iLIFE '04: SEE HOW THE SUITE STACKS UP

ARE GARAGEBAND, iMOVIE, iPHOTO, AND iDVD WORTH THE $49? READ OUR REVIEWS, p. 68

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Photography by Peter Belanger

The Virtual CD

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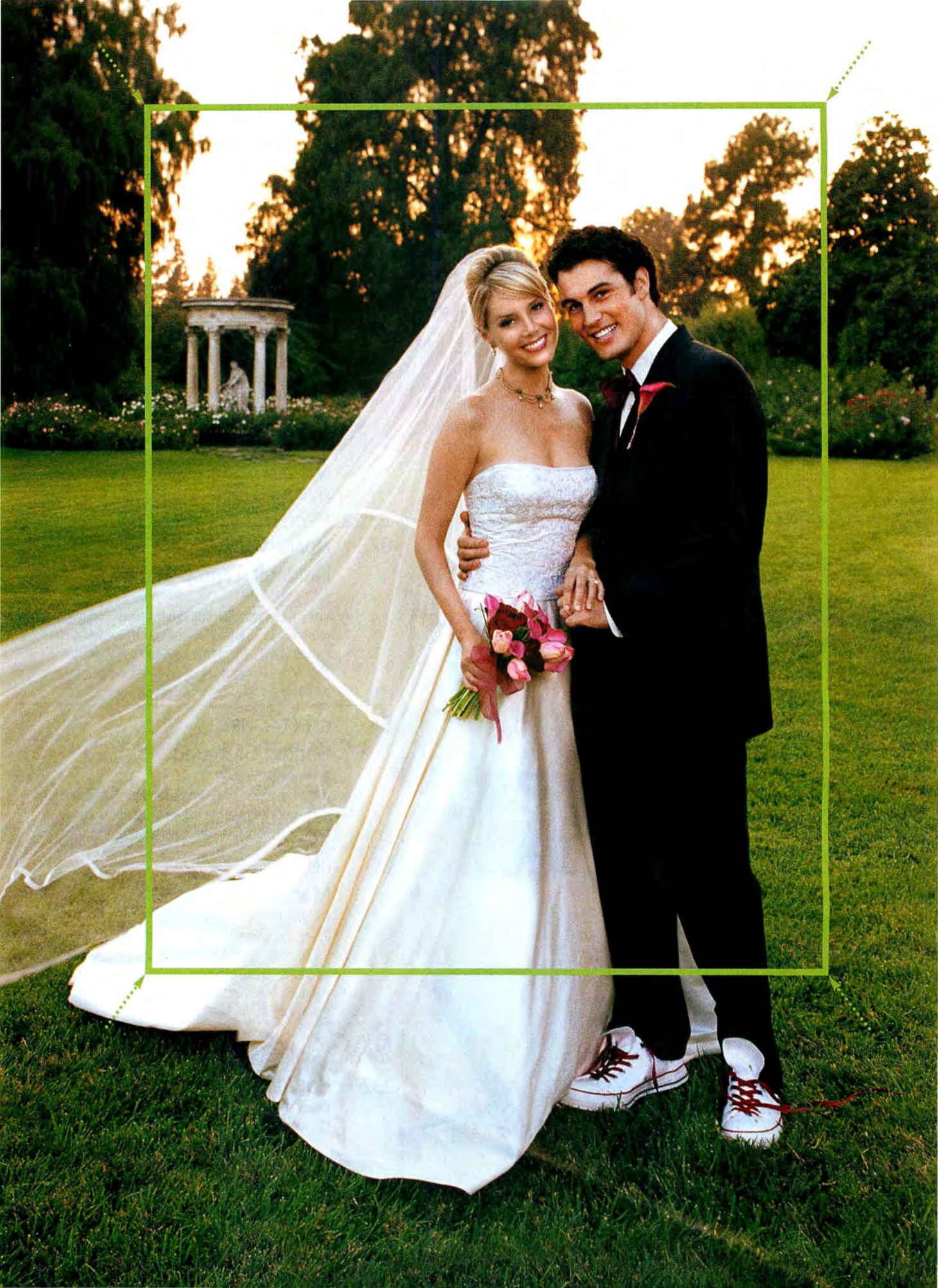

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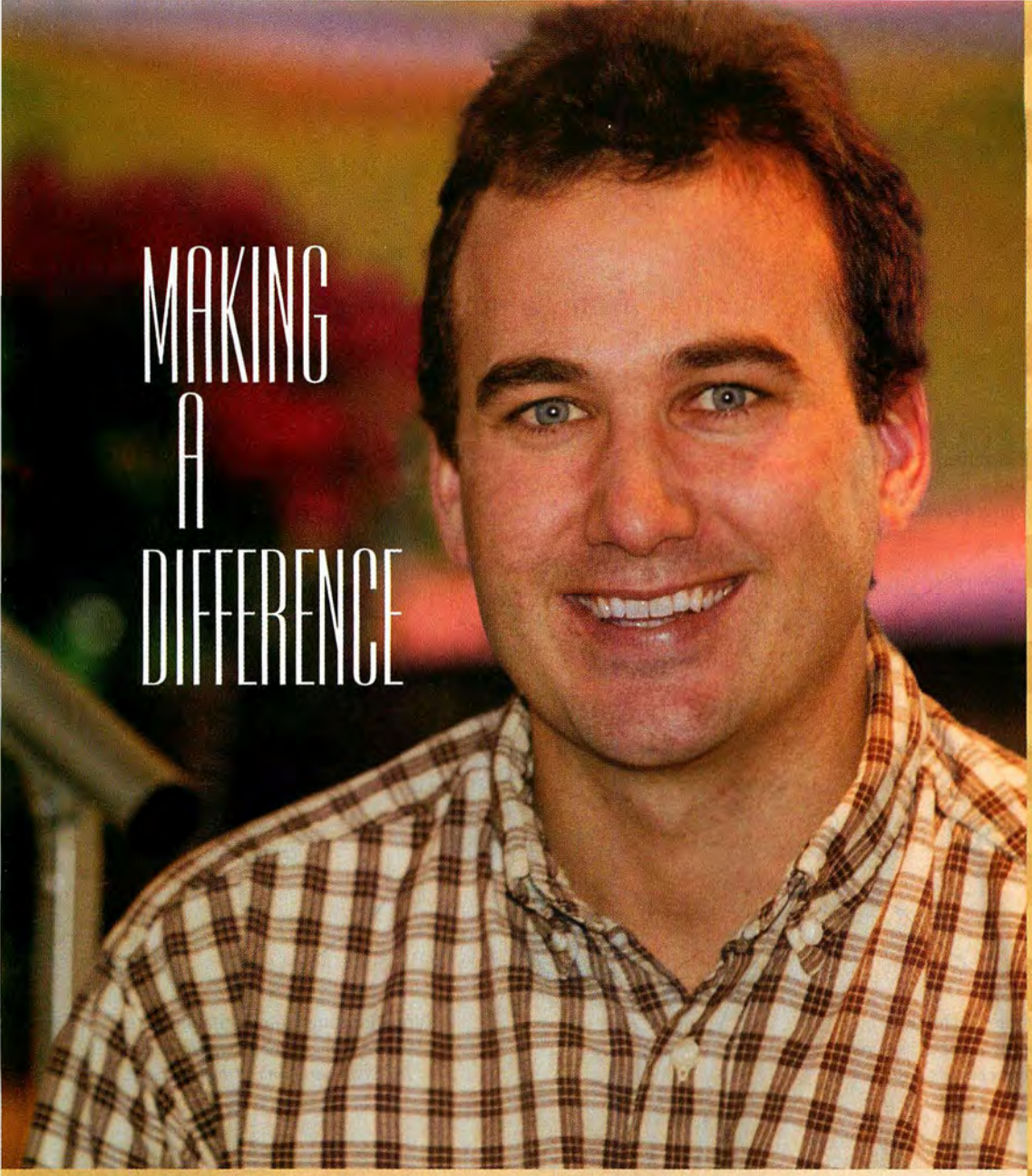

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THE NEW APPLE STORE IN DOWNTOWN SAN FRANCISCO IS a beauty. Nestled right between Market Street and shopping-mad Union Square (and right across the street from the Virgin Megastore, where songs cost a wee bit more than 99 cents each), Apple's new retail outlet occupies a two-story structure with a glass front, a huge glass skylight, and a large glass staircase.

The Apple Store that's within a ten-minute drive of my house isn't beautiful at all. It's in a small shopping-mall space that Apple has not spent millions of dollars redesigning. I'm pretty sure it's where the old Game Keeper store used to be.

The two stores have very little in common. And yet they both sit at the heart of a retail push that promises to alter the shape of the Mac landscape.

Tales of Retail

According to Apple senior vice president of retail Ron Johnson, Apple gets one-seventh of its revenue from its 78 (as of this writing) Apple Stores. Roughly half of the Macs sold at Apple Stores go to first-time Mac buyers—hence Apple's contention that its stores are a great long-term strategy for attracting Windows users.

And that makes sense. The presence of Apple Stores throughout the malls of America (including one at *the* Mall of America) keeps Apple right in the face of people who might otherwise write off the Mac as an afterthought in a Windows-centric world. And once you're inside the store, seeing all the related software and peripherals dispels the myth about there not being any Mac products. Buying a Mac for the first time becomes a lot less scary, especially when Apple Store employees offer to configure your new computer and peripherals for you—for free—before you leave the store.

And that's one of the more interesting aspects of Apple's strategy: to make its stores different because of the service, not the products. Apple Stores come staffed with Geniuses, people whose job it is to answer questions and solve problems, not to sell products.

Like a lot of people, I was initially skeptical about the Apple Store concept. But I've seen just how crowded those stores can get. And as all Mac users know, the more time you spend with Apple's products, the more you realize how much better those products are than the stuff that's being used by the other 95 percent of computer users. Best of all, whether it's the hard-core Mac users shopping for a new printer or those clever Mac Geniuses stashed behind the Genius Bar, the Apple Store reinforces the notion that using the Mac (or even just the iPod) makes you part of a community. How could that not be good for Apple, for the Mac, and for Mac users?

The Search for Soda

In retail matters of another kind, it's not often that the worlds of Macs and colored sugar water (as Steve Jobs so famously called it) collide, but a few weeks ago, I found myself driving through a Northern California deluge, from one convenience store to the next, in search of Pepsi. It's not that I have a particular jones for that brand of cola—I'm a Diet Mountain Dew man, myself—but I needed to find enough iTunes cap–sporting soft-drink bottles for *Macworld*'s version of the Pepsi Challenge. (See "A Little Soda-Drinking Music, Please," *Mac Beat* [page 21], for the results of our unscientific survey to determine the true odds of winning a free iTunes download from a bottle of Pepsi.)

The quest took Senior News Editor Philip Michaels and me to five stores. The final tally: 30 bottles of colored sugar water. Or to be more accurate, 29 bottles of colored aspartame water, since all but one of our purchases were Diet Pepsi, not the regular kind. We also found about a zillion caps for Pepsi's previous promotion. Turns out the soda bottler is not particularly efficient at keeping its inventory fresh. Too bad Pepsi can't follow Apple's iTunes lead and offer digital downloads of soda. □

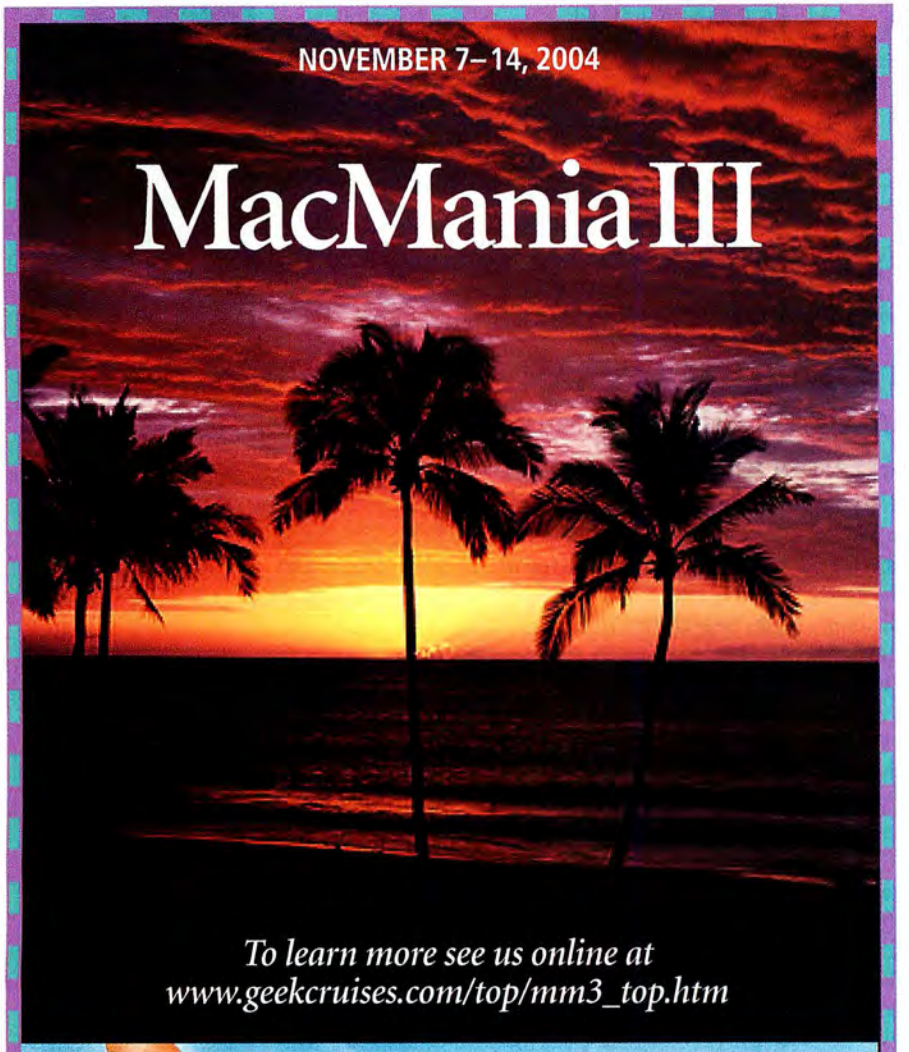
ABOUT THIS MACWORLD

What songs did *Macworld* editors and designers download with their soda-gotten gains? Glad you asked:

- **Jason Snell**, editor in chief: "Everybody Loves a Happy Ending," by Tears for Fears
- **Terri Stone**, senior how-to editor: "Political Science," by Randy Newman, and "El Cerrito," by Thinking Fellers Union Local 282
- **Philip Michaels**, senior news editor: "I'm a Boy," by The Who; "Folsom Prison Blues (Live)," by Johnny Cash; and "Get Smart/Casino Royale," by Pourcel Agents
- **James Galbraith**, Macworld Lab test manager: "Pepsi Party," by Mighty Vumba
- **Kelly Lunsford**, senior associate editor: "Company," by Ani DiFranco, and "Hey Ya! (Explicit Version)," by OutKast
- **Jonathan Seff**, senior associate editor: "Dream Police," by Cheap Trick, and "Smoke on the Water," by Señor Coconut and His Orchestra
- **Jennifer Steele**, art director: "A Promise," by Echo & The Bunnymen
- **Amy Helin**, senior designer: "The Best of Times," by Styx
- **Sue Voelkel**, copy editor: "The Million You Never Made," by Ani DiFranco

Still skeptical about the Apple Store? Did you have an easier time finding iTunes-themed Pepsis? Let me know at jason_snell@macworld.com or at www.macworld.com/forums.

PORTRAIT BY SVEN WIEDERHOLT



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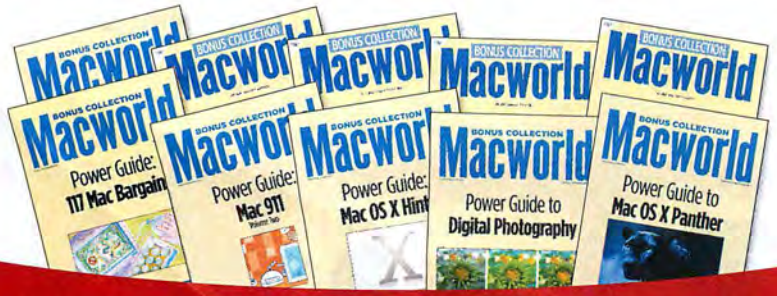

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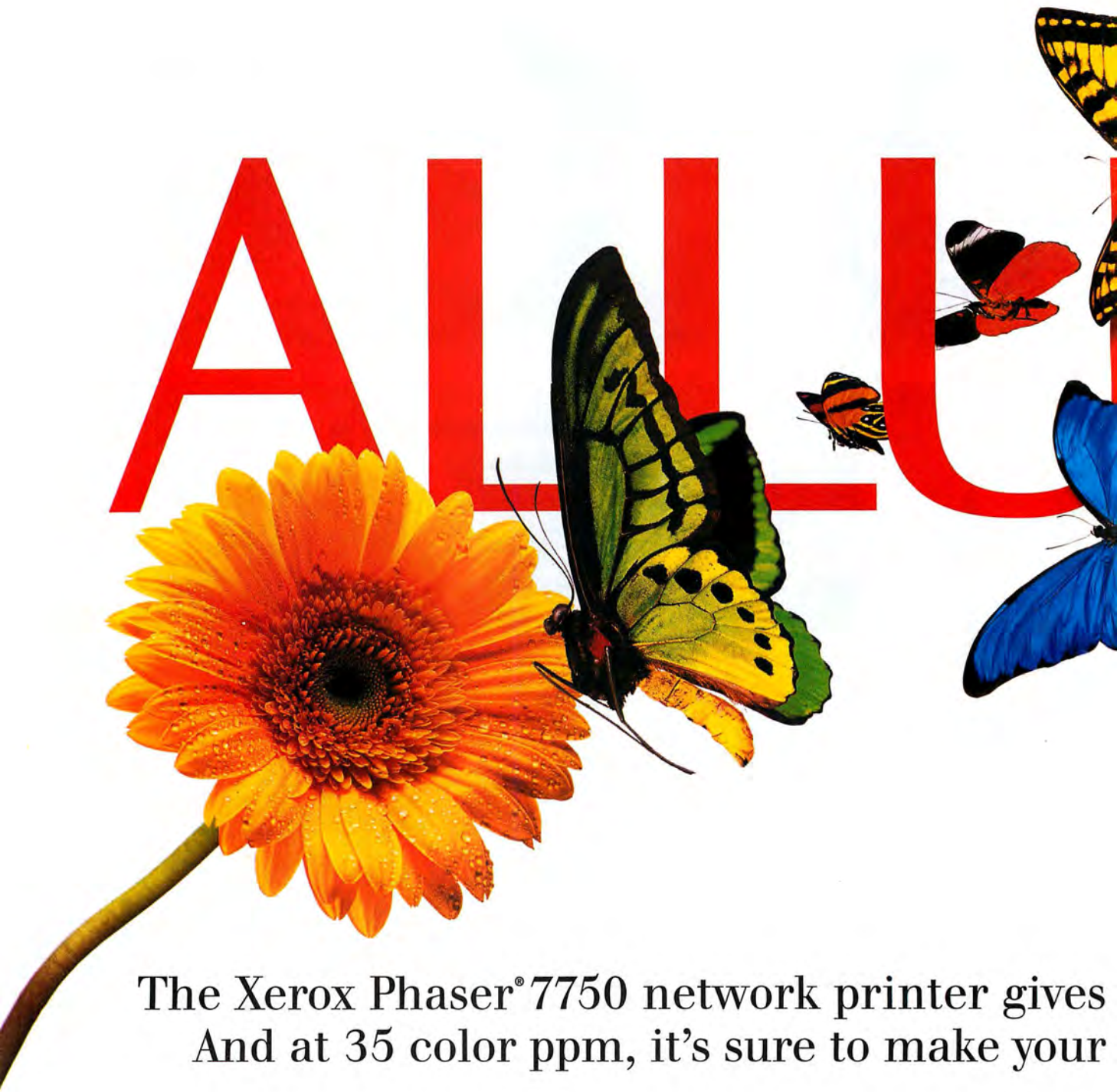

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FEEDBACK

Past Tense, Future Perfect

It may have been 20 years since the Mac's debut, but most *Macworld* readers remember 1984 as if it were yesterday, whether they're feeling nostalgic about the first time they ever saw a Mac or recalling some overlooked detail about the Mac's early days. While the February issue's look back at two decades of the Mac made some readers reminisce about the past, others focused on the present, offering comments and critiques of current Mac hardware and software. That just proves passion about all things Macintosh is still going strong 20 years later—and that means the future is bright. □

History Lessons

GEORGE BEEKMAN

I enjoyed "20 Years of the Mac" (February 2004), but I was surprised that you didn't mention HyperCard in the timeline. Bill Atkinson's groundbreaking application introduced multimedia authoring, visual programming, and hypertext to the masses. Macromedia Director and Flash, Microsoft's Visual Basic, and all Web browsers in existence include features that HyperCard pioneered.

GARY HEYER

I greatly enjoyed reviewing and reliving Apple's history. Throughout the years, Apple's marketing efforts didn't adequately advertise certain features—for instance, the early availability on the Mac of long file names such as Letter to Macworld, 1/19/04 (compared with ltmw0119.doc on PCs)—and acceptance, at least from the Mac Plus era on, of PC-formatted disks (years later, you still couldn't take your disks in the other direction).

More Mac Memories

TOM BOMBACI JR.

Jason Snell invited us to share our Mac stories (*From the Editor's Desk*, February 2004); here's mine. Like millions of other benighted PC users, I knew about the Mac, but just peripherally. Once I started teaching an operating systems course at the local branch of New Mexico State University, I decided I needed to have a Mac to speak knowledgeably about it. It didn't take too long for me to get the hang of the new hardware and software and feel at home with it. I still have my Gateway PC, but my main pump is my Power Mac G4. It is easier, more elegant, and more fun than any PC I've ever had. I'm a convert.

BOB COHEN

I had no idea what to do with a computer prior to 1985. I wasn't interested in programming or learning a command-line interface. A friend at work brought in his 128K Mac and began writing new training manuals for a course he taught. He invited me to try it out, and I was instantly hooked. Soon we were sharing his computer. A few months later, I bought a used 512K Mac and an ImageWriter I printer for $900. With the addition of an external floppy drive, I used my Mac until 1994. The Mac, the HD20, the floppy drive, and the ImageWriter are still in my closet. Occasionally I pull them out and hook them up just to make sure they still work. It's hard to believe it's been almost 19 years since I first started mousing around, but it's been great fun. I can only imagine what my Mac will be like when January 2014 rolls around.

LES BOWEN

My first exposure to a Mac was in elementary school. We used Classics to play Where in the World Is Carmen Sandiego? and other educational games. In high school, we used Macs to make the yearbook. I didn't fully convert to Macs until I joined my college newspaper a couple of years ago. I still toy around with a PC, but Windows has never lent itself to an open-source geek and Web-site developer like me. I dabbled in Linux for a while, but OS X converted me. I had all the power of Linux at my fingertips and one of the greatest-looking graphical user interfaces. Now I'm the admin for a lab of assorted G3 and G4 machines.

Mail Call

DEREK JONES

Are you off your rocker naming Bare Bones' Mailsmith 2.0 the best e-mail client ("The 19th Annual Editors' Choice Awards," February 2004)? Mailsmith may do what it does well, but it's missing a major feature that prevents it from ever spending any time on my Mac: IMAP support. The $100 price gap between Mailsmith and Qualcomm's Eudora (ugly but free) is outrageous.

Creative Critiques

GERARD McLEAN

Your review of Adobe GoLive CS (♦♦♦½; February 2004) doesn't mention GoLive's biggest asset: building forms. Macromedia Dreamweaver excels at pretty much everything else in a WYSIWYG HTML editor, but GoLive rips through complex and long forms. Dreamweaver chokes on anything more than simple names, addresses, and so on. Most of the sites I build are database driven, so the primary thing I care about in any WYSIWYG program is forms rendering. GoLive consistently saves hours where Dreamweaver takes forever to redraw.

DANIEL ST-PIERRE

Who got the brilliant idea in Adobe Photoshop CS (♦♦♦♦½; February 2004) to drop the File Info window's Load button? I can no longer update the keywords of my pictures at the push of a button, and I have to retype every redundant detail of dozens of pictures every time I do a new shooting. To me, that little omission makes me want to go through the trouble of going back to the previous version of Photoshop.

The Replace and Append buttons within the File: File Info: Advanced pane have superceded the Load button. You can load metadata onto images that way or apply saved metadata templates via the fly-out menu that appears in the upper right corner of the File Info dialog box. To apply a saved metadata template to many

images at once with the File Browser, select the images and choose Edit: Append Metadata or Edit: Replace Metadata from the browser's menu bar.—Jackie Dove

A Perfect Halo?

MICHAEL R. BAGNALL

A ★★★★★ rating for Halo (*The Game Room*, February 2004)? I have a 450MHz dual-processor G4 with a top-of-the-line graphics card and more than 1GB of RAM, and I get major amounts of screen lag on the lowest settings and resolutions. Halo looks and plays a lot better on the Xbox I bought some time back, which has far less memory, processing power, and graphics hardware.

A 450MHz dual-processor G4 is below Halo's system requirements. MacSoft recommends at least an 800MHz G4 or G5 processor, OS X 10.2.8 or later, 256MB of RAM, and a 32MB AGP video card. I tested Halo on a Power Mac G4, and it played great.—Peter Cohen

G. WELLS

Peter Cohen's Halo review is right on the mark. I would have given it ten mice.

Keeps on Clicking

WADE MOLINE

I don't believe that the Canon Digital Rebel should get a ★★★★½ rating (February 2004). I tried one out, and while the pictures are good, I can't imagine that the cheap plastic body could stand the abuse a serious photographer would give it. I have used a Sony DSC-F707 since it came out and have dropped it, kicked it, and gotten it wet and extremely cold; it still works like a charm.

SuperCard's Still Standing

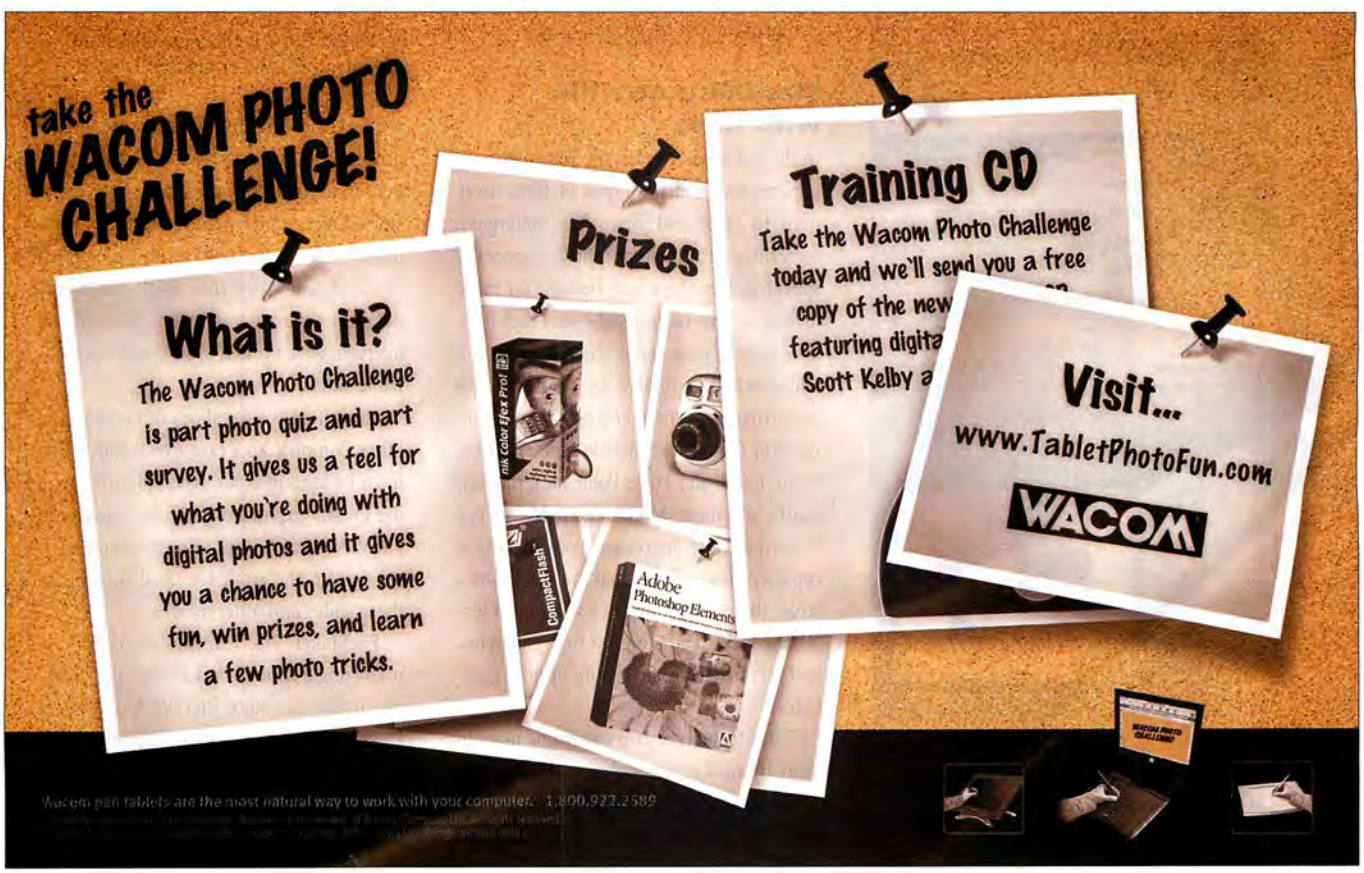
MIKE YENCO

Regarding Andy Ihnatko's Runtime Revolution 2.1 review (★★★★; February 2004): does he realize that SuperCard is still alive and well? Look no further than www.supercard.us. I'm using this application every day to work on several shareware apps. It combines everything that made HyperCard easy with all the modern Mac OS power. *Macworld* reviewed SuperCard 4.0 back in April 2003; its ★★★★½ rating is higher than Revolution's. I don't understand the impression the review gives that Revolution is the first application since the death of HyperCard to deliver a development environment for both new programmers and experienced consultants and that this is somehow a real accomplishment. SuperCard did this back when HyperCard was still around—and it continues to do so.

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

CORRECTIONS

In our review of the iBook G4s (March 2004), we misidentified the processor speed of the entry-level iBook; it's 800MHz.



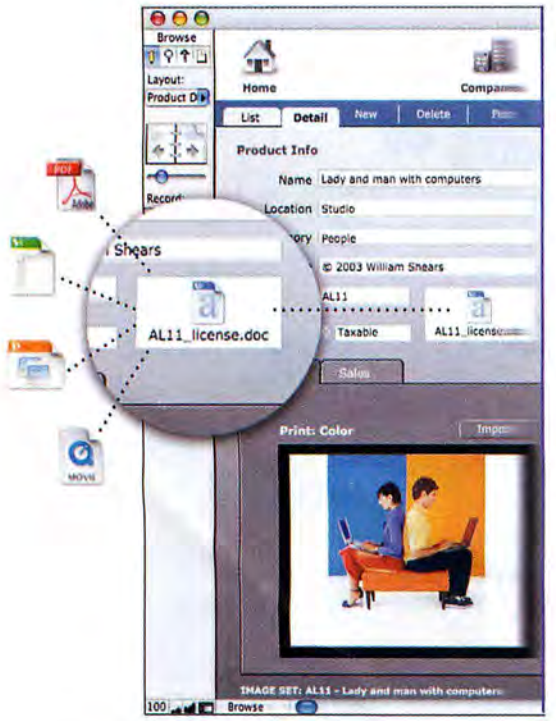
Have It YOUR WAY

The new FileMaker Pro 7 delivers unprecedented capabilities to customize database solutions with striking ease of use.

ONCE IN A WHILE, A NEW VERSION OF A PRODUCT ROLLS OUT THAT JUST SEEMS to fire perfectly on all cylinders, with features and functions in lockstep with the fast-changing requirements of users. For literally millions of users of FileMaker database software, that time is now.

