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Reviewed: **iPod Nano**

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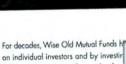
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Macworld

Incorporating MacUser

MAC BEAT

18   Video iPods, new iMacs, and iTunes 6; .Mac updates; farewell to Macworld Expo Boston; Apple addresses nano blemishes; and more.

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Photography by
Peter Belanger

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The Virtual CD
Macworld doesn't end on the last page. All magazine readers also have free access to a new virtual CD-ROM each month. To view this month's exclusive content, go to the following URL (broadband Internet recommended):
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SECRETS

BACK PAGE

THE NEW SCANSNAP PAPER MANAGER

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Moving Pictures

About a week before Apple announced its fifth-generation, wide but thin, video-playin' iPod, I wrote my column for this very issue of *Macworld.* In that column, I complained about Apple's failure to enter the market for portable and downloadable video. What a difference one set of Apple product announcements can make (see *Mac Beat,* page 18).

I'll admit, I'm somewhat relieved that this column, a, shall we say, *creative* retelling of Dickens's *A Christmas Carol*—featuring Ghosts of iPods Past, Present, and Future—will never see the light of day. But what makes me happier is that Apple is finally a player in the video market, and that its first steps are so encouraging.

iTunes Does TV

In that column, I fantasized that iTunes 6 would add a Videos item to the Source list; this item would display a list of music videos, movies, and TV shows. As it turns out, my fantasy was pretty close to reality.

True, iTunes' video content—so far, music videos and five TV series—isn't as wide-ranging as I'd hoped. But there's no technical reason that Apple couldn't start selling feature-length films from its store tomorrow. Count on some enterprising movie studio to experiment with films on iTunes in the very near future.

I actually find it encouraging to see Apple turn to television first. For a long time, I've had the feeling that Steve Jobs doesn't really like TV. But Apple has now recognized that television—even more than movies—is the medium that can be transformed by digital downloads. Like I said, those five series are only a first step. Indeed, ABC was the only network Apple approached about this new service. I'm betting that Apple executives are already fielding requests from other networks and TV studios, and that we'll be seeing their wares for sale at the iTunes Music Store before too long.

Now all Apple needs to do to make my fantasy come true is to combine two of its recent features: Podcasting and downloadable TV shows. Imagine paying a monthly subscription for *The Daily Show* and having it downloaded, without commercials, to your Mac (and video iPod) the day after it airs.

Video on the iPod

I realize that many people might be skeptical about watching video on an iPod. After all, that's a *tiny* screen. But as I wrote a couple of months ago, I've been spending a lot of time on my commute watching TV shows on my Treo cell phone. The specs for the videos I've been watching are identical to those of the iPod—30 frames per second at 320 by 240 pixels, roughly half the resolution of standard TV.

You're not going to watch a beautifully shot motion picture on one of these new iPods. But for TV shows, music videos, and the like, the small screen works just fine. Watching video on-the-go won't be for everyone, but anyone who has a long commute or spends a lot of time on airplanes will embrace it.

A Dream Deferred

Apple's video announcements leave plenty of room for improvement. Half–TV-resolution videos are fine for an iPod, but not for high-resolution computer screens.

Thanks to the politics of the media business, I'm not surprised that Apple didn't integrate DVD into its new products. Yes, you can play a DVD back on a new iMac and control it via the new Front Row application. But there's no way to burn the videos you've bought to DVD, nor is there any Apple-approved away of converting the DVDs you've purchased into movies you can play on your iPod. (This is not to say that it can't be done. But Apple won't help you do it—the act of converting those DVDs into other formats is still, frustratingly, illegal.)

Video Everywhere but Here

There's another shoe that needs to drop here, and it's the one that wirelessly connects the TV set to your Mac, giving you a Front Row–style interface as you sit on your couch.

In my Apple-video fever dream, I saw it as a small plastic box, only a little larger than an AirPort Express, attached to a beautiful flat-panel TV set. This device would let me—via a snazzy Apple remote control—browse my iTunes music, movies, TV shows, and iMovies, and play them at full high-definition quality.

I'm not complaining. I think Apple will release a product like this eventually—whether it's based on the Mac mini and Front Row or is a slim AirPort Express–like device. With its latest hardware, Apple has put video in our computers and on our iPods. Now it must close the loop and let us connect those sources to the machines we use to watch our videos: our TV sets. ☐

So—new iMacs, new iPods, and a new iTunes. What do you think? Let me know in our forums (macworld.com/forums), or send an e-mail to jason_snell@macworld.com.

Get the BIG Picture!

ACTUAL SIZE. THE SANYO XACTI E6 DIGITAL CAMERA.

Who says big things don't come in small packages?

Introducing the SANYO Xacti E6 -- the digital camera that will change the way you view digital photography. This camera features a full 3″ LCD screen and it is small enough to fit in the palm of your hand. With 6 megapixel resolution and 3X optical zoom, you will be taking high-quality images in no time.

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SANYO's Touch Sensor shutter release button for better pictures.

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FEEDBACK

Hidden Gems

Every month, grassroots software developers release dozens of new apps for the Mac. And every month, Senior Writer Dan Frakes reviews as many of them as he can in *Mac Gems*. But a monthly column just can't include all the worthy ones—hence our September feature "50 Mac Gems," in which Dan got to clear out some of his backlog. Many of you wrote in to complain about programs he'd left out. Not to worry: if Dan hasn't reviewed one of your faves yet, he'll add it to his check-'em-out list. □

You Forgot

SCOTT BRENNER

I enjoyed September's "50 Mac Gems" article but was surprised that the fabulous open-source FTP client Cyberduck (cyberduck.ch/) was overlooked. You mentioned a few FTP clients but passed over the mature, feature-rich, and free Cyberduck. I think many *Macworld* readers would have benefited from knowing about it.

HENRY SCHAECHTERLE

In your September issue, you covered 50 low-cost applications for the Mac. I was surprised that you didn't include the NeoOffice office suite (www.neooffice .org). I think it's equal in every way to Microsoft Office, and it's basically freeware. You can use the entire suite without limitations or being nagged to register, but after I'd used it for a while, I made a $20 donation to support the open-source project. It's now my office application of choice.

We didn't include Cyberduck because it was included in November 2004's roundup of bargain software, "Even More Software Bargains" (macworld.com/0829). Rob Griffiths mentioned NeoOffice in his May 2005 review of OpenOSX Office (macworld .com/0352). The September article wasn't intended to be—indeed, couldn't be—a comprehensive look at bargain software for the Mac. Rather, it was a snapshot of 50 gems that we hadn't been able to review previously but that we felt you should know about. There's a lot of great inexpensive software out there. We try to cover as much of it as we can in our monthly Mac Gems *column, our* Mac Gems Weblog *(macworld.com/0830), and occasional features such as September's "50 Mac Gems."—Ed.*

Repurposed Macs

STEVEN MINKLER

Thanks for the great tips about converting an old Mac into a jukebox ("Old Mac, New Tricks," September 2005). I work in a college media-production department with four other highly creative people. We've always enjoyed playing background music to make the day move along. We started with an FM radio nearly 20 years ago, and then upgraded to a CD changer. About 5 years ago, we decided to load up an old 266MHz Mac with iTunes and some of our favorite music. Over the years, we've accumulated nearly 4,200 songs (as well as sound bites from movies, comedy routines, old radio commercials, and self-recorded "promos," to make it sound like a real radio station), taking up 14.5GB of space. Visitors to our office comment on our eclectic music mix, not to mention the random iTunes visuals on the monitor. The only drawback is that the old G3 can't run OS X (even with XPostFacto), so we have to create all of our playlists "by hand." But it's still chugging along!

MICHAEL R. HOFFMANN

I have used X10 for many years now and must say that, after trying Smarthome's PowerLinc Controller USB, I'm about to give up on using my iMac to automate my home. The problem is that even with all the updates to Indigo and its drivers installed, even after upgrading to OS X 10.4.2, and even after reinstalling Indigo and connecting the controller directly to the USB port, Indigo finds that controller only about once in 20 tries—and usually only after a full restart. Having everything else (printer, external USB drives, and even my cable modem) off or disconnected seems to help. I have

e-mailed Smarthome a number of times and followed their recommendations each time, but with no improvement. The old PowerLinc USB worked fine, but who wants to leave their computer on all the time?

PETER MARMOREK

Foolish me! Here I've been giving my old computers to charities, Third World countries, or underfunded inner-city schools. But now you tell me that I could have used them for such valuable purposes as saving myself a walk upstairs to select a new playlist, or a walk across the room to turn lights on and off. Come on, *Macworld*: there are billions of people who would love the chance to do nonfrivolous stuff with an old Mac.

Who's the Thief?

KEN ALAN

With regard to your story about software activation ("Stop, Thief!" *Mac Beat*, September 2005): yes, there are software pirates out there—the monopoly software publishers. Thanks to dwindling competition (for instance, the recent merger of Macromedia and Adobe), we get buggy, crippled products, little innovation, products rushed to market with little usability testing, and, of course, inflated prices. It may be time for computer users to organize a software user association to set our own policies on how software publishers will do business with us. In business, the people who pay the money make the rules.

Mobile Surgery

CHRIS CLUCK

I thought the article "Laptop ER" (*Mobile Mac*, September 2005) was well

done, but it should have included a link to Safeware (www.safeware.com). This company specializes in insuring laptops. For as little as around $200 a year, you can insure your laptop and all its accessories from theft, accident, out-of-warranty issues, and more, and that coverage extends around the globe.

RON SCHACHT

I've worked in the broadcast-engineering field for about 40 years and have seen just about every possible liquid spilled into just about every electronic device made. The most important thing to do is to immediately remove the power source—in the case of a laptop, take out the battery. Even when the unit is off, several circuits are still "live." The liquid, especially if it isn't water (believe me, iced tea is the worst), will conduct, and the resulting electrolysis will etch away the foils on the boards, and the pins on the chips. Unplug the unit, take out the battery, and let it dry out (hint: put it in a warm attic for a few days). Then you can reinstall the battery and see whether it fires up.

Feedback on Feedback

BRAD MITCHELL

In September's *Feedback*, a reader commented on the fan noise of the 12-inch PowerBook. I had the same problem, especially after switching to Tiger. Looking at my SysStat widget, I found that Virex was eating up 60 to 85 percent of my CPU cycles. I erased Virex from my system (scary), and the heat and fan noise immediately disappeared. I'm whisper-quiet now except when running several processor-intensive programs. All I need now is virus protection with Tiger that isn't such a CPU hog. Any ideas?

GRANT MUKAI

I've been reading your *Feedback* column for the past two years, and I've seen all sorts of comments about the magazine but nothing about the CD that comes with it. So I just want to say what a wonderful addition the virtual CD is to *Macworld*. Having all the applications mentioned in the magazine right in one spot is very helpful. I don't have to jump from one Web site to another to find the programs reviewed. The CD intros

are creative and (in most cases) hilarious. And I love the Breen's Bungalows and Lynda.com videos—they're really helpful.

Thanks for your comments. We're planning major improvements to the virtual CD over the next year. Check our table of contents each month for the link to that issue's CD.—Ed.

CORRECTIONS

September 2005's *Mobile Mac* misidentified the car owner who installed a Mac mini in his VW Golf GTI. The correct name is Matt Turner.

Post comments on our forums (www.macworld.com); send them by mail to Letters, *Macworld*, 501 Second Street, 5th Floor, San Francisco, CA 94107; or send them by e-mail to letters@macworld.com. Include a return address and daytime phone number. Due to the high volume of mail we receive, we can't respond personally to each letter. We reserve the right to edit all letters and posts. All published letters and forum comments become the property of *Macworld*.

PRODUCTIVITY BOOSTER ROCKET

FileMaker Pro 8 accelerates work and drives business benefits all the way to the bottom line.
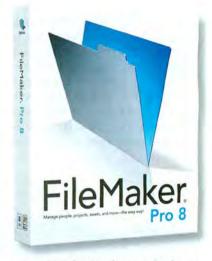
THE CUSTOMERS OF TRUE NORTH PRINTED PLASTICS ARE AMONG THE most sophisticated manufacturers in the world, and they often demand virtually real-time updates on the status of orders from True North and other suppliers.

Thanks to FileMaker Pro, that is no problem for True North and its customers. That's because True North's employees regularly log the status of all ongoing work into FileMaker Pro: information like job completion percentage, estimated ship date of finished work, arrival date of the order, and so on. With simple Web access, True North's customers log directly and securely into these status updates, gaining vital information that helps them better plan their own manufacturing schedules. That's customer service, FileMaker style.

"It's been a godsend," says Andrew Struthers regarding FileMaker Pro.

"There's just no other solution on the market that can provide the functionality, power, and ease of use of FileMaker Pro."

Struthers ought to know. As IT manager at Mississauga, Ontario-based True North, Struthers and his small IT team use FileMaker Pro to "run the entire facility." That means everything from sales quote requests to time and work management, barcoded inventory control, purchasing, contact management, contact event history, and the entire accounting system. And now True North is rapidly cutting over from FileMaker Pro 7 to the new FileMaker Pro 8 during

a transition that Struthers says has been "seamless."

Real solutions, real competitive advantage
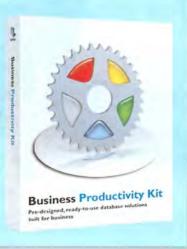
True North is among literally thousands of businesses that are leveraging the productivity-boosting power and customer-pleasing functionality of FileMaker Pro to gain that extra yard of competitive edge. Like a genie in a bottle, FileMaker Pro 8 *is* a high-performance solution to the most common and pressing information management challenges facing small businesses in virtually any market.

FileMaker Pro 8 has been built on the simple but powerful premise that information drives business success, and the easier information can be created, stored, and distributed, the more successful will be the business.

For example, True North's FileMaker

Pro-based inventory control system gives employees up and down the organization accurate, real-time information not only on stocks of raw goods, but also on the status of current and pending shipments. "FileMaker Pro takes scanned barcode information on raw goods as we receive them," says Struthers. "Then as products are ready for shipment, FileMaker Pro confirms the shipments are correct and headed to the right customers, and they are correctly packaged. This has saved us tens of thousands of dollars."

Struthers says the biggest selling point of FileMaker Pro for True North is its ability to perform seamlessly in a mixed PC and Macintosh environment, something vital in a company like True North that operates engineering and design on Macs and everything else on PCs. FileMaker Pro 8 had one other immediate benefit for True North, namely the ability to reduce a package of some 57 databases containing virtually all mission-critical operational data to just two database files. The savings, says Struthers, "have been tremendous."

Sharing info = satisfied customers

One of the best demonstrations of the productivity-boosting personality of FileMaker Pro is its ability to fit into just about any type of business where organizing, storing, and then distributing information is vital. It is this power that helps the seven-person staff at Business Printers of San Diego function like a world-class company many times its size.

Company president J.E. de Sequera says he places very high premiums on keeping his customers completely informed and up-to-date on order status *as well as* project approvals, both of which FileMaker Pro 8 accomplishes. Business Printers used to generate reams of fax proofs of print projects for review, as part of a once-cumbersome and time-consuming process. Using PDF Maker in FileMaker Pro 8, the company "has taken an eight-step process and reduced it to two," de Sequera says. First employees generate a PDF of the proof. FileMaker Pro 8 then searches for the customer

How FileMaker Pro 8 will help your business realize greater productivity and profits

✔ **Manage** customer contact information by giving employees instant access to all contact details, exploiting FileMaker Pro 8's *Fast Match* feature that lets users quickly search data without the time-consuming burden of typing.

✔ **Archive** virtually any kind of data in any type of format in a virtually limitless data store for efficient retrieval of information.

✔ **Automate** the creation of client proposals filled with rich data and then quickly and easily publish these proposals for easy and instant review by the client.

✔ **Eliminate** cumbersome, expensive, and fragile paper forms once and for all.

✔ **Control** your inventory and downstream manufacturing processes with startling ease of use.

✔ **Store** and quickly access product and project details, replete with part numbers and digital pictures, then link this information to your sales order database, thus eliminating duplicate data entry.

✔ **Create** newsletters, catalogs, and any other customer information and distribute them electronically at super-low cost and ultra-high speed.

✔ **Generate** regular job status reports and develop job schedule files.

✔ **Leverage** FileMaker Pro 8's new scripting parameters to radically reduce the number of different databases you need to manage, immediately "creating" developer time that can be better spent on strategic development projects.

✔ **Use** the new *Tab Control* to save hours building layouts; now it's a single step using multiple tabs.

✔ **Boost** productivity for employees and customers alike who view FileMaker Pro information by creating easy-viewing Adobe PDF files with the new *PDF Maker*.

✔ **Produce** Excel files for data analysts in-house or at your suppliers' or customers' locations with the new *Excel Maker*.

✔ **Perform** email merge to send personalized messages to one customer or one thousand customers.

✔ **Save** even more time by instantly emailing the contents of any field in a FileMaker Pro database with the new *FastSend* feature.

contact information and sends out an email with the PDF as an attachment.

Business Printers also exploits the Tab Windows feature of FileMaker Pro 8 in some ingenious ways. As de Sequera's office assistant is visually impaired, FileMaker Pro 8 allows her to display all vital information she seeks on one screen, tabbing easily to a new screen for more information instead of having to slowly scroll from place to place to find what she needs. Of course, FileMaker Pro 8 does the other heavy lifting in the business as well, such as job entry, work

tracking, order tracking, job ticket printing, generating proof sheets, and many other operational tasks. What's more, de Sequera, who is not an IT professional, handles all the FileMaker Pro development and programming work himself.

The bottom line for de Sequera and Business Printers when using FileMaker Pro 8 is just that—the bottom line. "Costs are reduced due to instant access to information. We look like a big, organized company when we're really just seven people doing all the work."

Seven people, plus FileMaker Pro 8. ■

Video iPod Arrives

Fifth-Generation Model Adds Video to Its Repertoire

The iPod has been a hit since Apple released the original, 5GB model four years ago. But for almost as long, people have predicted and anticipated an iPod that could play more than music. With the iPod photo, Apple added a color screen and the ability to display photos and slide shows, but that didn't satisfy the desire for an iPod that could also play video. Well, put a big check mark next to that wish-list item, because the wait is over—a video iPod is finally here.

Apple's fifth-generation full-size iPod—introduced by Steve Jobs at a special event in October (just a month after the superslim iPod nano replaced the popular iPod mini)—is the next rung on the player's evolutionary ladder. In addition to its regular musical duties, the new iPod can play video on a bright 2.5-inch, 320-by-240 pixel, 260,000-color TFT display that's noticeably crisper than that of the nano. At first glance, the new iPod

appears wider than previous full-size iPods, but this is just an illusion produced by the extra half-inch of display. The display extends out nearly to the right and left edges of the iPod, but the player is still just 2.4 inches wide. Jobs did say that the new 30GB and 60GB models are thinner than the previous 20GB model (31 percent and 12 percent thinner, respectively).

The video iPod can play full-motion (30 frames per second) video files encoded in the MPEG-4 and H.264 formats (for Apple's complete specs, including information on which audio and video data rates and codecs are supported, go to macworld.com/0892). But where will that content come from? Jobs has said in the past that the big reason Apple didn't have a video iPod was that video content—unlike music—wasn't easily available. Apple has solved that problem by adding music videos, TV shows, and short films to the

iTunes Music Store for purchase and download (for more on the video content, see "iTunes 6 Makes Waves," page 22). You can also add your own iMovies and other videos to the iPod.

BIG CHANGES

	VIDEO iPOD	PREVIOUS iPOD
Capacity	30GB, 60GB	20GB, 60GB
Price	$299, $399	$299, $399
Battery Life	14 hours, 20 hours	15 hours, 15 hours
Dimensions (in inches)	4.1 (h) × 2.4 (w) × 0.43 (d), 4.1 (h) × 2.4 (w) × 0.55 (d)	4.1 (h) × 2.4 (w) × 0.63 (d), 4.1 (h) × 2.4 (w) × 0.75 (d)
Weight	4.8 oz., 5.5 oz.	5.9 oz., 6.4 oz.
Display	2.5-inch (color)	2-inch (color)
Color	white, black	white
Playback	music, photos, video (H.264, MPEG-4)	music, photos

Thanks to the Quick-Time 7.0.3 update, QuickTime Pro users now have a Movie To iPod (320x240) export option, and iMovie users can also create video files that will play on the new iPods. Navigating through videos (and configuring the iPod to play those videos) is much like working with music and photos on the previous generation of full-size iPods.

The Basics

The new iPod comes in two configurations. A 30GB model that can hold 7,500 songs, 12,500 photos, or 75 hours of video costs $299, while a 60GB model—with double the capacity for songs, photos, and video—costs $399. For the first time with full-size iPods, users can now choose either white or black (just like with the nano). And Apple has discontinued another black iPod—the iPod U2 Special Edition. While Bono's visage appears on Web pages devoted to the new iPod, the iPod named after his band has disappeared from the Apple Store.

As with previous color iPods, Apple offers a $19 Apple iPod AV Cable for connecting the new models to a TV. But this time around, that cable can also send videos instead of just pictures and slide shows. Unfortunately, because the iPod stores video at 320 by 240 pixels—one quarter the resolution of standard-definition TV—videos you send to a TV set will be doubled in size, showing degradation and pixelation.

Apple has also added a $39 iPod Universal Dock, which includes five inserts that work with several different iPod models, as well as an infrared receiver that works with the $29 Apple Remote (the same one included with the new iMac) and lets you control your iPod from across the room.

Although it adds much, the new iPod also spells the end of several technologies. Like the nano, the video iPod syncs only with a USB 2.0 cable—goodbye FireWire—and Apple's remote port has vanished; accessory makers are now expected to use the iPod's proprietary dock connector. If you have older acces-

sories—micro-phones, FM transmitters, and remote controls, for example—that depend on the remote port, you'll have to replace them.

One hidden gem is that the iPod now lets you choose settings for voice recording—a mono low setting or a CD-quality high setting—even though no product currently exists that can be used to record audio to the latest iPod.

Many people may have expected a more radical redesign of the iPod to turn it into a video player (a larger body, wide-screen format, and so on), and more content (including full-length movies) to be available at its launch. But Apple has taken something that many other companies have done, and—as it so often does—created a product with an elegance and design all its own. The video iPod is Apple's first stab at such a device, but by all indications, it's a pretty good first step. □

Senior Editor CHRISTOPHER BREEN, freelance writer MATHEW HONAN, and Senior News Editor JONATHAN SEFF contributed to this story.

ALL-IN-ONE DESKTOP ADDS VIDEO CAMERA, REMOTE CONTROL

The New iMac

The release of the first generation of the iMac is widely credited—along with Steve Jobs's return to the company—with helping to save a financially troubled Apple in 1998. So it's fitting that the latest iMac, announced in October, brings new technologies and ideas to the Mac platform. This slimmer edition of Apple's all-in-one iMac G5 is powered by faster processors and numerous new internal components, and it features two new integrated Apple software applications, an infrared remote control, and a built-in video camera.

The new iMac model includes several firsts for Apple—the most noticeable of which is a built-in version of the popular iSight Web cam (which works with Apple's iChat AV); before now, the iSight was available only as an add-on peripheral (Jobs says that this version is in fact an upgrade to the stand-alone model). The iSight's lens is located at the top center of the iMac's front; to its right is a green LED that lights up when the camera is in use.

A new utility called Photo Booth lets you take snapshots using the iSight and then add visual effects such as sepia tint, X ray, bulge, and squeeze. When it comes time to take the picture, Photo Booth counts down and then turns the entire iMac screen white, creating a "flash" effect that illuminates the subject. Once Photo Booth takes the picture, a Polaroid-inspired icon of the photo slides into a tray near the bottom of the Photo Booth interface. You can then share the pictures using Apple's

Mail application or iPhoto, save them as icons for use in iChat or Address Book, or use them to represent your account on your Mac.

Media Center

The iMac's beautiful wide-screen display is ideal for viewing pictures, movies, and the like. Controlling your digital content used to mean parking yourself in front of the keyboard and mouse, but the new iMac ships with a six-button infrared remote control. The remote control's back is magnetic, and a small magnet is embedded on the lower right side of the iMac's case, giving users a convenient place to stow the remote. The iMac's infrared receiver is hidden behind the Apple logo on the center of the lower portion of the iMac's face.

During the iMac's October introduction,

Jobs compared the iMac G5 remote to the remotes, littered with dozens of buttons, that are available with Windows Media Center–based PCs, and said, "I don't know if there's ever been a slide that shows what Apple's all about like this one."

Apple created a new application for use with the remote: Front Row. When activated, it takes control of your Mac's screen, sweeping the Mac user interface into the background and leaving behind four icons (representing movies, DVDs, photos, and music). Front Row gives you a large interface—which can be seen from a good distance away—that lets you play DVDs and navigate through DVD menus; browse and play back any QuickTime-compatible movies in your Movies folder; play back slide shows from iPhoto books, albums, and slide shows; browse and watch movie trailers streamed directly from Apple's Web site; and browse and watch music videos, movie shorts, and television shows purchased from the iTunes Music Store.

Although Front Row looks to be a powerful and simple way to view content on your Mac, the missing piece of the puzzle is a way to send movies, pictures, and music to a TV or stereo. It seems likely that Apple will create a product to let users move content beyond the Mac's screen.

Hardware Improvements
Like its predecessor, the iMac G5 is available in 17-inch ($1,299) and 20-inch ($1,699—$100

less than before) wide-screen configurations. But under the hood, the systems use slightly faster processors: the 17-inch model has been bumped from 1.8GHz to 1.9GHz; the 20-inch, from 2.0GHz to 2.1GHz. Frontside-bus speed has gone from 600MHz to 633MHz on the 17-inch and from 667MHz to 700MHz on the 20-inch. The new iMac also has a more slender profile than its predecessor—up to a half-inch thinner and 15 percent lighter—and both models include a DVD-burning SuperDrive (previously, only the 20-inch and higher-priced 17-inch models included a SuperDrive).

The iMac G5 is the first Mac model to feature PCI Express graphics—a growing standard on PCs that provides faster performance for graphics systems than the AGP interface on previous models. To power the graphics, Apple includes ATI's Radeon X600 Pro video card in the 17-inch iMac, and the Radeon X600 XT in the 20-inch model (both cards include 128MB of VRAM).

This iMac is also the first Mac model to support DDR2 SDRAM, a faster RAM technology than the standard DDR on other systems; both models ship with 512MB of RAM and have an open RAM slot that supports modules with capacities as large as 2GB. And it's the first to include Apple's multibutton Mighty Mouse in the box. Although it's a little unusual to find these hardware upgrades making their debut in a consumer Mac, you can expect them to find their way into the next revisions of Apple's other Mac models.

The iMac no longer includes an internal modem. For people who need one, Apple is now offering the Apple USB Modem as a $49 option; it works at data speeds of up to 56 Kbps and fax speeds of up to 14.4 Kbps, and it supports caller-ID, wake-on-ring, telephone-answering, and modem-on-hold features. Considering everything that Apple added to the iMac—without upping the price—a modem seems a small price to pay for this nice upgrade.—PETER COHEN

MODEL	PRICE	RAM/ MAX RAM	HARD DRIVE	OPTICAL DRIVE	BUILT-IN WIRELESS	GRAPHICS PROCESSOR/ RAM	MORE INFORMA-TION
17-inch iMac G5/ 1.9GHz	$1,299	512MB/ 2.5GB	160GB Serial ATA	8× SuperDrive	AirPort Extreme, Bluetooth 2.0+EDR	ATI Radeon X600 Pro/128MB	macworld .com/0890
20-inch iMac G5/ 2.1GHz	$1,699	512MB/ 2.5GB	250GB Serial ATA	8× SuperDrive	AirPort Extreme, Bluetooth 2.0+EDR	ATI Radeon X600 XT/ 128MB	macworld .com/0891

Boujou bullet 2, from 2d3 (www.2d3.com): Software for automatic tracking and match-moving adds support for 16-bit images, a new Target Tracker with zoom capabilities, and more-accurate target-shape definition ($2,500; upgrade, $999).

Maya 7 Personal Learning Edition, from Alias (www.alias.com): Software helps new users learn the ins and outs of Alias's 3-D–animation program (free).

Painter Essentials 3, from Corel (www.corel .com): Consumer app based on Painter IX lets users turn digital photos into paintings ($99).

Portraits & Prints 2.1, from Econ Technologies (www.econtechnologies.com): Template-based photo-printing utility adds direct access to iPhoto digital photo libraries ($30; upgrade, free).

Smasher, from Insider Software (www .insidersoftware.com): Font utility for OS X 10.3 and later lets users view fonts in suitcases, including legacy fonts from OS 9 ($50).

Stitcher 5, from Realviz (www.realviz.com): Panorama software features improved user interface, live preview mode, manual control points, and import of Photoshop masks, among other additions ($580; upgrade, $250).
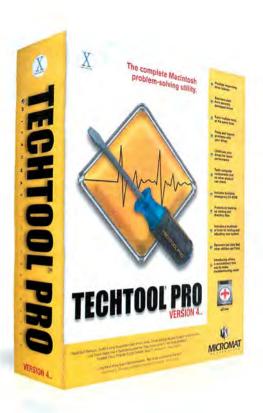
PRODUCTIVITY BEAT

BBEdit 8.2.3, from Bare Bones Software (www.barebones.com): Update to the HTML- and text-editing application runs natively as a "universal binary" on PowerPC-based Mac hardware and Intel-based Apple machines ($199; upgrade, free).

ConceptDraw Business Suite, from CS Odessa (www.conceptdraw.com): Collection of business visualization and brainstorming software for OS X 10.1.5 and later includes ConceptDraw V, ConceptDraw Mindmap, and ConceptDraw Project ($499).

Delicious Library 1.5.1, from Delicious Monster Software (www.delicious-monster.com): Update to cataloging application improves lookup, import, and export results ($40; upgrade, free).

SyncDeK 6.0, from WorldSync (www.worldsync .com): Tool for FileMaker developers that allows bidirectional data synchronization in FileMaker-based solutions adds compatibility with the FileMaker 8 product line (pricing starts at $249 for the single-user engine).

Ultimate Reference Suite 2006, from Encyclopedia Britannica (www.britannica.com): Suite for OS X 10.3 and later includes three encyclopedias, the Homework Helpdesk for helping students complete papers, and the Britannica Brainstormer visual browser for simplified research ($50).

UPDATED MUSIC STORE ADDS TV SHOWS, MUSIC VIDEOS, AND MORE

iTunes 6 Makes Waves

Just five weeks after releasing iTunes 5, Apple updated its free music-jukebox software to version 6. The latest version adds several dramatic new features for the iTunes Music Store (iTMS)—including downloadable TV shows and music videos, and the ability to send music and videos as gifts.

The biggest feature, which goes with the introduction of the video iPod, is the addition of video to the iTMS.

Using iTunes 6, you can now purchase TV shows, short films, and music videos for $1.99 each. Available for download are two very popular ABC series, *Desperate Housewives* and *Lost*, and the new ABC drama series *Night Stalker*, as well as two shows from the Disney Channel, *That's So Raven* and *The Suite Life of Zack and Cody*.

Whether iTunes users will be willing to spend money to download TV shows remains to be seen, but Apple's pricing should be enticing enough to get people to give it a try.

Also available are 2,000 music videos from hundreds of artists including Beastie Boys, Coldplay, Kanye West, Madonna, and U2, as well as six short films from Academy Award–winning Pixar Animation Studios (of which Steve Jobs serves as CEO).

iTunes 6 adds a new Videos item in the Source window, which contains any video content you buy from Apple or that is included as bonus material on purchased albums. Unlike the Library and Podcasts windows, the Videos area has a solid black background and shows a thumbnail (complete with reflection) of the video along with title and time information. A quick check of a recent *Desperate Housewives* episode showed the quality of Apple's downloads to be very good, albeit small—320 by 240 pixels.

