



# TEN THINGS TO KNOW ABOUT TIGER

INSIDE THE NEXT OS X: FAST FINDS, SAFARI 2.0,  
EASY AUTOMATION, 64-BIT APPS, AND MORE

# Macworld

The Mac Product Experts [www.macworld.com](http://www.macworld.com) | September 2004

# Top Mac Tips



Beat the Clock  
with **66** Time-Savers  
from the Experts

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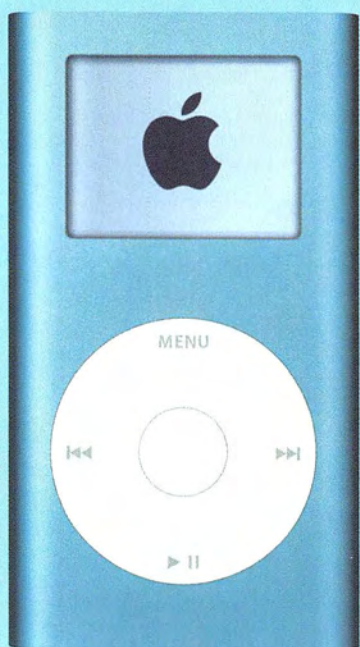
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# Macworld

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CHRISTOPHER BREEN

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Check out our editors' favorite developments of the month.

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# Typing Tiger

Ten years ago, if you had asked me what the biggest differences between Macs and PCs were, I would've praised the Mac's point-and-click mouse-driven interface and blasted the DOS command line lurking below Windows. These days, I'm not only embracing an operating system that has the Unix command line burbling beneath its surface, but also reveling in utilities that replace point, click, and drag with typing.

The old DOS interface was the stuff of nightmares because it required that regular people memorize intricate commands to get work done. The original Mac interface made all those commands accessible—on the menu bar and in its windows. If you clicked around enough, you could find almost every command a program offered.

## The Dark Side of the Mouse

Mousing around was an innovative improvement on typing text commands. Trouble is, yesterday's innovation is today's old news. As computers have become more complicated, getting by on just your wits and your mouse has become more difficult.

Ah, but innovation has rescued us once more. Some of the most lauded Mac utilities are tools that use indexing and clever databases to let you access all the stuff on your Mac with just a few keystrokes. I've been using Objective Development's LaunchBar ([www.obdev.at](http://www.obdev.at)), but fellow Mac users have also raved about BlackTree's Quicksilver (<http://blacktree.com/apps/quicksilver>) and Peter Maurer's Butler ([www.petermaurer.de](http://www.petermaurer.de)). Now, if I want to launch an application such as Now Up-to-Date & Contact, I don't have to search for it in the Finder. I just press  $\mathbb{X}$ -spacebar and enter nud. LaunchBar has scanned my Mac and knows the names of all my programs; it automatically figures out which program I mean, shows it to me, and opens it when I press return.

Programs like these can radically change the way you use your Mac. When I'm working on a Mac without LaunchBar, I want to pull my hair out.

## Find That Tiger

Tiger ships sometime in the first six months of 2005, and this forthcoming version of OS X comes with a number of features that we potentially can't live without (see "10 Things to Know about Tiger," page 50). Chief among them is Spotlight—a collection of technologies that should make it easier to find what you're looking for.

Spotlight isn't a replacement for LaunchBar, Quicksilver, and Butler, but it's very similar to those utilities. It quickly scans everything on your Mac, including the

contents and identity of your files, mail messages, contacts, and more to produce instantaneous search results.

A more radical element of Spotlight is the introduction of Smart Folders, which feature dynamic contents that change based on a set of criteria you define. For example, you could have a Smart Folder containing every file you've received via e-mail in the past week, with newer files automatically landing in the folder and files older than a week disappearing automatically. With Smart Folders and fast Spotlight searches, I suspect that we won't be using the Finder in the same way ever again. And I bet that in a couple of years' time, trying to find a file, e-mail message, or personal contact on a Mac running Panther will seem just as frustrating as I now find using a LaunchBar-free Mac.

## It's All about Time

Next to Spotlight, Tiger's most impressive new feature is Automator, a system of automating dull tasks that promises to be a gigantic productivity booster for Mac users. But if you can't wait for Automator to give you a productivity push, have no fear; in this issue, we've got dozens of tips and tricks that will help you work faster *right now*. In "Beat the Clock" (page 56), our team of Mac experts offers advice about streamlining the programs you use the most.

Our tips may not *radically* change the way you work with your Mac, but they should save you a lot of time—which you can spend pondering how much time Tiger will save you when it arrives next year. □

Surely our time-saving tips have bought you enough free time to send me an e-mail—about anything from Tiger to your favorite productivity-boosting utility. Let me hear from you, at [jason\\_snell@macworld.com](mailto:jason_snell@macworld.com), or visit [www.macworld.com/forums](http://www.macworld.com/forums).



**Quicksilver Is Golden** BlackTree's Quicksilver is among the new breed of utilities that radically change how Mac users work.

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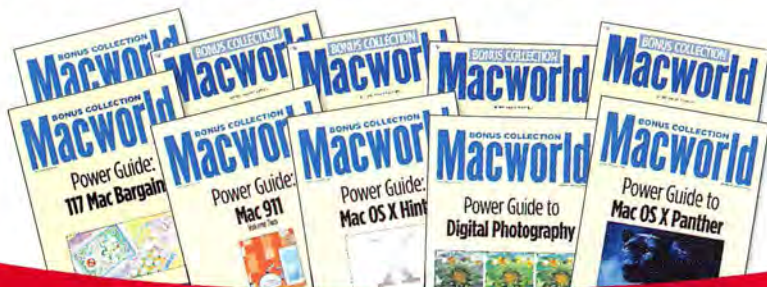
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# FEEDBACK

## Center of Attention

Apple's Digital Hub stood front and center in *Macworld's* June 2004 issue, in which we offered a comprehensive guide to digital music, tips on transferring videotapes to DVD, and more. The response we've gotten from readers indicates that the Digital Hub is also a focal point of their Mac lives. Those readers had plenty to say about building a Mac-based home stereo system, as well as shooting and editing pro-quality digital video. And discussions about the many ways to use a Mac are always music to our ears. □

## Can't Stop the Music

GARY QUIRING

The "Release the Sounds" section of your "Digital Music Superguide" (June 2004) failed to mention a downside to using Slim Device's Squeezebox. Due to legal restrictions on music available from the iTunes Music Store, Slim Device's Squeezebox cannot transmit any music you buy there. I have found a workaround for this issue: purchasing and using Rogue Amoeba's Nicecast ([www.rogueamoeba.com](http://www.rogueamoeba.com)). Nevertheless, your article should have stated this restriction.

JEFF AYLEN

Michael Gowan's "Release the Sounds" was informative and helpful, but his information on phono inputs is wrong. While the phono input does provide extra amplification, it is also correcting the RIAA curve, which attenuates low-frequency information and boosts high frequencies to get all the information in a given recording onto the vinyl disk. Your article's omission of the RIAA equalization curves is really of little concern, but I take issue with the incorrect and misleading statement "[phono] can't handle the full range of frequencies that modern music will try to cram through." There is more musical information in the grooves of any vinyl LP than in current digital formats, and that includes "the full range of frequencies" in modern music. I'm not saying that records are better or more perfect, but old or modern music recorded on LP will contain more musical information than current digital formats, and, all things being equal, will sound better. It is simply a gain and equalization mismatch between line-level components and phono stages that causes problems, not extra frequencies.

ALBERTO HAUFFEN

I think the article was great, but that photo spread was simply awful! Any audiophile would shout, "What a waste!" upon seeing the two sets of speakers, too close to each other, in that wall unit. And the awkward placement of the model in relation to all the speakers reflects a total disregard for enjoyment of high-quality sound. Of course, you don't have to be an expert in acoustics to know that the other Apple speakers next to the iMac on the table aren't exactly the best choice for appreciating music. And where is the keyboard? Does that model control that Mac with her mind?

JOHN BURT

I was disappointed that your "Digital Music Superguide" didn't give information on which bit rates to use when making MP3s. I converted 67 hours of pop and rock music about four years ago. My advice: Do not use variable bit rate. I keep running into situations where it won't work. I also suggest using 192 Kbps (or at least 160) because 97 percent of the music I converted ended up with a rate between 164 and 184.

## iMovie Reconsidered

ROBERT TOOMBS

I'd never paid much attention to iMovie. I tinkered a little with the demo clips in the first version and found the program so rudimentary that I never bothered looking at it again. But after reading Jim Heid's "From VHS to DVD" (June 2004), I discovered that iMovie 4 could do more than I'd ever known it could. The article got me to thinking, too—about a 15-year-old video of my grandparents' Irish bed-and-breakfast. Since the property is no longer in the family and my grandmother is gone, I realized that with my aunt's birthday approaching,

perhaps I could do something special for everyone. The result is spectacular. I have no doubt at all that it will be received with amazement and delight. Many thanks for opening my eyes to something I hadn't really known my Mac could do.

## Here Comes the Sunshade

KILPATRICK WILL

"Improve Outdoor Lighting" (in *Digital Hub*, June 2004) offered an inexpensive alternative—white poster board—to professional light reflectors. I was expecting to see my favorite solution described: the sunshades sold for car windshields. These are widely available at AutoZone and similar auto-parts stores, Target, and Wal-Mart for around \$10 in a variety of sizes. Make sure to get the ones that have two separate panels, not two joined panels. These reflectors made of fabric and metal hoops are very much like the ones used by professional photographers, but they cost much less. The silvering on them may be somewhat less effective, but they provide softer and more even lighting than white poster board. They're also foldable, so they're much easier to store and transport.

## Active Opposition

MARK BARNHART

I have used QuarkXPress since version 3; I had decided to wait for Quark to move to Mac OS X. But after reading "Activation Nation" (*Mac Beat*, June 2004), I have changed my mind and will switch from Quark as soon as I finish my current projects. I will likewise dump any other software with this Orwellian activation technology, even if it means producing my projects with Microsoft Word, Apple's AppleWorks, or Software MacKiev's Print Shop.

SUZANNE THOMAS

"Home, office, laptop" has been the general practice for installing software. If companies want to protect their interests and keep customers, then they should license their software for three nonnetworked computers. This should keep the intellectual-property lawyers from questioning the legality of a program's ability to access and manipulate the computer's ID numbers, as well as a company's right to deny users access to software they've paid for.

## We've Been Framed

DRU VINTON

Leave it to Adobe to shoot longtime customers in the foot by killing FrameMaker on the Mac ("Out of Frame," *Mac Beat*, June 2004). Our company has been using FrameMaker for years because it's truly a cross-platform application. For the last two years, Adobe has been stating on its Web site that Mac users are important to the company and that it would not ignore or forget them in regard to a FrameMaker

upgrade. I guess that shows you that when Adobe speaks, don't believe it.

## Bookmarklets Reloaded

SEAN CHANDLER

Reader Paul Calamai and Dori Smith offered a Safari bookmarklet for sending a URL and selected text from a Web page to an e-mail recipient (*Feedback*, June 2004). In all of a minute, I had typed the script into the Safari address bar, saved the script as a bookmark, and tested it. Wow. Where can I find more Safari bookmarklets?

*The March 2004 Geek Factor column included a list of bookmarklet-friendly sites. Go to [find.macworld.com/0031](http://find.macworld.com/0031) to find the online version.—Dori Smith*

## Cats Got Your Tongue?

PETER KEENE

Microsoft's software engineers must be sweating after Apple's announcement that Tiger will be the last annual upgrade of OS

X. Now Microsoft will have to think for itself about what should go into Longhorn. On the other hand, the Mac community and third-party developers must be relieved. We'll get a chance to catch our breath and consolidate a bit. Mac gurus will be able to get their books out before they're redundant. While it's great to have new features we didn't know we needed, I have yet to find all of them in Panther—and soon there'll be a new cat in the alley. Never mind the number of ways there are to skin a cat—there are too many cats to skin.

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## APPLE'S FLAT-PANEL LINEUP EXPANDS

# Cinema's Scope

No matter how you look at it, the latest addition to Apple's line of Cinema Displays is big news—all 30 diagonal inches of it. But as eye popping as the 30-inch Apple Cinema Display HD is, it's only part of the new look unveiled for Apple's monitors. This generation of flat-panel displays offers more than ever to video editors, designers, and desktop publishers. In addition to boosting the maximum available size, Apple has overhauled the panels' design and revamped their cabling.

### Wide-Screen Edition

Still, the emergence of the 30-inch Apple Cinema Display HD dwarfs just about any other display development (see "Mondo Monitors"). This \$3,299 behemoth serves up a resolution of 2,560 by 1,600 pixels. With it, you can edit high-definition video

(at 1,920 by 1,080 pixels), with room to spare for tools and palettes. Apple says that the 30-inch monitor displays 77 percent more pixels than the 23-inch Cinema Display.

In fact, the new monitor is so big that no existing graphics card has enough power to drive it. Apple has

switched from its proprietary Apple Display Connector (ADC) to a Digital Video Interface (DVI) connector, but even that industry standard doesn't have enough bandwidth for such high resolution.

So graphics-chip provider Nvidia created the \$599 GeForce 6800 Ultra DDL card, an 8x AGP card with 256MB of DDR RAM—and the first graphics card to support dual-link DVI. That standard allows twice as much information to pass over the same DVI connector by using all 24 pins instead of just 12. And since the GeForce 6800 Ultra has two such connections, it can drive two 30-inch

panels at the same time. (Note that the card itself is so big that it takes up the space of two PCI cards.) You'll need to



## MONDO MONITORS

Apple has overhauled the look and number of its flat-panel monitors.

NAME	SIZE	NATIVE RESOLUTION	HUB	PRICE
Apple Studio Display	17 inches	1,280 by 1,024	2 USB 1.1	\$699
Apple Cinema Display	20 inches	1,680 by 1,050	2 USB 2.0, 2 FireWire 400	\$1,299
Apple Cinema Display HD	23 inches	1,920 by 1,200	2 USB 2.0, 2 FireWire 400	\$1,999
Apple Cinema Display HD	30 inches	2,560 by 1,600	2 USB 2.0, 2 FireWire 400	\$3,299 <sup>A</sup>

<sup>A</sup> Requires \$599 Nvidia GeForce 6800 Ultra DDL card.

buy the graphics card to use the 30-inch display; both will be available in August.

### 20-23 Vision

Apple also introduced new versions of the 20-inch Apple Cinema Display and the 23-inch Apple Cinema Display HD, at \$1,299 and \$1,999, respectively. Both should be shipping by the time you read this. Like their massive 30-inch counterpart, these two Cinema Displays adopt a thin aluminum bezel that looks more like the metallic cases of the Power Mac G5s and aluminum PowerBooks. (The narrow bezel makes it easier to line up multiple monitors next to one another.) An aluminum stand with an adjustable hinge supports the displays; the stand is detachable, so anyone can use a VESA-compatible mount to hang any of the panels on a wall.

More significantly, Apple replaces its ADC connection with a single cable that comes out the back of each panel and breaks out into DVI, USB,

FireWire, and power connections.

The standard DVI connector on the displays allows PowerBook users and users of older Macs to hook up to the panels right out of the box, without needing a bulky and expensive DVI-to-ADC converter. Since the panels conform to VESA standards, PC users, too, can take advantage of the 20- and 23-inch Apple Cinema Displays.

The cable's USB and FireWire connections plug into your Mac, and two USB 2.0 and two FireWire 400 ports are on the back of each panel. The self-powered, two-port USB 2.0 hub draws its energy from the monitor's power plug. Brightness controls and a power switch rest, out of sight, on the side of each display.

Apple will continue to sell its 17-inch Apple Studio Display for \$699. That flat-panel monitor features a resolution of 1,280 by 1,024 pixels, as well as ADC connectivity and a two-port USB hub.—JONATHAN SEFF

**Triple Feature** The new Cinema Displays have an aluminum exterior and a thin bezel (from left to right are the 30-, 23-, and 20-inch models).



## iMacs Missing in Action

There's good news for people looking for a new iMac—Apple plans to release a new version of the consumer desktops in September. But there's bad news for people who want iMacs now—Apple is running out of them.

Apple's online store stopped taking orders for iMacs in July. (Some brick-and-mortar stores still report having iMacs on hand.) The company had hoped to have a next-generation iMac ready by the time its current inventory ran out but conceded its planning was "less than perfect." Now Apple is looking at a September launch date for a revised iMac line, with no older models available between now and then.

If that's bad news for Mac shoppers, it's *really* bad news for the company. Apple's heading into the back-to-school buying season with no consumer-friendly desktop offering other than the eMac. "Clearly this is an important season for them, with education being such an important part of their market," says Ross Rubin, director of industry analysis for market-research firm NPD Techworld. "It's incumbent upon them to have something for the students, faculty, and staff during that time. Apple is trying to win market share in education, but it's going to be hard for them to do that without having product for students to purchase."

Apple was already facing falling iMac sales. "iMac [and] eMac sales have dropped from 17 percent to 33 percent each quarter this year [from last year's quarterly numbers]," says Tim Deal, an analyst for Technology Business Research. "Apple needs to reinvigorate the iMac line with features and price points that will resuscitate its dismal sales figures—and the sooner the better."

So what can Mac users expect in a new iMac? A new design seems likely, especially since Apple is adding G5 processors to the consumer desktops.

Whatever Apple has in store, it had better deliver it as promised in September. "If they release a superstar product in September, I think it would go a long way toward overcoming the lateness," Rubin says. "Certainly, the track record shows that the new iMac designs tend to do very well out of the gate."—JIM DALRYMPLE





OS X UPDATE ISN'T JUST ANY CAT

# Tiger Tales

Apple may have given Mac users a first glance at all the features in Tiger (see "10 Things to Know about Tiger," page 50). But this major update to OS X remains shrouded in mystery. Nobody knows just what Tiger will look like once Apple is ready to unleash it sometime in the first six months of 2005. Still, that doesn't mean you can't grab the tiger by the tail and learn what sets this OS X update apart from some other big cats that share its name.—PHILIP MICHAELS

## TONY THE TIGER

**CLAIM TO FAME:** Animated character created in 1952 to proclaim the greatness of Kellogg's Frosted Flakes

**EERIE SIMILARITIES TO OS X:** Multiparty chat addition to iChat AV will be great for three-way video conferences with the Trix Rabbit, the Lucky Charms leprechaun, and Toucan Sam

**COST:** \$4.65 (Box of Frosted Flakes, no coupon)

## TIGER WOODS

**CLAIM TO FAME:** Winner of 40 PGA Tour events, including 3 Masters, 2 U.S. Opens, 1 British Open, and 2 PGA Championships

**EERIE SIMILARITIES TO OS X:** No major updates to OS X in 2004; no major wins for Tiger Woods since 2002

**EARNINGS:** \$7.4 million (2003 prize money)



## The Tyger

**CLAIM TO FAME:** Poem by William Blake (left)

**EERIE SIMILARITIES TO OS X:** "What immortal hand or eye/ Could frame thy fearful symmetry?" Apple's Senior Vice President of Software Engineering Bertrand Serlet, we're guessing.

**PRICE:** \$39.95 (list price for *Oxford Book of English Verse*)



## DETROIT TIGERS

**CLAIM TO FAME:** World Series winners in 1935, 1945, 1968, and 1984

**EERIE SIMILARITIES TO OS X:** Apple boasts of 150 new features in Tiger—slightly more than the number of games (119) the Tigers lost in 2003

**FRANCHISE VALUE:** \$262 million (Forbes)

## DAVE "TIGER" WILLIAMS

**CLAIM TO FAME:** All-time leader in penalty minutes (3,966) over a 14-year NHL career

**EERIE SIMILARITIES TO OS X:** Tiger uses Dashboard to access JavaScript-based Widgets; Williams used boards to knock opponents silly

**ESTIMATED VALUE:** \$340.42 (penalty minutes multiplied by hourly minimum wage)\*



\* \$455.14, Canadian

## APPLE'S ADVICE: STAY UPDATED AND STAY CALM

# Security's X Factor

Faced with a report critical of how safe its operating system is from online attacks, Apple first came out with a software update it hoped would quash potential threats. Then it came out with a response it hoped would reassure users about OS X's overall security.

"We all have to be concerned about cyber-security and threats in general," concedes Phil Schiller, Apple's senior vice president of worldwide product marketing. "But if Mac users just keep their software updates running, they shouldn't have much to be concerned about."

OS X's security came under fire in May, when security firm Secunia warned OS X users of "highly critical" vulnerabilities that exist if you surf the Net with either Microsoft Internet Explorer or Apple's Safari Web browsers. Secunia reports that the vulnerability lets external Web sites run scripts on your Mac via URLs starting with "help:runscript." So if Safari's default Open "Safe" Files After Downloading preference is enabled, someone could put arbitrary files—including script files—on your Mac simply by asking you to download a .dmg file. Apple has since issued a security update and says Mac users should download those updates as they appear.

While Secunia contends that the fix didn't address the disk URL vulnerability, industry analysts downplay the risk to Mac users. "It seems that people just don't write exploits for the Mac because [it's] not as popular and the [exploit writers] don't get much bang for the buck," says Bruce Schneier, CTO of Counterpane Internet Security. "Historically, these aren't that big of a deal, but that could change."—JIM DALRYMPLE



## CREATIVE BEAT



**Create 12.0**, from Stone Design ([www.stone.com](http://www.stone.com)): Drawing, page-layout, and Web-page-creation tool adds a customizable toolbar and a new Table tool for creating and editing data tables and exporting the results to HTML (\$149; upgrade, free).

**Eye Candy 5: Textures**, from Alien Skin Software ([www.alien-skin.com](http://www.alien-skin.com)): Collection of ten texture generator plug-ins is compatible with Adobe Photoshop 7, Adobe Photoshop Elements 2, Jasc Paint Shop Pro 8, and Macromedia Fireworks MX 2004 (\$99; upgrade from Eye Candy 4000, \$49).

**ImageBuddy 3.0**, from Kepmad Systems ([www.kepmad.com](http://www.kepmad.com)): Photo-printing tool adds higher-resolution printing, mouse scroll-wheel support, rotate-text support, and the ability to add transparent background images to page layouts (single-user license, \$19; household license, \$26; site license, \$400).

**SketchUp 4.0**, from @Last Software ([www.sketchup.com](http://www.sketchup.com)): Updated 3-D design program gains Follow Me, Texture Tweaker, and Face Me features, among other additions (\$495; upgrade, \$95).—COMPILED BY PHILIP MICHAELS

## INPUT DEVICE BEAT



**BT-500 Mouse**, from Radtech ([www.radtech.us](http://www.radtech.us)): Bluetooth mouse offers two buttons and a scroll wheel (\$55).

**IntelliScanner Cordless Collector**, from Intelli Innovations ([www.intellisw.com](http://www.intellisw.com)): Barcode reader uses Bluetooth technology (\$299).

**Stowaway Universal Bluetooth Keyboard**, from Think Outside ([www.thinkoutside.com](http://www.thinkoutside.com)): Collapsible keyboard works with Bluetooth-equipped PDAs, smart phones, and Macs (\$150).

**The Mouse BT**, from MacMice ([www.macmice.com](http://www.macmice.com)): Wireless Bluetooth mouse features left and right buttons and a clickable scroll wheel (\$70).—COMPILED BY PHILIP MICHAELS



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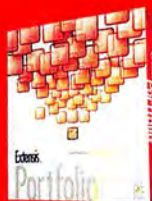
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## POWERBOOK RUNS EXPLOSIVE ACT

# All Fired Up

During a recent performance by Circus Orange, Tom Comet was riding his 12-foot unicycle across the stage when a large flame shot out from his posterior, setting him on fire. Comet was perfectly all right—such stunts are par for the course with Circus

Orange, which specializes in pyrotechnic circus performances (imagine a combination of acrobatics, juggling, and explosions). And if the Toronto-based troupe (left) has its way, a PowerBook G4 will soon be directing all that explosive mayhem.

The troupe is developing customized software for its 800MHz laptop; the software will control flames, explosions, and fireballs, integrating them with background music and sound effects. Comet, the group's director and co-owner, says the Mac-software combo will provide split-second control over hundreds of devices.

"Because I'm a performer and a [pyrotechnician], I'm also often one of the technicians on stage," he adds. "It's always been tough for me to teach someone else the nuances of the show. With this, I can completely program the show, and all I need to do is hire one technician. As long as everything is going to plan, it works."

And even for someone who's used to juggling just about anything—Comet holds the world record for juggling three chain saws at once—putting the PowerBook in control of Circus Orange's performances gives him one less thing to worry about.—CYRUS FARIVAR



## COMPOSER USES MAC-BASED STUDIO FOR SOUNDTRACKS

# The Mac Scores Again

Tune in to one of the History Channel's epics, and pay close attention to the accompanying musical soundtrack. Chances are, it came to life on Gary Pozner's Mac. The New York-based composer—whose credits include *The Quest for King Arthur*, *Russia: Land of the Tsars*, and the upcoming *The French Revolution* and *Destination Titanic*—con-

siders the Mac an important tool for scoring films. "I got involved with computers so I could execute my song-writing ideas whenever I wanted to," Pozner says. "I get an idea at three in the morning—I just go to my computer and realize it."

Pozner is a relatively recent Mac convert. After spending 19 years using the DOS program Sequencer Plus on PCs, he saw a 1999 demo at an Apple seminar that opened his eyes to the powers of the Mac and the audio-production software Logic. "It all worked the first day," Pozner says.

Pozner's composing arsenal now consists of a dual-867MHz Power Mac G4, a 450MHz Power Mac G4, and an 867MHz PowerBook G4. He uses many Native Instruments products, and to store everything, he has ten 250GB and two 320GB FireWire hard drives from LaCie.

Pozner still runs Logic on an OS 9-based Mac—not all the plug-ins were OS X native at once—but he's looking forward to using Logic in Apple's new operating system. "My OS 9 computer still crashes every other day," he says, "but the two computers I have running OS X have been rock solid."—JONATHAN SEFF



**Music Man** Longtime musician Gary Pozner shows off the Mac-based studio where he does his soundtrack work.

MULTIMEDIA  
BEAT

**iDive**, from Aquafadas ([www.aquafadas.com](http://www.aquafadas.com)): Digital-video media-management program offers visualization, tagging, and retrieval features (\$70).

**iDrum**, from Glaresoft ([www.glaresoft.com](http://www.glaresoft.com)): Drum machine plug-in features more than 500 unique drum sounds for GarageBand, Logic Pro 6, Logic Express 6, and Digital Performer 4.12 (\$50).

**Media Rage**, from Chaotic Software ([www.chaoticsoftware.com](http://www.chaoticsoftware.com)): Application edits and organizes music files in AAC, MP3, and Ogg Vorbis formats (\$20; upgrade from MP3 Rage, \$10).

**Sorenson Squeeze 4.0**, from Sorenson Media ([www.sorenson.com](http://www.sorenson.com)): Video compression line adds high-definition encoding for MPEG-1, MPEG-2, MPEG-4, QuickTime, and Real Media (Sorenson Squeeze 4 Compression Suite, \$449; upgrade, \$159; Squeeze 4 for Macromedia Flash MX, \$119; upgrade, \$49; Squeeze 4 for MPEG-4, \$199; upgrade, \$89).

**SoundSoap Pro**, from BIAS ([www.bias-inc.com](http://www.bias-inc.com)): OS X audio-restoration plug-in provides noise-reduction capabilities for professional audio producers and engineers (\$599; upgrade from SoundSoap, \$499).—COMPILED BY PHILIP MICHAELS

INTERNET  
BEAT

**ChatBarrier X3**, from Intego ([www.intego.com](http://www.intego.com)): Security tool encrypts text messages sent using Apple's iChat instant-messaging software (\$40; 10-user site license, \$100).

**Internet Cleanup 2.0**, from Aladdin Systems ([www.aladdin-sys.com](http://www.aladdin-sys.com)): Privacy tool for blocking and deleting data used by Internet applications adds Network SpyAlert feature for stopping programs from sending data without permission (\$30; upgrade, \$20).

**Webstructor**, from Softchaos ([www.softchaos.com](http://www.softchaos.com)): Web browser can capture and edit Web pages, turning them into editable, printable documents (\$79).—COMPILED BY PHILIP MICHAELS



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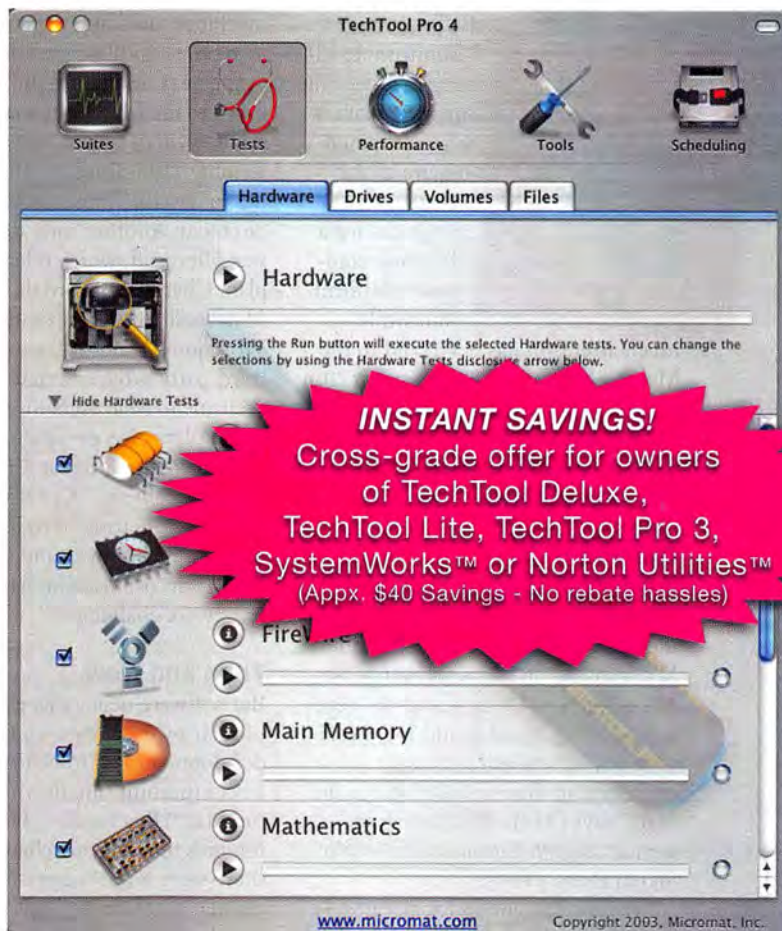
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SOFTWARE MAKERS MARK 20 YEARS ON THE MAC

# First to the Party

When James Rea saw the Macintosh's graphical user interface back in 1984, he knew the database software his company was developing for Alpha Micro minicomputers would be perfect for the new Apple computer. But there was a problem: Rea's company, ProVue, wasn't part of Apple's official developer program. So Rea improvised. First, he got his hands on a Macintosh through a friend who knew a dealer with an extra model. Then, since the Macintosh had no built-in developer tools of its own, ProVue shelled out \$9,995 for

a Lisa—the Apple desktop would-be Mac developers had to do their work on. By August 1984, ProVue had produced OverVue, a RAM-based database program for the Macintosh.

ProVue was among the first wave of Macintosh developers, pioneering software makers who combined ingenuity and moxie to create programs for a fledgling computer platform. And while

much attention has been paid to the Mac itself during the computer's 20th anniversary, the efforts of early developers—whose software helped make the Mac a viable platform—have gone unrecognized.

## Outside Help

Apple decided early on that third-party developers would play a role in the Macintosh's success. Before the Macintosh even shipped, evangelists Mike Boich and Guy Kawasaki were approaching Apple II and DOS software publishers and “strongly encouraging them to develop for the Mac,” says Owen W. Linzmayer, author of *Apple Confidential 2.0* (No Starch Press, 2004).

“We used fervor and zeal, but seldom money, to get developers to buy into our dream of changing the world with a personal computer,” recalls Kawasaki.

One of those companies was Blyth Software, which got its start as an Apple dealer in eastern England before it started designing software, including an application-development and information-management tool

called Omnis. “As new Apple machines came out, the company made the logical progression from one to the next, and hence the decision to move to the Mac really made itself,” said Gwyneth Gibbs, vice president of Raining Data, Europe, which continues to develop Omnis as Omnis Studio today. Another early developer was Microsoft, which released Multiplan, Chart, and Word during the Macintosh's first year on the market. Word joins Omnis as one of the few third-party programs that has been available to Mac users for all 20 years of the platform's existence.

“Attracting interest was never really a problem,” Kawasaki says. “However, getting [developers] to finish their products and adhere to the Macintosh user-interface guidelines were challenges.”

## Then and Now

But software makers faced challenges of their own. “When we started, all development had to be done on a different machine and downloaded onto the Mac,” Rea recalls. “It took 15 minutes to make any change, and there were no debuggers. Now, we can recompile in seconds and have excellent debugging tools.”

Still, in some ways, it was easier developing Mac software 20 years ago than it is today, contends CE Software president John Kirk. “The basic [applications] weren't available. You didn't have to be brilliant to figure out what [software] was needed,” he says. “You had to be brilliant to figure out how to do it well.”

## Early Adapters

What other companies came out with software during the Macintosh's first year? Here's a sampling of some of the products *Macworld* was covering 20 years ago.—PHILIP MICHAELS

- > **1stBase**, from DeskTop Software: Relational file-handling and report-writing system.
- > **Animation Toolkit**, from Ann Arbor Softworks: Animation software.
- > **Brock Keystroke**, from Brock Software Products: Database and report generator.
- > **Desk Accessory Mover**, from CE Software: Utility for manipulating the Macintosh's desk accessories.
- > **Desktop Calendar**, from Videx: Calendar and appointment book.
- > **Lode Runner**, from Brøderbund: Arcade-style game.
- > **MacFORTH**, from Creative Solutions: Programming language.
- > **MacGAS**, from Applications Unlimited: Glossary and spelling checker.
- > **MacLink**, from DataViz: Data-transfer program.
- > **Mac-Slots**, from Soft-Life: Slot-machine-style game.
- > **MacType**, from Palantir Software: Typing tutorial program.
- > **MegaFiler**, from Megahaus: File-management system.
- > **MicroPlanner**, from Micro Planning Software: Project-management analysis system.
- > **ProPrint**, from Creighton Development: Program for printing MacWrite documents on letter-quality printers.
- > **Softworks C**, from Softworks: C compiler for the Macintosh and the Lisa.

Apple's efforts to attract developers didn't pay off immediately. “There wasn't exactly a plethora of software to choose from,” Kawasaki says. And while the first killer Mac application, Aldus PageMaker, wouldn't appear until July 1985, Apple observers are still impressed with the groundwork Apple laid during that first year. “They got people to develop for a machine that didn't exist, and that was breaking with tradition,” Linzmayer says.—PHILIP MICHAELS





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## DRIVERS EXPAND WIRELESS OPTIONS BEYOND AIRPORT

# Shuffling the Cards

Going wireless may be freeing, but it's a long way from free. Even after a recent price cut, Apple's AirPort Extreme card, which adds wireless networking capabilities to your Mac, costs \$79. An older AirPort card will run you \$59.