With the availability of FileMaker Pro 7, FileMaker, Inc. delivers breakthroughs like the ability to manage any file, open multiple windows in the same database, dramatically increase database storage, confirm changes before saving, and a new, advanced security system.

Early users enthusiastically validate claims that FileMaker Pro 7 is the most user-friendly, highly customizable database solution money can buy. "I love the fact that it has lots of power, but I have not felt like I have had to learn a whole new application. FileMaker Pro 7 is powerfully simple," notes Ken Newell of the Hamilton Glaucoma Center at the University of California at San Diego.



Import, store, and export any file: PDFs, Office documents, images, video, music, and more.

Handling any file with ease

In the last several years, the very nature of information, and the types of files, users need to store and share has undergone something of a metamorphosis. Generally speaking, these files have become far more diverse as time has passed—and they have also grown very large. FileMaker Pro 7 addresses this reality by allowing the importing, exporting, and storing of more types of files. These include images, PDFs, Word, Excel, and PowerPoint files, movies, music, and more. Moreover, FileMaker Pro 7 dramatically increases your database capacity to new limits that are 4,000 times larger than before—up to a stunning 8 terabytes. Fields can store up to 4 gigabytes, and text fields can now store up to 2 gigabytes.

These features are very welcome news to Scott Howard of the Alabama Eye Bank in Birmingham. The Eye Bank coordinates the collection of donor eyes and eye tissue as well as the distribution of these prized products to hospitals and clinics throughout the country. Howard's work involves the storing of complex medical slides as very-high-resolution bitmap or JPEG files, often to Excel and Word files. With yesterday's database capacity restrictions, Howard and his team were limited to storing black-and-white slides.

FileMaker Pro 7 is the most important upgrade in FileMaker history.

"But often we get slides of corneas and other complex and rare eye features that must be seen in color," says Howard. "With the greatly expanded database capacity in FileMaker Pro 7—it's almost unlimited—we can do the work we need to do with these slides and other images."

FileMaker Pro 7 makes easy work of managing a wide variety of files. For example, users can store literally hundreds of PowerPoint presentations, including data such as date created, contents, and audience, for easy and accurate retrieval. And workgroups will find it easy to manage and

share archives of key documents (in PDF, Word, or other formats) such as contracts, press releases, price lists, and more.

Creative professionals will be delighted by their enhanced ability to share and export images, digital video, and music and sound files. A FileMaker Pro 7 solution can be the hub for teams creating storyboards, marketing and advertising graphics, and video and music projects—even managing props and continuity for movies and TV.

More productivity, flexibility, and the Web, too

Another new feature of FileMaker Pro 7 Scott Howard likes is its ability to extend richer solutions to the Web, allowing remote users to access the database through their Web browsers. FileMaker Pro 7 enhanced Instant Web Publishing permits users to securely publish as well as collect and share data over the Internet.

For Howard and the Eye Bank, this means making their database solutions available to remote offices, clinics, and laboratories through a secure network solution. "For Web publishing, FileMaker Pro 7 beautifully and easily renders the layouts," he says.

New multiple windows in FileMaker Pro 7 permit users to browse, search, and edit simultaneously.

In many ways, upgrading to FileMaker Pro 7 means upgrading to a veritable efficiency engine. By allowing users to open multiple windows within the same database, FileMaker Pro 7 permits users to browse, search, and edit simultaneously. This translates into accessing the information users want faster than ever before. Each window can show results from a different query—a feature that elevates multitasking to new heights.

And users can now confirm all record and layout changes before they are saved to the database. This feature not only helps to ensure accurate data entry, but also allows users to experiment with jazzy new layouts and database structures.

FileMaker Pro 7 features an advanced security system that secures the database with account names and passwords and by assigning custom privileges to each user or group. And its new relational model consolidates all tables into one file, while the relational graph makes simple work of the most complex development jobs.

"This is the upgrade that everyone's been waiting for," enthuses Michael Kern of the Center for Bioethics at the University of Pennsylvania in Philadelphia. "FileMaker Pro 7 is more efficient. It's easier to do my work far more productively."

For more information on this exciting new version of FileMaker, visit www.filemaker.com/fm7.

Using an old version of FileMaker Pro? For a limited time, users of FileMaker Pro 6 all the way back to FileMaker Pro 2.1 may upgrade to FileMaker Pro 7 for only $149 (save $150 off full price).* *See www.filemaker.com/fm7 for details.*

The most important new and enhanced features in FileMaker Pro 7 are the following:

- **Import, store, and export any file: PDFs, photos, Word and Excel files, music files, and more**
- **Open multiple windows in the same database at the same time for unprecedented multitasking**
- **Super-expanded 8-terabyte database storage; container fields can store up to 4 gigabytes and text fields up to 2 gigabytes**
- **A new option lets you confirm data and layout changes before you commit them, so you can experiment with new layouts**
- **New relational model to streamline the creation of simple and complex databases**
- **New relationships graph to link data between tables just by clicking and dragging**
- **Enhanced Web publishing capabilities, all with point-and-click ease**
- **Advanced security features using account names and passwords and simple assignment of custom privileges for any user**
- **Designed from the ground up for Mac OS X and Windows XP/2000**

*Only licensed users of FileMaker Pro software are eligible for this promotion. For FileMaker Pro 2.1-5.x customers, this offer expires Sept. 17, 2004. After Sept. 17, 2004, only FileMaker Pro 6 customers will qualify for this offer.

AFTER A GREAT YEAR, WHAT DOES APPLE'S MUSIC STORE DO FOR AN ENCORE?

iTunes' Birthday Music

Most birthday parties include a song for the honoree. But the iTunes Music Store—which celebrates its first birthday on April 28—will have closer to 50 million songs at its bash. That's the number of songs eager customers had downloaded from Apple's online music store by early March 2004. While the company will fall short of its first-year goal of 100 million downloads, it expects to top the 70 million mark by the store's first birthday. But total downloads tell only part of the story.

The store came online in April 2003, offering OS X users a selection of 200,000 songs for 99 cents each (and most albums priced at $9.99). The music store's library has since ballooned to more than 500,000 songs, with offerings from more than 200 independent record labels joining content from the five major music companies. And last fall, the store's reach extended to millions of Windows users when Apple released a Windows-compatible version of iTunes.

Most importantly, the rapid expansion of the iTunes Music Store indicates that Apple has found a way to sell music online that makes everyone—artists, labels, and especially consumers—happy.

"Apple deserves a lot of credit for breaking the logjam," says Phil Leigh, senior analyst at Inside Digital Media. He says that before the iTunes Music Store came along, digital rights for online music were very restrictive, but Apple "was able to negotiate rules that were very sensible, and [that] made sense to consumers." (To find out what *Macworld* readers think of the store, see "In Tune with Users.")

CD owners can copy, rip, or lend their music to just about anyone. But the rights for digital-music downloads are quite draconian. However, users have responded in the most telling way possible—with their credit cards. With 50 million songs sold in just ten months, Apple has claimed market-share numbers as high as 80 percent in the music-download business.

The iPod Connection

Using iTunes to purchase music has made the whole process very easy on consumers who use the music store; iTunes also makes it easy to listen to songs on the Mac or burn them to CDs. But there's also the issue of expanding listening options—which is where the iPod comes in. The iPod makes digital files portable. Michael Goodman, senior analyst for market-research firm The Yankee Group, contends that, because of Apple's protected AAC format, "If I don't have an iPod, then I don't use iTunes."

The numbers bear that assertion out. In the quarter before the music store's launch, Apple sold around 78,000 iPods. Sales soared to 304,000 iPods during the quarter in which the

MUSICAL MILESTONES Apple's iTunes Music Store hit several landmarks during its first year.

May 5, 2003	June 23, 2003	September 3, 2003	December 15, 2003	January 6, 2004	March 15, 2004
Apple announces that 1 million songs have been downloaded during the store's first week of business.	Five million songs have been downloaded from the store.	Avril Lavigne's "Complicated" becomes the 10 millionth song downloaded from the store.	Frank Sinatra's "Let it Snow, Let it Snow, Let it Snow" is the store's 25 millionth download.	Steve Jobs announces that iTunes Music Store song downloads now top 30 million.	Song downloads hit the 50 million mark.

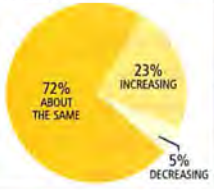
ILLUSTRATION BY KRISTA WILDERMUTH

IN TUNE WITH USERS

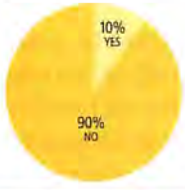
Is the iTunes Music Store still a hit with Mac users? To find out, we had market-research firm Karlin Associates survey 420 Macworld Reader panelists about their shopping habits.

Q: How often do you visit the iTunes Music Store?

Q: In the last three months, have your visits to the iTunes Music Store increased or decreased?



Q: Have you given an iTunes gift certificate or allowance to someone?



Q: On average, how much do you spend per month at the iTunes Music Store?

AVERAGE AMOUNT: $11

AMONG READERS INCREASING THEIR VISITS: $13

iTunes Music Store launched. From October to December 2003, the quarter in which the store opened for Windows users, Apple sold 730,000 iPods.

Both Goodman and Leigh believe that the futures of the iTunes Music Store and the iPod are intertwined—a drop in iPod sales and use means fewer visits to the store. For that reason, analysts are watching how Apple handles complaints about diminishing battery life in some older iPod models (see "In a Fix," *Mac Beat*, April 2004). "That is certainly a dark cloud on the horizon that has the potential of becoming a storm if Apple doesn't address it," Goodman says.

The Other Side

Opening up the iTunes Music Store to Windows users has expanded Apple's share of the online music world. But Windows people have many more options than Mac users when it comes to online music.

iTunes' closest competitor is Roxio's Napster 2.0, which features a comparable catalog of 500,000 songs, similar pricing, and 30-second previews. Napster's main differences from Apple's offering include its use of the Windows Media 9 format and a Web interface. (Musicmatch Downloads is much the same but uses Musicmatch software and features about 400,000 tracks.) But Napster 2.0 also stands out by offering a $9.95-a-month subscription plan for unlimited streaming, in addition to music downloads (but users still need to buy tracks for 99 cents or albums for $9.95 to burn them). Steve Jobs has dismissed subscription models for the iTunes Music Store—something Leigh sees as iTunes' biggest shortcoming.

"I think they'll hurt themselves if they ignore it," says Leigh. "They could be abdicating the market to Napster or others if they're not careful."

Leigh has a point. Although Steve Jobs has said that people are interested in owning their music instead of "renting" it, subscriptions can allow people more flexibility—including the ability to listen to complete tracks rather than 30-second previews before deciding to buy.

Room for Improvement

What's ahead for the iTunes Music Store? Apple has added many requested features (see "Changes in Store," *Mac Beat*, January 2004), but observers say the store could improve even further.

"One of the potential benefits of online music retail is to provide greater accessibility to independent music," says Bill Gould, CEO of Kool Arrow Records. "Unfortunately, iTunes, among others, has an interface that makes it difficult for the user to discover new artists and/or labels in a simple way."

Also, people are used to getting more than just songs with CDs—liner notes, lyrics, essays, and photos, to name a few of them. "We both would like to be able to make the CD booklet available to consumers who purchase the album," says Amanda Marks, senior vice president of Universal Music Group eLabs. "We're constantly working with [Apple] on things like that, and making value-added opportunities that are available to purchasers of physical albums, available to purchasers of digital albums. For example, ticket-purchase opportunities, and enhanced content that may be available from a Web site, like bonus tracks."

Apple hopes to launch a European version of the iTunes Music Store in 2004, but it said in January that it was running into licensing hurdles. While company executives say a 2004 launch is still feasible, remember that every one-year-old goes through a few growing pains.—JONATHAN SEFF

Additional Reporting by Adelia Cellini, Cyrus Farivar, and Philip Michaels

A Little Soda-Drinking Music, Please

Your odds of winning the grand prize in the Powerball lottery are one in 80 million. But grab a bottle of Pepsi, Diet Pepsi, or Sierra Mist that's part of the current iTunes Music Store promotion (cosponsored by Apple and Pepsi), and you have a one-in-three chance of walking away with a free song.

We like those odds. Plus, we're awfully fond of soda. So to put those one-in-three odds to the test—and to quench our editor-sized thirst—we decided to round up as many Pepsis as we could find and see if 33.3 percent of them came up winners. We settled on a 30-soda sample size—enough to give us meaningful results without depriving too many Northern California Pepsi drinkers of a chance to win free songs from Apple. We wound up with an almost all–Diet Pepsi sampling, save for a lone Pepsi.

Since no one can drink 30 sodas in one sitting, we found out how many winning caps we had by using a method first posted at MacMerc.com: tilt the bottle to a 25-degree angle, and look at the bottom of the cap. If you see the word *again*, you're out of luck; if you see the word *song* or a random string of letters and numbers, you've just won a free song.

All told, our 30 bottles of Pepsi products yielded 14 free iTunes songs—a more-than-acceptable 46.7-percent success rate. "I won one song but couldn't decide what to buy, so I bought a second one," Macworld Lab Test Manager James Galbraith said. "So I guess the promotion worked." Especially if you like diet soda.—PHILIP MICHAELS

Eye Tunes Senior Associate Editor Jonathan Seff tilts his Diet Pepsi to see whether he's a winner.

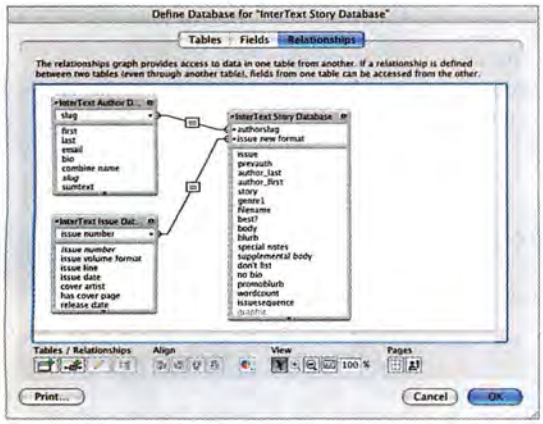
FILEMAKER PROMISES BIG CHANGES IN DATABASE UPDATE

Magnificent Seven

With the latest version of FileMaker Pro (www.filemaker.com), the numbers tell the story. When FileMaker updates its database application, it usually ups the version number by half—from 5.0, for example, to 5.5. This time around, however, FileMaker Pro is proceeding directly from version 6 to version 7. The company hopes the message is clear—it calls FileMaker Pro 7 the most significant overhaul of the database program in nearly a decade.

Version 7: It's All Relative

In 1995, FileMaker Pro 3 transformed FileMaker Pro into a relational database program, by allowing users to link and display data across different database files. With FileMaker Pro 7, the need for separate files evaporates: the program can store multiple data tables within one file.



Good Relations FileMaker Pro 7's Relationships graph lets you easily modify database relationships.

Before, if you had different sets of related data—for products, vendors, and contact information, say—you needed to create separate files for each one. In version 7, you can put everything into one file, so you can streamline your data structures.

Having all that data stored in one place means you don't need to have multiple database windows open at once. But if you *want* to, you can: FileMaker Pro 7 lets you open multiple windows for any database; you can see a product list in one window while another one shows the details of a specific product.

Defining the relationships between different databases has gotten a lot easier in version 7, too. The new Relationships graph provides a drag-and-drop interface for viewing all the relationships in your database (see "Good Relations").

This update also introduces a new security system; the old Access Privileges-Groups system has been replaced by a role-based system that has accounts and privilege sets. The security improvements also extend to FileMaker's Instant Web Publishing capabilities. Instant Web Publishing, introduced in FileMaker Pro 4, gains additional controls and rendering improvements in this update.

FileMaker Pro 7 also includes editable options in ScriptMaker, as well as the ability to require confirmation before someone modifies a record or a layout.

All in the Family

FileMaker Pro 7 is available now, as is FileMaker Developer 7, an enhanced version of FileMaker Pro aimed at professional database developers. (For pricing and upgrade information, see "FileMaker Family.")

Other updates to FileMaker's product line will arrive this summer, including FileMaker Server 7. An entirely new product, FileMaker Server 7 Advanced, incorporates custom Web-publishing support using XML and XSLT, and thus absorbs the Web-serving aspects of the discontinued FileMaker Pro Unlimited.—PHILIP MICHAELS

FILEMAKER FAMILY

FileMaker has announced pricing and availability information for its updated database software.

PRODUCT	RELEASE DATE	PRICE/ UPGRADE
FileMaker Pro 7	available now	$299/$149
FileMaker Developer 7	available now	$499/$399[A]
FileMaker Mobile 7	summer 2004	$69/$35
FileMaker Server 7	summer 2004	$999/$499
FileMaker Server 7 Advanced	summer 2004	$2,499/ $1,500[B]
FileMaker Applications	summer 2004	$49–$299/ free[C]

[A] With $100 rebate. [B] Upgrade from FileMaker Server 7. [C] FileMaker Pro 7 required.

IMAGING BEAT

C-765 Ultra Zoom and **C-770 Ultra Zoom**, from Olympus (www.olympus.com): Both four-megapixel cameras feature 10× optical zoom (C-765, $499; C-770, $599).

C-8080 Wide Zoom, from Olympus (www.olympus.com): Eight-megapixel camera features 4× optical zoom and f2.4 wide-angle glass lens ($999).

Easyshare CX7430, from Kodak (www.kodak.com): Four-megapixel camera has a 3× optical zoom ($280).

Easyshare DX7630, from Kodak (www.kodak.com): Six-megapixel camera has a 3× optical zoom ($499).

iPix Interactive Studio, from iPix InfoMedia (www.ipix.com): Panoramic image-editing application features annual licensing arrangement instead of per-image fee structure (single-user license, $899).

Portfolio 7, from Extensis (www.extensis.com): Digital-asset–management software adds built-in CD burning, batch image conversion, and embedded support for EXIF and IPTC metadata ($200; upgrades, $100 to $130).—COMPILED BY PHILIP MICHAELS

PRODUCTIVITY BEAT

LANsurveyor 8.0, from Neon Software (www.neon.com): Network-management software adds Panther support ($495 to $9,995, depending on scale; upgrades start at $199).

RealBasic 5.5, from Real Software (www.realsoftware.com): Cross-platform development tool adds Linux support and allows users to build in Mach-O, the native format for OS X (Standard license, $100; upgrade, $30: Professional licenses, $400; upgrade, $120).

SoftBooks 1.0, from Praevius (www.praevius.com): Business-management application tracks income and expenses, creates estimates and invoices, maintains inventory, and has other features ($80).—COMPILED BY PHILIP MICHAELS

ICONS BY PETER HOWALT

Mac for business.

Who says the world has to be so PC?

Apple® PowerBook® G4

> 1.0GHz PowerPC™ G4 processor
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Extensis Suitcase X1

> Unmatched font preview options, including previewing multiple fonts at the same time
> Activate fonts directly from the Suitcase Preview Pane
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> Instantly find your desired font using Suitcase's keyboard search or Quick Find

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MA/MW 5/04

PHOTOGRAPH BY PETER BELANGER

MAKE USB WEB CAMS WORK WITH iCHAT AV

USB Joins the Chat

When it comes to tapping iChat AV's videoconferencing capabilities, most people assume you need a FireWire-based Web cam or camcorder. But the reality is that the days of USB Web-cam owners getting shut out of the conversation are long gone. And Web-cam makers are eagerly pointing out to Mac users that video chats via Apple's instant-messaging app aren't just for FireWire users anymore.

iChatUSBCam, a $10 program from Ecamm Network (www.ecamm.com), came out last summer. The utility—a module that works with Unsanity's Application Enhancer (www.unsanity.com)—lets you use a USB Web cam to gab away on iChat AV. Here's how it works: after installing the Web-cam driver—whether it's from the camera maker or a driver developer such as IOXperts—you install Application Enhancer and then install iChatUSBCam. After you restart your computer and launch iChat, a green camera logo should appear next to your icon; that means your USB Web cam is ready for use. Making an existing USB Web cam iChat-compatible obviously saves you the expense of having to buy new equipment for video chatting; it also provides an alternative to more-expensive FireWire Web cams.

Take the new IceCam, from Macally (www.macally.com). Because it uses USB 1.1, the IceCam (pictured here) doesn't match the picture quality of Apple's iSight. And unlike the iSight, it lacks a built-in microphone. But there's another key difference between the two Web cams: while the iSight sells for $149, the IceCam costs $39. Macally also packages iChatUSBCam software with the camera, which sits on the end of a flexible 14.5-inch cable for easy height and angle adjustment.

Expanding iChat AV's reach to USB Web cams is just one of iChatUSBCam's assorted tricks. The utility also allows video chats on G3-powered Macs whose processor speed falls fall below iChat AV 2.0's 600MHz minimum. (Installing iChatUSBCam and Application Enhancer on a 500MHz PowerBook G3 with OS X 10.2.6 had that unsupported laptop conducting video chats as well as any newer model.) G3 Mac owners can also use iChatUSBCam to add support for FireWire DV camcorders. With iChatUSBCam increasing the number of iChat-compatible cameras, more Mac users than ever will be available for a little face time.—PHILIP MICHAELS

Opening Up to Windows

First, it was USB Web cams—now, Mac-based videoconferencing is doing away with another barrier, as cross-platform chats come into focus.

For Mac users, the biggest barrier to video chats with Windows users fell when Apple and America Online updated their instant-messaging clients. Now, Mac users who use the iChat AV 2.1 beta can videoconference with their Windows counterparts running AIM 5.5. But one barrier remains: iChat AV 2.1 runs only on Panther. (Similarly, AIM 5.5 requires Windows XP for its video-messaging features.)

SightSpeed (www.sightspeed.com) added OS X 10.3 compatibility when it released its subscription-based SightSpeed Video Messenger 2.0 client this past January. The makers of SightSpeed aren't intimidated by the increased competition from iChat, noting that the Windows version of AIM uses the same low frame rate and high latency as the regular AOL service. SightSpeed offers 30-frames-per-second streaming no matter which platform you're using.—PHILIP MICHAELS

FROGPAD SEES KEYPAD AS A LEAP FORWARD

Key Changes

The QWERTY keyboard has been around for 130 years. FrogPad (www.frogpad.com) thinks that is long enough. The input-device maker has built a one-handed keypad that ditches the QWERTY design for a key layout that it believes is easier to learn and use.

At 5.0 by 3.5 by 0.4 inches, the FrogPad is roughly a fifth of the size of a standard keyboard. But unlike similar shrunken-down keyboards that follow the QWERTY key layout—for example, Matias's $295 Half Keyboard—the FrogPad places its 20 keys in a new order. Vowels are grouped together on the keypad's left side; the other 10 consonants that, along with vowels, constitute 86 percent of the letters used in the English language make up the rest of the keys. To type any of the other 11 letters, just hit the appropriate key and the space bar at the same time. Typing numbers or symbols works the same way—simultaneously press the appropriate key and the Number or Symbol key. Using the FrogPad requires only two fingers at the most, at any given time. For that reason, the company thinks the FrogPad is ideal for people who need to keep one hand free, such as CAD designers and graphic artists.

FrogPad began shipping a $170 Mac-compatible USB keypad in March. (While it doesn't feature Mac-specific ⌘ and option keys, it does have GUI and Alt keys that serve the same purpose.) A $200 Bluetooth version should ship before the end of June.

Handy Device A Bluetooth FrogPad will soon join this Mac-compatible USB model.

FrogPad doesn't think that people will have much difficulty learning to use the keypad. The company says it takes only six to eight hours of training with the FrogPad to type 40 words per minute. And when you think about it, six to eight hours isn't that long of a time to jettison more than a century of keyboarding tradition.—PHILIP MICHAELS

Industrial strength protection for industrial strength Mac users

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Apple Xserve

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MAC-BASED POSTAGE RETURNS

Stamp of Approval

Waiting in line at the post office to send mail isn't anyone's idea of a good time—and for small-business owners, doing so can cost time and money. PC users can print United States Postal Service postage, so why can't Mac users?

For a while, Neopost let Mac users print postage with its Simply Postage products, but it gave up in May 2003. The company says on its Web site (www.simplypostage.com) that it "did not experience the anticipated level of market acceptance."

Endicia (www.endicia.com) hopes to succeed where others have failed by bringing postage printing back to the Mac, with its Endicia for Mac. Currently awaiting approval by the USPS, Endicia for Mac lets users enter the weight of items, import and verify addresses, and print postage from any ink-jet, laser, or label printer. Users must pay subscription fees of $20 per month or $200 per year; they can then buy postage, with no surcharge, using the Endicia software. (A free 30-day trial is available.)

"If you were to go once every two weeks to the post office, with a 20 minute wait, it would pay for itself," says Amine Khechfe, vice president of business development at Endicia.

But Endicia provides more than just convenience. Subscribers can insure first-class mail, print free delivery confirmations, drag and drop addresses from OS X's Address Book, access reports on postage spending, track mail, and perform address verification and Zip+4 service.

Subscribers still have to give their packages to a mail carrier or drop them off at a local post office, but the ability to print their own postage means no more waiting behind someone trying to decide whether to buy the Antique Toys or the Flag stamps.—JENNIFER BERGER

MACWORLD'S GLOSSARY

What It Means: PDF

There's no escaping PDF. Thanks to programs such as Microsoft Word and QuarkXPress, which can generate PDF files, you probably come across Portable Document Format on a daily basis. Less familiar, however, is the PDF acronym followed by an incomprehensible string of characters—for example, PDF/X and PDF/X-1a. These aren't typos; they're PDF subsets. Understanding what the assorted PDF flavors mean can help you create files that are more likely to print correctly when you send your jobs to prepress shops.—TERRI STONE

PDF/X: If PDF is an overpermissive parent, PDF/X is the authority figure that imposes strict ground rules for your own good. While you could create PDF files with elements that don't print well—RGB color and missing fonts, for example—those files won't qualify for PDF/X status. Because different printing scenarios call for different rules, PDF/X has several variations, as described below.

PDF/X-1: These files can't contain form fields, annotations, comments, or images in any color space other than CMYK.

PDF/X-1A: This subset of PDF/X-1 adds OPI and file encryption to the no-no list, but it allows spot colors. PDF/X and PDF/X-1a are best used by U.S.-based newspaper publishers and print advertisers.

PDF/X-2: More flexible than PDF/X-1, PDF/X-2 files can be in the LAB, as well as the CMYK, color space. Documents that are part of an OPI workflow and ICC color managed can also be PDF/X-2, a format common to the packaging industry, both in the United States and abroad.

PDF/X-3: PDF/X-3 files can use spot colors, as well as CMYK, RGB, and LAB color spaces. While PDF/X-3 permits ICC color management, it doesn't allow OPI. PDF/X-3 is suitable for file output on digital presses worldwide.

PRO FILE Q&A

with Peter Tamte

Stop, Thief

Peter Tamte has a problem: people keep stealing his stuff. When his company, MacSoft, released Halo last December, it quickly discovered the number of downloads exceeded the number of sales. Tamte recently spoke to *Macworld* about the adverse effect piracy has on software development—particularly when it comes to Mac gaming.—PETER COHEN

AT A GLANCE

PETER TAMTE Founder, MacSoft; President, Destineer
MAC: 15-inch 1.25GHz PowerBook G4
SOFTWARE: Microsoft Office, Apple Safari, Intuit Quicken

Q: How often has Halo been pirated?
A: From what we've been able to extrapolate, the lost sales are already in the millions.

Q: Is every downloaded copy a lost sale? If I wasn't going to buy it in the first place, am I really stealing it?
A: The bulk of the cost of bringing a game to market is the development cost. Only about 30 percent of a game's price goes toward paying for the packaging and distribution. And I haven't gotten any checks from these pirates for the 70 percent of Halo that they're enjoying.

Q: You've called piracy "the single biggest threat to Mac gaming." Why?
A: I guarantee you that every PC game publisher is going to use Halo's Mac sales as a bellwether for how an A-list action game on the Mac sells. Can the publisher recoup the costs of bringing the game to market? The way you do that is to look at earlier games in a similar genre—this title, Halo in this case, sold X number of units. Stealing the game brings that bar lower and eliminates the number of games that could be brought to the Mac.

More Info:

http://maccentral.macworld.com/news/2004/01/26/piracy/

Peter Tamte joins Aspyr's Michael Rogers and MacPlay's Mark Cottam to discuss piracy and gaming at MacCentral.com.

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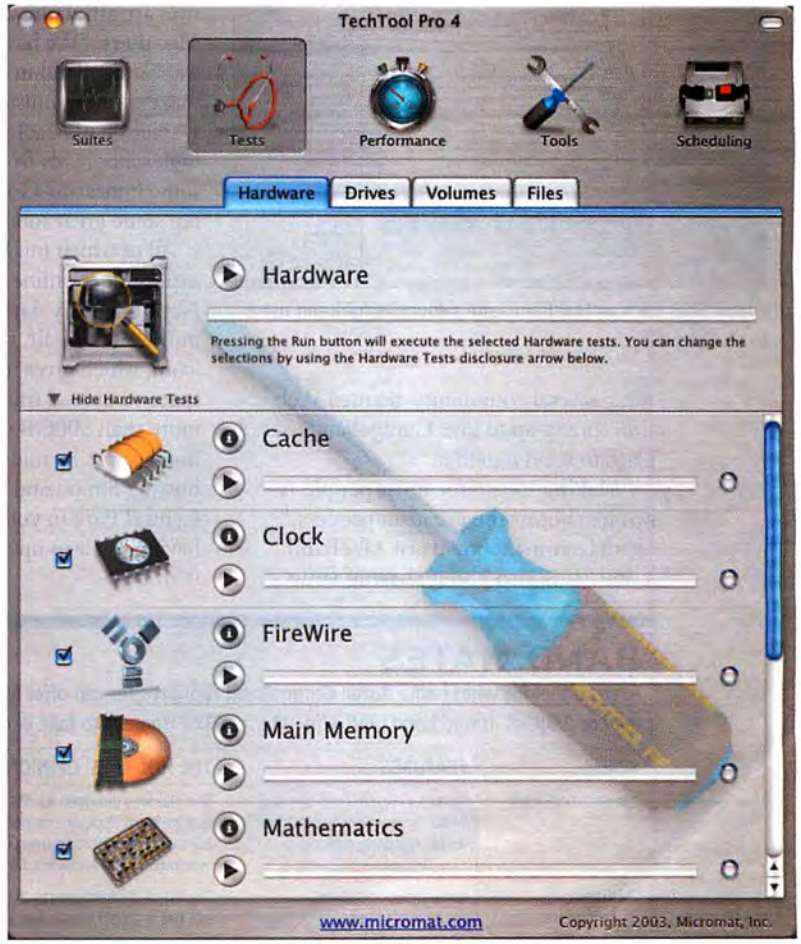

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GARAGEBAND JAM SESSIONS GO ONLINE

Banding Together

GarageBand may bring the power of music creation to your Mac, but unless you can find a way to get your tunes to the outside world, you'll be left searching for an audience.

Even before the newly released Apple program hit shelves as part of the iLife '04 suite, several community-themed Web sites sprang up to give GarageBand users a place to band together.

I Jam Sites such as MacBand.com allow GarageBand users to share music.

"Making music for most people is not just about the creation process," says Heston Liebowitz of MacBand .com. "It is also about sharing your music and seeing how it is received by the world."

Within hours of GarageBand's January debut, Mac music enthusiasts set up virtual garages where musicians could swap loops, upload jams, exchange tricks and tips, and talk about GarageBand developments. Some of these sites are relatively simple community Weblog-style operations for discussing the latest GarageBand news. Others provide free space for people to upload their creations, which listeners can play and rate (see "Band Mates").

No matter the focus, these GarageBand sites are attracting a diverse assortment of Mac users. "We have school teachers who use GarageBand in their music classes to make creating music fun," says Miguel Danielson of MacJams.com. "We have high school kids from Detroit who have some honest-to-God talent and are making some great songs."