Purchased videos employ Apple's Fair-Play digital rights management (DRM) scheme, so you can play them on as many as five computers or transfer them to as many video iPods as you like. One thing you can't do is burn them to a DVD. But considering that the resolution of Apple's content is half that of television, the results wouldn't be ideal anyway.

iTunes 6 includes expanded online gift options to giving specific songs, albums, music videos, and iTunes playlists as gifts. Previously, you were limited to sending gift certificates or setting up allowances.

Apple also added customer reviews and a public beta of Just for You, a personalized music-recommendations feature. Both of these are popular features on sites such as Amazon.com and Netflix, and are welcome additions to the iTMS.—MATHEW HONAN

INPUT-DEVICE BEAT

LX7 Cordless Optical Mouse, from Logitech (www.logitech.com): Desktop mouse features a tilt scroll wheel, forward and back buttons, and "smart power management" for extended battery life ($40).

USB Overdrive 10.4, from Alessandro Levi Montalcini (www.usboverdrive.com): Updated version of utility for extending the usability of input devices adds support for Apple's new Mighty Mouse multibutton mouse ($20; upgrade, free).

V270 Cordless Optical Notebook Mouse for Bluetooth, from Logitech (www.logitech.com): Charcoal-gray mouse offers a 1,000-dpi optical sensor and multiple buttons with a scroll wheel ($50).

V400 Laser Cordless Mouse, from Logitech (www.logitech.com): 2.4GHz cordless mouse features a tilting scroll wheel with zoom capabilities, programmable forward and back buttons, and a battery indicator ($50).

X-Arcade Trackball, from Xgaming (www.xgaming.com): Gaming device features a center-mounted trackball accompanied by three buttons on either side ($100).

STORAGE BEAT

Backup 3.0, from Apple (www.apple.com): Update to personal backup software adds preset backup plans for iLife content, automatic scheduling, and incremental backups (free with .Mac account).

Biggest S1S, from LaCie (www.lacie.com): Four-bay RAID system can transfer data at up to 80MB per second in RAID 0 configurations and comes in two capacities (1TB, $1,699; 2TB, $3,199).

Data Rescue II, from Prosoft Engineering (www.prosofteng.com): Data-recovery software for OS X 10.3 and later adds a new interface and more-robust file searching ($99; upgrades, free for users who bought Data Rescue in 2005, $65 for other users).

G5 Jive, from Sonnet Technologies (www.sonnettech.com): Internal hard-disk mounting system lets users add three more Serial ATA hard drives to a Power Mac G5 ($100).

Personal Backup X4, from Intego (www.intego.com): Updated backup, synchronization, and volume-cloning software for OS X 10.2.8 and later features faster backup and adds the ability to span multiple CDs or DVDs ($70; upgrade, $45).

Salvage Suite 4.2, from SubRosaSoft (www.subrosasoft.com): Update to file-recovery suite improves accuracy, adds more file support, and features faster shredding of sensitive files ($90; upgrade, free).

Now Playing

Title and Registration
Death Cab For Cutie
0:42

harman/kardon

Introducing Drive + Play, the smarter way to bring the music on your iPod to life.

Drive + Play is your in-car audio solution, giving you all of the music-browsing capability of your iPod without ever taking your eyes off the road. Just mount the display for maximum visibility, position the controller within easy reach and plug in your iPod. With better control capabilities and continual battery charging, Drive + Play is music to your ears. For more information, visit us at driveandplay.com. **harman/kardon**

NEWS IN BRIEF

MORE STORAGE, BETTER BACKUP, AND GROUPS FEATURE INCLUDED

Apple Updates .Mac

When large Web sites such as Yahoo and Google started offering free e-mail accounts with huge amounts of storage, as well as online community features, Apple's .Mac (www.mac.com) began showing its age. But now Apple has updated its suite of e-mail, online storage, and Web-hosting tools with several improvements and new features.

Each $100-per-year .Mac account now gets a total of 1GB (up from 256MB) of combined iDisk and e-mail storage, while the $180 Family Pack—which includes a master account and five subaccounts—provides a total 2GB of storage. (Users can purchase an additional 1GB of storage for an extra $50 a year.) Note that .Mac doesn't provide a connection to the Internet—you need separate high-speed or dial-up access to use it.

For people who share large amounts of content on their .Mac HomePages (small software developers, for example, or people with lots of movies), even more important than storage is bandwidth.

The latest version of .Mac includes 10GB of data transfer per month for individual accounts, up from 3GB (and members who purchase the additional 1GB of storage get a total of 25GB of data transfer every month).

Apple (like other companies that host data for customers) gives .Mac users a set amount of bandwidth for the transfer of data from an account per month. Hit the limit, and you can't transfer any more data until the next month. Apple still doesn't give you any way to see how much bandwidth you have remaining, or a way to pay for more if you go over your limit, however.

.Mac also includes Backup 3, the latest version of Apple's backup utility. The update adds preset backup plans for iLife content (including purchased music), Home folders, and other essential files; automatic backup scheduling to CDs and DVDs; incremental backups; advanced file restoration; built-in Spotlight searching; and the ability to back up more than one Mac to your iDisk.

Another addition is .Mac Groups, a community feature that allows many .Mac members to connect with one another. Group members can e-mail everyone in a group with a single address; share iDisk space for posting images, movies, and other files; create group Web pages; and make shared iCal calendars.

Online retailers such as Amazon.com usually sell .Mac subscriptions at a discount—as low as $78 at press time (you can also renew a current account this way).—JONATHAN SEFF

Apple Secretly Bumps Up Mac Mini

In response to reports on the Internet that some users who purchased a 1.42GHz Mac mini received a 1.5GHz system instead, Apple confirmed that "some Mac mini systems may contain components that slightly exceed the published specifications. There are no changes to the published specifications or part numbers."
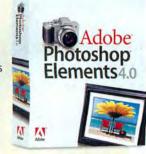
iPhone On the Way?

A few days after making disparaging comments about the iPod nano ("Screw the nano. What the hell does the nano do? Who listens to 1,000 songs?"), Motorola CEO Ed Zander told CNet News.com that "we know that they are going to build a smart phone—it's only a matter of time." Motorola's Rokr phone, the first with a version of iTunes built in, has faced a lukewarm reception since its release in September 2005.

Photoshop Elements Not Dead

Although Adobe released Photoshop Elements 4, the latest version of its consumer-level image-editing application, only for Windows, the company says it has not killed the Mac version. An Adobe represe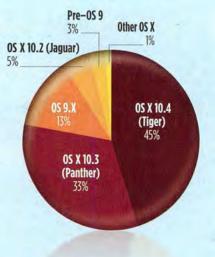ntative explained that unlike with Photoshop and the Creative Suite, Elements users tend not to work collaboratively and across different platforms—so a simultaneous release was not as important. He added that, "our Mac customers are still very important to us," but would not say when the Mac version would be available.—MACWORLD STAFF

THE READERS SPEAK

OS Usage

Although Apple would love it if everyone ran out and bought the latest version of OS X the day it hit the shelves, many users are still running older versions, according to a survey of 294 people on the Macworld Reader Panel. Because each respondent was allowed to pick every OS version he or she was currently using, this chart represents the 412 total OS mentions in our survey.—JONATHAN SEFF

Pre–OS 9 3%
Other OS X 1%
OS X 10.2 (Jaguar) 5%
OS 9.X 13%
OS X 10.4 (Tiger) 45%
OS X 10.3 (Panther) 33%

Farewell, Boston

You didn't need psychic powers or a Magic 8 Ball widget to see that the end of Macworld Conference & Expo on the East Coast was coming sooner rather than later. IDG World Expo (www.idgworldexpo.com), which produces the Macworld Expo trade show, made the demise of the Boston show official in September. The underwhelming attendance and general lack of interest in Macworld Expo Boston for the past two years said it all—not to mention Apple's conspicuous absence from the show.

There are plenty of reasons that IDG World Expo pulled the plug on the Boston trade show. Sure, Apple contributed by opting out of the show after Expo organizers moved the event back to Boston in 2004. But even before then, Apple's interest had seemed to wane. Remember the 2002 Macworld Expo in New York? Highlights of Steve Jobs's keynote included a seemingly endless presentation on processor efficiency, and the bad news that the previously free iTools services would now cost $100 per year.

Of course, the reasons behind Macworld Expo Boston's demise are of little comfort to the people most affected by the development—Mac users on the East Coast who now find themselves without a major Mac event to call their own. Expo is about more than flashy product announcements and memorable keynotes—above all, it's a chance for users to meet, share ideas, learn new tricks, and get acquainted with the cutting-edge technology that's either available to them now or on its way. Until you sit in a conference session with hundreds of other Mac users who share your Mac-centric interests and passions, you're just not getting the same experience.

Apple is more or less unaffected by whether there's a Mac trade show on the East Coast; to a lesser extent, so is IDG World Expo. The same can't be said for Mac users from that region, unless they've got a lot of frequent-flier miles and a fair amount of time on their hands around the first week of January.—PHILIP MICHAELS

UTILITIES BEAT

KeyCue 1.1, from Ergonis Software (www.macility.com): Updated menu-shortcut utility adds Tiger compatibility ($15).

StuffIt Deluxe 10, from Allume Systems (www.stuffit.com): Updated data-compression tool adds JPEG compression technology, as well as new features for OS X 10.4, such as a Spotlight Importer ($80; upgrade, $30).

Virex 7.7, from McAfee (www.mcafee.com): Antivirus software adds support for OS X 10.4 (contact McAfee for pricing).

VirusBarrier X4, from Intego (www.intego.com): Virus-detection and -eradication program features new interface, e-mail analysis on send and receive, and the ability to define a secure zone for files ($70; upgrade, $45).

Widget Maker X, from LAJ Design (www.widgetmakerx.com): Application lets you create, modify, and manage Dashboard widgets in OS X 10.4 ($17).

MULTIMEDIA BEAT

Cubase SE3, from Steinberg Media Technologies (www.steinberg.de): Entry-level music-production software adds a new audio engine, drag-and-drop capabilities for MIDI files, improved Hitpoint detection, and a redesigned Track Inspector ($160).

EyeTV EZ, from Elgato Systems (www.elgato.com): USB 2.0–based TV tuner lets you hook up an antenna, cable, or satellite TV connection to view raw, uncompressed TV signals ($149).

Griffin iFM, from Griffin Technology (www.griffintechnology.com): iPod accessory acts as inline FM receiver, iPod remote control, and audio recorder ($50).

SoundBridge Radio, from Roku (www.rokulabs.com): Wi-Fi–equipped network music player plays unprotected AAC or MP3 files over a wireless network streamed from a Mac or PC running iTunes; it also features an AM/FM radio ($399).

Nano Problems

Replacing the iPod mini—the most successful iPod model to date—with the nano was a bold move on Apple's part, but one that began paying off as soon as it was announced. The nano has earned accolades from reviewers, industry analysts, and consumers alike (for our review of the iPod nano, see page 32). But not everyone is completely satisfied. Some customers have complained about scratched or broken nano screens, and one user even set up a Web site that highlighted the problems.

While complaining about a product is nothing extraordinary, getting Apple to respond to such complaints isn't as common. But Phil Schiller, Apple's senior vice president of worldwide product marketing, recently answered questions regarding both issues.

In addressing the problem of broken screens, Schiller says that Apple has tracked down the problem. "This is a real but minor issue involving a vendor quality problem in a small number of units," says Schiller. "In fact, this issue has affected less than one-tenth of one percent of the total iPod nano units that we've shipped. It is not a design issue."

Schiller says that if customers have this problem, all they have to do is contact AppleCare for a replacement iPod.

Responding to the second issue, Schiller says that the screens on the iPod nano are made of the same material as those on the company's fourth-generation iPod—which, to date, is not generating many complaints.

"We have received very few calls from customers reporting this problem—we do not think this is a widespread issue," says Schiller. "If customers are concerned about scratching, we suggest they use one of the many iPod nano cases to protect their iPod."

Although Schiller's suggestion may sound like nothing more than a plug for vendors of iPod accessories, the iPod has always been scratch-prone, and protective cases are a good idea for all sorts of expensive devices.

For his part, nano owner Matthew Peterson—who set up the Web site devoted to the problems— feels vindicated. "I started the site to get Apple's attention. Mission accomplished," he said in a statement on the voluntarily deactivated Web site. "Apple did the right thing, and should be commended for doing so on their own. No one had to take them to court or threaten legal action."—JIM DALRYMPLE

Now Playing
9 of 12
The Journey
Fatboy Slim
Palookaville
3:37
-0:59

iFM RADIO, REMOTE, AND RECORDER FOR iPOD $49.99

- Listen to FM radio on your iPod
- Record FM radio to your iPod
- High quality omnidirectional built in microphone for recording voice memos

AirClick REMOTE CONTROL FOR MAC, PC, iPOD AND iPOD MINI $39.99

- Designed specifically for use with iPod & iPod mini
- Uses RF for control from up to 60 feet away
- Control Keynote, iTunes, QuickTime, DVD player and more with AirClickUSB

SmartDeck INTELLIGENT CASSETTE ADAPTER FOR iPOD $29.99

- Control iPod navigation through your car stereo
- Intelligent level control for optimal input levels
- Constructed of the highest quality components
- Seamless integration between iPod and car stereo

PowerJolt iPOD AUTO CHARGER $24.99

- Charges ALL iPod models, including iPod shuffle
- Includes 20 inch USB to Dock cable
- Fused to protect against power surges

nano now

TuneJuice BATTERY BACKUP FOR iPOD & iPOD MINI $19.99

- Powered by a standard 9 Volt battery
- Provides up to 8 hours of additional play
- Compact and lightweight

nano now

GRIFFIN

buy now at: www.griffintechnology.com

iPod Nano

Apple's Thinnest, and Quite Possibly Coolest, iPod Yet

BY CHRISTOPHER BREEN

iPods have been around long enough for people to take them for granted. Yes, they're small. Yes, they hold a lot of music. And yes, they're cool. So it takes some-thing special to break through our jaded iPod sensibilities. The iPod nano—with its tiny size, sleek look, colorful display, and responsive controls—is that special something.

The nano combines features of the iPod shuffle, the discontinued iPod mini, and today's full-size iPods. Like the shuffle, the nano uses flash memory (2GB or 4GB of it) rather than a hard drive. Like the 4GB iPod mini, the 4GB nano can hold roughly 1,000 songs. Also like the mini, the nano dispenses with some extras that are in full-size iPods: for instance, the nano doesn't let you play video, record audio, download photos directly from your digital camera, send those photos or videos to TVs or projectors for viewing, or install OS X and boot from it. But like those full-size models, the nano has a crisp color screen that displays album art and pictures you've downloaded from a computer.

However, the nano isn't just an amalgam of previous iPod models. It was the first iPod to include a stopwatch, a Screen Lock feature, and multiple clocks (the new video iPod also has this feature). It was also the first iPod to include an unplayed-Podcasts indicator (a small blue dot that appears next to Podcasts you haven't yet listened to) and the Lyrics screen.

And as you might expect, it sounds as good as any other iPod you've owned.

It's Thin, All Right

At 0.27 inches from back to front, the nano is about as thick as six stacked credit cards. At 3.5 inches high by 1.6 inches wide, it fits neatly inside a business-card holder. And even though it weighs only 1.5 ounces, the nano doesn't feel flimsy or delicate. (Some buyers have complained that the nano's exterior is easily scratched [we did not experience this problem]—see "Nano Problems," *Mac Beat*, page 28.) Despite the nano's small size, its Click Wheel is easy to use and its 1.5-inch display is good for viewing text and pictures.

Because of the nano's thinness, Apple had to move some standard iPod ports. The Hold switch is on top of the player, as on other iPods. But the nano's headphone port is on the bottom, next to the 30-pin dock port. The position of these ports is a prob-lem only if you use accessories that have wide dock connectors. For example, my fat ¼-inch stereo-plug-to-miniplug adapter wouldn't fit on the nano when the Dock connector was also attached. While longtime iPod users may initially be thrown by plugging headphones into the bottom rather than the top, doing so can be advantageous if you carry the iPod in your pocket: when you take it out, it's oriented in such a way that you don't need to flip it over to view the screen or use the controls.

Speaking of the dock connector, this iPod syncs only over a USB connection, though it can be charged via either a FireWire or a USB connection. Apple suggests that you can sync only via USB 2.0, but I was able to sync the nano (albeit very slowly) when it was plugged into my Power Mac G4's USB 1.1 port. There's no question that the lack of support for syncing via FireWire is going to be a problem for people with older computers, which don't have USB 2.0. If you fall into this category, your choices are limited: you must either look for a way to add a USB 2.0 port (via a PCI card or PC Card) or seek out an older iPod (the new video iPods also sync only over USB 2.0).

Given the lack of support for FireWire syncing, it's not surprising that Apple includes only a USB cable in the box (along with the usual Apple earbuds and foam covers, software disc, and documentation).

When connected by USB 2.0, the nano syncs faster than the iPod mini did. Syncing the same 903-track playlist to a 4GB nano and a 4GB iPod mini took 9 minutes and 15 seconds on the nano and 16 minutes and 13 seconds on the mini.

Fast as a Flash

The nano's Click Wheel is nicely responsive. You feel (and hear, in a quiet environment) a

REVIEWS YOU CAN TRUST Macworld rates only final shipping products, not prototypes. What we review is what you can actually buy.

definite "click" when you press the wheel and the center button. In fact, owners of other iPods may initially be thrown off by how quickly the wheel responds. At least one person who tried my nano thought it scrolled too quickly, making it hard to select items he was after. I felt the same way at first, but I quickly adjusted.

No one will be upset by the speed with which the iPod nano moves from screen to screen. This is particularly noticeable when you're viewing pictures. When I look at pictures on my 60GB iPod photo, there's a noticeable delay between when I select a thumbnail image and when I finally see the "large" view of that image. The larger iPod must spin up its hard drive before it can display the image. The nano's flash memory means that there's no hard-drive delay: images pop up almost immediately, and audio tracks begin playing instantly.

Regrettably, the nano's battery life isn't nearly as good as that of the second-generation iPod mini. In tests where I'd fully charged a 6GB mini, selected the first song in the mini's Songs screen, and pressed Play, the mini was able to squeeze out more than 26 hours of play time, even though Apple rated the mini's battery charge at 18 hours. Apple suggests that the nano can play uninterrupted for up to 14 hours. My first audio play test fell short of that by just over an hour, but a subsequent test hit the 14-hour mark almost exactly. While playing slide shows, the nano performed a little better than advertised in terms of battery life: Apple claims that the nano can show slide shows for up to 4 hours; in my test of a looping slide show comprising 1,786 photos, the battery lasted for 4 hours and 36 minutes.

On Display
Although it's smaller than the display on the iPod mini, the nano's screen has greater resolution—offering a resolution of 176 by 132 pixels, versus the mini's 138-by-110-pixel resolution. The nano also has a very sharp display—at least when it's lit. And you can see title, artist, and album information on the Now Playing screen; the mini showed only the song title and artist. Unfortunately, it's not easy to see what's on the screen when it isn't lit, unless it's under a direct light (either an indoor lamp or daylight).

The smaller screen forces at least one compromise: When displaying a photo-album screen, the nano shows fewer thumbnails than the full-size iPods: a 4-by-3 grid of thumbnail images instead of a 6-by-5 grid.

About the Extras
The nano was the first iPod to include a few extras: the Stopwatch, the Screen Lock feature, the Lyrics screen, and a new clock that lets you create multiple analog or digital clocks.

Given that a lot of people will use the nano while exercising, the nano's Stopwatch feature is perfect. I also like the new Lyrics screen in the iPod's Now Playing area; it lets you view the words for any track—as long as you've added them to the Lyrics tab of the Song Information window in iTunes 5. Unfortunately, the only way to add those words for now is by hand—songs sold through the iTunes Music Store don't have embedded lyrics (yet).

Other new features are less successful. Screen Lock is supposed to foil thieves by letting you seal the nano with a combination. But that lock-down isn't foolproof; a baddie could extract your nano's music and data simply by plugging it into his or her computer. And the new clock, which lets you

The Rokr

♦♦⅓ $249 (with two-year Cingular contract), from Motorola (www.motorola.com): The Rokr is neither a terrible phone nor a bad music player, but its slow syncing and response, 100-track limit, audio glitches, and occasionally ungainly interface will disappoint people who are accustomed to the elegance of an iPod (see macworld .com/0881 for a full review).

keep track of time for multiple time zones, seems merely gimmicky.

Value
If you're looking for the greatest bang for your gigabyte buck, the nano won't deliver. With the 2GB model, a gigabyte of storage costs about $100; with the 4GB model, it costs a little more than $62. (Cost per gigabyte is even higher for the iPod shuffle—at more than $198 with the 512MB model.) Compare this with about $6.65 per gigabyte on a $399 60GB video iPod, and you'll see that people who want the most for their money may pass on the iPod nano's cool form and handy size in favor of the higher-capacity iPod.

Macworld's Buying Advice
The iPod nano has a clear color screen, responsive and manageable controls, photo viewing, and fast syncing. And it's impossibly thin, of course. The nano is a nearly perfect fit for the middle of the iPod lineup—it sounds great and mixes the best features of the shuffle, mini, and color-screen iPods. While you may be disappointed by the lack of support for syncing via FireWire, and may consider the price of admission comparably high, the decision to purchase this slick little iPod may ride on what you're willing to cough up for coolness. □

RATING: ♦♦♦♦½
PROS: Responsive controls; clear and bright screen; support for photo viewing; syncs quickly; no skipping, thanks to flash memory.
CONS: No syncing via FireWire; no support for viewing pictures on a TV; can't be used to boot a Mac.
PRICE: 2GB model, $199; 4GB model, $249
COMPANY: Apple Computer, www.apple.com

Teeny Tiny Here, the iPod nano is shown at actual size.

CHRISTOPHER BREEN is a senior editor at *Macworld*.

FireWire Hard Drives

Find the Right Drive for Your Needs

BY JAMES GALBRAITH

Years ago, when Apple shipped its first Macs with 1GB hard drives, I remember asking myself, "Who would ever need that much storage?" It didn't take me long to figure out who, especially now that the 80GB drive in my PowerBook is bursting at the seams with pictures from my multimegapixel digital camera and my ever-expanding library of audio files and movies.

Files and applications aren't the only things taking up precious storage space—OS X puts available disk space to work as virtual memory. My system, for example, uses 5GB as virtual memory with no applications running, and almost 9GB when running a lot of applications. This use of hard-drive space by the operating system means that your entire system can take a performance hit if you start running out of drive space.

If you're beginning to count down the remaining free megabytes on your hard drive, or if you're finally getting serious about backing up your data, you need more storage. You may choose to install a new drive inside your Mac. But for most Mac users, increasing storage means buying a new external hard drive that includes fast and convenient FireWire connections. Trying to consider all the factors when you're choosing a hard drive can boggle the mind, so here are the questions you should ask yourself when choosing a new drive, as well as *Macworld*'s ratings of some of the latest external FireWire hard drives. (More reviews of FireWire hard drives are available at macworld.com/0580.)

Question 1: Which Connectors?

The main connectors you'll find on external drives are FireWire (also called FireWire 400), FireWire 800, and USB 2.0, and many drives include two or more of these interfaces. FireWire 400 is a Mac user's best bet.

It's fast and it's on all Macs that are less than about seven years old, and FireWire upgrades are available for many earlier systems. You can also boot your Mac from most FireWire drives in a pinch.

Apple introduced another, faster version of FireWire, FireWire 800, almost three years ago. It, too, can boot a Mac using OS X, but its speed and performance benefits are questionable. Although it's theoretically faster than FireWire 400, FireWire 800 is far from twice as fast. In fact, a portable FireWire 400 drive with a rotational speed of 7,200 rpm may outperform a FireWire 800 drive spinning at 4,200 rpm. FireWire 800 is also not as common as FireWire 400—only Power Mac G5s and 15- and 17-inch PowerBooks ship with FireWire 800 ports.

FireWire 800 compatibility may also be an issue if you don't have one of the Macs with a FireWire 800 port. FireWire 800 ports are compatible with FireWire 400 devices via a special FireWire 400-to-800 cable, but if you plug a FireWire 400 device into a FireWire 800 port, it will operate only at FireWire 400 speeds. If you're a video or audio pro, FireWire 800

is nice to have, but you'll want to make sure that the drive also has a FireWire 400 port, for maximum compatibility.

If you work across platforms, consider a drive that has a USB 2.0 port, because Windows PCs often don't have FireWire ports. USB 2.0 is also gaining popularity on the Mac side; more and more Macs include USB 2.0 ports. USB 2.0 is backward-compatible with USB 1.1 ports (no adapter needed), which have been included on every Mac sold since the introduction of the original iMac seven years ago. But USB 1.1 can be mind-numbingly slow for anything but the smallest file transfers, and you can't boot your Mac from a USB drive.

LaCie Mobile Hard Drive, Design by F.A. Porsche 7,200 rpm USB and FireWire (portable)

Iomega Black Series Triple Interface (desktop)

Our Picks

Of the approximately 30 hard drives I've tested recently, three stand out as *Macworld* Top Products (see the tables in this review). The Iomega Black Series Triple Interface drive is our winner in desktop hard drives, thanks to its various connection options, very quick speed (especially in copying data to the drive) and low cost per gigabyte. Our runner-up in that category, by just a hair, is Other World Computing's Mercury Elite-AL Pro 7,200 rpm FireWire 800/400+USB2.

For a portable drive, you just can't go wrong with the LaCie Mobile Hard Drive, Design by F.A. Porsche 7,200 rpm USB and FireWire. Its only flaw is that it doesn't have a FireWire 800 port, but in some cases, it's faster than drives with such a port. Other World Computing's Mercury On-the-Go 7,200 rpm 8MB drive is the runner-up in the portable-drive category.

And as for a drive that goes perfectly with your Mac mini, you just can't beat Newer Technology's miniStack 7,200 rpm, with its FireWire- and USB-hub–like attributes and low cost per gigabyte.

If you can't decide between drives that have one or more of these interfaces, then don't decide at all. Just buy a drive that has all three connectors—there are many to choose from. They're called triple-interface drives, and they offer the ultimate in compatibility. Some hard drives include more than one of the same type of FireWire port. This makes it possible to connect another FireWire peripheral—a second drive, say—to the first drive instead of taking up another port on your Mac. This is often referred to as *daisy chaining*.

Question 2: Portable or Desktop?

Now that you know what type of connectors you're looking for, you need to think about how you'll use your drive and how far from your desk you'll want to carry it. FireWire cables carry data, but they can also carry power from your computer to the device—enough to power smaller hard drives (like the ones inside laptop computers) that aren't plugged into an electrical outlet. For the purposes of this review, hard drives that are powered via FireWire are referred to as portable drives, because they tend to be smaller and lighter. And hard drives that require external power are

DESKTOP FIREWIRE HARD DRIVES COMPARED

★ = Top Product.

Company	Edge Tech	EZQuest	G-Technology	Iomega	Maxtor	Other World Computing	SmartDisk	Western Digital
Product	DiskGo 3.5-inch Portable Hard Drive, 400GB	Monsoon FW/USB2 HD, 250GB	G-Drive FW 800 & FW 400, 400GB	Black Series Triple Interface, 250GB ★	OneTouch II FireWire 800 & USB Drive, 300GB	Mercury Elite-AL Pro 7,200 rpm FireWire 800/400+ USB2, 250GB	CrossFire Desktop, 160GB	Extreme Lighted Combo Drive, 320GB
Rating	♦♦½	♦♦♦♦	♦♦♦♦	♦♦♦♦½	♦♦♦♦	♦♦♦♦½	♦♦♦♦	♦♦♦♦
Contact	www.edgetech corp.com	www.ezq.com	www.g-technology .com	www.iomega.com	www.maxtor.com	www.macsales.com	www.smartdisk .com	www.wdc.com
Price^A	$375	$185	$429	$240	$320	$230	$170	$300
Price per GB	$0.94	$0.74	$1.07	$0.96	$1.07	$0.92	$1.06	$0.94
Connectors (Number)	FireWire 400 (2), USB 2.0 (1)	FireWire 400 (2), USB 2.0 (1)	FireWire 400 (1), FireWire 800 (2)	FireWire 400 (1), FireWire 800 (2), USB 2.0 (1)	FireWire 400 (1), FireWire 800 (2), USB 2.0 (1)	FireWire 400 (1), FireWire 800 (2), USB 2.0 (1)	FireWire 400 (2), USB 2.0 (1)	FireWire 400 (2), USB 2.0 (1)
Other Capacities	80GB, $99; 120GB, $120; 160GB, $135; 250GB, $200	80GB, $109; 160GB, $139; 200GB, $165; 400GB, $339; 500GB, $469	160GB, $189; 250GB, $249; 500GB, $569	160GB, $180; 400GB, $380	200GB, $230	80GB, $160; 160GB, $200; 200GB, $210; 300GB, $270; 400GB, $360; 500GB, $480	250GB, $250	120GB, $180; 160GB, $200; 250GB, $250
Pros	Low price per gigabyte; can boot OS X using FireWire.	Can boot OS X using FireWire; inexpensive.	Fast; can boot OS X using FireWire; unique case design; FireWire 400 and 800 ports.	Fast; can boot OS X using FireWire; triple interface; includes Retrospect Express.	Can boot OS X using FireWire; triple interface; one-button backup via Retrospect Express (included).	Fast; can boot OS X using FireWire; triple interface; includes Retrospect Express.	Can boot OS X using FireWire; USB 2.0 and FireWire connectors; distinctive design; good FireWire 400 speeds.	Can boot OS X using FireWire; unique lighted design.
Cons	Very slow at booting OS X via Fire-Wire; inconsistent speed performance.	No FireWire 800 ports.	No USB 2.0 ports; expensive.	None significant.	Slow performance when copying and duplicating files.	None significant.	No FireWire 800 ports.	Takes up more desktop space than most drives; no FireWire 800 ports.
Comments	This 400GB model is the only DiskGo drive that can boot OS X, and it does so very slowly. In fact, this drive's speed varied widely during our testing.	The Monsoon is a slim drive, clad in anodized aluminum. It has both USB 2.0 and FireWire 400 ports, fast FireWire 400 speeds, and a low price.	This fast drive's design complements a Power Mac G5, and the drive is a great performer. It also has tons of storage space, but it's a bit expensive.	The Iomega Black Series is our top pick for desktop FireWire hard drives. You can't go wrong with its combination of connection options, low price per gigabyte, and winning speed.	This triple-interface drive is designed for backing up. It ships with Retrospect Express and has a programmable button that can initiate backups.	The Mercury Elite-AL Pro is very fast, winning one of our three timed trials. It also has a slim aluminum case that complements a Power Mac G5.	This moderately priced drive features the same signature case design as other Smart-Disk drives—it's just bigger.	With its clear plastic case and two 5-inch tubes that glow and change colors, this moderately priced drive adds some fun to its function.
Macworld								
Copy 1GB to Drive	1:37	0:47	0:35	**0:33**	1:32	0:36	0:51	0:49
Duplicate 1GB on Drive	1:19	1:17	0:57	0:55	1:56	**0:54**	1:25	1:21
Low Memory Photoshop CS Suite	1:47	1:37	1:32	1:33	**1:28**	1:34	1:48	1:41

BEST RESULTS IN **BOLD** (<Better). All Drives in this table have a rotation speed of 7,200 rpm. ^A All prices shown are the manufacturers' suggested retail prices.