But Mac users have low-cost alternatives to AirPort cards. Makers of wireless hardware, such as Belkin ([www.belkin.com](http://www.belkin.com)), Buffalo Technology ([www.buffalotech.com](http://www.buffalotech.com)), and Linksys ([www.linksys.com](http://www.linksys.com)), use the same Broadcom Wi-Fi chips found in Apple's AirPort Extreme. And the 802.11g-based CardBus and PCI cards from these companies cost much less than AirPort Extreme cards—\$30 to \$50.

As long as you have at least OS X 10.2.7 and the most recent AirPort software for your system, you can insert these cards into your Mac, and it should recognize

them as if they were AirPort Extreme cards. AirPort Base Stations work fine with these third-party cards, too; however, if you have WEP enabled, use Equivalent Network Password in the AirPort Admin Utility to extract hexadecimal WEP keys needed for a non-AirPort wireless card.

Device drivers have emerged that enable older and newer cards from dozens of manufacturers to work seamlessly on a Mac. OrangeWare ([www.orangeware.com](http://www.orangeware.com)) offers a \$15 driver for OS X 10.2 and later that supports wireless cards with chips made by Atheros ([www.atheros.com](http://www.atheros.com)).

OrangeWare's driver supports a long list of cards. The driver handles both 802.11g and 802.11a-802.11g combination cards, as well as the unique Super G with Turbo Mode found in Atheros products (see "How Super Is Turbo?").

If you're trying to go wireless with an older Mac running OS 8 or 9, iOXperts ([www.ioxperts.com](http://www.ioxperts.com)) offers a \$20 driver that works with a vast list of 11 Mbps, 802.11b cards, which cost \$10 to \$30. iMacs and iBooks without card slots can use Belkin's \$70 802.11b USB adapter, which offers drivers for OS 9.2 and later, including OS X.—GLENN FLEISHMAN



## How Super Is Turbo?

A variation of the 802.11g wireless standard that promises to double AirPort Extreme's already-impressive maximum throughput is appealing. But Turbo—part of the Super G proprietary wireless standard created by chip maker Atheros—hasn't exactly won over the wireless world.

Atheros isn't the only manufacturer looking to speed up its wireless products; Broadcom ([www.broadcom.com](http://www.broadcom.com)), which supplies chips to Apple, Texas Instruments ([www.ti.com](http://www.ti.com)), Conexant ([www.agranat.com](http://www.agranat.com)), and others, has added proprietary extensions that boost speed. But it's doing so by changing how wireless data is packaged and timed to be sent; Atheros,

on the other hand, is changing how products based on its chips send radio signals.

All Wi-Fi devices use a continuous range of frequencies, called a channel; Turbo uses two of these channels to boost speed. Atheros claims a raw rate of 108 Mbps for Super G with Turbo turned on. Removing all overhead, most reports show an improvement from about 20 Mbps with an all-802.11g network to 30 Mbps with an all-proprietary network. Most home users will find the extra speed irrelevant.

Broadcom claims that Turbo interferes with other 802.11b and 802.11g networks within a few dozen feet. Atheros dismisses Broadcom's tests as flawed. The Wi-Fi Alliance trade group should resolve the issue once it conducts its own tests.—GLENN FLEISHMAN

## UTILITY BEAT



**Dock-It 2.0**, from Gideon Software ([www.gideonsoftware.com](http://www.gideonsoftware.com)): Multifunctional launcher adds support of OS X dockings and changes the label size (\$10; upgrade, \$6).

**DragThing 5.2**, from TLA Systems ([www.dragthing.com](http://www.dragthing.com)): Updated Dock utility adds improved support for clippings (\$29; upgrade from DragThing 2.X to 4.X, \$12; upgrade from DragThing 5, free).

**Peek-a-Boo 2.0**, from Clarkwood Software ([www.clarkwood.com](http://www.clarkwood.com)): System monitoring utility adds OS X compatibility (\$20).

**Synk 5.0**, from Ben Rister ([www.decimus.net](http://www.decimus.net)): Synchronization and backup utility adds intelligent synchronization that knows when users delete or add files, as well as a preview pane (commercial license, \$40; noncommercial license, \$20).

**The Missing Sync 4.0 for Palm OS**, from MarkSpace ([www.markspace.com](http://www.markspace.com)): Software for synchronizing Macs with Palm OS 4- and Palm OS 5-based handhelds replaces several existing Missing Sync products and supercedes PalmSource's HotSync Manager for OS X (\$50; download, \$40; contact MarkSpace for upgrade pricing).—COMPILED BY PHILIP MICHAELS

## STORAGE BEAT



**DiscBlaze 4**, from Radical Breeze ([www.radicalbreeze.com](http://www.radicalbreeze.com)): Updated CD- and DVD-burning software now supports additional disc-image formats (\$25; upgrade, \$10).

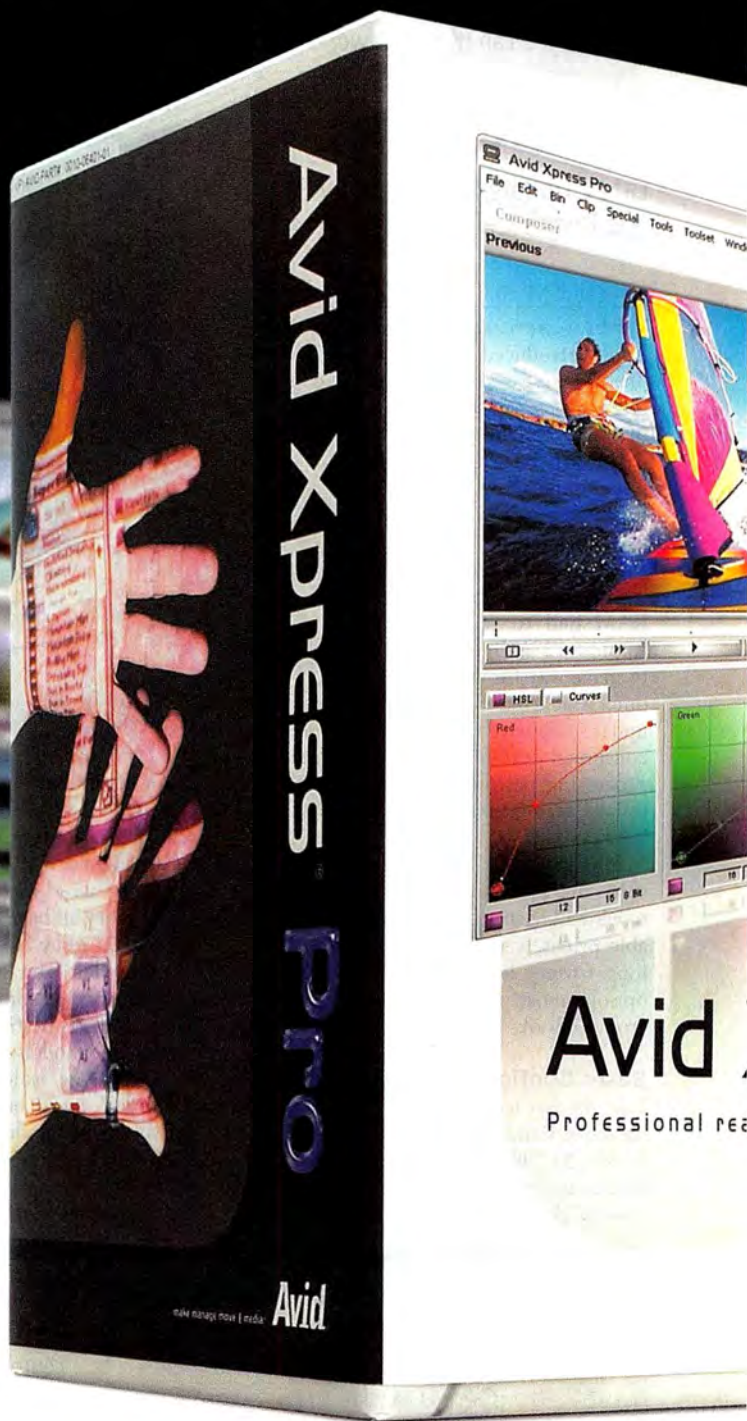
**Dragon Burn 4.0**, from NewTech Infosystems ([www.ntius.com](http://www.ntius.com)): CD- and DVD-burning tool is now compatible with DVD players that handle the JPEG format (\$50; upgrade, \$10 to owners of any OS X CD- or DVD-burning software).

**SureFire800**, from Kano Technologies ([www.kanotechnologies.com](http://www.kanotechnologies.com)): External hard drive features 20GB to 80GB of storage, FireWire 400/800 and USB 2.0 connectivity, and Dantz Retrospect Express backup software (\$249 to \$399, depending on capacity).—COMPILED BY PHILIP MICHAELS

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# REVIEWS

OUTSTANDING: ★★★★★  
 VERY GOOD: ★★★★  
 GOOD: ★★★  
 FLAWED: ★★  
 UNACCEPTABLE: ★

Reviews you can trust: Macworld rates only final shipping products, not prototypes. What we review is what you can actually buy.

## iBook G4s

Latest Update Frees Memory Slot and Boosts CPU Speed

BY HENRY NORR

When we reviewed the overhauled iBooks Apple introduced last fall (March 2004), we liked what we saw, with just a couple of reservations. We welcomed Apple's decision to double the machines' standard memory to 256MB but regretted that it had done so by filling up the only expansion slot; this meant anyone who wanted additional RAM had to toss out Apple's 128MB DIMM to make way for a bigger one. And even though the update brought G4 chips to Apple's consumer portable line for the first time, processing performance was a tad slow by today's standards, especially in the entry-level model.

Fortunately, the latest iBook updates solve the first problem and go a long way toward alleviating the second. With reasonable prices, a sturdy and attractive design, long battery life, and all the connectivity options most users will need, Apple's new crop of iBooks is full of compelling choices.

### Basic Configurations Unchanged

Like the last batch of iBooks, the latest one has three standard configurations—priced at \$1,099, \$1,299, and \$1,499. In most respects, they're not very different from their predecessors. Hard-drive capacities are unchanged,



at 30GB, 40GB, and 60GB, respectively, and Combo (CD-RW/DVD-ROM) drives are standard in all three configurations. The low-end model has a 12.1-inch display, while the other two have 14.1-inch screens; however, as before, they all have the same standard resolution—1,024 by 768 pixels. And as with previous models, the smaller screens may be problematic for some viewers (see "Which Mobile Mac Is Best?").

All three models have 256MB of memory, but it's now soldered directly to the machines' logic boards. That leaves the RAM-expansion slot free, and Apple confirms that the slot can handle 1GB DIMMs, boosting the maximum total to 1.25GB. (Specifications for the previous iBook gener-

ation said the maximum was 640MB, and Apple officials said that installing more memory could void the machines' warranties, even though some memory vendors said 1GB DIMMs worked fine.)

In addition, all three configurations have faster G4 processors than their predecessors. The 12.1-inch model and the formerly 933MHz 14.1-inch model have hit the 1GHz mark, while the top-of-the-line 14.1-inch model has gone from 1GHz to 1.2GHz.

The result is a noticeable, but not overwhelming, performance improvement in our standard benchmark suite of tests (see the benchmark chart). In real-world use, all these machines feel reasonably responsive for routine tasks such as Web browsing, e-mailing, and word processing. Obviously, these systems aren't for heavy-duty graphics or multimedia work, and hard-core gamers will notice that frame rates lag well behind those of current PowerBooks—not to mention desktop Macs.

In terms of connectivity, the only change is that an AirPort Extreme (802.11g) wireless networking card is now standard in the \$1,499, top-of-the-line iBook; in the other two configurations, the card remains a \$99 option. A Bluetooth card for wireless hookups to compatible phones, PDAs, and other devices is still a \$50 option in all three configurations. In addition, of course, there's a wired Ethernet jack (limited to 10 or 100 Mbps, as most LANs are) and a 56-Kbps (V.92) modem.

None of these iBooks has a PC Card expansion slot, but all three have a pair of USB 2.0 ports. The single FireWire port is

## iBOOK G4S COMPARED

COMPANY	PRODUCT	MOUSE RATING	PRICE	OS COMPATIBILITY	CONTACT	PROS	CONS
Apple Computer	12-inch iBook G4/1GHz	★★★★	\$1,099	X	800/692-7753, www.apple.com	Low price; relatively light and compact; good battery life; improved performance; RAM-expansion slot now free; slot-loading Combo drive.	Screen too small for some users.
Apple Computer	14-inch iBook G4/1GHz	★★★★	\$1,299	X	800/692-7753, www.apple.com	Easily readable screen; excellent battery life; RAM-expansion slot now free; slot-loading Combo drive.	Somewhat large and heavy for travel.
Apple Computer	14-inch iBook G4/1.2GHz	★★★★	\$1,499	X	800/692-7753, www.apple.com	AirPort Extreme standard; good performance; easily readable screen; excellent battery life; roomy hard drive; slot-loading Combo drive.	Somewhat large and heavy for travel.

## 22 Portable computers

12-inch iBook G4/1GHz  
14-inch iBook G4/1GHz  
14-inch iBook G4/1.2GHz

## 24 Digital cameras

Canon PowerShot Pro1  
Konica Minolta Dimage A2  
Nikon Coolpix 8700  
Olympus C-8080 Wide Zoom

## 26 Painting and graphics software

Studio Artist 3.0

## 28 DVD-authoring tool

DVD Studio Pro 3.0

## 29 Music-recognition software

PhotoScore Professional 3  
SmartScore 3.2 Professional

## 30 Font utility

FontAgent Pro 2.1

## 32 3-D-compositing program

Combustion 3

## 34 Portable photo printer

Epson PictureMate

## 35 3-D package

iModeler 3D Professional 2.0

## 36 3-D decorating program

Interiors 3.4

## 36 Woodworking design program

Design Intuition 1.3

## 38 iPod voice recorders

Belkin Voice Recorder for iPod  
Griffin Technology iTalk iPod Voice Recorder

## 40 Multimedia programming tool

Isadora 1.0

## 42 The Game Room

Blades of Avernum  
Delta Force: Black Hawk Down

Dragon Tales: Learn & Fly with Dragons  
PistolMouse FPS Worms 3D

## 46 Mac Gems

BT-500 Mobile Mouse  
Fast DVD Copy  
Sync Entourage-Address Book  
WinSwitch  
WordService

# Which Mobile Mac Is Best?

With the iBook family and the 12-inch PowerBooks, Apple currently offers five standard configurations with 12- and 14-inch screens. Because the differences—even across the iBook-PowerBook divide—are relatively subtle, making your selection may not be easy.

For many shoppers, budget has to be the first consideration. If you're in that category, don't worry—despite their relatively low prices, Apple's current low-end laptops offer plenty of horsepower for most purposes and all the features you're likely to need. At just \$1,099, the 12-inch iBook—now with a 1GHz G4 processor, 256MB of memory, a 30GB hard drive, and a Combo drive—is a terrific bargain.

In fact, aside from its smaller hard drive and the absence of wireless networking, the entry-level iBook is not a whole lot different from the 12-inch PowerBook, which costs \$500 more. And you can bring the iBook even closer to parity with its PowerBook cousin without coming close to the PowerBook's price.

The main disadvantage of the 12-inch laptop models is the smallness of their screens. Compared with the wide-screen 15- and 17-inch PowerBooks, they provide much less real estate for your work. And with 1,024 by 768 pixels packed into a relatively small space, everything may look a little squeezed, especially if your vision isn't the best. Small type, in particular, may be a little hard to read. Of course, you can deal with that issue by increasing point sizes or using the Displays preference pane to switch to a lower resolution (800 by 600 or even 640 by 480 pixels). Just keep in mind that at those settings you can't fit as much information on screen, and both the iBook and PowerBook screens will lose much of their normal sharpness.

The other low-cost solution to the screen-size issue is to move up to one of the 14-inch iBook models. But it's important to realize what the 14-inch display does and doesn't deliver: while it makes everything look a little bigger and therefore more readable, it doesn't actually provide any more room for your documents or Web pages. It's limited to the same 1,024-by-768-pixel resolution as the 12-inch version.

Remember also that the extra dollars aren't the only cost of a larger display: at 5.9 pounds, the 14-inch iBooks are noticeably heavier and bulkier than their 12-inch sibling. On the plus side, some of the extra weight is due to larger batteries, which mean slightly better battery life. And if you want DVD-burning capabilities in your iBook, a 14-inch screen is your only choice: if you buy from the online Apple Store, the company offers its CD-RW/DVD-R SuperDrive as a \$200 option for the larger-screen models, but not for the 12-inch iBook.

With the smaller Apple laptops, you forgo some features that make the 15- and 17-inch PowerBooks so appealing to many users. Most obviously, you lose the ample wide-format screens, but you also give up some processing and graphics speed, a PC Card slot, and technologies such as FireWire 800 and Gigabit Ethernet. But most of those features are aimed at publishing and multimedia pros—average home users, students, and business travelers won't miss them much. Besides, the smaller PowerBooks are not only less expensive but also a heck of a lot easier to travel with. Now, if Apple would just bring that backlit keyboard to the iBook line...

again of the FireWire 400 (1394a) variety, but that shouldn't be a problem for users—relatively few peripherals have FireWire 800 (1394b) ports, and almost all that do also have FireWire 400 ports.

Externally, the latest iBooks have the same ice-white enclosure that has identified the line since the curvy, colorful clamshells of the original models went extinct in 2001. The 12-inch model still weighs 4.9 pounds;

the 14-inch configurations weigh a pound more than that.

## Double-Feature Batteries


An underappreciated feature of today's iBooks is their very good battery life. With the 12-inch model, we were able to play DVD movies for 3 hours and 15 minutes—that's enough time to watch an Austin Powers movie twice through, if you're so inclined. The 14-inch models, which have slightly larger batteries (61 watt-hours versus 50 watt-hours), did even better, lasting about 3 hours and 40 minutes. That's well short of the "up to six hours" Apple promises, but it's considerably better than what we've recorded in past tests of most other notebooks, including PowerBooks.

We've always liked the white iBooks, and with this update, we like them more than ever. Of course, we'd love to see Apple trim their weight; cut prices; and, someday, include AirPort cards and FireWire 800 as standards.

## Macworld's Buying Advice

The current iBook lineup offers an excellent combination of performance, features, and affordability. We particularly like the 12-inch model, because of its relative compactness and bargain price.

If you opt for the 14-inch display, and if you don't need wireless networking, we recommend the less-expensive 14-inch model. For most users, a slightly faster processor and larger hard drive aren't worth the extra \$200. If you'll be adding a wireless card, the price differential shrinks to \$101, and that relatively small amount might induce you to spring for the top-of-the-line model. □

	Speedmark 3.3	Adobe Photoshop 8.0	Cinema 4D XL 8.5	iMovie 4.0	iTunes 4.2	Unreal Tournament	Compressor
	OVERALL SCORE	SUITE	RENDER	RENDER	MP3 ENCODE	AVERAGE FRAME RATE	MPEG-2 ENCODE
12-inch iBook G4/1GHz	99	2:45	6:25	1:18	3:27	14.6	15:49
14-inch iBook G4/1GHz	102	2:48	6:26	1:15	3:27	14.6	15:54
14-inch iBook G4/1.2GHz	110	2:28	5:45	1:12	3:07	14.9	15:24
14-inch iBook G4/1GHz (10/2003 version)	92	2:56	7:48	1:18	4:06	13.4	16:20
	>Better	<Better	<Better	<Better	<Better	>Better	<Better

BEST RESULTS IN BOLD. REFERENCE SYSTEM IN ITALICS.

Speedmark 3.3 scores are relative to those of a 1GHz eMac, which is assigned a score of 100. Photoshop, Cinema 4D XL, iMovie, and iTunes scores are in minutes:seconds. All systems were running Mac OS X 10.3.3. All systems but the 14-inch iBook G4/1GHz reference system were tested with 512MB of RAM. The reference iBook has 128MB built in and only one RAM slot. To even the playing field, we installed a 512MB DIMM and then created a 128MB RAM disk. We tested MP3 encoding with an audio-CD track that was 45 minutes long, converting it from the hard drive using iTunes' Better Quality setting. We used Unreal Tournament's Antalus Botmatch average frames-per-second score; we tested at a resolution of 1,024 by 768 pixels. The Photoshop Suite test is a set of 14 scripted tasks using a 50MB file. Photoshop's memory was set to 75 percent and History was set to Minimum. For more information on Speedmark 3.3, visit [www.macworld.com/speedmark](http://www.macworld.com/speedmark).—MACWORLD LAB TESTING BY JAMES GALBRAITH AND JEFFY K. MILSTEAD

# 8-Megapixel Digital Cameras

## High-Resolution Cameras Set Out to Win the Megapixel Competition

BY JEFF KELLER

The latest trend in digital photography is ultra-high-resolution fixed-lens cameras. The digital-camera manufacturers are constantly trying to outdo one another, in much the same way that CPU manufacturers compete—but in this case, the race is measured in megapixels instead of megahertz.

We found that this increased resolution may not always benefit the people who buy these cameras. The four cameras we looked at—the Canon PowerShot Pro1, the Konica Minolta Dimage A2, the Nikon Coolpix 8700, and the Olympus C-8080 Wide Zoom—each have an 8-megapixel CCD, which is far more resolution than the typical consumer requires. (For a review of another 8-megapixel camera, the Sony Cyber-shot DSC-F828, see the May 2004 issue [1000].) They're also priced the same as or very close to the entry-level digital SLRs, the Canon Digital Rebel (1000); February 2004) and the Nikon D70, which offer better performance and photo quality. But these 8-megapixel cameras give you tons of resolution without the bulk of a digital SLR. And while all four models are quite good, the Olympus stands out from the crowd.

### Bundle It Up

These four cameras differ greatly in terms of their memory cards and software. Compact Flash cards are not included with the Konica Minolta and the Nikon. The Olympus includes a 32MB xD Picture Card and takes a CompactFlash Type II card, while the Canon includes a 64MB CompactFlash card and has a CompactFlash Type II slot.

Each camera also comes with its own proprietary software. The bundled programs, which all run in OS X, let you view and perform basic edits on your photos. They can also process images in the RAW format. You can use the Canon software to control your camera's settings and focus directly from your Mac, and to save images directly to the Mac. That feature, combined with the sizable memory card, means that with the Canon, you get more for your money.

### A Look Around

All four cameras have sleek black bodies loaded with buttons and dials. The Canon and the Konica Minolta have rings for zoom and focus, while the Nikon and the Olympus resort to more-traditional buttons for those functions. The Canon is the most compact camera of the bunch, at 4.6 inches wide by 2.8 inches tall by 3.5 inches deep, though the Nikon is the lightest, weighing just over 1 pound. But none of them seem bulky, especially when compared with the 33.7-ounce Sony Cyber-shot DSC-F828. The construction of all four cameras is very good, with the Olympus being the most solid.

With the exception of the Olympus, all of the cameras sport big zoom lenses: the Canon and the Konica Minolta have a 7× lens; the Nikon, an 8×; and the Olympus, a 5×. Except for the Nikon, whose lens starts at 35mm, the cameras' zoom range starts at a nice, wide 28mm. All of the cameras support conversion lenses (though Canon doesn't offer a wide-angle lens).

All four cameras have a hot-shoe for attaching an external flash. The Konica Minolta's hot-shoe support is limited to Konica Minolta flashes, but the camera includes a flash-sync port for third-party flashes.

The Konica Minolta stands out in another big way: it has image stabilization. Unlike some other cameras that stabilize only the lens, the Konica Minolta's Anti-Shake system actually moves the CCD to compensate for motion. This will give you sharp pictures at shutter speeds that would normally produce blurry photos, especially at the telephoto end of the lens.

When framing or reviewing photos, you'll rely on an LCD or an electronic viewfinder (which you actually peer through, as on a film camera) on each of the four models. The LCDs on the Konica Minolta and the Olympus can tilt, while those on the

**The Lineup** From left to right are Olympus's C-8080 Wide Zoom, Canon's PowerShot Pro1, Nikon's Coolpix 8700, and Konica Minolta's Dimage A2.



## 8-MEGAPIXEL DIGITAL CAMERAS COMPARED

COMPANY	PRODUCT	MOUSE RATING	PRICE	OS COMPATIBILITY	CONTACT	PROS	CONS
Canon	PowerShot Pro1	★★★★	\$999	9 X	800/652-2666, <a href="http://www.usa.canon.com">www.usa.canon.com</a>	Very good photo quality, design, and performance; useful zoom and focus ring; large LCD can flip out and rotate; good macro mode; powerful battery; large memory card and remote control included.	Occasional vignetting; no autofocus-assist lamp; no live histogram; LCD and EVF difficult to see in low light.
Konica Minolta	Dimage A2	★★★	\$999	9 X	201/574-4000, <a href="http://www.konicaminolta.com">www.konicaminolta.com</a>	Anti-Shake system; manual zoom and focus rings; amazing electronic viewfinder (EVF); EVF and LCD usable in low light; very powerful battery; great performance.	Images can be very soft; numerous complex buttons and dials; no memory card included; unimpressive macro mode; no autofocus-assist lamp.
Nikon	Coolpix 8700	★★★★	\$999	9 X	800/645-6689, <a href="http://www.nikonusa.com">www.nikonusa.com</a>	Very good photo quality; autofocus-assist lamp; LCD can flip out and rotate; useful time-lapse and bulb modes; LCD and EVF viewable in low light.	Lens starts at 35mm; complex controls and menu; lengthy shot-to-shot speed in RAW or TIFF mode; no memory card included; less powerful battery.
Olympus	C-8080 Wide Zoom*	★★★★	\$999	9 X	888/553-4448, <a href="http://www.olympusamerica.com">www.olympusamerica.com</a>	Heartily built; good photo quality; in-camera editing of RAW images; two live histograms; autofocus-assist lamp; two memory-card slots; LCD and EVF viewable in low light.	Lens doesn't have as much zoom power as competition's; controls can be intimidating; long delays between shots in RAW or TIFF mode.

\* = Editors' choice.

Nikon and the Canon can be flipped to the side and rotated (which is far more useful). The Canon has the biggest LCD of the bunch, at 2 inches diagonal. The Konica Minolta's amazing electronic viewfinder (EVF) has nearly four times the resolution of the other EVFs, and it can tilt upward 90 degrees, which is handy when you're using a tripod. The Konica Minolta, Nikon, and Olympus models brighten their screens automatically in low light.

## Feature-Packed

All four cameras offer full control over aperture, shutter speed, focus, white balance, and color. And all have similar shutter-speed ranges, except when in bulb mode (which only the Canon lacks). In this mode (which requires that you use a remote shutter release), the Nikon offers exposures for as long as 10 minutes. For more-creative shots, the Canon, Konica Minolta, and Nikon cameras offer a time-lapse photo mode.

The always-handly manual focus feature is offered by each of the 8-megapixel models, but I found the focus rings on the Canon and the Konica Minolta easier to use than the buttons on the Nikon and the Olympus. As you'd expect, these cameras have numerous white-balance options, including custom modes. The Konica Minolta, Nikon, and

Macworld TEST RESULTS	DETAIL	COLOR	OVERALL QUALITY
Canon PowerShot Pro1	Good	Very Good	Very Good
Konica Minolta Dimage A2	Flawed	Good	Flawed
Nikon Coolpix 8700	Very Good	Very Good	Very Good
Olympus C-8080 Wide Zoom	Good	Good	Good
Best results in BOLD.			
Our panel of experts judged two different photos that were taken with each camera at its default settings and with the highest-quality JPEG option selected. We viewed both on-screen and printed (from a Canon i9900) photos, and we rated each as Excellent, Very Good, Good, Flawed, or Unacceptable.—MACWORLD LAB TESTING BY JEFF KELLER AND JAMES GALBRAITH			

right on the camera and then save the image as a TIFF or JPEG file.

## Time to Shoot

Shooting speed is one area in which you'd expect these high-priced cameras to excel, and for the most part they do.

The Konica Minolta stands out from the rest in almost all aspects related to speed. Startup times for the cameras range from 1.6 seconds for the Konica Minolta (which doesn't need to wait for its lens to extend) to 3.5 seconds for the Nikon. Once they're up and running, you'll find that all but the Canon offer live histograms; the Olympus has two to choose from.

All of the cameras focus quickly in good lighting, with the main differences occurring in low light. The best cameras in this

## Photo Quality

If you're making 8-by-10 or smaller prints, these cameras will do the job, though they will likely be overkill. But if you're making 20-by-30-inch or larger prints, or viewing at 100 percent on screen, you'll notice that images from these cameras have higher noise levels and more purple fringing than those from 4- and 5-megapixel models.

As with our other reviews of imaging products, we assembled a jury of *Macworld* editors, who judged 8-by-10 prints made from these cameras. We took the same two photos with each camera at default settings and with the highest-quality JPEG setting selected, and then we printed them on the same Canon i9900 printer. Our jurors gave the Nikon a thumbs-up for both detail and color, making it their number-one choice. The Canon and the Olympus also did well, but the colors of the Olympus prints were a little flat. Fortunately, you can adjust the color saturation right in the camera menu on the Olympus and all the cameras. While the Konica Minolta performed decently in the color department, it fell short in terms of detail—and this is the camera's biggest flaw. The Konica Minolta sometimes produced images so soft that they seemed out of focus—even sharpening the shots in Photoshop would not have fixed them.

The Canon's much-vaunted L lens produced occasional *vignetting*, or dark corners, in several of our test images. In pictures of people, we found that the Konica Minolta and the Olympus showed absolutely no red-eye, with the other two cameras having just a bit of it. In terms of overall photo quality, the Nikon, Olympus, and Canon cameras were very close, with the troublesome Konica Minolta in last place.

## Macworld's Buying Advice

The Olympus C-8080 Wide Zoom takes the prize by a nose. Its good photo quality (though a bit unsaturated at the default settings), design, durability, in-camera RAW editing, fast and accurate autofocus system, strong battery, and manual controls give it the win. Close behind are the Canon PowerShot Pro1 and the Nikon Coolpix 8700, which are both very good but have a few flaws. And due to its soft-focus problems, we just can't recommend the Konica Minolta Dimage A2. □



Olympus models go a step further, allowing you to fine-tune the white balance manually.

If you take a lot of ultra-close-up shots, then the Canon and the Nikon are your best choices, with the Olympus right behind. The Canon and Nikon will focus the lens just 3cm from your subject, while the Olympus will focus at 5cm. The Konica Minolta's minimum focus distance is 25cm—and that's at the telephoto end, unlike the other three.

These cameras all support the RAW image format; all but the Canon also support TIFF files. Although you can use Photoshop CS's Camera Raw feature to process RAW images, the cameras also include software for that purpose (though Nikon's is quite limited—to get features equal to those in the other cameras' software, you have to pony up for the more capable Nikon Capture). The Olympus goes a step further by allowing you to edit the RAW image properties (such as white balance, color, and sharpness)

situation are also the two with autofocus-assist lamps: the Olympus and the Nikon. Fortunately, shutter lag is low for all four cameras, though I noticed some lag on the Nikon at slower shutter speeds. After you've taken a shot, you can take another in 1 to 3 seconds, with the Konica Minolta again being the fastest. The spread widens a bit if you're shooting in TIFF or RAW mode: the Nikon and the Olympus have considerable delays while saving the image to the memory card, and the camera is locked up during that time.

You'll be spending plenty of time with the in-camera menus, where most of the settings are buried. The easiest menu to navigate belongs to the Konica Minolta, though the controls on the camera's body are quite complex. The Canon's menus are also good, but they're spread out in two separate sections. I found the Nikon's and the Olympus's menus to be clunky and complex.

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## REVIEWS

# Studio Artist 3.0

Graphics Program Explodes  
with New Tools

BY BEN LONG

Synthetic Software's Studio Artist has been a capable and impressive painting and graphics application since its debut several years ago. With version 3.0, the developers finally address some outstanding workflow issues, so Studio Artist can now become part of a larger graphics workflow for print, video, and Web artists. And this version features a tremendous number of new tools.



**Advanced Brush Features** Studio Artist 3's brushes can automatically paint over an existing image, using sophisticated routines that trace the contours of an underlying picture.

Billed as a *graphics synthesizer*, Studio Artist provides remarkable painting, rotoscoping, and animation tools. Because you won't find standard image-editing or color-adjustment tools in Studio Artist, the program resembles Corel Painter more closely than it does Adobe Photoshop.

While many painting programs include fewer than two dozen tools, Studio Artist has 27 *categories* of brushes—and that's just brushes. Studio Artist offers a huge number of painting tools that allow you to create everything from painterly, natural-looking textures to intricate brush strokes that look like complex paintings.

#### Zen and the Studio Artist

The best advice for new Studio Artist users is to relax and give up any need to control  
continues on page 40

**RATING:** ★★★★★

**PROS:** Large number of tools; unparalleled brush definition and customization capabilities; improved workflow; includes 8 hours of training videos.

**CONS:** No multiple undos; takes time to understand the interface.

**PRICE:** \$379; upgrade, \$179

**OS COMPATIBILITY:** Max OS 9, Mac OS X

**COMPANY:** Synthetic Software, 888/808-4188, [www.synthetic.com](http://www.synthetic.com)

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# DVD Studio Pro 3.0

Update Adds Enhanced Effects, Workflow Improvements

BY JIM HEID

The ability to produce more eye candy with less work—that just about sums up what's new in DVD Studio Pro 3.0. The latest version of Apple's high-end DVD-authoring program provides gorgeous new design options for DVD developers, and it adds features that reduce DVD development time.

The difference between DVD Studio Pro 1.5's interface and that of version 2.0 was like night and day (★★★★; December 2003). DVD Studio Pro 3 builds on the strengths of version 2. Version 3 brings a variety of improvements that add up to an appealing upgrade—and they further strengthen DVD Studio Pro's position as the best value in professional DVD-authoring software.

## Same Pretty Face

Like version 2, DVD Studio Pro 3 lets you work in any of three operating modes—Basic, Extended, or Advanced—depending on your skill level and the complexity of your project. In Basic mode, DVD Studio Pro 3 feels like Apple's iDVD with a graduate degree—you can use many of the same drag-and-drop techniques to create DVDs, but you have more control over video compression, menu designs, and menu navigation.

In Extended and Advanced modes, you can take advantage of everything that DVD-Video technology allows—subtitles, alternative video angles and audio tracks, advanced navigation schemes, and more.