All of which might lead to the biggest explosion in online music sharing since Napster's glory days—only this time, the musicians benefit, too. iCompositions .com, which gives users 50MB of free space to upload tracks, had already served more than 300GB of music to half a million visitors by mid-February. That's like hosting Simon and Garfunkel's concert in Central Park in your apartment, without having to clean up afterward.—MATHEW HONAN

BAND MATES

To get a feel for what half a dozen GarageBand support sites can offer Mac musicians, we asked the Los Angeles–based band (and iLife '04 users) The Hoorays to take each site for a spin.

SITE	FEATURES	THE HOORAYS' OPINION
iCompositions.com	forums, song sharing, tips and tricks, product reviews, custom loops, and song ranking	This site was designed for the serious-to-nerdy musician. But the Most Popular Compositions section is probably the most important thing on the site, and it's overwhelmed by the annoying, flashing advertising.
MacBand.com	song and loop sharing	The list of different genres makes it easy to navigate. This site has a simple charm, like an old Hank Williams tune.
MacJams.com	forums, song sharing, tips and tricks, and song ranking	It's well designed and usable, and the music is good—we joined this one and bookmarked it.
MacJukebox.net	forums, song sharing, articles, and tips and tricks	This site is nice to look at but feels as though it was rushed. It could become a cult favorite, like the B-52s before they blew up with "Love Shack."
ShareYourMusic.com	forums, song sharing, and Weblog	This site has a funky design. We like that it posts concert news.
TheGarageDoor.com	tips and tricks	This no-frills page is designed to inform quickly and easily—Blackilicious meets Fugazi—but in Safari, all the content appears in drop-down menus.

HARDWARE BEAT

Bravo II Disc Publisher, from Primera Technology (www .primera.com): This USB 2.0 machine burns CDs and DVDs and prints disc labels at 4,800 dpi, and it comes with a 52× CD-R recorder or an optional Pioneer combo DVD±R/CD-R recorder ($2,195; with Pioneer drive, $2,695).

C510, from Lexmark (www .lexmark.com): Color laser printer prints 8 color and 30 black-and-white pages per minute ($699).

Elura 60, Elura 65, and **Elura 70**, from Canon (www.canondv.com): Three digital camcorders feature optical zooms of 14×, 16×, and 18×, respectively (60, $599; 65, $699; 70, $799).

Epson Stylus Photo RX600, from Epson (www.epson.com): Multifunction device scans, prints, and copies photos ($349).

Phaser 4500, from Xerox (www .xerox.com): Black-and-white laser printer features 1,200-dpi resolution and a print speed of 36 pages per minute ($979).

Phaser 8400, from Xerox (www .xerox.com): Color printer with 2,400-dpi class resolution prints 24 color and 24 black-and-white pages per minute ($999).—COMPILED BY PHILIP MICHAELS

STORAGE BEAT

8× Dual DVD±RW Drive, from LaCie (www.lacie.com): FireWire drive features 8× write speeds and 4× rewrite speeds and ships with Toast 6 Titanium ($249).

BRU LE, from Tolis Group (www .tolisgroup.com): Data-backup program with both an Aqua interface and a command-line console supports FireWire and USB drives, as well as tapes ($129).

MediaBank HS-R, from Miglia Technology (www.miglia.com): The RAID backup and storage hardware adds FireWire 800 support to go along with its existing FireWire 400 configuration (FireWire 400 system: $429 and up, depending on capacity; FireWire 800 system: $449 and up, depending on capacity).—COMPILED BY PHILIP MICHAELS

FAST vs FURIOUS

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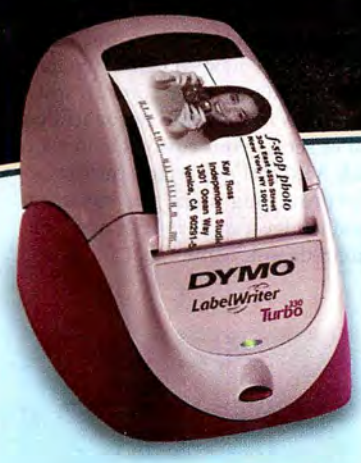

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Business Accounting Packages

Five Applications Serve a Wide Spectrum of Financial Needs

BY JEFFERY BATTERSBY

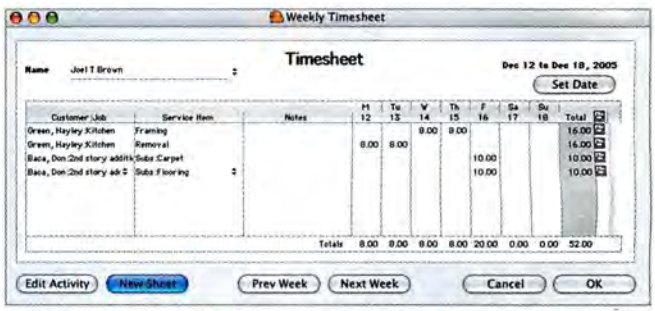
Depending on the kind of business you have, your accounting requirements may run the gamut from extraordinarily simple to unbearably complex. But at the end of the day, you want a package that tracks income and expenses, and that gives you some insight into the past, current, and future state of your business—all with a minimum of hassle.

I looked at five accounting packages: CheckMark Software's MultiLedger 6.0.7, Cognito Software's MoneyWorks Gold 4.0.9, Intuit's QuickBooks Pro 6.0, MYOB's AccountEdge 2004, and Space-Time Associates' TinyBooks 1.1.4. All of them feature an array of accounting tools suitable for a variety of business needs, from basic income and expense tracking to payroll management. And they all offer text or graphical reports. Two of the usual suspects, AccountEdge and QuickBooks, as well as MoneyWorks, are excellent solutions for users with demanding accounting needs, while the inexpensive and aptly named TinyBooks provides good tools for tracking basic income and expenses.

QuickBooks Pro 6.0

When I reviewed Intuit's business accounting package QuickBooks Pro 5.0 last year (♦♦♦; April 2003), the program was not much different from the product Intuit had dropped from production in 1997, and it was significantly less impressive than its Windows counterpart. Unfortunately, one year later, not much has changed. Version 6.0 sports only a few new features and minor improvements. While these are welcome and necessary, I wish it offered more. QuickBooks remains intuitive and easy to use, making business accounting as easy as entering checks in the register of your personal checkbook. QuickBooks is now much better at sharing data files with QuickBooks for Windows (QBW). In fact, its most significant new feature is its ability to open QBW data files, so users can finally transfer data both ways. Getting data files to a QBW user still isn't as easy as giving the person your Mac data file—the procedure with AccountEdge, MultiLedger, and MoneyWorks—although Intuit has made the process clearer by adding a Create A File For QuickBooks For Windows option to the File menu. This option requires that the recipient on the Windows side treat the Mac data file as a QBW backup file and "restore" the data.

QuickBooks' other new features include one-click export of reports to Excel spreadsheets (another boon for cross-platform file sharers), better customization of the program's toolbars, automatic file backups, and the ability to check for software updates from within the program. None of these features will make you stand up and shout, but they are significant improvements over version 5.



New Year, Same Old Using QuickBooks Pro 6.0 is as intuitive as entering checks into your personal register. But its interface, despite some minor improvements, has not changed much since 1997.

MYOB AccountEdge 2004

If you've used previous versions of MYOB's AccountEdge, you won't notice many differences in this version's functionality or interface. But several new features will enhance the way you do business with customers and vendors, and will make it easier to process employee payroll. AccountEdge's updates facilitate the processing of electronic banking transactions. A new MYOB Merchant Account Service allows you to process credit card transactions from within AccountEdge. Once you've set up your customers to use a credit card, AccountEdge retains their information, so processing future transactions is easy. AccountEdge also includes a new integrated direct-deposit feature that allows you

Business Accounting Packages Compared

COMPANY	PRODUCT	MOUSE RATING	PRICE	OS COMPATIBILITY	CONTACT	PROS	CONS
CheckMark Software	MultiLedger 6.0.7	♦♦	$399	9X	800/444-9922, www.checkmark.com	Excellent accounting tools; good reporting; inventory management.	Poor setup process; weak user interface; not user friendly.
Cognito Software	MoneyWorks Gold 4.0.9	♦♦♦♦	$625*	9X	info@cognito.co.nz, http://cognito.co.nz	Easy setup; sophisticated features comparable to those of QuickBooks and AccountEdge.	Account settings designed for use in New Zealand; no U.S.-based customer support.
Intuit	QuickBooks Pro 6.0	♦♦♦½	$300	9X	650/944-6000, www.intuit.com	Improved integration with Windows version; easy export of reports to MS Excel; automatic backups.	Still no feature parity or direct file compatibility with Windows versions; little has changed from 1997 version.
MYOB	AccountEdge 2004	♦♦♦♦	$299	9X	973/586-2200, www.myob.com	Integrated credit card processing; integrated electronic funds transfer; greater customization for multiple users.	New features may be of limited value to some users; intrusive security structure; five-company limit.
Space-Time Associates	TinyBooks 1.1.4	♦♦♦	$49	9X	603/424-6456, www.winograd.com	Inexpensive; easy to use; can export directly to a spreadsheet program.	No support for invoices, accounts payable, or other accounting features most businesses need.

*At press time. Price depends on the value of the U.S. dollar relative to the New Zealand dollar.

30 Business accounting packages
AccountEdge 2004
MoneyWorks Gold 4.0.9
MultiLedger 6.0.7
QuickBooks Pro 6.0
TinyBooks 1.1.4

34 Digital-video editor
Final Cut Express 2

37 Audio-editing program
Peak 4.1

38 Photo Printers
Epson Stylus Photo RX500
Hewlett-Packard PSC 2410 Photosmart All-in-One
Lexmark PrinTrio Photo P3150

42 Video-editing program
MediaEdit Pro

43 Whiteboard-capture device
eBeam System 3 BT

44 Disc-burning package
Dragon Burn 3.1.17

57 The Game Room
Activision Anthology: Remix Edition
Rayman 3: Hoodlum Havoc
Star Wars Jedi Knight: Jedi Academy
Sveerz
Starbase Defender
XIII

65 Mac Gems
DVDxDV
Little Snitch
Rating Bar
Snapz Pro X
Trans Lucy

40 This Month in Digital Cameras
HP Photosmart 945, Minolta Dimage A1, Nikon Coolpix 3700, Olympus C-5060 Wide Zoom, Olympus E-1, Panasonic Lumix DMC-FZ10 Pentax Optio 555, Sony Cyber-shot DSC-F828

to make electronic funds transfers (EFTs) to vendors and process payroll without having to write, print, or sign any checks. Both features require that you pay monthly and transactional fees to MYOB. These are roughly analogous to the fees that businesses routinely pay financial institutions for electronic transfers and credit card transactions.

Earlier versions of AccountEdge allowed you to create groups of users according to job classifications such as accounting or sales; the new version does that *and* lets you create individual users. In the past, the program implemented user access poorly, making it difficult to restrict individual users to specific information. MYOB has made significant changes to AccountEdge's security features. You can now create users to whom you assign individual passwords, and then you can customize their access to the program on a feature-by-feature or even a screen-by-screen basis. MYOB has also significantly improved AccountEdge's form-customization capabilities, which now let you insert a variety of image formats and add new fields to any of the program's forms. You can also customize field location, size, and fonts.

Minor tweaks to other aspects of the program give users greater report customization, better security in a multiuser setting, and a vastly improved user manual. However, a change in the way MYOB expects you to register the application may alienate some people. MYOB says that it now requires AccountEdge users to authenticate the program on a yearly basis, to prove they are legitimate owners. While it's reasonable for MYOB to make sure no one is pirating its product, the company actually forces users to authenticate each company file they create with the program, not to simply authenticate the application itself.

The actual authentication process is simple enough. After one year, AccountEdge prompts you to verify your company information. If you don't authenticate during the 30-day grace period, you will not be able to update information in your company file until you complete the process. (You can still view and print all your information.) In addition, MYOB is now limiting the number of company files you can actively use. If you have more than five active company files, you are required to notify MYOB and pay a $10 fee for each new file you create. This requirement is overbearing and unnecessary.

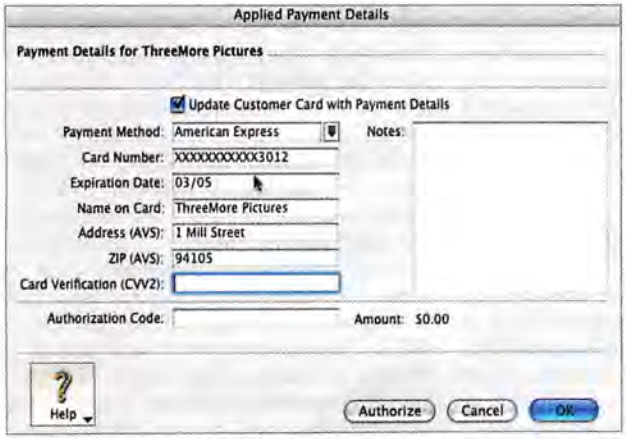
Tiny but Mighty TinyBooks may be basic and inexpensive, but it handles simple accounting tasks with ease.

TinyBooks 1.1.4

Because Space-Time's TinyBooks costs a mere $49, you may not expect much from this business accounting package. But despite its relatively low price, TinyBooks works quite well if all you want to do is track your business's income and expenses. It also lets you collect income and expense data and provides minimal reports based on that information.

TinyBooks has a simple interface: the main window displays a list of the current month's transactions, and a small box at the bottom displays a running total of the current month's income, expenses, and profits. Seven buttons at the bottom of the window allow you to create, delete, or modify transactions; navigate between months; and save or print the transaction list. The only thing that's missing is information on your year-to-date profit.

The program includes extremely limited reporting features. It lets you print either income or expense reports that you can filter by date, expense account, or keyword. You can print, save, or export all of the reports as tab-delimited files, and then import them into a spreadsheet program, such as Microsoft Excel, for further manipulation. However, TinyBooks lacks features for billing customers, printing bills, tracking outstanding customer balances, printing checks, and completing any of the myriad tasks that all the high-end accounting packages can handle. This is fine for businesses that don't require any of these features, but if you plan to expand your company, you may want to consider MYOB FirstEdge (★★★★½; July 2002) instead. For a mere $50 more, you'll own a significantly more functional accounting package that's upgradable to MYOB AccountEdge 2004.



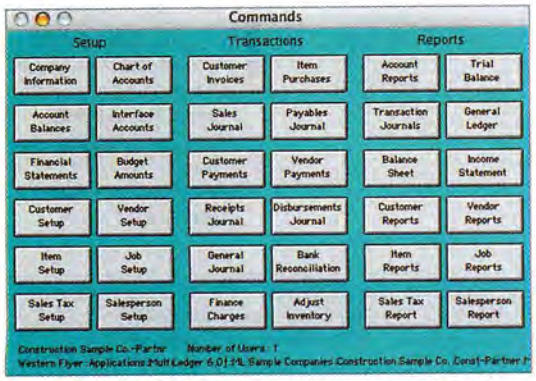
Taking Credit You can now process credit card transactions and electronic funds transfers from within MYOB AccountEdge.

MultiLedger 6.0.7

The first image that comes to mind when you launch CheckMark's MultiLedger is the Hollywood stereotype of a crusty accountant. The program's incredibly austere interface seems the perfect solution for those sour-faced men who sharpen pencils and scowl over pale-green ledger books all day. Unfortunately, MultiLedger's dour-looking front end is only the beginning of its problems: the program's frustrating setup process will leave you feeling miserable before you've entered a single transaction.

MultiLedger's main navigation window consists of 36 buttons organized in three columns of 12 buttons each. Unlike any other major program I reviewed, Multi-

continues



Not Much to Look At MultiLedger's sparse and unintuitive interface masks a difficult setup process.

Ledger doesn't provide any sort of basic setup wizard to help you create a set of accounts. Instead, its 36 buttons, disabled and completely useless, stare straight back at you, without giving you a clue as to what to do next. Selecting New Company from the File menu gives you the option of creating a new company with a set of basic income and expense accounts. The program includes a very limited selection of business-specific accounts, such as Graphic Artist, Restaurant, and Retail Corporation.

When you create a new company, MultiLedger prompts you to save your file. Once you save it, the Company Information button lights up. After you enter some basic information and close the window—which doesn't offer a Save command—the rest of the buttons light up, ready for use. But if you attempt to enter a sales transaction, for example, you'll see an alert box telling you to "set up applicable Interface Accounts" before you can continue. Surprises like this pop up regularly, making the whole process very frustrating. You'll need the manual nearby at all times.

Once you complete the setup, you can easily create new transactions, print or graph reports, and create customized invoices. The program also includes excellent inventory-management tools and can track income and expenses by specific jobs. But the setup process is so painful that it's likely to frustrate most users before they realize the program's benefits.

MoneyWorks Gold 4.0.9

Cognito's MoneyWorks Gold is an excellent, easy-to-use accounting package. You can set it up in a flash, and it's versatile enough to handle anything from an inventory-based business to a rental-management company. The program's only quirk is that, since its developer is based in New Zealand, some of its terminology can seem a bit strange to Americans. Just for example, the account-settings window contains a note stating that the accounts have been created for businesses in New Zealand. This means you'll encounter a few unusually spelled words or have to spend a few minutes editing the account names to reflect American English and terminology. For instance, New Zealanders refer to the sales tax as the general services tax (GST), so you'll want to edit any GST accounts to reflect the U.S. term.

This issue has no bearing, however, on how the program handles your business finances. Like MultiLedger, MoneyWorks has a limited number of predefined account settings, but the lapse is more forgivable in this program because it takes you smoothly through the setup process: you can begin using MoneyWorks in less than 10 minutes.

MoneyWorks has a flowchart interface similar to MYOB AccountEdge's. A button bar at the top of the program's main Navigator window allows you to switch easily between MoneyWorks' program modules, such as Sales, Expenses, Inventory, Banking, and Customers & Suppliers. In each module, context-sensitive options appear in the window's lower portion. For example, if you're in the Customers & Suppliers module, the window displays buttons for creating new customers and vendors, evaluating customer sales, and printing customer statements and shipping labels.

MoneyWorks also includes an excellent collection of reports—more than 70 in all—that give you a firm grasp on your company's financial health. This feature puts the program in the same league as QuickBooks and AccountEdge. The program's drawbacks are its considerable expense and that the company handles all program support via e-mail from New Zealand. While you're likely to get a reply to your query in 12 to 24 hours, this is less optimal than simply calling for tech support.

Silky Smooth MoneyWorks sports a clean flowchart interface that simplifies the way you manage data, and it can be used for any kind of business.

Macworld's Buying Advice

The number and quality of accounting applications available for the Mac have continued to grow since the introduction of Mac OS X. Many are so well designed and so feature rich that it's difficult to nail down any one as the only application you should use to run your business. MoneyWorks Gold 4.0.9, AccountEdge 2004, and QuickBooks Pro 6.0 are all standout packages. These applications make business accounting easy, for new users and professional bean counters alike. TinyBooks 1.1.4 is limited in scope—but it's inexpensive, and it may work well for niche businesses. While MultiLedger 6.0.7 is certainly a capable accounting application, the program's setup process and user interface are so poorly designed and difficult to master that it pales in comparison with all of the other programs. □

TAKING ACCOUNT

Choose the Right Accounting Software for Your Business

Choosing an accounting application affects critical aspects of your enterprise—from how much time you spend entering bills and creating invoices to how much time you spend with your accountant during tax season. To select the best application for your business, create a checklist of the way your business handles transactions such as creating estimates, billing clients for time, accepting credit cards, and maintaining inventory. Once it's down on paper, organize your list according to importance. When you're done, compare your list against the list of features available in the applications you're considering.

For example, if you bill customers for time your employees spend on a job, both QuickBooks Pro 6.0 and AccountEdge 2004 have time-billing capabilities that allow you to enter employee time in a classic time-sheet format. MoneyWorks Gold 4.0.9 doesn't. Instead, you must use a convoluted method that treats time as an inventory item. In effect, you're "selling" your customer an employee's hours. Will this work? Absolutely. But it's sloppy, and if a large portion of your work is billed on an hourly basis, you're better off considering the other two applications.

Having trouble finding applications for your specific trade? Check out industry publications, contact your trade association, or search Apple's Made4Mac Web site (http://guide.apple.com/index.lasso). Fortunately, most applications have a free demo period, so you can kick the tires and take the program for a spin before you plunk down any money for it.

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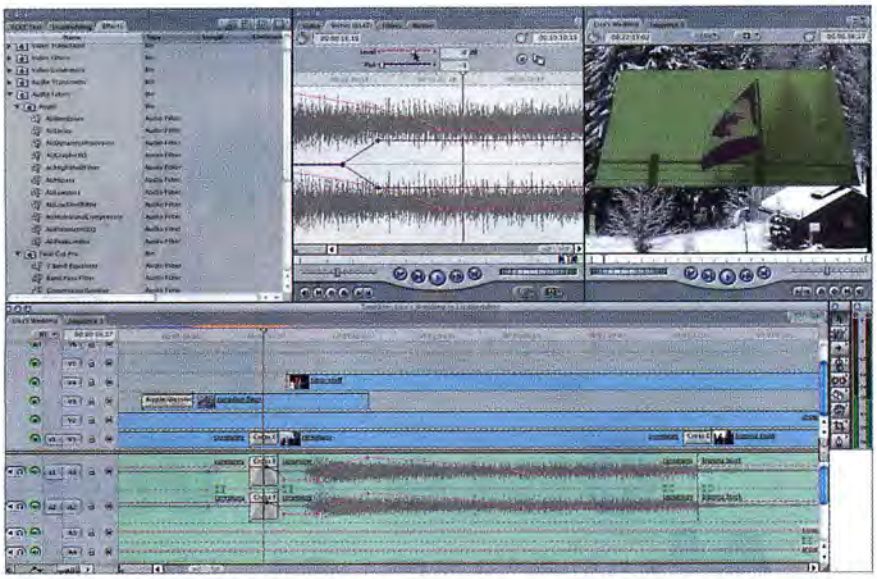
Final Cut Express 2

Intermediate DV Editor Gains Enhancements from Its Pro Sibling

BY JEFF CARLSON

Software companies nearly always build new versions of software on top of old versions, a practice similar to the way you'd add a second story to a too-small house. But in Final Cut Express 2.0's case, Apple moved to a completely new neighborhood, scrapping Final Cut Express 1.0 (★★★★; May 2003) and basing its successor on Final Cut Pro 4 (★★★★; September 2003), which included performance and audio-related improvements, as well as real-time effects previews. Now intermediate DV enthusiasts will benefit directly from these great new features and pay less than a third of Final Cut Pro's price.



Real-Time Everything Final Cut Express 2 boasts RT Extreme for previewing effects, such as this 3-D–rotated overlay (top right), as well as automatic audio keyframing for making rough volume and pan adjustments (center).

Improving from Within

The core characteristics of Final Cut Express 1 remain in version 2: it works only with DV-format footage (as opposed to high-definition or 24-fps input, which Final Cut Pro handles); supports up to 99 video and audio tracks; incorporates some color-correction capabilities and some motion control via keyframes; and offers more-flexible titles, transitions, and effects. It wraps all this in an interface that's nearly identical to what pros use.

But the improvements in Final Cut Express 2 are less about a few new features and more about its strengthened Final Cut Pro 4 foundation. The application is optimized to run on Mac OS X 10.3 (Panther) and on G5 processors, which contribute to its most exciting new feature, RT Extreme. In Final Cut Express 1, you had to render (write to disk) many effects and transitions before you could play them back in the Canvas (the window where you play back your assembled movie).

Now you don't have to wait. RT Extreme lets you see most effects and transitions before rendering. It requires a 500MHz G4 processor (550MHz for portables) or higher, or dual-G4 or -G5 processors of any speed. RT Extreme offers multiple performance settings (Safe RT and Unlimited RT, each with High, Medium, and Low video-quality modes) to accommodate a range of Mac speeds, or to let you specify your preferred trade-off between playback speed and video quality.

I tested RT Extreme on a 1.25GHz 15-inch PowerBook G4. As an example, a color adjustment and 3-D rotation applied on a clip overlay played fine, though it dropped quite a few frames. But playback was good enough to give me an idea of how the final rendered version would turn out.

A New Look

Final Cut Express 2 boasts an improved user interface with added features that make editing easier (see "Real-Time Everything"). You can add customizable buttons to windows for quick access to more than 400 commands. To do so, simply drag and drop a command from the Button List, which also features a handy text-search field for easily locating commands.

You can also resize multiple windows by dragging their adjoining edges. However, this feature had an annoying flaw—it was too easy to resize windows accidentally when I meant to drag a clip's in- or out-points in the Viewer (the main preview window).

You can change the height of individual tracks in the timeline; this comes in especially handy if you like to edit audio tracks in the timeline while displaying their waveforms. The program even gives you timeline controls that let you play only the audio tracks you isolate; you don't have to disable all the other tracks manually to mute them.

An Ear for Quality

Final Cut Express 2 has gained some audio improvements, too. Audio keyframing lets you set volume level and pan values while you're playing back a clip, giving you a rough set of audio edit points to fine-tune later. However, because Final Cut Express makes adjustments in real time, this feature sometimes made me feel as if I were playing some sort of scrolling video game (quick, set the level before the waveform disappears!).

Apple has also implemented its Audio Units (AU) technology in version 2, and it provides 11 AU filters in addition to 16 audio filters from Final Cut Pro. And if you own Apple's Soundtrack application (★★★½; December 2003), you can set scoring markers to identify music cues in Final Cut Express 2, and then export the markers for use in Soundtrack.

Not Quite Captured

Surprisingly, the only real problem I ran into during testing was with a much-touted new feature: recording over time-code breaks. A time-code break occurs when the camcorder encounters blank tape (say, at the end of the last recorded frame), assumes the tape is new, and resets the counter to zero. This happens frequently after people review what they've recorded.

When you use the Capture Now feature, Final Cut Express 2 is supposed to note the time-code break, create a new clip, and then continue capturing. However, in testing with multiple Macs and camcorders, I encountered instances where Final Cut Express aborted the capture process without capturing footage after the time-code break, or else captured the footage but didn't split it into separate clips. (Apple is aware of these problems and is looking into them.)

Macworld's Buying Advice

Even with the capture gaffe, Final Cut Express 2 gives you the best aspects of a professional video-editing application while leaving out features an intermediate or semi-professional user doesn't need. If you're looking for more than what iMovie offers, this is a program you can call home. □

RATING: ★★★★

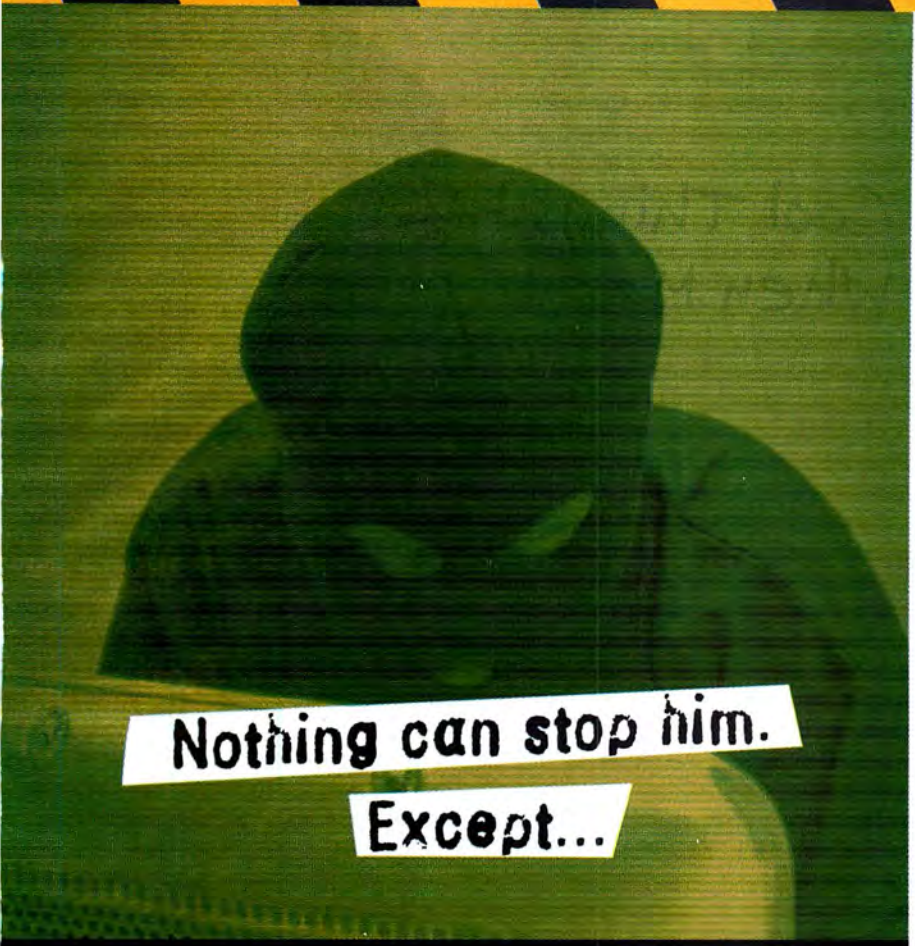
PROS: Professional-level editing; real-time preview of effects; audio keyframing; system optimization.

CONS: Could not capture DV across time-code breaks during testing.

PRICE: $299

OS COMPATIBILITY: Mac OS X

COMPANY: Apple Computer, 800/692-7753, www.apple.com



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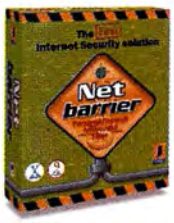

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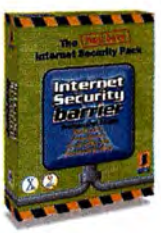

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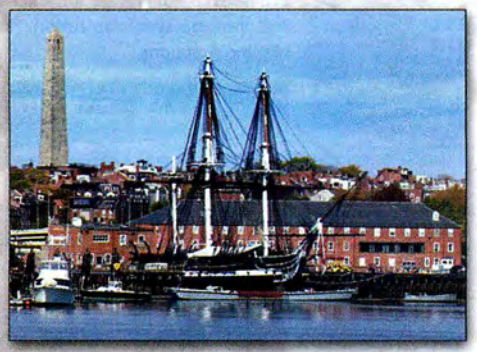

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Peak 4.1

Professional Audio Editor Offers Enhanced Interface and New Effects

BY CHRISTOPHER BREEN

Peak 4.1, the new version of BIAS's two-track audio editor, takes greater advantage of OS X's power than its predecessor, Peak 3 (♦♦♦½; July 2002), did. Harnessing the computing muscle of dual-processor Macs, the program now performs simultaneous actions more smoothly. And it allows you to burn files directly to CD—there's no need for an intervening application. It also has improved performance and, most important, new effects and features sure to interest audio and video professionals.

New Verb Peak's new ImpulseVerb effect allows you to apply warm and realistic reverb to your audio files.

Generous Plug-in Selection

This version of Peak supports Apple's Audio Units effects plug-ins. The program offers 12 Audio Units plug-ins, including Delay, Limiter, and Reverb, as well as more than 30 VST plug-ins. New to this collection of VST plug-ins is a compressor/limiter called BIAS Sqweez.

Peak also includes a new ImpulseVerb effect. Unlike traditional reverbs, ImpulseVerb is a collection of recordings of naturally reverberous environments (a cathedral and a tiled bathroom, for example) that you can apply to a file, making it sound as if it had been recorded in that environment. The program includes hundreds of these effects, which you can preview in real time. In our tests, we found many of these reverbs to be warm and realistic.

But ImpulseVerb is useful for more than simply applying reverb to a sound file. You can also copy a piece of audio into the Mac's Clipboard (the *whoosh* of a jet engine, for example), invoke the ImpulseVerb command, and then apply the spectral characteristics of the copied audio to another selected audio file. This can produce some unique—and occasionally usable—sound effects. To create even more-bizarre sound effects, you might try Peak's new Harmonic Rotate effect, which produces files that sound as if they had been run through a ring modulator and then heavily filtered. As with Peak's other effects, you can preview the Harmonic Rotate effect before applying it to a sound.

With this release, BIAS has bundled copies of Roxio's professional CD-burning application, Jam. This is a nice perk for Peak users who need a mastering-quality disc-burning application. Peak 4.1 is a free upgrade for people who purchased Peak after January 1, 2004.