How We Tested All speeds are in minutes:seconds. We ran all tests with the FireWire drives connected to a dual-2.5GHz Power Mac G5 with Mac OS X 10.3.7 installed and 512MB of RAM. All drives were tested using FireWire 800, unless it was unavailable; in those cases, we used FireWire 400. We copied a folder containing 1GB of data from our Mac's hard drive to the external hard drive to test the drive's read speed. We then duplicated that file on the external drive to test both read and write speeds. We also used the drive as a scratch disk when running our low-memory Adobe Photoshop CS Suite test. This test is a set of four tasks performed on a 150MB file, with Photoshop's memory set to 50 percent.—MACWORLD LAB TESTING BY JAMES GALBRAITH AND JERRY JUNG

referred to as desktop hard drives. Desktop drives are larger and heavier, but they, too, can be carried around. However, you probably won't want to carry one far.

Because portable drives are built around physically smaller mechanisms, they're usually more compact and easy to tote around. One downside to these drives is that they're more expensive than desktop drives and provide less storage capacity. Currently, portable drives top out at between 100GB and 120GB, while desktop models can hold 500GB. Portable drives also tend to be slower (generally between 4,200 and 5,400 rpm) than most desktop drives (generally 7,200 rpm).
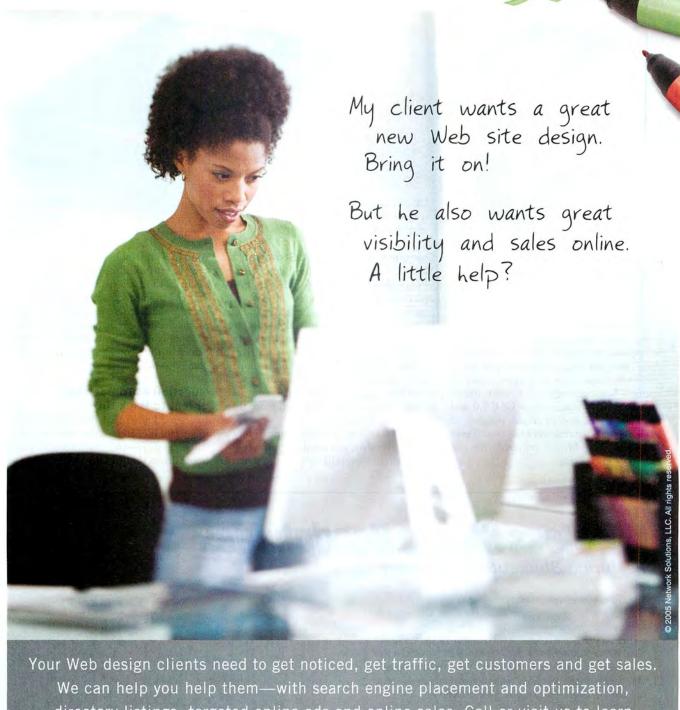
If you plan on moving your drive from system to system and place to place, then a portable drive is the way to go. If your drive will generally stay in one place and

PORTABLE FIREWIRE HARD DRIVES COMPARED

★ = Top Product.

Company	CMS Products	G-Technology	Kanguru	LaCie	Other World Computing	SmartDisk	US Modular	WiebeTech
Product	FireWire ABS Plus for Mac, 100GB	G-Drive mini FW (FW 800), 60GB	2.5-inch Combo Quicksilver FireWire/USB 2.0, 100GB	Mobile Hard Drive, Design by F.A. Porsche 7,200 rpm USB and FireWire, 60GB ★	Mercury On-the-Go 7,200 rpm 8MB, 60GB	FireLite FireWire 1394b Hard Drive, 80GB	Dragon Drive 2.5-inch, 20GB	ComboGB, 60GB
Rating	●●●●	●●●●	●●●●	●●●●	●●●●	●●●●	●●●	●●●●
Contact	www.cmsproducts.com	www.g-technology.com	www.kanguru.com	www.lacie.com	www.macsales.com	www.smartdisk.com	www.usmodular.com	www.wiebetech.com
Price^	$319	$299	$300	$240	$250	$250	$99	$250
Price per GB	$3.19	$4.98	$3.00	$4.00	$4.17	$3.13	$4.95	$4.17
Drive Speed (rpm)	4,200	7,200	4,200	7,200	7,200	5,400	4,200	5,400
Connectors (Number)	FireWire 400 (1)	FireWire 800 (2)	FireWire 400 (1), USB 2.0 (1)	FireWire 400 (1), USB 2.0 (1)	FireWire 400 (2), USB 2.0 (1)	FireWire 800 (2)	FireWire 400 (1), USB 2.0 (1)	FireWire 400 (1), FireWire 800 (1), USB 2.0 (1)
Other Capacities	20GB, $219; 40GB, $199; 60GB, $229; 80GB, $269	not applicable at 7,200 rpm	40GB, $130; 60GB, $160; 80GB, $190	not applicable at 7,200 rpm	80GB, $300; 100GB, $360	40GB, $150	40GB, $149; 60GB, $169; 80GB, $199; 100GB, $279	80GB, $300; 100GB, $370; 120GB, $500
Pros	Can boot OS X using FireWire; includes Bounce-Back Professional 5 backup software[B]; powered via Fire-Wire.	Fast; can boot OS X using FireWire; FireWire bus-powered.	Can boot OS X using FireWire; FireWire bus-powered.	Fast; can boot OS X using FireWire; Fire-Wire bus-powered.	Fast; can boot OS X using FireWire; Fire-Wire bus-powered; includes Retrospect Express and other utilities; includes carrying case.	Can boot OS X using FireWire; Fire-Wire bus-powered; FireWire 800 connectors; includes FireWire 800-to-400 cable.	Can boot OS X using FireWire; FireWire bus-powered.	Fast; can boot OS X using FireWire; Fire-Wire bus-powered; compact; triple interface.
Cons	No USB 2.0; no FireWire 800 port.	No USB 2.0; no FireWire 400 port; high cost per gigabyte.	No FireWire 800 port.	No FireWire 800 port.	No FireWire 800 port; high cost per gigabyte.	No USB 2.0; no Fire-Wire 400 port.	Modest capacity, though other capacities are available; slow; no FireWire 800 port; high cost per gigabyte.	High cost per gigabyte.
Comments	The only portable drive we've reviewed designed specifically for backups, this little red drive comes with CMS's own backup software but has only a FireWire 400 port.	This fast drive complements the design of a Power Mac G5 and is a great performer, but it is a bit expensive.	The shiny black Combo Quicksilver features a glowing blue kangaroo that flashes when the drive is active, but it was a little slow in our speed tests.	The Mobile Hard Drive is our top pick for portable hard drives. Even tested with Fire-Wire 400, it beat out many of the FireWire 800 drives in this review.	This fast little drive has good connection options and an eye-catching, clear case design. It also comes loaded with lots of useful utilities.	Few palm-size portable drives offer FireWire 800, but the small Fire-Lite, in its distinctive case, does, and it pays off. This moderately priced drive also had the fastest read speeds in our tests.	The Dragon drive can do everything that these other portable FireWire drives can do—it just does it slower, and at a very high cost per gigabyte.	At a relatively high cost per gigabyte, the ComboGB offers a wide range of connection options and fast performance.

Macworld LAB TEST

Copy 1GB to Drive	0:54	0:49	0:56	0:45	0:51	0:47	1:12	0:50
Duplicate 1GB on Drive	1:54	1:23	1:56	1:17	1:23	1:35	2:30	1:43
Low Memory Photoshop CS Suite	3:01	2:17	3:02	2:12	2:20	2:41	2:55	2:39

BEST RESULTS IN **BOLD** (<Better). ^ All prices shown are the manufacturers' suggested retail prices. [B] *Reviews*, January 2005 (macworld.com/0816).

How We Tested All speeds are in minutes:seconds. We ran all tests with the FireWire drives connected to a dual-2.5GHz Power Mac G5 with Mac OS X 10.3.7 installed and 512MB of RAM. All drives were tested using FireWire 800, unless it was unavailable; in those cases, we used FireWire 400. We copied a folder containing 1GB of data from our Mac's hard drive to the external hard drive to test the drive's read speed. We then duplicated that file on the external drive to test both read and write speeds. We also used the drive as a scratch disk when running our low-memory Adobe Photoshop CS Suite test. This test is a set of four tasks performed on a 150MB file, with Photoshop's memory set to 50 percent.—MACWORLD LAB TESTING BY JAMES GALBRAITH AND JERRY JUNG

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AL Pro 7,200 rpm FireWire
800/400+USB2 (desktop)

Western Digital
Extreme Lighted Combo
Drive (desktop)

you don't mind dealing with an additional cable and power brick, a desktop drive will be more affordable and faster. Desktop drives can even complement your workspace's decor—for example, there are several available desktop drives that resemble a Mac mini. Because Mac minis are hard to upgrade, an external drive—especially a drive that fits the mini both physically and stylistically—can be a very attractive option. Some of these external drives for the Mac mini also act as USB 2.0 and FireWire hubs, adding to the number of available ports your system has (see "Hard Drives for Mac Mini Compared" for our ratings of these drives).
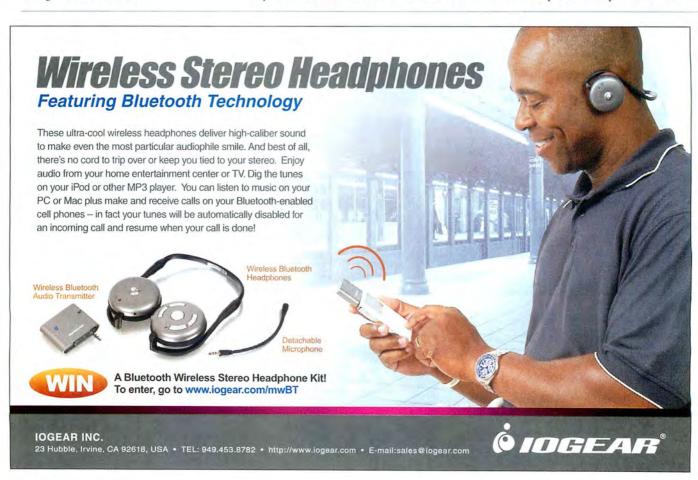
Question 3: How Much Storage?

Most of these FireWire hard drives come in multiple capacities. Typically, the most-expensive drives—measured in cost per gigabyte—are those with the lowest and the highest capacity in a line. Taking desktop drives as an example, many companies offer an 80GB drive as their least-expensive product. For about 25 percent more money, most companies will sell you a drive with twice the capacity, or for 50 percent more money, you can get a drive with more than three times the capacity.

For this reason, you may want to buy a larger drive than you need, even though it may seem like overkill now. As the sizes of your files and applications—as well as that of your music collection—get larger, you'll easily fill the extra space. Be aware, though, that the highest-capacity drives cost more because they represent the latest and greatest mechanisms available on the market. As the supply of these mechanisms grows, the prices of the products based on them will come down.

Question 4: To Back Up or Not to Back Up?

Everyone knows that they should back up important files and folders, but many people still don't do it—and you know who you are. Some drives ship with backup software such

PHOTOGRAPHY BY PETER BELANGER

as EMC Dantz's Retrospect Express. These applications make it easy to execute a backup strategy and protect against data loss. Some desktop drives, like the Maxtor OneTouch II, go a step further by including a programmable button on the front of the drive that can initiate a backup with one press. (See "Take Control of OS X Backups: Part One" at macworld.com/0581 for more on creating backup strategies.)

The Bottom Line

An external FireWire hard drive is an easy way to increase your Mac's storage capacity. Whether the right drive for you is a portable or a desktop depends on your individual needs. But in short, you can never really have too much drive space or too many connectors. □

Other World Computing Mercury On-the-Go 7,200 rpm 8MB (portable)
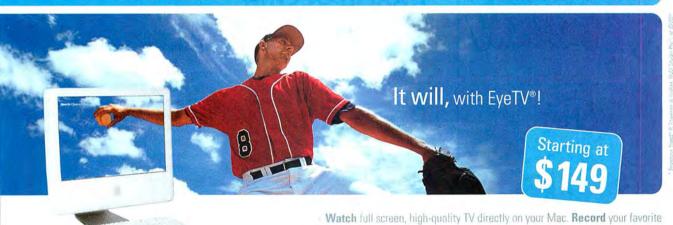
JAMES GALBRAITH is *Macworld*'s Lab Director.

HARD DRIVES FOR MAC MINI COMPARED

★ = Top Product.

Company	LaCie	MicroNet	Newer Technology
Product	mini FireWire 400 Companion Hard Drive, 250GB	miniMate 7,200 rpm FireWire + USB 2.0 Hard Drive & Integrated FireWire and USB Hub, 80GB	miniStack 7,200 rpm, 320GB ★
Rating	♦♦♦♦	♦♦♦♦	♦♦♦♦
Contact	www.lacie.com	www.micronet.com	www.newertech.com
Price^A	$200	$135	$260
Price per GB	$0.80	$1.69	$0.81
Connectors	FireWire 400 (2)	FireWire 400 (3), USB 2.0 (4)	FireWire 400 (3), USB 2.0 (4)
Other Capacities	80GB, $120; 160GB, $150	160GB, $170; 250GB, $200; 400GB, $545	80GB, $140; 160GB, $180; 250GB, $220; 400GB, $360; 500GB, $480
Pros	Fast; can boot OS X using FireWire; very low price per gigabyte.	Can boot OS X using FireWire; integrated USB 2.0 and FireWire hub.	Can boot OS X using FireWire; integrated USB 2.0 and FireWire hub; large capacity; includes Retrospect Express; low cost per gigabyte.
Cons	No USB 2.0 ports.	Modest capacity, though other capacities are available; high cost per gigabyte.	None significant.
Comments	Unlike the other hard drives for the Mac mini, this hard drive isn't a USB and FireWire hub and a desktop hard drive. However, it gets the job done very well.	Its integrated USB and FireWire hub makes this a good, if expensive, drive for Mac mini owners looking to increase their disk space and gain more connection options.	Great features make the miniStack our Top Product pick of hard drives designed for the Mac mini. It has plenty of ports, as well as a fan that can be controlled via switches on the back of the unit.

For speed-test results for these drives, see macworld.com/0580.

^A All prices shown are the manufacturers' suggested retail prices.

REVIEWS
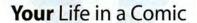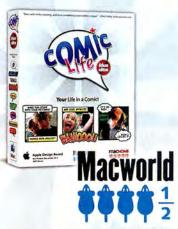
More Reviews

For complete reviews of the products listed here, visit **www.macworld.com/reviews.**

●●●½ **DoorStop X 1.0** ▲ ($49), from Open Door Networks (www.opendoor.com): DoorStop X 1.0 is an easy-to-use replacement for the software firewall built into OS X. It gives you more control over firewall configuration and logging. But it also lacks certain features that are common to other consumer-oriented, third-party firewall programs (macworld.com/0857).

●●●●● **FileMaker Pro 8 Advanced** ($499), from FileMaker (www.filemaker.com): Anyone doing database development in FileMaker should upgrade to FileMaker Pro 8 Advanced. This new version allows developers to write smarter scripts, build better user interfaces, and deliver databases faster (macworld.com/0855).

●●●●½ **iCorrect Portrait 1.0** ($100), from PictoColor (www.pictocolor.com): This skin-tone–adjustment program designed especially for photo portraits is a fast and easy way for both hobbyists and commercial photographers to dramatically improve bad photos and fine-tune good ones. PictoColor has perfected this Photoshop plug-in, and it works equally well on any skin color—something few programs can do (macworld.com/0858).

●●●●½ **Norton AntiVirus 10.0** ▲ ($70), from Symantec (www.symantec.com): It's important for all computer users—even Mac users—to periodically check for viruses, and the latest version of Norton AntiVirus is an excellent program for that purpose. It's impressive, adding important elements such as full compatibility with Tiger and a Quarantine feature for infected files (macworld.com/0860).

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Cool iPod Stuff

●●●● **HomeDock** ◄ ($100), by Digital Lifestyle Outfitters (www.dlodirect.com): iPod owners now have two ways to connect their beloved devices to their home stereos while retaining high-quality sound. Like Kensington's Stereo Dock (macworld.com/0870), the HomeDock provides audio output, iPod charging, and a remote control. But the HomeDock includes a few more features and some nifty design touches (macworld.com/0865).

●●●●½ **mm50** ($150), by Logitech (www.logitech.com): The Logitech mm50 is a welcome addition to the growing lineup of portable iPod speakers. It's slightly bigger than its competitors, but its design and sound quality are the best we've seen and heard in a truly portable speaker. At $30 less than our previous favorite, the Altec Lansing inMotion iM3 (macworld.com/0871), it's a bargain (macworld.com/0866).

●●●● **iTrip** ▶ ($40), Griffin Technology (www.griffintechnology.com): This radio transmitter for the iPod is impressive. It offers reasonable range and has intuitive controls. It also sports a clear, readable LCD. Its ability to tune to frequencies outside the normal range in the United States will be a great help for people whose radios can take advantage of that feature (macworld.com/0868).

●●●½ **iPod nano Armband** ▶ ($29), from Apple Computer (www.apple.com): Apple's iPod nano Armband (available in five colors) lets you wear your iPod nano on your upper arm—a popular style for exercising. The band is perforated to let your skin breathe, and the Click Wheel is accessible through a clear vinyl window. The only drawback is that the armband strap can get caught on your body when you're running or moving your arms (macworld.com/0869).

¶¶¶¶ PhoneValet Message Center 3.0 ($200), from Parliant (www.parliant.com): This Mac-based phone-answering system adds new features such as call blocking and custom ring tones to its already excellent core (macworld.com/0861).

¶¶¶¶ Quicken 2006 ▲ ($60), from Intuit (www.intuit.com): Quicken 2006 is a much better tool for tracking your finances than a paper register or a Microsoft Excel spreadsheet, and it's well worth its price. If you're already using Quicken 2005, you must decide whether the few new features are compelling enough to justify investing another $60 (macworld.com/0862).

¶¶¶ Site Soap 1.2 ▲ ($13), from Talacia Software (www.talacia.com): If you receive Web pages and images that you need to clean up and optimize quickly before putting the content online, Site Soap 1.2 will serve you well. But it will prove superfluous if you're developing Web pages with commercial Web development tools such as Macromedia's Dreamweaver or Adobe's GoLive (macworld.com/0863).

¶¶¶¶½ Toast 7.0 Titanium ($100), from Roxio (www.roxio.com): You won't find a better CD- and DVD-burning application than Toast 7.0.1 if OS X's built-in abilities aren't enough for you. This upgrade includes a data-spanning feature that automatically divides content across multiple discs. It also includes Roxio's Popcorn DVD-copying software and the DivX Pro 6 codec (macworld.com/0856).

¶¶¶¶ Webstractor 1.5 ($80), from Softchaos (www.softchaos.com): If using the Web for research is part of your life, Softchaos's Webstractor 1.5.3 is one Internet utility you should own. The program now automatically downloads updated versions of Web pages you've gathered and adds a handy search function (macworld.com/0864).

Game Room

News Feed

Zoo Tycoon Returns

Fans of the first Zoo Tycoon should keep their eyes peeled for Zoo Tycoon 2, which should be out soon, from MacSoft Games (not Aspyr Media, which produced the first Mac version of the game).

The Sims Go to School

Aspyr plans to have the first expansion pack for The Sims 2 out in November. The Sims 2 University takes your sims to college, where they can waste four sim years drinking too much and spending lots of simoleons on a degree they'll never use in real sim life.

Radeon and On

ATI used to have two Mac Radeon 9800 cards—one for G5s and one for G4s. Now the company is down to one card that works in both systems. The Radeon 9800 Pro Mac Edition costs $299 and has 256MB of VRAM, just like the G5 card it replaces.

Space Cowboys X2: The Threat lets you make your fortune in outer space—when it's not busy crashing your system.

SIMULATION

X2: The Threat

Space simulations—open-ended adventures that let you make (or lose) your fortune out on the final frontier—have been in a state of steep decline over the past couple of decades. And the latest entry, Virtual Programming's X2: The Threat, certainly isn't doing the genre any favors.

You start the game as the captain of a minuscule spaceship with limited cargo space, slow performance, and unimpressive defenses. By combining your entrepreneurial and tactical skills, you can save money, buy bigger crafts, and decide how you want to proceed—as a captain of industry, a space pirate, or a military genius. Your success in your chosen role will determine your path and how well you fare with each of the six different races that rule space. Success can also backfire on you. Upgrade your ship with too many improvements, and you'll make it a tantalizing target for space pirates.

X2's game interface is extraordinarily complex. You'll need to spend a few hours poring over the manual and going through training simulations before even thinking about playing a real game. But while the simulations are helpful, they're not exactly straightforward. You'll often need to intuit what the spoken narration means in order to understand what to do. However, all of this training really pays off later in the game, when you'll need to control not only your own ship but also entire fleets.

Because X2 is an open-ended game, you can play forever, forging your own destiny. However,

RATING: 🔹🔹
PROS: Vast universe to explore; great graphics.
CONS: Complicated interface; stability issues; lame cinematics.
PRICE: £25 (about $45 at press time)
COMPANY: Virtual Programming, www.vpltd.com

you'll have to suffer through a story line and a mission system that seem grafted on. The game includes laughably bad cinematic sequences with second-rate animation and poor voice acting.

Fortunately, the rest of the game looks fabulous, with 3-D graphics that appear to pop off the screen. Those effects require specific hardware; you'll need a 1.25GHz G4 or faster Mac and an ATI Radeon 9600 or Nvidia GeForce4 Ti graphics card or better for optimal results.

Audio is a major problem in this game. The music is forgettable, and the voice dialogue is bad. Even worse, the core technology that drives the audio seems to be unstable, at least in early versions of the game. As this issue went to press, Virtual Programming released version 1.42, an update that it says provides better stability and reliability for some users. But I recommend proceeding with caution, as past updates have not always been compatible with saved game files.

X2: The Threat is a single-player game. That's no great loss here—the game is incredibly deep and complex. But if your tastes veer more toward multiplayer games, you may be

better off with Guild Software's Vendetta Online (♦♦♦; macworld.com/0854).

The Bottom Line X2: The Threat is an ambitious but seriously flawed space simulation. Stability problems with the Mac version don't help.

PUZZLE
Atlantis

RATING: ♦♦♦
PROS: Nice music and sound effects; smooth game play.
CONS: Too similar to MacPlay's Luxor.
PRICE: $20
COMPANY: FunPause, www.funpause.com

If you want to know how I feel about FunPause's Atlantis, just read my review of MacPlay's Luxor, because they're fundamentally the same game (♦♦♦♦; macworld.com/0833).

While Luxor's backdrop is ancient Egypt, Atlantis takes you to the 19th century, where you lead a team of explorers on a mission to unlock the secrets of the lost city of Atlantis. To do so, you must make your way through more than 80 puzzles. The goal is to prevent a string of colored spheres from moving down a serpentine track to the final destination; you do that by shooting your own colored balls at the ones on the track. If you line up three or more balls of the same color, those balls will disappear.

The audio and sound effects are well suited to the game, and the level design is challenging. Atlantis does have some original embellishments, such as the ability to use game credits to buy power-ups between levels. But in terms of actual game play, Atlantis is identical to Luxor. Picking one game over the other comes down to personal taste and aesthetics. Before spending $20, you can download a demo and try it out for an hour to see if you like it.

Same Old Tune Atlantis adds a new backstory to a very familiar ball-matching puzzle game.

Strike It Rich Stuff your pockets full of gold while avoiding cavemen and other nasties in Mac Joy's Gold Miner Joe.

The Bottom Line Atlantis is pretty to look at and a competent puzzle, but it doesn't do much to distinguish itself in an already crowded genre.

ACTION
Gold Miner Joe

RATING: ♦♦♦♦
PROS: Fifty levels.
CONS: Repetitive music; sparse sound effects.
PRICE: $20
COMPANY: Mac Joy, www.macjoy.com

Gold Miner Joe is a fun new platform action game by Mac Joy. In it, you command Joe, a bearded miner who must make his way through 50 levels of mines as he collects treasure and avoids foes—including the pesky Kentucky brothers, who hide in barrels and try to shoot poor Joe right in the backside.

Joe runs and jumps from platform to platform. He can shimmy down poles, climb up ladders and ropes, run on moving conveyor belts, and more as he collects gold nuggets. Help him collect them all, and you'll fill up your Gold-O-Meter (a thermometer bar at the top of the screen) and move on to the next level. Since he's a cartoon character, Joe can fall great distances without injuring himself. However, he can't swim, so you'll need to be careful to keep him dry.

Each level includes checkpoints that serve as restart locations if Joe is knocked out of commission. You'll also come across Save maps, which present you with a pass code that you can use at the beginning of a game to save your starting point. While I would have preferred a more conventional saving system, this is an acceptable alternative.

Production quality in the game is excellent. Gold Miner Joe has an old-school,

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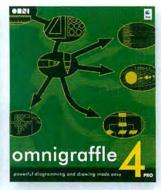
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16-bit console look. The music adds to the retro feel; it's upbeat, bouncy, and appropriately video game–ish—though it does tend to get repetitive after a while.

To play, you'll need a system with OS X 10.2 or later and OpenGL graphics support. The game also supports joysticks and game pads. Although you can opt to play in full-screen or windowed mode, I'd stick with full-screen mode. In windowed mode the graphics are a little too small (depending, of course, on the native resolution of your display).

The Bottom Line I never get tired of a good platform game, and Gold Miner Joe absolutely fits the bill.

PUZZLE

Word Craft

RATING: ♦♦♦♢
PROS: Multiple difficulty levels; simple game play.
CONS: Grating soundtrack.
PRICE: $20
COMPANY: MacPlay, www.macplay.com

Do you consider yourself a wordsmith? Put your skills to the test in Word Craft, a spelling game in which thinking on your feet is the key to success.

If you're familiar with the tabletop game Boggle, you have the basic idea of what to

Hot off the Presses Make words from molten-hot tiles in Word Craft.

expect here. Word Craft shows you letters on a five-by-five-tile grid. You have to create words from adjoining tiles. The longer the words, the more points you'll rack up.

Oh, if only it were that easy.

In Word Craft, you're up against the timer. The letter tiles are poured from molten metal. Every time you formulate a word, the game replaces the used tiles with red-hot letters fresh from the fire. If a letter sits unused for too long, it'll start to cool. When it turns ice-cold, you can use that letter only to start or end a word. This means that you'll be punished for letting hard-to-use letters such as Z sit and wait. When all the letters turn cold, the game is over.

Recently Reviewed

Myst V: End of Ages
♦♦♦♦♢; Ubisoft, www.mystvgame.com; $60

Myst V: End of Ages marks the end of the road for one of the most beloved adventure games of the modern era. The Myst series, created by Cyan, started life on the Mac, so it's only fitting that it reaches its end here, too.

This final chapter in the Myst series has much in common with the earlier games. You'll have to visit a variety of different ages and solve puzzles to move forward and ultimately win the game. The goal here is to collect a series of slates, which you can use to communicate with—and more important, to command—the Bahro, mysterious bipedal creatures who apparently possess a fair degree of elemental power.

Myst V is the most technically sophisticated game in the series, employing a real-time environment, gorgeous graphical effects, a stunning soundtrack, and mind-blowing attention to detail, right down to the leaves on the trees and the blades of grass in the fields. It's an

absolute masterpiece—although the puzzles themselves can be incredibly challenging, to the point of utter frustration.

To play, you'll need at least a 1GHz G4 with a 32MB video system. However, Ubisoft recommends a 1.6GHz or faster processor to keep up.

Mac players will need to buy the game on a hybrid (Mac and PC) Special Edition DVD. The DVD costs $10 more than the Standard Edition CD that shipped for the PC, but it includes extras such as a soundtrack, a documentary about the game, and a strategy guide.

The Season's Greetings from zCover

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www.zCover.com

If you get totally stuck, you can shuffle the tiles around (sort of like shaking the box in Boggle). You'll also occasionally find bonus tiles that can help get you out of a jam. A built-in Merriam-Webster dictionary makes sure that you aren't making up words.

You shouldn't have trouble finding a system that can run the game—any 333MHz G3 running OS X 10.1.5 or later should do the trick.

Word Craft is ideal for the road warrior or the busy executive or student looking to blow off steam in between meetings or classes. You just need a good knowledge of the English language and a desire to show off your word-crafting skills. The game offers different levels of challenge to keep things interesting.

I liked Word Craft's industrial look, but found the accompanying soundtrack repetitive and quickly turned down the volume. You can play in full-screen or windowed mode.

The Bottom Line Word Craft makes wordsmiths race against the clock. It's a fun diversion for people who want to combine their love of words with their need for speed.

Macworld.com News Senior Editor PETER COHEN hasn't spent any time spelunking for gold, outside of gaming on his Mac.
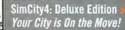
Top Downloads | Gunroar

Longtime readers know that I absolutely adore anything produced by Kenta Cho, a Japanese developer of offbeat and psychedelic shoot-'em-ups. His latest effort, Gunroar, hasn't changed my opinion at all.

Like Cho's previous games, Gunroar takes a tried-and-true arcade concept and adds wild, abstract vector-style graphics, a pumping electronic soundtrack, and varied game-play modes. Gunroar is an overhead, scrolling shooter that puts you in control of a small naval vessel as you blast other ships or guns mounted on land. You'll occasionally have to square off against ships and turrets that have multiple targets.

Although the game scrolls upward automatically, you can go faster by pushing your boat north on the screen and maneuvering around green and brown islands (defined as layers of simple polygons against the blue background of the water). The faster you push your boat, the more points you'll rack up.

An advantage of the game's stark vector-style graphics is that the design doesn't distract from the game play. The cascade of colors and shapes can get hypnotic, especially with the rhythm of the music pulsing away in the background, but your attention never wavers

from the action on the screen or what's happening around you. The design lends itself to a situational awareness that's somewhat unique to Cho's games, and it's one of their most appealing attributes.

One thing that makes Gunroar special is that you can fire in 360 degrees when playing in Twin Stick mode, which lets you press different keys to move and fire. This means you not only have control over which direction your boat is pointing, but also can direct your own gun turret to point in different directions, so you can face north while shooting south, for example. The action can get a little repetitive at times, but it's so much fun that I find the repetition an easy flaw to overlook.

As with Cho's past games, these Mac versions are bare-bones conversions—there are no niceties in here for Mac users. However, if you're handy with Terminal, you can launch the application with additional options, such as windowed mode, custom resolutions, sound, and luminosity.

You certainly can't beat Gunroar for the price—like all of Cho's goods, it's absolutely free.

The Bottom Line Gunroar distills basic shoot-'em-up action to its core and provides you with an interesting, if occasionally repetitive, 360-degree shooting experience.

RATING: ●●●◗
PROS: 360-degree turret control; abstract graphics don't distract from game play.
CONS: Repetitive; players must use Terminal to access options.
PRICE: free
COMPANY: ABA Games (download from macworld.com/0834)

ICON BY PAUL HOWALT

Mac Gems

BY DAN FRAKES

WEB-PAGE-SCREENSHOT UTILITY

Paparazzi 0.2.3

Taking screenshots of what you see on your screen is easy—but grabbing a picture of an entire Web page, including what's currently scrolled out of view, isn't so simple. Or at least it wasn't—the free Paparazzi 0.2.3 (●●●●; www.derailer.org), from Nate Weaver and Johan Sørensen, has changed that.