Like version 2, DVD Studio Pro 3 demands a fast Mac and a big screen. On a dual-1GHz Power Mac G4 with 1GB of memory, the program was a bit sluggish, and on a 17-inch display, the interface was cramped. A dual-2GHz Power Mac G5 with 2GB of RAM delivered smooth performance, and a 23-inch Apple Cinema HD Display better accommodated the program's many windows and palettes.

The biggest change in DVD Studio Pro's interface is a new Graphical view, which depicts the navigation structure of your DVD (see "The Big Picture"). It's similar to the Map feature in iDVD 4, but it does

much more. For example, you can print the Graphical view to document your work or to send it to a client for approval.

## Visual Feasts

Professional DVDs often have transitions between menus: one menu pushes another off the screen, for example. Creating menu transitions used to be labor-intensive and required Apple's Final Cut Pro or Adobe

you can even specify a different transition between *each* image. But this may earn you a summons from the design police (and rightly so).

Some DVD players support *jacket pictures*, static images that appear when people press the stop button on their DVD players. DVD Studio Pro 3 adds support for jacket pictures, and creating them is as easy as choosing an option from a pop-up menu.

## Design and Deliver

As in version 2, you can create DVD menus using DVD Studio Pro's built-in library of attractive themes and button templates, or you can create menus and buttons in



**The Big Picture** DVD Studio Pro 3's new Graphical view (top left) visually depicts a DVD project's structure. The menu editor appears in the center; some of the program's predesigned themes are in the upper right palette.

After Effects. DVD Studio Pro 3 makes the process a one-click operation. You can choose from 30 transition styles, ranging from a classic cross-dissolve to a spectacular lens flare in which an animated glare of brilliant light separates one menu from the next. You can even assign a different transition to each DVD menu button or specify that one or more buttons not have any transition at all.

Many of version 3's transitions use transparency effects to provide additional glitz; for example, a menu can show through an animated object that's part of the transition. Here's the best part: with surprisingly little effort, you can create transparent transitions yourself. Use Final Cut Pro, After Effects, or Apple's forthcoming Motion to create the transitions' animated elements, and then store them in a specific folder on your hard drive to make them available from within DVD Studio Pro. This is a great way to go beyond DVD Studio Pro 3's built-in transitions. I wouldn't be surprised to see third-party transition collections soon.

Version 3 also lets you add transitions between images in a DVD slide show, and

Photoshop and then import them. I was pleased to see that DVD Studio Pro 3 is smarter about managing imported graphics. If you alter an existing menu graphic in Photoshop, DVD Studio Pro 3 immediately reflects your changes. In DVD Studio Pro 2, you had to quit and relaunch for changes to appear.

Like version 2, version 3 includes a separate program, Compressor, that encodes video into MPEG-2 format. Compressor 1.2, also included with Final Cut Pro HD, supports a broader range of MPEG-2 formats than earlier Compressor versions. (If you're using DVD Studio Pro 2 and you aren't quite ready to upgrade to version 3, you can download the free Compressor 1.2 update instead.)

On the audio front, there's both good news and bad news. The good news is that DVD Studio Pro 3 supports DTS (Digital Theater Systems) multichannel audio. On the downside, to compress audio in Dolby AC3 format, you must still use Apple's somewhat inscrutable A.Pack utility, which is included with DVD Studio Pro. While

continues on page 38

## RATING: ★★★★★

**PROS:** Elegant interface; many design and workflow enhancements; can import iDVD 4 projects.

**CONS:** Separate program required for AC3 audio encoding; burned discs don't play in OS 9.

**PRICE:** \$499; upgrade from previous versions, \$199

**OS COMPATIBILITY:** Mac OS X

**COMPANY:** Apple Computer, 800/692-7753, [www.apple.com](http://www.apple.com)

# Music Recognition Programs

## SmartScore 3.2 Professional and PhotoScore Professional 3 Tackle Scanned Scores

BY CHRISTOPHER BREEN

People who've worked with a scanner and an optical character recognition (OCR) program know how difficult it can be for computers to accurately recognize the printed word. That problem is compounded in OCR applications for scores (musical notation). The program must not only recognize text in the form of lyrics, titles, and dynamic markings, but also determine a note's pitch by its position on a musical staff, rhythmic value, or accidental sign (sharp, flat, or natural).

Two programs—Musitek's SmartScore 3.2 Professional and Neuratron's PhotoScore Professional 3—are designed to surmount these challenges with a minimum of mistakes. Their success at doing so depends a great deal on the quality of the original score and scan. Beyond that, the programs differ in their ease of use and depth of editing tools.

### The Scan's the Thing

Standard OCR programs are fairly tolerant of less-than-perfect original source material, but SmartScore and PhotoScore are not. Each program requires a TWAIN scanner driver; neither is intended to work with handwritten scores, and scanning photocopied scores is not recommended. When presented with a score with small staves—for example, a full orchestral score reduced to fit on an 8.5-by-11-inch page—both programs generated pages filled with an unusable mishmash of notes. From standard-size scores, the programs were able to generate usable scans.

SmartScore immediately distinguished itself by automatically configuring the scanner settings to produce the best scan. Conversely, PhotoScore launched the scanner's

interface and left us the more difficult task of creating an optimal scan. Despite making numerous adjustments within PhotoScore's scanning interface, I was unable to create scans that produced results as good as those automatically created by SmartScore.

Specifically, PhotoScore had more difficulty with accidentals than SmartScore did: it recognized these symbols as notes, and therefore created measures that exceeded the number of beats they should hold. Similarly, PhotoScore recognized the dot characters of dotted notes as notes more often than SmartScore did. To PhotoScore's credit, that program routinely recognized text—lyrics, titles, and composer information—far more accurately than SmartScore did.

### Editing and Interface

Neither program produced a mistake-free score, so I tried out the editing tools. Both programs split the main window into two panes—the top shows a picture of the original score, and the bottom displays the program's interpretation of that score. This split-screen

scheme lets you easily compare the scanned score to the original. PhotoScore takes the prize for ease of use and intuitiveness. With an interface that mimics Sibelius's professional notation program (♦♦♦♦; July 2004; [www.sibelius.com](http://www.sibelius.com)), PhotoScore makes it easy to select notes and musical symbols and correct them. Just click on the on-screen keypad featuring common musical characters (or press the corresponding keys on your keyboard's numeric keypad).

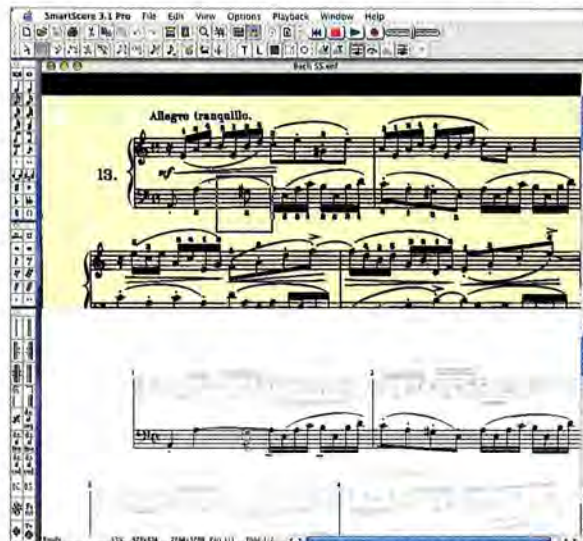
PhotoScore automatically marks measures that have an incorrect number of beats, so you can zero in on less-obvious mistakes, such as a 16th note recognized as a 32nd. SmartScore can also detect these mistakes, but it doesn't do so automatically, nor does it mark all the problem measures on the score.

SmartScore's interface offers a couple of toolbars with a host of less-than-intuitive, roughly drawn icons. Thankfully, the version 3.2 update adds tool tips, which describe the purpose of each icon. To edit notes, you use your keyboard's Z, X, and C keys for toggling between functions. You can select, delete, or change any

object, such as single notes or clusters of notes, dotted rhythms, or dynamic markings. Alternatively, you can select notes by clicking on the sometimes-confounding icons in the toolbars. Neither method is terribly intuitive.

SmartScore's poorly organized manual makes the program even more difficult to use. PhotoScore has sparse (50 pages) but well-organized documentation.

PhotoScore's manual is thin because the program has comparatively few features. PhotoScore is intended for quickly cleaning up a scanned score that will be exported to a full-blown notation program (the program includes a button that exports the score to



**Hard to Recognize** SmartScore does a reasonable job of identifying most notes in a simple score, but it has a cluttered interface.

Sibelius). Although SmartScore can also export scores to programs such as Sibelius and MakeMusic's Finale (♦♦♦♦; July 2004; [www.finalemusic.com](http://www.finalemusic.com)), its editing capabilities are complete enough for creating a good-looking score from scratch.

SmartScore 3 comes in several versions, including separate Songbook, MIDI, Piano, and Guitar editions. They range in price from \$99 to \$199, so it's wise to do some research and find exactly the product you need.

### Macworld's Buying Advice

If I ruled the world, I'd bring together the bright minds at Musitek and Neuratron and suggest that they create one program combining SmartScore 3.2 Professional's OCR capabilities and more-advanced editing features with PhotoScore Professional 3's interface. If you're willing to accept more mistakes as long as they're easy to correct, consider PhotoScore. If you choose SmartScore, the time you save with better recognition may be lost in struggling with the interface—plus, its professional version is considerably more expensive than PhotoScore's. □

### PHOTOSCORE PROFESSIONAL 3

**RATING:** ♦♦♦

**PROS:** Intuitive interface; good text recognition; integration with Sibelius.

**CONS:** No assistance with scanner settings; recognition not as accurate as SmartScore's.

**PRICE:** \$199

**OS COMPATIBILITY:** Mac OS 9, Mac OS X

**COMPANY:** Neuratron, [sales@photoscore.com](mailto:sales@photoscore.com), [www.neuratron.com](http://www.neuratron.com)

### SMARTSCORE 3.2 PROFESSIONAL

**RATING:** ♦♦♦♦

**PROS:** Good musical recognition; simple scanner setup; full selection of editing tools.

**CONS:** Unintuitive interface; disorganized manual.

**PRICE:** \$399; academic, \$299

**OS COMPATIBILITY:** Mac OS 9, Mac OS X

**COMPANY:** Musitek, 800/676-8055, [www.musitek.com](http://www.musitek.com)

# FontAgent Pro 2.1

Font Manager Gives Small Studios a Boost

BY ANDREW SHALAT

While OS X may have reignited the font wars, those battles are now fought in small skirmishes. The three big font managers on the market—Insider Software's FontAgent Pro, and Extensis's Suitcase (February 2004) and (formerly owned by Diamond-Soft) Font Reserve (February 2003)—are all top-notch in terms of functionality and ease of use. Each approaches OS X's peculiar font challenges in its own way, and each has its own merits, depending on how you like to work. Deciding which one is best for you comes down to user interface and application-specific refinements in features such as previews and font activation.

FontAgent Pro 2.1's evolutionary new features—autoactivation, font subsets (called Cascading Sets), and Classic font activation—keep it in-line with its competitors. Its network-sharing protocol, Fontezvous, is a clever solution to small-studio problems.

## Interface

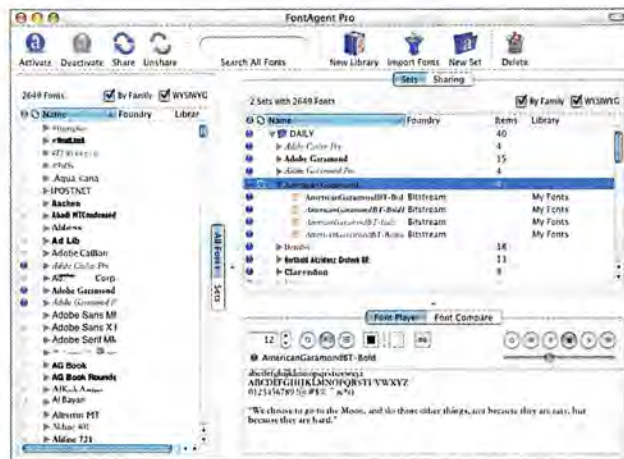
FontAgent Pro's Aqua interface and new icons are similar to those of most new OS X apps. Upon examination, you'll see that the inspira-

tion for FontAgent Pro's triple-pane window is iTunes. Font libraries and sets are located on the left and upper right. In the lower right pane is the program's distinctive Font Player, which lets you view fonts in real-life circumstances, and a new Font Compare tab.

Font Compare is FontAgent Pro's take on customizing previews, for testing a number of typefaces back-to-back. It's similar in concept to Suitcase's easy preview functions, but it's not as intuitive; you must choose the fonts and place them in the same set to compare them.

FontAgent started out as a font-repair and -organization utility, and it still has superior repair and organization functionality.

As in earlier versions, the program examines the fonts it imports, and it moves corrupt fonts to a separate Problem Fonts folder. FontAgent Pro then generates a



**Haven't We Met Somewhere Before?** FontAgent Pro 2.1's interface bears a striking resemblance to iTunes' interface.

report, so you can go in and clean out your font detritus.

Version 2.1 has a few thoughtful additions, such as a WYSIWYG button that lets you preview your fonts in list view without having to run Font Player. Unfortunately, there's no way to resize the type in the list.

## Networking with Fontezvous

FontAgent Pro 2.1 bypasses the font-server model that its rivals have adopted, to leverage the Mac's zero-configuration networking utility, Rendezvous. Instead of requiring a dedicated server, Fontezvous facilitates peer-to-peer font sharing. Once sharing is activated on networked computers, you can import, preview, and activate fonts through the Sharing tab in FontAgent Pro.

The only aspect of FontAgent Pro that puzzles me is its insistence on moving or copying fonts when importing them. Unlike Font Reserve or Suitcase, which ask where your fonts live, FontAgent wants to *move* or copy them for you, potentially taking up hard-disk space and creating unnecessary font duplication. For one user, this isn't much of a problem, but if you're one of many users on a Mac, the ensuing redundancy is primitive.

## Macworld's Buying Advice

FontAgent Pro 2.1's all-in-one organization, activation, and repair facility is topped only by its clever and easy font-sharing feature. Despite some nagging flaws and inflexibilities, it's an excellent choice for a small studio or an individual user. □

**RATING:** ★★★★★

**PROS:** Fontezvous peer-to-peer font sharing; time-saving WYSIWYG lists; convenient Font Compare tab; built-in repair function.

**CONS:** Moves or copies fonts on import; can't resize WYSIWYG type in left work area.

**PRICE:** \$100; download, \$90; upgrade, \$50

**OS COMPATIBILITY:** Mac OS X

**COMPANY:** Insider Software, 866/216-1399, [www.insidersoftware.com](http://www.insidersoftware.com)



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# Combustion 3

## 3-D—Compositing Program Features New Effects and Editing Capabilities

BY BEN LONG

Though the Mac-based compositing market is dominated by Adobe After Effects and Apple's own Shake, Discreet's Combustion has earned a loyal following, thanks to its unusual interface and powerful features.

Version 3 offers many improvements and important additions, such as the ability to perform simple edits within a composition. Combustion has high-end features like vector-

The theory behind Combustion's interface is that you won't have to expend much effort navigating and managing it. In practice, this is largely true. But Combustion's approach is so far from the mainstream Mac interface that even experienced graphics pros will need time to get up-to-speed.

### Special Operations

To create an effect in Combustion, you apply operators to a layer. Operators include color corrections, special-effects filters, and geometric transformations, and you can apply them to single layers or a group of layers. The advantage of this approach is that you can go back and redefine, remove, reorder, or tweak any operator at any time.

Other new operators include Grain Management, which allows you to add or remove grain and noise from a layer; new feathering controls, which let you feather different sides of a selection by different amounts; and the ability to output your projects as Flash animations, which is convenient.

The most impressive things about this program, however, are its price and its helper applications. Its \$995 price is competitive with that of Adobe After Effects, but Combustion comes bundled with Re:Vision Effects' Re:Flex plug-in, an excellent morphing and warping tool that would cost you \$500 to add to After Effects.

### Performance Issues

While Combustion 3's performance is an improvement over the previous version's, it still feels uneven. Most operations clip along just fine, but you might be surprised to find the program slowing down from time to time, especially while you're using the painting tools. I was surprised that the program's Grain Management tools felt a little sluggish, especially as I added more layers to my composite.

Though After Effects plug-in support has improved in version 3, it's still not flawless, so you might find that some of your After Effects plug-ins won't work. Where Combustion really scores over After Effects is in its support for high-bit images (including 16- and 32-bit images). And its support for Cineon files and look-up tables (LUTs) makes Combustion a practical tool for high-end broadcast and film finishing.

### Macworld's Buying Advice

If you already use Combustion, the \$200 upgrade is a no-brainer. And if you're looking for an inexpensive alternative to Discreet's high-end products, or if you need to work with high-bit media, Combustion is an excellent choice. Once you get used to Combustion's interface, you'll be sold on it. But if you're already an experienced After Effects user, the program may not offer enough advantages to convince you to switch. Combustion is also a good choice if you're a beginner; however, because of the program's small user base, you won't get the plug-ins and support that you get with After Effects. □



**New Face** Combustion eschews the usual Mac look-and-feel in favor of a custom interface derived from Discreet's high-end compositing products.

based painting, pro-level particle effects, and smooth integration of 2-D and 3-D compositing (features derived from Discreet's high-end video-compositing apps such as Inferno, Flint, and Flame). But the program still has its weak points; its performance is uneven and it's difficult to learn.

### Something Completely Different

Combustion's strongest feature has always been its unique interface. The program takes over your entire screen, filling it with a neutral-gray background so seeing colors accurately is easier. The upper two-thirds of the screen displays your work while the lower third contains context-sensitive tabs, buttons, and sliders.

Though Combustion eschews typical floating windows, its Viewport mechanism (which is really a window) lets you quickly and easily see multiple views of your project. The program's excellent RAM playback (for playing back video) lets you view your video in real time while you work, an essential tool for complex rotoscoping jobs.

The most impressive of Combustion 3's new features is its Edit Operator, which lets you edit film clips together—complete with transitions—within the application. You no longer have to return to an editing application to adjust the timing of an edit within an effect. (Most other compositing programs require a separate editing program for this task.) You can even capture clips from any QuickTime-supported device directly into Combustion—a handy shortcut for quickly grabbing additional media such as video, animation, or stills. But make no mistake: Combustion's Edit Operator is rudimentary, and it's not a substitute for a real editing application.

### Animation Assistance

Animators often create complex motions by using simple mathematical expressions to define how a layer should move. Combustion improves this process with its Visual Expressions Browser, which lets users alter and customize expressions with visual sliders and controls.

**RATING:** ★★★

**PROS:** Can edit within a composition; new visual approach to creating expressions; Flash output; improved feathering controls; many built-in extras, including grain management and Re:Flex morphing; good high-bit support.

**CONS:** Uneven performance; difficult to learn; not compatible with all After Effects plug-ins.

**PRICE:** \$995

**OS COMPATIBILITY:** Mac OS X

**COMPANY:** Discreet, 800/869-3504, [www.discreet.com](http://www.discreet.com)



(actual size)

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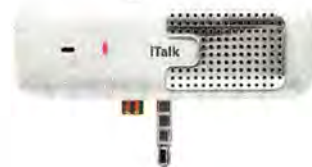


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# Epson PictureMate

Little Photo Printer Offers Computer-Free Snapshots

BY JAMES GALBRAITH

With its compact design and handle, the Epson PictureMate looks like a portable CD player or a lunch box. But it's actually a \$199 photo printer that uses six pigment-based inks to print on 4-by-6-inch glossy photo paper—with or without the assistance of your Mac.

## Slots o' Fun

The PictureMate can accommodate all major types of flash memory—for example, CompactFlash Types 1 and 2, Memory Stick, Secure Digital, and others.

In OS X 10.3.3, the cards mount on your Mac's desktop without the need of software. The printer has a USB port for cameras that support PictBridge and USB direct connections. And you can hook up flash, Zip, and CD-RW drives to the USB port to save photos to an external device.



PHOTOGRAPH BY PETER BELANGER

## Price of Prints

Epson sells a \$29 box that includes 100 sheets of 4-by-6 photo paper and one cartridge that contains enough of each ink color to print 100 photos. The price per print comes to 29 cents.

Once printed, the photos should last longer than you will. The prints are both smudge-resistant and waterproof, and independent longevity tests show that the PictureMate's prints should last 200 years in a photo album and as many as 100 years behind glass in a frame.

## Easy Proofs

Contact sheets are easy to produce. Plug in a camera or a memory card, and use the PictureMate's wizard to print a proof sheet containing numbered thumbnails of each picture. Then you select your photos and print them. Options include

bordered, borderless, wallet-size, black-and-white, and sepia-tone prints. You can also select one of 18 ways to crop your pictures. Each photo takes a little more than two minutes to print without the help of a Mac.

## Picture Quality

I printed images from several cameras and found that their overall quality was very good, though they were a little heavy on the magenta—especially in skin tones. There were also very faint lines visible in the prints that were taken directly from the card. They disappeared when I used the enhanced-detail mode, which is available only when you print from a Mac, but this took about twice as long (5 minutes, compared with 2.5 minutes).

## Macworld's Buying Advice

The Epson PictureMate is a great printer for people who want to immediately print good-looking photographs from their digital cameras. □

**RATING:** ★★★★★

**PROS:** Compact; portable; low price per print.

**CONS:** Limited to 4-by-6-inch paper; no battery option.

**PRICE:** \$199

**OS COMPATIBILITY:** Mac OS 9, Mac OS X

**COMPANY:** Epson, 800/873-7766, [www.epson.com](http://www.epson.com)

# THE CONQUEST

## DiskWarrior is Now OS X Native

It's the indispensable utility that repairs problems such as disks that won't mount, files you can't trash, and folders that have disappeared. MacUser magazine said, "It's the fastest and safest data recovery utility you can buy."

Macworld magazine said, "DiskWarrior is by far the best disk utility available for the Mac; it can repair virtually any disk problem you may

encounter...and it is likely to become the only tool you'll want to keep with you at all times."

David Coursey, ZDNet AnchorDesk, agrees in an article comparing disk utilities. He used it to fix a disk that no other utility could. "DiskWarrior is a great product, not just because it fixed a pretty serious screw-up, but because it showed me what it planned to do in minute detail before doing it."

But disk damage isn't the only threat to your data. As hard drives get older, the drive mechanisms

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# iModeller 3D Professional 2.0

Create 3-D Models without Special Skills

BY BEN LONG

If you need to make custom 3-D models but can't spare the time or expense, VR Interactive's iModeller 3D Professional 2.0 can help. Instead of learning complex traditional 3-D tools, you can create 3-D models in iModeller simply by taking a series of digital photos of

an object. The program then uses your photos to calculate the object's geometry.

iModeller can provide good results. It's an intriguing tool that goes toe-to-toe with Realviz's ImageModeler 3.5 (★★★★; September 2003). But for a highly complex model, its output may not be as detailed as you'd like.

To use iModeller, you have to photograph your object from different angles on a reference image and then import the photos into the program.

You'll need to shoot against a solid background and ensure that your scene is evenly lit. Usually a combination of six or seven images, shot from a variety of angles, is plenty. The program then analyzes all of the images to locate the reference image.

Next, you need to create masks for each image to separate your object from the background. Because the masking tools don't follow standard Adobe Photoshop conventions, you may find it easier to use

Photoshop or your favorite image-editing program for this step.

Finally, a click of the 3D tab starts the program on its 3-D construction. After creating the geometry, iModeller applies textures to your model from the original source images to produce a final textured model. The problem is that it takes a lot of work.

iModeller is best for curvy or organic shapes that are hard to model with a regular 3-D package, but it isn't very effective at modeling objects with regular geometric forms or hard edges. iModeller can export to a number of native 3-D formats, including Cinema 4D and 3D Studio Max.

## Macworld's Buying Advice

iModeller 3D Professional 2.0 is handy for modeling weird and organic shapes. While it doesn't replace a traditional modeling app, it's great if all you need are placeholder objects that won't be viewed in too much detail. □

**RATING:** ★★★

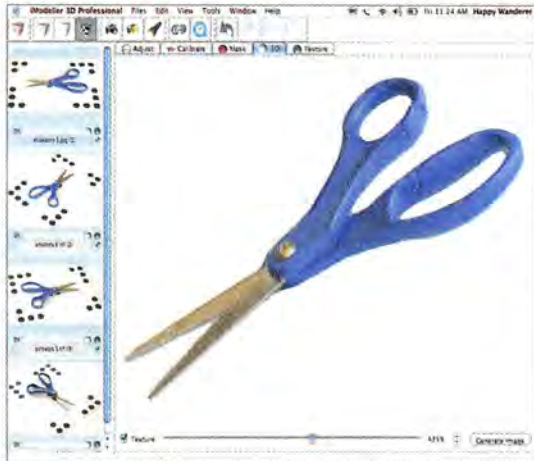
**PROS:** Creates simple 3-D models without the need for advanced 3-D modeling skills; good export support.

**CONS:** Masking tools use some nonstandard interface conventions; weak on manufactured, geometric shapes; doesn't always produce usable models.

**PRICE:** \$529

**OS COMPATIBILITY:** Mac OS X

**COMPANY:** VR Interactive, 888/848-1908, [www.vri.ca](http://www.vri.ca)

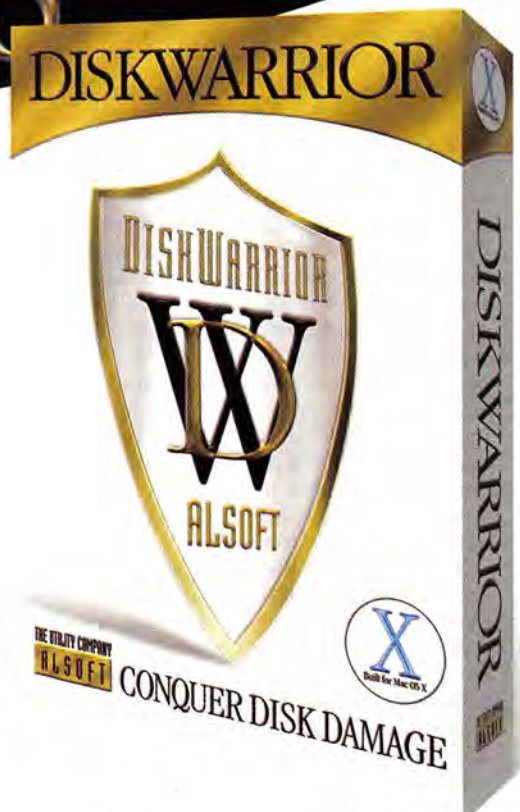


**Weird Shapes** iModeller is good at modeling oddly shaped items, such as a scissor handle.

# CONTINUES

begin to malfunction. Eventually, the malfunctions become so severe that the drive simply stops working. DiskWarrior can automatically test for hardware malfunctions, giving you the chance to back up your data before it's too late.

Be prepared. Don't wait until after you have a disk disaster to buy your copy of DiskWarrior. Bob LeVitus, aka Dr. Mac, said, "I feel naked without DiskWarrior." You can believe MacHome magazine when they said, "DiskWarrior is a quick, one-click solution to faster, more stable hard drives."



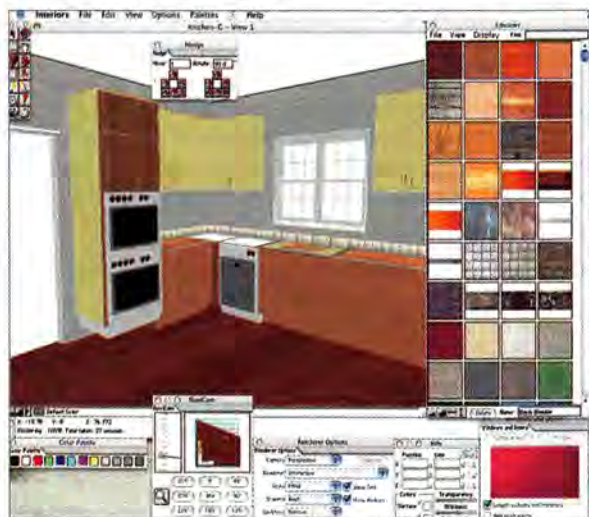
Choose 141 at [www.macworld.com/getinfo](http://www.macworld.com/getinfo)

# Interiors 3.4

3-D Decorating Program Helps You Avoid Surprises

BY GREG MILLER

Judging by the popularity of current interior-design TV shows such as *Trading Spaces* and *Surprise by Design*, the do-it-yourself market is growing. Microspot Interiors 3.4, a 3-D interior-design application, provides a quick way of rendering layouts so both



**Wide Variety** Interiors' work environment lets you drag and drop textures onto the objects in your model.

professionals and home owners can see their designs before they start painting or moving furniture around. And home owners will find Interiors a big help in keeping design and vision consistent.

The design process in Interiors is fairly straightforward. You start by laying out a room in its exact dimensions—you can draw 3-D walls with proper thickness and height as easily as you can draw a single line. Once you create walls, you can add doors, windows, furniture, and accessories from the program's object library. Interiors is intelligent about helping you place objects logically. For example, clicking on a wall with a window object automatically places the window in the wall, orients the window properly, and sets the window to a typical height. You can then use the Windows And Doors palette to adjust the size and placement of the window. Throughout the process, you can view your model from any angle by using the View menu and the NaviCam palette.

The final step in the design process is to apply colors and textures to the surfaces of the room through simple drag-and-drop actions. While this worked great most of the time, we found intermittent bugs in the texturing of certain objects. For instance, some cabinets refused to accept a texture, but their corresponding hardware was textured

instead; one countertop refused to accept a texture, while its backsplash texture worked fine. Microspot is aware of these problems and is working on fixes. Once the design is complete, the 3-D rendering engine does a great job of creating a realistic room.

The assortment of doors, windows, furniture, and cabinets included in the object library is fairly extensive. In addition, Microspot is making more objects available for free on its Web site every month. This works fine for do-it-yourself home owners, but professionals are going to want to use their own objects and will need, at the very

least, to customize the design of furniture elements beyond color, texture, and dimensions. This customization capability is not currently included, but Microspot is planning a sibling application (in development as this issue went to press) that will give Interiors this capability. Also, since Microspot is a British company, American users will notice that the default library of objects is geared toward British cabinet sizes and appliances. The program offers an American-scaled kitchen library, but it's limited. The introduction of custom object sizes will likely eliminate this problem.

In many ways, Interiors' interface—for actions such as applying textures to objects—is easy and intuitive. But in other ways, it can be complex and confusing with its multitude of context-sensitive palettes that appear and disappear. Furthermore, trying to lay out architectural elements such as curved walls or non-90-degree angles is difficult. And the program was marred somewhat by its sluggish performance on a 400MHz Power Mac G4.

## Macworld's Buying Advice

Overall, Interiors is a fun and useful interior-design tool. But Microspot has a tough job in trying to satisfy both the casual user and the professional at the same time. Current users should upgrade to this OS X version. New users should try it out first. □

### RATINGS: ★★★★★

**PROS:** Good rendering; additional library elements available online every month; excellent value.

**CONS:** Can't create custom objects; slow performance; textures don't always work the way you'd expect.

**PRICE:** \$129; download, \$116

**OS COMPATIBILITY:** Mac OS X

**COMPANY:** Microspot, service@microspot.co.uk, www.microspot.com

# Design Intuition 1.3

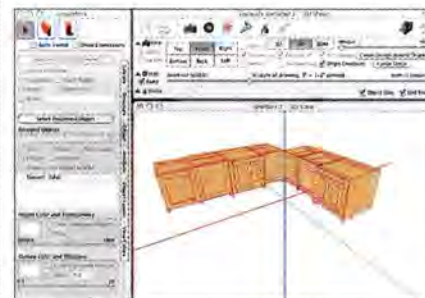
3-D CAD Software Makes Woodworking and Design Projects Easy

BY GREG MILLER

GizmoLab's Design Intuition 1.3, a 3-D CAD software package for woodworkers and hobbyists, can quickly produce accurate, scaled drawings of 3-D models. Design professionals and home owners can use it to design projects such as decks, kitchen cabinets, or rooms.

With a Mac-style graphical interface, a minimal number of tools, and a clear display of all model information, Design Intuition is a practical, easy-to-learn tool. Once you create an object, you can change views, adjust attributes, or create another object. Each object's dimension is displayed directly on the model; double-click on it to change it.

Besides 2-D and 3-D views, the program has a Materials List view—a shopping list of items you'll need in order to create your design. The new Smart Objects feature lets you create interactive intelligent objects—for example, a bookshelf that adjusts the size and placement of its shelves depending on its



**Handy Controls** Access controls with just one click.

overall dimensions. Another new feature is Repeaters—objects that tile or fill in automatically when resized. I'd like more choices for object shapes, a library of common moldings, and the ability to export drawings as DWG files, which would let VectorWorks and AutoCAD users build libraries that were created in Design Intuition.

## Macworld's Buying Advice

Design Intuition 1.3 is easy and fun, as well as a great value. I recommend it for woodworkers, cabinetmakers, and kitchen designers. □

### RATING: ★★★★★

**PROS:** Familiar graphical interface; easy to learn; Smart Objects and Repeaters functionality.

**CONS:** Limited library of shapes; no DWG file export.

**PRICE:** \$140; lifetime license, \$500

**OS COMPATIBILITY:** Mac OS X

**COMPANY:** GizmoLab, support@gizmolab.com, www.gizmolab.com

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# iPod Voice Recorders

Griffin iTalk Takes the Lead in Sound-Quality Race with Belkin Voice Recorder

BY CYRUS FARIVAR

Until recently, iPods could receive information only from a computer—contacts, calendars, and MP3 files all had to be imported. Now the iPod can be used as a recording device, too, for directly storing and playing back audio. You're not going to want to record your band's demo on your iPod, but if you want to capture close-range interviews or voice memos, the Belkin Voice Recorder for iPod and the Griffin Technology iTalk iPod Voice Recorder can get the job done. In the end, though, the Griffin is our pick, thanks to its better sound quality.

These microphones work only with iPods that have dock connectors; they don't work with the iPod mini, which lacks the appropriate software.

## Voice Recorder for iPod

These devices work similarly. When you plug one of them into the iPod's headphone jack, the iPod goes straight into voice-recording mode—you don't have to install anything. In this mode, the iPod displays a large, stopwatchlike counter that marks recording time in hours, minutes, and seconds. Two menu choices below the counter offer Record and Cancel options.

The Belkin Voice Recorder is an omnidirectional microphone that records in mono sound at 8KHz and 128 Kbps, or about 1MB per minute of audio. It records audio as WAV files; there are no options for recording in other formats. (We wish that both recording devices had options for changing the file format—to MP3 or AAC, for example—and recording quality, to allow for smaller files.)

The Belkin also has a small speaker for playing back recordings, or any MP3 file on your iPod.

Once you've made recordings, you can play them directly from the iPod or through iTunes, and you can even work with them in an audio-editing program.