Interface Improvements

When we last looked at Peak 3, we noted that the program's first OS X–compatible version maintained the features that had always made Peak popular among audio and video professionals. Those features included batch processing of audio files, compatibility with VST plug-in effects, and the ability to edit QuickTime movie audio tracks. Yet Peak 3 had an unintuitive interface, and the earliest revisions of the program often crashed.

With Peak 4.1, BIAS has cleaned up many (though not all) of Peak 3's glaring interface problems and applied a more attractive, Aquafied theme to the program.

Interface Issues

Peak is now a better-looking and better-organized program than it once was. The black-and-white icons and long Preference menu are gone—they've been replaced by brushed-aluminum buttons on a resizable toolbar and a less cluttered Preferences window. Peak also includes a new translucent cursor overlay that displays location and selection coordinates—helpful when you want to precisely select a portion of an audio file.

Yet work remains to be done. The toolbar button icons are as confusing as ever, despite the presence of tool tips (for example, Apple's Eject Disc symbol is used in Peak to invoke the Open dialog box). Peak now includes a drawer where you can view a list of markers, regions, and loops, but the drawer doesn't open wide enough to display all the information in it, and its resize control doesn't work. Peak still lacks contextual menus, which would make it easier to work with. The program's Open Dialog After Launch setting, which is enabled by default, causes the program to pause for nearly a minute before presenting that Open dialog box. This option is better left disabled. And the program tends to litter your hard drive with temporary files that disappear only when you quit the application.

With version 4.1, BIAS has fixed the screen-redraw problems that caused the display of the timeline to stutter. The cursor now moves smoothly and the screen updates quickly when you've enabled the Scroll During Playback option.

Other Peaks

Like version 3, Peak 4.1 is available in different flavors—the $199 Peak DV 4.1 and the $99 Peak LE 4.1. Peak DV 4.1, which is intended for video production, supports batch processing but lacks many of the effects, found in the core program, that are intended for sound designers (both ImpulseVerb and Harmonic Rotate, for example, are missing). Peak LE 4.1 doesn't support batch processing and offers even fewer effects but serves as a fine editor for users who want to clean up audio tracks in QuickTime movies or perform basic audio-editing chores. All three versions of Peak 4.1 include a copy of the last OS 9–compatible version of the program—Peak 3.21.

Macworld's Buying Advice

Despite its interface irregularities, Peak 4.1 is a useful—and powerful—addition to any audio or video professional's toolbox. □

RATING: ♦♦♦♦

PROS: Better performance than previous versions; somewhat improved interface; cool new effects.

CONS: Interface anomalies; lack of contextual menus.

PRICE: $499

OS COMPATIBILITY: Mac OS X

COMPANY: BIAS, 707/782-1866, www.bias-inc.com

All-in-One Photo Printers

Six-Color Photo Devices Print, Scan, and Copy their Way into the Market

BY JAMES GALBRAITH

All-in-one, or multifunction, ink-jet printers—devices that print, scan, copy, and sometimes more—are nothing new. But now some big companies have spawned a new category of all-in-ones: six-color photo ink-jet printers with scanners and media-card slots built-in. The three products we tested—the $249 Epson Stylus Photo RX500, the $324 Hewlett-Packard PSC 2410 Photosmart All-in-One, and the $100 Lexmark PrinTrio Photo P3150—represent some of the first in this category. These devices let you scan, store, print, and copy the photos you have fading away in a shoebox, as well as the shots you'll take this weekend. As an added bonus for digital-camera users, the media-card readers on some of these products let you print directly from the cards themselves, without using a Mac. (The HP can also send faxes.)

These three photo all-in-ones vary in their success: the HP and the Epson show up with high-quality scans, copies, and prints, while the Lexmark falls down on the job.

Not Too Big

Surprisingly, each of these all-in-ones is just a couple of inches larger than a regular photo ink-jet printer, with footprints of about 18 inches square. Their heights range from 9 to 12 inches (with scanner lids down and letter-size paper in input and output trays).

Quick Prints

If you want to make prints straight from your digital camera's media card, the HP and the Epson can accommodate you. When you insert a media card into the HP printer, the 2.5-inch LCD displays the images on the card. From there, you can choose which images you want to print. The Epson has a small, text-only menu screen that doesn't display images. Instead, you print an index sheet to see numbered thumbnails of your photos. You then fill in the index sheet's bubbles with a pen, place the index sheet on the scanner glass, and print your order. Or you can select the photo's number via the menu screen.

Unlike the Epson and the HP, the Lexmark requires that you use your Mac to open and print the images, using an app such as Adobe Photoshop or Apple's iPhoto. In fact, you must have the Mac running any time you want to use the Lexmark all-in-one printer.

Printer Details

Each of the all-in-one printers we tested prints with as many as six color inks, which make for better-quality photos. The HP comes with one black cartridge and a tricolor cartridge; to print photos, you swap out the black cartridge for a $25 tricolor, photo-color cartridge. The Lexmark also uses this three-cartridge scheme, but the black cartridge is the $25 option. The Epson comes with six individual cartridges. As we've noted in previous printer reviews, the upside to this configuration is that when an ink color runs out, you have to replace only that cartridge.

Scanner Details

The scanners on these devices are all flatbeds located on top of the printers. The Epson has two special scanning features the other ones don't have. First, it lets you save your scanned images directly to an inserted memory card for storage or sharing. Second, it has a built-in transparency adapter, so you can scan film, some types of negatives, and slides. It produced good-quality scans—it's perfectly suited to the photo hobbyist.

The Lexmark has one strange design flaw: its scanner bed slants downward in the front. When we used the scanner, we had to tilt the unit backward, place the photo on the glass, close the lid, and set the unit back down. This was the only way to avoid partial scans.

PHOTOGRAPHS BY PETER BELANGER

We tested (from top to bottom) the Epson Stylus Photo RX500, the Hewlett-Packard PSC 2410 Photosmart All-in-One, and the Lexmark PrinTrio Photo P3150.

A scanner's optical resolution may be important if you want to print photos larger than the originals. Each printer had an acceptable resolution.

Because these units have both a scanner and a printer, they can work as black-and-white or color copiers. Overall, we were surprised by how well this function worked in these devices.

In the Macworld Lab

Of course it's important to find out how well these all-in-ones print and scan, but we went

continues on page 45

All-in-One Photo Printers Compared

COMPANY	PRODUCT	MOUSE RATING	PRICE	CONTACT	COLORS	SCANNER'S OPTICAL RESOLUTION	INK-CARTRIDGE REPLACEMENTS	PROS	CONS
Epson	Stylus Photo RX500 ★	♦♦♦♦	$249	800/463-7766, www.epson.com	6 colors, 6 cartridges	2,400 × 2,400	black cartridge, $17; each color cartridge, $12	Transparency adapter; color-correction software; individual ink tanks; very good prints.	No preview display.
Hewlett-Packard	PSC 2410 Photosmart All-in-One	♦♦♦♦	$324[A]	800/452-0900 www.hp.com	6 colors, 2 cartridges[A]	1,200 × 2,400	color cartridge, $35; black cartridge, $20; photo cartridge, $25	Built-in preview display; built-in fax.	Expensive; requires optional photo cartridge for six-color photo prints.
Lexmark	PrinTrio Photo P3150	♦♦	$100	800/539-6275 www.lexmark.com	6 colors, 2 cartridges[B]	600 × 1,200	color cartridge, $38; black cartridge, $25; photo cartridge, $25	Low price.	Requires Mac to be on at all times; scanner bed slanted; significantly lower photo quality than the others; slow scanning and printing.

★ = Editors' Choice. [A] The HP PSC 2410 requires an optional $25 tricolor photo cartridge to print photos. The price listed includes the cost of the photo cartridge. [B] An optional $25 black cartridge is available for the Lexmark PrinTrio Photo P3150.

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THIS MONTH IN DIGITAL CAMERAS

Model	Nikon Coolpix 3700	Panasonic Lumix DMC-FZ10	HP Photosmart 945	Minolta Dimage A1	Olympus C-5060 Wide Zoom	Olympus E-1
Rating	♦♦♦½	♦♦♦♦	♦♦♦	♦♦♦♦	♦♦♦♦	♦♦♦♦
Resolution (in megapixels)[A]	3.2	4.0	5.0	5.0	5.0	5.0
Price	$399	$599	$499	$899	$699	$1,799
Lens						
Zoom (35mm equiv.)	3× (35mm–105mm)	12× (35mm–420mm)	8× (37mm–300mm)	7× (28mm–200mm)	4× (27mm–110mm)	no lens included
Maximum Aperture	f2.8–f4.9	f2.8	f2.8–f3.1	f2.8–f3.5	f2.8–f4.8	no lens included
Media Supported	Secure Digital	Secure Digital/MMC[B]	Secure Digital/MMC[B]	CompactFlash Type II	xD Picture Card, CompactFlash Type II	CompactFlash Type II
Size (in inches)[C]	compact, 3.8 × 2.0 × 1.2	large, 5.5 × 3.4 × 4.2	midsize, 4.8 × 3.4 × 3.4	midsize, 4.6 × 3.4 × 4.5	midsize, 4.6 × 3.4 × 2.6	large, 5.6 × 4.1 × 3.2
Weight (in ounces)[D]	4.6	18.3	13.7	19.8	15.2	23.3
Bundled Software	NikonView	ArcSoft Camera Suite	HP Photo and Imaging	Minolta Dimage Viewer	Olympus Camedia Master	Olympus Viewer, Olympus Studio (demo), Adobe Photoshop Elements
Bundled Hardware	16MB SD card, USB and video cables	16MB SD card, AC adapter, lens hood, USB and video cables	32MB SD card, dock, USB cables	16MB CompactFlash card, lens hood, USB and video cables	32MB xD card, remote control, USB and video cables	USB, FireWire, and video cables
Battery[E]	lithium ion	lithium ion	AA (no charger)	lithium ion	lithium ion	lithium ion
Additional Features	can also use Duracell CP1 lithium batteries, AF illuminator, voice-activated self-timer	optical image-stabilization system, supports add-on lenses (though they are hard to find), electronic viewfinder, hot-shoe	supports camera dock, images can be marked for e-mail or printing, illuminator, unique AF Digital Flash feature, electronic viewfinder, optional wide-angle lens	antishake CCD, hot-shoe and flash sync port, tilt-able LCD and electronic viewfinder, saves favorite settings to mode dial, time-lapse mode, supports Raw image format	passive autofocus sensor and AF illuminator; flip-up rotating LCD; supports add-on lenses, underwater case, and external flash; saves favorite settings to mode dial; supports Raw format	digital SLR, AF illuminator, splash-proof body, supports Raw format, noise- and shading-reduction features camera can be controlled by Olympus Studio software, Four Thirds lens mount
Movie Mode	yes, with sound (maximum length dependent on card)	yes, with sound (maximum length dependent on card)	yes, with sound (1-minute maximum)	yes, with sound (maximum length dependent on card)	yes, with sound (maximum length dependent on card)	no
Image Quality	Very good; can be noisy if ISO is boosted.	Very good; some jaggies and purple fringing.	Very good; some jaggies, noise, and purple fringing.	Excellent; slightly noisy.	Very good; noisy at default settings.	Excellent; images sometimes underexposed.
User Interface	Very good; numerous scene modes a bonus.	Very good.	Excellent; in-camera help system a bonus.	Acceptable; challenging to learn.	Acceptable; can be intimidating.	Very good.
Pros	Compact metal body; robust performance; AF illuminator; VGA movie mode; voice-activated self-timer; impressive macro performance; excellent LCD; plentiful scene modes.	Fast, stabilized 12× zoom lens; very good photo quality; full manual controls; support for add-on lenses and external flash; sharp and large LCD and electronic viewfinder; excellent continuous-shooting modes; well built.	Great value; incredibly easy to use; Digital Flash feature lives up to hype; electronic viewfinder usable in low light; full manual controls.	Great photo quality; sharp 7× zoom lens; very useful antishake system; superb performance, even in Raw or TIFF mode; easy to see electronic viewfinder and LCD, even in low light; excellent battery life.	Nice wide-angle lens (that still has some zoom power); tons of manual controls; expandable; two histograms in record mode; VGA movie mode; excellent battery life; Raw images can be edited in camera.	Robust performance; great image quality; all the benefits of a D-SLR; long battery life; USB 2.0 and FireWire; innovative dust-removal system; AF illuminator; well built; splash-proof.
Cons	Images can be noisy if ISO boost is used; red-eye; limited manual controls; movie mode has a few bugs.	No AF illuminator (and therefore poor low-light focusing); electronic viewfinder can be hard to see in low light; must use manual focus for macro shots in manual shooting modes.	Dated movie mode; slow write speeds; burst mode not usable since screens shut off; audio-video cable costs extra.	Images slightly noisy; not an easy camera to use; unimpressive software bundle and macro mode.	Images noisy at default camera settings; some red-eye; controls can be confusing at first; manual only on CD.	Images sometimes underexposed; expensive compared with other cameras in class; nonstandard lenses.
Contact	800/645-6689, www.nikon.com	800/742-8086, www.panasonic.com	800/752-0900, www.hp.com	201/574-4000, www.konicaminolta.com	888/553-4448, www.olympusamerica.com	888/553-4448, www.olympusamerica.com

Cameras are listed first in order of resolution, and then alphabetically by vendor. [A]The camera's effective resolution, not the CCD's resolution. [B]MMC = MultiMedia Card. [C]Width × height × depth. [D]Camera only unless

Pentax Optio 555	Sony Cyber-shot DSC-F828
●●●½	●●●½
5.0	8.0
$550	$999
5× (37.5mm–187.5mm)	7× (28mm–200mm)
f2.8–f4.6	f2.0–f2.8
Secure Digital/MMC[8]	CompactFlash Type II, Memory Stick Pro
compact, 3.9 × 2.3 × 1.6	large, 5.4 × 3.6 × 6.3
7.2	33.7
ACDSee	Pixela ImageMixer (OS 9 only), Sony Image Data Converter (should be Mac compatible by the time you read this)
16MB SD card, 3-D image viewer, USB and video cables	AC adapter, lens hood, USB and video cables
lithium ion	lithium ion
passive autofocus sensor, 3-D photo feature, built-in color filters, saves favorite settings to mode dial	electronic viewfinder, unique NightShot and NightFraming modes, rotating lens, supports Raw format, manual zoom, focus rings, VGA movie mode
yes, with sound (maximum length dependent on card)	yes, with sound (maximum length dependent on card)
Very good; somewhat noisy.	Very good; high levels of noise and purple fringing.
Very good.	Very good.
5× zoom lens in compact body; full manual controls; great performance; long battery life; impressive macro mode; unique 3-D, color-filter features.	Robust performance; very high resolution; fast 7× zoom lens; well-designed, sturdy body; useful NightFraming feature; VGA, 30-fps movie mode; full manual controls; supports external flash; dual memory-card slots.
Images somewhat noisy; red-eye.	Too much purple fringing in images; not as many manual controls as other cameras in class; competition from D-SLRs; slow Raw-mode performance; software not compatible with OS X.
800/877-0155, www.pentaxusa.com	877/865-7669, www.sonystyle.com

otherwise noted. [E]Battery charger included unless otherwise noted.

BY JEFF KELLER

There's a little something for everyone this month, with cameras that range from a compact point-and-shoot to a full-size digital SLR (D-SLR).

The only point-and-shoot camera in the group is the Nikon Coolpix 3700. This is Nikon's first camera to use Secure Digital (SD) memory cards, and it has an autofocus-assist lamp that helps the camera lock focus in dim light—a feature rarely found on Nikons. Two standout features on the 3700 are a beautiful LCD and a voice-activated self-timer. Image quality is very good, though the automatic ISO boost can add visual noise to images. Red-eye is also an issue; this is common with compact cameras.

If you want a camera with a wide-angle lens, the Olympus C-5060 Wide Zoom is worth a look. It offers a 4× zoom lens that starts at 27mm—you won't often see this in the digital world. Image quality is very good, but noise levels are higher than normal (turning down the in-camera sharpening helps reduce noise). Long battery life and the responsive autofocus system are also noteworthy.

One of my favorite ultrazoom cameras from last year was the Panasonic Lumix DMC-FZ1 (●●●½; October 2003). But the two main issues I had with it were its low resolution and its lack of manual controls. Panasonic has updated the DMC-FZ1. A great new model, the Lumix DMC-FZ10, still has that amazing f2.8, 12× zoom Leica lens with optical image stabilization, but this new camera has 4 megapixels and full manual controls. The super lens and impressive burst modes make the DMC-FZ10 a great choice for action photography. My main gripe concerns how it works (or, more accurately, how it doesn't work) in low-light conditions: it's hard to focus, and the electronic viewfinder can be too dark to see.

The Dimage A1, from Konica Minolta, also has image stabilization, but instead of the mechanism being in the lens, it's part of the CCD itself. The A1's f2.8–f3.5, 7× zoom lens isn't quite as impressive as the lens on the DMC-FZ10, but you'll get an extra megapixel of resolution and many manual controls. The A1 also has great performance, with no delays between shots, even in Raw or TIFF mode. Unlike the electronic viewfinder (EVF) on most cameras, the A1's EVF can be viewed in low light. The A1's lithium-ion battery lasts for a long time, too. As with some of the other cameras I've mentioned, the A1's images are slightly noisy but otherwise excellent.

Another 5-megapixel ultrazoom camera is the HP Photosmart 945. Whereas the Dimage A1 focuses on performance and manual controls, the Photosmart is designed for ease of use. From the in-camera help system to the HP Photo and Imaging software, the Photosmart 945 is a shining example of a camera that anyone can use. I especially like how it lets you select photos for sending via e-mail or printing—right in the camera. Another cool feature is Digital Flash, which brings out detail in underexposed areas of photos. As with the Dimage A1, the 945's electronic viewfinder is usable in low light. However, its downsides include slow write speeds, a dated movie mode, and a fairly useless burst mode.

If you want extra zoom power in a pocket-size camera, you should consider the Pentax Optio 555. It offers a 5-megapixel CCD and a 5× zoom lens, manual controls, and great battery life, all housed in a take-anywhere metal body. The camera also has unique digital color filters and a mode for making 3-D images. Like the Olympus C-5060, the Optio 555 takes good but noisy images. And like the Nikon Coolpix 3700, the 555 has red-eye problems.

If 5 megapixels isn't enough, how does 8 sound? The Sony Cyber-shot DSC-F828 has just about all the bells and whistles you can imagine, and then some. It takes very high-resolution images, but they contain a lot of purple fringing, especially given the camera's 7× Zeiss T lens. In most cases, performance is very good, except in Raw mode, where the camera locks up for several seconds while the file is saved to the memory card. Speaking of memory cards, the DSC-F828 can use Memory Sticks and CompactFlash cards (including IBM Microdrives). The DSC-F828 is a bulky camera, with a unique rotating lens design that lets you shoot from unusual angles—for example, above a crowd. Neither the included Pixela ImageMixer software nor the Raw conversion software is OS X native (Sony promises that a Mac version will be available by the time you read this; in the meantime, Adobe Photoshop's Camera Raw feature will do the trick). The DSC-F828 is compatible with iPhoto, though.

The Olympus E-1 digital SLR uses the new Four Thirds standard, which was designed with Kodak and Fuji. Since it's an all-new system, you'll need to buy new lenses—a problem for the pros that Olympus is trying to lure. Although the Olympus E-1's 5-megapixel resolution is lower than that of other cameras in its price range, it outperforms them in areas such as continuous shooting and build quality. Image quality is excellent, though some of my test photos were slightly underexposed. The Olympus E-1 has a high-tech ultrasonic dust-removal system, which most D-SLR users will appreciate. This camera is a great choice if you have only a small lens collection, or if you're starting out with your first SLR. □

JEFF KELLER is the editor of the Digital Camera Resource Page (www.dcresource.com), which includes reviews and ratings of more than 550 digital cameras, and dvspot (www.dvspot.com), a consumer-oriented DV-camcorder site. Send feedback about this column to reviews@macworld.com.

MediaEdit Pro

Video Editor Is Counterintuitive and Difficult to Use

BY ANDREW SHALAT

At first glance, MediaEdit Pro looks as though it might fill the gap between iMovie 4 and Final Cut Express. It sports slick packaging, a familiar interface, an impressive name, and a reasonable price. The "Pro" at the end of its name gives the impression that this program is powerful despite its low price. After all, iMovie is a little too rudimentary for some people, and Final Cut Express intimidates others. It seems only right that a program would come along to occupy the middle ground between those programs. Unfortunately, MediaEdit Pro does not.

The program does have merits that you won't find in other midlevel movie-editing programs. MediaEdit Pro's painting and drawing tools, which are similar to those in Adobe Illustrator, let you draw directly on your movie clips—a cool feature. MediaEdit Pro also lets you use Apple's iSight to quickly capture video.

The painting and drawing tools are helpful if you're game enough to attempt rotoscoping, or painting frame by frame over your clips. They may even lead to some visually innovative movies. But most casual users won't want to take the necessary time.

Haphazard Organization

MediaEdit Pro has four main windows: Movie Viewer, Clip Organizer, Controller, and Action History.

Unlike iMovie or Final Cut—in which a browser window displays all your movie clips, music, and images—MediaEdit essentially asks you to do your own media organizing. You access the Media Browser catalog utility, which acts as a hybrid of Adobe Photoshop's File Browser and OS X's iPhoto, from the File menu. It lets you preview any images and clips in your system, construct slide shows, do basic image editing, and import your selections into a movie.

Not Quite There MediaEdit Pro's interface is familiar but incomplete. It lacks a ready-made clip repository and simplified access to transitions and effects.

MediaEdit Pro's approach to media organization makes it difficult to find all your disparate music, images, and movie clips, even with its Media Browser. For example, adding music from an iTunes collection is tedious. Without the advantage of a quick search field, as in iMovie, you could spend hours looking for the right tunes.

The Clip Organizer is divided into two tabbed sections: Clips and Timeline. You can order clips by dragging them into place, or edit them by double-clicking on them to launch the Movie Editor, where you'll do most of the detail work—such as adding titles; colorizing clips; assembling transitions and effects; adjusting clip speed; and importing, creating, and adjusting audio tracks. We were a little disappointed with the limited previews for transitions and effects.

You create titles as graphics inside of clips, essentially painting them on a clip in the Movie Editor. This approach may seem flexible, but it's also time-consuming and imprecise. You won't find fancy rolling credits, as you will in iMovie or Final Cut, unless you make them yourself—typical of this application. Some tools are there, others are not, and none is nearly as smooth and complete as iMovie's or Final Cut's tools.

Macworld's Buying Advice

Sometimes it takes something like MediaEdit Pro to make you realize how good iMovie's simple interface is, or how powerful but easy to use Final Cut Express is. MediaEdit Pro lacks many features you'd expect to be prepackaged, such as titles and pan effects. While the program's authors made a valiant effort to create an easy and powerful video-production tool, the fact is that Apple got there first and has set a high standard for ease of use and efficiency. We'd like to see a viable competitor for iMovie, but in light of iMovie 4's latest enhancements, MediaEdit Pro barely makes the cut. □

RATING: ♦♦½
PROS: Drawing and painting tools let you paint directly on video clips; support for iSight video capture.
CONS: Lacks most of the innovations and ease of use found in iMovie 4 and Final Cut Express.
PRICE: $40
OS COMPATIBILITY: Mac OS 9, Mac OS X
COMPANY: macXware (a division of Summitsoft), 800/842-7787, www.macxware.com

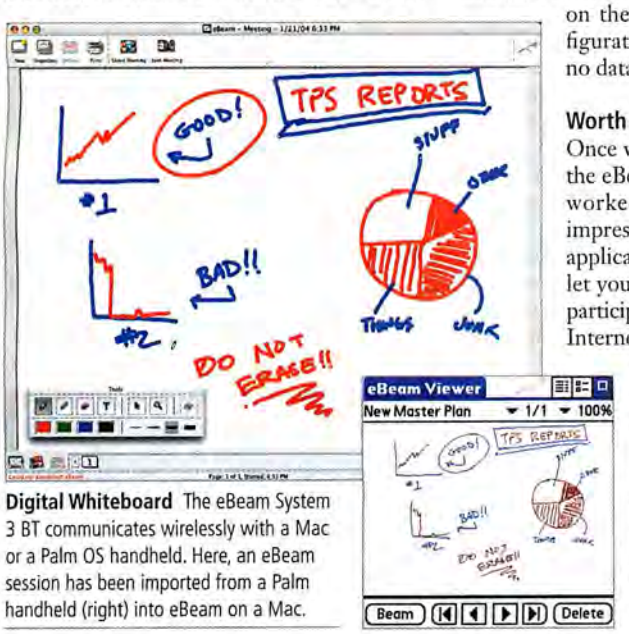
www.InsideMacRadio.com

eBeam System 3 BT

Whiteboard Capture Goes Wireless—for Mac Systems and Palm Handhelds

BY JEFF CARLSON

Wireless is the new watchword for the Mac, and there are many Bluetooth-enabled mice and keyboards that can untangle your computer's snarled nest of cords. This cable cutting is now moving to other devices, such as Luidia's eBeam System 3 BT, a whiteboard-capture device that uses Bluetooth technology to digitally record to your Mac what you write on an ordinary whiteboard. Working wirelessly makes it easy to connect an eBeam session to a Bluetooth-equipped Mac (running OS X 10.2.6 or later), but you can also connect to a Palm OS handheld. The wireless eBeam provides the same level of capture—good but not great—as the USB version of eBeam did (★★★★; March 2003). But with this device, poor documentation made setup unnecessarily difficult.



Digital Whiteboard The eBeam System 3 BT communicates wirelessly with a Mac or a Palm OS handheld. Here, an eBeam session has been imported from a Palm handheld (right) into eBeam on a Mac.

The portable eBeam receiver has suction cups that adhere to any corner of a whiteboard as large as 8 feet by 4 feet. It transmits the relative location of anything you write with dry-erase markers housed in electronic sleeves. The sleeves are pressure sensitive and send a signal whenever you write on the board, but we had to write firmly.

This version of eBeam differs from last year's USB model because of its smart implementation of the Bluetooth transmitter: it's housed in a power supply that you plug into the wall, and the power supply connects to a USB cable that runs to the eBeam receiver. If you're in a location where there are no Bluetooth Macs, you can still connect to the receiver via USB. The eBeam system also includes four dry-erase markers and sleeves.

Confusing Configuration

Setting up the Bluetooth connection to a 15-inch PowerBook G4 was a bit confusing. Unlike with most other Bluetooth accessories, you can't just go to OS X's Bluetooth preference pane or the Bluetooth Setup Assistant and then select the eBeam as a normal paired device with a secure connection to your computer. Instead, you must use Apple's Bluetooth Serial Utility to create a virtual Bluetooth outgoing serial port.

The documentation was sparse and contained an error; eBeam's online help doesn't include Bluetooth information; and clicking on the Help button in the configuration-error dialog box loads no data.

Worth the Trouble

Once we'd set up the connection, the eBeam hardware and software worked without a hitch. The impressively full-featured eBeam application includes options that let you share a session with other participants over a network or the Internet; play back a session from the beginning; and export data to a QuickTime, digital-video, or image file.

We also tested the eBeam with a Bluetooth-equipped Palm Tungsten T handheld. Setting up a connection was effortless. Capturing a session worked well, and we were able to import the session into the Mac eBeam application. Currently, the meeting is sent to just one device; it would be nice if several people could capture a whiteboard session at the same time.

Macworld's Buying Advice

The eBeam System 3 BT adds wireless connectivity and Palm OS support to a device that is typically shackled to your Mac. Despite the glitches in setting up its Bluetooth connection, the eBeam performs well. But the price jump between the USB version ($749) and this version ($1,200) may give you pause. □

RATING: ★★★½
PROS: Smart hardware implementation; good capture; built-in conference capability; Palm OS compatibility.
CONS: Bluetooth setup poorly explained; documentation contains a mistake; marker sleeves need to be more sensitive; expensive; transmits only to one device.
OS COMPATIBILITY: Mac OS X
PRICE: $1,200
COMPANY: Luidia, 650/413-7500, www.luidia.com

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Macworld
The Mac Product Experts

Dragon Burn 3.1

Inexpensive Disc-Burning Program Makes Promises It Can't Keep

BY CHRISTOPHER BREEN

Dragon Burn 3.1.17, an inexpensive disc-burning application from NewTech Infosystems, promises some intriguing features that Mac OS and Roxio's Toast 6 Titanium (★★★★½; December 2003) do not offer. Among these features are simultaneous burning on multiple recorders, multisession DVD-R burning, and conversion of an iTunes playlist's AAC files to AIFF files for an audio CD. Regrettably, too many of its features work poorly (or not at all).

Before citing Dragon Burn's failings, let's talk about what it does well. Unlike OS X or Toast, Dragon Burn lets you load a disc image file into the program and burn it to multiple CD and DVD burners at the same time. This can be a time-saver if you have a couple of CD burners and need to make several copies of a disc. Dragon Burn also makes the creation of multisession CD-R discs—discs you've recorded data to multiple times—very easy. It gives you two recording options when you're ready to record a disc—Disc and Session. Theoretically, all you need to do to create a multisession disc is click on the Session button.

I say "theoretically" because multisession burning is not an option for DVD-R discs and doesn't work properly with DVD-RW media. The program writes the first session to a DVD-RW disc, but when you later insert that disc into your Mac's DVD drive, the drive doesn't recognize it. Worse, I couldn't eject these discs without rebooting my Mac while holding down the mouse button.

Although Dragon Burn 3 lets you import iTunes playlists that include AAC-encoded files and then burn those files as an audio disc, the resulting files sound noisy and distorted. When you rip an audio disc and convert the resulting files to another format, title information changes to a meaningless mix of letters and numbers—Peter Gabriel's "Red Rain," for example, changed to dbxt16531729.mp3.

Making Copies One Dragon Burn feature that *does* work is simultaneous recording on multiple burners.

RATING: ★½
PROS: Simultaneously records to multiple burners; clear multisession interface.
CONS: Multisession DVD burning doesn't work properly; poor AAC conversion; strips titles from converted audio files.
PRICE: $46; download, $40
OS COMPATIBILITY: Mac OS X
COMPANY: NewTech Infosystems, 949/421-0720, www.ntius.com

Macworld's Buying Advice

A disc-burning program—even one priced at around $40—that fails to deliver on its promises is no bargain. If the disc-burning features built into OS X aren't extensive enough for you, spend the money to get a disc-burning application that works—Roxio's Toast 6 Titanium. □

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

THE UTILITY COMPANY
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All-in-One Photo Printers

continued from page 38

a couple of steps further. We wanted to find out whether they could print photos comparable to those from online photo labs, whether getting the best prints required editing images in Photoshop or another application before printing, how well the products would reproduce color images, and how long they would take to print the best photos.

We shot several digital photos and ordered prints from Ofoto and Photo Access, two of our favorite online photo services (see "Choosing an Online Photo Service" in "Hot Shots," October 2003). Then we opened the photos in Photoshop and printed them on each device. In the Print dialog box, we chose whatever color-correction profiles came with the printer: ColorSync for the Epson and the Lexmark, and ColorSmart III for the HP.

When our panel of experts compared these two sets of prints, they preferred the HP and Epson prints to those from the online photo services. The panel praised the HP output for the bright, healthy glow of the people in the photos. The Epson printed a bit darker than the HP, but the color was more consistent throughout. The Lexmark print had overblown highlights and visible artifacts throughout the image.

We also printed the test photos directly from a memory card to the Epson and HP printers. The HP prints were too red—the subjects' skin appeared sunburned. The Epson print was actually slightly better than the photo we printed from the Mac.

To judge general print and copy quality, we printed our standard test image from Photoshop to each printer and made a color copy of it using the all-in-ones' scanners. We compared the printers' output with our high-quality, professionally made proof. The Epson prints were truer to the proof both times, with very nice color fidelity and detail. The panel approved of the HP's prints and copies, but the copies lost some of the fine detail present in the original prints. The Lexmark's reds in the Photoshop print were oversaturated and gaudy. The copy was dark and had a green cast; orange bell peppers printed red; and red items were a dark bloodred.