Nice Shot Paparazzi lets you take a snapshot of an entire Web page.

To capture a Web page, you launch Paparazzi and enter the page's URL. Then you can enter the width, in pixels, of the browser window you want to simulate. This is useful if you're developing Web sites, as you can save shots of how a page will look on screens of different sizes. (Note that if a page has a designated minimum width and you enter a width that is smaller than that, Paparazzi will use the page's minimum width.) You can also enter a minimum height, handy for short pages. Click on the Capture button, and Paparazzi displays a preview of the page (resizing the Paparazzi window also resizes the preview).

If you like what you see, click on the Save Image As button and choose the JPEG, PNG, or TIFF format; if you choose JPEG, you can also adjust the quality (and thus the file size) of the image.

OS X does let you save a page to PDF or use Safari's Web Archive feature to achieve similar results, but there are advantages to using Paparazzi. When you save to PDF in OS X, the resulting file often looks quite different from what you see on screen; plus, it's broken into separate pages, and each page has its own header. And the Web Archive feature is useful only if you're planning on sending the resulting archive to another Tiger user; even then, the resulting archive shows only how the page would look on that user's computer, not, for example, how the page would look to someone with a lower- or higher-resolution screen. If you're a Web designer who wants to send a client a sample of the site you're working on, or if you just want a quick snapshot of what a Web page looks like at a given time, a Paparazzi screenshot can be quite useful.

REWRITABLE-DISC ERASER

QuickErase 1.5

Mac OS X's disc-burning functionality has improved with every release, but one task remains a hassle: erasing rewritable (CD-RW and DVD-RW) discs, which you can reuse as many times as you want. However, to reuse a rewritable disc, you must first erase it. In OS X, this means inserting the disc, launching Disk Utility, selecting the disc in the list of volumes, and then clicking on the Erase button in the toolbar.

If I can burn a disc directly in the Finder, why can't I erase it in a similar fashion? Evidently, Ivo van Willigen has asked himself the same question, because his free Quick-Erase 1.5 (●●●●; www.vanwilligen.nl) does something very close. You do leave the Finder, but it doesn't seem as though you do. With a rewritable disc in your optical drive, launching QuickErase lets you opt to erase the disc "quickly" (prepare the disc so you can write over the data) or "completely" (securely overwrite the disc

Good As New With QuickErase, you get easy access to erasing rewritable optical discs—no trip to Disk Utility required.
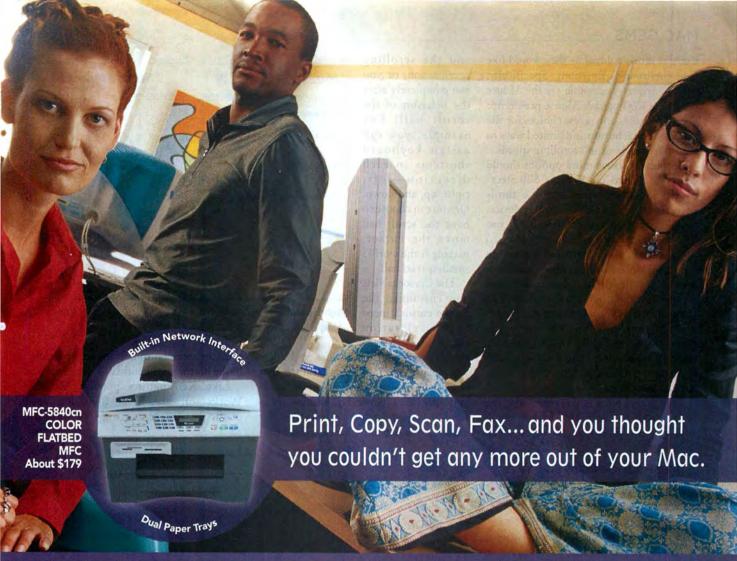
with zeros, which takes much longer)—these are the same options available when you use Disk Utility to erase a disc. The freshly erased disc will appear in the Finder when QuickErase is finished and the disc is ready for use.

What I like best about QuickErase—and what sets it apart from similar utilities—is that it's designed to be accessed via a Finder window's toolbar. Open a Finder window with a visible toolbar and drag the QuickErase utility into the toolbar. (You'll have to hold it in the desired location for a few seconds before it will stick.) A QuickErase button will then be available next to the Finder's own toolbar buttons—in fact, it looks just like them. Whenever you want to erase an optical disc, simply click on the QuickErase button and choose an erase method.

MIGHTY MOUSE DRIVER

SteerMouse 3.0

There has been a lot of debate about Apple's new multibutton Mighty Mouse, and one of the most common complaints is that its software doesn't give advanced
continues

users as much control as they would like over the mouse's functions. Specifically, Apple's driver—accessible via the Mouse tab of the Keyboard & Mouse preference pane—provides only a few choices for the actions of each button and limited ways to customize tracking and scrolling speeds.

People who crave more options should check out PlentyCom Systems' $20 Steer-Mouse 3.0 (♦♦♦♦; plentycom.jp), a third-party driver for Apple's new input device. (It also works with other mice, but it was designed primarily for the Mighty Mouse.)

You configure SteerMouse through the SteerMouse utility, which provides options for the Mighty Mouse's buttons, scroll ball, and cursor movement. The Buttons tab lets you assign actions to each of the Mighty Mouse's four buttons—left, right, wheel, and side. Options include click, double-click, triple-click, click-lock, control-click (or right-click), scroll, and cursor actions.

The Wheel tab lets you customize the behavior of the Mighty Mouse's scroll ball. You can adjust both the scroll speed

and the scrolling acceleration, or you can completely alter the behavior of the scroll ball. For example, you can assign keyboard shortcuts to each direction—left, right, up, and down. Or you can choose to have the scroll ball move the cursor, making it the world's smallest trackball.

The Cursor tab lets you customize the mouse cursor's speed and acceleration much more effectively than Apple's driver does, and it lets you enable Auto Move—a feature that causes the mouse cursor to move automatically to a particular location in a newly activated window or dialog box (for example, the default, Cancel, close, mini-

Mightier Mouse SteerMouse makes Apple's new mouse even better by adding a slew of additional features.

mize, or zoom button, or the resize handle in the bottom right corner of the window).

Like Kensington's popular Mouse-Works software, SteerMouse lets you configure different groups of settings

PROMISING PROSPECT
Rawr-jour 0.6b5

Thanks to OS X's Bonjour technology (formerly called Rendezvous), it's easy (at least in theory) to find Bonjour-enabled devices and services on your local network. For example, if two computers are running OS X with Personal File Sharing enabled, a user of one Mac should be able to connect to the other Mac simply by opening the Network view in the Finder and double-clicking on the other computer's icon. But Bonjour isn't just for file sharing; it also helps you connect to local Web servers, locate shared iTunes and iPhoto libraries, and much more.

There are just two problems. The first is that, as anyone who regularly uses the Network view in the Finder can attest, it doesn't always work perfectly—sometimes computers that you know are available don't show up. The second is that although Bonjour helps you access many types of services, you generally do so using a different interface for each: for example, local Web servers via Safari's Bonjour item, file sharing via the Finder, SSH via Terminal, and shared iTunes libraries via iTunes.

Although I can't help you with the first problem, you can solve the second by using Jeremy Knope's free Rawr-jour 0.6b5 (www.macsaresexy.com), a Bonjour browser (don't ask me where the name came from). When Rawr-jour is running, its Dock menu shows you a list of Bonjour-enabled services

Bonjour Buddy Rawr-jour lets you quickly locate and connect to Bonjour-enabled computers and services.

on your local network, along with all the devices, computers, and users offering those services. To connect to a service, you choose it from the appropriate submenu.

For example, choosing a computer via the SSH submenu launches Terminal and connects to that computer using SSH, with your current user name as the login name. Choosing a Web service launches Safari and opens the home

page for that computer or device. However, there are a couple of exceptions: the iTunes and iPhoto items show you shared iTunes and iPhoto libraries, respectively, but choosing one doesn't open the library in your copy of iTunes or iPhoto. (Nothing happens in the case of iPhoto libraries; for iTunes libraries, you get a streaming-audio bookmark.)

Which services appear in the menu depends on two things: which services you've enabled in the Rawr-jour preferences dialog box and which of those services are actually present on your local network. In other words, even if you've enabled Apple File Sharing in Rawr-jour's preferences, it won't appear in the menu if there are no computers on your local network with File Sharing enabled.

Although you can manually add services protocols via Rawr-jour's preferences, the preferences dialog box includes a pop-up menu containing the most-common Bonjour-enabled services; choosing one adds it to the list.

Rawr-jour is still a beta release, so it's got a few quirks. But I've been using Rawr-jour for a while now with few problems. And the developer has plans for additional features before the final release—which I'm looking forward to.

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for different applications—your Mighty Mouse can function one way in Adobe Photoshop and another in the Finder. And SteerMouse offers Panther users another welcome feature: while Apple's Mighty Mouse drivers work only with OS X 10.4.2 and later, SteerMouse also supports 10.3.9.

At $20, SteerMouse may seem like a lot to spend when you've just shelled out $50 for a new mouse, but if you'll use the additional functionality, it will surely be worth the investment.

GARAGEBAND INSTALLATION HELPER

GarageBand Anywhere 5.0.1

Apple's GarageBand is a killer app, but it's also a huge one—including all of its support files (loops, instruments, and so on), it takes up nearly 2.5GB of hard-drive space. (And that's not counting any additional loops or Jam Packs you download or purchase.) Because of these space requirements, you might think about installing GarageBand on a larger, non-

NOTIFICATION UTILITY

Growl 0.7.2

OS X has made multitasking an everyday occurrence for Mac users. But this capability has introduced a new problem: knowing the status of background tasks.

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Heads Up Growl helps applications keep you informed.

Some software developers have altered their application's Dock icon so it indicates event status. Unfortunately, a Dock icon is very small and can convey only so much information. Other developers use dialog boxes, but these either interrupt you—by taking over your screen—or appear in the background so you remain unaware of their presence.

Enter Growl (♦♦♦♦; growl.info), a free, open-source conduit for receiving event information from applications. Currently more than 120 apps work with it, including Adium, FlickrExport, GmailStatus, NewsFire, Skype, and Synergy. Others—including Safari, iChat, Mail, Microsoft Entourage, NetNewsWire, and Salling Clicker—get Growl support through third-party plug-ins and monitoring add-ons.

Growl provides ten different notification styles, each with its own options. E-mail and speech notification are also available. You can extensively customize these alerts. For example, each application has its own set of events. You can turn each event on or off, use a different style or priority for each, and make them "sticky" (notification does not go away until you acknowledge it). You can even pick styles that are specific to individual applications. Growl also includes a Network feature, which sends notifications from one computer to another. The current implementation of this feature has a few flaws—Growl can hang if the computer to which you're forwarding isn't turned on and awake, and feedback loops can occur when two computers forward their notifications to each other.

That said, Growl is fully functional and very promising for software that's at only version 0.7.2. As new notification styles sprout and more applications add support, this software will become indispensable for any multitasker.—DERIK DELONG

Traveling Band With GarageBand Anywhere, you can install GarageBand on (or move it to) a non-startup volume.

startup drive. The problem is that the iLife installer won't let you put Garage-Band anywhere but on your startup volume. And although you can copy the application itself to another drive, the app is the smallest component of the package (around 50MB)—the real space hogs are the support files, which must reside in the /Library directory.

If you'd like to be able to stick your GarageBand files somewhere else, the easiest solution is David Hodge's free GarageBand Anywhere 5.0.1 (♦♦♦½; macworld.com/0814). This nifty utility can install GarageBand and its support files from the iLife '05 disc onto any volume. Alternatively, the Move GarageBand option can copy your existing application and support files to a new volume, moving the original files to a backup directory. In either case, the utility creates Unix links on your startup disk so that OS X treats GarageBand as if it were located on the startup disk.

In my testing on two computers, GarageBand Anywhere worked as advertised. In fact, it worked even when it warned that it might not: on one computer, it gave me a dire-sounding warning about a "link error" that might prevent GarageBand from finding its loops; however, that prediction turned out to be rather pessimistic, as the moved version of GarageBand worked fine.

GarageBand Anywhere does need better documentation. For example, it doesn't say whether there will be a problem updating GarageBand—when Apple releases new versions—after moving it or installing it on a different volume (the developer says no). And although the Help system provides a good deal of descriptive information about Garage-Band Anywhere's options, a Read Me file would allow people to find out more about the app before launching it. (A Web site would also be useful—the application is currently available only via a VersionTracker product page.) □

DAN FRAKES (www.danfrakes.com) is a senior editor at *Macworld*. Send your thoughts on this column, or on things you'd like to see in future columns, to macgems@macworld.com.

DUAL-LAYER DVD BURNER

d2 DVD± RW 16× Fire-Wire with Double Layer ($189), from LaCie (www.lacie.com):

This DVD burner can burn 8.5GB of data to dual-layer DVDs (which offer twice the capacity of single-layer discs). Although it has a relatively slow read speed, its performance is very good overall—it burns 2.4×-rated dual-layer media at 4×. Its excellent Mac compatibility includes support for OS X 10.4 (Tiger) and iLife (except for iDVD), and it comes with the full version of Roxio's Toast Titanium (April 2005; macworld .com/0313).

FLATBED SCANNERS

MIDRANGE SCANNER

CanoScan 9950F ($400), from Canon (www.canon.com):

This CanoScan offers improved scan quality and more-intuitive software controls. The 9950F tops its predecessor, the 9900F, in almost every way (macworld.com/0188).

LOW-END SCANNER

CanoScan 8400F ($150), from Canon (www.canon.com):

The 8400F has limited transparency support but is a great all-around scanner (mac world.com/0187).

LCD MONITORS

23-INCH DISPLAY

L2335 ($1,599), from Hewlett-Packard (www.hp.com):

Along with its outstanding value and ability to pivot to portrait mode, the L2335 also provides excellent video-in options and very good color fidelity and viewing angle (March 2005; macworld.com/0278).

20-INCH DISPLAY

MultiSync LCD2070NX ($799), from NEC Display Solutions (www.necdisplay.com):

The MultiSync LCD2070NX is great for people who want a moderately priced 20-inch monitor that can display bright, accurate colors (macworld.com/0636).

19-INCH DISPLAY

SDM-HS95P ($699), from Sony (www.sony.com):

This display lacks some of the features found on other displays (such as a USB hub, speakers, or the ability to pivot), but the SDM-HS95P is a bright and nicely designed LCD that performs well (macworld.com/0638).

17-INCH DISPLAY

SDM-HS75P ($450), from Sony (www .sony.com):

It's short on bells and whistles—no built-in USB support, speakers, or ability to pivot—but the SDM-HS75P is a good choice for people who have limited desk space and who want a bright and shiny, well-designed display (macworld.com/0637).

MACS

DESKTOP

Product	Processor	Display	Rating	More Information	Best Price[A]	Speedmark Score[B]
iMac	G5/1.8GHz	17 inches		macworld.com/0599	$1,080	163
	G5/2GHz	17 inches		macworld.com/0600	$1,320	174
	G5/2GHz	20 inches		macworld.com/0601	$1,730	174
eMac	G4/1.42GHz (Combo drive)	17 inches		macworld.com/0602	$790	140
	G4/1.42GHz (SuperDrive)	17 inches		macworld.com/0603	$900	142
Mac mini	G4/1.25GHz	not included		macworld.com/0316	$494	100
	G4/1.42GHz (Combo drive)	not included		macworld.com/0321	$580	115
	G4/1.42GHz (SuperDrive)	not included		macworld.com/0709	$680	115
Power Mac	G5/dual-2GHz	not included		macworld.com/0604	$1,675	205
	G5/dual-2.3GHz	not included		macworld.com/0605	$2,225	226
	G5/dual-2.7GHz	not included		macworld.com/0606	$2,798	250

PORTABLE

Product	Processor	Display	Rating	More Information	Best Price[A]	Speedmark Score[B]
iBook	G4/1.33GHz	12 inches		macworld.com/0705	$927	106
	G4/1.42GHz	14 inches		macworld.com/0706	$1,269	111
PowerBook	G4/1.5GHz (Combo drive)	12 inches		macworld.com/0398	$1,305	not tested
	G4/1.5GHz (SuperDrive)	12 inches		macworld.com/0399	$1,550	not tested
	G4/1.5GHz	15 inches		macworld.com/0400	$1,645	123
	G4/1.67GHz	15 inches		macworld.com/0401	$1,928	not tested
	G4/1.67GHz	17 inches		macworld.com/0402	$2,240	135

[A] From a PriceGrabber survey of retailers as of October 11, 2005. [B] Speedmark 4 is Macworld Lab's standard test tool for benchmarking systems running Mac OS X 10.4 (Tiger). For information on Speedmark testing, go to www.macworld.com/speedmark.

COLOR INK-JET PRINTER

Photosmart 8450 ($250), from Hewlett-Packard (www.hp.com):

This networkable ink-jet printer uses as many as eight dye-based inks to produce great-looking photos with or without your computer. Its LCD makes direct-from-camera printing easy, and this model produces some of the best-looking text we've seen from an ink-jet (macworld.com/0280).

COLOR LASER PRINTERS

🖊🖊🖊🖊 LaserJet 2550Ln ($600), from Hewlett-Packard (www.hp.com):
This networkable printer offers crisp text and good color fidelity. It also supports Apple's Bonjour. But its paper capacity is only 125 sheets (macworld.com/0083).

ALSO RECOMMENDED:

🖊🖊🖊🖊 Magicolor 2430 DL ($499), from Konica Minolta (www.konicaminolta.com):
With accurate color prints and features such as PictBridge camera printing, this networkable printer could be good for your home or small office, but it's noisy and doesn't support Post-Script (macworld.com/0635).

MINIDV CAMCORDER

🖊🖊🖊🖊 Optura 60 ($899), from Canon (www.canon.com):
The Optura 60 shoots excellent video (as long as you have enough light) with true-to-life, vibrant color. It also offers optical image stabilization, a true 16:9 wide-screen mode, and extensive manual controls for creative flexibility. It snaps decent still images, too (macworld.com/0621).

FIREWIRE HARD DRIVES

DESKTOP DRIVES

🖊🖊🖊🖊½ Black Series Triple Interface, 250GB ($240), from Iomega (www.iomega.com):
Fast; many connection options; low price per GB; can boot OS X via FireWire (macworld.com/0580).

ALSO RECOMMENDED:

🖊🖊🖊🖊½ Mercury Elite-AL Pro 7,200 rpm FireWire 800/400+USB2, 250GB ($230), from OWC (www.macsales.com):
Fast; various connection options; can boot OS X via FireWire (macworld.com/0580).

PORTABLE DRIVES

🖊🖊🖊🖊 Mobile Hard Drive, Design by F.A. Porsche, 7,200 rpm USB and FireWire, 60GB ($240), by LaCie (www.lacie.com):
Very fast; various connection options; can boot OS X via FireWire (macworld.com/0314).
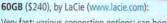
ALSO RECOMMENDED:

🖊🖊🖊🖊 Mercury On-the-Go 7,200 rpm 8MB, 60GB ($250), from OWC (www.macsales.com):
Fast; FireWire bus-powered; can boot OS X via FireWire; utilities included (macworld.com/0314).

For more on FireWire hard drives, see our review on page 34.

Hardware Products We Tested This Month

MIDRANGE SCANNER

🖊🖊🖊½ Perfection 4490 Photo ($250), from Epson (www.epson.com):
Here's a fast, easy-to-use scanner that can create high-resolution scans of both reflective and transparent media. Although its colors tend toward green on reflective scans at the default settings, it did well at capturing fine detail and did a very good job with color on slides and transparencies (macworld.com/0835).

COLOR LASER PRINTER

🖊🖊🖊🖊 Phaser 8500/DN ($1,099), from Xerox (www.xerox.com):
The Phaser 8500/DN is a very good general-use color laser printer. But if you're willing to sacrifice speed, there are comparably priced color lasers available that produce better-quality prints (macworld.com/0836).

COLOR INK-JET PRINTER

🖊🖊🖊🖊 Pixma iP4200 ($130), from Canon (www.canon.com):
Though a little poky at high resolutions, the Pixma iP4200 is a great all-around ink-jet printer that excels in printing both office documents on plain paper and high-quality, long-lasting photos on specialty media (macworld.com/0837).

LOW-END SCANNER

🖊🖊🖊½ Perfection 3590 Photo ($149), from Epson (www.epson.com):
This easy-to-use flatbed scanner is capable of scanning reflective media, as well as limited transparent media. The colors are a bit off at the default settings, but the Perfection 3590 Photo is nonetheless a solid entry-level scanner (macworld.com/0838).

17-INCH MONITOR

🖊🖊½ LCM-17w7 ($249), from Westinghouse Digital Electronics (www.westinghousedigital.com):
Despite its appealing design, this display has a slightly washed-out appearance that's hard to correct. Its wide-angle aspect ratio and built-in speakers are both subpar (macworld.com/0839).
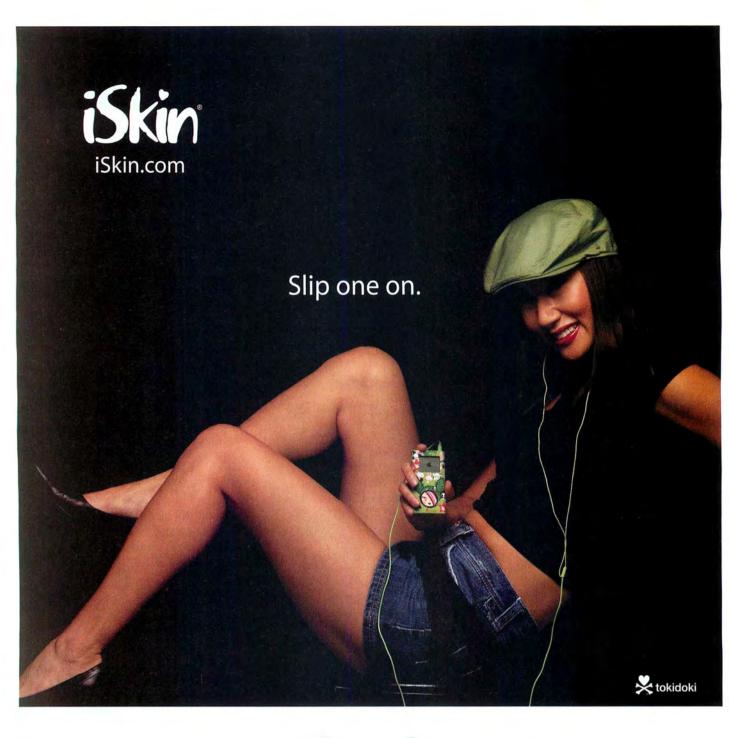
DIGITAL CAMERAS

Product	Rating	Price	Contact	Mega-pixels	Comments	More Information
Canon EOS Digital Rebel XT	🖊🖊🖊🖊½	$899	www.canon.com	8	Best digital SLR under $1,000; good features and image quality; many lens choices.	macworld.com/0535
Canon PowerShot SD400	🖊🖊🖊🖊	$399	www.canon.com	5	Excellent images with accurate colors and good detail; noise in images above 200 ISO.	macworld.com/0634
Hewlett-Packard Photosmart M22	🖊🖊🖊	$150	www.hp.com	4	Extensive help features; respectable images; low price; good for beginners.	macworld.com/0595
Konica Minolta Dimage Z5	🖊🖊🖊🖊	$649	www.konicaminolta.com	5	Great images at low ISO; 12× lens; Super Macro mode.	macworld.com/0534
Olympus C-7070 Wide Zoom	🖊🖊🖊🖊	$600	www.olympus.com	7	Advanced features; good build quality; slow write speed.	macworld.com/0577
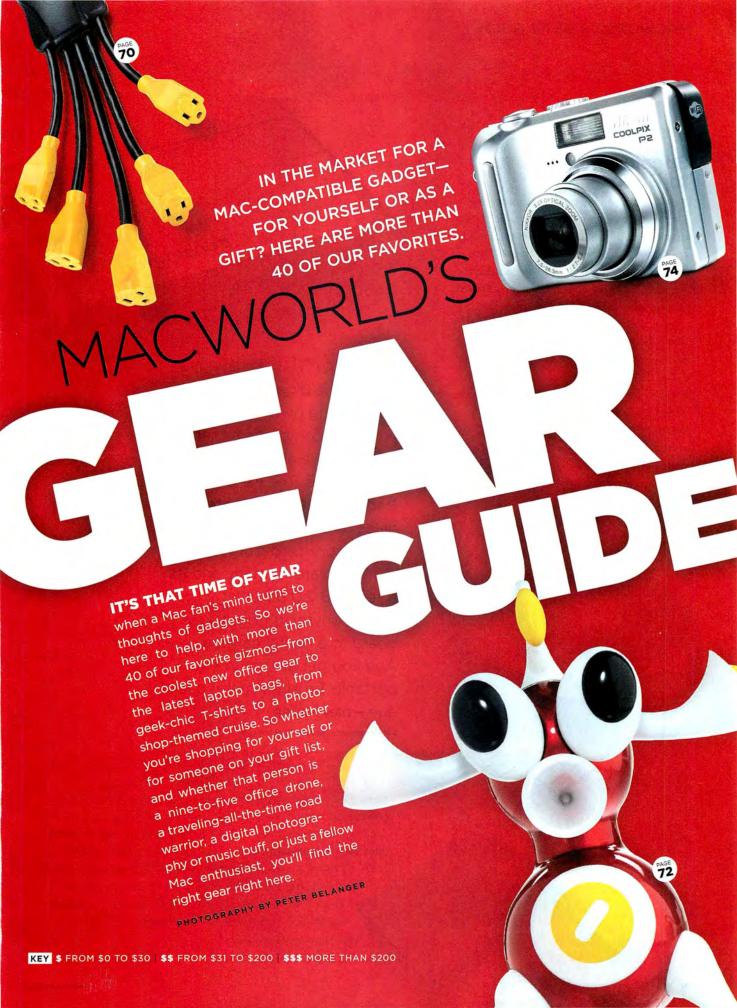
» Top Products are those we've recently reviewed in a comparison of like products. As new products become available, we will update the list. For longer reviews of these products and for other product recommendations, go to www.macworld.com/reviews.

iSkin
iSkin.com

Slip one on.

tokidoki
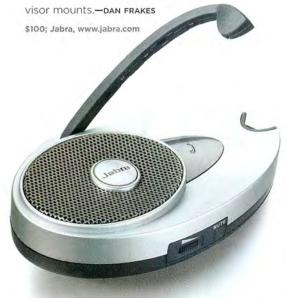
Protection for your iPod, iPod mini, iPod shuffle and iPod nano.

IN THE MARKET FOR A
MAC-COMPATIBLE GADGET—
FOR YOURSELF OR AS A
GIFT? HERE ARE MORE THAN
40 OF OUR FAVORITES.

COOLPIX
P2

MACWORLD'S
GEAR GUIDE

IT'S THAT TIME OF YEAR
when a Mac fan's mind turns to
thoughts of gadgets. So we're
here to help, with more than
40 of our favorite gizmos—from
the coolest new office gear to
the latest laptop bags, from
geek-chic T-shirts to a Photo-
shop-themed cruise. So whether
you're shopping for yourself or
for someone on your gift list,
and whether that person is
a nine-to-five office drone,
a traveling-all-the-time road
warrior, a digital photogra-
phy or music buff, or just a fellow
Mac enthusiast, you'll find the
right gear right here.

PHOTOGRAPHY BY PETER BELANGER

KEY $ FROM $0 TO $30 | $$ FROM $31 TO $200 | $$$ MORE THAN $200

Road Warriors

Speakerphone to Go $$

A mobile phone may be the business traveler's most important tool. So why do so few models include that other necessity of modern business life, the speakerphone? (And even those that do won't win any awards for sound quality.) The solution is Jabra's **SP500**. This portable Bluetooth speakerphone has good sound quality, 20-hour talk time, and 480-hour standby time. A pivoting microphone makes sure everyone is heard, and a built-in DSP adjusts the volume to reduce background noise. For people who *must* talk while driving (we really wish you wouldn't), the SP500 even comes with window and visor mounts.—DAN FRAKES

$100; Jabra, www.jabra.com

Play Anything $$

One of the biggest problems with relying on a laptop as your sole computer is that it doesn't have all the ports a desktop has. The Kensington **PocketHub Media Center** helps remedy that situation. Its memory-card slots read 15 different card formats, and its three USB 2.0 ports let you plug in anything from a keyboard to a digital camera. And you get all that in one portable, brushed-metal package.—DAN MILLER

$50; Kensington, www.kensington.com

Itty-Bitty Backup $$$

Three things a laptop-toting traveler should *always* bring along: a small drive for transferring files between computers, extra copies of important data, and a way to make a good backup. Targus's **40GB Ultra Slim Pocket Hard Drive** is your three-in-one tool: it's a spacious 40GB drive in a tiny package—a mere 3 inches square, half an inch thick, and just 3.2 ounces. Yet the USB 2.0 drive has more than enough room for incremental, on-the-go backups of your important data.—DAN FRAKES

$250; Targus, www.targus.com

Hybrid Power $$

If your portable computing environment encompasses planes, trains, and pretty much any other place with hard-to-find power supplies, Kensington's **Thin & Light 70 Watt AC/DC Notebook Power Adapter** is for you. It lets you replace your PowerBook's AC adapter with one that plugs into any auto, airline, or wall AC outlet. It's thinner and lighter—although a bit longer—than the standard Apple AC adapter, so it fits into a laptop bag more easily. It also includes interchangeable tips that power your PowerBook, iBook, and iPod; tips for other laptops are available separately; and a $25 attachment allows you to simultaneously charge your laptop and your mobile phone, iPod, or other peripheral.—DAN FRAKES

$120; Kensington, www.kensington.com

Bag It

$$ For toting a laptop around all day, you can't beat a backpack. STM's **Sports** model is one of the best. It has the usual padded laptop compartment, as well as pouches for your iPod, phone, and more. Ergonomic shoulder straps and ventilated back padding make it comfortable, even with heavy loads.—DAN FRAKES

$75; STM Bags, www.stmbags.com

$$ Timbuk2's **Laptop Zip Briefcase** is a hip professional take on the laptop bag. A padded compartment keeps your laptop safe; two large inside compartments and scads of gadget pockets and pouches hold everything else.—DAN FRAKES

15 inch, $100; 17 inch, $120; Timbuk2, www.timbuk2.com

$$$ Adobe and Medium Design Group have teamed up to create "the ultimate bag for creative professionals." The **Adobe messenger bag** holds all the trappings of a designer's mobile life inside a secure, roll-top main compartment.—DAN FRAKES

$250; Adobe and Medium Design Group, adobe.mediumdesigngroup.com

Nine-to-Fivers

Save Your Hands $$

Anyone concerned about ergonomics—and that should be anyone who uses a computer—will want to know about Contour Designs' **RollerMouse**: it's a keyboard tray with its own built-in, programmable mouse-replacing roller bar. Roll that bar, and your cursor moves up and down. Slide it side to side, and your cursor does likewise. It makes the sideways mouse-grab a thing of the past, keeps your hands on the keyboard where they belong, and is easier to use than a trackpad.—DAN MILLER

$200; Contour Designs, www.contourdesigns.com

Breath of Fresh Air $$

The biggest problem with the modern office environment isn't the fluorescent lighting or bitter coffee. It's the stale air—you're probably breathing some right now. If you are, the **MiniMax Tower Fan** could make your lungs a bit happier. Small enough to fit on a desktop but strong enough to air out a stable, it won't make recycled office air any fresher. But at least it'll move that air around a bit, and look really cool while doing so.—DAN MILLER

$50; Brookstone, www.brookstone.com

DLO | HomeDock for iPod

Watch slideshows with music on your big screen TV

iPod nano ready

Made for iPod

HomeDock Features

HomeDock links your iPod to your Home Stereo system letting you enjoy iPod's music throughout your house

Connect your iPod and HomeDock with a pair of powered speakers for a compact sound system with remote control.