Belkin's microphone works fairly well for voice memos and other similar audio recordings. The company has acknowledged that the product is meant for very close-range recording, rather than for interviews at a longer distance. This might explain its tendency to distort more projected syllables and to play back sounds such as *ess* and *eff* with a loud popping sound—a

major drawback. In addition, at \$60, it's priced far too high, considering its limitations and that its competition makes a better and less expensive product.

## iTalk iPod Voice Recorder

Although the Griffin Technology iTalk iPod Voice Recorder's setup, interface, mike level, and file format are the same as the Belkin device's, it is far superior. It's less expensive (\$40), it has more features, and it does a better job overall than the Belkin.

The Griffin records more clearly and with more-consistent sound than the Belkin. And it has a nicer-sounding speaker (but it's also significantly larger than the Belkin). There's a standard 3.5mm port on the top of the microphone for both audio in and audio out, so you can attach another microphone or listen via headphones. Depending on the microphone you use, you may be able to improve the quality of your recording. (Belkin makes the Universal Microphone Adapter, which you can plug an external

microphone into; this adapter costs an additional \$40.)

## Macworld's Buying Advice

If you want to use your iPod as a digital voice recorder, we recommend the Griffin Technology iTalk iPod Voice Recorder: its recordings sound better, it has an extra jack for a headphone or a mike, and it costs \$20 less. The choice is clear. □

### BELKIN VOICE RECORDER FOR IPOD

**RATING:** ★★

**PROS:** Smaller size.

**CONS:** Distorts sound on playback; weak external speaker; no file-format options for recordings.

**PRICE:** \$60

**COMPATIBILITY:** iPod with dock connector

**COMPANY:** Belkin, 310/604-2347, [www.belkin.com](http://www.belkin.com)

### GRIFIN TECHNOLOGY iTALK IPOD VOICE RECORDER

**RATING:** ★★★

**PROS:** Very good recording quality; audio-in/ audio-out jack on unit; great value.

**CONS:** Slight voice distortions in sound quality; no file-format options for recordings.

**COMPATIBILITY:** iPod with dock connector

**PRICE:** \$40

**COMPANY:** Griffin Technology, 615/399-7000, [www.griffintech.com](http://www.griffintech.com)



## DVD Studio Pro 3.0

continued from page 28

A.Pack is great for preparing multichannel audio with surround channels, it's overkill for creating simple, two-channel stereo tracks such as those used in corporate, training, or wedding DVDs. Basic, two-channel AC3 encoding in Compressor or in DVD Studio Pro 3 itself would be a welcome change.

## Less Time to Burn

On the workflow front, DVD Studio Pro 3 lets you copy and paste buttons and other elements from one DVD menu to another. I used this feature when I created a training DVD that contained a half-dozen menus, and it saved me many hours of authoring tedium.

DVD Studio Pro can now import iDVD 4 projects, opening the door to some interesting workflow options. You can use iDVD to draft a DVD's content and structure, and then bring that project into DVD Studio Pro to add navigation niceties, subtitles, or other advanced DVD features.

iDVD 4 projects imported accurately in my tests, but because of a minor bug in DVD Studio Pro 3's import function, adding menu transitions to an imported project required a few extra steps. Apple is aware of this bug and will likely address it in a maintenance update.

DVD Studio Pro 3 gives you more ways to create your final product, adding support for rewritable (RW) media. If you insert a rewritable disc that already contains data, version 3 conveniently offers to erase and reuse it. DVD Studio Pro 3 can also burn to DVD+R and DVD+RW media, assuming your burner supports it. (Most of the SuperDrives in Power Mac G5s do.)

My tests uncovered one fairly serious burning issue: discs that you burn with DVD Studio Pro 3 don't play back in OS 9. Apple says that the problem is due to an "optimization" it made in the burning process; the company plans to issue a fix. If your DVDs must play in OS 9, there is a workaround: you can use Roxio's Toast to burn the encoded folders that DVD Studio Pro creates.

## Macworld's Buying Advice

If you're contemplating going beyond iDVD—or if you're still suffering through using DVD Studio Pro 1.X—don't hesitate to jump to DVD Studio Pro 3.0. Users of version 2 won't get any life-changing productivity gains from version 3, but the new Graphical view and other workflow improvements are welcome. DVD Studio Pro 3's changes deal primarily with design and presentation, and since design and presentation are largely what DVDs are about, these enhancements make this an important upgrade, especially at \$199. □

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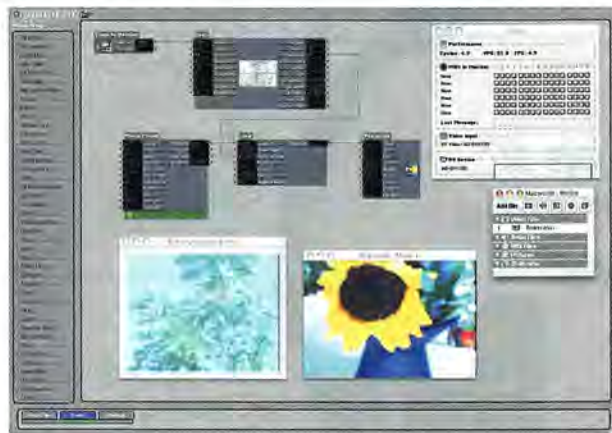
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# Isadora 1.0

## Interactive Programming Tool Assists Creative Performances

BY ROBERT ELLIS

TroikaTronix's Isadora, a graphical programming tool that facilitates real-time control of digital audio and video, MIDI, images, and Studio Max 3DS files, has found a following among performers, video artists (VJs), and people looking for a way to render innovative multimedia effects to video.



**Effects Control** Input from the outside world can control effects in Isadora. Here, the Eyes module allows the brightness of the streaming tree video to manipulate the glow effect applied to the sunflower movie.

While other applications (such as ArKaos VJ, Max/MSP, and VDMXX) can create special effects for live performances, their complexity can be daunting; their performance, sluggish; and their effects, predictable.

Isadora's ease of use and flexibility make it a solid choice. Isadora allows you to manipulate prerecorded and live media—either with programmed effects and controls or on-the-fly via input from a keyboard or a mouse, a MIDI device, a microphone, or a video camera. Isadora can project video onto as many as four monitors (Stages) simultaneously, and you can record any Stage to a QuickTime movie for use in another video-editing program.

At first glance, Isadora *can* be a bit overwhelming, so you may want to work through the tutorials and spend a little time with the sample files. There's also an excellent 246-page manual. You'll quickly lose yourself in experimentation.

### Flexible and Extensible

Isadora's workspace has three panes: a Toolbox, which lists the various modules; a Scene Editor, where you arrange modules and create links to make them work together; and a Scene List, a row of buttons that allow you to jump from one scene to another. The interface lacks Mac-style polish and refinement. For example, some buttons didn't dis-

play correctly. And I wasn't able to resize or collapse individual panes. My qualms are mainly aesthetic, though—Isadora isn't much to look at, and it could use some productivity tweaks, but it's easy to use.

You don't have to write any code to create a multitude of possible combinations and settings. To create a program, simply select modules from the Toolbox, arrange them in the Scene Editor, and connect them.

Isadora ships with more than 100 ready-made modules—everything from basic effects (Chroma Key, Colorize, Crop, and more) to complex options such as Eyes

(which lets you control your media with the brightness of a camera's live video stream). The program is also compatible with FreeFrame, an open-source video plug-in system (more than 40 free plug-ins are available on the TroikaTronix Web site). And you can create and save your own modules.

### Scene Control

An elaborate scene can turn into a tangled web of interconnected modules, but you can hide the clutter by creating a Control Panel—a customized user interface of buttons and sliders

that control the modules in a scene.

Complex scenes can heavily tax system resources, but the program was stable and responsive on my dual-800MHz Power Mac G4 with 1.25GB of RAM, even as I experimented with numerous parameters and effects. Video capture may require some compromises in performance, though. Depending on your system, you may not be able to run as many effects, or you may have to capture at a lower frame rate or lesser quality.

### Macworld's Buying Advice

Isadora is powerful, flexible, stable, responsive, and surprisingly easy to use. It's also reasonably priced. If you need a programming environment for creating live interactive multimedia performances, or want a tool that can help you render live interactive media for use in multimedia projects, Isadora will help you express yourself in unlimited ways. □

**RATING:** ★★★★★

**PROS:** Powerful and flexible; stable; extensive collection of modules; excellent tutorials and documentation; reasonable price.

**CONS:** Interface lacks polish.

**PRICE:** \$350

**OS COMPATIBILITY:** Mac OS 9, Mac OS X

**COMPANY:** TroikaTronix, 718/218-6775,

www.troikatronix.com

### Studio Artist 3.0

continued from page 26

or understand this product. If you're the type of artist who likes to comprehend your digital tools so that you can predict and control them, then you're going to have a hard time. Simply put, the level of control and variation in Studio Artist's tools goes too deep to be used in a strictly procedural manner. You're better off constantly experimenting and exploring—and the program's interface is well designed for experimentation. Though it lacks a standard tool palette, the program's pop-up menus and windows provide quick access to all of its custom palettes.

Version 3's interface is mostly unchanged from version 2 (Macworld, June 2002), though there are new parameters and adjustment options scattered throughout the program's configuration palettes. There's also a new Session File format option, which allows you to more effectively store a work-in-progress.

Version 3 doesn't support multiple undos, and that's a real liability in a program that thrives on experimentation. Previous versions would let you save a finished image only as a bitmap, so you'd lose a lot of the setup and configuration you had developed while painting. Version 3 lets you save a work-in-progress in a special Session format, so integrating Studio Artist into a workflow with other graphics applications and editing your work later are much easier.

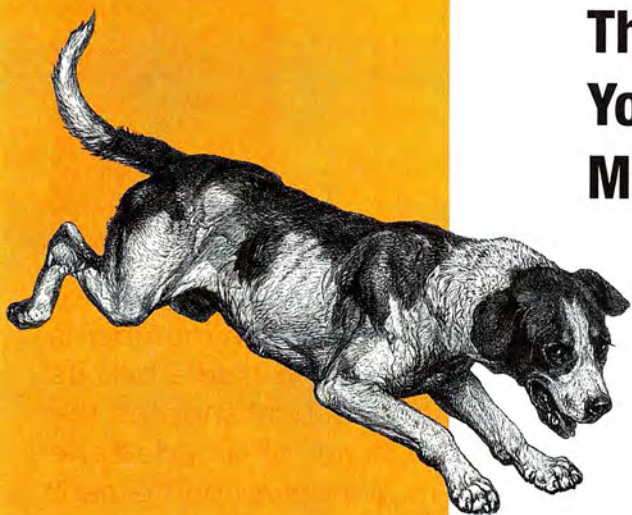
### Better with MSG

Studio Artist 3 introduces a new plug-in architecture called Modular Synthesized Graphics (MSG), which allows you to add huge numbers of new tools quickly—just in case the 3,000 included presets aren't enough. The new Vectorizer tool automatically traces bitmapped artwork into EPS-compatible images. Unlike other automatic tracers, Studio Artist doesn't limit the number of colors in the final image, which means you can produce stunningly photorealistic vector images.

Other impressive new features include Bézier warps, an improved movie-editing workflow, advanced onion-skinning for animators, and numerous new image-processing effects.

### Macworld's Buying Advice

If you're already a Studio Artist fan, you're going to love this upgrade. If you're not, and if you make your living producing digital still images or video, Studio Artist is well worth your consideration. With its new settings, it now fits into a multiprogram workflow. If you're a hobbyist, you won't want to dismiss Studio Artist 3.0; at \$379 (which includes more than 8 hours of video training), it's one of the best deals you'll find in graphics software. □



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> Delta Force: Black Hawk Down  
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> Blades of Avernum  
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> Dragon Tales: Learn & Fly with Dragons

# The Game Room

Team-based tactical games typically require as much strategy as reflex: you have to think about where your team is and what each member is doing while keeping the enemy at bay. But while Aspyr Media bills its new Delta Force: Black Hawk Down as a serious tactical shooter, the game largely eschews strategic challenge in favor of arcade-style action. It also arrives more than a year behind its Windows counterpart.

Like the *Black Hawk Down* film and book, the game's storyline is based on the U.S. military's involvement with Operation Restore Hope, a failed 1993 United Nations peacekeeping effort in the East African country of Somalia. However, the events in the game are largely fictional. The action in *Black Hawk Down* picks up a few months before the conflict's dramatic climax in October 1993, and only the last third or so of the game focuses on real events.

For adrenaline junkies, *Black Hawk Down* offers copious amounts of nonstop action. You'll start the game from the gun turret of a Humvee on your way to rescue a convoy from certain doom. By the end of that first mission, you'll also have taken on the enemy with your own rifle and manned a minigun bolted to the side of a helicopter. And missions get more hectic from there. There's no training mission to help you get acclimated to all this action, so expect to spend some time during your first mission trying to figure out what everything does. That said, the game play is fairly straightforward, and you should be sufficiently comfortable with the controls by the time the action truly heats up.

In many ways, *Black Hawk Down* is similar to the first-person shooter *Medal of Honor*. In each mission, you'll be given tasks, such as destroying a bridge or



**U.N. Peacekeeper** In *Delta Force: Black Hawk Down*, you'll neutralize resistance while protecting civilians in Mogadishu, circa 1993.

taking down a radio tower. The main difference here is that you're not alone. Unfortunately, you'll find that your fire team is woefully stupid and incapable of helping you most of the time. One exception to this rule is the *room takedown* feature: just click on a button to send your team in to clear an enemy-controlled room.

Collateral damage—the death of innocent civilians—is something

that's always paramount in the minds of soldiers when they go into combat. It also figures dramatically into this game. Much of *Black Hawk Down* centers around urban combat where civilians are almost always underfoot. To succeed, you'll have to be careful to keep them out of your line of fire. Unfortunately, the game's design strips some of the challenge out of tracking down and killing enemy gunmen. Extensive use of scripted actions means that the bad guys pop up in the same place and at the same time in each mission. This reduces much of *Black Hawk Down* to a simple matter of remembering sequences and patterns.

In addition to a 15-mission single-player campaign, *Black Hawk Down* includes multiplayer cross-platform support through Novalogic's NovaWorld game-finding service. You can choose from a number of game modes, including Capture The Flag, King Of The Hill, and Attack And Defend. There's nothing revolutionary here, but the modes add fun for online gamers.

*Black Hawk Down* looks and sounds great—assuming you have the horsepower to run it. You'll need at least a 1GHz processor, as well as an ATI Radeon 8500 or Nvidia GeForce2 MX graphics card or better with at least 64MB of VRAM. These

continues

## DELTA FORCE: BLACK HAWK DOWN

RATING: ★★★

PROS: Good graphics and audio; cross-platform multiplayer action.

CONS: Bad AI; flawed game design; came late to the Mac.

PRICE: \$40

OS COMPATIBILITY: Mac OS X

COMPANY: Aspyr Media, [www.aspyr.com](http://www.aspyr.com)

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## THE GAME ROOM

requirements exclude a lot of consumer-class Macs.

**The Bottom Line** The unusual setting and fast-paced action give Delta Force: Black Hawk Down a unique twist. Too bad the game's poor AI and flawed game play reduce it to mediocrity. Fans of team-based tactical games should look at Aspyr's Call of Duty or Tom Clancy's Rainbow Six 3: Raven Shield first.

### Worm Food

Worms 3D, from Feral Interactive, is the latest addition to the legendary strategy-game franchise featuring cartoon worms that are hell-bent on blasting each other to smithereens. It's a tongue-in-cheek take on games like Scorched Earth, in which two players square off on opposite sides of a battlefield and calculate the necessary trajectories and velocities to blast their opponent—while avoiding their opponent's blasts.

Worms 3D is the first game in the Worms franchise to feature true 3-D graphics. This adds a new challenge—players must take this third dimension into account when they aim projectiles. Although the game play has been tweaked, the game's charm and basic premise largely remain intact. The wise-cracking worms still have a formidable arsenal of projectiles—such as bazookas and sheep (yes, sheep)—and the scenery retains the cartoonish

whimsy that has made the Worms series so endearing to so many people.

If you're new to this series, a tutorial mode will help you get your bearings. Solo players can choose between a Campaign mode, which sends you off on a series of progressively more difficult missions, and a timed Challenge mode. There's also a multiplayer mode, which lets you take on two to four players in a variety of games and battlefields. Worms 3D supports the online GameRanger service, but it doesn't support cross-platform competition. Unfortunately, a bug currently prevents you from playing over a LAN unless Worms 3D can connect to the Internet. Feral Interactive is working on a patch that will address this issue; it should be out by the time you read this.

The game's system requirements are relatively modest—you'll need a 600MHz processor and a 3-D graphics card with 32MB of VRAM. This should cover anyone with a two-year-old or newer machine. A lot of folks with upgraded Power Mac G3s should be able to join in as well.

**The Bottom Line** Worms 3D's cartoonish landscape and comical characters disguise a turn-based strategy game that's both varied and challenging. I recommend downloading the demo and trying it out.

### Old-School RPG

Computer-based role-playing games (RPGs) have come a long way since the early days of text-based, multiuser dungeons. Today the genre is filled with sophisticated 3-D adventures and huge online multiplayer worlds that make reality seem shabby by comparison. But one company that has largely remained untouched by this evolution is Spiderweb Software, whose line of classic RPGs has seen only minor changes over the past decade. The company's latest game, Blades of Avernum, features a storyline recycled from an earlier game and an updated graphics system that still manages to look old-fashioned.

Blades of Avernum is a collection of three RPGs co-opted from the company's classic Blades of Exile game.



**Open-Ended Adventuring** Once you're done playing the built-in scenarios in Blades of Avernum, you can add more or make your own.

### BLADES OF AVERNUM

**RATING:** ★★★

**PROS:** Huge, varied story lines; editing tools can extend the game; low system requirements.

**CONS:** Aging interface desperately needs an overhaul; repurposed content from an older game.

**PRICE:** \$25

**OS COMPATIBILITY:** Mac OS 9, Mac OS X

**COMPANY:** Spiderweb Software, [www.spidweb.com](http://www.spidweb.com)

But whereas the earlier game used a 2-D tile-based graphics engine, Blades of Avernum features isometric 3-D graphics—essentially a three-quarters view of the game play. This is certainly an improvement, but it will likely disappoint some RPG fans who have grown used to seeing full-blown polygonal 3-D characters.

Still, there's plenty to keep you busy. The game features a rich and detailed story line; complex, challenging game play; a detailed skill-building and inventory-control system; and intriguing nonplayer characters who offer missions and tasks that can really extend the game. You'll need weeks to play through every possible journey in Blades of Avernum. And the game's low system requirements make it a good companion for older laptops and home machines.

After you've played through the three scenarios that come with the game, you can use its included scenario editor to create your own levels. You can play scenarios that other users build, too.

If you've played the Baldur's Gate series, Neverwinter Nights, or other recently released RPGs, you'll probably find Blades of Avernum's interface quaint and anachronistic. Its graphics have a rather homespun appeal that will overwhelm eye-candy junkies looking for sophisticated visual effects. And although it runs natively in OS X, the game has many obsolete interface elements that

### WORMS 3D

**RATING:** ★★★

**PROS:** Varied game play; solid multiplayer action; cute graphics.

**CONS:** Initial release sports buggy LAN play; no cross-platform support.

**PRICE:** \$45

**OS COMPATIBILITY:** Mac OS X

**COMPANY:** Feral Interactive, [www.feralinteractive.com](http://www.feralinteractive.com)



**Irritable Invertebrates** Witty worms throw bombs—and more unusual missiles—at each other in this fun strategy game.

make it look like a relic from earlier iterations of Mac OS.

**The Bottom Line** If you're an RPG fan who relishes substance over style, *Blades of Avernum* can keep you busy for weeks—if not months. But if you've already played *Blades of Exile*, there's not a lot that's new here. Check out the demo, which you can download from Spiderweb Software's Web site.

### License to Carry

MonsterGecko has come up with such an obviously good idea that I'm amazed no one thought of it sooner: a gun-shaped mouse, called the PistolMouse FPS, designed specifically for first-person shooters (FPSs).

The PistolMouse is an optical USB mouse that you keep planted on your desktop—you don't point it at the screen to shoot (as you do with a light gun). Its grip rises out of the base of the mouse, and it's equipped with two triggers and an oversize, clickable scroll wheel that's perfect for quick thumb action. This makes the PistolMouse well suited for most action games that use the mouse for aiming and firing.

Navigating an FPS with a traditional mouse normally requires that you sweep your hand around the tabletop. But the PistolMouse's design lets you pivot

### PISTOLMOUSE FPS

**RATING:** ★★★★★

**PROS:** Helps you aim; no drivers required.

**CONS:** No recoil; sensitivity setting may need some tweaking.

**PRICE:** \$70

**OS COMPATIBILITY:** Mac OS X

**COMPANY:** MonsterGecko, [www.monstergecko.com](http://www.monstergecko.com)



**Desktop Pistol** The PistolMouse FPS gun-shaped mouse is great for first-person shooters.

with your wrist, as if you were pointing a real gun.

It's a much more realistic motion that translates into faster response time. Although the PistolMouse's 800-dpi optical resolution is

lower than that of some high-end controllers, it's noticeably more precise than a standard optical mouse.

A removable gel-pad grip keeps your hand firmly in place and free of sweat during furious firefights. If you have a glass tabletop or another surface that works poorly with an optical mouse, I recommend picking up an oversize mouse pad for use with the PistolMouse—it will save you from having to pick up and reposition the mouse midgame.

No drivers are necessary to get the PistolMouse working, but you may need to fiddle with the mouse's sensitivity settings within individual games to optimize response time. About the only thing the PistolMouse lacks is a recoil to simulate the action on screen. I found it a bit unsettling in some games to see my hand jerking back when firing but feel nothing in my hand. According to MonsterGecko, the developers are working on this issue, so maybe we'll see the feature added to future releases.

**The Bottom Line** The PistolMouse FPS is a cool novelty mouse that really works. It's definitely worth a look from demanding FPS gamers.

### Dragon Drop

*Dragon Tales* is a PBS animated series with colorful, nonthreatening dragons; cheery music; and straightforward life lessons in each episode. It's a huge hit with the preschool crowd; in fact, my own four-year-old child loves the show. Now Scholastic has tapped into this market

## Recently Reviewed

### XIII

★★★★; Feral Interactive, [www.feralinteractive.com](http://www.feralinteractive.com); \$55

In the May 2004 issue, I looked at an early release of *XIII*, a new conspiracy-themed first-person shooter from Feral Interactive. The game is now shipping, and it looks terrific—its cel-shaded graphics in particular will appeal to fans of graphic novels.

The game's amnesiac-assassin story line is entertaining, but its game play doesn't deviate much from that of other first-person shooters. However, a heady assortment of specialized weapons and tools (such as lock picks and winches) keeps things interesting. You'll definitely want to take advantage of the game's built-in updater—the CD-ROM version has some flaws that a later update fixed.

with a new game called *Dragon Tales: Learn & Fly with Dragons*, which hones preschoolers' early math and logic skills.

In the game, players are whisked off to the fanciful world of *Dragon Land*, where they'll help Cassie—a young, headstrong pink dragon, and one of the show's stars—teach her siblings how to fly. To do that, players will need to help them with their activities, which include sorting, grouping, and logic tasks. In one game, for example, players must sort junkyard objects by shape, making some objects larger or smaller depending on how they fit. In another activity, players must identify objects from a toy chest by color or marking. Since preschoolers can't always read, all of the game's activities rely on visual and audio cues. For parents or teachers who have more than one child working on the same Mac, *Dragon Tales* features a sign-in screen that lets each player return to his or her own game.

As a reward for completing all of the learning activities, kids get to play a game where they control each of Cassie's three siblings in an aerial relay race. In it, kids must avoid obstacles, such as flying flutter-bys, while grabbing fruit.

**The Bottom Line** *Dragon Tales: Learn & Fly with Dragons* is a simple but fun tie-in to the popular PBS show. The activities don't follow a strict curriculum, but they're enough to keep the little ones entertained as they develop basic math skills. □

MacCentral.com Senior Editor PETER COHEN often wakes up with dragon breath—but never dragon tales.



**Flying High** Cassie's siblings need help learning to fly in the preschool crowd-pleaser *Dragon Tales*.

> WinSwitch  
> WordService  
> BT-500 Mobile Mouse  
> Fast DVD Copy  
> Sync Entourage-Address Book

# Mac Gems

One of my favorite features in OS X 10.3 is Fast User Switching, which lets you quickly switch between user accounts via a menu-bar menu. Unfortunately, the menu's title is the current user's full user name, which can take up a significant chunk of the menu bar.

You could shorten your user name, but a better way to lessen this menu-bar intrusion is Wincent Colaiuta's free (donations accepted) **WinSwitch 1.2.1**

(<http://www.wincent.com>). With WinSwitch, you can choose how you want your Fast User Switching menu to appear in the menu bar—as the current user's long or short user name, as a generic icon (that of the Accounts preference pane), or as the current user's account picture. Using the second or third option gives you all the benefits of Fast User Switching without the excessive space requirement.



**Svelte Switching** WinSwitch provides a less conspicuous Fast User Switching menu.

Book, but when it comes right down to it, I still prefer to use a mouse. Unfortunately, it's tough to find a portable mouse that fulfills my personal requirements:

small size, multiple buttons, and wireless functionality without additional hardware. One of the few that have all three is RadTech's \$55 Bluetooth **BT-500 Mobile Mouse** (<http://www.radtech.us>).

Less than three inches long, the BT-500 weighs two and one-quarter ounces and features the accuracy of an 800-dpi optical mouse in a compact, comfortable form. With two standard buttons (left and right) and a clickable scroll wheel, it provides enough functionality even for advanced users. (OS X recognizes all three buttons without additional drivers—I use the scroll-wheel button for Exposé.)

My only criticism of the BT-500 is actually a consequence of a desirable feature. To preserve battery life (it operates on two AAA batteries), the BT-500 enters sleep mode after a few minutes of inactivity, and it takes a few seconds to wake up when you use it again. But I'm still on my first set of batteries after a month and a half of use, so there are clearly benefits to this approach. The BT-500 also has a convenient on/off switch that prevents battery drain when the mouse is rolling around in your laptop bag.

If you have a PowerBook or an iBook that's Bluetooth enabled via either built-in support or a USB adapter, the BT-500 is a great accessory that takes up less space than most mobile phones.

## DVD Duplication

If you're a parent who just purchased your third copy of *Finding Nemo* because thrice-weekly viewings have destroyed the first two copies, or if you're a road warrior who prefers to take copies of movies with you so the originals don't get scratched, you've probably wondered how to make easy backup copies of your commercial DVDs.

There are many ways to copy such DVDs; most employ a multi-

## Wordsmith Services

In a previous issue, I wrote about OS X's services ("OS X's Overlooked Shortcut," *Working Mac*, December 2003), which let you use one application's abilities from within another. In that article, I briefly mentioned some of the best services plug-ins, but one is so useful that it deserves more attention. Devon Technologies' excellent (and free) **WordService 2.5.1** (<http://www.devontechnologies.com/freeware.php>) provides more than 30 functions for working with text.

After selecting text in a services-aware application, you can perform a number of formatting and conversion actions on the text—sorting lines, changing line endings, converting capitalization, creating smart quotes, and more. WordService can also insert the current date and time into a text field or document. If you frequently have to manipulate text, this plug-in is a must-have.

## Mighty (Miniature) Mouse

In this space, I've recommended a few products for enhancing the trackpad on an iBook or a Power-

All Caps	
Decode Tabs	
Encode Tabs	⇧ ⌘ O
Initial Caps Of Sentences	
Initial Caps Of Words	
Lowercase	
Mac- to Windows-Encoding	
Macintosh Line Endings	
Rotate13	
Smart Quotes	⌘"
Straight Quotes	⌘'
Unix Line Endings	
Windows Line Endings	
Windows- to Mac-Encoding	

**Textsmith** WordService gives you tons of options for working with text in services-aware apps (a subset is shown here).

**Portable Pointer** If you have a Bluetooth-enabled iBook or PowerBook, the BT-500 Mobile Mouse should be in your bag.



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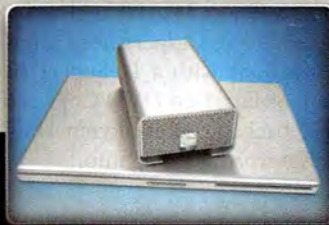
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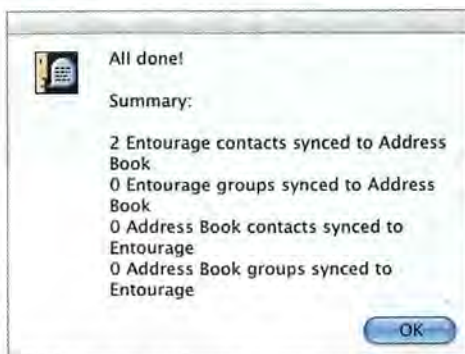
macZONE

step process involving various combinations of open-source and commercial products. But for a one-click approach, the only product I've found for OS X is Velan's \$99 **Fast DVD Copy 2.1** (★★★★; [www.fastdvd.com](http://www.fastdvd.com)).

For some DVDs, the process is as simple as clicking on Start, letting Fast DVD Copy extract the content of the disc, and then burning the copy. However, because single-layer recordable DVDs hold less data than commercial (dual-layer) video DVDs, many movies won't fit. For these movies, Fast DVD Copy lets you decide between further compressing the movie (resulting in lower video quality) or cutting disc features such as additional audio tracks and languages, supplemental material, subtitles, and so on. You decide the balance between these two options—as you remove items, the resulting video quality will increase. Fast DVD Copy displays a graph of the expected quality of the copy, from Good to Highest.

As an extreme example, I recently made a backup of the 200-minute *Lord of the Rings: The Return of the King* DVD to watch on a trip. Even at the lowest quality, the movie was too big for a recordable DVD. I told Fast DVD Copy to eliminate the 5.1-channel audio track—leaving just the 12-channel version—and the copy then fit on a standard recordable DVD.

Fast DVD Copy isn't without drawbacks. It's expensive, and the multistep activation procedure is



**Easy Sync** Sync Entourage-Address Book synchronizes your Entourage contacts with OS X's Address Book.

## Entourage Envoy

If you use OS X's Address Book to store your contact information, you can take advantage of Apple's iSync to synchronize your contacts with your iPod, PDA, and many mobile phones. In addition, many applications and utilities work with Address Book (including OS X's iChat

AV and built-in fax functionality). If you *don't* use Address Book, you've probably felt left out in the cold. You can manually export and import information to and from other contact managers, but that can be rather frustrating—especially if you frequently update your contacts.

If your contact manager happens to be Microsoft Entourage (X or 2004), you're in luck—thanks to Paul Berkowitz's \$19 **Sync Entourage-Address Book 2.5.1** (★★★★; <http://scriptbuilders.net>). Based on the impressive AppleScript support built into both Entourage and Address Book, Sync Entourage-Address Book is a comprehensive set of scripts that lets you synchronize your contact data between the two—so you can use your Entourage contact data with all the applications and services that support OS X's Address Book.

The first time you use Sync Entourage-Address Book, you run a special script that lets you tell the synchronization app how your computer is set up—your Address Book display settings, what language you use for OS X, and so on. You can also choose how Entourage's Custom Fields correspond to Address Book fields, and choose between one-way and two-way syncing. (Since I never touch Address Book—I always edit my contacts from within Entourage—I use the one-way sync option.) Then you simply run the main application.

There are a few more options, and many other features to help you make sure your syncing is both accurate and complete. I highly recommend reading the (very thorough) documentation before using Sync Entourage-Address Book. You'll probably have to read through it only once. After the initial sync, you just run the app as often as you want to sync your contact information between Entourage and Address Book. (For more on scripts that work with Entourage, see "Get More from Entourage," *Work-ing Mac*, November 2003.)

Note that Berkowitz also provides a similar, \$19 utility, Sync Entourage-iCal, which synchronizes Entourage's calendar data with Apple's iCal. □

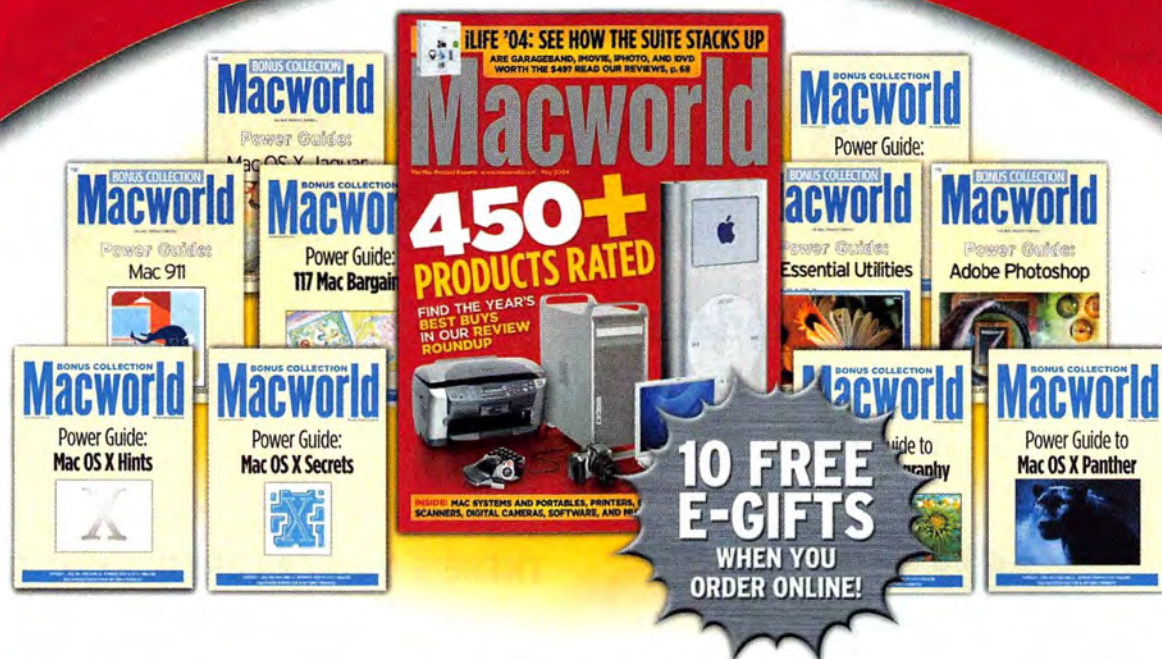


**DVD Clone** Fast DVD Copy lets you create backup copies of your precious DVDs.

cumbersome. In addition, each copy of the program is licensed to a particular computer—if you ever want to run it on another machine, the process can be a hassle. And while a Power Mac G5 with a 4× SuperDrive worked flawlessly, I experienced a few failed burns on a PowerBook with a 1× SuperDrive. But despite these complaints, Fast DVD Copy is the easiest way to make backup copies of your DVDs, and that alone makes it worth looking into.

