they're not necessarily worth spending another \$1199 or more so soon. But to people who have an older (or no) laptop, the MacBook Pros are easy to recommend. That said, unless light weight is your primary buying criterion, you'd probably be better off taking advantage of the Core is and i7 processors and improved graphics on the 15- or 17-inch model.

### Macs: Current Lineup SPEED-MARK 6 FIND CODE PRODUCT RATING PRICE DISPLAY DESKTOP Intel Core 2 Duo/3.06GHz \$1199 21.5 inches \*\*\* 148 5510 (nVidia graphics) Intel Core 2 Duo/3.06GHz \$1499 21.5 inches 164 5509 (ATI graphics) Intel Core 2 Duo/3.06GHz \$1699 27 inches 162 \*\*\* 5508 Intel Core i5/2.66GHz \$1999 27 inches 209 5511 Mac Mini Intel Core 2 Duo/ 104 \$599 not included 5507 2 26GHz Intel Core 2 Duo/ not included \$799 118 5506 2.53GHz Mac Pro Intel Xeon/2.66GHz \$2499 not included 206 4488 (4 cores) Intel Xeon/2.26GHz not included \$3299 203 4503 (8 cores) PORTABLE MacBook 13 inches 111 Intel Core 2 Duo/ \$999 \*\*\*\* 5505 2.26GHz (white) MacBook Air Intel Core 2 Duo/1.86GHz 13 inches 70 \$1499 4953 Intel Core 2 Duo/2.13GHz \$1799 13 inches 72 4954 MacBook Pro Intel Core 2 Duo/2.4GHz \$1199 13 inches 118 6151 Intel Core 2 Duo/2.66GHz \$1499 13 inches 8881 126 6152 Intel Core i5/2.4GHz \$1799 15 inches 6153 Intel Core i5/2.53GHz \$1999 15 inches 150 \*\*\* 6154 Intel Core i7/2.66GHz \$2299 15 inches 161 \*\*\*\* 6155 Intel Core 2 Duo/2.8GHz \*\*\*\* \$2499 17 inches 140 4952 ^ Speedmark 6 is Macworld Lab's standard test tool for benchmarking systems running Mac OS X 10.6 (Snow Leopard) For more information on Speedmark testing, go to macworld.com/5503. <sup>B</sup> In a browser's address field, typing in a find For more information on Speedmark testing, go to macworld.com/55C code after macworld.com/ takes you to a product's review or overview.



### **New CPUs at** the Core of MacBook Pros

BY JAMES GALBRAITH

The Core i5 and Core i7 chips used in the latest MacBook Pros set a new standard in Mac laptop performance.

They both feature Intel's Turbo Boost technology. With Turbo Boost, the processor can boost its clock frequency when necessary. With the 2.4GHz Core i5 520M, Turbo Boost can increase the clock speed up to 2.93GHz; the 2.53GHz Core i5 goes up to 3.06GHz; and the 2.66GHz Core i7 can go up to 3.33GHz.

The Core processors also support Hyper-Threading. By using four virtual cores, Hyper-Threading allows each of the two cores on these chips to process two threads at once.

There's a key difference between the Core i5 processors used in the 27-inch iMac that was introduced last fall (and is still the fastest Mac we've ever tested) and those in the new MacBook Pros. The MacBook Pros use a mobile version of the Core i5 and Core i7. Both chips have two cores and can support up to four threads. The desktop Core i5 used in the iMac has four cores; however, it doesn't support Hyper-Threading.

### Correction

In our "Mac Money Managers" feature (June 2010), we misprinted a URL for SplashMoney on page 50. Instead of macworld.com/5669, it should be macworld.com/5969.