Use the HomeDock as a remote controlled desktop dock to connect, sync and charge any iPod via USB

DLO HomeDock is Available Now at iPod Retailers Nationwide

Nine-to-Fivers

Desktop Big Screen $$$

If you want to turn a Mac into an all-around media center, Westinghouse Digital's new **HD-Grade monitor** can help. This display has a single Digital Visual Interface (DVI) input, so it will work digitally with new DVI-equipped Macs. Its response time (15 milliseconds) is fast enough for games and movies, and its 1,280-by-768 native resolution will make 'em look nice and sharp.—DAN MILLER

$229; Westinghouse Digital Electronics, www.westinghouse digital.com

Alarming Development $$

The weakest excuse for being late to work has to be "my alarm didn't go off on time." Don't let your cheap old alarm clock embarrass you ever again. Thanks to an embedded, self-powered microchip, Brookstone's **SmartSet Alarm Clock** always knows the right time, even if the power goes out. It also adjusts itself for daylight saving time and remembers separate alarms for weekdays and weekends. Unlike some of Brookstone's goofier gadgetry, this device could actually be useful.—DAN MILLER

$35; with radio, $60; with CD and radio, $100; Brookstone, www.brookstone.com

GRIFFIN

iTrip LCD
Sports a large, backlit LCD screen, a handy side knob makes it a breeze to select broadcast frequency, selectable LX or DX modes.

up/beat audio
expand your sound

Boostaroo Revolution
Awesome portable audio amplifier & splitter gives you high-definition 3-D surround sound imaging for two higher-quality headphones.

Lilipod   LiliPod
A watertight, floatable, hardshell case that fits snugly around your iPod and keeps it safe, no matter what activity you partake in.

sendStation

smartCharge
An all-in-one car charger specifically designed for the iPod shuffle. Includes built-in 3.5 mm (1/8") stereo audio jack.

Sportsuit Convertible -
Protection, flexibility, and a secret pocket for headphones, the Convertible also has options that allow car, bike, and belt mounting, in sporty style and fashion colors.

MARWARE
innovative products for the Apple market

❋ ❋ ❋ ❋ ❋ ❋ ❋ ❋ ❋ ❋

NaviPro ex - Cut loose with wireless remote control for iPod. Enjoy mavigating through your favorite playlists, albums or audiobooks.

TEN

❋ ❋ ❋ ❋ ❋ ❋ ❋ ❋ ❋ ❋

iSkin Duo - unique Dual Layers combine for 360° protection for your iPod nano or shuffle. Includes Ultra-Clear Screen Protector, Wheel Cap click wheel protector, and a removable rotary belt clip.

iSkin

❋ ❋ ❋ ❋ ❋ ❋ ❋ ❋ ❋ ❋

PocketDock - Charge and sync your iPod. Transfer data. The PocketDock family allows you to leave your iPod's dock at home while giving you a range of features in a tiny, pocket-sized adapter.

sendStation

Dr. Bott LLC

Nine-to-Fivers

Savvy Cephalopod $

The people who make AC adapters don't seem to be communicating with the folks who make power strips: the former are so bulky that you can plug only a few at a time into the latter. But the geniuses behind the PowerSquid have a solution: the **Outlet Multiplier**. It lets you plug in five AC-adapter bricks at a time without sacrificing other outlets. It also comes with keyhole slots on the back so you can mount it on a flat surface.—CYRUS FARIVAR

$15; ThinkGeek, www.thinkgeek.com

Laptop Desk $$
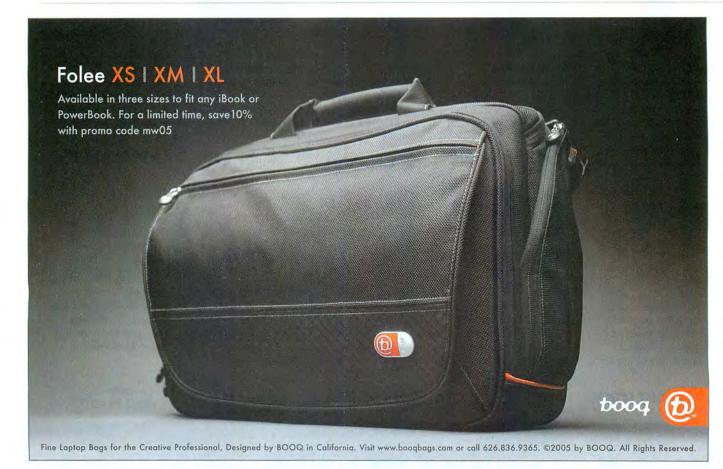
Do you use a laptop at the office—and then tote it home with you so you can work late into the evening? If you're one of the overworked masses, the **surface**, from edgeblur, could be your new favorite place to work. It's a highly configurable laptop desk that has side wings for your mouse and/or coffee cup, and adjustable supports in the back that tilt your PowerBook or iBook to a comfortable angle (and help it keep cool). You can use it in your favorite chair, in bed, or anywhere else you feel like working.—DAN MILLER

clear, $144; white, $149; edgeBlur, www.edgeblur.com

Music Lovers

The Ears Have It $-$$

If you're still using your iPod's stock earbuds, you owe it to yourself—and your ears—to upgrade to headphones that'll do your music some justice. Thanks to Sennheiser, you can do just that without abandoning Apple's stylish aesthetic or breaking the bank. The white-and-silver **MX 500** earbuds (♦♦♦; macworld.com/0847) offer better sound (and, for many people's ears, a better fit) than Apple's own buds. And the lightweight **PX 100** headphones (♦♦♦♦; macworld.com/0848) provide incredible sound quality in a clever design that folds up like a pair of eyeglasses (both include convenient hard carrying cases). Your ears will thank you.—DAN FRAKES

MX 500, $20; PX 100, $60; Sennheiser, www.sennheiserusa.com

Goes to 11 $$
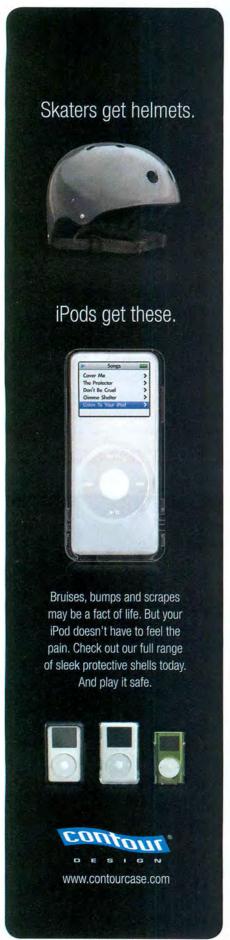
Practice makes perfect, but it also makes noise. M-Audio's **JamLab** has a USB interface that lets any aspiring Clapton connect a guitar to a Mac via a standard guitar cord and listen in with headphones, so the neighborhood doesn't have to hear. The included GT Player Express software, which provides guitar amp simulations and cool effects, can play and record audio at 24-bit, 48kHz quality. And the included 160MB of ProSessions drum loops means you'll never have to play alone.—JONATHAN SEFF

$79; M-Audio, www.m-audio.com

Music Lovers

Surrounded by Sound $$$

Many of us watch DVDs on our Macs—but if you've never done so in surround sound, you don't know what you're missing. Logitech's new **Z-5450** is a complete THX-certified, 5.1 surround-sound speaker system: five satellites, a subwoofer, and a hardware decoder (Dolby Digital, DTS, DTS 96/24, and more). The compact receiver's seven inputs let you use it with your Power Mac G5, iMac G5, DVD player, iPod, or PlayStation, while wireless rear speakers (they require only one nearby AC outlet each) save you from having to run cables across a room. Best of all, the entire system costs less than many AV receivers.—DAN FRAKES

$500; Logitech, www.logitech.com

Pet Sounds $-$$

Music and pets are great, but musical pets are even better. Hasbro's **i-Dog** (top) feeds off your music and responds with ear-wagging dances to match. Watch its lights to determine its mood: if the i-Dog starts to get sad or angry, it's tune time. You can even plug your iPod into the i-Dog, and its built-in speaker lets you listen, too. Zizzle's **iZ** (bottom), a sort of musical alien, can also act as an iPod speaker, showing various light effects in time to the music and commenting on your choice of tunes. But it also lets you create music using seven built-in beats, seven rhythm variations, and seven lead effects that you mix together by pressing, turning, and flicking iZ's various body parts.—DAN FRAKES

i-Dog, $30; Hasbro, www.hasbro.com;

iZ, $40; Zizzle, www.zizzle.com

One-Man Band $$

You've been using GarageBand for a while now, and your musical creations are starting to sound a little stale. That's because you're using the same loops and instruments as everyone else. Spice up your songs with Apple's **Jam Packs**. These four GarageBand add-ons—Instruments, Loops, and Effects; Remix Tools; Rhythm Section; and Symphony Orchestra—contain more than 2,000 additional loops apiece, and some also offer new instruments, guitar amps, and effects presets. One caution: each of these massive collections consumes several gigs of drive space.—JONATHAN SEFF

$99 each; Apple Computer, www.apple.com

Rise and Shine $$

For people who need music to get going in the morning, iHome Audio's **iH5** (●●●●; macworld.com/0849) is the perfect nightstand companion. It provides a charging cradle for dockable iPods and great sound for its size, and will wake you with anything in your collection. (It also includes an AM/FM radio and a standard buzzer alarm.) Stash the $20 remote under your pillow, and you won't even need to roll over to hit the snooze button.—JONATHAN SEFF

$100; iHome Audio, www.ihomeaudio.com

More for Music Fans

We just couldn't fit in all the audio gear we wanted to include in print. So we put some more suggestions for digital audiophiles online.

Hearing Aids $$ Protect your ears with Etymotic Research's ER-20 High Fidelity Earplugs (macworld.com/0840).

Over Your Shoulder $$ Want a stylish way to tote your iPod? Delarew Designs' hip Delapod AccessPak may be just what you need (macworld.com/0841).

Perfectly Portable $$ Most iPod speakers trade sound quality for size. Logitech's mm50 doesn't (macworld.com/0842).

Get the Hookup $$ Send tunes wirelessly from your iPod to your home stereo with Belkin's TuneStage (macworld.com/0843).

Drive My Car $$ Harman/Kardon's Drive + Play system may be the best way yet to play your iPod in the car (macworld.com/0844).

Musical Express $$$ For iPod audiophiles, Focal-JMlab's iCub combines a powered subwoofer, an integrated amp, and a digital-to-analog converter in a high-end digital audio system (macworld.com/0845).

Digital Photograph

Swag for Shutterbugs $–$$

If you have friends who are hooked on digital photography, you can help them feed their habit with a **gift certificate** from online photo service **Shutterfly**. The gift certificates are available in $10, $25, $50, $75, and $100 denominations (in electronic form or on paper), and they can cover any of Shutterfly's services, including photo storage, printing, and putting snapshots on note cards, mugs, T-shirts, calendars, and tons of other items.—JENNIFER BERGER

$10 to $100; Shutterfly, www.shutterfly.com/photogifts/index.jsp

Cut the Camera Cords $$$

The 5-megapixel Nikon **Coolpix P2** makes it a snap to transfer pictures from a camera to a Mac. It's the first consumer camera with built-in Wi-Fi to hit the market. (Kodak is working on a Wi-Fi digital camera of its own, but its wireless connections will require a special card.) Connecting the P2 to your wireless network is easy: you build a network profile for your camera on your Mac and then sync it with the camera. The P2 can access that network any time you're within range. Once you're within range of the network, your snapshots can go directly from the camera to your Mac; otherwise, the P2 will store them on a memory card and then upload them when you are in range. Oh, yeah, the P2 is also a decent point-and-shoot, with a responsive 2.5-inch screen and a 3.5x optical zoom.—KELLY TURNER

$400; Nikon, www.nikonusa.com

ers

Camera? What Camera?
$$

You want to carry your photo gear in a protective bag, but you don't like the look of those boring black cases that scream, "Hey, I'm carrying around really expensive photo equipment!" Crumpler's idiosyncratically named **camera bags** are a nice alternative. They provide lots of padding, many pockets for memory cards and other extras, and a removable divider that lets you customize the interior. The bags come in a wide range of sizes. The 4 Million Dollar Home model, for example, comfortably fits an SLR camera body and a lens ($75).—KELLY TURNER

$45 to $115; Crumpler, www.crumplerbags.com

The Family That Adjusts Histograms Together . . . $$$

You want to go to a Photoshop conference. The rest of your family wants to escape winter on a sunny beach. You've got only a one-week vacation window for the whole gang. The solution: the **Photoshop Fling 3 & MacMania IV Geek Cruise**. Leaving San Diego, California, in early February, your ship heads to Cabo San Lucas, Mazatlan, and Puerto Vallarta—and returns on February 11. En route, you'll get to listen to Photoshop experts explain special effects, color management, and more. And your family will get to sit by the pool and explore sunny Mexico. (Note: *Macworld* is a coproducer of the MacMania IV Geek Cruise.)—JENNIFER BERGER

$449 to $3,792 per person; Geek Cruises, www.geekcruises.com

Parents/Kids

Check the Dailies $$$

If you can't be close to the families and children you love, you can get the next best thing: high-quality video footage of the most-important events in their lives. Give parents a DV camera and they'll have no excuse not to send you tapes or DVDs of first steps, loudest-burp contests, and birthdays. The Canon **Optura 60** (♦♦♦♦; macworld.com/0824), our current favorite, offers excellent color, solid still images, optical image stabilization, manual controls, and flexible features such as microphone and headphone jacks.—FRITH GOWAN

$899; Canon, www.canon.com

Just My Size $

Anyone who took piano lessons as a kid knows how irritating it is to play a full-size keyboard with pint-size hands. Ditto with the computer. That's why KidzMouse's **Keys** keyboard is so cool. KidzMouse has downsized the brightly colored, rounded keys for junior users. It has also simplified them, eliminating the function and ⌘ keys (to reduce keyboard size and prevent errors) and making sure letter and number keys won't repeat when held down. To go with the KidzMouse Keys, Logitech's small, three-button **optical mouse** comes in Tiger, Spot (paw prints), Ladybug, Football, and Soccer designs.—FRITH GOWAN

KidzMouse Keys keyboard, $30; Kidzmouse, www.kidzmouse.com; Logitech child's optical mouse, $15; Logitech, www.logitech.com

For the stage-diving, VIP only, chinchilla wearing, entourage touting, "these go to eleven," paparazzi dodging, 3 p.m. wake-up call rock star in us all.

Listen like a pro. Shure, a leader in professional audio gear for over 80 years, steps offstage with its award-winning E Series Sound Isolating™ Earphones. Now stage-worthy, listen-like-you-live-it audio is available for anyone on the go. Shop **www.shure.com** for the full line of premium earphones and headsets for your music, movies, gaming, mobile phone, and more.

"These are the Mercedes of headphones." – *Forbes.com, April 18, 2005*

"High-definition drivers add bonus bass and extra bite to raging guitar solos." – *Maxim, "Top 25 of 2005," Scott Stein, May 2005*

"They're pure audio nirvana." – *CNET.com, CNET Editors' Choice, July 2005*

SHURE®
It's Your Sound®

Parents/Kids

Geek Out Your Baby $

Kids born today are going to know more about technology by the time they're ten than many of us adults do now. If you want to give your favorite infant a head start in the tech world, wrap him or her up in one of these cute onesies or T-shirts. The **Newbie onesie** and **Geek in Training T-shirt** (sizes 6 months to 4T) boldly proclaim a baby's technological proclivities, while the **iPod My Baby onesie** (sizes 6 to 18 months) is a bit more ambiguous. Sure, iPods are known for their elegant interfaces. Babies? Not so much.—FRITH GOWAN

Newbie onesie and Geek in Training T-shirt, $13; ThinkGeek, www.thinkgeek.com; iPod My Baby onesie, $16; iPodMyBaby, www.ipodmybaby.com

Up Close and Personal $$

Children over eight—as well as a few adults I know—will get a kick out of the **QX5 Computer Microscope**. Instead of looking through an eyepiece, you hook up the QX5 to your Mac and then view images and control the microscope from there. With 10x, 60x, and 200x magnification, the ability to create time-lapse movies, and basic image-manipulation tools, budding scientists will want to eyeball everything and anything—bugs, dog hair, and maybe those suspicious three-week-old leftovers in the fridge.—FRITH GOWAN

$80; Digital Blue, www.playdigitalblue.com

No Chores Required $-$$

Want to make a teenager happy all year long? An **iTunes allowance** lets you credit recipients' accounts monthly, so your favorite kids can stay hip to all the latest releases without demanding their own credit cards—or worse, borrowing yours. You simply choose a monthly dollar amount and enter the recipient's Apple account (or create a new one); Apple charges you automatically every month until you cancel.—FRITH GOWAN

$10 to $200 per month; Apple Computer, www.apple.com/itunes

Gamers

Pharaonic Fun $

Kinetic puzzle games are nothing new, but **Luxor** (▮▮▮▮; macworld.com/0850) puts some new variations on the theme by mixing in a little bit of ancient Egyptian mythology. Long trains of brightly colored spheres descend on grooved

tracks through scenes inspired by the land of the pharaohs; you make them vanish by matching the colored spheres in your own shooter to what you see. Addictive,

fast paced, and beautiful, Luxor is fantastic for casual gamers looking for something a bit different.—PETER COHEN

$20; MacPlay, www.macplay.com

Consolation Prize $

Mad Catz makes peripherals for all the major gaming consoles. Now it's making hardware for Mac gamers, too. The **PC Con** (▮▮▮▮; macworld.com/0851) looks and feels just like Microsoft's Xbox Controller S, with gel grips on the side, twin analog triggers underneath each index finger, two analog sticks within easy reach of your thumbs, and a four-way directional pad a short hop from your left thumb. The blister pack says the PC Con is Mac and PC compatible, but it doesn't ship with software for either platform. However, Mac games that support controllers do recognize it.—PETER COHEN

$20; Mac Catz, www.madcatz.com

holiday guide

nano gear

leather

C.E.O. Billfold Wallet C.E.O. Card Wallet

specialty

Sportsuit Safari Sportsuit Santa Sidewinder

sports

Sportsuit Sleeve Sportsuit Runabout Sportsuit Convertible Sportsuit Basic

silicone

available colors

Sport Grip Extreme Sport Grip

www.**MARWARE**.com

Put On Your Rally Caps $

Rally auto racing—high-speed racing on twisting on- and off-road courses—is huge overseas. **Colin McRae Rally 2005** brings the excitement of the sport to the Mac. You'll learn its ins and outs by participating in 300 stages of competition—through nine international locations and driving more than 30 different 2WD and 4WD vehicles from Volkswagen, Toyota, Mitsubishi, Peugeot, and others.—PETER COHEN

$22; Feral Interactive, www.feralinteractive.com

The Mac Ate My Brain $$

Some Bungie alums founded Wideload, and that heritage shows in the company's freshman effort, **Stubbs the Zombie in Rebel Without a Pulse**. You take control of a shambling zombie who can rip off his own arm to use as a remote-control weapon; eating peoples' brains reanimates them as part of your own zombie horde. Violent and bloody, the game is also rife with dark humor (think *Shaun of the Dead*, not *Dawn of the Dead*). Parents: check out the preview trailers before you stick this one in a youngster's stocking.—PETER COHEN

$50; Wideload, www.stubbsthezombie.com

Gamers

Welcome to the Monkey House $$

Zoo Tycoon 2 is that rarest of critters: a strategy game that's great for the whole family. You are the owner of a zoo, and it's up to you to keep your animals happy and healthy by providing appropriate habitats, while also staffing the park and maintaining its facilities well enough to keep paying customers coming back for more. The game features 3-D graphics as well as different game modes (including Zoo Guest, Zookeeper, and Photo Safari).—PETER COHEN

$40; Blue Fang Games; macworld.com/0846

Play Your Cards Right $$$

When it comes to delivering fast, intense 3-D graphics, this card is as good as it gets for Mac gamers right now. Designed specifically for the Power Mac G5, the **ATI Radeon X800 XT Mac Edition** features one dual-link DVI connector and an ADC connector, so you can drive a 30-inch Apple Cinema HD Display and an older 23-inch Cinema HD Display side by side.—PETER COHEN

$400; ATI, www.ati.com

Stocking Stuffers

Dust Buster $

Yes, selling air is probably the biggest marketing ploy of all time. But a can of **compressed air** is a geek classic: it's the best way to keep dust, dirt, and other nasty stuff out of your Mac and keyboard. One blast will send dust mites and Krispy Kreme crumbs running for their lives.—CYRUS FARIVAR

$7 and up; various

The Unkillable Pet $

Fish are the perfect office pet: they don't need walks, they aren't emotionally demanding, and they come in all sorts of freaky colors. Too bad their tanks get so skanky. If you want to brighten up the life of someone who spends 18 hours a day in a drab beige cubicle, but you don't want to burden him or her with the care of live fish, check out this **USB Mini Desktop Aquarium**, in which the fish are made of maintenance-free plastic. When you plug the thing into any handy USB port, they move around—a little bit.—CYRUS FARIVAR

$20; ThinkGeek, www.thinkgeek.com

LEARN HOW

YOU CAN SAVE

TIME WITH

TIGER'S COOL

AUTOMATION

TOOLS

S ure, you've probably heard of macros, Apple-Scripts, and other time-savers for Mac users. But who has the time to learn how to save time? You do, now that you have Tiger's Automator application. Using Automator is as easy as breaking a task down into its steps and clicking on Run. You can back up recent photos to CD, create a photo album, e-mail a song, convert files, and much more—all with the click of a button. You don't have to waste your time performing the same monotonous tasks over and over. Just let the robot do it.

MAKE AUTOMATOR WORK FOR YOU

ILLUSTRATIONS BY CHRIS GASH
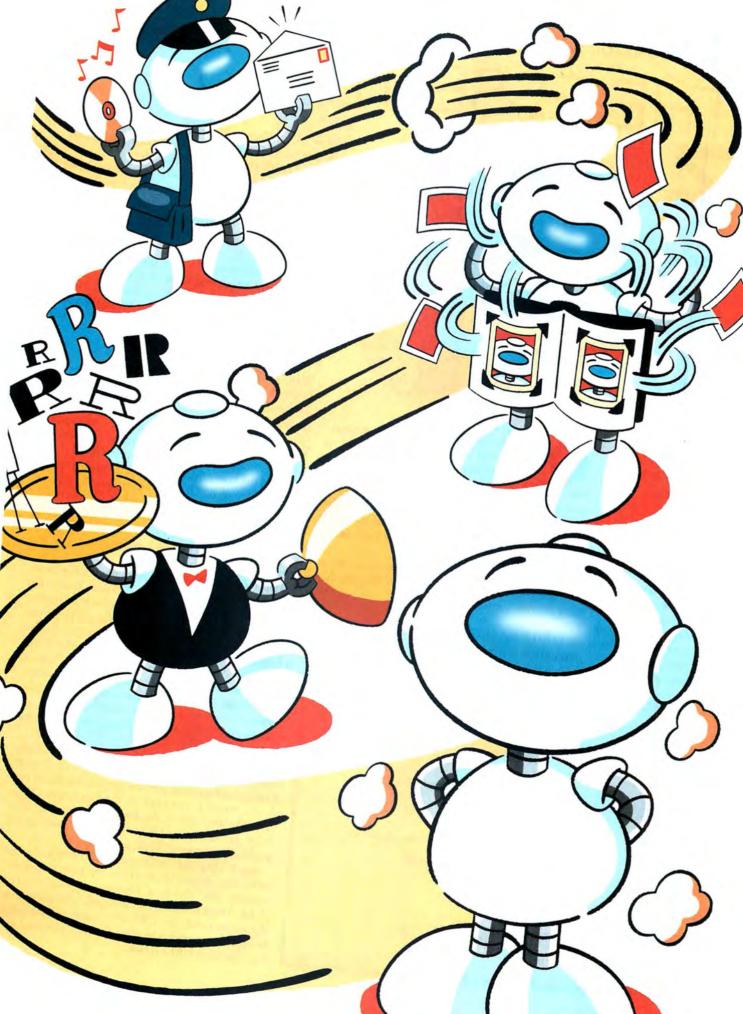
THE ESSENTIALS

LEARN

BY ANDY
IHNATKO

A Clean Slate The left side of the Automator window lists every action, organized by program, that Automator knows how to perform.

O ne of Tiger's juiciest technologies—Automator—lets you teach your machine how to handle routine procedures on its own. Your Mac won't do anything as cool as taking over your appliances with an eye toward murdering you—but it will take on a measure of autonomy. Show your Mac how to do something once, and it can do that thing again and again at the press of a key—or if you prefer, without the press of any key.

Apple has designed Automator so that anybody can describe a series of actions to his or her Mac and then have the Mac perform it.

A LITTLE BACKGROUND

Automator is wired into Tiger, so you can make cool things happen with every application and service on your Mac. When you want to teach your Mac to do a new trick, just open the Automator application, located inside your Applications folder.

The processes that Automator follows are called workflows. The basic concept behind creating a workflow is simple:

> Think about the process that you'd like to automate, and break it down into a sequence of deliberate actions.

> Choose those actions from the authoritative list of everything Automator knows how to do.

> Snap the actions together, one beneath the other, just as you would Lego bricks. When the workflow runs, Automator starts at the top and goes step by step by step until it reaches the bottom.

BUILDING A NEW WORKFLOW

NASA has a megahypersupercool Web site named Astronomy Picture of the Day (APOD), which features a different photo every day. It might be a deep-space radio-telescope image, or imagery transmitted by a recent probe, or even a historical photo from the Gemini or Apollo days (macworld.com/0541). But whatever the image, it's always something interesting. And a folder of APOD pictures makes for a great screen saver or desktop image. So I decided to create an Automator workflow that downloads the current APOD photo, stashes it inside the folder where I keep my screen-saver images, and then sets it as my current desktop picture.

Step 1 Choose New from Automator's File menu to open an empty workflow (see "A Clean Slate"). On the left side of the window is an inventory of actions. The Library column lists all the applications Automator knows how to control. When you click on a Library item, the Action column fills with a list of everything Automator can do in that application. Click on an individual action, and a pane underneath the list explains what that action is and how it works.

Step 2 The first thing your workflow needs to do is access the APOD Web site. This looks like a job for Apple's Safari.

When you click on the Safari group in the Library column, the Action column changes to list all the tasty actions that Safari can perform for you. But which one do you want? If you click on the Get Image URLs From Webpage action, the description explains, "This action gathers image URLs from the content of the specified Web pages." Well, I'm sold.

Step 3 Drag the Get Image URLs From Webpage action into the workflow area on the right side of the window. But there's a problem. Notice the red "URLs" note at the top of the action. This shows that the action needs the URL of an existing Web page before it can perform its duty. For that, you need the Get Specified URLs action.

Step 4 Drag the Get Specified URLs action to the top of the workflow. Notice that it doesn't require input from any other action. Sweet.

Step 5 Next, you need to tell the Get Specified URLs action which Web page to grab. Double-click on the Address field of the action and type the URL for NASA's Astronomy Picture of the Day page: http://antwrp.gsfc.nasa.gov/apod.

The Get Specified URLs action then spits out the URL of the Web page it just grabbed, which is exactly what the Get Image URLs From Webpage action needs. It's a match made in heaven.

If you stopped here, the workflow would spit out a list of the Web addresses for each JPEG on the APOD Web page. But that won't do you much good. You need the workflow to download that list to your Mac.

Step 6 Drag Safari's Download URLs action to the bottom of the workflow. It has one setting: it needs to know where to save the file. Choose the Pictures folder from the pull-down menu, or create a new APOD folder to keep everything nice and tidy.

Step 7 Now you need to figure out how to set the file as the desktop image. But what if you're not sure which application to use for the task? Is it a Finder

thing or an iPhoto thing? Luckily, Automator is armed with the awesome power of Spotlight, Tiger's built-in megasearch technology.
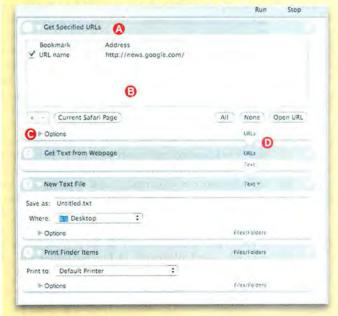
With Applications selected in the Library window, click on the search box and type desktop. The Set The Desktop Picture action sifts straight to the top

Final Results Your finished workflow finds images on the APOD Web site and turns them into desktop pictures.

ANATOMY OF AN ACTION

To build successful Automator workflows, you need to understand the user-interface doodads that are standard on all actions. Actions are divided into several different regions:

Ⓐ Top Region The top region contains a number that indicates the order in which the action will be completed, the name of the action, and a close box. Clicking on the close box removes the action from your workflow.

Ⓑ Middle Region This is where you adjust the action's custom settings—either to modify the way the action behaves or to give the action some information it's going to need in order to complete its task. An action that prints a document, for example, needs to know which printer to use. This is where you clue the poor thing in.

Ⓒ Bottom Region When you click on the disclosure triangle next to Options, the action expands to offer you additional settings. These settings usually affect what the user experiences when the action runs. Some workflows function invisibly. But you may want a certain action to display a status window—for example, to clue the user in to the fact that it's about to print something.

The most common option here is Show Action When Run. If you click on this check box, the workflow will pause and present the user with the panel of custom settings in the middle region. This gives the user the opportunity to override your settings before he or she clicks on Continue and the workflow resumes where it left off.

Ⓓ The Most Important Bits When Automator executes a workflow, it starts at the top and works its way to the bottom. Most actions are in the business of taking something from a previous action, processing it, and spitting out something else. The results of one action automatically flow into the top of the next action. The item at the bottom of the action is the product that the action spits out. Every action has just one type of input and one type of output. The output of one action must match up with the input of the next one. If it doesn't—let's say you attempt to send an iTunes recording of Jerry Lewis's "I'm a Little Busybody" to TextEdit for printing—Automator colors the input of the printing action red, to let you know that it just ain't gonna fly.

By the Book This section of "Make Automator Work for You" is an excerpt from *The Mac OS X Tiger Book*, by Andy Ihnatko (2005; reprinted by permission of Wiley Publishing).

of the action list. Drag it to the bottom of the workflow, and you're done (see "Final Results").

EXECUTING A WORKFLOW

Now you've got a working workflow. To make the magic happen, just click on the Run button at the top of the window. You'll see Automator perform the tasks from top to bottom. A process spinner appears in the bottom left corner of each action as it's performed, and is replaced with a green check mark when the action is complete.
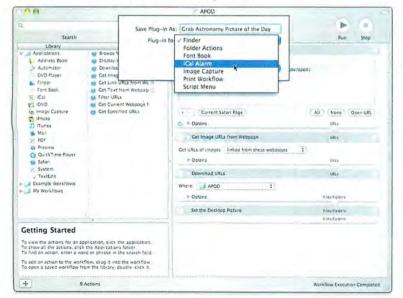
SAVING AND OPENING WORKFLOWS

The workflows you create in Automator are just like the documents you create in any other app. Once you finish snapping actions together, just select Save from the File menu. The only twist is that you can save a workflow in two different formats: workflows and applications.