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# 10 Things to Know about **TIGER**

**Apple's Major OS Update Won't Arrive Until 2005—  
Here's What You Need to Know Now**



## **THERE'S A TIGER LURKING OUT THERE.**

And although it will be some time before the beast finally pounces, it has started to show off some of its stripes. The next major update to OS X, Tiger, has a lot in common with its predecessors, Jaguar and Panther—from its feline-inspired nickname to the promised addition of 150 new features and enhancements. But in one key area, Tiger represents a departure—it's the first major update since OS X's 2001 release that won't appear in the fall. With Apple slowing down the rapid pace of OS X development, Tiger is expected to ship sometime during the first half of 2005. Still, Tiger isn't completely shrouded in mystery. We examine how each of the announced additions and enhancements will affect the way you use your Mac, and whether they will make Tiger the king of Apple's cats.

# 1 SPOTLIGHT: Searching's New Focus

Of all the no-hassle tasks you can do on a Mac, finding a song amid your iTunes library may be the simplest. Just go to the iTunes search bar and start typing what you're looking for, whether it's the name of the song, the artist, or the album. With every keystroke, the list of displayed songs is whittled down, until you've found what you were searching for.

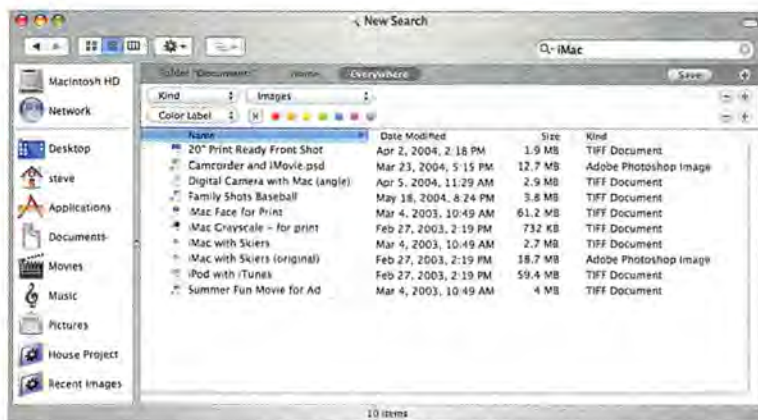
Apple plans to integrate the ease of iTunes-style searches throughout Tiger. The systemwide search feature—dubbed Spotlight—promises to look through documents, Mail messages, iCal calendar items, Address Book contacts, and other files, producing search results as quickly as you can type in queries.

Tiger adds a magnifying-glass icon to the far right corner of the menu bar. Click on it, and a drop-down search field similar to the one in iTunes appears. As you type your query, a live list of search results appears, with results sorted by type (Mail messages, PDF documents, and HTML files, for example).

Spotlight searches aren't confined to file names. Because Spotlight looks at information about your files and any text contained within them, it can search based on who created a file, who modified it and when, file type, and even individual words in a document. All your files are indexed in the background, so there aren't annoying pauses when you type in searches.

Spotlight searching appears in other parts of Tiger, too. Take System Preferences, which replaces the old list of toolbar icons with a search field. Type in a keyword, and a drop-down list of related preferences appears; at the same time, the relevant preference pane is highlighted. For example, a search for *Screensaver* will highlight the Desktop and Screen Saver icon. Search terms don't need to be exact—if you search for *Wallpaper*, for example, Spotlight will recognize what preference pane you're searching for and highlight its icon.

The Finder's search field will also undergo a Spotlight-powered renovation. In addition to the usual searches for file names, you can search by keyword—



the kind of file, the date it was last viewed or modified, and other properties. You can even search for multiple properties—say, every PDF you've viewed in the past week. A Save button in the Finder lets you save search results based on specific criteria into Smart Folders. Much like Smart Playlists in iTunes, Smart Folders update in real time whenever you add or remove documents. Mail and Address Book add similar functionality, with Smart Mailboxes and Smart Groups, respectively.—PHILIP MICHAELS

**Spot-on Searches**  
iTunes-style dynamic searching is a major component of Tiger's Spotlight feature.

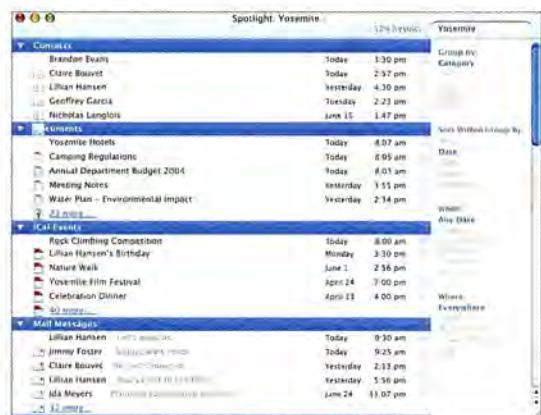
# 2 UNIX ENHANCEMENTS: Bits with Bite

Many changes in Tiger will take place below the surface, in the Unix kernel, in the Unix user space, and in the OS X development environment. These additions won't wow you as much as Spotlight will, but they're among the most important improvements you'll find in Tiger.

**64-bit Memory Addressing** Although the PowerPC G5 is a 64-bit chip, limitations in current versions of OS X restrict the amount of memory it can allocate to any one user process to "only" 4GB. While this seems massive, researchers working on tasks such as DNA sequencing require more—their data sets are huge, and computations happen quickly in RAM. Tiger's support for 64-bit memory addressing means that these applications can now harness up to *4 billion times* as much memory as their 32-bit counterparts. But those 32-bit applications will also get a boost under Tiger, thanks to general improvements in the OS's code.

**XGrid** Tiger will include XGrid, software that distributes complex tasks among a number of networked machines. This addition should lead to more applications designed to take advantage of networked Macs for CPU-intensive operations. You'll never use XGrid when writing a Microsoft Word document, but the feature will come in very handy if you work with huge amounts of experimental data or render complex animations on video files.

**Access Control Lists** In the current OS X, you define access to files and folders by setting permissions for the file's owner, the group to which the file belongs, and others (anyone who isn't the owner or



**Sorting It Out** Whether searching for contacts, documents, or e-mail messages, Spotlight lists its results by file type.



a member of the defined group). In Tiger, you can use Access Control Lists (ACL) to set permissions—any file or folder can have an associated ACL. For example, an associated ACL would allow you to give your spouse access to your Pictures folder, without going through complex group or permissions tricks.

**Resource Fork Support** In Tiger, many common Unix utilities, such as cp, tar, and rsync, will function properly when dealing with files that have resource forks—which is where, historically, Mac programs kept things such as icons, images, and sounds. OS X 10.3's Unix commands are, generally, not resource fork-aware, so using the copy (cp) command on a file results in the loss of the resource fork. Thanks to a documented interface in Tiger, developers will also be able to add resource-fork support to their own Unix programs. The support for resource forks at the Unix level should lead to more GUI apps that take advantage of Unix tools without endangering the resource forks in Mac files.—ROB GRIFFITHS



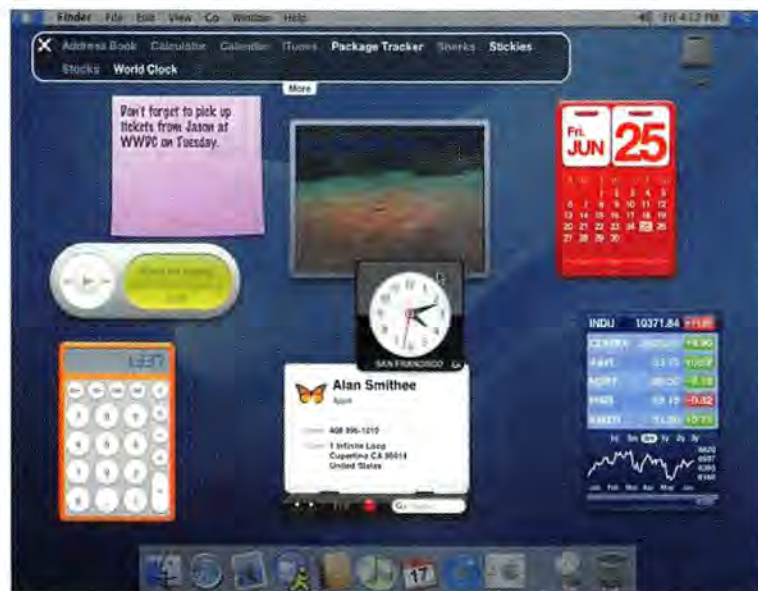
## DASHBOARD: Meet the Widgets

Harking back to the early days of Mac OS, Dashboard mixes the classic Mac's Desk Accessories with OS X's Exposé and then adds a dash of Web savvy, to create a completely separate layer of the Mac interface.

Apple bills Dashboard as “Exposé for Widgets,” and, indeed, Dashboard wouldn't make a lot of sense were it not for its integration with Exposé. Essentially, Dashboard lets you run small programs (which Apple calls widgets) on an invisible layer within Exposé. When you press a key (F12, by default), the Dashboard layer zooms and fades in, as though it had been hiding somewhere just behind your head all along. Clicking on a button to change a widget's preferences causes some graphical flash—

### Widget Central

A calculator, an iTunes controller, Stickers, and other JavaScript-based programs are part of Dashboard.



the entire widget spins around to reveal a preference pane on the “back” of the widget itself.

Don't expect to do your word processing or spreadsheet calculations in Dashboard—the programs that live there are meant to be tiny. But smaller tasks that should get in your face only for a few seconds (for instance, the Desk Accessories you used to stash in your Apple menu back in the day, such as Calculator and Scrapbook) are ripe for Dashboard.

Perhaps Dashboard's cleverest feature is how it integrates with Safari. Essentially, Dashboard applications are floating Safari windows. They can be designed with HTML, Cascading Style Sheets, and Web graphics (in GIF, JPEG, and PNG formats, among others). To program widgets, developers can use JavaScript, the common language of Web-page programming. And since widgets are basically Web-page windows, developers could also embed content via Flash or QuickTime.

If you're curious about Dashboard, you can give Arlo Rose and Perry Clarke's \$25 Konfabulator a try ([www.konfabulator.com](http://www.konfabulator.com)). It's a similar JavaScript-driven system of widgets. And as of version 1.7, it even provides Konsposé, a feature that lets you hide and reveal all your widgets at once, Dashboard-style.—JASON SNELL



## .MAC SYNC: In Sync, Systemwide

Tiger's entrance marks iSync's exit; Apple is dropping future development of the synchronization utility. But that doesn't mean an end to synchronizing data with your cellular phone, PDA, or .Mac account. In fact, Apple plans to integrate synchronization right into Tiger.

Much of Tiger's synchronization features work through .Mac, Apple's subscription-based bundle of Internet services. Consider it Apple's way of giving you more reasons to spend \$99 a year for a .Mac account. But syncing in Tiger doesn't end with .Mac.

Unlike iSync, Tiger's synchronization engine is open to the rest of the world. Users of third-party address books, calendaring apps, and the like can rejoice—if the developer of your particular program adds support for Tiger's new synchronization engine, you'll be able to sync your data with anything the synchronization engine can talk to. (According to Apple, Tiger will synchronize with the same sorts of things that iSync supports: .Mac, iPods, mobile phones, and PDAs. There's no indication whether Tiger will sync to other kinds of devices or directly with other Macs without using .Mac as an intermediary.)

More important, synchronization under Tiger is no longer limited to bookmarks, address books, and calendars. Any program can synchronize any sort of data. For example, if the developer of your favorite launcher-palette utility adopts Tiger's new synchronization engine, you'll be able to synchronize the

contents of various docks, tabs, or palettes. Make a change on your desktop Mac, and those changes would be automatically synchronized with the copy of the utility running on your PowerBook.

If you've ever been frustrated because the settings on the various Macs you use tend to drift apart on different computers, syncing can put them back together. Apple applications in Tiger that will support this new syncing technology include the Desktop & Screen Saver preference pane, Exposé, and the Dock—potentially enabling your Dock items to follow you wherever you go. You'll control it all from Tiger's .Mac preference pane, which lets you choose the applications you want to sync and how often that synchronization should occur.

Will this new syncing engine solve every data-synchronization problem Mac users face? Probably not. But because Apple is opening synchronization up to third-party developers with Tiger, many more of those problems will get solved than have ever been solved with iSync.—JASON SNELL

## 5 iCHAT AV: Three's Company

iChat AV allowed far-flung OS X 10.3 users to chat face-to-face. With its updated version of iChat, Tiger will make sure that more Mac users can join in the conversation.

The instant-messaging application first introduced in Jaguar received audio and videoconferencing capabilities in Panther. But those chat sessions were limited to one-on-one conversations. iChat's boundaries expand in Tiger—audio chats can now include as many as ten people, and videoconferences are expanding to include a total of four users.

Apple promises high-quality audio compression techniques for iChat AV in Tiger, so audio sessions will come through loud and clear. Audio chats will retain the same look they have in Panther—a panel that lists the other chat participants' names, as well as a sound meter. For multiparty chats in Tiger, the sound meter adds a second purpose—it not only lets you know whom you're talking to, but also provides a visual cue that lets you know who's talking.

Videoconferencing, however, gets a substantial visual overhaul. The interface offers a three-dimensional view, with the two video screens on either end tilted inward toward the third video screen in the middle. The image of each chat participant is reflected beneath their screens, in a look that Apple says is reminiscent of a conference-room table. However, Mac users of a certain age might notice more than a passing resemblance to the Council of Elders scene from the opening of *Superman*.

Whether you use the new iChat to collaborate with far-flung colleagues or to condemn General Zod to the Phantom Zone, you'll benefit from the H.264/AVC (Advanced Video Coding) video codec that improves the messaging app's picture resolution



(see "H.264: Highly Defined"). iChat also has improved bandwidth management: the chat participant whose computer sports the fastest Internet connection automatically becomes the manager of the entire multiparty chat session.

Even with enhanced bandwidth management, it's unclear exactly who will be able to use the revamped iChat; Apple hasn't announced system requirements yet. To video chat using iChat AV 2.1, you need a machine with at least a 600MHz G3 processor and a cable, DSL, or broadband Internet connection. With the processing oomph required for multiperson chats, the system requirements for iChat in Tiger could be more stringent.

Don't expect to take this new version of iChat out for a test spin. Unlike iChat AV—which appeared as a Jaguar-compatible beta before it was released as part of Panther—this new version won't be released as a separate beta.—PHILIP MICHAELS

### Virtual Boardroom

Apple designed iChat's three-panel multiparty video chat interface to look like a conference table.

## 6 AUTOMATOR: AppleScript for Everybody

You may not know anything about it yet, but trust us—Tiger's new Automator feature will save you a lot of time by handling all of the dull, repetitive tasks currently weighing you down.

In some ways, Automator is AppleScript for people who can't even look at the word *AppleScript* without breaking into a sweat. AppleScript has always been a fantastic way to create little programs that perform repetitive tasks—say, downloading a gallery of images off the Web and using them to generate a DVD slide show. But to benefit from that automation, you had to *write AppleScript code*—too much to ask of most users.

With Automator, you don't have to write a single line of code; instead, you build a flowchart. On the left side of Automator's window, you can pick from a large collection of actions—Apple is supplying more than 100, and developers can add even more—which you drag into the Workflow area. As you drag items in, they connect to one another. By building up a series of actions, you can create a complex series of tasks that incorporate various Mac programs.



Once an action is in the Workflow window, you can set options that define exactly what that action will do. For example, if you dragged in a Resize Image action, you would use the Workflow window to define the specific size of that image. After you've created an action, you can not only run it but also save it for when you have to perform the same task again.

Not all Mac users are going to hand off their workflows to Automator, but the ones who do will save so much time, they'll be way ahead of anyone who doesn't.—JASON SNELL



### Repeat After Me

In Automator, you can automate repetitive tasks by building a flowchart out of supplied actions instead of writing AppleScript code.



## CORE IMAGE, VIDEO: Hard-Core Graphics

Previous versions of OS X introduced Core Audio and Core MIDI—underlying sound technologies, built-in at the system level, that allow for faster and easier ways to work with sound. Tiger does the same trick, but with sight, not sound. The updated operating system has two new technologies that make powerful tools available to users throughout the system: Core Image and Core Video.

Core Image and Core Video take advantage of the fast memory and powerful GPUs (graphics processing units) of today's speedy video cards. Tiger's Core technologies give developers easier access to pixel-level effects than they had in previous versions of OS X while offering a new way to create such effects. By relying on the video card, Core Image and Core Video can quickly apply filters using floating-point calculations to produce detailed and accurate color without taxing your Mac's processor.

Just as Core Audio features Audio Units, Core Image and Core Video utilize Image Units and Video Units, respectively; Tiger will ship with dozens of these units, including blurs, transitions,

color adjustments, sharpeners, and compositing and gradient filters. Developers will be able to create applications that tap into these built-in units without having to write their own versions of common effects and transitions.

Core Image and Core Video depend heavily on graphics processing; as a result, they'll require Macs outfitted with the latest generation of ATI Radeon and Nvidia GeForce graphics cards that are capable of pixel-level programming for optimal results. But Apple promises that the technology scales for systems with older graphics cards, so any Tiger-compatible Mac should be able to use Core Image and Core Video.—JONATHAN SEFF



## SAFARI 2.0: Safari, Summarized

RSS—that's Rich Site Summary or Really Simple Syndication, depending on whom you ask—has simplified many a Web surfer's life. So it makes sense that Safari 2.0, arriving with Tiger, would add support for RSS feeds. After all, Safari's entire raison d'être is to streamline browsing.

RSS technology lets Web publishers generate small text files containing basic information about Web content. When it's paired with a program that can process RSS files—such as an RSS reader like Ranchero Software's NetNewsWire ([www.ranchero.com](http://www.ranchero.com))—RSS can radically change the way you deal with information on the Internet, by giving you a summary of all the latest news and information on your favorite RSS-friendly Web sites.

The new Safari RSS feature integrates RSS right into Safari itself, bringing the strengths of RSS to a bunch of users who may not otherwise know that RSS exists.

With Safari 2.0, if you go to a Web site that offers an RSS feed, a blue RSS badge appears on the right side of Safari's address window. You can click on the badge to read the RSS feed, a simplified view of the site's content with headlines and story descriptions. You can also view more than one feed at a time, creating your own personal channels full of, say, news stories from the New York Times, BBC, and ESPN Web sites.

Apple also added an RSS search box, similar to the Google search box, to Safari 2.0. Type a query into the RSS search box, and Safari will search the contents of all your bookmarked RSS feeds. It's a quick way to find information on a topic without having to scour the entire Web.

But RSS isn't all that's new in Safari 2.0. The Start Private Browsing command under the Safari menu basically makes Safari black out,



**Safari Blues** A blue RSS badge in Safari 2.0 lets you know when Web sites have an RSS feed.

forgetting everything that it's doing while you're browsing privately. So the pages you visit, the passwords you type in—you name it—won't be cached while you browse privately.

Fans of Microsoft Internet Explorer's excellent Web Archive feature, which lets you save a Web page (including embedded images) to disk, will be happy to know that Safari 2.0 will let you save out Web archive files as well. Using this feature, you can store old Web pages on your own computer and view them safely even if the Web site that posted those pages disappears forever.—JASON SNELL



## H.264: Highly Defined

OS X's big picture is about to get a whole lot sharper, as the new H.264/AVC video compressor and decompressor, or codec, appears in Tiger.

Also known as MPEG-4 Part 10, the H.264 codec produces extremely high-quality video at relatively low data rates. In fact, the DVD Forum—the trade association that brought you the DVD—has

used for iChat AV and should allow for much better image quality without increasing bandwidth requirements (see “iChat AV: Three's Company”).—JONATHAN SEFF



## VOICEOVER: The Last Word

Unlike other features debuting in Tiger, VoiceOver actually appeared to Mac users long before Steve Jobs gave the world a first look at the updated OS during the Worldwide Developers Conference in June. Earlier in 2004, Apple announced a new technology—then called Spoken Interface—that would combine speech, audible cues, and keyboard navigation to help people with visual impairments work easily with OS X. The company planned to add this functionality to the next major update of its operating system (see “Speaking of Access,” *Mac Beat*, June 2004).

VoiceOver is part of OS X's Universal Access features, and it's integrated into the OS's interface, giving you another way to access your Mac. With

## 10 TIGER FEATURES WE'D LIKE TO SEE

Ten down, 140 to go. Apple probably has plenty of other features it plans to unveil between now and Tiger's estimated early 2005 release. But just in case Apple programmers are stumped, here are a couple of ideas we've gleaned from *Macworld* staff, our contributors, and users of the *Macworld.com* forums on what might make for other nice additions to Tiger.

**1. Location Management:** OS X already has some smart capabilities, such as auto-sensing the appropriate network connection. Wouldn't it be great if the OS could also change a number of different settings—your default SMTP server, your default printer, and even your iChat status—just by knowing the name of the active 802.11 base sta-

tion or your Mac's current IP address?

**2. Users And Groups:** A return of this OS 9-era control panel would make it easier to control file sharing and permissions on your home network.

**3. Spring-Loaded Folders in the Dock:** Sure, it's fun to drag an item on top of a folder in the Finder and have that folder automatically open. How about

the same effect if you drag an item onto a folder in the Dock?

**4. Adopting from XP:** Not every idea to come out of Redmond is a bad one. Windows XP sports Open and Save dialog boxes that allow file renaming and deletion. Perhaps Tiger should, too.

**5. Sherlock, Revisited:** Remember Sherlock, OS X's built-in app for displaying cus-

tomized information in content-specific windows? Well, Apple seems to have forgotten it. And Tiger provides an opportunity for better integration between Sherlock and other apps.

**6. Label Fixes:** When labeled folders show up in the sidebar and Dock, it'd be nice if their assigned colors did too.

**7. External drive support:** Wouldn't it be great if you could tote your entire user folder around easily on an external FireWire drive? And wouldn't it be even better if you could plug that drive into another Mac and log right in, just as if it were your own?

**8. Quick Access to Files:** OS 9 had the Apple Menu. Windows has the Start Menu. Why not create a dedicated user-editable menu for quick file launching within OS X?

**9. Smarter Trash:** After years of having a one-Trash-for-all-volumes approach, OS X could let users control-click on the Trash and choose to only empty files from particular volumes.

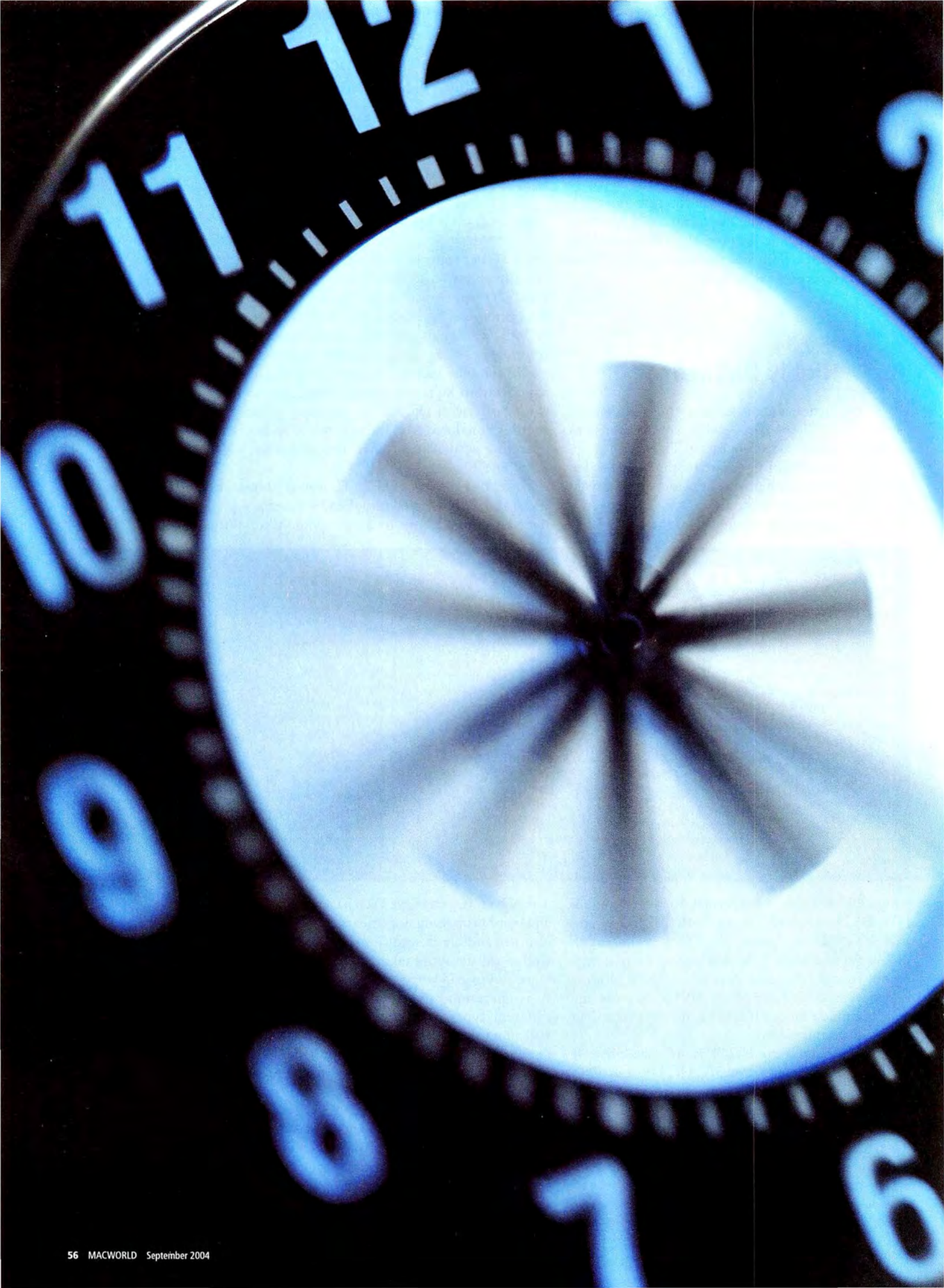
**10. iTunes Everywhere:** How about extending the new iTunes protocol so that any application, not just iTunes, can target its audio output to speakers that are driven by an AirPort Express?

adopted H.264 as a video format for the upcoming HD DVD standard (along with MPEG-2 and Windows Media Video 9's VC-9 technology). H.264 can reproduce full 1080i high-definition content at roughly the same data rate—7 to 9 Mbps—as today's standard-definition DVDs, because the codec is much more efficient and intelligent than MPEG-2 compression.

Another benefit to H.264 is its scalability; it works as well for content on 3G cell phones at 50 to 160 Kbps as it does for HD content. So content creators can choose different settings to make different versions of video by using only one codec. As part of Tiger's QuickTime multimedia architecture, the H.264 codec is also available to applications that are based on QuickTime, such as Final Cut Pro and iMovie—so you'll be able to export your movies directly, using H.264. The new codec will also be

VoiceOver, you can have Web pages, Mail messages, and word processing documents read aloud; you can also get audible description of your workspace as well as any activities taking place on the Mac. One voice can provide every description, or you can opt to assign unique and personalized voices to the six different types of information—commands, content, item descriptions, item types, spoken menus, or echoed text—that VoiceOver provides.

VoiceOver also offers keyboard commands for navigating through OS X's interface or controlling application and system commands. A new tool called viewfinder lets you control what the Mac says and lets you interact with items on screen via just your keyboard. Using VoiceOver, you can press buttons, drag sliders, select and deselect options, scroll, and operate other on-screen controls that would otherwise require a mouse.—PHILIP MICHAELS





# BEAT THE Clock

## 66 Time-Saving Tips Show You How

**TICK. TICK. TICK.**

SURE, YOU LOVE USING YOUR MAC—BUT EVERY MOMENT YOU WASTE COAXING A PROGRAM TO DO YOUR BIDDING IS A MOMENT YOU NEVER GET BACK. WOULDN'T IT BE BETTER TO SPEND THAT TIME DOING SOMETHING PRODUCTIVE?

SO DON'T THINK OF OUR EXPERTS' TIPS AS WAYS TO SPEND *LESS* TIME WITH YOUR MAC. THINK OF THEM AS WAYS TO BECOME MORE PRODUCTIVE, AND TO DISCOVER THINGS YOU DIDN'T EVEN KNOW YOUR MAC COULD DO. BUT LET'S NOT WASTE ANOTHER SECOND. TURN THE PAGE FOR GREAT NEW IDEAS—YOU'LL BE GLAD YOU TOOK THE TIME TO READ THEM.

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Photography  
by Peter Belanger



# Word Processing

## 1. TYPE YOUR TABLES

When you need to make a simple table, don't muck about with menus. Using only your keyboard, you can create a **Microsoft Word X** or **2004** table by typing characters to define the layout. For example, typing `+-+-+--` creates a small four-cell table—add more dashes between each plus sign to make the cells larger. To add a new row, press tab when you reach the lower rightmost cell. Note that if a table doesn't appear when you type the plus signs and dashes, you'll have to choose **Tools: AutoCorrect: AutoFormat As You Type** and select the **Tables** option.—HELEN BRADLEY

## 2. CLICK HERE

Templates save time if you need less-experienced people to add text—names or addresses, for example—to documents. When you create templates in **Word X** or **2004**, use a field to mark where text should be inserted. Click where you want the text to appear, and choose **Insert: Field**. In the dialog box, choose **Document Automation** from **Categories** and **MacroButton** from **Field Names**. In the text area below, type this field code: `MACROBUTTON NoMacro [Click here and type your name]`, replacing the prompt inside the brackets with text for your template. Click on **OK**, and save your document as a template.—HELEN BRADLEY

### FROM THE SOURCE



## 3. SAVE DOCK SPACE

Are **Microsoft Word**, **Excel**, **Entourage**, and **PowerPoint** all jockeying for a place in your Dock? Save space by putting the **Project Gallery** in your Dock instead (see "One Click, Several Apps"). Go to **Applications: Microsoft Office 2004: Office** and drag the **Project Gallery**

Launcher onto your Dock. Now just click on it to choose the type of Office document you want to create. And there are some handy bonuses: click on **Recent** to access any recently opened Office documents, and click on **Project** to open any of your project files.—JESSICA SOMMER, PRODUCT MANAGER FOR MICROSOFT OFFICE 2004



**One Click, Several Apps** Put just the **Project Gallery** in your Dock, instead of the whole Office panoply, and you can click on one icon to launch any Office application.

## 4. CHANGE TEXT DIRECTION

When you want to make text (a photo credit, for example) run vertically or upside down, the **Text Direction** feature in **Word X** and **2004** won't do. It works only with an entire document. Instead, choose **Insert: Text Box**, draw a text box, and type your text in it. To alter the text direction, click on the **Text Direction** icon in the toolbar that appears, go to **Format: Text Box**, remove the text box's borders, and move the box into position.—HELEN BRADLEY

## 5. MAKE STYLE SHORTCUTS

**Word X** and **2004** styles can save you time and trouble. To be a real power user, create keyboard shortcuts for frequently used styles. Choose **Format: Style**, and select a style you use a lot, such as **Heading 1**. Click on the **Modify** button, choose **Shortcut Key** from the **Format** menu, and press various key combinations until you find one that isn't in use. The shortcut must contain a combination of the shift, option, ⌘, or control key and a letter, number, or F-key. Try **control-1** for **Heading 1**, for example. There's no need to make a keyboard equivalent for the built-in **Clear Formatting** command; it already exists: ⌘-shift-N. (For more on creating shortcuts, see "Working Mac," page 68.)—NAN BARBER

## 6. PRINT A CUSTOM CHEAT SHEET

You can create customized **Word X** and **2004** keyboard shortcuts till the cows come home, but that doesn't mean you'll remember them. Prevent your work from going to waste by printing a cheat sheet. Go to **File: Print**, and then select **Microsoft Word** from the third pop-up menu. Choose **Key Assignments** from the **Print What** pop-up menu, and click on **Print**.—NAN BARBER

## 7. SELECT NONCONTIGUOUS TEXT

In **Word X** and **2004**, you can select noncontiguous bits of text. For example, you may want to copy and paste only the first and last sentences of a paragraph (and not any of the material in between). Select the first chunk of text. Then hold down ⌘ and select the second bit of text; the first one will remain selected. Continue ⌘-selecting as many pieces of text as you like. Now you can use **Copy**, **Cut**, or **Change Case** on all those selections at once. Another selection trick: ⌘-click anywhere within a sentence to select it along with any end punctuation.—NAN BARBER

## 8. TYPE LESS, DO MORE

The **AutoCorrect** feature in **Word X** and **2004** (and throughout **Office**) automatically fixes common spelling mistakes, but you can use it to avoid repetitive typing of commonly used words or phrases. Choose **Tools: AutoCorrect**. In the **Replace** field, type a shortcut for the word or phrase. For example, type `sy`. Then, in the **With** field, type what you want the shortcut to expand to—in this case, `Sincerely Yours`. Click on the **Add** button, and then on **OK**. When you type the shortcut and press the spacebar, **Word** will replace the shortcut with your chosen text.—TOM NEGRINO

## 9. SWIFT SYMBOLS

You can also use the **AutoCorrect** feature in **Word X** and **2004** to quickly type symbols, such as a heart (♥), without ever open-

ing the Insert: Symbol dialog box again. Choose Insert: Symbol, click on the heart symbol, click on AutoCorrect in the dialog box, and proceed as in "Type Less, Do More." Use a short, easy-to-remember combination of letters, such as *hx*. To insert the symbol, type those letters and press the spacebar.—NAN BARBER

## 10. REJUVENATE THE NORMAL TEMPLATE

If you find that the Normal style in Word X and 2004 doesn't take effect after you apply it, or that your Style menu is littered with styles you never use, replace the Normal template. In Office 2004, you'll find it in your Home folder: Documents: Microsoft User Data; in Office X, it's in Applications: Microsoft Office X: Templates. Drag it to the Trash; then quit and relaunch Word. Word creates a fresh copy of the original Normal template. To restore your custom styles, go to Tools: Templates And Add-Ins and click on Organizer to move your old favorites to the new Normal template.—NAN BARBER

## 11. THANK THE FORMATTING FAIRY

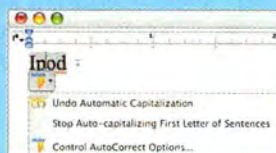
Need to match formatting when you paste text into a Word 2004 document? Skip the trip to the Paste Special dialog box (Edit: Paste Special). When you paste text or data, the Paste Options button (it looks like a clipboard) automatically appears. Click on it to access formatting options. Don't see this button? Go to Word: Preferences, click on Edit, and select the Show Paste Options Buttons option.—SCHOLLE SAWYER MCFARLAND

## 12. RESTORE COMMENTS TO THE TOOLBAR

In Word 2004, the Comments pane has been replaced by the Reviewing pane, and it is now available only from the

## 13. STOP ANNOYING AUTOCORRECTION

You may applaud Microsoft Word's autocorrection abilities when *truley* changes to *truly* while you type. But what about when *iPod* becomes *Ipod* time and time again? If you're a Word 2004 user, you don't need to back up and retype the text. Control it on-the-fly with *smart buttons*. Position your cursor on the blue line under the autocorrected word to access the AutoCorrect Options menu. Undo the change from here or turn autocorrection options on and off (see "Outsmart Word 2004").—JESSICA SOMMER, PRODUCT MANAGER FOR MICROSOFT OFFICE 2004



**Outsmart Word 2004** When Word's autocorrection gets it wrong, you can make it right again without going through a series of menu items.