We also compared prints made using each all-in-ones' two highest-quality settings. Interestingly, our jury found that the Epson's second-highest setting produced better results than its highest, which was too dark. We found hardly any difference between the Lexmark's top two resolutions—neither produced pleasing prints. If we didn't print using the HP's highest setting, faint vertical lines appeared on the prints. Printing the best-looking 4-by-6-inch photo took the Epson 2 minutes and 15 seconds. It took the HP 4 minutes and 25 seconds, and it took the Lexmark 6 minutes and 50 seconds.

Scanning Tests

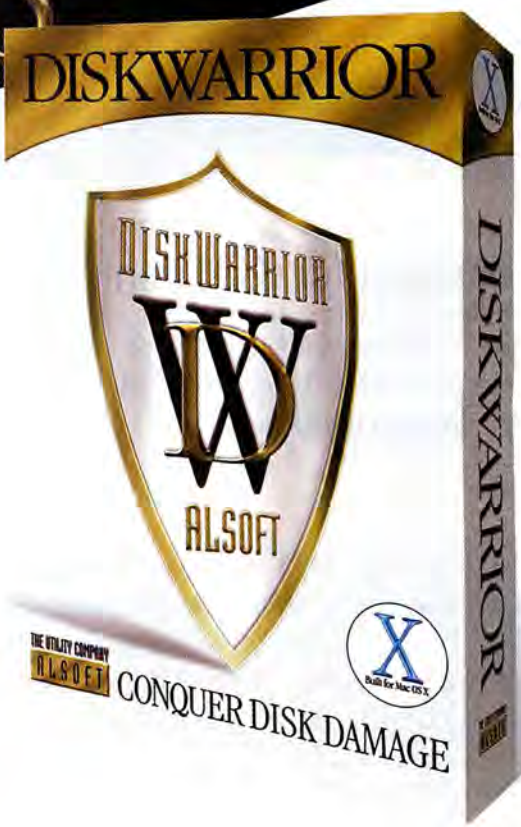
To test each all-in-one's scanner for speed and the ability to capture detail, we scanned a section of our test image at 1,200 dpi. They all did a fine job on detail. The Epson and the HP also did well with colors, but the Lexmark scan, like its prints, suffered from oversaturated reds. The HP finished our 1,200-dpi scan first, in about 26 seconds. The Epson came in at about 35 seconds, and the Lexmark took about a minute.

You can't save every old, mistreated photo, but the Epson gives it a try. It comes with Photo Fix software, which you can enable in the software driver; it tries to restore a faded or discolored photo's original color. We tried it on a couple of photos from the 1960s, and it produced scans that put them back in the right color ballpark, but weren't exactly perfect. The results were comparable to those of Photoshop's Auto Levels command.

Macworld's Buying Advice

If you're in need of a photo printer that can do much more than print, your choices from this batch of products are clear: The HP makes printing photos about as easy as it can get. But with more-accurate colors and an included transparency unit, the Epson takes the prize. The Lexmark, regardless of its low price, is not worth considering. □

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."

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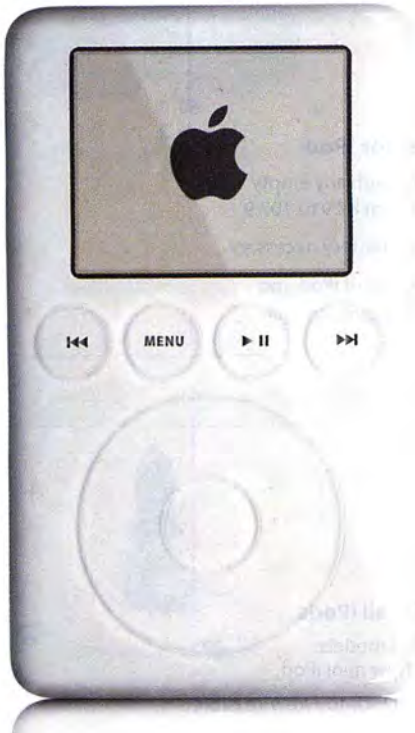


BY CHRISTOPHER BREEN

Making the difficult seem easy is one of Apple's strengths. Take iTunes, the iTunes Music Store, and the iPod. Their intuitive interfaces let us organize, buy, and play music effortlessly. Yet each of these products has hidden powers.

We'll reveal some of those powers and show you how to use them to your advantage. We'll also take you through the tricky process of replacing an iPod battery when it *loses* its powers. And we'll review the newest iPod—the iPod mini.

48 Smarter Playlists
50 Replace Your Battery
54 Review: iPod mini

iPOD AND BATTERY-REPLACEMENT PHOTOS BY PETER BELANGER; iPOD MINI PHOTO COURTESY OF APPLE COMPUTER

SMARTER PLAYLISTS *Organize Music, Network an iPod, and Control Sound Levels*

Once your music library grows past 1,000 songs, managing it can be awkward. But Apple provides an effective organizational tool—the Smart Playlist feature.

The mini Playlist When you plug an iPod mini into a computer that contains an iTunes library larger than the mini's 3.7GB capacity, iTunes offers to create a playlist that contains a subset of the tunes on your computer. The drawback is that when iTunes creates this playlist, it doesn't consider file size.

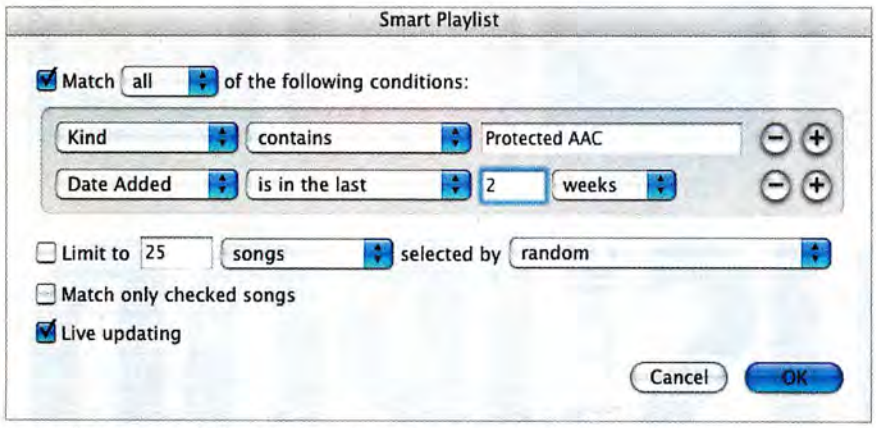
AIFF files devour 10MB of stereo audio per minute; AAC files encoded at 128 Kbps are about 7 percent of this size. Because the mini's storage capacity is limited, you'll probably want to bar huge files from being automatically placed on the mini.

To separate the storage-hungry wheat from the chaff, rate your songs or albums. Open iTunes and go to File: New Smart Playlist. Select the Match All Of The Following Conditions and Live Updating options. Then create a smart playlist with these conditions:

- Kind Is Not AIFF Audio File
- Kind Is Not WAV Audio File
- Kind Is Not Audible File
- Kind Is Not QuickTime Movie File
- My Rating Is Greater Than 3 Stars
- Limit To 3500 MB Selected By Album

Click on OK, and name the playlist. Highlight the iPod in iTunes' Source list, and click on the iPod Preferences button that appears at the bottom of the iTunes window. In the resulting iPod window, enable the Automatically Update Selected Playlists Only option and select the smart playlist you created (deselect any other playlists). Click on OK, and your mini will be updated with the songs in your smarter smart playlist.

The Never Heard Playlist Select New Smart Playlist from iTunes' File menu and configure the top row of pop-up menus to read Play Count Is 0. If you like, enable the Limit To option and limit the songs in your playlist by number of songs, duration of playlist, or cumulative size (10GB, for example). Enable the Live Updating option so that when a



Protecting Protected Files The Smart Playlist feature can help you back up your purchased music.

More great iPod accessories from Griffin

iTalk - iPod listens

The creators of iTrip now introduce the **Griffin iTalk** iPod Voice Recorder. Plug iTalk into your iPod and record voice memos and meetings with its high quality internal mic.

Play back voice memos or music through iTalk's built-in speaker. You can even connect a separate mic or your headphones into iTalk. So talk all you want, iPod will listen.

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- Charges iPod while playing your music
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song has been played once, it's removed from the playlist.

The Subgenre Playlist Some people find Apple's genres a little broad—Classical can encompass the music of Bach, Schubert, and Glass, for instance, or Jazz may lump Chet Baker together with Sun Ra. You can use iTunes' Comment field to create subgenres.

Select all the cuts on an album and press ⌘-I to produce the Multiple Song Information window. In the Comment field, enter the appropriate subgenre for that music—Baroque, Bebop, Italian Opera, or Cool Jazz, for example. Repeat for each album in your library.

Now create a smart playlist that uses the Comment field to distinguish music—such as one that reads: Comment Contains Romantic. For more-specific playlists, add other terms to an album or song's Comment field. You might, for example, enter such terms as piano, concerto, and classical to place all the piano concertos by Haydn, Mozart, and Beethoven into a single playlist.

The Back-Up-Your-Purchased-Music Playlist If you lose the music you purchase from the iTunes Music Store, you lose it for good—Apple won't let you download purchased music a second time unless you pay for it. So you should routinely back up your purchased music. This smart playlist can help you do it.

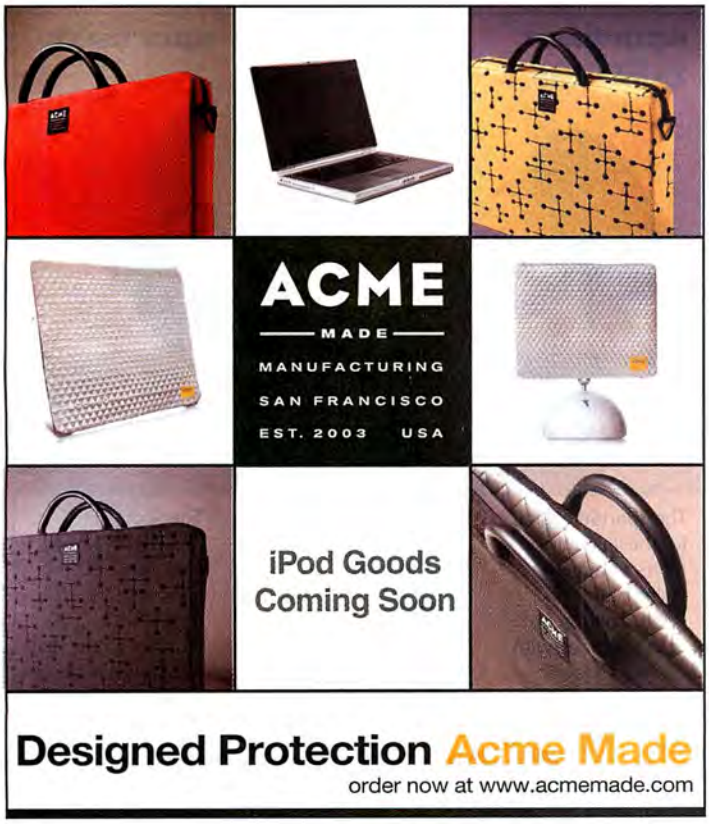
Choose New Smart Playlist and configure the top row of pop-up menus to read Kind Is Protected AAC, give the playlist a name such as Backup Library, and click on OK. This places all the purchased music files in your iTunes library into one playlist. (Your Purchased Music playlist should contain these same songs, but if you've reorganized your iTunes Music folder, some of the music you purchased may not appear in the Purchased Music folder.)

continues on page 52

One iPod, Multiple Macs

Many households include a network of Macs, and those Macs often contain different music collections. Why hop from computer to computer to download that music onto a single iPod? You can move *all* the music stored on your computers from a central Mac. Here's how:

1. Plug your iPod into the Mac you normally connect it to.
2. Mount the volumes from the networked Macs that contain the music you'd like to move to your iPod.
3. Launch iTunes and select Preferences from the iTunes menu.
4. Click on the Advanced tab and disable the Copy Files To iTunes Music Folder When Adding To Library option.
5. Select the Add To Library command from iTunes' File menu.
6. In the Add To Library dialog box that appears, navigate to the mounted volume and then to a folder full of music files. This folder may be the iTunes Music folder but can be any volume or folder that contains music files compatible with iTunes and the iPod (even files on a Windows PC). Note that if you're running Mac OS X, you must have sufficient privileges to access this folder.
7. Click on the Choose button, and pointers to the music files within the selected folder will be added to your iTunes library.
8. Select Update iPod from iTunes' File menu. All the files in your iTunes libraries (even those on remote volumes) will be downloaded to your iPod.



REPLACE YOUR BATTERY

Do It Yourself, Save Money, and Resurrect a Dead iPod

You can fully recharge lithium-ion batteries, such as the one inside the larger iPods, 300 to 400 times before they give up the ghost. When that ghost is gone, you need a new battery. For $99, Apple will replace the battery in an out-of-warranty iPod (www.apple.com/support/ipod/service/battery.html). iPodResQ will do it for $79 (888/447-3728, www.ipodresq.com).

Or you can perform this operation yourself with a replacement battery—which costs between $50 and $70—from outlets such as PDASmart (512/258-4500, www.pdasmart.com) and Laptops for Less (800/556-4490, www.ipodbattery.com).

This operation *will* void your warranty and, if performed improperly, could destroy your iPod. Before you try it, reset your battery monitor by completely draining the battery and then recharging it. (The following instructions do not apply to the iPod mini.)

First-Generation iPod

1. Press and hold the play button to turn off the iPod. Engage its Hold switch so it won't turn on.

2. Hold the iPod upright, facing you. Take the tool that shipped with your battery-replacement kit, insert it between the FireWire port and that port's symbol, and push forward toward the corner of the iPod Ⓐ.

The corner of the back plate should pull slightly away from the front.

3. With the tool wedged between the back case and the front, continue pushing around the corner and down the side of the iPod, working the back plate away from the front. Remove the back plate when it's free.

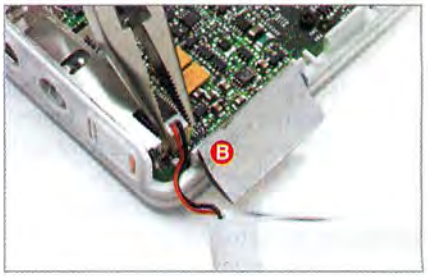
4. The battery sits just under the back plate, atop the hard drive. It's held in place by sticky pads. To dislodge the battery, you must apply some force. While doing so, hold the hard drive in place with your fingers. If you don't, the hard drive is likely to pull up along with the battery, damaging the hard drive's data connector.

5. Fold the battery away from the iPod so you can access the hard drive without pulling on the thin battery cables.

6. Gently pull the hard drive away from the top of the iPod. When the top and bottom pads are free, detach the hard drive's data connector by grasping it and gently pulling the drive away from the connector.

7. Grasp the battery connector on the circuit board Ⓑ with a pair of needle-nose pliers and gently pull up to detach it.

8. Using the replacement battery, reassemble the iPod, making sure that the wires of the new



battery are out of the way (so the back plate doesn't pinch them).

Second-Generation iPod

The procedure for replacing the battery in a second-generation iPod—the iPod that sports the same scroll-wheel controller as the original iPod but, unlike the first iPod, includes a cover for the FireWire port—is almost the same as the preceding procedure. Here are the differences:

1. The back plate wraps around the top of these iPods, so you can't wedge them open from the top corner. Instead, insert your tool about halfway down the side and then run it around the case.

2. The battery is held in place with a piece of silver tape. Detach this tape from the battery.

3. You can detach the battery connector without removing the hard drive. When you lift the battery away from the hard drive, the connector will be in plain view.

Third-Generation iPod

1. Turn off the iPod, and engage its Hold switch so it doesn't turn on while you're working on it.

2. Hold the iPod flat, with its face up, and insert a very small, thin flathead screwdriver between the metal back and the acrylic lip of the iPod, six centimeters (just less than 2.5 inches) from the top right side of the iPod, creating a space large enough to insert the corner of a credit card A.

3. Carefully run the credit card around the edge of the iPod, moving up toward the top left corner first.

4. Push the back plate away slightly to clear the external Hold switch from the internal hold toggle switch. Failing to do this could cause the toggle switch to break.

5. With the headphone port pointed up and the iPod's back toward you, carefully open the iPod's back plate to the right, as though you were turning a page in this magazine B.

Don't pull the back plate directly away from the front case; you could damage an internal audio connector.

6. To detach the hard drive, carefully lift up the EMI shield assembly C, and detach the data connector that sits beneath the copper tape on the left side of the iPod's circuit board.

7. To remove the battery, detach the power connector in the bottom right corner of the circuit board with your needle-nosed pliers D, untangle the power cable, and lift out the battery.

8. To reassemble the iPod, reverse these steps using the new battery. Make sure that the external Hold switch is in the same position it was in when you disassembled the iPod (in the Hold position). If it's not, you could snap the internal Hold toggle switch.

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continued from page 49

Select Preferences from the iTunes menu and click on the Burning tab. In the Disc Format portion of the Burning window, select Data CD or DVD, and click on OK. This allows you to burn your iTunes files in their current format rather than converting them to AIFF format (a format that creates much larger files).

Select your Backup Library playlist and click on iTunes' Burn button. If the number of files in the playlist exceeds the capacity of a CD-R disc, don't be concerned. iTunes will burn as many files as it can to the first disc and then ask for as many subsequent discs as necessary to back up everything in the playlist.

When you've burned that playlist, control-click on it and select Edit Smart Playlist from the contextual menu. Click on the plus-sign (+) button next to the top row of pop-up menus and configure the resulting row of menus to read: Date Added Is In The Last 2 Weeks (see "Protecting Protected Files"). Enable the Live Updating option and click on OK.

Launch iCal and create an appointment two weeks hence called Back Up iTunes. Configure the appointment so it recurs every two weeks, and set an alarm that reminds you to back up your playlist.

If you do lose your purchased music, select Preferences from the iTunes menu, click on the Advanced tab, and be sure that the Copy Files To iTunes Music Folder When Adding To Library option is enabled. Insert each backup disc, select the Add To Library command from iTunes' File menu, navigate to the disc, and click on Open. The purchased music files will be copied from the disc to your Mac and placed in your iTunes music library.

The Moon-in-June Playlist Visit one of the many lyrics sites on the Web—www.lyrictracker.com and www.top40db.com, to name a couple of them—and locate the lyrics to your favorite songs. Copy and paste those lyrics into the Comments fields of the songs in your iTunes library. Create smart playlists based on the lyrical contents of your songs.

For example, a good ol' boy's country playlist might contain songs that include the words *dog*, *truck*, *whiskey*, *prison*, and *pool hall*.

Fresher Air

The iTunes Music Store stocks more than 800 broadcasts of National Public Radio's popular *Fresh Air* interview program and charges $2.95 per show. NPR.org offers a larger selection of archived shows, and does so for free, at http://freshair.npr.org.

These shows, streamed over the Internet in Real Networks' RealPlayer format, cannot be natively saved and downloaded to your iPod. However, you can capture audio streamed to your Mac with utilities such as Ambrosia Software's WireTap and

Air Apparent The Power Search feature is the key to locating the *Fresh Air* interviews you desire.

Rogue Amoeba's Audio Hijack, and you can then download those saved files to your iPod. For more on this process, see "Record Streaming Audio," (*Digital Hub*, March 2004). But if you'd rather avoid that work, head to the iTunes Music Store.

Fresh Air programs can also be hard to find unless you know the secret. That secret is the Power Search function found in the iTunes Music Store's Search pop-up menu.

To find a program that features a specific guest, enter Terry Gross (the name of *Fresh Air*'s host) in the Artist field and then the guest you're looking for—Eddie Izzard, for example—in the Album field, and click on the Search button. The broadcasts that match your search appear in the results area (see "Air Apparent").

Finale

These tips won't prevent you from packing your iPod with the kind of music bound to scare off potential dates at your next iParty. But they will help you manage your iTunes library, extend the life or your iPod, and listen to music the way you choose to. How much more harmonious could life be?

For more tips on iTunes and the iPod, grab a copy of CHRISTOPHER BREEN's *Secrets of the iPod*, fourth edition (Peachpit Press, 2004).

Dealing in Volume

iTunes' Sound Check feature was designed to create consistent sound levels among all the songs in your iTunes library and on your iPod so that, in theory, a Bach violin concerto would be no louder or quieter than AC/DC's "Back in Black." Regrettably, Sound Check's results are often fickle.

To achieve more consistent results, try Manfred Lippert's iVolume (www.mani.de/en/software/macosx/ivolume/index.html). This $7 program analyzes each song and adjusts its perceived loudness to between 80 decibels (dB) and 100 dB, via the Volume Adjustment slider (found on the Options tab of each song's Information window). When you sync your iPod, these volume adjustments are copied to the device (see "Better Than Sound Check").

European iPod owners face a different volume issue. Because of laws that were designed to protect the hearing of French consumers, portable music players sold in the European Union are forbidden from blasting more than 100 dB into the ears of their owners. Therefore, iPods sold in Europe can play no louder than this limit. (iPods sold elsewhere play as loud as 104 dB—two and a half times louder than 100 dB.) But European iPod owners who'd like to accelerate the onset of tinnitus can do so with Hans-Peter Dusel's free utility iPodVolumeBooster (www.bnv-gz.de/~hdusel/tools/iPodVolumeBooster). Rather than adjusting the volume settings of the iPod's individual songs, iPodVolumeBooster makes changes to the iPod's hidden database, to allow higher volumes.

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iVolume keeps your volume consistent.

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REVIEW: iPOD MINI

The Smallest, Lightest iPod Ever Makes a Big Impression. But Is It Worth Its Price?

BY JASON SNELL

It's incredibly small and light, comes in five different colors, and has the lowest price of any product bearing the name iPod. Yet the iPod mini is a controversial product, mostly because it doesn't meet the expectations of people who wanted a truly low-cost iPod targeted at a mass market. But the iPod mini shouldn't be faulted for what it isn't. Instead, let's appreciate it for what it is—an impressive new iPod in a smaller, more stylish package.

What Good Things Come In

It's easy to lay out the iPod mini's specifications: it's 3.6 inches tall, 2 inches wide, and half an inch thick, and it weighs 3.6 ounces. But this list of measurements doesn't do justice to the mini—you really need to pick one up to understand how tiny it is. That there's a hard drive in there, let alone a 4GB one, is difficult to believe. I slipped the mini into my pants pocket and didn't even feel its presence—the original iPod feels like a second wallet.

The mini's anodized aluminum finish is essentially the same as the one on Apple's latest generation of PowerBooks. Unlike the PowerBooks, the mini comes in five colors: silver, gold, green, pink, and blue.

The mini's display is also smaller than the regular iPod's—a 1.67-inch diagonal instead of two full inches. The new display is quite readable, and the mini's menu interface is identical to that of the regular iPod. (And, yes, the two devices also offer exactly the same sound quality.)

The mini's display is one line shorter than the iPod's, so in Now Playing mode, you can see a song's title and the name of its artist—but not the name of its album. That's a reasonable choice, but I'd prefer more-sophisticated display options, such as being able to alternate the artist's name with the album's title.

Taking Control

Although the mini sports a dock connector identical to those on the third-generation iPods, its front button controls are more reminiscent of the first two iPod generations. Like those iPods, the mini has four buttons, located at the top, bottom, left, and right of the scroll wheel. But unlike the early iPods, which featured a second ring of buttons outside the scroll wheel, the mini saves space because its buttons are part of the wheel itself. Press down softly on the wheel, and it gives slightly. Clicking on the iPod mini is a much more reliable tactile experience than pressing the third-generation iPod's set of four electrostatic buttons.

However, the mini's compass-style button design has its own interface limitations. The most glaring is that while navigating the interface involves scrolling from side to side, you use neither the left nor the right button to do that scrolling. Instead, you use the Menu (top) and Select (center) buttons. This makes learning to use the mini a bit more difficult than it should be.

The mini's scroll wheel is still of the touch-sensitive, no-moving-parts variety, and it works well. I found the mini's controls to be slightly cramp-inducing in my

large hand, but several friends with smaller hands said that the mini felt more comfortable than the regular iPod.

The Accessory's the Thing

Although the mini's small dimensions ensure that a whole new crop of iPod cases will soon be in the offing, this new iPod is largely compatible with most size-independent add-ons for the third-generation iPods. For example, the mini's dock connector will fit any device designed for the current iPods. (Apple sells a mini-size dock as a $39 add-on.) But although you can *connect* Belkin's $50 iPod Voice Recorder and $99 iPod Media Reader to the mini, they're incompatible; Apple has omitted voice-recording and media-card–reading functionality from the iPod mini's software.

The mini's headphone and remote-control connectors are identical to those on the third-generation iPod. Unfortunately, the mini doesn't come with Apple's excellent wired remote control. You can purchase one from Apple for $39.

Macworld's Buying Advice

The two most difficult aspects of the iPod mini to judge are its storage capacity and its price, because they're so dependent on an individual user's needs. If you've got a huge music library and rely on picking an obscure track from an even more obscure artist at random, the iPod mini is not for you. If you've got a smaller library, or if you don't need the massive opportunity for serendipity that the larger iPods offer, the mini's 4GB of space will do just fine.

Similarly, your needs will affect how you view the $249 mini's asking price. The original iPod provided only 5GB of storage and cost $399, and it launched one of Apple's most successful product lines.

RATING: ★★★★½

PROS: Extremely small and light; attractive colors; clickable scroll wheel.

CONS: No remote control included; two-line Now Playing screen, incompatible with media-reading and voice-recording add-ons.

PRICE: $249

COMPANY: Apple Computer, 800/692-7753, www.apple.com

Even at $249, the mini is the most inexpensive iPod ever.

The mini isn't the groundbreaking, "$199 (or $149 or $99) iPod" that conventional wisdom said Apple had to announce at Macworld Expo to ensure continued dominance of the digital-music-player world. But it's an attractive, tiny iPod that carries 80 percent of the original's capacity in half its size, and at 60 percent of its price. That's pretty groundbreaking, too. □

iPODS COMPARED

Product	Rating	Price	Display	Size*	Weight	Headphones/Remote	Included Cables	Dock	Case/Clips
iPod mini (4GB)	★★★★½	$249	1.67 inches	3.6 × 2.0 × 0.50	3.6 ounces	headphones	FireWire, USB	none	belt clip
iPod (15GB)	★★★★½	$299	2.0 inches	4.1 × 2.4 × 0.62	5.6 ounces	headphones	FireWire, 4-to-6-pin adapter	none	none
iPod (20GB)	★★★★½	$399	2.0 inches	4.1 × 2.4 × 0.62	5.6 ounces	headphones and remote	FireWire, 4-to-6-pin adapter	included	case
iPod (40GB)	★★★★½	$499	2.0 inches	4.1 × 2.4 × 0.73	6.2 ounces	headphones and remote	FireWire, 4-to-6-pin adapter	included	case

*Length × width × height.

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- Star Wars Jedi Knight: Jedi Academy
- Activision Anthology: Remix Edition
- Rayman 3: Hoodlum Havoc
- Sveerz
- Starbase Defender
- XIII

Feel the Force

IN STAR WARS JEDI KNIGHT: JEDI ACADEMY, ASPYR ANSWERS the question that has tugged at many a Mac user's soul: Which side of the force would you choose? Jedi Academy is the sequel to Aspyr's excellent

2002 game, Star Wars Jedi Knight II: Jedi Outcast. Like its predecessor, Jedi Academy is a 3-D action game that puts you in the battle between light and dark sides of the Force—but it has some important differences. For one, Jedi Academy is not focused on Kyle Katarn, the Jedi-turned-mercenary-turned-Jedi who was finally redeemed in Jedi Outcast. Instead, Katarn serves as your mentor after you crash-land on the jungle moon where Luke Skywalker's Jedi Academy is located.

The Force Is Strong in That One Jedi initiates get plenty of on-the-job training in Aspyr Media's Jedi Academy.

In Jedi Academy, you are Jaden Korr, a Jedi initiate learning to master the ways of the Force—and the decisions you make will determine whether you master the light side or the dark side. You're tasked with discovering what happened to Master Luke's journal, which disappeared after an attack on the Academy, and with learning about the mysterious Cult of Ragnos, which threatens stability throughout the galaxy.

At the game's start, you choose from a variety of species, genders, and appearances for your character. You also get to design your own lightsaber by selecting a hilt style and a blade color. Unfortunately, these choices have no bearing on the story that follows.

Although game play follows a linear progression, it's not a straight narrative; you decide which missions you'll go on. When you complete missions successfully, you'll receive points that you can use to further hone your Jedi skills—a nice change from the previous game, which assigned new skills to players. You can develop light or dark Force skills; for example, you can learn to do mind tricks ("These are not the droids you are looking for"), or you can learn how to choke your enemies to death ("I find your lack of faith disturbing"). All the skills come in handy throughout the game—however, you won't amass enough credit to master them all. This eventually sets you up for a climactic final battle that changes depending on which side of the Force you're playing.

In another nice touch, Jedi Academy lets you play around with weapons, vehicles, and other stuff from the *Star Wars* movies. For example, you can ride a tauntaun—the shaggy, ill-mannered, bipedal critter that Han Solo rode across the snowy wastes of Hoth in *The Empire Strikes Back*—or operate the controls of an AT-ST—the armored miniwalker the Imperials used on the forest moon of Endor in *Return of the Jedi*. These test rides aren't a part of the game's main story line, but it's fun to play with the stuff you fantasized about as a kid.

Jedi Academy moves at a faster pace than Jedi Outcast did. In the process, it sacrifices a bit of character and plot development. My heart bled for Kyle Katarn—he suffered tragedies that seemed almost Shakespearean. By comparison, Jaden's Academy experience seemed more like an episode of *The O.C.* with lightsabers.

Multiplayer gaming is exciting and fun in Jedi Academy—it's much better than that of Jedi Outcast. There are new multiplayer game modes, such as Siege and Power Duel, as well as the classic modes found in Jedi Outcast (Free for All, Duel, Team Free for All, and Capture the Flag). If you decide not to

continues

STAR WARS JEDI KNIGHT: JEDI ACADEMY

RATING: ♦♦♦♦

PROS: You can choose which path to take; new multiplayer modes.

CONS: Story lacks the depth of its predecessor; 3-D engine is getting a bit creaky.

PRICE: $50

OS COMPATIBILITY: Mac OS X

COMPANY: Aspyr Media, www.aspyr.com

Hooked on Classics Relive the glory days of the 1980s with dozens of classic Atari 2600 games.

ACTIVISION ANTHOLOGY: REMIX EDITION
RATING: ♦♦♦
PROS: Lots of classic console gaming for nostalgia buffs.
CONS: Cheesy music and superfluous special effects mar the game play.
PRICE: $30
OS COMPATIBILITY: Mac OS X
COMPANY: MacPlay, www.macplay.com

play online, you can go solo on your own machine by populating your miniserver with computer-controlled Bots.

Jedi Academy runs well, but the Quake III Arena technology it's based on is getting long in the tooth. Although character animation and detail are fine, the scenery and environments—especially open, outdoor areas—lack impressive detail. John Williams's music loops do a lot to help heighten tension when they need to, and they provide familiar ground for Star Wars nerds like me.

Panther users should download the latest patch for Jedi Academy from Aspyr's Web site.

The Bottom Line A worthy continuation of a popular game series, Star Wars Jedi Knight: Jedi Academy hides its faults (tepid storytelling and character development) behind a nifty choose-your-own-adventure interface and improved multiplayer options.

Back to the Future

It's gratifying to see companies such as MacPlay feed the nostalgia of old gaming fogies like me. In its retro game collection, Activision Anthology: Remix Edition, MacPlay gathers more than six dozen games originally developed for the now ancient Atari 2600. Using the power of modern emulation—as well as some truly superfluous bells and whistles—Activision Anthology lets you relive the glory days of swinging Pitfall Harry across an alligator-infested pond. The only thing that's missing is the stiff one-button joystick.