Workflows When you save your result as a workflow, you're creating an Automator document. You work with a saved workflow just as you would work with any other file. To run a workflow document, you open it in Automator and click on the Run button. This is also what you do when friends, relatives, coworkers, and visiting clergy give you cool new workflows to assist you in your daily struggles through this mortal coil we call life.

Applications When you choose Application from the Save dialog box, your workflow becomes an ordinary application. When you double-click on it, it runs—you don't have to launch Automator itself.

Note that only Macs running Tiger contain the Automator architecture. So if you hand this application to someone running an earlier version of Mac OS, it flat-out won't work.

Plug It In When you choose Save Plug-In As from the File menu, Automator hands off your workflow to another application, such as iCal.

AUTOMATE FROM WITHIN

In addition to letting you schedule workflows with iCal, Automator can create plug-ins for the following applications:

> **Finder** The workflow appears in the Action menu of every Finder window.

> **Folder Action** The workflow is attached to the folder you specify, and runs every time you open or modify that folder.

> **Image Capture** Every time you import photos through your digital camera (or any other standard device that's compatible with the Image Capture utility), your workflow runs. Ultracool beans: plug in your camera and walk away. Automator independently loads all your new pictures into iPhoto, sends the tagged ones to your parents (for example) via e-mail, and then posts them all to your Web site as a photo gallery.

> **Print Workflow** The workflow appears as an option in the Print dialog box of every application. The upshot is that you can essentially create custom print commands. Wouldn't it be cool to have a Print With File Copy command that automatically saved a PDF file of everything you printed?

> **Script Menu** The workflow gets tossed into the systemwide AppleScript menu for easy access from the menu bar of any application.

TURN YOUR WORKFLOWS INTO PLUG-INS

OK. Wouldn't it be cool if a workflow could automatically run at the same time each day? Automator has a remarkable feature that lets you save workflows as plug-ins, which you can incorporate into the functions of other applications. Just select Save As Plug-In from the File menu, and the resulting pop-up menu shows you what's possible. (For an explanation of how Automator plug-ins interact with the supported applications, see "Automate from Within.")

For example, say you want to schedule your new workflow to run every morning. Just select iCal Alarm from the plug-in list (see "Plug It In"). Automator will create a new appointment for this workflow, denoting a time and a day when it's supposed to run. Since it's a standard iCal appointment, you can edit it to make it a daily event. The result is a new desktop picture every morning—and ultimately a big fat folder full of geeky pictures.

ANDY IHNATKO is the author of *The Mac OS X Tiger Book* (Wiley Publishing, 2005).

A TRIAL RUN

TAKE

BY ADAM GOLDSTEIN

Think Automator seems cool, but don't know where to get started? Here are five useful workflows you can try right now. First open Automator. Then click on the library item specified at the beginning of each step and drag the action that follows from the Action list into the Workflow pane below any previous actions. (The relevant library items and actions for each step are indicated in bold.)

E-MAIL A SONG FROM iTUNES

This workflow lets you send songs from your iTunes Library to anyone who has an e-mail address. The workflow will prompt you for the recipient and the subject line of the e-mail, as well as for the song (or songs) you want to attach.

1. Mail: New Mail Message In Options, select Show Action When Run so the workflow will ask you to specify the subject line and the recipient when you run it.

2. iTunes: Ask For Songs This action lets you pick the song (or songs) you want to send. If you think you might want to send more than one, select Allow Multiple Selection.

3. Mail: Add Attachments To Front Message This action assembles the finished Mail message for you.

BURN A BACKUP OF RECENT PHOTOS

This workflow burns all iPhoto pictures you've taken in the past two months onto a blank CD or DVD.

1. Automator: Ask For Confirmation In the Message box, type a short description of what the workflow does; you can add a more elaborate description in the Explanation field. When you run your workflow, these descriptions will appear in a dialog box.

2. iPhoto: Find iPhoto Items In the Find pop-up menu, choose Photos. In the Whose section beneath, choose Date from the first pop-up menu and Within Last 2 Months from the second one.

3. System: Burn A Disc In the Disc Name field, give your disc a descriptive name such as iPhoto Backup.

CREATE A PHOTO ALBUM FROM THE IMAGES ON A WEB SITE

This workflow copies images from a Web page in Safari to a new album in iPhoto.

1. Safari: Get Current Webpage From Safari This action gets the URL of the foremost browser window.

2. Safari: Get Image URLs From Webpage In the Get URLs Of Images pop-up menu, choose Linked From These Webpages so the workflow will download the images themselves, not dinky thumbnails. Just keep in mind that it'll download *any and all* graphics on the page.

3. Safari: Download URLs Choose whatever folder you like from the Where pop-up menu; your Pictures folder is as good a place as any.

4. iPhoto: Import Photos Into iPhoto In the Options section, select Show Action When Run so you get a chance to give your new iPhoto album a name while your workflow is running.

GET A LIST OF EVERY FONT ENABLED ON YOUR MAC

This workflow creates a text document that lists all your fonts (it takes a while to run).

1. Font Book: Find Font Book Items Make sure Typefaces is selected in the Find pop-up menu; the lower menus should read Whose Enabled Is True.

2. Font Book: Get Font Info Leave only PostScript Name turned on; the other items will clog up your list with unnecessary information. You can also deselect the Add Labels option.

3. TextEdit: New TextEdit Document This action launches TextEdit (if it isn't already running), creates a new text file, and dumps your list of fonts into it.

CONVERT AND RENAME BIG IMAGE FILES

This workflow shrinks selected images (space-hogging TIFFs, for example) by 50 percent, saves them as space-conserving JPEGs, appends the word *(small)* to their file names, and opens the new images in Preview.

1. Finder: Ask For Finder Items Make sure Files is selected in the Type pop-up menu. Specify the location where you want to start selecting, and select the Allow Multiple Selection option, which presents an Open dialog box where you can select the images you want to convert and rename.

2. Finder: Copy Finder Items From the To pop-up menu, pick a folder (your Pictures folder will work just fine), to which the workflow will copy the original images before it modifies them.

3. Finder: Rename Finder Items From the top pop-up menu, choose Add Text. Type (small) in the text field, and select After Name so your workflow will add this suffix to the end of each image's file name.

4. Preview: Scale Images Choose By Percentage from the pop-up menu and type 50.

5. Preview: Change Type Of Images You can select any image format you want, but JPEG is a good option if you're planning to post the images on a Web site or send them by e-mail.

6. Preview: Open Images In Preview This shows you the result of your workflow in Preview.

YOUR WORKFLOWS

TROUBLESHOOT

Automator is usually straightforward—drag the actions you want into whatever order you want, and then click on Run. When something goes wrong, though, you'll be glad to have the following tips on hand.

HUNT DOWN MISTAKES

If your workflow isn't working, there's a good chance that an action is at fault. Track down such an error with the Automator: View Results action. Just stick View Results after any other action, and when you run your workflow, View Results will show you the output of the previous action.

Say you've designed a workflow that uses the iTunes: Find iTunes Items action to find songs in iTunes. To test your workflow, insert the View Results action after the Find iTunes Items action. If you get back the result { } (an empty list) when you run the workflow, you'll know that the search isn't finding any songs that match your criteria—and that it's time to broaden your search.

BEWARE OF MISMATCHED ACTIONS

Typically, an Automator action sends its results to the following action in the workflow. Automator represents this relationship with a little arrow that points from one action into the next.

However, sometimes there *isn't* an arrow between actions; instead, the result of one action and the input of the next one both appear in red text. Consider this a warning: the type of information the first action produces may not be the type of information that the second action expects. Depending on your workflow, this input/result mismatch may cause problems—you should consider rearranging your workflow.

WHEN IN DOUBT, DISABLE

If an action seems to be holding up your workflow, don't delete the action—disable it instead. To do so, click on the number in its upper left corner and select Disable in the menu that appears. Automator will skip over that action while you troubleshoot your workflow. When you're ready to enable the action again, choose Enable from the same menu.

PAUSE A WORKFLOW

If one of your workflows takes its sweet time, you might want Automator to notify you when some part

of it has completed. The trick is to insert the Automator: Ask For Confirmation action *after* the relevant part of the workflow, forcing Automator to pause the entire workflow at that point. (You can also use the Ask For Confirmation action to pause your workflow so you can make changes to whatever it's working on.) Just remember to enter something descriptive in the Message and Explanation fields: for example, "Hey there, the workflow just finished converting your images."

TRACK YOUR WORKFLOW'S PROGRESS

You can tell which actions in your workflow have run by the little symbols next to each one in the Workflow pane. A green check mark means the action has completed, a spinning progress indicator means the action is running, and if neither is visible, the action hasn't run yet. But do yourself a favor—go to Automator and choose the View: Show Log menu item instead. A drawer will open at the bottom of the Automator window. In it, you'll see not only which actions have run but also how *long* each action took—a great way to discover bottlenecks.

DODGE FINDER ACTION MIX-UPS

One of the easiest mistakes to make in Automator is using Finder: Get Specified Finder Items when you mean to use Finder: Get *Selected* Finder Items. Get Specified Finder Items lets you enter a list of files and folders for the workflow to use before you even run the workflow. (The only way to change the items is to go back and change the Get Specified Finder Items action in the Workflow pane.) The Get Selected Finder Items action operates on the files and folders selected in the Finder when you run the workflow. That's much more convenient, since you don't have to modify the action itself when you want it to work with different files.

TAKE PRECAUTIONS CHANGING IMAGES

Whenever you insert a Preview action that modifies images on your hard drive, Automator asks whether you'd like to insert *another* action—one that will make copies of the images—first. If you want to avoid image accidents, take Automator's advice. In the dialog box that appears, click on Add, and your workflow will use duplicate images instead. ☐

BY ADAM GOLDSTEIN

ADAM GOLDSTEIN is the author of *AppleScript: The Missing Manual* (O'Reilly, 2005).

Photoshop Fling: Essentials & Effects
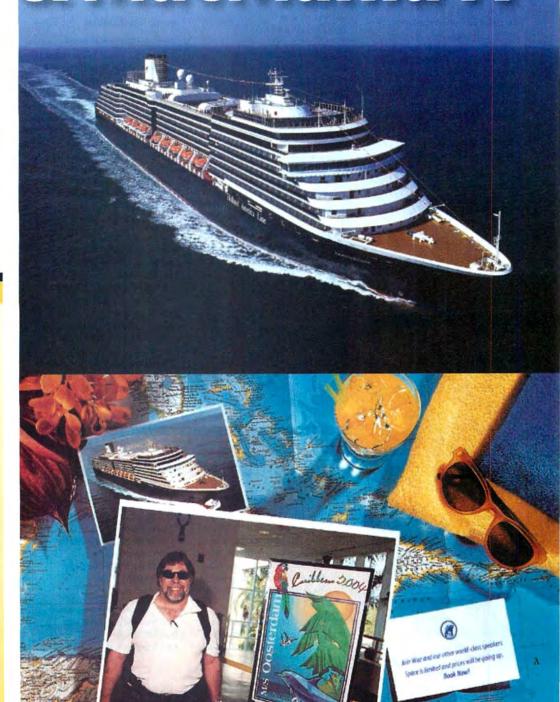
Photoshop Fling 3 / MacMania 4

During our cruise-conference, there will be four (4) three-day "tracks" offered at the same time:

- *Photoshop Fling: Essentials & Effects*
- *Photoshop Fling: Photography & Workflow*
- *MacMania: New User*
- *MacMania: Power User*

Attendees may freely move between the tracks, at any time. For example, while Photoshop Fling and the Digital Photography Workshop are independent of MacMania, classes here may be counted toward your MacMania session total. Similarly, Photoshop Fling conference attendees may attend any of the MacMania seminars—at no charge.

Therefore, all attendees may choose any combination of full-day, half-day, or quarter-day seminars—from either MacMania or Photoshop Fling—for a total of three (3) days' worth of sessions.

The conference fee is $795 and includes all courses, course materials, five evenings of entertainment, and the Bon Voyage Cocktail Party.

Adobe Photoshop CS2 One-on-One
Sunday the 5th, 8:30am – Noon

Speaker: **Deke McClelland**

Photoshop is a vast and complex program. It does certain things very, very well, and it does others very, very strangely. Using the program effectively is a matter of knowing which tools work best and when best to use them. Attend this introductory class and learn how to use the right features in the right order and save yourself a lot of heartache.

- What Photoshop can do
- Workspace and navigation
- Basic color management
- Highlights, shadows, and midtones
- Adjusting brightness levels
- Fixing a color cast
- Hue and saturation
- Colorizing a grayscale image
- Image size and resolution
- Rotate, crop, and perspective

Filters and Masks
Sunday the 5th, 1:30pm – 5pm

Speaker: **Deke McClelland**

Newly enhanced in CS2, corrective filters rank among the program's oldest and finest capabilities. Besides permitting you to sharpen the contrast of an image, blur away the defects, and remove digital noise and JPEG artifacts, they can help you hone in on exactly those details that need help the most. Combined with Photoshop's Masking function, filters make it possible to separate even the most complex foreground subject from its background and composite that image into a new setting. Sound amazing? You have no idea.

- Filtering basics
- The new filters in Photoshop CS2

- Unsharp Mask and High Pass
- Removing motion blur with Smart Sharpen
- The wonders of Remove Noise
- Gaussian Blur and Median
- Creating an Edge Mask
- Using the Color Range command
- Extracting image elements
- Blue screen and sky
- Full-on Masking

The Bold and the New in Photoshop CS2
Thursday the 9th, 8:30am – Noon

Speaker: **Deke McClelland**

Photoshop CS2 is the most ambitious, exciting, and downright seminal update to Adobe's flagship image editor in the past five years. Vanishing Point, envelope-style image warping, floating-point exposure, and the stand-alone Bridge all qualify as flat-out great. Then there's my favorite feature, smart objects, which let you do three things you could never do before: First, you can apply non-destructive transformations. Second, you can replicate a layer and edit all copies simultaneously. And third, you can adjust the composition of imported camera raw and Illustrator layers long after importing them. If flexibility and power appeal to you, join Deke and learn how to make them yours.

- The new Adobe Bridge
- The revolutionary Vanishing Point plug-in
- Combining multiple exposures into a single HDR image
- Applying free-form distortions with warp and envelope
- Making a smart object
- Non-destructive transformations
- Creating alias layers, all linked to a single original
- Placing camera raw and Illustrator artwork
- Modifying placed layers well into the future

& Effects

The Wow Factor:
One-Click Solutions in Photoshop
Thursday the 9th, 1:30pm – 5pm

Speaker: **Jack Davis**

Quick and easy ways to use Photoshop's built-in presets (and hundreds of complimentary Wow presets that will be provided in class) to create special effects on-time and on-budget.

- The phenomenal power, flexibility, and speed of Layers Styles
- How to create dimensional effects like chrome, rock, and glass (and beyond)—instantly and without filters
- One-click framing and tinting techniques to tie disparate photographs together—separately or as a collage
- Quick template-based collaging for weddings, groups, or editorials
- Single image collages and ghosted backgrounds

Creating Special Effects with Photoshop
Friday the 10th, 8:30am – 5pm

Speaker: **Bert Monroy**

Creating realistic textures, the effects of lights and shadows, and the ability to make an image jump off the page will be covered in this session. Filters? There are many of them in Photoshop. What happens when you use them for other than their intended purpose? What happens when you put a few of them together? You will create images that are more realistic than a camera could ever achieve.

The ability to bend things on a curve has been one of the most asked-for features, yet it has always been there. Bert will demonstrate the use of the Displace Filter to make controlled, fluid distortions. The Liquify Filter will also be explored for distortion effects. Distorting with the Transform function will be explored for perspective matching and the creation of realistic reflections.

- Working with Filters
- Using the Liquify command
- Light and shadows
- Reflections
- Integrating Photoshop into other programs
  - After Effects
  - 3D software

The Evolution of Digital Art

Speaker: **Bert Monroy**

Bert Monroy embraced the Mac as an artistic medium with the introduction of the Mac 128 in 1984. In this evening talk, open to all, Bert will take you on a journey through the evolutionary transformation of the Mac from its beginnings with MacPaint to its current status as the preferred tool of graphic artist throughout the world.

A history lesson mixed with useful production techniques will leave you not only entertained but a little more attuned to the potential that lies within our favorite little box.

You will learn:

- How the first computerized comic book was produced
- How the Mac has revolutionized the graphic arts industry
- How the Mac is used in the motion picture industry
- Much, much more

You will leave this talk, not only with some new found skills, but with the inspiration to explore new avenues you never before considered.

Photoshop Fling: Photography & Workflow

Expert Color Management
Sunday the 5th, 8:30am – Noon

Speaker: **Bruce Fraser**

Learn everything you ever wanted to know but were afraid to ask about color management. We'll start with a look at the basic science that underpins color management—don't worry, the session is guaranteed equation-free—because doing so helps you understand not only how color management works, but also why it sometimes fails to do so.

Next, we'll look at profiles, and their relationship to the devices they represent, with a view to developing sound troubleshooting skills.

Last but not least, we'll delve deep into Photoshop's color management features, mine the mysteries of working spaces, and look at what it takes to build and maintain a complete capture-to-output workflow.

Real World Camera Raw
Sunday the 5th, 1:30pm – 5pm

Speaker: **Bruce Fraser**

With the advent of Camera Raw 3.0, I look at Photoshop as a plug-in for Camera Raw, rather than the other way around. In this session, you'll learn the many benefits of shooting raw. Then you'll learn to exploit the vast amount of information raw files contain by making use of Adobe Camera Raw's powerful features, so that when your images land in Photoshop, you'll have very little to do to them except press Save and choose a file format.

Possibly the greatest challenge that digital shooters face is the sheer amount of data they generate. You'll learn that the key to avoiding drowning in data is to master metadata and make it your friend. You'll learn how to build a complete digital raw workflow using Bridge, Camera Raw, and Photoshop using automation wherever possible so that you still have time to shoot, and to have a life.

Essential Photo Optimizing— Getting it Right
Thursday the 9th, 8:30am – Noon

Speaker: **Jack Davis**

The experienced user knows there are a million tools in Photoshop to adjust your images for maximum impact, but which ones work best, work fastest, and are most "photographer friendly"? In this session you will learn all sorts of workflow-enhancing techniques including: 101 uses for Auto Levels, how to create non-destructive dodge and burn layers, advanced gray-scale conversions, eyedropper color correcting, stained teeth whitening, red-eye neutralizing, blotchy skin unifying, and the only way to use Photoshop's healing brush—all with an emphasis on quality, flexibility, and speed.

- Which editing tools are best to use when fixing images—and which ones to avoid
- Quick tone and color adjustments that leave your original image intact
- How to quickly fix under and over exposed images using Photoshop features like Shadow/Highlight
- Creating nondestructive, fast, and flexible repair layers for fixing, dodging and burning, and color correcting
- Simplified levels, curves, and sharpening techniques
- Advanced gray-scale conversions using Channel Mixer

Editing Images in Photoshop
Thursday the 9th, 1:30pm – 5pm

Speaker: **Bruce Fraser**

Photoshop has so many image editing options that it's often hard to know where to start, and once you've mastered a few tools, you tend to use them for everything (when all you have is a hammer, everything starts to look like a nail).

We'll start with basic adjustments like Levels, Curves, Hue/Saturation, and Shadow/Highlight, possibly turning up some hidden goodies you may have overlooked. Then we'll progress to how these basic adjustments can be modulated and controlled using layers, layer masks, and blending modes.

We'll look at strategy as well as tactics. Do I build a monster layered file that lets me keep all my options open, or do I use History instead? Last but not least, we'll delve into detail control-dustbusting, blemish removal, and sharpening.

Digital Photography Workshop

Speaker: **Jack Davis**

Learn the secrets of digital photography on our Mexican cruise. In this full-day class you'll quickly discover how to become a better photographer and tap the benefits of your digital camera. This Digital Photography workshop will give you the power to capture special moments and preserve precious memories—for snap shots to put in an album or oversized prints suitable for a gallery!

Learn how to:

- Tell beautiful, visual stories by capturing great digital photos
- Use natural light and flash the right way
- Use your camera's menus and functions to optimize what your camera can do
- Tap the value of a digital camera's features such as exposure compensation, scene modes, and when to shoot RAW

Part 1: Light, Camera, Action
Friday the 10th, 8:30am – Noon

Light is the primary subject of all of our photographs. In this illuminating, four-hour session we'll discuss the properties of light (and how it relates to space, depth, and focus) and how to use an understanding of light plus the various camera controls and features to produce technically-proficient photographs from the subtle to the dynamic.

- Understanding the properties of light
- Effective use of traditional camera controls
- Metering and exposure
- F stop/depth of field
- Shutter speed/motion control
- ISO
- Understanding digital camera menus
- Resolution
- File formats—RAW and JPEG demystified
- White balance
- Tone control
- Sharpening
- Putting it all together when shooting pictures

Part 2: Making Better Photographs
Friday the 10th, 1:30pm – 5pm

How do you put a little bit of soul into your pictures? Having control of your equipment is necessary, but only the first step. In Part 2 of this Workshop we will discuss how to move beyond technically well-executed documentation photography to exciting images that allow us to share, in an artful and memorable way, the experience of the moment we chose to record.

- Human vs. camera vision
- Perspective and point of view
- Camera position and lens choice
- Understanding the frame
- Organizing the visual elements
- Keep it simple and the use of negative space
- Design tools for "drawing" the photograph
- Clues to three-dimensionality
- Exploring the subject
- Photographing people
- Travel photography techniques
- Close-up photography techniques

For complete travel and booking information see our website:
www.GeekCruises.com/MacMania

MacMania: New Users
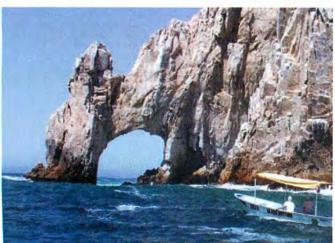
MacMania Ingenious Bar:
The Near Genius IS IN!

(Every evening, 5pm to 6pm)

Apple stores may own the rights to the name "Genius Bar," but at sea our own near geniuses will be ready to help you get up and running on Macintosh at the MacMania Ingenious Bar. Leo Laporte, Cap'n Neil, and many of our onboard luminaries will gather to offer informal one-on-one assistance from 5pm to 6pm every evening in the Crow's Nest. If the MacMania seminars are leaving you feeling like a sub-genius, visit the Ingenious Bar for an instant upgrade. These sessions are also designed for spouses and family members who aren't yet Mac geeks but are ready to learn more in a friendly, nonjudgmental environment—so everyone is welcome.

The MacMania Ingenious Bar: no problem too small, no brains too big.

The Ground Floor Guide to the Macintosh
Sunday the 5th, 8:30am – Noon

Speaker: **Andy Ihnatko**

"Honestly, I don't know the first thing about Macs."

Oh, really? Sure, it's easy to brag about how little you know about these things, but so few people are willing to put their money with their mouth is. Attend this session and silence all the nay-sayers. How basic is this session? Turning the Mac on and off is lesson two. Sure, by the end, you'll no longer be a novice...but you'll be able to thrill and amaze people with your tales of compressing a whole month's worth of trial-and-error learning into one single class.

The Dilettante's Guide To Tiger
Sunday the 5th, 1:30pm – 5pm

Speaker: **Andy Ihnatko**

There are American History books that spend 500 pages covering the whole thing from start to finish, and then there are the ones that cover just one thing in obsessive detail. The latter leaves you with ready answer to the question "So: the quill that Jefferson wrote the Declaration of Independence: what species of bird did it come from?" But the former approach leaves you with a broad understanding of absolutely everything, and the relationship between all of the various bits.

So the goal of this session is to make sure you know just exactly what Mac OS X is capable of, from user-level features that you'll use every day to aspects of Unix system administration that will make you glad that you're free to never ever ever touch that sort of stuff if you don't want to, not even with a ten-foot-pole strapped to a twelve-foot-pole.

Mac OS X Troubleshooting
Thursday the 9th, 8:30am – Noon

Speaker: **Christopher Breen**

The Mac and its accompanying operating system are impressive accomplishments but even Macs sometimes get the blues. Join Chris Breen as he shows you how to keep your Mac and OS X on the straight and narrow and, should it stray from that path, how to get it back on its feet with the least amount of fuss. Along with preventive and troubleshooting strategies, Chris will offer tips for dealing with such common annoyances as spam, Mac/Windows interaction, and printing problems.

Life is Good...iLife Makes it Better!
Thursday the 9th, 1:30pm – 5pm

Speaker: **Janet Hill**

If you are new to iLife, come see what happens when you take five best of breed multimedia applications—iTunes for managing music, iPhoto for digital photography, iMovie HD for editing digital video, GarageBand for creating your own music, and iDVD for creating your own DVDs—and integrate them so they work seamlessly. Suddenly it all connects!

Let your imagination soar: The iLife '05 software applications let you do fun, creative things with your pictures, music, and movies in ways that PC users can only dream about—then you share your joy with family and friends every which way from email and the internet to print and DVD. An you can do all these things and more, quite nicely, without thumbing through a manual.

A Day of iLife '05 Exploration
Friday the 10th, 8:30am – 5pm

Speaker: **Janet Hill**

Learn why this suite of tightly-integrated applications continues to lead the digital-media revolution.

You have been using iLife for a while but what can you really do with this program? With iLife '05 you can easily create stunning softcover books; import, organize, and edit RAW photos; and stun them with fully-customizable slideshows using iPhoto 5. Edit high-definition 16:9 video from the newest camcorders and create movies automatically with iMovie HD's new Magic iMovie feature. Drag and drop video clips, pictures, and music into the new animated drop zones found in iDVD 5 templates. Or create multi-track recordings in GarageBand 2. Of course, iTunes seamlessly integrates with iPhoto, iMovie HD, iDVD and GarageBand and syncs with every member of the iPod family. Come spend a day exploring the many intermediate features of iLife '05.

For complete travel and booking information see our website:
www.GeekCruises.com/MacMania

MacMania: Power Users

Power-User Productivity in OS X Tiger
Sunday the 5th, 8:30am -- Noon

Speaker: Bob "Dr. Mac" LeVitus

What is a Power User? According to Dr. Mac's Really Abridged Dictionary: Power User (pou'er yoo'zer) n. 1. Someone who uses a Macintosh better, faster, or more elegantly than you do. 2. Someone who can answer Macintosh-related questions you can't.

Don't miss this unique opportunity to spend some quality time with "one of the world's leading (self-proclaimed) authorities on Mac OS X," and the author of *Mac OS X 10.4 Tiger For Dummies*. The session will feature a myriad of tips, hints, tutorials, shortcuts, product demos, timesaving software recommendations, where to find what you need on the Web, and much more.

Automator
Sunday the 5th, 1:30pm -- 5pm

Speaker: Sal Soghoian

Mac OS X version 10.4 Tiger introduces Automator, a new application that automates anything on your computer quickly and easily. Using the power of Mac OS X, Automator controls your applications and files, automating---in an instant----what you need done with them. Automator will change the way you use your Macintosh. There's no scripting or coding, it's drag-and-drop easy. It's truly "Automation for the rest of us!"

Automator Product Manager, Sal Soghoian, gives you a personalized tour of this innovative application and you'll learn when and how to use Automator to make automating complex or repetitive tasks a breeze!

The MacMania Trio

Classic Jazz and Rock'n Roll
Performed by MacMania Speakers
Andy Ihnatko, Chris Breen, and Bob LeVitus

AppleScript Fundamentals
Thursday the 9th, 8:30am -- Noon

Speaker: Sal Soghoian

Now that you can "automate" your tasks, are you ready to look under the hood? In this session, you will gain a thorough understanding of the fundamentals used to create real-world AppleScript scripts. Step-by-step, practical approaches and techniques are reviewed in detail with plenty of snippets to aid you in developing a solid foundation in script writing. Sal provides insight and examples gleaned from over a decade of scripting the Mac OS and its core applications. Special attention is paid to new AppleScript tools and abilities found in Mac OS X Tiger.

Living the iLife
Thursday the 9th, 1:30pm -- 3pm

Speaker: Christopher Breen

There's a lot of power hidden under the placid exterior of Apple's digital media suite, iLife 05. Chris Breen goes beyond the basics and reveals his favorite iMovie, iDVD, iPhoto, GarageBand, and iTunes tricks. Among them, you'll learn how to use iMovie to add multiple playlists to your iPod shuffle, create an inescapable kiosk presentation with iDVD, manipulate iPhoto's expert sharing settings to make smaller (and better looking) slideshows, make GarageBand play the blues, and alter audio files in iTunes so they take up less space on your iPod.

Advanced iMovie:
Beyond the Birthday Party
Thursday the 9th, 3:30pm -- 5pm

Speaker: Christopher Breen

We understand that with a minimum of effort you can import video from your digital camcorder into iMovie and string together enough scenes to make a darned fine home movie, but is iMovie nothing more than the means for making less-boring videos of your kid's 10th birthday bash? Hardly. In Advanced Movie: Beyond the Birthday Party, Chris Breen will show you how to bend iMovie to your will to make dynamic video vignettes that include blue screen effects, picture-in-picture tricks, and sound effects that add realism (and a heapin' helpin' of humor) to your work.

Final Cut Express and
Final Cut Pro: A Step Up
Friday the 10th, 8:30am -- Noon

Speaker: Mark Swain

There is no doubt about it, iMovie is a quick digital editing solution with loads of features. However, if you have out grown iMovie's feature set, this is a great session that will take you inside the world of Final Cut. This guided tour starts off with getting you comfortable with the Final Cut interface and work flow. Learn the basics of non-linear editing, how to handle footage, and the ins and outs of video footage. Explore advanced editing tools such as ripple, roll, and slip edits. Also, figure out which version of Final Cut is right for you when we examine the differences between Express, and Professional versions. This session will take you from raw footage to finished video with little or no previous Final Cut experience.

GarageBand 101:
So You Want To Be a Rock 'n Roll Star
Friday the 10th, 1:30pm -- 5pm

Speaker: Bob "Dr. Mac" LeVitus

If you want to make music with GarageBand, this session is the perfect first step. The premise is to record, mix, and master a complete rock and roll song---using guitar, bass, drums, and vocals---in 3.5 hours or less.

Along the way you'll discover cost-effective hardware products that make using GarageBand better; how Apple Loops can save you time and effort; how to record vocals and acoustic instruments that sound awesome; using GarageBand's software instruments effectively; and lots of other cool stuff guaranteed to help you produce better sounding music with GarageBand.

Other Evening Entertainment

The Woz Hour

Join Apple co-founder Steve Wozniak while he reminisces, answers your questions, and explores our future.

Macworld/Apple Q&A

Got a question about Apple or the Mac? This is your chance to get the *real* skinny from the experts! Macworld Editorial Director Jason Snell and Apple's Sal Soghoian and Janet Hill answer your questions with the benefit of their years of first-hand experience in the Mac world.

Andy Ihnatko---The Wild Side

Mac Gems Shootout with
Leo Laporte, Bob LeVitus, and the Woz

Hold on to your hat and don't miss this a once-in-a-lifetime shootout featuring three of the most fanatical Mac maniacs in the universe---Leo, Bob, and Woz. Thrill as they demonstrate and praise their favorite and most-beloved shareware, freeware, and otherware. Then, once the smoke clears, grab a copy of any or all of these fabulous gems at the GeekCruises website. Don't miss it!

PRICING AND BOOKING INFORMATION

Course Fees: $795. Only passengers booked through Geek Cruises will be admitted.

Deposit: $400 per person, due at time of booking.