Reviewing Pane button on the Reviewing toolbar (View: Toolbars: Reviewing). But it's possible to bring it to the regular toolbar. Go to Tools: Customize: Customize Toolbars/Menus. Then click on Commands. With All Commands selected in the left box, scroll down in the right box to ReviewingPane. Drag ReviewingPane to the Standard toolbar and put it wherever you want it to stay. Make sure that the Save In option (which is located at the bottom of the Customize Toolbars/Menus dialog box) is set to Normal. Click on OK.—TOM NEGRINO

# Don't Use Word? Try These!

## 14. TALK TO ME

Need help proofing your work? AppleWorks 6 lets you *listen* for errors. To add a Speak Text button to the button bar, choose AppleWorks: Preferences: Button Bar and drag the Speak Text button from the Word Processing group onto the Button Bar. Select your text and click on the button to hear it read aloud.—HELEN BRADLEY

## 15. QUICK E-MAIL CLEANUP

When you copy text from e-mail or the Web into AppleWorks documents, strange line breaks may creep in to irk you. No problem. First save your document, then press  $\text{⌘-F}$ , click on the Find box, and type  $\backslash p$ . Next, click on the Change box and press the spacebar. Click on Change All and then on OK.—HELEN BRADLEY

## 16. PROTECT YOUR WORK IN NISUS WRITER

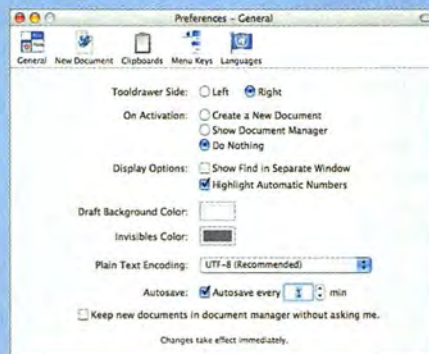
Tired of having to save every document—even if it's just something you're working on briefly to copy into another program—as a separate file on your hard drive? Nisus Writer Express offers a useful new feature called Document Manager, which keeps track of documents (see "Automatic Save"). You can start all new documents in Document Manager by setting the appropriate option in Nisus Writer Express's General Preferences, but it's easier to go down to the Autosave option in the same box and set it to save every minute; the application will save new documents into Document Manager by default. From then on, you open your document from the Doc-

ument Manager window; Nisus Writer Express saves changes there. To share a document, just save it as a stand-alone file.—ADAM C. ENGST

## 17. WHAT WAS THAT WORD?

You're having trouble thinking of the perfect word—but if you're using Nisus Writer Express, don't head for the bookshelf to find your thesaurus. Instead, open the Palette Library window, switch to the Writing palette in Nisus Writer Express's tool drawer, and drag the Language palette into the drawer. Nisus Writer Express shows related thesaurus entries for the selected word, or for the word next to or containing the insertion point. All you need is a quick glance at the drawer to see a variety, range, assort-

ment, sampler, or collection of alternatives to the current word.—ADAM C. ENGST



**Automatic Save** Use Document Manager, new to Nisus Writer Express, and frequent autosaves to save time.

# Spreadsheets



## 18. FIX YOUR FORMULAS

If you're perplexed about how to work properly with formulas in **Microsoft Excel 2004**, take advantage of the new Function ScreenTips. These will instantly display correct syntax for more than 140 functions (predefined formulas). Select Excel: Preferences and go to the View section. Under Window Options, select Function ScreenTips. Now, as you type, a small yellow box will appear with instructions that help you complete function arguments. Click on the function's name to open its Excel help topic in this box.—SCHOLLE SAWYER MCFARLAND

## 19. RAPID RANGE CHANGE

There's a faster way to change the cells referenced in an **Excel 2004** formula. Double-click on the cell that contains the formula to highlight the range of cells. Now click on and drag the colored border to encompass more or fewer cells. Press return, and your formula will update.—SCHOLLE SAWYER MCFARLAND

## 20. FILL CELLS YOUR WAY

It's now easier to paste data into **Excel 2004** worksheets. Excel X gave you a few options, in the Paste Special dialog box, but they could be confusing. In Excel 2004, the Paste Options button automatically appears when you try to paste. Click on it to match the cell's formatting or to directly access the Text Import Wizard. The program gives similar aid when you insert cells, rows, or columns into a worksheet: the Insert Options button appears. Don't see the Paste Options or Insert Options buttons? Go to Excel: Preferences, click on Edit, and select Show Paste Options Buttons or Show Insert Options Buttons.—SCHOLLE SAWYER MCFARLAND

## 21. LIGHTEN THE GRID LINES

The default dark-gray grid lines in **Excel X** and **2004** can be obtrusive, especially if you're working on a spreadsheet with black text on a white background. But if you turn grid lines off, it's difficult to find the active cell. Instead, take the middle road: just lighten them up a bit. Open Excel: Preferences, and go to the View section. Under Window Options, select a lighter shade from the Color pop-up menu. For me, Gray-25% (just above

White in the far right column) is the least obtrusive color that's still visible. To go back to the original color, select Automatic from the pop-up menu.—ROB GRIFFITHS

## 23. JUMP THROUGH LONG LISTS

If your **Excel X** or **2004** worksheets overflow with long rows or columns of data, a few keyboard shortcuts will make navigation much quicker. To move to the end of a row (or to the next blank row), press and release the end key and then press the down arrow. To move back to the top, press and release the end key and then press the up arrow. Similarly, you can jump across columns with end-right arrow and end-left arrow.—ROB GRIFFITHS

## 24. JUMP PAST EMPTY CELLS

Regular shortcuts don't work when you need to get to the end of a long column of **Excel X** or **2004** data that includes a lot of *empty* cells—but you're not out of luck. Move to an empty column close to the target column, and then press end-down arrow. Your cursor will jump to the bottom of the workbook, row 65,536. Now move the cursor into the target column and press end-up arrow. Presto, you've selected the last entry. The same trick works for row navigation.—ROB GRIFFITHS

## 25. SUM CELLS ACROSS A MULTISHEET WORKBOOK

Do your **Excel X** or **2004** workbooks often consist of a summary sheet with many identical subsheets? If so, use this time-saving trick to sum all of the entries in a given cell. For instance, say you're building a summary sheet for a collection of divisional sales reports. Each division is required to use an identical template, so you know that cell F104 always contains a division's total revenue.

To add together all of the divisions' total-revenue figures, enter the formula `=SUM(Div_1:Div_53!F104)` on your summary sheet. `Div_1` is the name of the first divisional worksheet in the workbook, and `Div_53` is the name of the last worksheet. You can use this trick with COUNT, AVERAGE, or any other function that takes a range of cells as input.—ROB GRIFFITHS

## 26. CALCULATE A YEAR-TO-DATE SUM

A popular way to track and forecast sales is with a 13-column **Excel X** or **2004** worksheet—one column for each month, and a total column at the end. As the year goes on, you put either the actual or the forecast figure into each column, giving you a quick glance at the full-year forecast. What if you just want the year-to-date actuals? You could calculate these each time, or you could just use this formula: `=SUM(OFFSET(B10,0,0,1,MONTH(TODAY())))`.

The trick is the OFFSET function, which returns a range based on a starting reference. The first three items in the OFFSET function define the starting reference. The cell address is a reference point, so set it to January's results (B10 in this

### FROM THE SOURCE



## 22. QUICK CHANGES IN EXCEL

Need to change something throughout an entire Excel document? In Excel 2004, you can search across a workbook instead of just inside the current worksheet. Open the Find dialog box (⌘-F), and choose Workbook

from the Within pop-up menu.

Here's another quick-change tip: When you want to add or edit the same data on multiple worksheets, ⌘-click on the worksheets to group them. Type or edit the data, and press return or tab. Excel automatically changes the data on all the sheets you selected. To ungroup the sheets, control-click on one sheet's tab and select Ungroup Sheets from the contextual menu.—JESSICA SOMMER, PRODUCT MANAGER FOR MICROSOFT OFFICE 2004



### MORE TIME-SAVING TIPS IN THIS ISSUE:

When you're trying to beat the clock, don't forget that each trip to mouse and menu adds up. Check out "Save Time with Shortcuts," *Working Mac* (page 68), for more tips.

example). The next two numbers show how far—in rows and columns—Excel should move to start the range. In this case you indicate 0, 0, because you want it to use B10 as the range's beginning. OFFSET's last two elements define the end of the range. You set the height of the range to 1, because all the data is in one row. Set the width of the range—or how many columns to move from the starting reference—to MONTH(TODAY()).

This function returns a number equal to the current month; for example, 7 for July. The final result is a range that starts in January's results and ends in the current month. This whole mess is summed, and bingo, you've got an always-right year-to-date actual calculator.—ROB GRIFFITHS

## 27. SUM CERTAIN VALUES

It's a thorny task to create a summary report from an Excel spreadsheet with ever-changing rows of data. Consider a daily sales report (see "Sales Flash!"). To create this example's summary report, you could laboriously hand-code every formula, but the spreadsheet would break as soon as you added a row. Instead, use the SUMIF() formula, which lets you test values before calculating sums. Here's cell F28's formula for calculating Alice's total dollars: =SUMIF(C\$4:C\$24,"Alice",F\$4:F\$24).

The first cell-range reference determines the data you wish to test. The formula's middle section states the condition, or what you're testing for—in this case, whether the sales rep's name is Alice. The formula isn't case sensitive, so you could write *alice*, but make sure to enclose this section in quotes. The final data range is the range of data to sum, based on whether each row of data meets the defined criteria. This range should be equal in size to the first range, though it does not have to refer to the same range. Replicate this formula—making sure the ranges don't

Date	Sales Rep	Units Sold	Price	Total \$
1-Apr	Ted	35	\$10.00	\$350.00
1-Apr	Mary	40	\$7.50	\$300.00
1-Apr	Alice	20	\$10.00	\$200.00
2-Apr	Dave	24	\$10.00	\$240.00
2-Apr	Susan	20	\$7.50	\$150.00
3-Apr	Dave	40	\$15.00	\$600.00
4-Apr	Mary	50	\$10.00	\$500.00
4-Apr	Susan	30	\$7.50	\$225.00
4-Apr	Ted	35	\$10.00	\$350.00
5-Apr	Mary	55	\$10.00	\$550.00
6-Apr	Alice	40	\$7.50	\$300.00
6-Apr	Ted	24	\$15.00	\$360.00
7-Apr	Dave	20	\$15.00	\$300.00
7-Apr	Susan	15	\$10.00	\$150.00
7-Apr	Dave	10	\$12.50	\$125.00
7-Apr	Mary	40	\$10.00	\$400.00
7-Apr	Alice	50	\$7.50	\$375.00
7-Apr	Susan	40	\$10.00	\$400.00
8-Apr	Dave	24	\$10.00	\$240.00
8-Apr	Ted	20	\$7.50	\$150.00
8-Apr	Mary	30	\$12.50	\$375.00
<b>TOTALS</b>		<b>662</b>		<b>\$6,640.00</b>

SUMMARY	SALES REP	UNITS	TOTAL \$
Week of April the 1st	Alice	110	\$875.00
	Dave	118	\$1,505.00
	Mary	215	\$2,125.00
	Susan	105	\$925.00
	Ted	114	\$1,210.00
<b>TOTALS</b>		<b>662</b>	<b>\$6,640.00</b>

**Sales Flash!** If you need to keep up with ever-changing data, use Excel's powerful SUMIF() function to create a quick and easy summary report.

change—to add the summaries for the other sales reps in both units and total dollars.—ROB GRIFFITHS

# Don't Use Excel? Try These!

## 28. SMARTER APPLEWORKS MOVES

Want to move cells from one area of an AppleWorks 6 worksheet to another, but your target range is offscreen? Use the menu instead of scrolling forever through columns with your mouse. Highlight the cells you want to move, choose Calculate: Move, type the cell reference of the upper left cell in the target area, and click on OK.—HELEN BRADLEY

## 29. FASTER CELL ENTRY

You don't have to press return every time you finish typing data in a cell and want to move to the next one. Instead, configure AppleWorks so that you can press an arrow key to confirm your entry and move one cell in the direction of the arrow. Choose AppleWorks: Preferences: General. Select the Always Selects Another Cell option under Pressing Arrow Keys, and click on OK.—HELEN BRADLEY

## 30. CAREFREE DATA CONSOLIDATION

If you have a series of AppleWorks worksheets that are chock-full of monthly data, it's easy to create a worksheet that consolidates the year's results (see "Add It Up"). To get the data from individual worksheets, reference the cells in the monthly worksheets. For example, to reference a total in cell B34 of a worksheet called Jan2004.cwk, you would type =Jan2004.cwk!B34. Once you've linked the cells, you can update your yearly report whenever a monthly worksheet changes. Simply choose Calculate: Calculate Now.—HELEN BRADLEY

## 31. UNDO THE UNDOABLE

You've got all your data into an AppleWorks worksheet when you realize the rows would be better as columns. Fix it with the Transpose option. Select all your data, including headings, and choose Edit: Cut. Click on the upper left cell of the new data range and choose Edit: Paste Special. In the dialog box, select the Transpose Rows And Columns option and click on OK.—HELEN BRADLEY

	A	B	C	D	E
1		Sales (\$)	Customers (#)	Gross Profit	
2	Jan	\$15,774.55	452		
3	Feb				
4	Mar				
5	Apr				
6	May				
7	Jun				
8	Jul				
9	Aug				
10	Sep				
11	Oct				
12	Nov				
13	Dec				
14					

**Add It Up** It's easy to link data from one worksheet to a cell in another. Just use a reference to the other worksheet in your formula.



# Presentations

## 32. PRESENT EVERYWHERE

Need to give a presentation on a trip, but don't want to drag along a computer? If you know there will be one at your destination, consider exporting your presentation from **Apple Keynote 1.0** or **Microsoft PowerPoint X** or **2004** as a QuickTime movie. The computer—Mac or Windows—won't need to have Keynote or PowerPoint installed; it needs only QuickTime (you'll need QuickTime Pro to play the presentation full screen). Copy the QuickTime movie to a USB flash drive or onto your iPod; then hook the device up to the local computer when you're ready to do your show.—TOM NEGRINO

## 33. OFF TO A SOLID START

Whether you use **Keynote** or **PowerPoint X** or **2004**, the best thing you can do for your presentation is write it in either program's Outline mode *before* you deal with slides and design issues. (In Keynote, choose View: Outline. In PowerPoint, click on the Outline View button—the second button at the lower left corner of your document.) Working with just the text helps you focus on the most important part of the presentation: the message you want to communicate to your audience.—TOM NEGRINO

## 34. TRICK OUT YOUR TEXT

To create cool text effects in **PowerPoint 2004**, copy your selection and then use File: Paste Special to paste in the text as a picture. You can now stretch the words, change their transparency, and apply picture effects, such as Emboss, Film Grain, Fresco, and more.—SCHOLLE SAWYER MCFARLAND

## 35. ONE OBJECT, MANY ANIMATIONS

**PowerPoint 2004** lets you apply several animations to the same object or bullet. For example, you could make a globe fly in, turn three times, highlight, bounce, and then exit. To apply multiple effects, select an image or word(s) on your slide and click on Custom Animation in the Formatting Palette. Click on Add Effect to

choose an entrance, emphasis, or exit animation, and then click on OK. Control the order of the effects by using the arrows to move them up and down in the list. Don't miss the Effect Options button in the Custom Animation dialog box. From here you can add sounds (including a handy laugh track) and change the animation's timing.—SCHOLLE SAWYER MCFARLAND

## 36. USE ALL YOUR RESOURCES

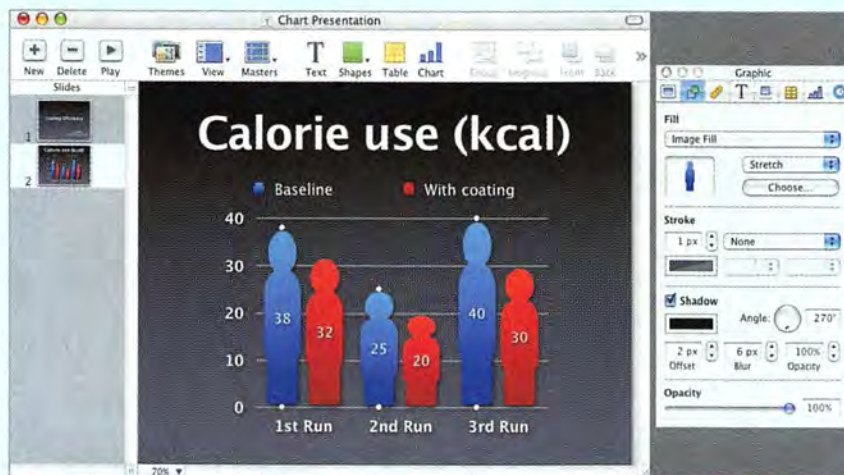
**Keynote** excels at importing graphics and movies from other programs, which means that you may have more presentation fodder than you realize. If you own Microsoft Office, you can import any item from Office's Clip Art library (and the huge collection online at <http://office.microsoft.com/clipart/>). Word's WordArt works particularly well for fancy slide titles. If you own Apple's LiveType (included with Final Cut Pro), you can create an endless variety of animated type, render it as a QuickTime movie, and import it.—TOM NEGRINO

## 37. GET A SHARPER LOOK

Bored by **Keynote** themes? A world of great-looking ones (some free, some not) awaits you online. Check out these sites: Keynote User ([www.keynoteuser.com](http://www.keynoteuser.com)); Keynote Pro ([www.keynotepro.com](http://www.keynotepro.com)); and Keynote Theme Park ([www.keynotethemepark.com](http://www.keynotethemepark.com)).—TOM NEGRINO

## 38. SPRUCE UP YOUR CHARTS

Improve the look of bar or column charts by using **Keynote's** Graphic Inspector to replace the standard rectangles with custom images. Create your chart as normal, and then double-click on a data series to select it. In the Fill section of the Graphic Inspector, choose Image Fill from the pop-up menu, and then click on the Choose button. Select a graphic image (scalable formats such as PDF, TIFF, or PNG work best). Finally, choose Stretch from the Size pop-up menu (below the Fill pop-up menu) to make the graphic take up the same space as the original bar (see "Chart People").—TOM NEGRINO



**Chart People** Jazz up your Keynote charts by using the Graphic Inspector to replace standard rectangles with custom images.

## 39. BUILD YOUR LIBRARY

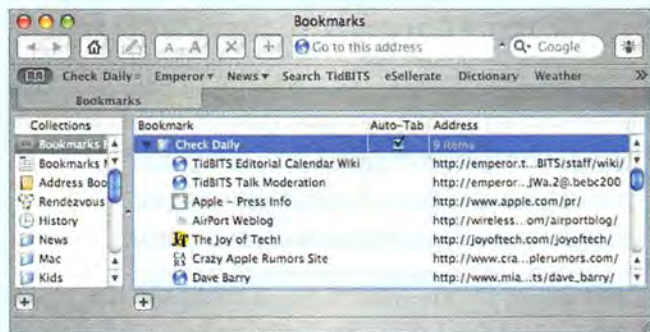
Formatting tables and other objects in **Keynote** takes a lot of time and effort, and there's no reason you can't reuse that investment. Just create a library file—a presentation file kept in the easy-to-access Library folder—and use it to store objects for reuse. First create a new Keynote file, using a neutral theme, such as Gradient. Create one or more slides based on the Blank slide master. Then copy and paste the objects you want to save from your presentation file into the library file. Finally, save the library file to *your hard disk*: Library: Application Support: Keynote: Image Library. Now you can access the library easily by choosing File: Open Image Library from within Keynote.—TOM NEGRINO

# Internet



## 40. CHECK MULTIPLE SITES QUICKLY

If you like to visit a set of Web sites each morning—a few online cartoons, a couple of Weblogs, and a news headline site—Apple's **Safari** makes it easy. Create bookmarks to the sites you want to visit and put them in a folder in the Bookmarks Bar collection. (Go to Bookmarks: Show All Bookmarks and click on Bookmarks Bar in the Collections list to the left.) Then select the Auto-Tab option (see "Safari on Autopilot"). From now on, just click on the folder in your Bookmarks Bar and all the sites will open simultaneously in new tabs. If you also occasionally want to access one of the sites by itself, ignore the Auto-Tab option. Instead, click on the folder to choose a single bookmark from the drop-down menu. And when you want to open all the sites in the folder, ⌘-click on it and choose Open In Tabs from the contextual menu.—ADAM C. ENGST



**Safari on Autopilot** Visit the same sites every morning? Use Safari's Bookmarks Auto-Tab option to create a folder that you can click on to open all the sites in new tabs.

## 41. X-RAY VISION FOR LINKS

Everyone knows that good Web design requires colored and underlined links—everyone, that is, except for some chichi designers who are too clever for their retro-framed glasses. If you run across a Web site that hides its links, press option-tab in **Safari** to draw a colored rectangle around the first link on the page. Press the key combination again to cycle through the other links on the page. If you need to highlight links often, go to Safari: Preferences: Advanced and choose the Highlight Links As You Press The Tab Key option. This also lets you press option-tab to move between text fields.—ADAM C. ENGST

## 42. COVER YOUR TRACKS

If your local Internet café is classy enough to have iMacs running **Safari** for public Web browsing, be careful about what you do online. The next customer could potentially see what sites you visited, ogle your Google searches, or even end up in your MyYahoo account. That's because Safari helpfully tries to remember passwords, AutoFill text, cookies, and more. Make Safari forget all about you by choosing Safari: Reset Safari to erase the record of where you've been on the Web, clear cached pages, empty the Downloads window, remove any cookies, destroy saved names and passwords, and clean out both AutoFill text and Google search terms (see "Clean Sweep").—ADAM C. ENGST

## 43. TIME TRAVEL WITH SAFARI OR EXPLORER

You found a great recipe for huevos rancheros on the Web a while back, but you can't remember where it was, and none of the sites Google finds seem right. How can you go back in time to find it again? Hop into the Wayback Machine with **St. Clair Software's HistoryHound** (\$20; [www.stclairsoft.com](http://www.stclairsoft.com)). HistoryHound automatically reads the URL of every page in your Safari and Internet Explorer histories (and bookmarks), retrieves those pages, indexes the text of each, and lets you search for any word on any page.—ADAM C. ENGST

## 44. BREAK OUT OF THE BLACK BOX

Puzzled by the strange black box that appears in your word bubble whenever you try to paste text from Word into an Apple iChat AV message? You don't have to type everything from scratch when you want to share an item with a friend. Copy the text into TextEdit (or into a blank e-mail message), and then cut and paste it into iChat from there.—TERRI STONE

## 45. ONE-WAY TO CHAT

Online chatters can use iChat's AV capabilities even if only one party has a microphone and camera. You can initiate a *one-way* chat, where one person talks through the microphone or camera and the other person responds by typing. This is a real boon for anyone who has difficulty typing because of an injury or disability, and for people who have low-tech friends or relations. Enable audio and/or video in iChat by selecting Video: Microphone Enabled and/or Camera Enabled. (You'll find this under the Audio menu if you don't have a camera.) Control-click on your pal's name in the Buddy List and select either Invite To One-Way Audio Chat or Invite To One-Way Video Chat. (These options will be given only if the other person doesn't have an attached camera or microphone.)—CHRISTOPHER BREEN

## 46. MY, WHAT BIG EARS YOU HAVE!

You can use iChat AV's audio feature to talk across the Web, but it's also useful if you want to monitor what's going on at another Mac. For example, you might want to keep an ear cocked for the sound of your teenager returning home—after curfew—from a date. Sign up for two iChat-compatible accounts—Mac or AIM. Make sure your Macs are on a network, and launch copies of iChat on each Mac. Initiate an audio chat between them, and hide iChat on the Mac you wish to monitor. Finally, to avoid giving yourself away, remember to turn off the microphone on the Mac where you're listening.—CHRISTOPHER BREEN



### Clean Sweep

The fastest way to cover your tracks in Safari is to choose Safari: Reset Safari.

# E-mail

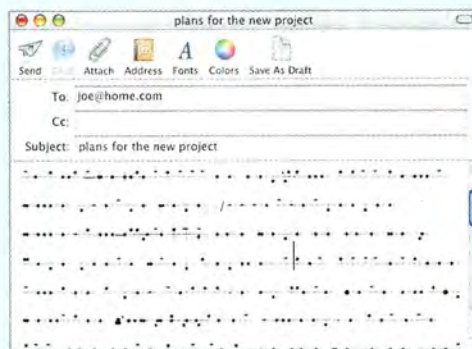


## 47. RECALL FORGOTTEN PASSWORDS

If you set your e-mail program to remember your account password and then you plumb forgot it, don't fret. You can quickly recover a long-lost password with the **Keychain Access** utility (Applications: Utilities). In the top half of the Keychain Access window, select the entry for your e-mail account (pop.yourisp.com, for example). In the bottom half, enable the Show Password option. Enter your administrator's password when prompted and then click on Allow Once. Your password will appear at the bottom of the window.—CHRISTOPHER BREEN

## 48. PROTECT MESSAGES FROM PRYING EYES

Here's a quick way to keep sensitive messages in the Sent mail folder of **any e-mail application** confidential. Download a font that displays musical characters—for example, Lennart Hallstrom's free Djembe font ([www.djembe.net/freeware.shtml](http://www.djembe.net/freeware.shtml))—and add it to OS X's Font Book. Open your e-mail application and create a new message in Rich Text or HTML format, depending on the application you're using. When you're finished, select the text and set the font to Djembe. Your message will now appear as rhythmic characters (see "What'd You Say?"). Because recipients probably won't have the Djembe font, they'll see your message as regular text characters. However, the message within the Sent mail folder will appear as gibberish. Should you wish to translate a sent message to readable



**What'd You Say?** You can prevent casual snooping by sending your e-mail messages in an unusual font such as Djembe.

text, simply click on the Forward button and change the format to Plain Text.—CHRISTOPHER BREEN

## 50. PROTECT COMPANY SECRETS WITH MAIL

There's nothing more embarrassing than leaking company secrets because you selected the wrong e-mail address. **Apple's Mail** application can help you catch these mistakes before they happen by marking any messages set to leave the company e-mail system. To set up this feature, open Mail's preferences and click on the Composing tab. Enable the Mark Addresses Not In This Domain option, and enter your company's domain (example.net, for instance). Now, whenever you address a new e-mail message, any recipient located outside this domain will appear in red text.—CHRISTOPHER BREEN

## 51. SYNC MAIL BETWEEN TWO MACS

Here's how to transfer your Mail settings and messages from one Mac to another—for example, if you primarily work on a Power Mac but use a laptop for travel. On the Power Mac, open your user folder and go to Library: Mail. Copy the Mail folder onto the nearby laptop. Open the same directory on your laptop, move the existing Mail folder somewhere else, and then replace it with the transferred folder. To import your other Mail settings—accounts, for example—return to the desktop machine and copy the com.apple.mail.plist file from the Preferences folder inside your user folder to the same location on the laptop. However, if you think you may want to return to the laptop's original settings at some point in the future, be sure to move the old com.apple.mail.plist to a different location before replacing it with the transferred file.—CHRISTOPHER BREEN

## 52. OPEN MULTIPLE ENTOURAGE WINDOWS

Most **Microsoft Entourage X** or **2004** users work in one window—switching back and forth between the Calendar, Address Book, and Mail views, and more. But if you want to work in more than one view at a time, you can easily open them in separate windows by control-clicking on the navigation button and selecting Open In New Window from the contextual menu.—TOM NEGRINO

## 53. The Quick Switch

You can switch **Entourage X** or **2004** views without ever mousing over to the navigation buttons. Press control-tab to cycle

### FROM THE SOURCE



## 49. QUICKER ENTOURAGE RESPONSES

Do you find yourself constantly e-mailing the same response to different people? Maybe customers routinely ask about your company's return policy, for example, or wedding guests want to know where you're registered. Here are

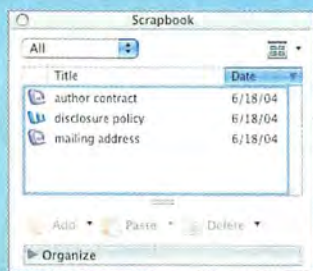
two ways to avoid retyping your response in **Microsoft Entourage 2004**:

> Store the text as a signature. In Entourage, select Signatures from the Tools menu and click on New. Give your new signature a name and type your message. Whenever you need to insert the text into a message, just click on the Signature button at the top of the message window and select the appropriate item.

> Store the text in the new Entourage Scrapbook (Tools: Scrapbook). To do so, copy the text you want to save as a clipping, and then click on the Add button in the Scrapbook window (see "Save It"). You can now drag the item into the body of your message whenever you need it. And unlike

signatures, scrapbook items are accessible from any Office 2004 application.—JESSICA SOMMER, PRODUCT MANAGER FOR MICROSOFT OFFICE 2004

**Save It** The Office 2004 scrapbook is a handy way to save snippets of text you need often.



through each view, or jump directly to a view by pressing its keyboard shortcut (⌘-1 through ⌘-6).—TOM NEGRINO

## 54. BEND ENTOURAGE TO YOUR WILL

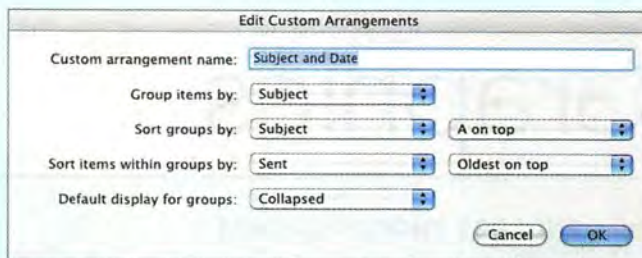
Entourage 2004 offers a wealth of options for grouping e-mail messages. But what if you want to use more than one sorting criterion? For example, you might want to group messages by sender and then sort the messages from each sender according to subject. To do this, you need to create a Custom Arrangement. Open the View menu and select Arrange By: Edit Custom Arrangements. Click on New to bring up the Edit Custom Arrangements dialog box, where you can specify how to group messages, sort the groups by criteria you select (in this case, alphabetically by sender), then choose how to sort items within each group (here, by subject). (See “For Your Viewing Pleasure.”)—TOM NEGRINO

## 55. SPOT NEW MESSAGES SPEEDILY

Perplexed by Entourage 2004's proclivity for putting your newest e-mail messages at the bottom of the message list? Display your preview pane on the right side (View: Preview Pane: On Right), and at the upper right of the message list is an option for sorting messages with Newest On Top. You may still notice that Entourage doesn't always display the way you want it to. Just click on Newest On Top twice, and it should sort properly.—JENNIFER BERGER

## 56. TAKE EUDORA ON THE ROAD

While traveling with your laptop, you try using a friend's Internet connection to check your e-mail with Qualcomm



**For Your Viewing Pleasure** A Custom Arrangement gives you much more flexibility in the way you view the Message List. Once you set up a Custom Arrangement, it's available in any e-mail folder.

**Eudora 6.** Receiving works fine, but your friend's ISP's spam-prevention system requires that all mail be sent using its SMTP server. Of course you could reset the SMTP settings for each of your Eudora personalities, but there's a better solution. In your Eudora preferences, open the Personalities settings and create a new personality that contains only the required outgoing SMTP information (the SMTP server name, the return address, and the user name if necessary). Next, in the Sending Mail panel, choose the new personality from the SMTP Relay Personality pop-up menu. The last step is to switch to the Personality Extras panel and, for each of the other personalities from which you want to send e-mail, to select the Use Relay Personality option. From now on, Eudora will receive mail for each account normally, but it will send using the settings for the SMTP relay personality.—ADAM C. ENGST

# Office 2004 Project Center

## 57. AUTOMATIC PROJECT MARKING

To take full advantage of Office 2004's new Project Center, you must associate e-mail messages with a particular project—but there's no need to do this entirely by hand. You can have Entourage 2004 automatically assign incoming and outgoing e-mail to a project, by creating a mail rule. For example, to mark all messages sent to a particular contact as part of the project, choose Tools: Rules, click on the Outgoing tab, and then click on New. In the Edit Rule dialog box, set the If criteria to the contact's e-mail address. In the Then section, select the Set Project option and specify the appropriate project (see “Project Rules”).—TOM NEGRINO



**Project Rules** This outgoing-mail rule automatically associates mail sent to a particular contact with a project, and moves the mail to that project's folder.

## 58. SHARE YOUR ENTOURAGE CALENDAR AND CONTACTS

Microsoft Entourage 2004 doesn't officially let you share contact and calendar information with coworkers. From Microsoft's standpoint, that's a job for Microsoft Exchange, an expensive Windows-based server. But you can work around that limitation by creating a project other Entourage 2004 users can access. Open the Project Center and start a new project. In the first screen of the New Project Wizard, deselect the Due Date option to create an ongoing project. Add the calendar items and contacts you want to share with your colleagues, click on the Share button, and specify a server that's always accessible (an iDisk will do nicely). Lastly, invite your colleagues to join the project. This workaround isn't as robust as a true server-based system, but it should meet the needs of small groups.—TOM NEGRINO

## 59. REMEDY FOR AN OVERSTUFFED IN-BOX

If you're a pack rat, Entourage 2004's database may creak under the load of your saved messages. The Project Center can clean house. First, use the New Project Wizard to create a new project. When you're done, click on File: Export. In the dialog box, select Export Items That Are In A Project and choose your project name from the pop-up menu. Select the Mail option under the Archive The Following Item Types header. On the next page, choose the option to delete messages after archiving them. Finally, name and save the archive file. To restore these messages later, select File: Import. If you don't want them returned permanently, create a new Identity (Entourage: Switch Identity) and import the archive into it. Delete the Identity when you're done.—SCHOLLE SAWYER MCFARLAND

# Graphics



## 60. ENLARGE PHOTOS QUICKLY

In Apple's iPhoto 4, you can set your Preferences (iPhoto: Preferences: General) so double-clicking on a thumbnail launches an image editor or brings up a larger image in iPhoto's edit view. But you can have it both ways. Keep your double-click preference set to opening another image editor, and click on iPhoto's Edit button to see the enlarged image in edit mode.—DERRICK STORY



**Turn On an Overlay** When you're fine-tuning an Adjustment Layer's Layer Mask, use the backslash key to toggle a colored overlay on and off.