The collection provides a good cross-section of the Activision games that were once available for the Atari 2600. Though some of these games are probably better left in the past—Skeleton and Dragster, for instance—many others, such as Freeway (Activision's answer to Frogger) and the Pitfall and River Raid series, are certifiable classics. What's more, you even get to play some games that never made it onto store shelves.

Activision Anthology revels in retro flavor. Its interface takes you back to the early 1980s, to a bedroom complete with a walnut-veneer TV and a boom box. While you play, you'll listen to pop music hits from the era—eight songs from notable talents such as Flock of Seagulls and Billy Ocean. Thank goodness I could turn it off; the second or third time "Eye in the Sky" by the Alan Parsons Project fired up, I started to get a bit testy. I'll stick with my own iTunes library, thanks.

The games all run well. But the developer, perhaps worried that the old-school graphics wouldn't hold the interest of modern audiences, has expanded the game play with new OpenGL modes, which unlock as you play. These modes—which project the games on spinning cubes, warp images, add motion blur, and so on—don't augment the game play in any way and mainly succeeded in angering me.

Activision Anthology's system requirements are surprisingly steep: a 400MHz G4 or better machine with a 16MB 3-D video card. That's much higher than Stella, a public-domain Atari 2600 emulator I've played. I expect that part of the difference lies in the OpenGL modes that made me grind my teeth.

The Bottom Line It's fun to go back and play the games that gave you your first thumb calluses. But the developer's attempts to jazz up these classics with some modern flair fall flat.

Everybody Loves Rayman

Platform games are one of the most popular forms of console gaming. These action adventures let you navigate a character through a 3-D world, jumping across hazards, beating up bad guys, collecting goodies or power ups, and more. It's rare that they come to computers, though, and rarer still that one shows up on the Mac. But thanks to Feral Interactive, Mac gamers can now test their mettle on a hugely popular platform franchise—Rayman 3: Hoodlum Havoc.

Rayman, for the uninitiated, is a wide-eyed, big-nosed cartoon character whose begloved hands and giant besneakered feet don't actually touch his body. Rayman lives in a strange, otherworldly place called the Crossroads of Dreams, which is occupied by creatures both fantastic and silly. The game's storyline goes something like this: André, a Lum with megalomaniacal delusions, has raised an army of Hoodlums—Lums dressed in what appear to be potato-sacks and wide-brimmed hats—to take over the world. There's only one problem: Rayman's friend Globox—a big, blue, googly-eyed critter—has accidentally swallowed André, and now the

continues

RAYMAN 3: HOODLUM HAVOC
RATING: ♦♦♦♦
PROS: The first appearance of a well-known console license on the Mac; great graphics; fun to play.
CONS: Occasional audio glitches.
PRICE: $60
OS COMPATIBILITY: Mac OS 9, Mac OS X
COMPANY: Feral Interactive, www.feralinteractive.com

Dream Weaver Rayman makes his way through beautiful, mysterious landscapes as he tries to help his friend, Globox.

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Follow the Bouncing Ball Memory and rhythm are essential in Sveerz, a challenging—and musical—puzzle game.

Hoodlum army is after him. It's up to Rayman to rescue Globox and to somehow stop the attack.

To that end, you'll navigate more than 50 levels, including bonus levels that unlock when you complete certain tasks. The environments Rayman and friends find themselves in are a feast for the eyes: swamps, deserts, mountains, forest glades, and huge mechanized monstrosities. The extravagant graphics have an almost dreamlike luminescent quality befitting a place called the Crossroads of Dreams.

Like many console converts, Rayman is easier to play with a game pad, although you can make do with the keyboard and mouse if you have to. The game offers plenty of flexibility in customizing video and audio settings, so you can optimize it for your hardware needs.

I did run into a bit of trouble with Rayman. Audio cues, such as comments from Rayman's buzzing buddy Murfy, occasionally came through in staccato bursts. Feral hadn't posted any fixes or updates at press time.

You can download a demo of the game from Feral's Web site.

The Bottom Line Rayman 3: Hoodlum Havoc is a rare find—a 3-D platform game that runs on the Mac. In addition to offering fabulous production values, the game is a lot of fun to play. It'll make a nice addition to your collection if you haven't already played it on another system.

SVEERZ
RATING: ♦♦♦½
PROS: Musical, colorful game with great party potential.
CONS: Clunky installer; problematic options.
PRICE: $20
OS COMPATIBILITY: Mac OS X
COMPANY: Skunk Studios, www.skunkstudios.com

Simon Says

On the surface, Sveerz, a new release from Skunk Studios, looks like a lot of other action-puzzle games—as colored objects descend, you must group and remove them before the growing pile reaches the top of the screen. But here, fortunately, is where the similarities end.

Sveerz adds a challenging twist to the action-puzzle formula by incorporating music into the game play. In Sveerz, music is more than just repetitive background filler—it's part of the action. To make the colored blobs (the "Sveerz" of the title) disappear, you must match sequences of flashing colors and sounds. (It's reminiscent of Hasbro's classic electronic game Simon, which challenged you to mimic flashing red, yellow, green, and blue lights.) Add to that a timer and two-player support, and you have an extraordinarily addictive and fun game that's also great at parties.

The game offers four modes: a fast-paced arcade mode that uses short sequences of colors and a tight time limit; a memory mode that tests your skills at remembering long sequences; a puzzle mode that challenges you to strategically connect combinations of Sveerz and clear the board; and the most challenging mode of all—Rhythm mode. In Rhythm mode, you not only have to remove the Sveerz in the correct sequence, but also must replicate the rhythm with which the sequence is sung to you. It's like playing the popular Dance Dance Revolution arcade game using your mouse instead of a dance pad.

When you're finished, Sveerz records your name and remembers your high score. It also offers the option of going online to compare your best scores with those of other Sveerz players worldwide.

I did run into a few minor problems. The game insisted on installing itself in

continues

FIRST LOOK | XIII

Feral Interactive really hit the ground running in 2004 with several new game releases, and even more are promised in the next few months. One of the most interesting games waiting at the starting gate is XIII, a first-person shooter with a conspiracy-laden plot worthy of an episode of *Alias* or *24*.

Lucky XIII You're a lean, mean killing machine in XIII. But it's up to you to discover your past.

XIII's roots actually lie in a decade-old French comic-book series of the same name. In the game, you're the purported assassin responsible for the death of the president of the United States. Though you definitely have the assassin's face, you can't remember a thing—not even your identity. All you're sure of is that the roman numeral *XIII* is tattooed on your chest, and that you're really good at killing things. Can you uncover the plot before you're silenced forever?

The game's story line is entertaining, and it's suspenseful enough to compensate for the fact that there's not a lot new here in the way of action. Borrowing liberally from the comic book's look-and-feel, XIII trades hyper-realistic 3-D graphics for the cel-shaded design of a graphic novel. The results are both unique and refreshing. The game also features voice talents of celebrity actors such as David Duchovny from *The X-Files*, *Batman*'s Adam West, and hip-hop star Eve.

XIII supports multiplayer gaming online or over a LAN. Feral has even managed to include some multiplayer content that was previously available only in the game's console releases—a little extra taste that our PC counterparts didn't get.

BETA TESTED

XIII
PROS: Neat cel-shaded graphics; interesting conspiracy plot.
CONS: First-person shooter aspects are old hat.
PRICE: $50
OS COMPATIBILITY: Mac OS X
COMPANY: Feral Interactive, www.feralinteractive.com

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Leave No Man Behind

A 1992 humanitarian mission became a military operation against oppressive warlord Mohamed Farrah Aidid in 1993. Army Rangers, Marines, Night Stalkers, Navy Seals and Delta Force ultimately brought him down. In Delta Force Black Hawk Down, experience 10 extraordinary months in Somalia as a member of the U.S. Special Operations Forces.

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STARBASE DEFENDER
RATING: ♦♦♦♦
PROS: Classic arcade game with an updated look.
CONS: Becomes challenging too quickly.
PRICE: $20
OS COMPATIBILITY: Mac OS 9, Mac OS X
COMPANY: Bigger Planet, www.biggerplanet.com

Alien Invasion The sky is full of aliens in Starbase Defender, an arcade-style action game.

my Applications folder, forcing me to manually drag it into my Games directory instead. And despite choosing Smooth Singers as my Voices option, I always ended up with the Sveerz Tones when I started a new Arcade game. However, I was able to change this option once the game started, so it was a minor annoyance.

The Bottom Line Sveerz is a unique addition to the puzzle-game genre. It's definitely worth the time it'll take to download it and try it out—especially if you're looking for a fun party game.

Memory Lane

Bigger Planet may not be the most prolific game developer on the planet, but it has a knack for making really nifty games. Now the developer has self-published a new shareware title called Starbase Defender, which harks back to the good old days of coin-op gaming.

While Starbase Defender borrows a bit from arcade classics such as Missile Command, Rip-Off, and others, it's certainly not stuck in the past. With 3-D graphics, interesting effects, and an electroclash soundtrack, this game has a modern flair while winking back to that classic era for inspiration.

In Starbase Defender, you're charged with protecting six glowing Cores, which are essential to the survival of your station. Alien ships are, of course, hell-bent on stealing them. And if the aliens grab all six, the game is over.

To fend off the invading hordes, you have an arsenal of three swiveling cannons, as well as shields that can withstand direct hits from missiles and other projectiles. When the fighting gets particularly tough, you can activate your Nova weapon to temporarily slow down your opponents and to give yourself a bit of a breather.

But you won't rest for long. With 18 different bad guys and 70 waves of attack culminating in an epic confrontation with the alien fleet's admiral, Starbase Defender will keep you on your toes. The pace of the game ramps up quickly after the first few levels. In fact, some gamers may have trouble keeping pace.

Starbase Defender is an odd contradiction. Although it sports extremely simple game-play mechanics—basically you're just pointing and clicking on points in the sky—it requires some deft skill. You have to time your shots just right by tracking where each ship is going. And you must simultaneously make sure your defenses don't get pummeled by incoming bombs and protect inbound ships. It's quite a juggling act, and it's not for the faint of heart.

The Bottom Line Starbase Defender is a fun mix of old and new. While it may not hold your attention for hours, it's a great pick-me-up with lots of challenge. □

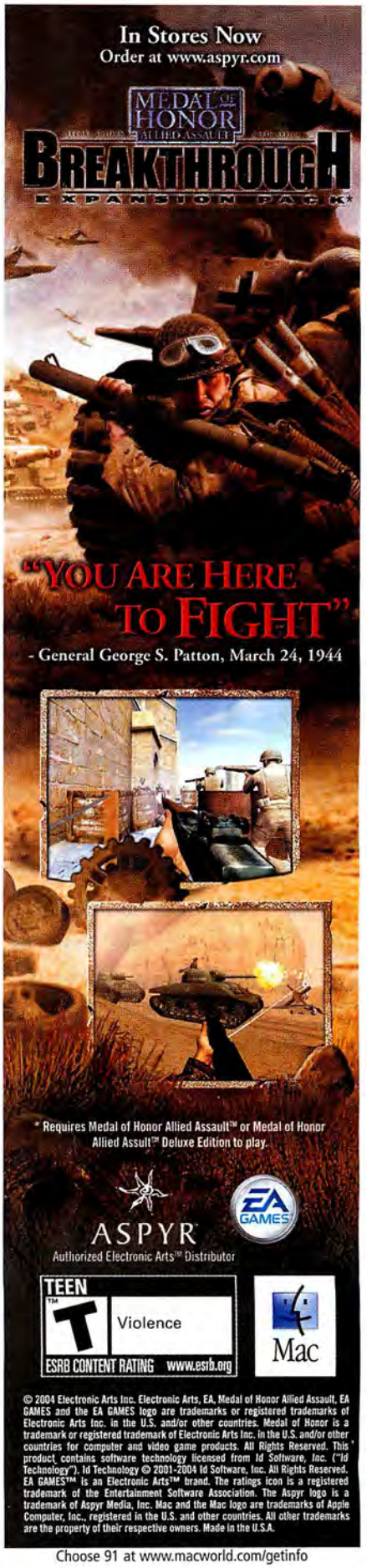
MacCentral.com Senior Editor PETER COHEN is easily mistaken for a Sveerz when he adorns his bald pate with yellow paint.

Recently Reviewed

TOYSIGHT ♦♦♦♦½

Freeverse Software, www.freeverse.com; $35

In February 2004's *Game Room*, I previewed a beta version of ToySight. This offbeat game collection works with the iSight (or any FireWire camcorder) and lets you use gestures to control what's happening on screen. ToySight is now out, and it's definitely worth a look—it's also a great way to make your Mac the focus of your next family game night or party.



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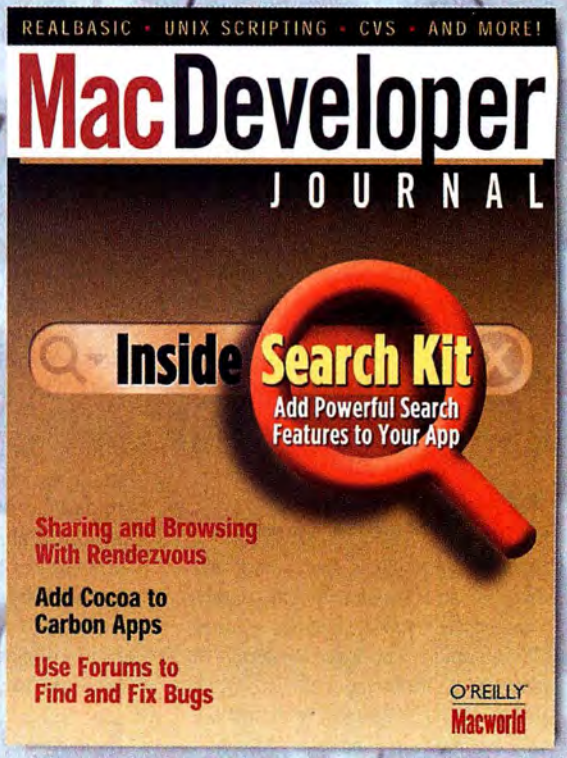
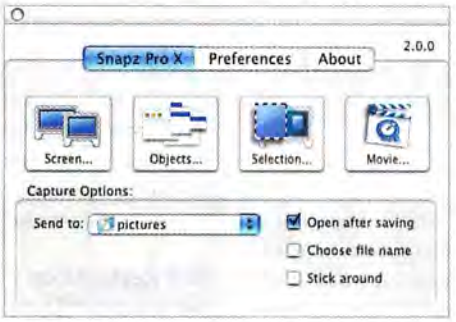


* Mac Developer Journal frequency: 4 issues per year. Future issues will be delivered digitally by the Zinio Reader.

> Snapz Pro X
> Trans Lucy
> Rating Bar
> Little Snitch
> DVDxDV

Screen Savings

MAC OS X INCLUDES WAYS TO TAKE SCREEN CAPTURES, BUT as with many other built-in features of the operating system, third-party products improve on the basics. For many years, the standard has been Ambrosia Software's Snapz Pro, and we were very pleased when the OS X version came out (★★★★½; January 2002). With the release of **Snapz Pro X 2.0** (★★★★★; screenshot-only version, $29; movie version, $69; upgrade, $20; www.ambrosiasw.com), Mac users have even more to be happy about.



Celluloid Hero The new Snapz Pro X 2.0 lets you capture anything on your screen—even if it's moving.

Snapz Pro X lets you capture an entire screen, objects (singly or in groups), or a selected area, in most common file formats (TIFF, JPEG, and PDF, to name a few). You can include borders and watermarks, create thumbnail icons, and choose color depth and compression levels. Some of these features have been around for a while, but the new Live Preview mode lets you see exactly how your screenshot will look, including all the options you've applied, before you actually take it—a big time-saver.

The improvements to Snapz Pro X's image-capture component alone make it worth its price. But what will blow you away is its *movie*-capture ability, which has been significantly improved since version 1.0. You can now record full-motion video and audio (the latter from your Mac, an external mike or input, or both) of action on your Mac's screen, at up to 30 frames per second in millions of colors. When you're done recording, you choose the video-compression format from your QuickTime-compatible codecs, along with frame rate, color depth, and data rate (useful for creating smaller videos for the Web or for e-mail messages), as well as audio-compression settings. You even get a real-time preview of the movie as it's being rendered, something the app does very quickly.

Snapz Pro X's interface has also been substantially overhauled; it's now easier to perform basic actions, but you still have quick access to more-advanced features. If you need to capture your screen, Snapz Pro X 2.0 is the tool to use.

Readily Transparent

Speaking of your screen, if you've ever tried to watch a DVD while working, you know that unless you have multiple displays, it's a constant battle for screen real estate. Either you have to keep switching back and forth between your work and DVD Player windows, or you need to make one or both windows so small that you can't really see either very well.

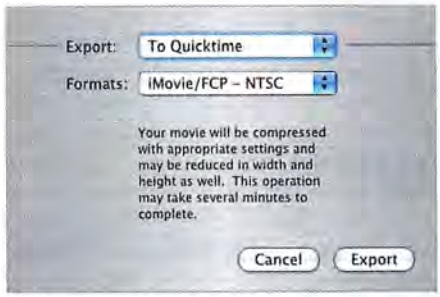
CE Software has taken an interesting approach to this problem with its $15 **Trans Lucy 1.0.1** (★★★½; www.cesoft.com). Using OS X's Quartz Extreme technology in ways Apple probably never imagined, Trans Lucy makes your movie translucent and sticks it right on top of your other work—you can still see, and use, other applications through the haze of your movie. (Note that your video card must support Quartz Extreme for translucency to work.) If you want to temporarily view the movie in all its glory, simply move the mouse over the Trans Lucy controller. And if having your movie on top of other windows

continues

Movie Magic Who says you can't work and watch a movie at the same time? With Trans Lucy, you can.

isn't your thing, you can instead choose to view it floating over your desktop but behind other applications.

Trans Lucy's controller offers most of the features of Apple's DVD Player and adds jog dials for opacity and scrubbing. (If you have a mouse with a scroll wheel, you can use the wheel to control those functions.) You can also control the player via user-defined hot keys.



DV Recovery Using DVDxDV, you can recover the video from the iDVD projects you deleted long ago.

Trans Lucy gives new meaning to the term *multitasking*—and it's an impressive demonstration of the power of Quartz Extreme, combined with a bit of ingenuity.

First Rate

I can be somewhat obsessive when it comes to rating my iTunes songs, mainly because ratings can be used in smart playlists. However, setting the ratings for songs can be a hassle—even iTunes' Dock menu requires a couple of steps. Beverage Software's $5 **Rating Bar 1.1** (★★★★; www.beveragesoftware.com) is just what I was looking for. It displays the rating (if there is one) of the current track in the menu bar—just click on a star to set or change the song's rating. One cool way to use it is to create a smart playlist in iTunes that consists of unrated songs, and then use Rating Bar to rate each song as it plays.

Cast Your Vote Rating Bar is the easiest way to rate your iTunes tracks.

Your Own Whistle-Blower

Nowadays it seems as though more and more applications are phoning home—surreptitiously contacting the developer's (or other) servers for various legitimate and not-so-legitimate reasons. In addition, Trojan-horse applications can send a hacker your personal or computer-related data over the Internet. If these types of things concern or annoy you, Objective Development's $25 **Little Snitch 1.1** (★★★★½; www.obdev.at) may put your mind at ease.

I Smell a Rat Little Snitch tells you everything that's going on behind your back.

Little Snitch acts as your own private security guard, watching outgoing network connections. If the app detects a connection attempt that wasn't obviously initiated by you, up pops an alert with the name of the offending application and the IP address and port to which the app is trying to connect. You decide whether to allow or deny the connection—once, until the application quits, or forever. You can also decide whether to apply that decision to just that IP address and port, any port on that server, or the same port on any server—or to allow or deny *any* connections by that application. For example, you may want to give your e-mail client permission to connect to any server, forever, so that it can always get your e-mail, regardless of the e-mail account you check.

Little Snitch takes a bit of patience as you configure it, one connection at a time, to your preferences. But once you get past the initial training, you'll see its dialog box only when an app—good or bad—is trying to connect behind the scenes.

DVD Restoration

You used iDVD to create a DVD a few years ago, and now you'd like to spruce that DVD up with a new theme or some additional titles. Or perhaps you'd like to use its video in another movie, but you no longer have the DV files on your hard drive. Because of how DVD-Video discs are put together, you can't just copy files off the disc and reuse them. You could recapture all the material (assuming you still have the tapes) and start from scratch, but the $25 **DVDxDV 1.07** (★★★★; www.dvdxdv.com) can extract video and audio from your DVDs for editing in Apple's iMovie, Final Cut Express, or Final Cut Pro.

To get your digital footage back, you simply insert your DVD and then choose File: Open DVD. DVDxDV will display each track on the disc, and let you preview audio and video contents (though not at the same time). You then select a whole track or set in- and out-points, choose Extract: New Movie, and choose your export format—iMovie/Final Cut (either NTSC or PAL) for DV, or Expert, which provides access to all your QuickTime codecs. Then sit back and watch DVDxDV restore the contents of your DVD.

Note that DVDxDV doesn't decrypt commercial DVDs and that you'll suffer a loss in quality when you transcode your video. However, this program may prove to be invaluable when you need to regain otherwise-lost footage. (An $80 Pro version, which offers a number of more-advanced features, is also available.) □

Contributing Editor DAN FRAKES (www.danfrakes.com) is the author of *Mac OS X Power Tools, Panther Edition* (Sybex, 2004) and an editor at MacFixIt.com. Send your thoughts on this column, or on things you'd like to see in future columns, to macgems@macworld.com.

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iLIFE '04

HOW DOES IT STACK UP?

AS YOU USE APPLE'S iLIFE PROGRAMS, YOU begin to suspect that you can do anything. The programs' simple interfaces and tight integration let you ignore pesky concerns about talent, so you can set your inner director, photographer, or DJ free. And with the release of iLife '04, you can also get in touch with your inner musician—thanks to a music-recording studio called GarageBand.

But to get the updated versions of iPhoto, iMovie, and iDVD, and the new GarageBand, you'll need to shell out $49 for the suite. (iLife '04 is free with new Macs.)

Because not everyone uses iLife for the same reasons, we've put together separate reviews of each new iLife application. (For our take on the whole package, see "Putting a Price on iLife.")

GARAGEBAND

Music-Making Software Is iLife's Newest and Coolest Component

BY CHRISTOPHER BREEN

At the risk of giving away this review's punch line, let me state from the very beginning that GarageBand is the hippest, easiest-to-use, and most empowering creative application to come from Apple since iMovie. With a fast Mac, even people who have never played a note can produce professional-sounding musical tracks. And in the hands of musicians, GarageBand is a useful musical sketch pad and a terrific rehearsal tool.

But let's not get carried away. GarageBand is hardly groundbreaking. Macs have been in professional and home recording studios for years, and they've run applications that can do everything GarageBand can do (and a lot more)—recording and playing MIDI data, recording and editing digital audio, adding effects to live instruments, and (recently) stringing together prerecorded audio loops to create a piece of music.

What makes GarageBand so revolutionary is that Apple has combined the most accessible elements of these programs into one highly approachable and highly *affordable* application that is useful to both the tin-eared and the conservatory-trained.

THE POWER OF THREE

GarageBand comprises three discrete musical components: prerecorded audio loops of both traditional and synthesized instruments, MIDI tracks created with software instruments (software synthesizers that you control through a MIDI keyboard or GarageBand's on-screen keyboard), and digital audio tracks for recording real instruments or vocals through the Mac's audio port or that of an audio interface (see "Center of Attention," March 2004, for more details).

All three components display as separate tracks within GarageBand's main timeline. You can add as many tracks as you need in order to complete your composition—for example, you could lay your own guitar riffs over several instrument loops.

TIP

BOUNCING TRACKS If your Mac chokes on too many GarageBand tracks, do what the pros of old did and combine multiple tracks in one track (a process called *bouncing*): Create as many tracks as your Mac allows, mix them to your satisfaction (balancing volume so they can still be heard when you add other tracks later), and export them to iTunes. Create a new GarageBand session, and then drag the exported file into GarageBand's window to import the recently merged track. Record additional tracks. Repeat as necessary until you've completed your project.

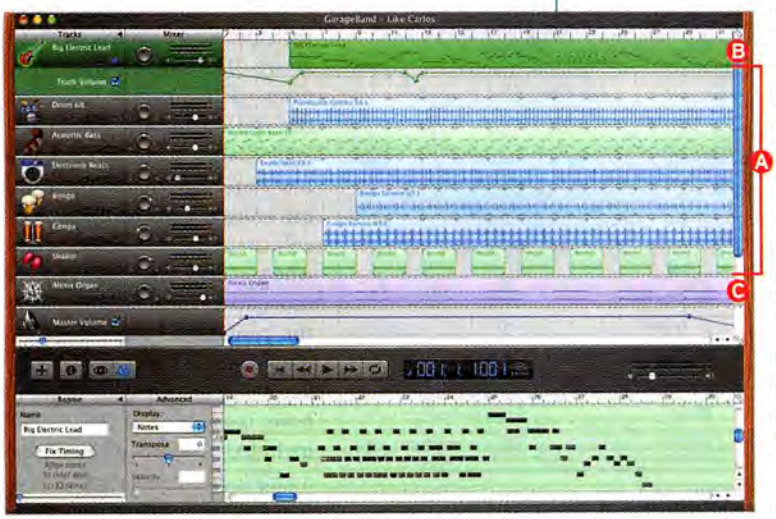
Inside the Main GarageBand window, you can move blocks of music, extend or shorten loops, and adjust panning and volume. Double-clicking on a track opens an editing pane where you can transpose (change the pitch of) your track and, in the case of MIDI files, change the velocity (loudness) of selected notes.

GarageBand's interface couldn't be easier to understand, and the quality of its loops is reasonably good (though variety is limited, in regards to time signatures, key signatures, and genres). Clicking on the browse button opens a pane in which you can select from the available loops for the time and key signature you designated when you first created your tune.

Apple has made it a cinch to locate the loops you'll like. You can select sounds in this browser pane by instrument (Piano, Bass, Drums, and Guitar, for example), genre (Rock/Blues, Electronic, and Country, for instance), and mood (such as Cheerful, Intense, and Relaxed). Click on a loop once to audition it, drag it into the main window to create a track, and stretch it out for as long as you'd like it to last. Just add additional tracks to build a song—what could be easier?

MIDI and digital audio tracks are just as easy to insert. Click on GarageBand's Add (+) button, and a window opens that lets you choose Software Instrument or Real Instrument—digital audio tracks that include effects appropriate for the kind of instrument (or vocal) you intend to record.

The program includes enough software instruments to cover the basics and a bit more—bass, continues



Making Tracks GarageBand lets you create three kinds of musical tracks—prerecorded loops A, MIDI tracks using software instruments B, and digital audio of real instruments C.

GARAGEBAND

RATING: ★★★★½

PROS: Extremely easy to use; cool amplifier-simulation effects; good loops, software instruments, and effects for the price.

CONS: Shortage of digital audio loops in a variety of keys; few loops for time signatures other than 4/4; very limited import and export options.

PRICE: as part of the iLife '04 suite, $49

OS COMPATIBILITY: Mac OS X

COMPANY: Apple Computer, 800/692-7753, www.apple.com

GARAGEBAND JAM PACK

GarageBand provides a decent selection of the basic instruments, loops, and effects you'll need in order to create professional-sounding pieces of music. When you're ready to go beyond the basics, there's Apple's $99 GarageBand Jam Pack. It includes more than 2,000 additional loops in a variety of styles—seventies rock, funk, dance-club beats, folk, and a fair smattering of world percussion loops (using non-Western instruments such as the saz, the sabahar, the balalaika, and the santoor). Also included are more than 100 additional software instruments, including a new grand piano, a 12-string guitar, a vibraphone, organs, drums, synthesizers, and basses. You'll also find 100 additional effects and 15 amp simulations.

Jam Pack fills in the sounds and loops offered in GarageBand. For example, Jam Pack includes richer string and horn patches. It also provides a far better selection of acoustic guitar and rock organ sounds (though it would be nice if Apple allowed you to engage the rotating-speaker effect with the Modulation Wheel in these patches). The sampled Bösendorfer grand piano, unfortunately, isn't a great improvement over GarageBand's Yamaha piano. It offers a mellower sound than the Yamaha, but like the GarageBand piano, it was sampled at too few volumes.

Those who prefer not to tweak GarageBand's Real Instrument effects presets will be impressed when they see how many new presets appear after they install Jam Pack. However, some of these presets are only marginally different from others. For example, the String Ensemble preset offers a touch more reverb and emphasizes high frequencies a bit more than the Warm Strings preset.

Guitar players are sure to be thrilled to learn that Jam Pack adds 15 new amp-simulation effects. These effects are based on the same four simulations in GarageBand—British Gain, British Clean, American Gain, and American Clean—so you could re-create many of these presets in GarageBand. But installing Jam Pack saves you that drudgery.

JAM PACK
RATING: ★★★★½
PROS: Nicely expanded set of synthesized sounds; some very funky grooves; expanded set of effects templates.
CONS: Piano lacks subtlety; near duplication of some effects.
PRICE: $99
OS COMPATIBILITY: Mac OS X
COMPANY: Apple Computer, 800/692-7753, www.apple.com

Macworld's Buying Advice

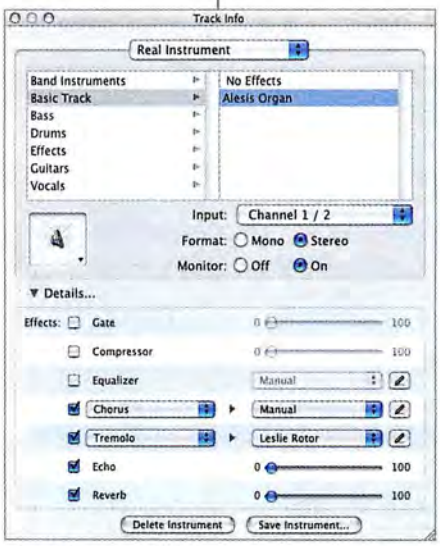
GarageBand offers a solid collection of loops, instruments, and effects. However, when you've exhausted GarageBand's offerings and are ready to extend your tonal palette with richer instruments, funkier and more exotic loops, and a broader variety of effects presets, reach for Jam Pack.

drums, guitar, horns, mallets, bells (but, oddly, no marimba or vibraphone), organs, keyboards (including electric and acoustic piano), strings, synthesizers, and woodwinds are represented. The quality of these sounds varies. The bass, guitar, drum, organ, and electric piano sounds are close to the real things. Typical of most synthesizers, the horn, woodwind, and string sounds are thin and unrealistic. The acoustic piano sound is bright—which helps it stand out in a mix of instruments—but in a solo setting, its tone is harsh and lacks dynamic subtlety.

EFFECTIVE EFFECTS

The real-time effects built into GarageBand's Real Instrument component are particularly nice. The most touted of these effects are the amp simulations that let you plug a guitar into a Mac and sound as though you were wailing away through a Marshall or Fender Twin Reverb amplifier. But amp simulation is only one flashy effect. GarageBand has a variety of effects presets for specific instruments or vocals. For example, to record a solo saxophone, you can select Band Instruments: Solo Sax from the Real Instrument window, and appropriate equalization and reverb will accompany the recording.

I say *accompany* because the effects aren't recorded with your performance. GarageBand records tracks *dry* (without effects), but it lets you listen to your performance with effects applied in real time. This feature is extremely helpful because monitoring a performance with effects tends to make people sing or play with more confidence (the "singing in the shower" syndrome). If you like what you're hearing, you're less likely to worry about how you sound, and you can concentrate instead on the feel of your performance. After you've recorded a track, you can decide whether to change or remove these effects.



Very Effective With GarageBand, you can leave the stomp boxes at home. The program includes a complement of common instrument effects.

CONS FOR PROS

Professional musicians will find GarageBand useful for creating simple musical sketches—laying down a basic drum-and-bass groove, for example, and improvising over that groove. In this regard, the program is also a helpful practice tool—it can substitute for an absent backup band.