Cabin Type	Cruise Rate
Standard Inside	$ 799 (GS* available)
Better Inside	$ 899 (GS*, ♿ available)
Standard Outside	$ 999 (GS*, ♿ available)
Better Outside	$1,099 (GS*, ♿ available)
Outside w/ Balcony	$1,299 (GS*, ♿ available)
Mini Suites	$1,399 (♿ available)
Superior Suite	$1,799 (♿ available)
Full Suite	$3,299 (♿ available)

Cruise prices are subject to change

3rd and/or 4th Person Rate:
ages 19 and older, $549; ages 2 – 18, $499; under 2 years old, $449.

Single Occupancy:
150% for inside and outside cabins and 200% for Outside with Balcony and above.

Port Charges and Taxes:
$199 per person.

Full payment is due on November 1, 2005 (or, if you book after November 1, at the time of booking).

Foreign Shipping Fees and Additional Payment Information: There is a foreign shipping charge of $60 (to cover the shipping of your cruise tickets, via FedX) per foreign residence ($35 per Canadian residence). There is a $25 charge for returned checks.

Air Add-ons: Airfare from most major cities is available through the cruise line. You can call our office for this pricing. (These rates include trans-fers to/from the dock/airport plus trans-fers to/from your hotel if we've booked the hotel as well.) In most cases, however, you will find better airfares on your own. Online travel sites such as Expedia.com, or Travelocity.com are excellent resources.

Pre- and Post-cruise Hotel Stays:
Sightsee San Diego! The hotel (Westin Horton Plaza San Diego) will be close to the dock. If we book your hotel, transfers from the hotel to the dock are included.

	1 night	2 nights	3 nights
Shared double	$150	$275	$400
Single	$275	$525	$775
3rd/4th person	$50	$80	$110

♿ Physically challenged available
*Guaranteed Share (GS) Fares: This plan is for passengers who are coming on a Geek Cruise by themselves and wish to share a cabin with another Geek Cruises passenger in an inside or outside cabin only. The prices are the same as the per person double occupancy rates. Share Passengers who smoke are not to do so in the cabin, unless okayed by fellow roommates. We try to match passengers with someone close in age, whenever possible. Note: Holland America will not accept any booking unless a fully completed Reservation Form is accompanied with a per-person deposit:
http://www.GeekCruises.com/booking/mm04_booking.htm

Standard outside double on the ms Oosterdam is approximately 177 square feet. Rooms will vary in size and furniture placement.

Mini-suites on the ms Oosterdam are big on luxury: private verandahs, whirlpool baths, VCRs, and mini bars.

DAY	PORT	ARRIVE	DEPART	CONFERENCE SESSIONS
Saturday, Feb 4	San Diego, Ca	—	5:00pm	7:15pm, Bon Voyage Cocktail Party
Sunday, Feb 5	At Sea	—	—	8:30am – 5:00pm & 6:00pm – 7:30pm
Monday, Feb 6	Cabo San Lucas, Mexico	7:00am	6:00pm	6:00pm – 7:30pm
Tuesday, Feb 7	Mazaltlan, Mexico	8:00am	6:00pm	6:00pm – 7:30pm
Wednesday, Feb 8	Puerto Vallarta, Mexico	8:00am	10:00pm	—
Thursday, Feb 9	At Sea	—	—	8:30am – 5:00pm & 6:00pm – 7:30pm
Friday, Feb 10	At Sea	—	—	8:30am – 5:00pm & 6:00pm – 7:30pm
Saturday, Feb 11	San Diego, Ca	8:00am	—	

San Diego
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Mazatlán
Puerto Vallarta

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THE MAC PRODUCT EXPERTS

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EDUCATION THAT TAKES YOU PLACES

iChat Power Tips

Whether the holidays have renewed your commitment to keep in touch with distant family or kept you busy finalizing plans for the office party, 'tis the season for using iChat AV. And with version 3.0, Apple greatly enhanced iChat AV, adding new features such as support for multiple-person audio and video chats. Of course, it's easy to launch iChat and start typing, but you can take your chats further with these tips.

Group Your Buddies

If you have five iChat buddies, finding one of them in a list is no problem. But if you have 50, 100, or more, you'll benefit from organizing your buddies into manageable groups. While groups aren't new to iChat, version 3.0 offers improvements that make them even more useful.

To start, use the View menu to select Show Offline Buddies, Use Groups, and (optionally) Use Offline Group. When you do so, all your buddies will appear beneath a gray divider bar, labeled Buddies, in the Buddy List window.

You can now click on the plus sign (+) at the bottom of the window and choose Add Group from the pop-up menu. Give the group a name and click on Add, and you'll see a new divider bar in the Buddy List window. If you have a lot of groups to create, click on the plus sign and choose Edit Groups instead of Add Group. This will let you add more than one group at a time, using a small edit window. Your groups will appear sorted alphabetically by name. You can control their order by placing spaces or numbers at the front of each group's name.

After you've created all your groups, the hard part begins—organizing your buddies. There's only one way to do this: drag and drop. Use the shift or ⌘ key to select more than one buddy at a time. If you want a buddy to appear in more than one group, simply option-drag the person's name from one group to another. When you're done, you can use the small triangles next to each group name to hide and show group members (see "Group Greatness").

Automatically Accept Chats

Normally, when a buddy initiates an audio or video chat with you, you have to accept the invitation before the conversation can begin. But you can use a hidden setting to make iChat automatically accept these invitations. You may wonder *why* you might want to do this (as visions of unexpected video chats in which you're wearing pajamas dance through your head): it's very useful to be able to accept chats automatically if you're using your Mac as a tool for remote monitoring.

For example, you could set up your home Mac with iChat and an iSight camera and connect to it from work, to check on your dog or to see whether someone left a package by your front door. Yes, you can do all of this with Webcam software, such as Evological's EvoCam ($25; www.evological.com), but in a pinch, iChat makes a decent (and free) remote-monitoring tool.

To enable automatic video- or audio-chat connections, quit iChat, open Terminal (in /Applications/Utilities), and enter either or both of these commands:

```
defaults write com.apple.ichat
AutoAcceptVCInvitations 1
```

Group Greatness You don't have to be a teenager to accumulate a massive—and overwhelming—list of buddies. Luckily, iChat 3.0's improved group features make it easy to separate your buddies into more-manageable subsets.

Stop Chat Mishaps

Most of the time, iChat just plain works. But there are times when it doesn't, and those times can be frustrating—especially when you're trying to have a video chat with grandma.

> **Poor-Quality Multiparty Chats** One of Tiger's most discussed features is iChat's support for multiparty audio and video chats—you can theoretically hold a four-person video chat or a ten-person audio chat. I say *theoretically* because success depends on both the speed of the systems involved and the available bandwidth. If you're having trouble with multiparty chats (you can't start one for instance, or you get choppy video and dropped-out sound), it's more than likely due to one of those factors.

To launch a multiperson audio chat, you need at least a 1GHz G4, a dual-800MHz G4, or any G5, and at least a 128-Kbps connection (upload and download). Check with your DSL or cable provider if you're unsure of your connection speeds. Participants can be on any G3, G4, or G5 machine, as long as they have at least a 56-Kbps connection, which covers any Mac that shipped with a modem in the past few years.

As you might expect, multiperson video chats have more-stringent requirements. To launch such a chat, you'll need a dual-1GHz G4 or faster, or any G5 machine. You'll also need a 384-Kbps Internet connection, but you'll get better results with even more bandwidth. Participants must have a 1GHz G4, a dual-800MHz G4, or any G5, and at least a 100-Kbps Internet connection.

Apple has a nice chart at the bottom of its iChat page (macworld.com/0745) that lays out the requirements for all the various audio- and video-chat options.

> **Insufficient Bandwidth** Does your Mac say you have "insufficient bandwidth" whenever you attempt to start a video chat—even if both chatters have high-speed Internet connections? Apple corrected this problem with OS X 10.4.2, so if you haven't upgraded from 10.4 yet, do so via your Software Update preference pane. Apple also says that McAfee Virex 7.5.X (www.mcafeesecurity.com) can cause this problem, and recommends removing it.

> **Camera in Use** Keep getting an error message stating that your camera is already in use—even though it's not? There's a simple solution. Just pull the plug on your camera, wait a few seconds, and then plug it in again. If this fails to fix the problem, try quitting all open applications. If that fails, you may need to restart your Mac.

> **Find More Help** For more help with iChat, try Apple's iChat AV Support page (macworld.com/0746), which contains a list of the top support issues. If that's not enough information, visit Apple's iChat Discussions group (macworld.com/0747) and look for posts from other people who may have found solutions to problems like yours.

```
defaults write com.apple.ichat
AutoAcceptACInvitations 1
```

The first command enables automatic video chats; the second one is for audio chats. When you relaunch iChat, it will automatically connect anyone initiating an audio or video chat with you. To turn this feature off, quit iChat again and repeat the above commands, but change the numeral 1 to 0 (zero).

Chat Anywhere

Just because you or your buddies are busy shopping doesn't mean you all can't still give and receive iChat messages. Use iChat's ability to communicate with mobile phones.

Send Messages to Mobile Phones Did you know that you can use iChat to send a message to any cell phone that's Short Message Service (SMS) enabled? Select File: New Chat With Person (or press ⌘-shift-N). In the space reserved for the person's name, enter his or her phone number instead, formatted like this: +15035551212.

The +1 is necessary; then you just list the full phone number with area code. Click on OK and enter your message text as you normally would. When you press return, iChat will tell you it has sent the message to the phone. Depending on the service provider your recipient uses, he or she might be able to reply to your message from the cell phone.

Receive Messages on a Mobile Phone It's pretty easy to get all of your iChat messages while you're away from your computer. The trick is that you need an AIM screen name, not a .Mac account, to do so. If you don't have one yet, visit my.screenname.aol.com and sign up for a free account. Then configure iChat to use your AIM screen name, if it doesn't already, by visiting iChat: Preferences and clicking on Accounts. Click on the plus sign to add new account information. (You can switch between multiple accounts via the iChat: Switch To menu item; just choose the account that you want to use.)

Once you're logged in to iChat via your AIM screen name, visit AOL's MyMobile page, mymobile.aol.com. Click on Sign In To MyMobile and log in with your AIM screen name if necessary. When you reach the main MyMobile page, click on the My Mobile Settings button on the left side of the screen and follow the instructions. Once you enable forwarding, AIM will send all received iChat messages to your cell phone via SMS.

If you use a .Mac account for iChat, you can't take advantage of this feature directly. However, you can create a workaround using Away status messages. Create a new AIM account with message forwarding, but leave iChat set to use your .Mac account. When you want to use the forwarding service, click on the status message below your name and set up a custom Away message. Use something such as "Reach me via an iChat msg to *ScreenName*" (replace *ScreenName* with your AIM screen name). The message should be short because only 42 characters will show up on recipients' screens.

Keep in mind that your carrier may charge you for receiving text messages, so check your plan to make sure that you don't get an unpleasant surprise, such as a $500 cell-phone bill. □

Make the Most of Podcasts

The latest versions of iTunes have helped Apple bring Podcasts—downloadable audio broadcasts that can be created by anyone with a microphone and something to say—to the masses. Only two days after Apple added a Podcast directory to its iTunes Music Store, users had subscribed to more than a million Podcasts.

The iTunes Music Store now offers upward of 15,000 Podcasts in areas as diverse as technology, sports, politics, and health. And iTunes 5 makes it easy to find and subscribe to Podcasts. But beyond that, details may get a little murky. Allow us to shed some light on the perplexing aspects of iTunes' Podcasts, with these helpful tips and tricks.

Not the Shuffle's Type

iTunes does its best to cram as much music as it can onto an iPod shuffle. So a shuffle doesn't play AIFF files (which tend to take up a lot of space), and iTunes' Autofill feature won't add audiobooks or Podcasts (which can also be meaty) to a shuffle—even if you've gathered those Podcasts into a playlist.

You can add Podcasts to the shuffle by dragging them onto the shuffle icon in iTunes' Source list. But if you convert the Podcasts (normally MP3 files) to a different format—AAC, for example—Autofill will have no objection to automatically pulling them over to the iPod (this causes iTunes to no longer see them as Podcasts for the purposes of syncing).

To perform that conversion, choose the encoder you'd like to use in the Importing tab of iTunes' Advanced preference pane, and then select Convert

Selection To *encoder name* from the Advanced menu. With the right configuration—with AAC Encoder and the Setting pop-up menu's Spoken Podcast setting selected, for example—you can even create a file that's smaller than the original (see "Be a Convert").

Note that converting a file will remove both the chapter marks and the ability to bookmark the Podcast. But you can easily regain bookmarking functionality by using Doug Adams's Make Bookmarkable AppleScript (go to macworld.com/0761 to download the script).

A Library of Their Own

Speaking of bookmarks, you may discover that some of the Podcasts you download from sources other than the iTunes Music Store are not bookmarkable—your iPod can't keep track of where you last stopped playing them. Fortunately, iTunes 5 includes a feature to fix this issue. Just select an uncooperative Podcast, choose File: Get Info, click on the Options tab in the resulting information window, enable the Remember Playback Position option, and click on OK. iTunes and your iPod can now pick up interrupted Podcasts from where you stopped them.

The Podcast Shuffle

Once you have Podcasts on your iPod shuffle, be aware that those encoded as M4B files (that is, bookmarkable AAC files) won't play if you listen to your music player in shuffle mode. If you want to hear these Podcasts on a shuffle, check that your shuffle's back toggle switch is set to the first position (Play In Order) rather than the second position (Shuffle).

iPod Sync or Swim

iTunes' Podcasts preference pane gives you the option of keeping all unplayed Podcast episodes. But if you've configured your iPod to update Podcasts automatically, the iPod will treat a Podcast as though you'd listened to it even if you've only played a portion of it. When you next sync your iPod, the Podcast will vanish from both the iPod and iTunes.

Be a Convert If you reencode Podcasts, you will convince Autofill to put them on your shuffle.

Lasting Relationship Save partly enjoyed Podcasts from deletion by adjusting iTunes' Keep setting.

If you tend to leave unfinished Podcasts on your iPod—you listen to shows in multiple parts throughout the week, for example—it's a good idea to choose a setting that's likelier to maintain your partially played Podcasts. Choosing Last 5 Episodes from the Keep pop-up menu, for instance, gives you plenty of opportunity to finish older Podcasts without unexpectedly losing anything (see "Lasting Relationship").

Spread the Word

If you've come across a great new Podcast and want to alert your friends, there's no need to send them to the iTunes Music Store. Just select Podcasts in iTunes' Source list, choose the title of the show you want to share with your friends, and drag it to the desktop. You'll then find a tiny Podcast subscription file (with a *.pcast* extension) that you can simply e-mail to anyone you want. All the recipient needs to do is drag the file into iTunes or double-click on it to subscribe to the Podcast linked to that file.

Get (More) Info

Before downloading a Podcast (or even after listening to one), you may be interested in learning more about the subject, episode, or Podcaster. If the Podcast's creator has prepared its tags properly,

Podcast Information

Podcast Winecast Enhanced AAC Feed
Episode Carneros Pinot Noir

The third and final chapter in my recent tastings in California, this time reviewing the Pinot Noir of the Los Carneros AVA.

Show Notes:
00:21 – Welcome and show theme
00:53 – Background and history of the Los Carneros American Viticultural Area
03:32 – Acacia Vineyard, Pinot Noir, Carneros 2003 ($25)
03:55 – Acacia Vineyard, Pinot Noir, Field Blend, 2003 ($50)
04:30 – Acacia Vineyard, Pinot Noir, Beckstoffer Vineyard 2003 ($60)
04:52 – Domaine Carneros, Pinot Noir 2002 ($27)
05:30 – Domaine Carneros, The Famous Gate 2001 ($50)
05:52 – Best of tasting
06:16 – Best value
06:32 – Please vote for Winecast for the Podcast Awards!
06:57 – Contact details and credits
07:18 – Next show theme

Feedback: winecast@gmail.com | Audio comments: 206-202-4696
Copyright 2005 Tim Elliott. Licensed to the public under http://creativecommons.org/licenses/by/2.0/

Go Deeper Use the Information icon or the Get Info command to find out more about a Podcast.

Mixing It Up

Numark (www.numark.com) has been making professional DJ equipment for more than 30 years, and now the company is tapping into the iPod phenomenon with its $399 iDJ, a two-channel mixer that lets mobile DJs use their iPods as playback devices.

The 4-pound iDJ features two docking stations that work with any dockable iPod (it even charges the iPods when they're docked), as well as all the buttons and knobs you could want. The iDJ includes a $1/4$-inch microphone input with gain and tone controls and two stereo line inputs (one for each channel), as well as output jacks for master and record RCA, S-Video, and $1/4$-inch and $1/8$-inch headphones.

The iDJ, which should be available by the time you read this, also provides USB connectivity so you can connect to a computer and load music on the iPods without removing them from the docks—a whole lot easier than digging through crates of LPs.—PETER COHEN

you should be able to get more information by clicking on the Information icon—a small letter *i* to the right of the Podcast's name in the iTunes Music Store or in your Mac's iTunes Podcast window (see "Go Deeper").

Another option is to visit the Podcaster's Web site. To do so when browsing for a Podcast on the main page of the iTunes Music Store, look underneath the Podcast description and click on the link arrow to the right of the word *Website*. If you've already subscribed to a Podcast, you'll find an identical arrow (without the helpful label) to the right of its name in iTunes' Podcast window. Either one of these methods will open your Web browser and take you to the Podcast's particular site.

Find What You Seek

Searching for Podcasts in iTunes can be tricky. If you've entered *Leo Laporte* time and again in the iTunes Music Store's Search field only to be frustrated at not finding his Laporte Report and TWIT (This Week in Tech) Podcasts, don't despair: you're just looking in the wrong place. You can search for Podcasts in two ways.

The first is to type your search term as usual in iTunes' Search field in the upper right corner of the iTunes window. When you see the message "Your search did not match any results," click on the Podcasts button in iTunes 5's new Search bar (above the message). The second option is to click on the Podcasts entry in the iTunes Music Store's main window, wait for the Podcasts home page to appear, and enter your search term in the search field in the middle of the page's left column. □

Senior Editor CHRISTOPHER BREEN is the author of *Secrets of the iPod and iTunes*, fifth edition (Peachpit Press, 2005).

FOR YOUR LISTENING P
TO RECOMMEND SOMET

LEASURE, WE'D LIKE
HING IN BLACK.

Johnny Cash, the Man in Black. At eMusic, you'll find his finest recordings, including his seminal work at Sun Records. In fact, at eMusic you'll find over 30,000 uncompromising indie artists. Like The New Pornographers, Miles Davis, Reverend Gary Davis, Arcade Fire, Charles Mingus, Jerry Garcia, Lucinda Williams, the Swan Silvertones and My Morning Jacket.

At eMusic, we've assembled the largest library of independent music ever. You can download titles for just 25 cents and it all works with your iPod®. And right now receive 50 free songs, which you get to keep forever just for checking out the site.

For extraordinary music, just walk the line and visit emusic.com/johnny.

GET 50 FREE SONGS FOR CHECKING OUT EMUSIC.COM/JOHNNY

emusic

#1 Site for Independent Music

Automate Photoshop Chores

As a photographer, you tend to run through the same mind-numbing tasks over and over again: editing, resizing, saving, and so on—it's a glamorous life. Adobe Photoshop does offer some automation controls, but their powers are relatively limited. That's one reason I think Automator, Tiger's easy-to-use automation tool, is one of the most exciting parts of Apple's latest operating system.

More than just a macro program, Automator lets you create complex procedures that span multiple applications. And you can trigger Automator workflows from the Finder; you can't do this with the tools in Photoshop. Although Automator doesn't come with Photoshop actions built in, you can quickly add Photoshop CS and CS2 support to its repertoire.

Download the Actions

Automator ships with actions for many of OS X's built-in applications, including the Finder, iCal, Preview, and Spotlight (for a basic Automator tutorial, see "Make Automator Work for You," page 84). But if you scan the list of applications in the Library pane, you'll notice that there aren't any actions for Adobe Photoshop.

Fortunately, Apple has made it extremely easy for developers to add Automator support for programs. Because neither Adobe nor Apple has offered actions

for Photoshop, I created my own—a suite of 42 actions for controlling Photoshop CS and CS2. You can download them for free from macworld.com/0762. Once you've downloaded and expanded the SIT file, drag the Action Pack item into your Adobe Photoshop folder. When you launch Automator, you should see an entry for Photoshop in the Library pane.

Build Your Workflow

Now that you've added Photoshop actions to Automator, you can string them together to accomplish any number of tasks. For example, say you've shot a few dozen pictures with your digital camera and you want to upload them to your Web gallery for viewing. This means resizing them based on their orientation (landscape or portrait), applying basic image correction, adding copyright information, and compressing the files (see "Do My Bidding").

Here's how you would build this basic workflow in Automator:

Step 1: Filter Your Files Before you resize a group of images, you need to separate the horizontal (landscape) shots from the vertical (portrait) ones so you can apply different settings to each. In Automator's Library pane, choose Applications: Photoshop CS (or Photoshop CS2, depending on the version you installed). In the Action pane, select the Filter From Orientation action and drag it to the Workflow pane. Set the action's pop-up menu to Landscape.

By the way, orientation isn't the only option for filtering your images. You can filter by aspect ratio, color mode, size, and more. You can even combine these filters to create more-refined filters—for example, to choose only landscape gray-scale images shot at an ISO setting of 100 (use Filter From Orientation, then Filter By Color Mode, and then Filter From EXIF).

Select the Save Document List Before Filtering option to save a copy of the original list of files. This will let you return to the original list later so you can refilter for portrait-oriented documents. Now select None from the Close pop-up menu. This will leave all of the documents open in Photoshop, saving time.

Do My Bidding
This Automator workflow sorts images, resizes them, and then applies corrections at the click of a button.

Name That Photo Remove any doubt about who took that photo—watermark it with your name.

idea to give yourself a little ownership protection. Many file formats, including JPEG, let you include special bits of text called *IPTC tags* within files.

Drag the Edit IPTC Info action to the bottom of your workflow and put your name in the Author field. Set Copyright Status to Copyrighted, and enter `Copyright ©` `2005` and your name in the Copyright Notice field. You might also consider adding your Web site's URL in the © Info URL field, to ensure that people can find you.

Select Append to save changes only to the tags you've modified. (Leaving Replace selected will overwrite *all* existing tags.)

Step 8: Set the File Type Now you're ready to save your resized images. Drag the Save As JPEG action to the workflow. To keep the file size small, enter 7 in the Quality field. Click on the Destination button and choose a folder to save your images into. Open the Option menu and select Show Action When Run. When you run the workflow, it will stop at this action and give you the opportunity to enter a new file name and destination. If you leave the New Name field blank, the files will maintain their original file names. Alternatively, you can enter a new name, and the action will give all of the resulting images that name plus a sequential number. Finally, put a check mark in the Close After Saving check box.

Step 2: Resize the Images Next, in the Action pane, select the Resize Image action and drag it to the Workflow pane, beneath the Filter From Orientation action. Make sure the Units menu is set to Pixels. Then enter 800 in the Width field and 72 in the Resolution field. Select the Resize Proportionally option to have Photoshop automatically calculate an appropriate height for your image.

Step 3: Unfilter the Batch Now that you've resized your landscape images, you'll want to turn your attention to the portrait ones. To return to the original batch of images, drag an Unfilter action to the bottom of your workflow.

Step 4: Filter for Portrait and Resize Repeat steps one and two—this time setting the Filter From Orientation pop-up menu to Portrait. Again, select the Save Document List Before Filtering option and set the Close menu to None. In the new Resize Image action, enter 600 in the Height field and 72 in the Resolution field, and select Resize Proportionally. Now you have a workflow that resizes images to dimensions appropriate to their orientation.

Step 5: Unfilter Again To ensure that the rest of the workflow will apply to your entire batch of images—not just to the portrait shots—drag another Unfilter action to the bottom of your workflow.

Step 6: Apply Correction If the images came straight from your camera, you might want to improve their contrast with Photoshop's Auto Levels command. Drag the Auto Levels action to the end of the workflow.

Step 7: Add Copyright Info When you put your images on the Web, it's a good

Save Your Workflow

Once you've finished your workflow, choose Save As from the File menu. Set File Format to Application. Then give your Automator workflow a name such as Prep For Web and click on Save. You should see a new application icon on your desktop. Your workflow will process any images you drop onto this application.

Note that Automator doesn't take each image and run it through the entire

workflow. Rather, Automator performs each action on the entire batch before moving on to the next action. If you're processing a lot of images, this can cause your machine to bog down a bit. If that happens, process your images in smaller batches.

Actions within Actions

But what if you want to automate a Photoshop process that isn't included in the list of Automator actions? For example, you might want to add a watermark that stamps your name onto the processed images. In this case, you can call on Photoshop's own automation tools.

Open Photoshop and create a new 800-by-600-pixel document. Open the Actions palette and create a new action called Add Watermark. Save the action into the Default Actions set. Next, click on Record. Select the type tool, choose a color, type your name on the bottom edge of the document, flatten the image, and stop recording (see "Name That Photo").

Return to the previous Automator workflow. Drag a Do Action action into your workflow, just below the Auto Levels action. In the Do Action field, enter the name of the action you just created in Photoshop. This field is case sensitive, so be sure to type the action's name exactly as it appears in Photoshop's Actions palette. When you run the action, you should end up with resized images emblazoned with your Photoshop-generated watermark.

Access Other Applications

One of Automator's most useful features is its ability to control multiple applications within a single workflow. For instance, now that you've resized your images, why not have Automator transfer them to your Web server for you?

If you happen to use Panic's Transmit 3 ($30; www.panic.com) for your FTP chores, you can set its Automator actions to do the trick. If you don't, OS X has a built-in FTP client—though you can normally access it only from the command line. To access it from within Automator, download Peter Dekkers's free Upload To FTP action (macworld.com/0763), which lets you transfer files via Automator.

Once you've downloaded the action, restart Automator and open your saved workflow. Scroll to the Save As JPEG action at the end of the workflow and select the Pass Saved Files Instead Of Originals option. This tells Automator to pass your new JPEG files, rather than your originals, to the next action.

Drag the Upload To FTP action to the bottom of the workflow and configure it with your server settings.

Now, at the click of your mouse, you can take your photos from the camera, run them through a basic editing routine, and plop them onto your server. If only Automator could also brew coffee, it would be perfect. □

Frequent *Macworld* contributor BEN LONG is working on an Automator action that will write these articles for him.

Just Scratching the Surface

In theory, my 42 Photoshop actions can be organized in 1.405 x 10^{59} combinations. Here are just a couple of the possibilities:

Organize After a Shoot Using the Rename From EXIF action, you can quickly rename an entire batch of photos using the data recorded by your camera—including date, time, ISO speed, and more. Then add the Finder's Copy Finder Items action to the end of your workflow to back up your new files automatically to another volume.

Prep for Video If you regularly use Photoshop files in a DV workflow, the Change Pixel Aspect Ratio action will let you set an image's pixels to a rectangular aspect ratio. The NTSC Colors action will make your images NTSC-safe. The Deinterlace action will clean up stills that you've grabbed from video for use elsewhere.

MOBILE MAC

Web Apps Work Anywhere

Most of us have used a Web-based e-mail service to check our inboxes. But such services aren't the only Web-based applications out there—others offer credible alternatives to iPhoto, iSync, and even (for reading RSS feeds and maintaining lists of bookmarks) Safari itself.

No, using a Web-based application isn't the same as using a native Mac app. But Web programs do have one distinct advantage: they're available from any computer connected to the Net, whether that system (Mac or PC) is at a friend's house, an office, or an Internet café.

And your files are available, too: imagine that you've bookmarked a Web page on your home Mac, and you find yourself stuck at the office, unable to remember that URL. If you'd stored it using a Web-based bookmark app, you could just log in and find it.

If you own more than one Mac, Web-based apps are an inexpensive, easy way to keep your information in sync. The more you migrate your programs and data to the Web, the less you'll depend on any one computer.

And Web apps offer a bonus: the best of them can help you find out what other users are doing with similar information. They add a social dimension to computing that stand-alone Macs just can't match.

Bookmarks to Go

Using .Mac and iSync, you can already save your Safari bookmarks online, along with your Address Book contacts. To see those bookmarks (in a pop-up window) on any Mac or PC, just go to www.mac.com and click on Bookmarks in the top navigation bar. But there's another bookmark application—the free del.icio.us (that's the URL: del.icio.us)—that takes online bookmarking to a whole new level.

The difference between del.icio.us and .Mac's bookmark syncing seems minor at first: del.icio.us lets you assign one or more keyword tags to each bookmark. But those tags are the crux of the app. In addition to helping you organize your own favorite links, they can help you find the favorites of other del.icio.us users.

For example, if you want to see sites other del.icio.us users have tagged with the keyword *Apple* or *Mac*, you could point your browser to del.icio.us/tag/apple or del.icio.us/tag/mac. So instead of having a mechanical search engine spit out a list of sites with the word *Apple* or *Mac* in their text, you can let other human beings tell you which sites they think are relevant.

These social connections go deeper still: when you add a bookmark to del.icio.us, it will tell you how many other users bookmarked the same page. It will also allow you to flip through their link collections. Find a user who shares your interests, and you're sure to find plenty of new and interesting Web sites.

At the moment, you can't import bookmarks into del.icio.us as simply as you can into .Mac and iSync. But a del.icio.us bookmarklet is available for Safari, Mozilla's Firefox, Opera Software's Opera, and Microsoft's Internet Explorer (see del.icio.us/doc/about for details). After you've installed it, you can click on it to add the current Web page to your del.icio.us collection.

While the spartan, no-nonsense design of the del.icio.us Web site keeps things running fast, Mac users accustomed to a more polished interface should test-drive Sci-Fi Hi-Fi's Cocoalicious (free; macworld.com/0821). The Mac-only Cocoalicious puts an iTunes-esque front end on the del.icio.us engine, making bookmark organization even simpler.

RSS fans, take note: if you use Ranchero Software's NetNewsWire or NetNewsWire Lite to read your RSS feeds, go to the program's Preferences menu, click

More Than a Spider Instead of relying on mechanical search engines, del.icio.us uses tags applied by real human beings to find relevant Web links.

RSS on the Road

Even if you're away from your Mac, you can use Bloglines to keep up-to-date on all your RSS feeds—and you can import them from your current RSS reader.

on the Weblog Editor button, and select Cocoalicious from the drop-down menu. The next time you come across a good link in one of your RSS feeds, click on the Post To Weblog button at the top of the NetNewsWire Lite window to send the URL to Cocoalicious and, from there, to your fellow del.icio.us users.

RSS for Road Warriors

Speaking of RSS: having a customized stream of Web news delivered directly to your Mac is undeniably convenient. Thanks to Safari's built-in RSS support in OS X Tiger, more Mac users are collecting and reading RSS feeds than ever before.

One big reason RSS is so popular is that it makes keeping track of which stories you've read and which you haven't easy. Once you've read a story, it's marked as read. But what if you're a mobile user who hops from computer to computer? Your RSS reader can't keep up with where you've been or what you've read. Browsing RSS feeds on the Web eliminates that headache—and has a few other benefits.

Bloglines (bloglines.com) is one of the best online RSS tools around, and it's free. It lets you follow your favorite news feeds within a two-panel interface similar to that of stand-alone RSS readers.

While you can subscribe to feeds directly, Bloglines also makes it simple to import feeds from your current news reader—as long as your RSS reader exports data in the OPML format. In NetNewsWire Lite, for example, you go to File: Export Subscriptions, select a name and destination for your export file, and choose a format for the export—OPML (With Groups) will preserve whatever groupings you've created to organize your feeds. Then click on Save.