## 61. EDUCATE YOUR ALBUMS

Like iTunes' Smart Playlists, iPhoto's Smart Albums corral media in logical groupings. To create one, go to File: New Smart Album. Name the album, then define its criteria. You can choose from nine definers, including keyword, star rating, date, and roll. To further refine a Smart Album's contents, click on the plus sign (+) button and choose another criterion. Click on OK, and you've got yourself a Smart Album. A gear symbol identifies it in the Sources list.—TERRI STONE

## 62. MOVE YOUR LIBRARY

It doesn't take long for digital images to overwhelm a hard drive. You can give your system more breathing space by moving your iPhoto Library folder to another drive. Quit the appli-

cation, and then copy the iPhoto Library folder to your preferred location. When the images have transferred, rename the original folder Old iPhoto Library. Open iPhoto and click on Find Library in the alert box that appears. Browse to the correct location and click on OK. If you prefer to have more than one iPhoto Library folder, download the free iPhoto Library Manager 2.0 (find.macworld.com/0033).—JENNIFER WILLS

## 63. OVERLAY LAYER MASKS

When you paint on an Adobe Photoshop CS layer mask that's attached to an adjustment layer, press the backslash key (\) to view the mask as a colored overlay on the main image window. The overlay often exposes areas where the mask doesn't align correctly. Fix problem areas by painting while the mask is overlaid on the image. Then press the backslash a second time to return to the normal view of your image.—BEN WILLMORE

## 64. CROP NEAR THE BORDER

When you're trying to shave just a sliver of pixels off one side of an image in Photoshop CS, the program snaps the cropping rectangle to the edge of the image every time you drag close to it. You can turn this behavior off by selecting View: Snap or pressing ⌘-shift-semicolon (;). Faster still, just hold down the control key to disable the behavior temporarily while you drag.—DAVID BLATNER

## 65. COPY IMAGE SIZES

If you want to create a new image in Photoshop CS that's the same size as one you already have open, press ⌘-N to bring up the New Document dialog box, and select the open file's name from the bottom of the Window menu.—DAVID BLATNER

## 66. IMPORT FOLDERS

Save a step when importing pictures into iPhoto by importing entire folders of images. Click once on the icon of a folder of images you want to import. Give it a descriptive name, and then drag the folder to the Album Source pane. iPhoto creates a new album and imports your photos into it.—GREG SCALLON, iPHOTO PRODUCT MANAGER

### FROM THE SOURCE



## About the Contributors

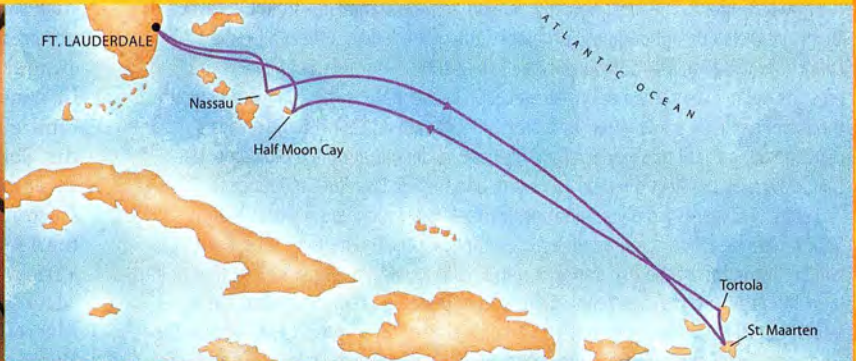
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NOVEMBER 7-14, 2004

# MacMania III

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## Save Time with Shortcuts

It may seem cliché, but there are two types of people: those who use keyboard shortcuts, and those who don't. On the one hand (pardon the pun), some people waste time putting hand to mouse, cursor to menu, and hand back to keyboard. Others press a combination of keys to do the same things. Instead of choosing File: Open from the menu, they press ⌘-O; instead of Edit: Copy, they go for ⌘-C.

Now, you know these keyboard shortcuts are there—you see them on the right side of all your application menus—but learning them takes some commitment. Start using them, if only for your most common operations, and you'll save time and muscle power. If you're already a keyboard-shortcut convert, read on for power tips that will make you a shortcut guru.

## Quick App Access

Keyboard shortcuts can save you time when you're working *within* your favorite applications, but there's another way to reduce mouse mileage. Application launchers open programs quickly—saving you the trouble of clicking on an icon in the Dock or searching your Applications folder. Some launchers also let you open files, browse your folders, and conduct Web searches. Here are my three favorites:

**1. LaunchBar** A few launchers add special menus to the menu bar; others have their own windows. The most powerful let you activate commands from the keyboard. Objective Development originally developed the granddaddy of them all—the \$20 LaunchBar (◆◆◆◆◆; *Mac Software Bargains*, July 2002)—for NextStep. When you press its default key combination, ⌘-spacebar, LaunchBar inserts a slim bar beneath the menu bar. Type a few letters of a program's name and LaunchBar displays a corresponding list of applications (and files and folders) that match the name. Use the arrow keys to select the item you want, and then press return to launch it.

LaunchBar learns from your choices. For example, when you want to launch Safari, type s a f and scroll down a list of applications. By the third time, Safari will be at the top of the list, and you won't need to use the arrow key. At that point, launching the app requires nothing more than pressing ⌘-spacebar and typing a few letters. LaunchBar also lets you enter Web searches. Type G O G to display the Google search template, press the spacebar, type your search keywords, and press return. Your browser will display the results.

**2. Butler** Taking a different tack, Peter Maurer's Butler (free [donations accepted]; [www.petermaurer.de](http://www.petermaurer.de)) presents a window in the middle of your screen after you press control-spacebar. As with LaunchBar, you type a few letters to see a list of items. Select one with the arrow keys, and press enter to launch it.

**3. Quicksilver** This free utility ([www.blacktree.com/apps/quicksilver/](http://www.blacktree.com/apps/quicksilver/)) gives you a choice of four different displays: a window, a menu, a bezel (a round-cornered gray rectangle), and a miniwindow. Press control-spacebar to bring up the display of your choice (you set this in the program's preferences), and type a few letters to show a list of matching applications, files, or folders in a larger window. (Quicksilver was still in beta at press time; the final version should be out in October.)

### Search for the Hidden Shortcuts

You can't use a shortcut if you don't know—or can't remember—what it is. But some programs don't display all available keyboard shortcuts in their menus. (Even if they do, you may appreciate a reminder. See “Jog Your Memory” for a utility that helps.)

**Apple Tricks** Most Apple programs, including the Finder, tuck many of their shortcuts away. To find the hidden ones, look in the Help menu. A few applications, such as iTunes and iPhoto, have a menu item here specifically for keyboard shortcuts. With others, select Help: *application name* Help, type *shortcut* in the search field, and press return. In most cases, you'll find a page (or in the case of the Finder, many pages) listing the application's keyboard shortcuts. Often these lists produce unexpected things. (Did you know that you can open a folder selected in the Finder by pressing option-down arrow?) Print them out and stick them up on your wall for quick reference.

**Access Other Apps** Sometimes you'll have to hunt around to find hidden shortcuts in other programs. In Microsoft 2004, select Tools: Customize: Customize Keyboard to see every command available and the default keyboard shortcuts. (Access the same sheet in Word or Excel 2001 or X by selecting Tools: Customize and then clicking on the Keyboard button.) As noted in *Mac OS X Hints* last month, there's a tricky way to print these lists. Select Tools: Macro: Macros to bring up the Macros dialog box. In the Macro Name field, type *ListCommands* and click on Run. In the dialog box that appears, choose All Word Commands and click on OK to start the macro. A document of 30 or so pages will open, containing *every* Word shortcut.

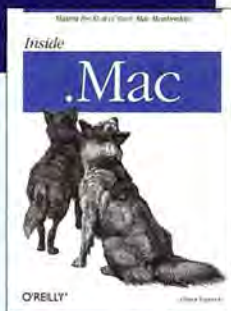
Adobe Photoshop also has *many* more shortcuts than its menus let on. For instance, the Tools palette is probably the most commonly used palette in Photoshop; from here you select the marquee tool, the crop tool, the text tool, and so forth. You don't have to click on the palette buttons to select a tool; each has a keyboard shortcut. Hold your cursor over one of the buttons for a couple of seconds, and you'll see a ToolTip that reveals it. For example, the crop tool's ToolTip



## CHECK IT OUT

### Master .Mac

Apple's .Mac site is so easy to use that it's easy to overlook all its possibilities. Squeeze every drop of usefulness from your membership with Chuck Toporek's *Inside .Mac* (O'Reilly, 2004). From the ins and outs of customizing your HomePage to setting up Mail and working with your iDisk, this book may help you discover something new.—SCHOLLE SAWYER McFARLAND



reads Crop Tool (C), which means that the shortcut for activating this tool is the C key. Need a cheat sheet? Choose Edit: Keyboard Shortcuts and click on Summarize. Open the HTML file that Photoshop creates in your default Web browser, and print it.

### Create Your Own Shortcuts

So now you know how to find the shortcuts that software companies think you need, but what if there's no shortcut for the command you use most? No problem—use Panther's Keyboard Shortcuts tool or the options built into some applications.

**Panther Power** With Panther, Apple introduced a way to customize keyboard shortcuts for most programs' menu items. Open System Preferences, click on the Keyboard & Mouse icon, and then click on the Keyboard Shortcuts tab. You'll see a handful of special shortcuts for actions such as taking screen shots and turning on Universal Access. Generally, you'll want to leave them be, but if you ever decide you prefer to use these key combinations for other shortcuts, you can.

To set up a shortcut for your favorite app, click on the plus sign (+) button below the shortcut list. A sheet opens (see "Tap Panther's Potential"). Select All Applications in the Application pop-up menu to create a shortcut that works in almost all your programs. (This won't apply to some older programs or anything running in Classic mode.) You can also choose a specific application. If you don't see the one you want in the list, scroll to the bottom, select Other, and navigate to it.

In the Menu Title field, type the *exact* name of the menu item for which you want to set a shortcut. Make sure it's spelled correctly, or your shortcut won't work. If the menu item's name contains an ellipsis (...), type option-semicol (;) for that character. Next, click on the Keyboard Shortcut field and press the key combination you want. Click on OK to save the shortcut; if the application is open, quit and relaunch it. Your keyboard shortcut will now appear in the menu, and you can use it whenever you want.

If your shortcut doesn't work, a different shortcut may already be using those keys. (You'll be warned of conflicts only if you're creating a Finder shortcut.) Check your application's menus. If you ever want to remove a shortcut, scroll down the Keyboard Shortcuts list, click on the triangle next to your application, select a shortcut, and click on the minus sign (-) button. To nuke custom shortcuts, click on Restore Defaults.

**Programs' Built-in Tools** While the Keyboard & Mouse preference pane lets you set shortcuts for most applications, some apps won't let you use this method. But you're not completely out of luck. Many programs, including Adobe Photoshop and InDesign and Microsoft Word and Excel, contain their own systems for customizing keyboard shortcuts.

If you want to set your own keyboard shortcuts in Microsoft Word and Excel, select Tools: Customize: Customize Keyboard (or click on the Keyboard but-

ton). You can create, change, or add shortcuts here. For example, to add a key combination to a command, click on the Press New Shortcut Key field, press your key combination, and click on Assign. Click on OK to save the shortcut. Sometimes you'll have to search to find a command's *proper* name, which may or may not make sense. For instance, you won't find a command named Insert Comment in the list—Word calls this command Insert Annotation (and has assigned it the shortcut ⌘-option-A).

Word and Excel will tell you if another function is already using your shortcut. If you want to assign that combination anyway, find the function that uses it in the Commands List, click on the function's name, click on the shortcut in Current Keys, and click on Remove. Now you'll be able to assign the shortcut to whatever you like.

Some other programs offer a similar interface for setting shortcuts. In Photoshop CS, select Edit: Keyboard Shortcuts. Set shortcuts for menu commands, palette menus, and tools, and even save them in files to share with others.

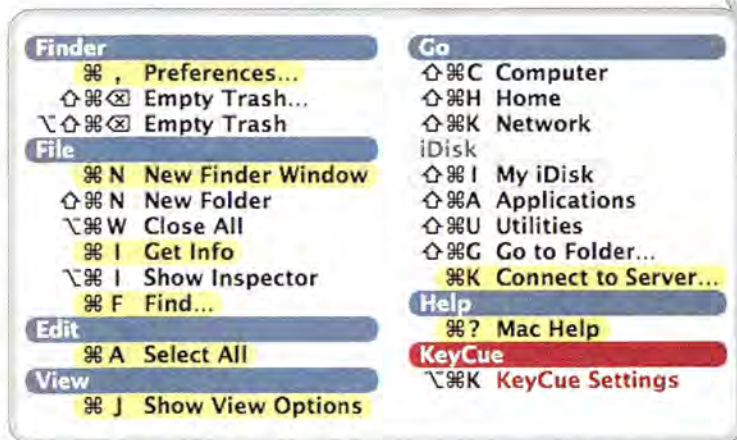
### Turbocharge Your Shortcuts

It's one thing to master individual keyboard shortcuts in the applications you use most, but once you get addicted to using the keyboard, you'll want to go further. How about pressing a couple of keys in the morning to open all the applications you need, or pressing a shortcut to save a file and send it via e-mail to your boss? You can do all this and more.

### Log Your Memory

Ergonis's \$15 KeyCue displays all the keyboard shortcuts listed in your applications' menus. (♦♦♦♦; Mac Gems, August 2004). Press and hold the ⌘ key for two seconds to display a screen in the center of your window.

continues



**Powerful QuickKeys** The gold standard of shortcut software is CE Software's \$100 QuickKeys X2 (♦♦♦♦; October 2003). It lets you create single-step shortcuts that launch applications, open files, or select individual menu items, as well as multistep shortcuts that automate more-complex procedures.

For example, use QuickKeys to hide all your applications and open a specific folder in the Finder. Use it to change the font, size, and style of text in a word processor. Or have it type boilerplate text—your name, your Web site's URL, or longer text—whenever you press a certain key. If you're a mouse lover but want to reduce the number of steps that common tasks require, you can use QuickKeys to create shortcut toolbars for all applications or

## Work That Mouse

Mice aren't necessarily the enemies of efficiency. Some pointing devices make shortcuts easier to access *without* making you use the keyboard. If your pointing device has multiple buttons, you may be able to use them to simplify different tasks.

Kensington ([www.kensington.com](http://www.kensington.com)) and Logitech ([www.logitech.com](http://www.logitech.com)) bundle software with their trackballs and mice that lets you set buttons to emulate keyboard shortcuts or simplify regular clicking. For instance, how many times do you click your mouse or trackball buttons each day? Use bundled software to spare yourself hundreds of repetitions: program one button as your control-click, another as your double-click, and another as your drag-click.

I use Kensington's Expert Mouse Pro, along with the company's MouseWorks software (see "Mighty Mouse"). This trackball has a scroll wheel and ten buttons: six along the top, which you can set to do things like launch your e-mail program or Web sites you look at regularly, and four main buttons surrounding the trackball. On my trackball, buttons activate F9 (Exposé's Show All Windows key), F10 (Exposé's Application Windows function), and the delete key. I've set the two top buttons as a chord—I press them simultaneously to hide the current application (equivalent to the ⌘-H keyboard shortcut).



**Mighty Mouse** Before you buy add-on software, check out the powers of the devices you already have. I've set up my Kensington Expert Mouse Pro to save me lots of time in menus and on the keyboard.



**Tap Panther's Potential** If you want to set a keyboard shortcut for a function that doesn't already have one, create your own via Panther's Keyboard & Mouse preference pane.

only for specific programs. (See "Increase Your Shortcut Savvy" for other articles about working with QuickKeys.)

**Inexpensive Options** Are your shortcut needs simple? Check out less-expensive utilities. The \$20 Keyboard Maestro and its free light version let you perform all kinds of actions with single keystrokes (♦♦♦♦; "More Software Bargains," May 2003). Maestro is not as powerful as QuickKeys—for example, it doesn't let you set up multistep shortcuts. (If you're adept at AppleScript, though, you can get similar results using Keyboard Maestro.) However, for many users it's more than enough.

Application launchers also offer a handy way to open applications in a snap (see "Quick App Access"). Some can also help you get to your favorite folders and more. And if you have a third-party mouse or trackball, don't overlook the software that came with it (see "Work That Mouse").

### Reduce Your Mouse Mileage

No matter how many keyboard shortcuts you use and how you use them, they all save you lots of time. And since excessive mousing can lead to repetitive strain injuries, it's in your best interest to try more keyboard shortcuts and save your muscles. □

KIRK McELHEARN is a Mac author and journalist who lives in the French Alps. His latest book is *How to Do Everything with Mac OS X Panther* (Osborne, 2004).

## INCREASE YOUR SHORTCUT SAVVY



### MAGIC WORD

June 2003: Learn how to create a smart macro—complete with dialog box—to simplify formatting in Microsoft Word.  
[www.macworld.com/2003/06/secrets/wordsecrets/](http://www.macworld.com/2003/06/secrets/wordsecrets/)

### STREAMLINE YOUR ROUTINES

June 2002: Use QuickKeys to do complex tasks such as launch your mail program and check your messages, load your favorite Web sites, or back up your hard drive.  
[www.macworld.com/2002/06/secrets/quickkeys/](http://www.macworld.com/2002/06/secrets/quickkeys/)

### TEACH WORD NEW TRICKS

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[www.macworld.com/2002/04/secrets/wordtricks/](http://www.macworld.com/2002/04/secrets/wordtricks/)

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# iTunes Encoding Strategies

Building a digital music library used to be a simple matter of inserting a CD into your Mac and encoding the songs as MP3 files. Today the process is a little more complicated. iTunes 4.5 not only supports the popular MP3 format but also gives you the option of encoding files in the AAC (Advanced Audio Coding) format or in a new format called Apple Lossless. So which one should you use?

Each format offers a different compromise between file size, sound quality, and compatibility. The key to picking the right format for your digital music library is to find the compromise that best suits the way you listen to music. Here's a look at the current encoding options built into iTunes 4.5 and the situations that call for each one. I'll also examine options for converting songs from one format to another.



## If Size Matters

As your music library grows, the amount of disk space it requires may become an issue. When you want to use disk space efficiently and fit as much as possible on your iPod, your best bet is to use one of the two *lossy* audio formats: MP3 and AAC.

An MP3 or an AAC file isn't a bit-for-bit duplicate of a digital recording; instead, it's a very accurate approximation. When you rip a CD into one of these formats, iTunes analyzes the recording and discards portions of it that most of us can't hear anyway. This deliberate lessening of quality makes MP3 and AAC files roughly one-tenth the size of the original tracks on a CD (see "iTunes 4.5 Encoding Options").

Of the two formats, AAC is more efficient—it allows you to encode at a lower bit rate and still get excellent sound. For example, an AAC file encoded at 128 Kbps generally sounds as good as an MP3 file

encoded at 160 Kbps, but the AAC file uses less disk space (AAC and MP3 use different criteria when deciding what information to discard).

By default, iTunes encodes AAC files at 128 Kbps and MP3s at 160 Kbps. However, you can specify a different bit rate by opening iTunes' Importing preference pane and selecting Custom from the Setting menu. For example, some users prefer the sound of AAC files encoded at 160 or 192 Kbps.

## If Sound Matters

To my ears, MP3 and AAC files sound great. But golden-eared audiophiles cringe at the notion of compromised sound quality. For these users, Apple created the new Apple Lossless encoder.

True to its name, Apple Lossless doesn't discard any audio information when encoding. As a result, Apple Lossless files sound truer to the originals, but they don't use disk space as efficiently as MP3 or AAC files. Apple Lossless files are roughly half the size of the originals—several times larger than their MP3 or AAC equivalents. This may be a problem if you're trying to shoehorn a large music library into an iPod mini.

In fact, even if you have only a small music library, Apple Lossless files may not be a good option for listening to music on your iPod. The large files cause the iPod's hard drive to spin up more often, requiring more-frequent battery charges.

With drawbacks like these, why use Apple Lossless? One reason is sound quality: if you have good hearing and good audio equipment, you *will* be able to tell the difference. High frequencies have more sparkle while bass lines sound less muddy.

Another reason to use Apple Lossless is to hedge against format obsolescence. If you ripped hundreds of CDs into MP3 files a few years ago, you're stuck with relatively low-quality files unless you rerip the CDs (see "Rebuild Your Library"). By using Apple Lossless, you can build a digital music library that won't make you cringe as your listening skills and equipment improve. Indeed, this is the reason some serious audio buffs use the AIFF or WAV format to encode their CDs—these uncompressed formats don't affect sound

## iTUNES 4.5 ENCODING OPTIONS

ENCODER	FILE SIZE FOR A 5-MINUTE SONG <sup>A</sup>	PROS	CONS
AAC (128 Kbps)	4.8MB	Best balance between sound quality and file size.	Not compatible with third-party music players.
Apple Lossless	34MB	No loss in audio quality.	Not compatible with older iPods or third-party players.
MP3 (160 Kbps)	6MB	Broadly compatible with non-Apple portable players and computer systems.	Sound quality is not as good as with AAC.
WAV and AIFF	52MB	Creates uncompressed files with no data loss.	Creates very large files.

<sup>A</sup> File sizes may vary from song to song.

quality. Unfortunately, they also gobble up about 10MB of disk space for every minute of music—not exactly ideal for storing thousands of songs.

### If Compatibility Matters

Having great sound is important, but it won't do you much good if you can't *play* your music. Newer encoding schemes such as AAC and Apple Lossless don't have the wide support that the MP3 format has. So they may limit you in terms of what you can do with your music outside of iTunes and the iPod.

Every iPod can play MP3 and AAC files (older iPods need a software update for AAC; see [www.apple.com/ipod/download](http://www.apple.com/ipod/download)). But Apple Lossless works only on iPods with a dock connector. If you use a non-Apple MP3 player (see *Reviews*, June 2004), you're even more limited: they don't support AAC or Apple Lossless.

Likewise, many newer car and home stereo systems can play CDs containing MP3 files, making this a great way to store long music mixes for a road trip or a party. But if you burn a playlist as an MP3 CD, iTunes skips over AAC and Apple Lossless tracks.

### Conversion Strategies

You can detour around some of these compatibility barriers by taking advantage of iTunes' ability to convert between audio formats.

**Unprotected AAC to MP3** To make a copy of an AAC file that you can play on a third-party MP3 player, open iTunes' Importing preference pane, and select MP3 Encoder from the Import Using drop-down menu. Because you're converting from one lossy format to another, use the Higher Quality option to minimize further loss in quality.

Next, select the tracks you want to convert and, from iTunes' Advanced menu, choose Convert Selection To MP3. iTunes creates MP3 versions of the tracks and adds them to your music library.

This process leaves your original AAC files unchanged, so you'll have two versions of each song you convert. To deal with the duplicates, corral them into a smart playlist with the criterion Kind Is MPEG Audio File (see "Find Those Files").

**Protected AAC to MP3** Creating MP3s from music you've purchased at the iTunes Music Store is trickier. iTunes won't convert a purchased song—doing so would strip the song of its copy protection. To work around this limitation, burn the protected songs to an audio CD, and then rip the CD into MP3.

**Conversions to Avoid** Incidentally, there's no point in converting an MP3 or an AAC file into Apple Lossless format. You can't create a lossless audio file from a lossy version any more than you can re-create a complete novel from a *Reader's Digest* condensed book. Similarly, there's no reason to convert an MP3 into AAC format. MP3 has the compatibility edge, and the sonic damage that a conversion would impose wouldn't be worth the slightly better storage efficiency.

## Rebuild Your Library

Ever wish you could just start over with your iTunes library and encode everything in a new format or at a higher bit rate? iTunes has some automation features that make the process of ripping your CDs a bit less tedious.

Open your iTunes Importing preference pane and select the new encoding settings; then insert the first CD you want to rip. When you click on Import, iTunes asks whether you want to replace your old versions. Choose Replace Existing to prevent iTunes from creating two copies of each song. If you replace the existing song, you won't have to rebuild any playlists or assign new ratings or equalizer presets. iTunes grabs this information from the original version of the song and applies it to the replacement.

Note that this tip won't work if you've edited a song's album, artist, or name information. So if you've done so, you should either restore the song's original information or manually delete the old MP3s before you rip the song.

### Build a Master Library

If disk space isn't a major concern for you, and if you have enough patience, you can use iTunes' conversion tools to get the best of both worlds: maintaining a master music library in Apple Lossless format, and then creating lossy versions of tracks for your iPod.

Start by ripping your CDs into Apple Lossless format. When you want to move some selected tunes to your iPod or other MP3 player, set your Importing preferences to the correct format and choose Convert Selection from the Advanced menu. Put your iPod in manual-update mode to avoid also transferring the



Apple Lossless versions. Then drag the newly converted files onto the iPod icon.

You can delete the converted files after transferring them, or, if you want to keep them for future use, create a smart playlist to help keep track of them.

### To Each Its Own

Although I've focused on the encoding options built into iTunes 4.5, there are plenty of other encoders on the market, such as FLAC and Ogg-Vorbis, and they have their own loyal followings (see "Digital Music Superguide," June 2004). In fact, the encoder showdown feels almost like a replay of the Betamax-versus-VHS wars of the 1980s. Thankfully, there's almost always a way to convert music from one digital format to another. □

**Find Those Files** To quickly locate just-converted MP3 or AAC files, create a smart playlist with the two criteria seen here (substitute the current date for the one shown).

Contributing Editor JIM HEID is the author of *The Macintosh iLife '04* (Peachpit Press/Avondale Media, 2004). He publishes iLife tips at [www.maclife.com](http://www.maclife.com).

## Easy 3-D in Illustrator

Successful graphic design grabs your attention and conveys a message—and nothing grabs attention like 3-D graphics that seem to pop off the page. But most 3-D programs are expensive and difficult to learn. That's where the new 3-D and artwork-mapping features in Adobe Illustrator CS (👉👉👉; February 2004) come in. They're powerful, but they don't require a master's degree in mathematics.

I'll show you how simple it is to transform basic shapes into realistic 3-D graphics. Just keep in mind that rendering 3-D graphics requires a lot of computer power, and complex shapes can take a while to process. For the speediest results, you'll want a G5 processor and as much RAM as your Mac will hold.

### Start with a Symbol

The first step is to create the 2-D artwork you'll map onto a 3-D surface. Create your artwork at actual size so it's easier to position on the 3-D object. Or download prepared artwork from [find.macworld.com/0024](http://find.macworld.com/0024), and follow along as I walk through the creation of a 3-D spray-paint can (see "You Can Make a Can").

Next, define the 2-D artwork as a symbol by selecting it and choosing New Symbol from the Symbols palette's drop-down menu. You can also drag the selected artwork into the Symbols palette. A symbol is like a master art item. You can place multiple copies of a symbol (which are called *instances*) in a document, and whenever you update the original symbol, all the instances update automatically. When you map art-

work to several different sides of an object, create a separate symbol for each side.

### Make It Real

Illustrator CS has two kinds of 3-D effects that support artwork mapping: Extrude and Revolve. 3D Extrude extends an object into space, giving the appearance of depth. It's perfect for creating boxes and 3-D type, and it lets you specify a beveled edge for the object. 3D Revolve rotates an object around an axis, so it's useful for creating round objects such as bottles, spheres, vases, and our spray-paint can.

Begin by drawing a vector object, using any of Illustrator's drawing tools. To create the can, make four shapes—one for the cap, one for the body, and two for the rims—each with a different fill color. Because 3D Revolve rounds out the objects, you draw just half of the final shape's profile with a stroke of None applied. (Illustrator draws strokes as additional sides, which makes 3-D shapes more complex and especially confusing for mapping art.) Then group the objects—a necessary step when

applying a single 3-D effect to multiple objects.

Now select the grouped object and choose Effect: 3D: Revolve. In the resulting 3D Revolve Options dialog box, click on Preview, and then position the object on the art board change as you edit it. To adjust the rotation, or view, of your art, use the mouse to rotate the cube in the dialog box, or experiment with the preset views in the Position pop-up menu. If you're unhappy with your object's rotation, press the option key to turn the Cancel but-

### You Can Make a

**Can** All you need is a 2-D logo, a group of several objects, and the 3-D effects in Illustrator CS.



ton into a Reset button. Click on it, and you'll start over from scratch.

It's easy to change your mind about any 3-D effect in Illustrator. That's because they're live effects, which change the appearance of objects without altering the original shape. For example, after you add a 3-D effect to text, you can still edit the text at any time, even after you save the document. Once you apply a live effect, you can see that effect in Illustrator's Appearance palette. Double-clicking on the effect's description brings up its dialog box, so you can edit that effect.

**Light and Shade** The right lighting and shading make your objects look more realistic. Click on the More Options button in the 3D Revolve Options dialog box to specify these settings. In the Surface section, click on the New Light icon to add multiple lights, which can help make an object's reflections look more realistic. Press the shift key while dragging on a light to see real-time results.

Illustrator uses blends to create the shading effects on 3-D objects. If you're going to print your 3-D object on a high-resolution device, such as an image-setter for offset printing, crank up the number of Blend Steps for shading before you send it off to the print shop. Too few Blend Steps can result in visible banding. But because render speed slows as the number of Blend Steps climbs, use a low number, like 25, until you're ready for print, when you can increase the setting to something like 200.

### Pick a Side, Any Side

While you're still in the 3D Revolve Options dialog box, click on the Map Art button. Again, click on the Preview button and position the dialog box so that you can see the art on your screen. Revolving adds multiple sides to an object, so choose the side on which you'll map your art. Click on the arrows at the top of the dialog box to step through each of the sides. Illustrator also displays a red outline on the object itself on the art board, helping you identify which side you're choosing. Shaded areas on the sides displayed in the dialog box indicate areas hidden from view. Once you've chosen a side, select your symbol from the Symbol pop-up menu and position the art. You can repeat these steps to apply symbols to other sides of your object, but a single symbol can't wrap around multiple sides.

By default, Illustrator doesn't shade mapped artwork, so to get the most-realistic results, choose the Shade Artwork option. Click on OK in both the Map Art and 3-D dialog boxes to see the final rendered version on your art board.

(Note that Illustrator rasterizes gradients mapped onto 3-D surfaces. In fact, the application rasterizes all images again when mapping them. The resolution setting in the Document Raster Effects Resolution dialog box determines the raster resolution. I recom-



## CHECK IT OUT

### A Dingbat Font Worthy of the Name

Jakob Fischer is PizzaDude ([www.pizzadude.dk](http://www.pizzadude.dk)), a Danish type designer who moonlights as a kindergarten teacher. His newest creation is the goofy Mutaints, a typeface and 52 related dingbat characters. You can buy it from MyFonts.com for \$25—which I consider a small price for something that makes me smile so widely.—TERRI STONE



mend setting it to 300 dpi or higher before you begin your project.)

To change the view or rotation of your 3-D shape, select the object and double-click on the 3D Revolve (Mapped) listing in the Appearance palette. To update the mapped artwork (which you defined as a symbol), edit your artwork, highlight the old symbol in the Symbols palette, and choose Redefine Symbol from the Symbols palette's drop-down menu. The mapped symbol will update on the surface of the 3-D object automatically, and then you're finished. The only thing left for you to do is add the title "3-D designer" to your business card. □

MORDY GOLDING is a writer, trainer, and consultant in New York. His latest works are *Teach Yourself Adobe Creative Suite All in One* (Sams Publishing, 2004) and *The Complete Guide to Illustrator CS* (Software Cinema, 2004).



## CHECK IT OUT


### Farm Out Your Tech Support

When creative professionals have software questions, we usually turn to colleagues, books, magazines, the Web, and software companies' tech support. Those methods are fine, but now there's a new resource.

Pay Support Farm ([www.supportfarm.com](http://www.supportfarm.com)) charges \$2 per minute, and you can talk to any one of a group of people working in the visual-effects industries. Their expertise covers more than 25 programs, including Adobe Photoshop, Apple Final Cut Pro, Boris FX, and Red Giant Software Magic Bullet.

The Web site has much more information, including a complete list of supported programs and the bio of every troubleshooter.—TERRI STONE

If you own a PowerBook, you probably like to travel (or at least roam around your home or apartment). PowerBook ownership implies that you're independent, mobile, and always on the move. That may not *a/ways* be the case—but let's face it, you're much more likely to take a PowerBook on a trip to Las Vegas than to lug along a desktop machine.

**AC Adapter** An AC adapter is easily the most overlooked accessory for mobile technologists. Rather than disconnecting your power supply, invest in a portable AC adapter from MadsonLine ([www.madsonline.com](http://www.madsonline.com)) or MacResQ ([www.macresq.com](http://www.macresq.com)) . These AC adapters (about \$75) are smaller and lighter


> If you're flying, pack as much of your electronics as possible in your checked luggage—you probably don't need your hot-sync cradle and a bunch of wallwarts in your carry-on bag.





## CASE OF THE MONTH

than the usual power supply, and you can keep one permanently located in your bag, thus avoiding the horror of arriving at a meeting with no juice.

You should also consider bringing a cigarette-lighter adapter and/or an airline EmPower adapter (which plugs into a new form of electrical outlet found in business-class seats on almost 40 airlines), depending on your method of transportation. MCE Technologies ([www.mcetech.com](http://www.mcetech.com)) offers cigarette-lighter adapters for around \$25 , and MadsonLine offers EmPower adapters for around \$30.

**A Bootable System CD/DVD** Make sure that you have a current bootable CD or DVD and that it starts up your specific PowerBook. Keep it in a safe place. Newer PowerBook G4s ship with the system software, Apple Hardware Test, and the Software Install and Restore images on a single DVD, replacing up to five CD-ROMs. Be careful, though—these DVDs cannot be used to boot any machine that has only a CD-ROM drive.

**Cables** Here are the cables you'll want to pack:

> Two RJ-11 (telephone) cables and an RJ-11 coupler. Why two RJ-11 cables? Although a 6-foot cable is sufficient for most locations, you'll probably need a 12- to 25-foot cable in your hotel room. You don't want to be chained to the desk when you could be surfing the Web while watching *Monday Night Football* in bed. The coupler is useful for times when you need both cables or when the phone line is hardwired to the wall.

> RJ-45 (Ethernet) and crossover cables. Most PowerBooks support Ethernet, which provides a great way to share files with someone else quickly. Bring both cables if you have a PowerBook G3 or earlier; users of iBooks and PowerBook G4s with two USB ports need only a regular (or "straight") Ethernet cable, because those machines will automatically sense whether they are connected to another machine or to a hub.

> FireWire (1394) cables. You should always bring a 6-pin-to-6-pin (standard) FireWire cable if your machine has a FireWire port. You can use this cable to connect two Macs for transferring files much faster than over Ethernet—400 Mbps versus 10 or 100 Mbps (depending on the speed of your network).