But if you have greater musical aspirations, you need to be aware of GarageBand's restrictions. The program lets you transpose its loops, but digital audio loops moved more than a few steps sound unnatural and can stutter. This makes it difficult to use these loops in songs where you occasionally need to move to a chord far away from the root chord (transposing a loop based in the key of C to the key of G, for example). It would have been nice if Apple had included versions of its digital audio loops in a variety of keys to avoid this problem.

If you do work with the included loops, you'll have lim-

ited options when you venture outside of the default settings, 4/4 time and the key of C. Although you can choose 5/4 time in the Time Signature pop-up menu, the program includes no loops in this meter. Similarly, 6/8 time is barely represented, with a few instrument loops but no drum loops (GarageBand Jam Pack does include four analog-drum-machine loops in 6/8 time).

GarageBand's import and export options are also severely limited. For example, you can currently export songs only as AIFF files.

To export a *subset* of the tracks in your GarageBand tune, you first have to isolate the tracks you want and then choose Export To iTunes from the File menu. To import audio files saved in AIFF or WAV format, you can drag the files into the GarageBand window. You can also drag MP3 files into GarageBand, which converts them to AIFF. (GarageBand doesn't support AAC files.)

Although you can't directly import MIDI files into GarageBand, Bery Rinaldo provides a tool for doing so with his free Dent du Midi (http://homepage.mac.com/berynaldo). Drag a MIDI file into the program, and it is converted into separate GarageBand-compatible tracks that you can drag to the program's main window.

Apple promises that upcoming versions of its professional music applications, Logic Express and Logic Pro, will be able to read GarageBand files (and, presumably, to let you export the programs' MIDI tracks). However, I hope the first major update to GarageBand supports importing and exporting of standard MIDI files, so I can use the MIDI tracks I create in GarageBand in any MIDI application.

And even though Apple recommends a G4 processor or faster if you want to use GarageBand's software instruments, the program can be sluggish or unresponsive on single-processor G4 Macs that have 800MHz processors or lower. Apple's professional loop-based music application, Soundtrack, doesn't suffer from these kinds of slowdowns and errors, which suggests that GarageBand could be better optimized.

TIP

MIDI OVERDUBBING When you record software instruments in a looped GarageBand track, you can continue to add to your recording as the track loops (this technique is called *overdubbing*). To build a drum track one drum at a time, for example, first lay down the beats for a bass drum. On the next pass, press the key assigned to the snare-drum to overdub the bass-drum sound. On subsequent passes, add the hi-hat, tom-tom, and cymbal sounds. GarageBand can also overdub some controller data, such as the Pitch Bend and Modulation wheels on a MIDI keyboard.

MACWORLD'S BUYING ADVICE

Given the wealth of things that GarageBand does well and the power it places in the hands of people who never imagined that they could create original music so effortlessly, I can forgive many of the program's shortcomings. For many people, GarageBand alone is worth the price of iLife '04.

continues

M-AUDIO KEYSTATION 49e

M-Audio's $99 Keystation 49e is a USB MIDI controller that sports 49 velocity-sensitive plastic keys, spanning four octaves, from C to C. It's bus-powered, so the power that operates the keyboard is provided by the Mac it's plugged into. And the Keystation 49e does not require additional drivers. However, unlike many of the inexpensive keyboards sold at music stores and warehouse outlets, the Keystation makes no sound on its own. Any sound it controls must come from the machine it's plugged into (your Mac running GarageBand, for instance).

The keyboard's controls are as sparse as you'd expect from an inexpensive MIDI controller; it has a Pitch Bend Wheel, a Modulation Wheel, a volume slider, two octave keys for changing the keyboard's range, and an Advanced Functions button for altering the keyboard's behavior (sending MIDI on a specific channel or changing the function of the Modulation Wheel, for example). This sparseness is fine for the likes of GarageBand, which doesn't let you tweak many MIDI functions, but it's not appropriate for programs such as Ableton's Live and Propellerhead's Reason. For these programs, a batch of controller knobs and sliders for twiddling the many on-screen controls is helpful.

The ports on the back are just as austere. Here you'll find an input for a sustain pedal (pedal not included), a USB port, an AC-adapter port for the optional power supply, and a MIDI port for when you want to connect the keyboard to a MIDI device such as a drum module or synthesizer.

Although the Keystation is a fine input device for players who want to create a MIDI drum or guitar track, or comp a few electric-piano chords with one hand, pianists accustomed to having a full 88-key complement at their disposal will find themselves hemmed in by the four-octave limit. These people will likely be pleased, however, that the keyboard's action (the pressure necessary to push down a key) is stiffer than that of many inexpensive plastic keyboards.

Macworld's Buying Advice

This keyboard has a lot going for it—a simple setup, a decent feel, and an attractive price. Unless you require a keyboard that makes sound on its own, has a full set of keys, or boasts a horde of knobs and faders, the Keystation 49e is a good value—and a great companion to GarageBand.

KEYSTATION 49E
RATING: ♦♦♦♦
PROS: Easy setup; attractive price.
CONS: Pianists may feel hampered by small keyboard; no sustain pedal included.
PRICE: $99
OS COMPATIBILITY: Mac OS 9, Mac OS X
COMPANY: M-Audio, 626/633-9050, www.m-audio.com

iPHOTO 4

Despite New Features, Photo Manager Falls Short of Its Potential

BY ADAM C. ENGST

iPHOTO 4

RATING: ★★★½

PROS: Improved performance; Rendezvous photo sharing; new slide-show controls; powerful organizational capabilities.

CONS: No selective import; limited support for multiple iPhoto Library folders; problems with sharing among multiple users of the same Mac.

PRICE: as part of the iLife '04 suite, $49

OS COMPATIBILITY: Mac OS X

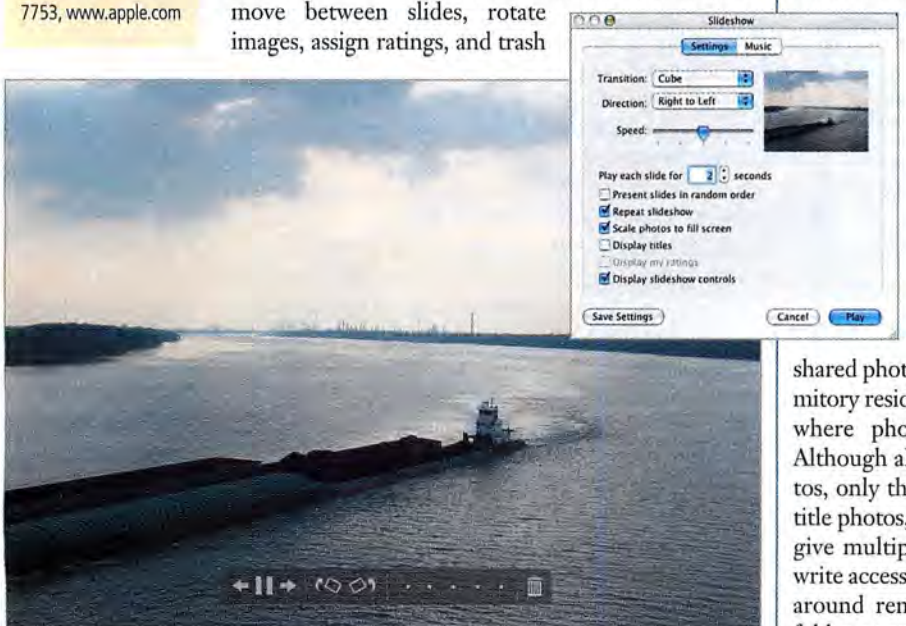
COMPANY: Apple Computer, 800/692-7753, www.apple.com

With the release of iLife '04, Apple's iPhoto photo-management program made the leap from version 2 to version 4. However, its features didn't cross quite the same distance. Although iPhoto 4 offers significantly improved performance and some useful additions, it still lacks features you'd expect from a serious photo manager—especially since you now have to pay for it.

OPTIMIZED ORGANIZATION

Importing digital images into iPhoto can be frustrating; iPhoto's Import command automatically downloads every image on your digital camera's media card and places the photos under the heading of a single film roll—even if those photos span several months of holidays, for example. iPhoto 4 addresses this issue by letting you edit your library's film rolls. You can drag photos from one film roll to another, or select several related photos and put them in a new film roll. However, iPhoto still lacks a quick and easy way to download just one or two photos from a larger set.

Once your photos are in iPhoto 4, the program lets you easily sift through the new additions. The new Display Slideshow Controls option in the Slideshow menu adds a subtle toolbar to your slide shows, letting you move between slides, rotate images, assign ratings, and trash worthless pictures (see "Slicker Slide Shows"). To eliminate the tedium of listening to the same song over and over, you can select an entire iTunes playlist to accompany your slide show. And a new Batch Change feature lets you quickly apply comments and change the names or dates of many selected photos at once.



Slicker Slide Shows When you activate the Display Slideshow Controls option in the Slideshow window (top), iPhoto displays a translucent toolbar (bottom) that simplifies culling, rotating, and rating your photos.

On the downside, iPhoto 4 still doesn't offer a way to export metadata such as keywords or ratings—so you can't back up data or transfer it to a different program. It's hard to justify putting work into creating metadata when you don't know whether you'll be able to use it even a few years from now.

iPhoto 2's performance was nothing short of lousy—so lousy that many users divided their huge stashes of images between multiple iPhoto libraries, to help ease the program's burden. But thanks to some serious speed improvements, most tasks in iPhoto 4 are smooth and fluid. Unfortunately, Apple doesn't provide a built-in way to merge multiple libraries, for people who no longer require them.

To help you sort through your massive photo collection, iPhoto 4 has *smart albums*, special albums that constantly update their contents based on criteria you set—including date ranges, personal ratings, keywords, and associated text. As interesting as Smart Albums are, selecting photos based on any criterion other than date or file name requires that you regularly file, rate, rename, or add keywords to your photos, which may be more work than you want to invest. More broadly useful are several built-in smart albums that organize your photos by date ranges you define.

Still missing from iPhoto, however, is support for hierarchical albums, which would let you organize subfolders of different vacation photos within a larger Vacations album—similar to the Finder's nested folders.

SHARING PHOTOS

One of iPhoto 4's most interesting features is Rendezvous-based photo sharing. Like iTunes music sharing, photo sharing gives other users on your network read access to your photos and lets them copy images to their own iPhoto libraries. iPhoto's photo sharing is ideal for people who want to retain sole control over their shared photo collections, such as office workers or dormitory residents. It's less successful in a family situation where photos are considered common property. Although all family members can see the shared photos, only the person sharing them can create albums, title photos, or assign keywords. There's still no way to give multiple users on the same computer read and write access to the same iPhoto Library; the best workaround remains storing the shared iPhoto Library folder on an external hard disk or other shared volume.

MACWORLD'S BUYING ADVICE

iPhoto 4 has some welcome improvements. But its new price and missing features won't woo users away from other photo-editing and cataloging programs. Still, even at $49, iPhoto 4 is an essential upgrade for anyone who relies on iPhoto to manage a large photo collection. People who use iPhoto only occasionally for its few unique capabilities, such as creating hardcover albums, may be happy staying with iPhoto 2.

iMOVIE 4

DV-Editing Software Is Nondestructive but Still Slow

BY JEFF CARLSON

When Apple released iMovie 3 as part of iLife last year, the user-friendly video-editing application landed with all of the grace of a belly flop. For many users, iMovie 3 was glacial, unresponsive, and buggy. In fact, it wasn't until version 3.0.3, released six months later, that the program's performance improved enough to make it a viable video editor. And even then, several significant bugs, such as audio glitches during export, continued to plague some users.

In contrast, iMovie 4 is more of an amateur swan dive: beautiful and graceful for the most part, but still in need of improving its form. Apple has added some welcome new features—most notably Direct Trimming—and improved the overall editing experience. But while it's faster than its predecessor, iMovie 4 still suffers from performance issues.

DIRECT TRIMMING

Until version 4, iMovie was a *destructive* video editor: when you cut unwanted frames from a clip, those frames were moved to iMovie's trash. The only way to regain this footage later, if you discovered that you'd made a mistake or that you needed additional frames, was to use the Restore Clip Media command—assuming, of course, that you hadn't emptied iMovie's trash in the meantime. But the Restore Clip Media command resurrected the original clip in its *entirety*, even if you needed only to gain two or three seconds of footage.

With the introduction of Direct Trimming, iMovie 4 joins the ranks of *nondestructive* editors such as Final Cut Pro and Final Cut Express. Instead of hacking unwanted footage off a clip, you now simply hide the frames you don't want to use by dragging the edges of the clip inward (much as you'd roll up a parchment scroll to see just a certain part). Later you can refine your edits to include previously removed frames by clicking and dragging the clip's edges to a new position.

TIP

SNAP TO IT You can turn Timeline Snapping on in the iMovie preference pane if you want, but save yourself the trip: instead, hold down the shift key as you drag the playhead in the timeline viewer. This will enable snapping for that operation only.

Although Direct Trimming is a welcome addition, it tends to make the timeline feel crowded. As you trim footage from one clip, the clips around it react by scooting in or moving out to fill the space. All this movement can make it hard to maintain perspective on the clip you're editing. If you prefer a little breathing room while you edit, you can prevent adjacent clips from filling the gap by pressing ⌘ while dragging a clip's edge. You'll then be left with an empty spot in the timeline where the extra footage used to live. Later, if you want to remove this gap, switch to the Clip Viewer (⌘-E) and delete the clip of black frames that marks the empty space. This will bring the adjacent clips back in line.

Direct Trimming has one important drawback: emptying the trash will delete all the trimmed footage from your project. To play it safe, avoid emptying the trash until you've exported your finished movie to its final format.

CATCH AN AUDIO WAVE

iMovie 3 let you edit volume levels within clips. With iMovie 4, Apple has expanded this feature by giving you the option of viewing audio-track waveforms—visual representations of sound—in the Timeline Viewer. It's now much easier to isolate unexpected loud noises and adjust volume to compensate. But because iMovie stores a clip's audio on the same track as its video, you'll have to extract the clip's audio to see its waveform. This could be a problem if you have audio content on both of iMovie's two audio tracks.

continues

Seeing Your Sound In iMovie 4, you can see the audio waveforms, so you can detect potential problems such as loud outbursts from crowds of people.

iMOVIE 4

RATING: ♦♦♦

PROS: Improved performance on high-end Macs; nondestructive Direct Trimming; improved navigation tools; noncontiguous clip editing; audio-track waveforms.

CONS: Performance problems persist, especially on slower machines.

PRICE: as part of the iLife '04 suite, $49

OS COMPATIBILITY: Mac OS X

COMPANY: Apple Computer, 800/692-7753, www.apple.com

Another way that iMovie engages your ears is with audio scrubbing. Press the option key while dragging the playhead in the Timeline Viewer to hear audio at the speed you're dragging. While that can be helpful, *Macworld*'s tests showed that audio scrubbing had a noticeable lag on a 1.25GHz PowerBook G4 and a dual-2GHz Power Mac G5, so the feature was mostly ineffective.

NAVIGATION AND SHARING

iMovie 4 also includes several smaller—but much appreciated—improvements that help make editing less time-consuming and mouse-intensive. For example, you can now select several noncontiguous clips and apply changes to them as a group. This is great if you need to apply a color-correction or soft-focus effect with the same settings to several clips at once, or if you need to extend several transitions of the same type by two seconds.

A new Timeline Snapping feature pulls the playhead to the closest edit point, making it easier to align video and audio. The playhead turns yellow and triggers a sound (optional) when it has been snapped to an editing point.

Thanks to new View menu options and their keyboard shortcuts, you'll spend less time scrolling through timelines. Press ⌘-option-P to jump to your playhead, ⌘-option-S to jump to the currently selected clip, or ⌘-option-Z to zoom in to the current selection. You can also set bookmarks to indicate a scene you're working on, and then jump back to it later using keyboard shortcuts. To quickly switch between the Timeline Viewer and the Clip Viewer, just press ⌘-E.

Apple also revamped the interface for publishing your movies. Using the new Sharing command, you can opt to send your movie or selected clips to your camcorder, e-mail application, .Mac home page, or Bluetooth device (such as a 3GPP-compatible cellular phone), or export a QuickTime movie. iMovie then applies preset compression settings for each type of output.

PERFORMANCE, ANXIETY

Of course, all the new features in the world won't help you if the program is too slow. And when it comes to speed, iMovie 4 had mixed results.

On the main testing machine (a 1.25GHz PowerBook G4 with FireWire 800), iMovie 4's performance was, overall, much faster than that of iMovie 3—although it was still slower than that of iMovie 2. In version 4, scrubbing through a movie was snappier, and rendering times for transitions, titles, and effects all seemed to be improved. In fact, my footage actually began playing when I clicked on the Play button. (If that sounds self-evident, you must have missed iMovie 3.)

However, on an older, 400MHz Titanium PowerBook G4, iMovie 4 didn't fare so well. Although not as slow as in iMovie 3, playback in iMovie 4 stuttered frequently, and the spinning beach ball appeared more frequently as the program chewed on various tasks. On the bright side, the stuttering seemed more consistent than in iMovie 3, evenly dropping a regular number of frames instead of inexplicably freezing up. However, this also occurred when I exported the movie back to the camcorder's tape; encountering jumpy playback during the editing process is one thing, but having it in the final movie is unacceptable.

On both machines, performance degraded with longer, more-complicated projects. Although there was less performance degradation on the 1.25GHz machine than on the 400MHz Mac—which slowed to an unbearable crawl—both machines struggled with a project containing nearly two hours of footage. Apple's iMovie system requirements broadly call for a PowerPC G3, G4, or G5 processor, but I can't imagine running iMovie effectively on anything less than 800MHz.

MACWORLD'S BUYING ADVICE

If you've never used a nondestructive video editor such as Final Cut Express, it's hard to appreciate the full benefit of Direct Trimming—but you will. All in all, iMovie 4 is an admirable upgrade to Apple's flagship digital-hub application. However, the application's overall performance still lags—particularly on older Macs.

PUTTING A PRICE ON iLIFE

As with any software suite, the question of whether iLife '04 is worth its $49 price largely depends on what you plan to do with it.

If you're new to digital music and are looking for an easy way to get started—something to accompany your solo performances or to just play around with—GarageBand alone will justify your iLife purchase. It offers a user-friendly interface, a nice range of software instruments, and powerful track-layering tools for hundreds of dollars less than you'd spend on professional audio software. (Professional musicians may also find GarageBand useful for sketching out compositions, but they may become frustrated by the current version's limited importing and exporting capabilities.)

Digital-video enthusiasts will likely find iLife '04 a worthwhile investment. iDVD 4's ability to burn two-hour DVDs is a huge boon. And while iMovie 4 still suffers from performance issues—particularly on older machines or with complicated projects—it's a clear improvement over version 3. But if you didn't upgrade from iMovie 2 because of version 3's performance issues, you'll need to decide whether new features such as Direct Trimming and noncontiguous clip editing are worth the hit you'll take in performance—especially if you're editing on an older Mac.

If you're not interested in creating your own music and you don't own a digital video camera, your decision to buy or not to buy iLife '04 will come down to whether you currently rely on iPhoto 2. If you do, iPhoto 4 is easily worth $49. If not, there are less-expensive options for organizing your media, including iView Multimedia's $30 iView Media (♦♦♦♦; October 2003).

As a package, iLife '04 has a lot going for it. Despite some performance issues and rough edges, the programs it includes complement each other nicely. And for digital-media enthusiasts who want to seamlessly integrate their digital photos, movies, and music, iLife '04 is a tremendous bargain.

iDVD 4

New Themes and Longer DVDs Boost an Already Good Program

BY JEFF CARLSON

iDVD, Apple's user-friendly DVD-authoring software, exemplifies the real secret behind the company's appeal: Apple makes Mac users look good. Without a lick of design talent, you can use iDVD to burn a shiny platter that will make most folks think you hired a professional.

The Big Picture iDVD's new Map feature gives you an overview of your DVD assets.

The newest version, iDVD 4, gives amateur moviemakers even more power, thanks to some slick new themes, additional navigation options, and improved encoding technology.

A BIGGER THEME PARK

One of the secrets to iDVD's success is its selection of prefabricated navigation environments—which makes the process of creating menus and backgrounds a simple drag-and-drop affair. iDVD 4 adds 20 new themes to this lineup. In Road Trip One, for example, you watch a view from inside a car driving down a perpetual highway and use the rear-view mirror as a drop zone for your media.

A few themes even tie together— a particularly nice touch. For example, Road Trip Two offers a view out the back of the same car that's in Road Trip One, showing the highway roll away. This lets you keep a consistent theme throughout your project without recycling the same layout over and over.

Also, motion menus can now be longer than 30 seconds—in fact, they're limited only by the amount of free space available in your project. To top it off, you can finally create button titles with line breaks.

AUTOPLAY AND THE MAP

Another new trick that adds professional polish to your movies is iDVD 4's AutoPlay feature. It lets you play a media file before the first navigation page appears.

Naturally, you can choose your own media files for AutoPlay. To do this, you use iDVD 4's new Map feature. Clicking on the Map button displays a hierarchical view of the assets in your project. Drag any media file to the AutoPlay area in the upper left corner of the Map window, and the file will play as soon as the DVD is inserted in a player. But keep in mind that viewers can't skip over the AutoPlay movie to jump to the navigation, even if they've seen it several times before (although they can fast-forward).

It's disappointing that the Map feature is only a window to your data—you can't actually move things around in it. I'd like to be able to rearrange the media hierarchy in the Map's flowchart format.

IMPROVED ENCODING

With iDVD 4, Apple at last breaks the 90-minute barrier, allowing you to burn as much as two hours on a DVD. iDVD 4 adopts the same MPEG-2 encoding technology that Final Cut Pro uses, which translates to not only more data per disc but also better-quality data. In my tests, burning a 48-minute iMovie project at iDVD 4's Best Performance encoding setting (which is equivalent to the encoding scheme in iDVD 3) took roughly 50 minutes on a 1.25GHz PowerBook G4. By comparison, burning a 118-minute project at the new Best Quality setting required 4 hours and 40 minutes. (Unlike the Best Performance encoding setting, which begins encoding your DVD assets in the background while you're designing the project, the Best Quality setting doesn't start encoding until you click on the Burn button.) The video quality, however, was indistinguishable from that of the shorter project in most aspects. One scene, of a mountainside at dusk shot from a moving car, did contain compression artifacts that weren't in the shorter movie, possibly because the clip's content was noisy to begin with.

For schools and offices that can't afford to supply everyone with SuperDrive-equipped Macs, iDVD 4 can now run on any Mac with a 733MHz PowerPC G4 processor or higher. A new archive feature collects all iDVD media assets and stores them in an OS X package file, which you can transfer to a SuperDrive-equipped machine for burning later. This is also useful for offloading encoding duties to another machine while you work on other projects.

MACWORLD'S BUYING ADVICE

Despite slow encoding and a few minor quibbles, iDVD 4 is a strong program and an important upgrade. With comparatively little effort, I was able to burn professional-looking DVDs that contained more media than previous versions could handle. □

iDVD 4

RATING: ♦♦♦♦

PROS: Two-hour encoding limit; new themes; Map view with AutoPlay; ability to create archives for transferring to non-SuperDrive Macs.

CONS: Map lacks interactive controls; Best Quality setting can't encode in the background.

PRICE: as part of the iLife '04 suite, $49

OS COMPATIBILITY: Mac OS X

COMPANY: Apple Computer, 800/692-7753, www.apple.com

Your Emergency Tool Kit

YOUR MAC DEVELOPS A SERIOUS PROBLEM THAT CAN'T BE ignored: Perhaps it won't print your documents. Or applications keep crashing. Or the Mac itself crashes on startup. That's when you need to pull out your emergency tool kit. We've assembled a collection of essential utilities you should have on hand.

Disk Repair

You'll probably reach for a disk-repair utility most of the time. Fortunately, you already own one if you have OS X: it's Apple's Disk Utility. (For more freebies, see "Fix It for Free.") Go to Applications: Utilities, launch Disk Utility, select the problem volume, and click on the First Aid tab.

For almost any imaginable problem that you can't easily fix, click on Repair Disk Permissions. This is worth trying even if you think that permissions have nothing to do with the trouble.

If permissions problems are preventing you from launching Classic, select the Fix OS 9 Permissions command in Disk Utility's File menu.

When permissions fixes don't do the trick, click on Repair Disk to repair problems involving the hidden directory area of a drive—an area critical for tracking the name and the location of all the items on the drive.

But some situations are beyond the scope of Disk Utility. That's when you should look elsewhere. Alsoft's $80 **DiskWarrior 3** (♦♦♦♦; www.alsoft.com) succeeds more often than any other repair utility. If you have extra cash, add Symantec's $100 **Norton Utilities 8.0** (♦♦♦; www.symantec.com) or Micromat's $98 **TechTool Pro 4.0.1** (♦♦♦½; www.micromat.com). There are always a few problems that neither Disk Utility nor DiskWarrior can fix, but that one of these utilities can. Also, they both have troubleshooting features beyond disk repair, whereas DiskWarrior is more focused.

Backups

No matter how damaged a disk becomes, you won't have to worry about losing data if you've backed it up. For simple backups of critical documents (such as iPhoto or iTunes libraries), the Finder is a sufficient copy tool. But to back up your entire drive (especially if you want a bootable backup to completely restore your drive), you need a dedicated backup utility.

Although you can use the new Restore tab in the Panther version of Disk Utility, Bombich Software's free **Carbon Copy Cloner 2.3** (♦♦♦♦½; www.bombich.com) makes creating bootable backups a breeze. Dantz's $129 **Retrospect 6.0** (full review to come in a future issue; www.dantz.com) and Prosoft Engineering's $49 **Data Backup X** (♦♦♦♦; www.prosoftengineering.com) give you additional options. For example, you can back up just the files that have changed since your last backup, dramatically speeding up the process. Though it's more difficult to master and more prone to problems than Data Backup, Retrospect excels at tasks such as backing up over a network.

FIX IT FOR FREE

Panther includes applications that can solve software problems. Disk Utility is one (see the main story); here are three others.

Activity Monitor Activity Monitor (shown below) can force-quit processes that are not listed in the standard Force Quit window, such as the Dock.

Font Book Duplicate fonts can cause applications to crash. Font Book checks for these duplicates and disables all but the version you want to keep.

Terminal Unix-savvy readers know that many of the utilities mentioned in this article (especially the shareware) are graphical front ends to Unix commands that do the actual work. If you're willing to master the relevant Unix basics, you can launch Terminal and run the commands directly. Terminal also provides access to additional commands for which there are no graphical front ends.

Data Recovery

If you need a recovery utility, you probably also need a tranquilizer. You've failed in your attempts to resurrect a damaged disk with a repair utility. There are critical files that you never backed up. A recovery utility is your last hope—it won't fix the disk, but it may be able to recover your files. The best tool for this job is Prosoft Engineering's $89 **Data Rescue X** (●●●●½). If it can't recover your files, they're probably not coming back. If you've already bought Norton Utilities or TechTool Pro, their included recovery functions can be an economical alternative to Data Rescue.

Don't Erase That!

Have you ever had a panic attack after selecting Empty Trash because you just unintentionally deleted your only copy of an important document? There's a utility with a permanent cure for such attacks: Prosoft Engineering's $49 **Data Recycler X** (●●●●; www.prosoftengineering.com). With this program installed on your drive, you can instantly recover almost any deleted file. It can even recover files you've deleted using Terminal's rm command. No other utility offers this protection.

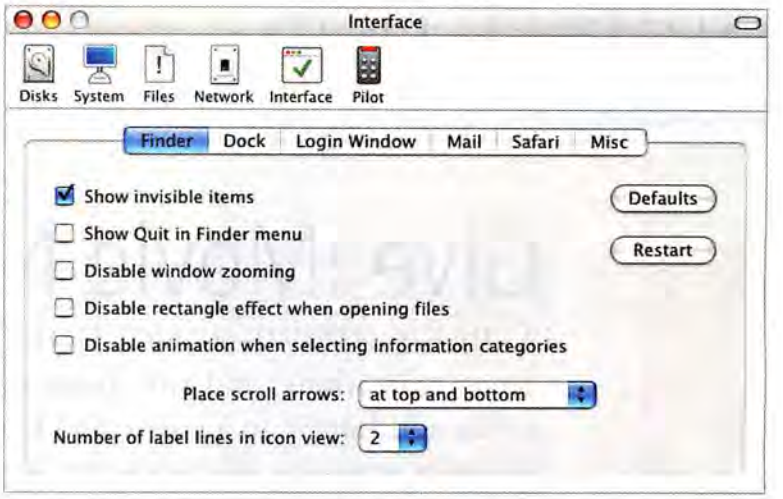
Once again, Norton Utilities provides a viable alternative, this time via its UnErase option. It doesn't have the success rate of Recycler, but it's your best chance of quickly recovering a file that was deleted before you installed any protection software.

Virus Protection

Neither I nor anyone I know has been the victim of a virus that directly attacks OS X. Still, a Mac antivirus utility can prevent you from becoming a carrier for viruses that attack Windows machines via e-mail. You have two sound choices: Symantec's $70 **Norton AntiVirus 9.0** (●●●; www.symantec.com) and Network Associates' **Virex 7.2.1** (●●●½; free with a subscription to Apple's .Mac service or available for $70 from www.networkassociates.com).

Multipurpose Utilities

Be sure to add a couple of multipurpose utilities to your tool kit. They combine otherwise unrelated functions into single mega-utilities. The best of the lot provide the greatest number of features along with an interface that simplifies finding and using the feature you want. Kristofer Szymanski's $12 **Cocktail 3.2** (●●●●½; www.macosxcocktail.com) is my favorite. It can automatically delete potentially corrupt cache files (which can cause applications to crash), force-empty the Trash (when selecting Empty Trash fails to work), and make invisible items appear in the Finder (helpful when you want to locate items in Unix directories). Another excellent choice is Laurent Muller's $19 **Xupport 1.3.7** (●●●●; www.computer-support.ch/Xupport). It offers many of the features Cocktail does, as well as firewall and backup capabilities. Look for Xupport 2.0; in beta at press time, it has a much-improved, redesigned interface and several new features.



If you can't fix printing problems with Panther's Printer Setup Utility, get Fixamac Software's $15 **Printer Setup Repair** (●●●●●; www.fixamac.net). It can fix incorrect permissions of printing-related files (a common source of printer errors), delete corrupted printing-related preferences and cache files, and delete and reinstall printer drivers.

Don't Get Caught without Them

There are easily a dozen other utilities you could add to your kit. But the ones listed here will get you out of the vast majority of jams. All that's left is to get a good pair of overalls, and you'll be ready the next time disaster strikes. □

Save Yourself the Bother Why waste hours scouring the Web in search of the solution to a problem? With utilities such as Cocktail, dozens of helpful fixes are just a click away.

NEW BAR-CODE READERS

Two Mac-compatible bar-code readers recently made their debut. The Peninsula Group's Phoenix II ($179; www.barcodereaders.com) is a USB bar-code reader you can use with any Mac OS since OS 7. A bar-code–management program, Peninsula QuickTrack V Start, ships with the reader.

Intelli Innovations' IntelliScanner OCR Pen ($399; www.intellisw.com) is designed to capture text and bar codes. It comes with Collection, a program that organizes your scanned information; ProInventory, an inventory manager; and xTagger, which generates bar-code labels. The IntelliScanner OCR Pen requires OS 9.2 or later.—TERRI STONE

The Phoenix II (top) and the IntelliScanner OCR Pen

Contributing Editor TED LANDAU is the author of *Ted Landau's Mac OS X Help Desk* (Peachpit Press, 2004), the complete troubleshooting guide for Panther.

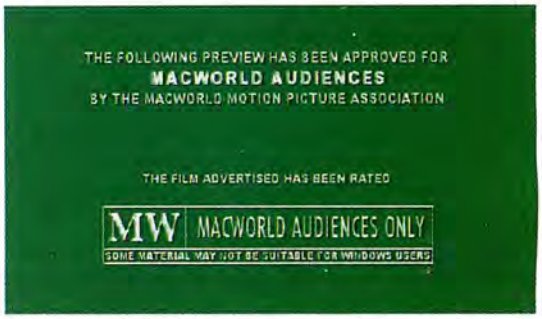
Working Mac is a monthly collection of tips that will help you be more efficient—and help you get home in time for dinner. We want to hear from you! If you've got secrets to share or suggestions for column topics—or if you just want to tell us what you think of *Working Mac*—e-mail us at workingmac@macworld.com.