Back at Bloglines, go to the My Feeds tab, click on Edit, and then click on the Import Subscriptions link. In the pane on the right, fill in the path of your exported OPML file and click on the Import button. (Unfortunately, Safari doesn't export in OPML. But

if you're comfortable using Terminal, you can use a shell script at macworld.com/0820 to export your Safari feeds.)

Like del.icio.us, Bloglines is more than just a convenient way to access an application when you're away from your Mac. It, too, has a social aspect to it. It will point out the day's most-linked-to topics on the Web. It'll also let you share your subscriptions with other people and allow you to check out feeds other users are subscribed to and the Web sites they enjoy. Again, chances are you'll stumble across something good.

The Online Shoebox

While the photo-sharing site Flickr (flickr.com) doesn't let you edit your photos the way iPhoto does, it can help you organize, save, and share even the heftiest photo collection. In fact, Flickr is better than iPhoto in a couple of ways.

First of all, because it's Web-based, multiple users can share a single account (a basic one is free). That makes it easy to trade and organize photos between, say, the family G5 at home and an iBook in a faraway dorm.

Second, like del.icio.us and Bloglines, Flickr is inherently social, thanks to keyword tagging. For families sharing a Flickr collection, tags are an easy way to find photos featuring, say, *baby* visiting *grandma*. If you make a picture public, other Flickr users can search against your tags, comment on your pictures, or even add tags of their own.

Why would you want to search someone else's snapshots? Say you're planning a trip to Rome. You could go to Flickr, search for the tag *Rome*, and get some ideas for sites you might want to see. Even better, you might get some travel tips in the attached comments. That's what makes Flickr so much more than a way to share snapshots.

With its Uploadr companion app for OS X, Flickr also makes it easy to upload photos via the Web or e-mail (the latter is perfect for camera phones, since it bypasses the tedium of downloading images to your Mac first). But Flickr actually works best in conjunction with iPhoto. The free Flickr Export Plugin for iPhoto, developed by Fraser Speirs, provides the missing link between both applications, helping you copy your iPhoto library to the Web. (See "Share Your Photos on the Web" at macworld.com/0818 for details.)

Another way to quickly add a photo to Flickr is the Flidget Dashboard widget for Tiger (free; macworld .com/0819). It provides just enough of an interface for you to tag your photos and set their privacy level.

That integration between iPhoto and Flickr is how things should work: you can let your desktop apps do what they do best, while Web apps make your data available wherever you are, even if you're away from your Mac. Until we realize the dream of truly ubiquitous computing, Web apps will have to do. □

JASON COOK is a freelance writer in Cambridge, England.

GEEK FACTOR
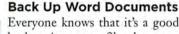
5 Workflows for Geeks

A robot programmed to do your bidding—who would pass that up? But many people think of Automator, Apple's newest Mac-automation tool, as a tool for beginners who are too scared to learn how to use AppleScript. In fact, Automator can be quite powerful—especially when combined with other OS X features, such as Unix commands, image handling, and even AppleScripts.

Here are five useful and fun Automator workflows bound to make you the envy of all the geeks in your town.

Just open Automator (in your Applications folder) to get started. Click on the library item specified at the beginning of each step, and then drag the action that follows from the Action list into the Workflow pane below any previous actions. (The relevant library items and actions for each step are indicated in bold.)

If you'd like to save a workflow, choose File: Save. At that point, if you want to make the workflow a double-clickable Finder icon (so you can run it using iCal's alarm feature, for example), choose Application from the File Format pop-up menu in the Save dialog box.

Back Up Word Documents

Everyone knows that it's a good idea to back up important files, but many people forget to do it. This workflow makes backing up a cinch; when you run it, all the recently changed Microsoft Word files in your Documents folder get compressed and then burned onto a CD. Run the workflow every week, and you're covered—you'll never lose more than a few days' worth of Word work.

1. Finder: Find Finder Items This action looks for all the files on your hard drive that match certain criteria. First, click on the Where pop-up menu and select Documents, so the action will search only in your Documents folder. Next, choose Date Modified from the Whose pop-up menu (lower left), and choose This Week from the pop-up menu to its right. Click on the plus sign (+) to add another criterion. In the new row of pop-up menus that appears, set the first menu to Extension. Set the next to Is Equal To and then type doc in the text field beside that menu. The action will now find files in your Documents folder that changed this week *and* that are Microsoft Word files.

2. Finder: Create Archive When you run your workflow, this action takes all the files found in step 1 and compresses them into a single ZIP file. Type a name such as Word files backup in the Save As field.

3. System: Burn A Disc This action puts the compressed file from step 2 onto its own blank CD (or DVD). Type a name such as Word Backup CD in the Disc Name field, and then select the Append Date option so the CD's name will indicate when you burned it.

4. Finder: Move To Trash This action moves the ZIP file created in step 2 to the Trash.

Other Ideas If you want this workflow to back up items other than Word files, just change the criteria in step 1; you can specify any file type you desire (HTML, for instance).

To make the workflow even more convenient, use iCal's alarm feature to schedule it to run automatically. To do this, save the workflow as an application, as described at the beginning of this article. In iCal, select File: New Event, select View: Show Info, click on the Alarm pop-up menu, and select Open File. In the dialog box that appears, select the workflow.

Get a Profile of Your Mac

Do all the Macs in your classroom have the latest version of OS X? Do you find yourself frequently on the phone with an Apple tech-support wiz, searching desperately for your computer's RAM information? Although OS X includes the System Profiler utility for getting information about your Mac, it's hard to see all its statistics at once. This workflow fetches all the profile information from your Mac and turns it into a text file.

1. System: System Profile Click on Options and turn on Show Action When Run. When you run the

Get More Action(s)

Automator's built-in actions let you do everything from opening Finder items to activating fonts. But as you explore its limits, you'll probably wish you could do more. Here's where to look when you can't find the action you seek. Some sites offer both actions and complete workflows, almost all of which are free:

> **Apple's Automator page** (macworld.com/0827)
> **Automator World** (macworld.com/0831)
> **MacScripter** (automatoractions.com)
> **Nyhthawk Productions' Automator site** (automator.us)

Typically, new actions will automatically install in the correct place. In some cases, however, you'll need to drag the file into */your user folder*/Library/Automator. If you don't see an Automator folder, create it yourself.—SCHOLLE SAWYER McFARLAND

workflow, it will ask you which parts of your computer you'd like to have information about—software, printers, AirPort, and so on.

2. TextEdit: Filter Paragraphs Step 1 produces one big chunk of text filled with all the profile information you request—but that text contains a lot of blank lines. To strip them out, set the action's Return Paragraphs That pop-up menu to Are Not Empty.

3. TextEdit: New Text File This action saves the text from step 2 into its own file. Type `Profile.txt` in the Save As field, and then choose your Documents folder from the Where pop-up menu.

4. Finder: Open Finder Items This action opens the file for your inspection. Leave the Open With pop-up menu set to Default Application to open the file in TextEdit, or, depending on your needs, set it to another application that can read plain text, such as Microsoft Word or Apple Safari.

Get Your Man The Unix command Ⓐ to the left of the divider bar (or pipe) gets the manual, or man, page for whichever Unix command you specify. The command to the right of the pipe formats the manual page for display in TextEdit.

Other Ideas When you're about to call Apple for tech support, print out the profile this action produces so you can refer to it. If you run a computer lab, use the text file each machine produces to compare system statistics.

Make Man Pages More Manageable

When studying the fine points of `grep` or `uptime`, the first place Unix aces turn for help is the manual pages. This workflow spares you the trouble of opening Terminal and straining your eyes to read its unhelpful text formatting. Instead, you can open any man page in TextEdit and print or save the document for easy reference.

1. TextEdit: Ask For Text When you run the workflow, this action lets you specify the man page you want to see. In the Question field, type `What Unix command would you like to learn about today?` and select the Require An Answer option.

2. Automator: Run Shell Script Use this action to run a Unix command that retrieves and formats the man page for TextEdit. Choose As Arguments from the Pass Input pop-up menu. Then type the command `man "$@" | col -b` in the big text field Ⓐ (see "Get Your Man").

3. TextEdit: New TextEdit Document This action opens the man page in TextEdit.

Other Ideas Save a man page you use often (for a programming language such as Perl or Ruby, say) as a text file, and keep it in your Dock for easy access.

Set Up a Surveillance Camera

If you have a recent digital-camera model, there's a good chance your Mac can make it take pictures on cue. (The camera must be able to take photos while it's plugged in via USB. The first action in this workflow will tell you if yours can't.) This workflow will tell the camera to take a picture every 10 seconds, shrink it down to a small JPEG, and repeat until you tell it to stop. This can be useful in many situations—when you're trying to figure out what your dog does while you're away from home, for example, or if you'd like to make a time-lapse video without buying add-on software.

1. Image Capture: Take Picture This action tells the camera to take a picture. If your camera's tight on space, select the Delete Image From Camera After Download option. If you have a capacious card in your camera, you might as well keep this option off so you have all your photos on both your camera and your Mac.

Note that this action automatically stores the snapshots in */your user folder*/Pictures. If you'd like to store the pics somewhere else, add the Finder: Move Finder Items action to the workflow, and indicate where you'd like to save them.

2. Preview: Change Type Of Images This action gives you the opportunity to convert the images to a space-saving format, which is especially useful if your camera shoots in TIFF or Raw format. When you insert this action in your workflow, a dialog box appears asking whether you'd like to add an action that will copy your images before you change them. Click on Don't Add so you don't end up making two copies of every picture. Then, for maximum space efficiency, choose JPEG 2000 from the To Type pop-up menu if your image editor supports that format—Apple Preview and Adobe Photoshop and Photoshop Elements do. (If you're using Photoshop, you might need a plug-in from the installation disk.) Otherwise, just choose JPEG.

3. Preview: Scale Images This action shrinks each picture's dimensions for even more space savings. You'll see the same warning dialog box when you insert this action in your workflow. Click on Don't Add again. Unless you need to see each picture at a high resolution, the default of 480 pixels is probably big enough.

4. Automator: Pause Add this action to make Automator pause before taking the next picture. Type 10 in the text field to make the workflow stop for 10 seconds. Before you go to the next action, save the workflow and give it a name.

5. Automator: Run Workflow To make the workflow take another picture, you need to make it repeat. This action starts it over again. From the Workflow pop-up menu, choose Other and then select the workflow you saved in step 4. Now save your workflow *again*.

To test your new workflow, click on the Run button at the top of the window. When you're done taking pictures, click on Stop at the top of the Automator window.

Other Ideas Once you stop the workflow, drag the pictures into iMovie to make a time-delayed movie.

Put a Stock Quote on Your Desktop

Your desktop can be a huge billboard for anything you like—even your favorite stock's price, in the case of this workflow. If your screen is big enough, you should be able to see the price from across the room.

1. Automator: Run Web Service Fill in the fields as shown in "Take Stock" **B**, but substitute your favorite stock's ticker symbol for AAPL (Apple's ticker symbol). When the workflow runs, it'll go out on the Internet to get that stock's price.

2. TextEdit: New TextEdit Document This action puts the stock's current price into its own TextEdit document.

3. Automator: Run AppleScript Type the AppleScript shown in the Run AppleScript field **C**. When

you run the workflow, these commands will resize the TextEdit document to fill the screen, and zoom in on the text inside it.

4. Finder: Get Specified Finder Items For this step, you need a PNG image you don't care about. Press ⌘-shift-3 to take a picture of your desktop. Find that file, which will be named something like Picture 1, and rename it Desktop_Picture.png. In Automator, click on the plus sign (+) in the Get Specified Finder Items action and select Desktop_Picture.png in the dialog box that appears. Automator will overwrite this picture with a screenshot of the TextEdit document from step 3. (This seems like a weird step, but it ensures that the *next* action will know where to save your screenshot.)

5. System: Take Screenshot This action takes a full-screen picture—including the TextEdit document that's currently showing. Then the action saves the screenshot to the location you specified in step 4. (Ignore the fact that the Save To pop-up menu says Clipboard—that's a bug.)

6. Finder: Set the Desktop Picture This final action takes a picture of your stock's price and makes it your desktop picture. Close any open windows (or press F11) to reveal it.

Other Ideas Change TextEdit's default font to something that looks more interesting—so the stock quote appears in the Rockwell typeface, for example. (Note: If this workflow appears to fail after you use it a few times, log out and then log back in again.) ▢

GO TO WEB:
If you don't want to type, then let us automate part of the process for you. You can download all the workflows discussed in this article at macworld.com/0832.

ADAM GOLDSTEIN is the author of *AppleScript: The Missing Manual* (O'Reilly, 2005) and a coauthor of *Switching to the Mac: The Missing Manual, Tiger Edition* (O'Reilly, 2005).

HELP DESK

Mac OS X Hints

The Insiders' Tips You Won't Get from Apple

Assign Custom Icons More Quickly

OS X lets you create custom icons for your files and folders, which is not only fun but also useful—you can, for instance, place a custom icon on all of a project's folders to make them easy to identify at a glance.

You can freely download countless types of icons (see "Indy Icons") from sites such as The Iconfactory (www.iconfactory.com) and InterfaceLift (macworld .com/0804). Or you can use an icon editor, such as Uncommonplace's Icon Machine ($25; macworld .com/0805) or Mscape Software's Iconographer ($15; macworld.com/0806), to create your own.

The problem is that assigning custom icons is rather tedious. First, you have to click on the file with the icon you want and choose File: Get Info (⌘-I) in the Finder. Next, you click on the small icon in the Get Info window and copy it (⌘-C). Then you click on the destination file, open its Get Info window, and paste the icon (⌘-V) into the right spot. That's a lot of clicks, especially if you're changing multiple icons.

So here's a time-saver (for those of you running OS X 10.3.3 or later): don't use the Get Info window when you're copying the custom icon. Instead, just select the source item in the Finder and press ⌘-C to copy the icon. Now select the destination, press ⌘-I

Indy Icons By using custom icons, such as this set from The Iconfactory, you can give your files and folders a look that makes them easy to spot among the background clutter.

to open the Get Info window, click on the small icon image, and press ⌘-V to paste.

Play to Spotlight's Strengths

Yes, Spotlight can dig out the proverbial needle from a haystack (that is, a file), but it can also find and open applications on your hard drive with just a few keystrokes. Want to launch a somewhat-buried

🔍 CHECK IT OUT

Save Time When Scrolling

You probably scroll through windows and documents hundreds of times a day and use the scroll bar and scroll arrows much of the time to do it. Here are some tricks to make that easier.

First, if you use the scroll arrows at the bottom of the scroll bars to page through long documents, you can save yourself a mouse click when you want to reverse direction. Scroll bar arrows in OS X are sensitive to mouseover actions if another scroll arrow has already been activated. That means if you click and hold one scroll arrow, you can then move your mouse onto the opposite-direction arrow to immediately reverse. Before OS X, you had to first release the mouse button, move to the opposite arrow, click and hold that arrow, and wait for scrolling to commence again.

The scroll arrows need to appear together for this to be useful—there's not much point to holding the mouse button down while you move the mouse pointer 10 inches down your screen. OS X does this by default, but the arrows appear only at the bottom of the scroll bar

area, which isn't a lot of help if your pointer is at the top. With just a tiny bit of work in Terminal (/Applications/Utilities), though, you can have the best of both worlds—double scroll arrows at both the bottom *and* the top of the scroll bar.

Launch Terminal and enter the following command:

```
defaults write "Apple Global Domain"
AppleScrollBarVariant DoubleBoth
```

Press return to execute the command, and you'll have enabled double arrows at both ends of the scroll bar. Note that if you'd rather not use Terminal, you can use Marcel Bresink's freeware program TinkerTool (macworld .com/0810). Any newly launched programs will display two sets of arrows, but you must quit and relaunch any programs that were running for the change to take effect (or you could simply log out and log in).

If you ever tire of this feature, the easiest way to revert is to go to the Appearance preference pane, set the Place Scroll Bars option to At Top And Bottom, and then change the Place Scroll Bars option back to Together.

Pump Up the Volume When you need a little extra volume, QuickTime's preview player lets you "turn it up to 11." On the left, you see a clip with the normal volume-control slider. On the right, the same clip is playing with an enhanced volume slider.

application such as Disk Utility? Press ⌘-space, type `Disk Uti`, and wait a bit, and you'll soon see the Disk Utility application at the top of the results list. Click on it, and Disk Utility will open.

Unfortunately, the "wait a bit" portion of the process can get old quickly. If you have a big hard drive, you might wait several seconds, during which time Spotlight bores you by spitting out irrelevant results. That's where third-party launchers can help. The three best-known programs are Objective Development's LaunchBar ($20 [for home use]; macworld.com/0807), Peter Maurer's Butler ($18; macworld.com/0808), and Blacktree's Quicksilver (free; macworld.com/0809). These programs all work in a similar manner: you type a keyboard shortcut, enter a few letters of the application or document's name, and press return to open the highlighted item (or use the mouse to choose it from a list of results). Unlike with Spotlight, these searches happen nearly instantly—they don't try to maintain a live index of all files and their contents on your hard drive—so there's no annoying wait.

What these utilities generally don't do as well is look inside files for bits of data (some of them don't do this at all). In an ideal world then, you'd use Spotlight to search for information within files, and one of the launcher applications to open files and documents. (Make sure to remap any conflicting keyboard shortcuts—LaunchBar and Spotlight, for example, use the same one.)

No problem. After you've picked and downloaded your launch application, open the Spotlight preference pane, choose the Search Results tab, and deselect both the Applications and System Preferences options. Now Spotlight will no longer search for applications or system preference panes. What's more, you should see better performance when you use Spotlight for other searches.

Give QuickTime Previews a Volume Boost
You're probably aware that the Finder can preview QuickTime audio and video files—just click once on a QuickTime clip in column-view mode, and you'll

see the movie appear in the Preview column, complete with QuickTime controller for easy playback.

But what do you do for those times when a video's audio is too quiet to hear? You could import the clip into iMovie and increase the volume, or reach over and crank up your speakers. But there's a simpler method: hold down the shift key before clicking on the volume-level icon. When you do, QuickTime gives the volume slider more range than it usually has (see "Pump Up the Volume"). (Bonus hint: ⌘-click on the left-facing arrow at the end of the progress slider to see the video play backward.) □

Senior Editor ROB GRIFFITHS is the author of *Mac OS X Power Hound, Panther Edition* (O'Reilly, 2004), and runs the Mac OS X Hints Web site (www.macosxhints.com).

Watch System Activity in Real Time

Have you ever wanted more detail about what your system is doing? Perhaps your hard drive thrashes or a program crashes every time you run it. Perhaps you'd like to see which files get modified when you change a program's settings. Although there are no foolproof methods for figuring this stuff out, one option is the Unix command `fs_usage`.

The `fs_usage` command reports file system activity in real time—in other words, it creates output as things happen. When launched, it starts filling your Terminal screen with output, unless you reroute the output to a text file. Here's an example of what might appear:

```
08:25:15 getattrlist
/Applications/iChat.app/Contents/MacOS/iChat 0.000044
MicrosoftMouse
```

In the first column, you see the time the system activity occurred. Next, you see the name of the file system command (in this case, `getattrlist`). (For descriptions of the various commands, go to macworld.com/0813 and scroll down to Section 2.) Then you see the file involved (often this space is blank), followed by the amount of time it took the command to execute (`0.000044`). Last, you see the name of the process that generated the activity. The two most interesting columns are the file involved and the name of the process. Those two values are what may help you figure out what's happening on your system.

Here's how I use `fs_usage` to track down a problem:

1. Open Terminal and type `sudo fs_usage -w > ~/Desktop/usage.txt`. You must run `fs_usage` as root; that's why you need to type `sudo`. You'll be asked for an administrator password before you can proceed. This command redirects the `fs_usage` output to a file, making it easy to search through when you're done.

2. Perform the activity you'd like to investigate—launch the app that crashes, use your machine until you hear the disk churn, and so on.

3. After you've observed the behavior you were looking for, switch back to Terminal and press control-C to terminate `fs_usage`.

4. Switch to your desktop, and use a text editor to open the file usage.txt, which may be somewhat large. If you're looking for something related to an application, use your text editor's search feature to find that program's name. If you're trying to find the source of a lot of disk activity, look for a whole bunch of `read` and `write` entries in the output. Then look at the last column to see which program created them. If you want to find a preferences file that a program has modified, search for both the program's name and *.plist*.

Basically, `fs_usage` can help you do detective work. You get a detailed peek inside your system—what you see depends on what you do while the utility monitors your system. Type `man fs_usage` for more details.

Mac 911

Solutions to Your Most Vexing Mac Problems

Media Meltdowns

I have converted many old VHS tapes to DVD-R, using name-brand media. When I tried to view one of my DVDs 18 months later, it stalled, skipped, and stopped dead in its tracks. I watched the DVD right after burning it, and it played perfectly. I thought that once I made a successful DVD, it would last basically forever. What's going on?

Mike Volpe

Although the folks who manufacture DVDs claim that the discs can last for years, they base that claim on lab tests designed to simulate the aging process. When it comes to the real world, only time will tell.

Factors that can contribute to failing media are poor quality (not all DVDs are created equal), humidity, sunlight, and abuse. But you *can* lessen the impact of these factors.

To begin with, buy good media. Those in the know suggest that Taiyo Yuden's products are reliable and stable when treated well. A Google search will turn up American companies that sell this Japanese brand. Next, carefully store your discs in an environment that's as moisture- and sunlight-free as you can find—for example, in an airtight container with a silica gel pack, tucked away in a cupboard. And you should, of course, put discs back in their cases rather than leaving them atop a hot AV amplifier or letting your five-year-old use them as Frisbees.

Prone to Clone There's no need to worry about iPod accidents—you can use Carbon Copy Cloner to make a perfect copy of your data and restore your iPod for next to nothing.

Your tale of woe also demonstrates that one should never rely on a single backup to a particular medium. The more copies you make, and the more different media you use, the more likely it is that you'll be able to recover your data down the road.

iPod Insurance

I know that iPods suffer glitches with some frequency, and reloading all my tunes is quite a tedious and frustrating process. Is there an easy way to store a perfect clone that I can put back on the iPod in case of emergency?

Bob Marketos

Mike Bombich's Carbon Copy Cloner ($5; www .bombich.com) can do the job. Connect your iPod to your Mac and launch Carbon Copy Cloner. From the Source Disk pop-up menu, select your iPod. From the Target Disk pop-up menu, choose the hard drive where you want to store your backup (see "Prone to Clone"). Click on the Preferences button; in the sheet that appears, enable the Create A Disk Image On Target option. Click on Save, click on the lock icon next to the Clone button, enter your administrator password in the resulting sheet, and click on OK

PHOTOGRAPH COURTESY OF APPLE

🖐 TIP OF THE MONTH

Wake the Sleeping Tiger

Before Tiger, you could configure OS X's security settings to require a password when the computer woke from sleep or from a screen saver. Unfortunately, that meant the computer's other legitimate users couldn't log in without that password. Tiger offers a workaround.

First, go to the Security preference pane and select the Require Password To Wake This Computer From Sleep Or Screen Saver option. Then go to the Accounts preference pane. If necessary, click on the lock at the bottom of the window and enter an administrator password. Click on Login Options and select the Enable Fast User Switching option. Now, when the computer wakes up, the Authenticate dialog box includes a Switch User button. Click on this button to go to the login window, where other users can enter an account name and password to use the Mac.

Stephen Holland

Have Tools, Will Travel

Having recently spent several weeks on the road talking up Macs and the voodoo they do, I thought I'd cover the troubleshooting tools and utilities I pack when traveling. When my bags pass through airport security, here's what shows up on the X-ray machine:

> **iPod** My iPod pulls double-duty when I travel—it not only holds enough music to get me through a couple of long flights, but also carries a bootable version of OS X, any applications and files I need for my trip, and the troubleshooting utilities required to fix my PowerBook if things go wrong. Creating a bootable iPod is no big deal. Your iPod should be 10GB or larger in order to hold a full installation of OS X and the files you need. To install OS X on the iPod, just treat it like any FireWire drive and follow the usual OS X installation procedure.

> **Bootable Utility and OS Discs** I always travel with bootable Disk Warrior and Drive Genius discs, as well as a Tiger installation DVD. But since I don't dare risk damaging those discs while on the road, I bring copies. My original Disk Warrior disc isn't compatible with Tiger anyway, so I've downloaded the free DiskWarrior 3.0.3 CD Update (macworld.com/0759), which allows me to create a Tiger-compatible bootable copy of the Disk Warrior CD. As for the Drive Genius and OS X discs, I use Apple's Disk Utility to burn bootable copies.

To do so, insert the disc you want to copy, launch Disk Utility (/Applications/Utilities), select the disc in the left side of the Disk Utility window, and choose File: New: Disk Image From *name of disc,* substituting the name of the disc you've selected. In the Convert Image dialog box that appears, choose DVD/CD Master from the Image Format pop-up menu and None from the Encryption pop-up menu, and then click on Save.

Once you've created the image, select it in the left side of the Disk Utility window, insert a blank disc of the appropriate type (a CD-R if the original disc was a CD, for example), and click on the Burn button at the top of the window. In the sheet that appears, click on Burn again. When the disc is complete, it should contain an exact copy of the original, one that's capable of booting your Mac.

> **Cables** The beautiful freedom of wireless networks hasn't yet reached much of the world, so my gear bag includes cables. Specifically, I carry a 6-foot Ethernet cable, a phone cable, two USB cables (one for standard peripherals and another with the kind of mini USB connector routinely found on digital cameras), and a 6-foot FireWire cable (helpful when I need to link my PowerBook and another Mac via FireWire Target Disk mode).

to dismiss the sheet. Click on the Clone button, and the program will begin cloning everything on the iPod to a disk image on the target drive.

If you need to restore this backup to your iPod, first erase the iPod by installing the latest iPod Updater (download it from macworld.com/0764). Then, on the target drive, double-click on the disk image to mount it. (It will be called *name of iPod*.sparseimage, where *name of iPod* is the name of your iPod.) Launch Carbon Copy Cloner, choose the mounted disk image as the source, and choose the iPod as the target. Click on the lock icon again. Once you've entered the required password, click on the Clone button. Carbon Copy Cloner will copy the data stored in the disk image back to the iPod. Once the process is complete, your iPod will regain all the music and data it had when you first cloned it. Naturally, it won't have any music or data you've added since then.

Another alternative should be available by the time you read this: ProSoft Engineering's TuneTech ($59; www.prosofteng.com). ProSoft says that in addition to backing up your iPod, TuneTech will repair it, optimize its playlists so they're more efficient (meaning that your iPod's hard drive has to spin up less often, thus saving the battery charge), salvage some deleted files, shred data, duplicate the iPod's contents to another iPod, and scan the iPod's drive for damage.

Simpler Spotlight

Is there any way to make Spotlight search just document names and not the contents of the tens of thousands of files I have on my hard disk?
Ron Belisle
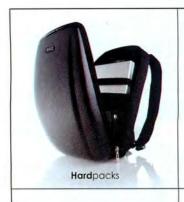
The best solution I've found is to enter your search term inside quotation marks. Although this doesn't narrow your search to just document names, it does narrow it to instances when those words appear together. For this reason, the closer you come to the file's full name, the more accurate your results will be.

For example, if I enter `Mac 911 invoice` with no quotation marks, Spotlight offers 151 matches (and would offer scads more if I used an e-mail client that Spotlight indexes, such as Apple's Mail). Some of these results contain those three magic words in the document's title. When I enter `"Mac 911 invoice"`, with quotation marks included, however, I see 30 results, all of which have the words *Mac 911 invoice* in the title. But note that this trick works only when you enter entire words. If I enter `"Mac 911 inv"`, for instance, I get bubkes. □

Senior Editor CHRISTOPHER BREEN is the author of *Secrets of the iPod,* fifth edition (Peachpit Press, 2005) and *The iPod and iTunes Pocket Guide* (Peachpit Press, 2005).

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Hot Stuff

iBALL

Many speakers are designed for use with the iPod, but they all require that you dock your iPod with the speakers (or, even worse, connect it via the headphone port). Oregon Scientific's $300 iBall, a transmitting iPod dock and charger paired with an 8-inch wireless receiving sphere that has three speakers inside, uses 2.4GHz adaptive frequency hopping to provide clear sound from up to 100 feet away (it works with any dockable iPod). The sphere includes a built-in remote for controlling your iPod from across a room (www.oregonscientific.com).—JONATHAN SEFF

OneLook

I've met plenty of digital dictionaries and thesauruses. But none of them has wooed me away from my trusty stack of reference books—until now. When I enter a term in OneLook, this elegantly simple (and free to use) Web site returns a brief definition and links to entries in several online dictionaries. Plus, it provides results from thesauruses, a rhyming dictionary, Wikipedia, and many other resources. If you enter a word OneLook can't find, it'll suggest words that are spelled similarly. Even better, the site lets you search using wild cards (a crossword aficionado's dream come true) and perform reverse lookups. OneLook isn't flashy or animated (and its ads are generally unobtrusive); it's as sedately helpful as a dictionary should be. I'm glad I've finally discovered it (www.onelook.com).—CHARLES PURDY

Graphire4

For aspiring digital artists, Wacom's latest entry-level tablet bundle means there's no excuse not to get in the game. The Graphire4 tablet has two programmable keys and a scroll wheel, the pen has 512 levels of pressure sensitivity, and the wireless three-button mouse has a rubberized grip. But the included software—Adobe Photoshop Elements 3, Corel Painter Essentials 2, and nik Color Efex Pro 2 GE—really makes the Graphire4 shine. The 4-by-5-inch USB model costs $100; the 6-by-8 USB model, $200; the 6-by-8 Bluetooth model, $250 (www.wacom.com).—JACKIE DOVE

MacSudoku 2.1

Sudoku, the fiendishly addictive number puzzle, became a hit in Japan 20 years ago. And now it's available on the Mac. *Using Rosborough Technology's $10 MacSudoku, I can do all the "what-if" work without all the scribbling and erasing. It lets me work on puzzles from my local paper (I enter the starting numbers by hand) or solve one of its built-in games (ranging in difficulty from Easy to Fiendish), using a simple interface. But it won't make the game *too* easy—you have to do the work yourself (www.rosboroughtech.com).—DAN MILLER

WHAT'S HOT

Brought to you by John Moltz of the Crazy Apple Rumors Site (www.crazyapplerumors.com)

1 During an interview, Motorola CEO Ed Zander says, "Screw the nano." *Zander's comments followed on the heels of his "To hell with printers" tirade and his "Damn toaster burned my bagel" keynote address.*

2 IDG World Expo cancels Boston's Macworld Conference & Expo. *As it turns out, a Mac trade show without Apple didn't really work very well after all.*

3 Microsoft announces desktop "gadgets"—small, easily accessible applications that are strikingly similar to Dashboard widgets. *Does Microsoft even have an R&D department?*

4 Apple quadruples storage space for .Mac accounts to one gigabyte. *The company explains that the world truly needs more pictures of your cat.*

DISC STAKKA

Do you hate those stacks of CD and DVD jewel cases piling up everywhere? Meet Imation's Disc Stakka, an automated carousel that stores your discs and retrieves them when you need them. You can store as many as 100 discs in a Stakka and stack as many as five units. So how do you find a disc when you need it? The $150 Disc Stakka includes OS X cataloging software and a USB connection, so you search by title, keyword, directory, or file name; when you find the disc you're looking for, the carousel delivers it to you (www.imation.com).—PETER COHEN