**A Mouse** A mouse will increase your efficiency if you plan to work for an extended period of time. Most optical mice will work on any available surface—even on your pant leg!

Avoid infrared and Bluetooth mice when traveling. They too easily get powered on when something in your bag accidentally presses one of the buttons. I can't tell you how many times I've found myself unexpectedly out of battery life because of an infrared mouse that was accidentally triggered.

## Audiophile Attaché

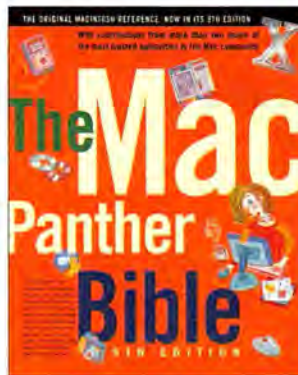
Audiophiles often use separate headphone amplifiers with their iPods. But how do you transport such a portable system? HeadRoom's \$59 GigaBag (800/828-8184, [www.headphone.com](http://www.headphone.com)) lets you carry an iPod and a portable amplifier (such as HeadRoom's own AirHead) in a unique bag that allows you to control the iPod via its clear plastic front. Openings in each corner of the bag let in headphone cables, and a pouch on the back can hold earbuds or other small items. You can carry the GigaBag on a shoulder strap or belt clip. The GigaBag works with all iPod models and comes in black or charcoal.—DAN FRANKS



**Earphones or Headphones** Nothing is worse for your fellow travelers than having to listen to every ping and boing your computer makes—not to mention your blaring Audioslave MP3s. Do everyone a favor and bring a pair of earphones. If you're traveling with a loved one, bring a second pair of earphones and a 1/8-inch headphone splitter so that you can both watch a DVD (or listen to iTunes) together.

The Boostaroo (\$30; [www.boostaroo.com](http://www.boostaroo.com))  is a nice addition to your bag if you travel with a buddy. In addition to splitting your audio output into three so that you can plug in three sets of headphones, it also provides a 40 percent increase in volume.

**Tools** Pack miniature Torx #8 and Torx #10 screwdrivers , a Phillips screwdriver, and a small pocketknife in your checked luggage. You can often mitigate PowerBook accidents that happen while you're traveling—for example, spilling a soda on your keyboard—by taking the keyboard and battery out, wiping them off, and letting the machine dry open and upside down overnight. 



**By the Book** This is an excerpt from *The Macintosh Panther Bible*, 9th edition, by Cheryl England, et al. (Peachpit Press, 2004).

JASON D. O'GRADY has been publishing the PowerPage ([www.powerpage.org](http://www.powerpage.org)) for over eight years and has contributed to *Macworld*, *MacWeek*, and *MacPower* magazine in Japan.

## Hack the iPod's Notes

You're in love, and you're looking for the perfect present for your sweet-potato pie. You've already bestowed red roses, vintage wine, and trips to exotic lands. Why not give a more personal gift—one that expresses your amorous emotions with song? Of course we're talking about an iPod replete with love notes.



### Denote the Note

This mishmash of text and brackets (bottom) turns into a love note (top) when dragged into the iPod's Notes folder.

The third-generation iPods and the iPod mini include a new Notes area that can hold 1,000 4Kb plain-text files. Packing your iPod with these files is a cinch: just create a plain-text document with Apple's TextEdit or Microsoft Word, and copy the file into the iPod's Notes folder.

But there's more to Notes than individual text documents. Thanks to Notes' support for basic HTML tags, you can link notes to one another *and* to audio files stored on your iPod. You can also configure the iPod to lock out everything but the Notes area; that way, viewers *must* start there. Called Notes-Only mode or Museum mode, it holds potential for museum curators, tour guides, or realtors interested in presenting facts about a painting, a historical center, or an overpriced property. Right now, though, we're interested in matters of the heart.

### The Truth about Tags

First, we must touch upon the iPod's limited HTML support. When I say that it supports basic tags, I mean *basic*. The

iPod can't display styled text, so you'll find no tags for creating italic or boldface type. Instead, the included tags are designed to help the iPod interpret Web pages and to create links.

These tags are limited to line breaks (`<br>`), opening and closing paragraph marks (`<p>` and `</p>`, respectively), and a tag for creating titles (`<TITLE>The Title You Want</TITLE>`). Normal

HTML rules *don't* apply: a `<p>` tag, for instance, doesn't create a space after a paragraph. You need to use a `<p>` and a `<br>` tag, as we do here, or use two `<p>`s or two `<br>`s.

For example, type this into your text editor:

```
<TITLE> Ooh, Baby, Baby</TITLE>
```

```
Ooh, my little snookums!<br><p>I'll never forget the night we met. The moon, the smell of your perfume, the drenching rain.</p><br><p>I'm so happy you're mine!</p>
```

Then save the file as plain text and mount your iPod as an external drive. (To do that, select the iPod in the iTunes Source window, click on the Display iPod Options button in the right-hand corner of the iTunes window, select Enable Disk Use, and click on OK.) Copy the file to the iPod's Notes folder. You'll get a note that looks like this:

*Ooh, my little snookums!*

*I'll never forget the night we met. The moon, the smell of your perfume, the drenching rain.*

*I'm so happy you're mine!*

### The Missing Links

You've made a good start, but you may find it difficult to really bare your soul in a 4Kb file. You might want to create additional notes and link to them from the original Ooh, Baby, Baby note.

To do so, enter `<a href="the note you refer to">the link text</a>`.

For example, you may want to include a link to a love letter stored in a file called Letter1.txt, which you've placed in the iPod's Notes folder. Let's say you want that link to be the words *Words of Love*—you'd type `<a href="Letter1.txt">Words of Love</a>`.

On the iPod, the words *Words of Love* will be underlined. To travel to that note, simply scroll down until the link appears, and then press the Select button. If two links appear on the screen, the active link will be displayed as a solid black line. Other links will be gray. Use the scroll wheel to activate links above or below the currently active link.

Use the Menu button to return to the main text when you're done.

If you'd rather not clutter the top level of the Notes folder with hundreds of notes—and if you want to ensure that your sweetie starts in the right place—you can create subfolders within the Notes folder. To refer to files within one of these subfolders, your link must use this form: `<a href="folder name/note name">the link text</a>`.

For instance, if you have a file called *Our First Kiss.txt* inside a folder called *Great Dates*, you might create a *Things I'll Never Forget* link to it: `<a href="Great Dates/Our First Kiss.txt">Things I'll Never Forget</a>`.

File names in links are not case sensitive, but you will need to spell out the full name of the note, including the *.txt* extension if it has one. And you can't link to notes stored outside the iPod's Notes folder.

Keep in mind that a folder can be a destination, so you could create a link that takes you to the *Great Dates* folder (which, presumably, contains several notes) by typing `<a href="Great Dates">Unforgettable Moments</a>`.

### Say It with Song

Unless you're romantically linked with someone who understands geeks and loves gadgets, the object of your affection may wonder why you've put a mash note on an iPod. It is, after all, a music player, and you'll get far more bang for your buck if links in your notes play songs or sound effects that describe your feelings.

For instance, you might add an entry to *Ooh, Baby, Baby* that reads, "When I see you, my heart sings."

To link the words *my heart sings* to the Ohio Players' "Love Rollercoaster" on the iPod, use this form: `<a href="song=Love Rollercoaster">my heart sings</a>`.

You could just as easily link to a stored recording of yourself reading a Shakespearean sonnet or of the sound of a gentle, lapping ocean to accompany a recounting of hours spent beneath the boardwalk.

Like other links, the phrase in the note will be underlined. When you highlight the link by scrolling down the page and then press the iPod's Select button, the song or sound you've linked to will play. When it's done, the iPod returns to the note.

You can also use links to point to a particular playlist, genre, artist, composer, or album. If you wanted to link to the playlist *Funky Love Songs*, with the phrase "Select me to groove all night!" you'd create this link: `<a href="ipod:music?playlist=Funky Love Songs">Select me to groove all night!</a>`.

If your iPod has more than one version of a song—both the studio version and the live recording, for example—you can combine filters to zero in

## Noteworthy Tools

Is your mind reeling with possibilities for the iPod's Notes feature? You are not alone. Some intrepid folks have already written utilities and AppleScripts that help push it to the limit:

- > Flying Meat Software's \$20 VoodooPad and free VoodooPad Lite ([www.flyingmeat.com](http://www.flyingmeat.com)) let you create linked iPod-ready notes without having to enter a single line of HTML.
- > Kainjow Software's Pod2Go (free [donations accepted]; [www.kainjow.com/pod2go](http://www.kainjow.com/pod2go)) can download news feeds, weather, movie schedules, horoscopes, stock information, song lyrics, driving directions, and more onto your iPod.
- > Tom Sutcliffe's Book2Pod (free; [www.tomsci.com/book2pod](http://www.tomsci.com/book2pod)) converts long plain-text files—books from Project Gutenberg (<http://promo.net/pg/>), for example—into small linked-text files. Book2Pod can create files that exceed the iPod's limits of 4Kb per note and 1,000 notes per iPod.
- > Kainjow Software's BiblePod (free; [www.biblepod.kainjow.com](http://www.biblepod.kainjow.com)) allows you to read books and chapters from the King James Bible on your (Notes-capable) iPod.
- > Apple's iPod AppleScripts (free; [www.apple.com/applescript/ipod/](http://www.apple.com/applescript/ipod/)) can do everything from extracting a MacCentral.com article from a Safari page and making it iPod-readable to letting you copy text to the clipboard and put it in the iPod's Notes folder as multiple linked text files.
- > The Mail2iPod AppleScript (free; [www.find.macworld.com/0022](http://www.find.macworld.com/0022)), posted on [macosxhints.com](http://macosxhints.com), lets you read Apple Mail e-mail on your iPod.

on a specific song. A link that reads "Select me to hear how I feel!" could play the studio version of James Brown's "Prisoner of Love," from the album *Can Your Heart Stand It!!*. Just use this form: `<a href="ipod:music?album=Can Your Heart Stand It!!&song=Prisoner of Love">Select me to hear how I feel!</a>`.

### Locking It Down

Your present is nearly complete. But your gift will be far more effective if it launches directly to the Notes screen when your loved one first switches on the iPod.

For this to happen, you must configure the iPod to launch into NotesOnly mode. To do so, create a plain-text document and enter this line of text: `<meta name="NotesOnly" content="true">`.

Save the file with the name *Preferences*, and copy it to the top level of the iPod's Notes folder. When the iPod next launches, it will display the Notes screen, and it won't let you navigate outside the Notes area. You can steer to notes with the scroll wheel and the Select button, but you can't access screens other than those in the Notes area unless you hook the iPod up to your Mac and remove the *Preferences* file you placed in the Notes folder.

### Duly Noted

Your multimedia masterpiece is complete. Give the iPod a final charge, wrap it in a colorful case, and present it on bended knee. Now that will strike the perfect note! □

To learn more secrets of the iPod, look for Contributing Editor CHRISTOPHER BREEN's *Secrets of the iPod*, fourth edition (Peachpit Press, 2004).

## Mac OS X Hints

Mute the startup sound, scale fonts in relation to one another, fix a problem with iChat's image attachment, take advantage of Mail's threading functions without enabling threading, work with Terminal's shopt command, and speed up sheet displays.



### CHECK IT OUT

#### Speed Up Sheets

Sheets are dialog boxes that gracefully slide out of a window's title bar (see "Neat Sheets") rather than floating freely in their own windows. Sheets are attached to a specific window to show they're associated with a particular application or window. Their opening and closing animation may be beautiful, but it wastes a lot of time. Just consider how many times you'll open and close various sheets in a day's work.

You can regain this lost time, and make your Mac feel much faster, with a simple command in Terminal. Launch Terminal and type the following: `defaults write NSGlobalDomain NSWindowResizeTime .001`. This command changes the amount of time used to display a sheet's animation from the default of two-tenths of a second (0.2) to one-thousandth of a second (0.001). In other words, sheets will appear and disappear instantly. To make the change take effect, you'll have to quit and restart any running applications.

You can also experiment with slower sheet displays—try using a value of 1.5 or 2.0 instead of 0.2. While this setting is not one you'll want to keep for very long (unless you enjoy working very slowly), it will show you the incredible detail in the animation—the sheets actually arc up and out of the window's title bar, and then drop gently into place.



**Neat Sheets** One command is all it takes to speed up sheets such as this one in the Preferences menu of the Firefox browser.

#### Mute the Startup Sound

The tone you hear when you start up your Mac is a good-news sound—it tells you that the machine has made it through its basic hardware tests just fine. But it can also be annoying, especially if you're in a library, a classroom, or a nursery.

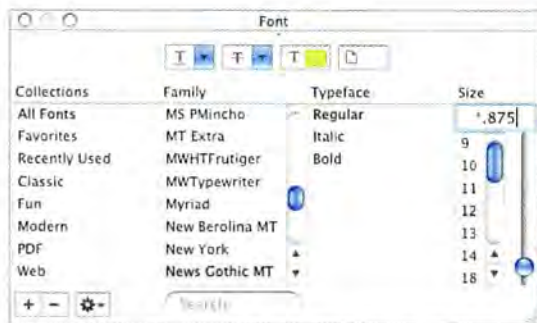
There are many third-party programs and AppleScripts that can disable the startup chime, but you also have two built-in methods at your disposal. If you're restarting a running Mac, you can press the mute button (F3 on laptops, or the mute key on Apple keyboards) or lower your volume to zero before you restart. If you're starting up your Mac from scratch, press and hold the mute key on the keyboard before pressing the machine's power button.

If these methods don't seem to work for you, you may wish to look at the free `StartupSound.prefPane` (find.macworld.com/0030), an application that lets you set the volume of the startup sound, anywhere from fully muted to really, really loud.

#### Use Relative Font Scaling in Cocoa Applications

Certain OS X applications have the ability to scale fonts mathematically, not just by absolute font size. What does this mean in English? Consider a document with 16-point bold headlines, 14-point italic subheadings, and 12-point body text. If you decided that everything needed to be just a bit smaller, traditionally you would change all the 16-point fonts to 14 point, the 14-point fonts to 12 point, and the 12-point fonts to 10 point. This is a lot of work, and it poses another problem: you'll lose the relative sizing between fonts. A 12-point font is 75 percent of the size of a 16-point font, but a 10-point font is roughly 71 percent of the size of a 14-point font.

If you're using Apple's TextEdit or Mail, or another Cocoa application, however, you can resize all of your fonts simultaneously and keep the relative sizing the same. Select all the text in your document, open the Font panel (⌘-T), and then enter a mathematical expression ( $\ast .875$  or  $/2$ , for example) in the Size field (see "Honey, I Shrunk the Fonts"). By multiplying or dividing all of the font sizes by a certain number, you'll keep the relationship between the fonts' sizes intact—your body text will still be 75 percent as big as your



**Honey, I Shrunk the Fonts** In TextEdit and other Cocoa apps, you can scale all of the fonts in a document relative to one another, in one easy step.

headline text, regardless of point size. Note that you can also use the plus (+) and minus (–) operators in the Size field, but they won't solve the scaling problem—they'll just add or subtract the same value in points from all the fonts.

## Select Fonts via the Keyboard

Did you know that you can use your keyboard to scroll through fonts in TextEdit and other Cocoa applications? Begin by selecting the text you want to modify in your document, and then display the Font panel (⌘-T). Now, instead of clicking on the font name, click once in the search box at the bottom of the panel, and *then* click in the Font column. The font will be highlighted in your system's chosen highlight color—the column is now active.

At this point, you can use the arrow keys to scroll up and down the list of font names, and you'll see your selection change in real time based on the current selection.

## Reenable iChat Image Pasting

If you've ever tried to paste an image during an iChat with a friend who isn't using iChat or the official AIM client (a Linux user running GAIM, for example), you've probably noticed that it doesn't work. The lack of support isn't a huge problem by itself, but the failed attempt to send an image has broader repercussions.

If you then try to attach an image while chatting with iChat or AIM users—those who can normally receive them—you'll find that iChat throws up its arms in desperation.

The solution to this problem is slightly more complicated than just quitting and restarting iChat, since iChat uses a background agent that keeps track of your status and other such details. When you quit iChat, this agent remains running, which seems to cause the iChat pasting errors. To fix the problem, quit iChat and launch Activity Monitor (Applications: Utilities). Find iChatAgent in the list of running tasks (or begin typing iChat in the search box until you see it). Select it, and click on the Quit Process icon in the toolbar (see "A Pasting Problem"). When you restart

## Know Your Options

While working in the bash shell in OS X 10.3's Terminal, you can use the `shopt` shell-options command to enable time-saving features, including shortcuts for long directory paths and automatic fixes of simple typos.

To see what variables are available, type `shopt` and press enter—this will display all of the options along with their current settings (on or off). You can read about the different options by typing `man bash`, pressing enter, typing `/ shopt options`, and then pressing enter again. You'll jump to the definitions of each option (type `q` when you're done to exit the manual). The two options that are most useful to the casual Unix user are `cdable_vars` and `cdspell`.

The `cdable_vars` shell option allows you to create shortcuts—using bash variable names in `cd` (change directory) commands. This is most useful for long paths. Instead of typing `cd /Library/WebServer/Documents`, you can create a shortcut, such as `cd webserv`. To execute the previous example, enable the option by typing `shopt -s cdable_vars` and pressing enter. Then type `webserv=/Library/WebServer/Documents` and press return. Now, typing `cd webserv` will take you to the specified folder.

The `cdspell` variable brings back the simple typo fixes you may be used to from the tcsh shell. Type `shopt -s cdspell`, and the shell will now figure out you meant `cd ~/Desktop` when you typed `cd ~/Dekstop`.

These changes will last only until the next time you shut down your Mac. To make them stick, you'll need to include the statements in your user's `.bash_profile` file, which is located in your Home directory. If it's not there, you'll need to create it. For instructions on how to do both, go to [find.macosxhints.com/0026](http://find.macosxhints.com/0026).

iChat, you'll once again be able to paste images—except, of course, to any friends who don't use iChat.

## See Mail Threads with Threading Turned Off

The Organize By Thread view in Apple's Mail application groups related messages, so following an e-mail conversation is easy. However, this view is somewhat difficult to get used to because it rearranges your mailboxes and clutters your screen with colored lines that show the grouped messages.

If you'd like to skip the visual and organizational changes, you can get some threading features without enabling the Organize By Thread view. Even in a non-threaded view, Mail will highlight all messages in a thread when you select just one of the messages in it. To jump to the previous or next message in a thread, press option-up arrow or option-down arrow. □

## A Pasting Problem

With a tiny bit of effort, you can fix an iChat problem that happens when you try to paste an image into certain chat applications.



Contributing Editor ROB GRIFFITHS is the author of *Mac OS X Hints*, *Panther Edition* (O'Reilly, 2004), and runs the Mac OS X Hints Web site ([www.macosxhints.com](http://www.macosxhints.com)).

## Mac 911

As easy as the Mac is to use, there are times when you get so frustrated by seemingly arbitrary limitations—a cable modem that won't work with your network, Internet Explorer cookies that refuse to be deleted, or a beloved keyboard command changed to satisfy the perverse fancy of an Apple executive—that you're ready to return to pencil, paper, and slide rule. But don't give up on your Mac. Read on and relax.

### Cable Capers

**My home network uses a router with three Macs, a PC, and two laser printers. My cable provider allows multiple connections via networking to the Internet over broadband. This worked well under OS 9. I recently moved to OS X, and my connection to the Web is sporadic when I turn on Internet Sharing. Can you help?**

Christopher Smith

Your networking setup is doing double duty. OS X's Internet Sharing is intended for connections that don't include a router. In a setup without a router, the host Mac (the one directly connected to your cable modem) handles the routing for you, directing traffic for other Macs on the network.

Because you already have a device for routing network traffic, you don't need Internet Sharing. Instead, switch it off, and configure your router to accept connections to the Web via its WAN (wide area network) port and to distribute IP addresses across your network through its LAN (local area network) port.

By the way, you may find that your cable modem has glommed on to the unique hardware address (called the Media Access Control, or MAC, address) of a device other than your router. If so, pull the power cable from the modem, to reset it, and then plug it into the router, to grab the router's MAC address. If that doesn't work (some modems resist this technique), clone the MAC address from the device the modem used to plug into (your Mac, for example) to the router. You'll find instructions for doing this in your router's documentation or on the router maker's Web site.

### Out, Damned Cookies

**Since upgrading from Jaguar to Panther, I haven't been able to delete all Internet Explorer (IE) cookies. When I reopen IE's Preferences, the cookies are still there. What gives?**

Via the Internet

It's a bug, and an annoying one at that. The obvious solution is to move to a browser that doesn't have this problem. If, however, you prefer IE above all others, turn to a third-party utility for help. You can configure M. Atmani's \$10 Cookie Dog 2.0 ([www.versiontracker.com](http://www.versiontracker.com)) to flush cookies from five browsers—Internet Explorer, Safari, Mozilla/Netscape 7, Camino, and OmniWeb—when you log in. Or try Aladdin Systems' \$30 Internet Cleanup ([www.aladdinsys.com](http://www.aladdinsys.com)), which includes Cookie Tosser, a utility that will put an end to any browser's cookies.

### Drive Details

**I have a 350MHz iMac and want to replace the hard drive with a roomier one. What kind of hard drive is compatible?**

Geoffrey Garrett

Your iMac, like all desktop Macs, takes a 3.5-inch ATA/EIDE drive. iMacs with CRTs included 5,400-rpm drives, and, because of heat issues, Apple recommends that you replace the original drive with another 5,400-rpm drive. But I can tell you that lots of people have put 7,200-rpm drives into their iMacs without their computers igniting.



## TIP OF THE MONTH

### A Grave Situation

Many people know the  $\grave{`}$  (grave accent) keyboard shortcut for rotating through open windows in the foreground application. Even more know that the  $\grave{`}$ -tab combination invokes Panther's Application Switcher—and that once it's active, tapping tab while holding the  $\grave{`}$  key moves you from left to right through a menu of open programs' icons. But only an elite few know that tapping the  $\grave{`}$  (grave accent) key instead of tab when Application Switcher is active reverses the movement, from left-right to right-left.

After pressing  $\grave{`}$ -tab to open Application Switcher, hold the  $\grave{`}$  key and use the following keys to activate additional shortcuts: the end key takes you to the rightmost program icon; the home key, to the leftmost; the left and right arrows scroll continuously (not just one icon at a time) in their respective directions; H hides whichever application's icon is highlighted, without bringing the program to the foreground; and Q quits the highlighted program, without switching to it. Clicking on a program's icon in Application Switcher selects it as the foreground application.

Jim Akin



## UNSOLICITED ADVICE

You may find drives that boast Ultra ATA/133 performance. Although your iMac didn't ship with this kind of drive, Ultra ATA/133 drives work well in it. Just keep an eye on drive size. The CRT iMacs will recognize only 128GB of storage, so there's no reason to pay for a drive with greater capacity.

And while we're on the subject of replacing iMac drives, those of you with 333MHz or slower iMacs must partition a new drive so the first partition is no larger than 8GB. Once you've partitioned the drive, you must install OS X in that first 8GB-or-smaller partition.

### I, QuickTime

I just watched a trailer for the movie *I, Robot*. The viewer is like a miniature Web site inside a QuickTime movie. Can I make something similar with QuickTime?

Todd Damotte

One of the coolest—yet most underused—features of QuickTime is its ability to display skins. If you have QuickTime Pro (\$30; [www.apple.com](http://www.apple.com)), open the *I, Robot* movie trailer and press ⌘-J to reveal the Properties window. Click on the first pop-up menu, and you'll see that the movie contains nine separate tracks: three video tracks, three soundtracks, a sprite track, a skin track, and a Flash-based video track. To better understand what these tracks do, choose Enable Tracks from QuickTime Player's Edit menu and switch tracks off and on.

For a QuickTime skin tutorial, go to [www.apple.com/quicktime/tools\\_tips/tutorials/mediaskins](http://www.apple.com/quicktime/tools_tips/tutorials/mediaskins).

### From Here to There (and Back)

How do I network a Windows PC with Mac OS X 10.3.3? I have only a regular network cable and a crossover cable.

Greg Rusher

At the risk of sullyng these pages with instructions for mucking with a PC, I'll show you how to connect your Mac to a computer running Windows XP Home Edition.

Use Windows' Help and Support (found in the Start menu) to learn how to install the proper network protocol (TCP/IP in this case) so your network interface card works with an Ethernet connection. Now string that crossover cable between your Mac and PC.

To share a folder on the PC, right-click on the desktop, select New from the resulting contextual menu, and then select Folder from its submenu. Name the folder, using 12 or fewer characters. Right-click on the folder and select Network And Sharing from the contextual menu. In the window that appears, enable the Share This Folder On The Network option and, if you want to change files in the shared folder, enable the Allow Network Users To Change My Files option.

## Change Shortcuts with .plist Files

I've already told you a quick way to swap the New Folder and New Finder Window keyboard shortcuts. But if you like mucking with .plist files as much as I do, or if you want a reason to learn more about this part of your Mac's innards, you'll appreciate this alternative way to change your Panther keyboard shortcuts.

Install the Developer Tools that came with your copy of Panther. Select Go: Go To Folder from the Finder, and type ~/Library/Preferences. Option-drag the com.apple.finder.plist file from the resulting Preferences window to the desktop, to create a copy. Drag the copy atop the Property List Editor application in the Developers folder at the root level of your startup drive.

Click on the triangle next to the root entry in the com.apple.finder.plist window, and click on the New Child button. Name the new entry NSUserKeyEquivalents, and choose Dictionary from the Class pop-up menu. Click on the entry's triangle, and then click on the New Child button twice to create two new entries. In the first entry, type New Finder Window and choose String from the Class pop-up menu. In the Value field, type @\$N. In the second entry, type New Folder, select String from its Class pop-up menu, and enter @N in the Value field. Choose File: Save.

Make another copy of the original com.apple.finder.plist file and tuck it away in a safe place in case you want to reverse your actions. Replace the copy that now resides in the Preferences folder with the version you just edited. While holding the option key, click on the Dock's Finder icon and select Relaunch. When the Finder relaunched, you'll discover that ⌘-N generates a new folder and ⌘-shift-N produces a new Finder window.

To view this folder from your Mac, select Connect To Server from the Finder's Go menu. Click on Browse. In the resulting Network window, double-click on the folder with the name of your Windows workgroup (likely called MSHOME or WORKGROUP). Inside this folder, you'll see an icon with the name of your PC. Double-click on this icon and an SMB Mount window will appear. Select the name of your shared folder from the window's pop-up menu, and click on OK. That folder will appear on your Mac's desktop as a networked volume.

### New New Folder

Although I'm happy that Panther includes a way to customize keyboard shortcuts, I haven't been able to switch existing shortcuts. For example, I'd like to switch the Finder's commands for New Folder and New Finder Window to ⌘-N for New Folder and ⌘-shift-N for New Finder Window. Can I do this?

Max Schwarz

Just download a copy of DJ Gamble Software's free N Commander from [www.versiontracker.com](http://www.versiontracker.com). Run the app, and it will reverse the New Folder and New Finder Window keyboard commands (see "The New Switcheroo"). □

File	Edit	View	Go	Wind
New Finder Window				⌘N
New Folder				⇧⌘N
Open				⌘O
Open With				⇧⌘W
Close Window				⌘W

File	Edit	View	Go	Wind
New Finder Window				⇧⌘N
New Folder				⌘N
Open				⌘O
Open With				⇧⌘W
Close Window				⌘W

### The New

**Switcheroo** N Commander (or Property List Editor) can restore ⌘-N to its rightful place in the Finder.

Contributing Editor CHRISTOPHER BREEN is the author of *Secrets of the iPod*, fourth edition (Peachpit Press, 2004), and the blogger of the Mac 911 Weblog ([www.macworld.com/weblogs/mac911](http://www.macworld.com/weblogs/mac911)).

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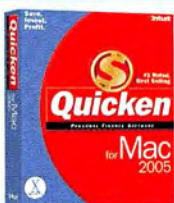
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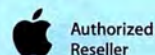
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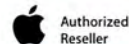
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<p><b>OLYMPUS E-1</b> <b>Special</b></p> <ul style="list-style-type: none"> <li>• 5.24 MegaPixels</li> <li>• 2/3" CCD Screen</li> <li>• USB</li> </ul> <p><b>\$1069<sup>99</sup></b></p> <p>E-20 ..... \$909.99</p>	<p><b>OLYMPUS C-5000</b> <b>NEW!</b></p> <ul style="list-style-type: none"> <li>• 5.4 MegaPixels CCD</li> <li>• 4x Dig./3x Opt. Zoom</li> </ul> <p><b>\$234<sup>99</sup></b></p>	<p><b>OLYMPUS C-8080</b> <b>NEW!</b></p> <ul style="list-style-type: none"> <li>• 8.0 MegaPixels</li> <li>• 700x Digital Zoom</li> <li>• 5x Opt/3x Dig. Zoom</li> </ul> <p><b>\$644<sup>99</sup></b></p> <p><b>NEW! Stylus 410</b> ..... <b>\$264.99</b></p>
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<p><b>SONY DSC-T11</b> <b>NEW!</b></p> <ul style="list-style-type: none"> <li>• 5.0 MegaPixels</li> <li>• 2x Digital Zoom</li> <li>• 2.5" LCD Screen</li> </ul> <p><b>\$404<sup>99</sup></b></p> <p>DSC-T1 ..... \$389.99 NEW! DSC-V1 ..... \$364.99</p>	<p><b>CANON DIGITAL REBEL KIT</b> <b>NEW!</b></p> <ul style="list-style-type: none"> <li>• 6.3 Megapixel CCD</li> <li>• 1x Opt/1x Digital Zoom</li> </ul> <p><b>\$719<sup>99</sup></b></p> <p>Digital Rebel ..... \$629.99 EOS 100 ..... \$1049.99 EOS 10S ..... \$569.99</p>	<p><b>CANON EOS 10D Mark II</b> <b>NEW!</b></p> <ul style="list-style-type: none"> <li>• 11MegaPixels</li> <li>• 2.0" LCD Screen</li> </ul> <p><b>\$3999<sup>99</sup></b></p> <p><b>NEW! SD10</b> ..... <b>\$249.99</b> <b>NEW! SD110 (in all colors)</b> ..... <b>\$209.99</b></p>
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## DIGITAL VIDEO

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## SCANNERS

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## PRINTERS

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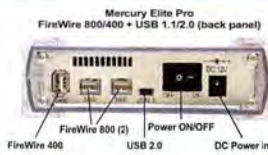
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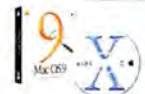
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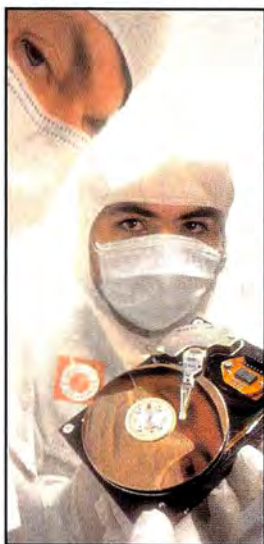
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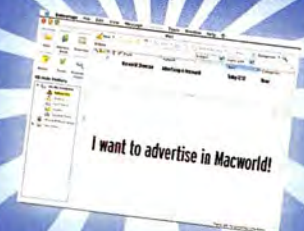
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iTunes' iMix feature, part of the version 4.5 update, lets you publish playlists at the iTunes Music Store, so you can expose other online music shoppers to your eclectic tastes. And *Macworld* is getting into the iMix act, with our very own playlist of Apple-themed songs, at [find.macworld.com/0028](http://find.macworld.com/0028).

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by 10 Cents

## Kensington Noise Canceling Headphones ▼

Nothing is more annoying than background noise when you're trying to concentrate on your work (and the music blasting out of your Mac). Kensington's Noise Canceling Headphones help silence chattering colleagues. The adjustable, foldable headset covers your ears entirely and delivers crisp, clear sound. An on/off switch controls the headset's noise-canceling capabilities. Kensington's \$40 headset doesn't completely block out sound, but it does muffle noise and voices to less-distracting levels ([www.kensington.com](http://www.kensington.com)).



## AirPort Express

Whether it's sharing printers, streaming music, or serving as an Internet bridge, Apple's miniature wireless base station boasts the flexibility of a contortionist—it bends over backward to meet your needs, for only \$129. On-the-go Mac users who've ever tried to work near an inconveniently placed broadband hookup in a hotel room will embrace AirPort Express's greatest asset—its portability. And since it fits in the palm of your hand, AirPort Express can easily accompany you on the road. Just hook it up to your hotel room's broadband connection, and you can enjoy the same wireless freedom you experience in the comfort of your own home ([www.apple.com](http://www.apple.com)).



## WHAT'S HOT A Quick Look at the World of Macs

- 1 BMW inks a deal with Apple to equip its cars with integrated iPod connectors. *Because, really, haven't BMW owners deprived themselves of enough of life's luxuries?*
- 2 The iTunes Music Store makes a successful debut in three European countries. *But Apple continues to ignore Canada as part of that country's ongoing punishment for giving the world Gordon Lightfoot.*
- 3 Apple unveils Tiger's features but won't release the updated OS until 2005. *And this Christmas, Steve Jobs will give his family elaborate descriptions of presents that they won't be allowed to open until August 2005.*
- 4 After vowing in June 2003 to deliver 3GHz Power Mac G5s a year later, Apple misses its target. *But on the bright side, Apple continues to add artists and songs to its online music store. (Offer not available in Canada.)*



A CLOSER LOOK:

## CASUAL GAMES

If you want to know how deep the Mac gaming world is, check out casual games, which don't have A-list-game system requirements but also don't skimp on the fun. Our current faves are Varmintz (left), from Skunk Studios ([www.skunkstudios.com](http://www.skunkstudios.com)); Power Chips and High Roller, from MumboJumbo ([www.mumbojumbo.com](http://www.mumbojumbo.com)); and Flip Words, from Red Marble Games ([www.redmarblegames.com](http://www.redmarblegames.com)).

## GBoard5

What's faster than a dual-processor Power Mac G5? A dual-processor Power Mac G5 on wheels. Plop your G5 on this \$130 Plexiglas platform from AstroAge ([www.astro-age.com](http://www.astro-age.com)), and you'll enjoy rollaway access to the tower under your desk—ideal for anyone who needs to reach the connectors on the back of the tower. (An integrated cable guide on the back of the GBoard5 keeps all those cables in place.) AstroAge also sells a GBoard5 equipped with a brake, for \$140, as well as a G4 model, for \$100 (\$110 with brakes). If you're more interested in a metallic version, check out Power Support's \$129 G5 Skateboard ([www.drbot.com](http://www.drbot.com)).

PHOTOGRAPHS BY PETER BELANGER

Randy likes the feel of **Sand**.

**Suitcase**

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