Give iMovie New Powers

APPLE'S iMOVIE 4 INCLUDES DOZENS OF VISUAL EFFECTS, scene transitions, and title formats. Used tastefully and sparingly, these extras add finesse to a movie and lend a professional touch. But some projects require something a little more creative than what iMovie's built-in tools can provide.

That's where iMovie plug-ins come in. Whether you want your footage to throb to the beat of your soundtrack or glow with psychedelic colors, these add-on packages let you work with your footage in ways that are otherwise impossible.

All iMovie plug-ins appear directly within iMovie's Effects, Transitions, or Titles pane, so you'll never have to open up a second application to use them. In fact, using a plug-in is, in most cases, as easy as using one of iMovie's built-in effects.



Faux Preview Add a fun touch to your iMovie projects by creating your own film-rating screen.

Bundles of Joy

If you're looking for a quick way to expand and diversify iMovie's bag of tricks, look no farther than the Slick family of plug-ins, from GeeThree. While most plug-in packages focus on one theme or task—such as adding color-correction tools or motion effects—each volume of Slick Transitions & Effects is packed with a versatile assortment of top-notch plug-ins.

To get the most bang for your buck, try **Slick Transitions & Effects Volume 5** (★★★★★; www.geethree.com). It includes more than 100 effects, transitions, and titles, for $50—that's roughly 50 cents per plug-in.

The package excels at providing high-octane alternatives to iMovie's relatively pedestrian transitions. For example, Flash Dissolve brightens the outgoing clip until it's completely washed out, and then burns the incoming clip into the white frame. And Volume 5 includes several classic transitions missing from iMovie's repertoire, including a Wipe transition—in which a vertical or horizontal line sweeps across the screen, replacing one clip with another.

Volume 5 also includes a series of audio effects that make a video clip bulge or change brightness in rhythm with a soundtrack—perfect for garage-band (and *GarageBand*) music videos. You can even use a Film Ratings effect to make your own movie-preview ratings titles (see "Faux Preview").

Of course, if you're just looking to add a specific effect or transition to iMovie, you can probably find a less-expensive alternative to Volume 5. But if you're looking for a well-rounded set of plug-ins that you can apply to a variety of moviemaking endeavors, Volume 5 is hard to beat.

You don't get the same abundance with GeeThree's $70 **Slick Transitions & Effects Volume 6** (★★★★), but this collection of seven effects plug-ins lets you tackle some ambitious iMovie tasks. The Color Correction effect, for example, lets you adjust color balance and brightness with far more control than iMovie's Adjust Colors effect allows. It provides useful controls for adjusting shadows, midtones, and highlights, as well as black points and white points. There's even a Broadcast Safe option—when activated, it ensures that colors will be within an acceptable range for television. On the downside, there's no way to easily apply the same color-correction settings to multiple clips.

You can use Volume 6's Film Reel effect to add a single scrolling strip of images or movie clips to your video

Finesse Your Footage Stupendous Software's Levels & Balances plug-in collection gives you advanced controls over the color and contrast of your footage. It even displays a small histogram in the top right corner.

frame, or use Video Wall to divide the entire frame into a grid of as many as 64 boxes—each filled with a separate movie or photo. If you're creating a training video, you may also appreciate the Overlay effects, which let you create on-screen boxes and highlights.

Because the effects in Volume 6 provide more settings than would fit within iMovie's standard Effects pane, each effect includes a Configure button that provides access to the additional controls. This can be a cumbersome way to work. If you frequently use these types of effects, you may be ready to graduate to Final Cut Express, which makes creating and previewing effects much faster.

Plug-ins à la Carte

If you don't need the variety offered by GeeThree's Slick series, and if you prefer to spend less money, several companies sell smaller plug-in collections that may better fit your budget.

Transition Plug-ins If you're looking for a useful but economical transition collection, consider the $22 **4in1 Transitions**, from BKMS Software Development (♦♦♦½; www.bkms.com). The star of 4in1 Transitions is a classic, well-executed wipe transition—a common request among iMovie users. When you're after something a bit more exciting, try the Melt Through transitions, in which one scene appears to melt into the next. There's also a Pixilate transition, which simulates the look of static by having the scene fade or dissolve in a shower of pixels. (You can also purchase these plug-ins individually for $8.)

Title Plug-ins Although iMovie 4 packs a fairly impressive set of titling tools, there's always more room for text toys. Stupendous Software's $25 **Big and Bold** collection (♦♦♦♦; www.stupendous-software.com) offers a series of 40 sophisticated title styles—most of which would be difficult to produce in Final Cut Pro, never mind iMovie. For example, Banner Ghost centers your title text on screen while a large but faint version of the same text glides across the screen. With Gather, multiple instances of the text converge from all sides to meet in the center. The results are gorgeous. Another useful addition is the Ticker effect, which lets you create your own CNN-style crawling text along the bottom of the screen.

Effects Plug-ins If you're working with badly exposed footage or just want to create some cool effects, Stupendous Software's $25 **Levels & Balances** (♦♦♦♦) may be the answer. This plug-in collection offers 29 effects that bring Photoshop-like color and level controls to iMovie. The Adjust Levels effect lets you adjust a clip's black points, white points, or gamma (brightness) settings to help you salvage under- or overexposed footage, as well as add contrast and visual punch (see "Finesse Your Footage"). If you shot your footage with the incorrect white-balance setting—which can add an ugly yellowish tint to indoor scenes—you can use one of three White Balance effects to adjust the color balance. There are also several effects that will let you single out and tweak only certain colors—to turn a yellow rose red, for example.

I found the effects in Levels & Balances easier to use than the Color Correction effect in Slick Volume 6. You don't have to burrow into a separate dialog box to adjust settings, and each effect superimposes a histogram (a bar graph depicting the distribution of tonal values in a clip) over the image preview. On the down side, Levels & Balances doesn't provide a broadcast-safe option, so you'll need to be careful not to adjust a clip to the point where its colors won't display properly on a TV.

If you're not looking for color correction so much as color *distortion*, check out the very groovy **Rainbow** plug-in, from Mouken LC (♦♦♦♦; $8; www.mouken.com). Rainbow performs only one trick—but it's an interesting one. It creates beautiful, high-contrast effects that resemble the results of the darkroom technique known as *solarization*. Used to the extreme, this can make your footage look like a bad psychedelic video. Still, Rainbow may be just what you need for your next dream sequence or music video. □

PUMP UP THE VOLUME

If you're disappointed by the tinny or muffled quality of your iTunes playback, Octiv has a solution that might just reignite your musical passions. **Volume Logic** is a $20 iTunes plug-in (♦♦♦♦½; www.octiv.com) that digitally remasters your music as it's playing, to dramatically improve sound quality and to even out the volume between songs. Based on the same audio-processing technique used by FM radio stations to add punch to their signals, Volume Logic includes a set of volume, bass, and treble knobs that adjust themselves thousands of times per second to balance and clarify tones (shown here). The plug-in offers 18 presets, each geared toward a specific music genre, as well as other controls to boost bass and adjust the amount of processing that Volume Logic performs.

The results are amazing. With Volume Logic turned on, a cheap set of computer speakers sounds better, and a good set of speakers sounds superb. Volume Logic not only excels at enhancing dance, electronic, and R&B tracks, but also adds sparkle and punch to subtler genres, such as jazz and classical. I wish only that Volume Logic's talents extended beyond iTunes playback: it has no effect on tracks that you burn to a CD or copy to an iPod.

You can download a 14-day trial version to hear the difference for yourself.

Contributing Editor JIM HEID is the author of *The Macintosh iLife, '04 Edition* (Peachpit Press/Avondale Media, 2004). He publishes additional iLife tips at www.macilife.com.

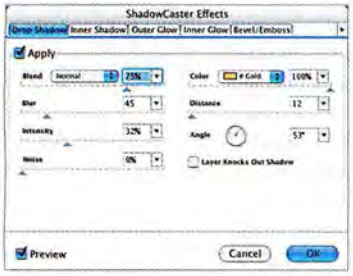
Digital Hub is a monthly collection of tips and strategies for anyone who creates movies, music, or photographs for personal use. We want to hear from you! If you've got secrets to share or suggestions for column topics—or if you just want to tell us what you think of *Digital Hub*—e-mail us at digitalhub@macworld.com.

Best XPress XTensions

XTENSIONS, AS PLUG-INS FOR QUARKXPRESS ARE CALLED, add tools for greater creativity and efficiency to the page-layout program. Before QuarkXPress 6 ($945; www.quark.com), there were dozens of XTension developers and hundreds of plug-ins—of varying quality. Now there are only a handful of developers, but their XTensions are refined and powerful. These are some of our favorites, all of which are also available for QuarkXPress 4 and 5.

Import Photoshop Files

Two XTensions let you import any Adobe Photoshop document into an XPress picture box without first flattening it or saving it in TIFF or EPS format: Techno Design's **Photoshop Import XT** (●●●●; $69; www.techno-design.com) and a lowly apprentice production's (ALAP) **ImagePort 1.3** (●●●●½; $100; www.alap.com). Photoshop Import XT is the less expensive of the two and performs one function: it allows you to import layered, native Photoshop documents via XPress's standard Get Picture dialog box.



Add Shadows and More ShadowCaster's Effects palette lets you control many type and image effects.

ImagePort offers the same functionality and adds a palette, very similar to Photoshop's Layers palette, that's a real time-saver. You'll jump between programs less frequently when you can enable and disable layers, channels, and paths inside the Photoshop file without leaving XPress. You can easily create a spot varnish, emboss, and foil—just save the special effect as a channel in Photoshop and then turn the channel on or off in XPress. The easy-to-use interface also lets you control the blend mode and opacity for any layer, and choose paths as clipping paths or for text runaround.

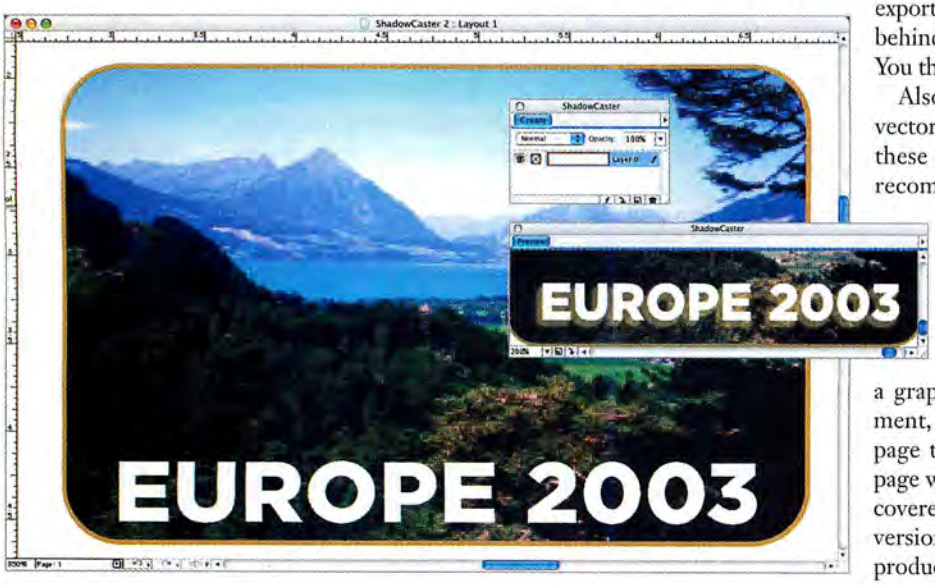
Both XTensions include a free viewer XTension so people who don't have the full XTension can print your document.

Add Drop Shadows and Transparency

ALAP's **ShadowCaster 3.2** (●●●; $100) brings remarkable power to XPress. Its transparency and shadow features are similar to those in Adobe InDesign and Photoshop, so it's very easy to learn. You can add bevels, glows, embosses, inner shadows, and drop shadows to an item or group, and apply varying levels of transparency to items that overlap other items, using blending modes like Photoshop's (see "Add Shadows and More"). You can group items onto layers and adjust opacity for an entire layer. The program lets you easily remove effects from layers, and copy and apply effects from one layer to another. You can save frequently used effects as styles and share those styles with other XPress users.

Be warned that while its features are powerful and its results are striking, ShadowCaster's implementation is clunky. It displays the added effects in a high-resolution preview window, not on the XPress page. You must export the image, which ShadowCaster places behind items on the XPress document page. You then delete the original items manually.

Also, many XPress documents contain vector EPS files, and ShadowCaster previews these in low resolution only. The company recommends converting vector EPS graphics to raster EPS or TIFF format before using ShadowCaster.



Export Pages as Pictures

When you want to use a page or a portion of a page created in XPress as a graphic element in another XPress document, it's much easier to use a *picture* of the page than it is to include the entire XPress page with all its components. Gluon's got you covered with **XPressImage 6** (●●●●½; $199; Pro version, $349; www.gluon.com). No other product comes close to its functionality.

XPressImage 6 lets you convert a selection, page, spread, or document to any of 16 file formats (including EPS, TIFF, GIF, JPEG, PDF picture, PNG, Scitex, Targa, BMP, and PCX) at any size and resolution, with or without a black border, as well as bleed and crop marks. It can also create Java or HTML pages from any or all of your document's pages, with a table of contents that links to each page. When exporting to GIF, JPEG, or PNG format, you have control over color indexing, compression, and interlacing.

In addition, you can export to the Clipboard, so you can instantly paste your image into another document or application. XPressImage also lets you save settings as presets, and it converts any document you put in a hot folder to one of your preset formats.

The program includes a Photoshop plug-in that automatically tells Photoshop to rasterize vector EPS files imported into XPress. The Pro version ($349) can save XPress boxes as layers in Photoshop, apply a Photoshop Action before saving, and send documents directly to e-mail. It's also AppleScript-able.

Resize Entire Documents

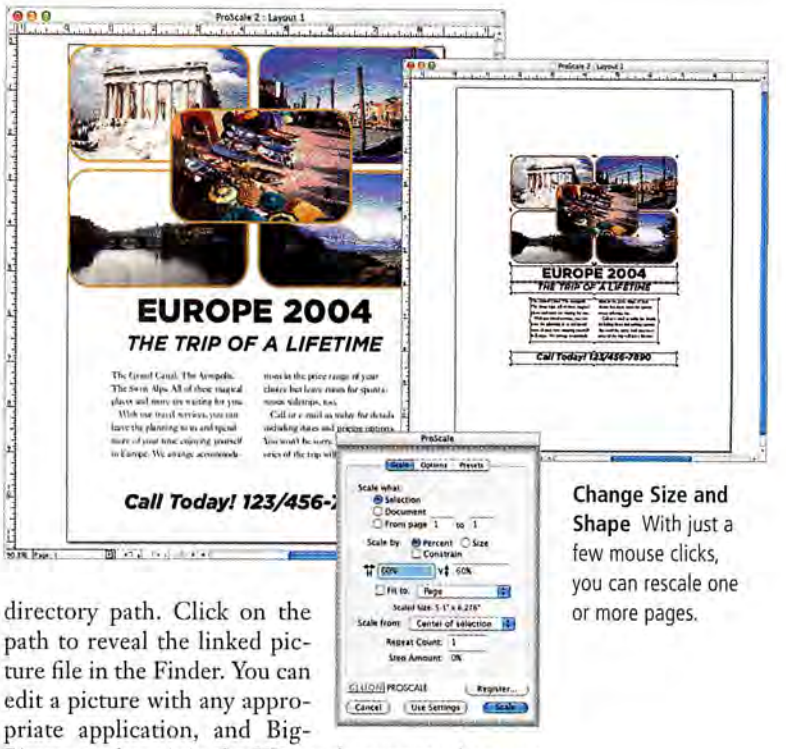
The good news: the clients love your 8-by-10 ad. The bad news: they want "exactly the same ad" in 2.5 by 5, 5 by 4, and 8.5 by 11. That's when it's time for Gluon's **ProScaleEV 7** (♦♦♦♦½; $139).

While the interface is uninspired, it's certainly efficient. You can resize entire multipage documents, or just selected items, with complete control over what gets scaled and how (see "Change Size and Shape"). It scales pages nonproportionally while maintaining the proportions of page items. A Fit To pop-up menu lets you choose common sizes, such as A4, A5, ⅓ page, ½ page, letter, and tabloid. Alternatively, you can enter new dimensions, or just click and drag selected items to a new size. Whichever method you choose, the process is extremely fast. And if you botch a scaling, you can undo it with ⌘-Z.

Extreme Picture Management

Badia Software's **BigPicture 2.0** (♦♦♦♦½; $90; www.badiasoftware.com) is remarkably helpful when your document contains many pictures. It treats images the way I wish XPress would: namely, listing everything about all of them, showing you where they are, and helping you link and unlink them.

BigPicture 2.0's giant window displays a thumbnail of all pictures, as well as vital information about each one, including color model, format, file size, resolution, effective resolution, scaling, angle, compression, application, date modified, fonts, and colors. Or you can select all pictures in a document that match a chosen criterion (for example, all RGB images). It shows where you used each picture and gives its directory path. Click on the path to reveal the linked picture file in the Finder. You can edit a picture with any appropriate application, and BigPicture updates it in the XPress document when you resave the picture.



Change Size and Shape With just a few mouse clicks, you can rescale one or more pages.

And BigPicture has other significant productivity enhancers: BigPicture can search for missing or modified pictures and automatically relink the files, unlink all pictures, relink pictures to a different folder (great for swapping high-resolution and low-resolution pictures), and replace any picture with another while maintaining the original transformations you applied in XPress, such as scaling and cropping. And you can change a picture's actual file name inside BigPicture.

Don't Stop Here

I've highlighted a few XTensions here, but there are plenty of others that are worth investing in. To find and compare XTensions (as well as plug-ins for other professional creative applications), try ThePowerXChange (www.thepowerxchange.com). □

VERSION CONVERSION

Markzware's $199 MarkzTools 5 (♦♦♦½; August 2003) consisted of seven modules for salvaging corrupted files, switching between QuarkXPress 4 and 5, and reducing file size. Version 5.5 ($199; upgrade from version 5, $99) adds a Convert menu item to XPress 4.1 or 5; this lets you open an XPress 6 document. If the XPress 6 document was created using features not available in versions 4.1 or 5, then the XTension ignores those features. For example, you can import only XPress 6 documents that have one layout, and documents with multiple layers may not convert into XPress 4.1.

JAY J. NELSON is the editor and publisher of Design Tools Monthly (www.design-tools.com), a source of news and advice for graphic design professionals.

Create is a monthly column for professional print and Web designers and audio and video pros. We want to hear from you! If you've got secrets to share or suggestions for column topics—or if you just want to tell us what you think of *Create*—e-mail us at create@macworld.com.

Laudable Laptop Stands

BOY, DID WE EVER GET A GOOD LAUGH OUT OF THE COMbustible PowerBook 5300. Quite the scorchin' deal, eh? (Never mind that only a few batteries in a testing lab actually caught fire.) These days, however, the joke isn't quite as funny: laptops really are getting hot enough to singe the skin.

You can stay cool with the right laptop stand. And you'll protect more than your skin: the 11 stands reviewed here all raise the height of your laptop to a more comfortable viewing or typing angle. As with most ergonomic products, one that's ideal for you may not work well for someone else, so keep your specific needs in mind. I wouldn't want to see you get burned.

The LapGenie

Lap Stands

My editor insisted that I work on this article from my couch, so I'm doing my best to accommodate her, with the help of a few stands designed to keep your laptop off your lap. (They also function well on a desk.)

Rain Design's simple **iLap** (♦♦♦♦; $50 and $70; www.raindesigninc.com) features an angled anodized aluminum base with a soft padded base riser and padded wrist rest. You can't change degree of tilt, but the riser rotates slightly to match the angle of your legs (if you're sitting) or to lie flat on a desktop.

WorkRite Ergonomics' **TravelRite** (♦♦♦; $146; www.wrea.com) tilts your iBook or PowerBook as much as 30 degrees, which may provide a more comfortable angle for typing. It also provides space for air to flow beneath the laptop. It includes a padded wrist rest that you can adjust to match the thickness of your laptop; however, the wrist rest makes the TravelRite feel bulkier than it should and encourages you to rest your wrists while typing. Also, the stand blocks the media drive of a 15-inch or 17-inch PowerBook G4.

Dexia Design's Dexia Rack

Dexia Design's **Dexia Rack** (♦♦♦♦; $45; www.dexiadesign.com) is a model of portability. Folded flat, the aluminum frame is 0.75 inches thin and weighs 1.5 pounds. But when it's unfolded, the Rack lifts the laptop 7.6 inches—enough room to accommodate your legs when you're sitting on a couch or in bed, or to raise the screen for working at a desk. The rubber feet on my 15-inch PowerBook G4 didn't always find traction on the Rack's metal surface, but this wasn't much of an issue since the Rack is flat.

The **LapGenie**, from LapGenie (♦♦½; $130; www.lapgenie.com), provides what should be a happy combination of the previous two stands: it has a surface high enough to put your legs under and an adjustable work surface that can be set to any angle that will hold your computer (a benefit for people who aren't able to work in a sitting position). But the LapGenie is the Inspector Gadget of stands, with a bewildering six-step unfolding process. Folding it up was also annoying: on more than one occasion, the metal legs pinched my fingers. And when packed, it felt too bulky to be easily portable. However, once deployed, the stand is surprisingly sturdy, given its lightweight (1.7-pound) anodized aluminum body.

Desk Stands

The previous stands are at home on your lap or your desk. The following stands are designed primarily for a desk or another flat, solid surface. They follow one of two design philosophies: they either hide your laptop's keyboard (so you can use an external keyboard and mouse without obstruction) or leave it accessible, whether you connect external input devices or not.

Keyboard-Inaccessible Humanscale believes that since you won't be using your laptop's keyboard, that space can be put to better use. Its **LPTHLD02** model (♦♦♦; $200; www.humanscale.com), also referred to as the Ergo-Top, incorporates a plastic U-shaped piece, upon which you rest the lower section of your computer. This piece completely blocks the keyboard and trackpad and serves as a document holder that lets you keep your reference materials in front of you. The base of the U-shaped piece tilts at one of five preset angles

PHOTOGRAPHS BY PETER BELANGER

Humanscale's LPTHLD01

and controls the height of the laptop's screen.

A portable version of the same idea, Humanscale's **LPTHLD01** (●●●; $300), or Ergo-Q, folds up neatly into a flat metal slab that's half an inch high. Like the Ergo-Top, the Ergo-Q has an adjustable leg mechanism that lets you change the height of the screen.

I liked the construction and design of both stands, especially the portable model, but the depth of each stand, when added to the desk space an external keyboard occupies, put the screen a few inches too far from my eyes. Also, putting the lower section of my PowerBook into the U-shaped construction blocked the front-loading DVD-drive; iBook and 12-inch PowerBook G4 owners, whose media drives eject from the side, won't have this problem.

The **StandIt**, from StandIt (●●●½; $46; www.standit.com), also blocked my PowerBook's media drive, but the utter simplicity of its design and its low price nearly compensates for that. You might think that the metal StandIt is just a recipe-book holder: a lip on the bottom prevents the laptop from sliding onto the table, and a stiff wire leg pivots out from the back to provide support. Three separate legs of different sizes come with the StandIt to control its angle; you need to remove one before attaching another, which is awkward. Ultimately, though, the StandIt didn't work for me because the aluminum PowerBook G4's hinge doesn't open up far enough to make the screen vertical. (To be fair, the stand worked fine with my older Titanium PowerBook G4.)

Keyboard-Accessible If you want height without sacrificing the use of your laptop's keyboard and trackpad, the following stands provide more-open designs. Though you'll probably use these on a desk with an external keyboard and mouse, it's nice to have the option of unhindered access to the laptop.

Similar in design to the LPTHLD01, Contour Design's **NoteRiser** (●●●½; $130; www.contourdesign.com) begins as a slim square of aluminum and transforms, via a couple of bends and slots, into an angled stand that can raise your laptop. The NoteRiser has two metal tabs that prevent the laptop from sliding; these tabs also make a PowerBook G4's media drive inaccessible.

For something considerably sturdier, turn to the **Kamas PowerBook Stand** (●●●●½; $100; www.macsonly.com/macimp/kamas2.html), which is composed of a heavy-duty steel base and a laptop platform that is adjustable to any angle. A bracket holds the computer securely in place and includes a slot that accommodates the PowerBook's DVD drive (you specify your PowerBook or iBook model when you order, so you get the correct bracket). A small shelf in back is great for storing the computer's power adapter, and a small extension on the platform allows you to thread cables out of the way.

My favorite stand for elevating my PowerBook is the inexpensive **Laptop-Desktop Stand**, from ErgoKomfort (●●●●½; $50; www.ergokomfort.com). This simple two-piece acrylic shelf lifts the laptop to a comfortable level and offers a tilt adjustment of up to 15 degrees. The computer sits on top, with its ports and the media drive fully accessible, so you can easily grab your PowerBook and toss it into your bag at the end of the day.

ErgoKomfort's Laptop-Desktop Stand

Although each of the previously mentioned stands keep a hot laptop away from your lap, none of them actively deal with the heat issue. MacMice's **iBreeze** (●●●●; $30; www.macmice.com) takes on that challenge. A stand made from a single piece of angled acrylic, the iBreeze also includes two built-in, USB-powered fans designed to siphon the heat away from the laptop. The fans are relatively quiet—they sounded a little softer than my PowerBook's internal fan—and tend to lower the laptop's temperature by between 5 and 15 degrees Fahrenheit; with the help of Jeremy Kezer's ThermographX software (www.kezer.net/thermographx.html), I saw an average of about 8 degrees. While the iBreeze is a bargain, its lack of angle adjustment limits its usefulness.

MacMice's iBreeze

Macworld's Buying Advice

I tend to favor simpler designs such as ErgoKomfort's Laptop-Desktop Stand, but I'm also drawn to the elegance of portable stands such as Humanscale's LPTHLD01 and Contour Design's NoteRiser, though it's unfortunate that the PowerBook G4's front-loading media drive is often blocked by the design of many stands. The important thing is that each of these laptop stands will keep your legs cool and raise the laptop to a better viewing or typing angle. □

JEFF CARLSON hasn't owned a desktop computer since 1995. He's the author of *iChat AV 2 for Mac OS X: Visual QuickStart Guide* and *iMovie 4 & iDVD4: Visual QuickStart Guide* (Peachpit Press, 2003 and 2004).

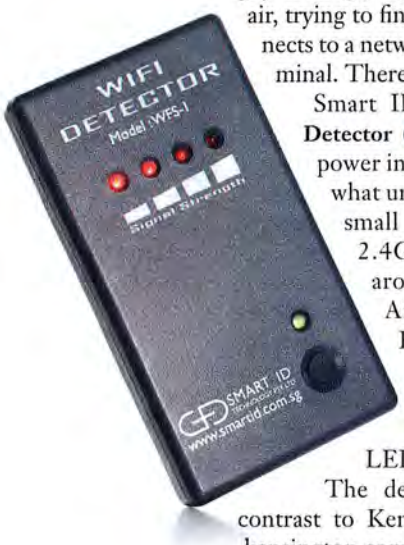
Mobile Mac is the place for tips on making the most of your PowerBook, your iBook, or their sidekicks. We want to hear from you! If you've got secrets to share or suggestions for column topics—or if you just want to tell us what you think of *Mobile Mac*—e-mail us at mobilemac@macworld.com.

Gadget Grab Bag

IF YOU'RE READING THIS COLUMN, IT'S PROBABLY SAFE to say that you like your drives naked, your tools plentiful, and your desktops virtual. In that spirit, we've sought out some products that you'll want to put on your wish list. These items are sure to add an extra measure of geekiness to your life.

Signal Sniffer

We've all seen the wireless dowser—you know: the guy looking perplexed as he wiggles his laptop in the air, trying to find a stronger Wi-Fi signal as he connects to a network at a coffee shop or an airline terminal. There's a better way.



Smart ID Technology's $28 **WFS-1 WiFi Detector** (●●●●; www.smartid.com.sg) packs power in a compact, functional (albeit somewhat unattractive) package. Hold down the small black button, and if there are 2.4GHz microwave signals zipping around—the frequency used for both AirPort (802.11b) and AirPort Extreme (802.11g) wireless networking, as well as microwave ovens and Bluetooth—the WiFi Detector lights up one to four of its LEDs to indicate signal strength.

The device's strong point, especially in contrast to Kensington's $30 WiFi Finder (www.kensington.com), is instant response. The WiFi Finder can take as long as two minutes to present a snapshot of signals in the area. The WiFi Detector, however, dynamically changes its flickering signal-strength lights. As you move the device around, you can use it to head toward the strongest signal.

Because the WiFi Detector picks up all 2.4GHz signals, you're likely to get false positives in areas with lots of cordless phones and other interferers—nevertheless, it's an ideal tool for any wireless road warrior.

Tools of the Trade

Is Victorinox's $60 **CyberTool** (www.victorinox.com) a Swiss Army Knife that went to electronics camp, or a multipurpose system-administrator tool that happens to have the Swiss Army Knife logo stamped on it? With a bottle opener, a can opener, and three Torx attachments, this gadget is hard to define.

The CyberTool, which comes in original-iMac translucent plastic colors, is a treasure trove of neatly packed-away items. It includes all the usual Swiss Army doodads (small and large blades, scissors, toothpick, awl, and tweezers), as well as the drinker's troika (corkscrew, bottle opener, and can opener). But nestled among these standard items are a set of pliers, a pen, and a socket that takes four reversible bits. You get Torx 8, 10, and 15 bits; a 4mm hex bit and 4mm and 5mm hex sockets (nested in one tool); and a variety of screwhead bits. The CyberTool also has screwdriver tips as part of other tools. In other words, it has everything you need when you have to dismantle a G5 tower and put it back together again.

The CyberTool is a little lumpy, and it can't replace full-size tools if you frequently need them—but

WIFI DETECTOR, JOLT CAFFEINE ENERGY GUM, CYBERTOOL, AND QUADRA 4-IN-1 PEN PHOTOGRAPHS BY PETER BELANGER

GEEK FAVORITES

Need to pull an all-nighter to finish that AppleScript *and* maintain fresh breath at the same time? No worries—you can just chew your way to minty alertness.

Two pieces of GumRunners' Jolt Caffeine Energy Gum ($9 for six packages; www.joltgum.com) pack the same punch as a cup of coffee. This caffeine-, guarana-, and ginseng-laced chewing gum even comes in two flavors, Spearmint and Icy Mint.

The company says that because the caffeine enters your body under the tongue, delivery is faster than with coffee—it may be just the jolt you've been waiting for.—JONATHAN SEFF

it's a remarkable gizmo for the traveling techie or the less demanding user.

Multiplying Desktops

Although all OS X users on a single Mac can have a unique desktop—complete with personalized background pictures, files, and folders—the problem is that each person can have only *one*. And as any Linux user will tell you, that's just not enough.

Out of One, Many Virtual Desktop Pro takes the desktop idea to the tenth power.

CodeTek Studios' $40 **VirtualDesktop Pro 3.0** (★★★½; www.codetek.com) lets you create as many as 100 virtual desktops, each of which looks and works precisely like an independent Finder window. Multiple desktops let you better organize your working environment without having to constantly hide and swap application windows. (A $20 Lite version that omits 15 customization options is also available.)

VirtualDesktop Pro lets you name each desktop and set up specific applications' document windows to open automatically on a given virtual desktop. Using a tiny proxy image that shows the relative position and size of windows within a desktop, you can also drag windows from desktop to desktop.

The program works flawlessly in Panther, has full support for X11 and Exposé, and offers remote control using AppleScript—another fine example of how OS X can bridge the gap between Mac and Linux or Unix users.

Drive Beauty

Sticking a gleaming, spinning hard drive inside a dull box just isn't right. That's where WiebeTech's **ComboDock** (★★★★; $150; with AC adapter, $170; www.wiebetech.com) comes to the rescue.

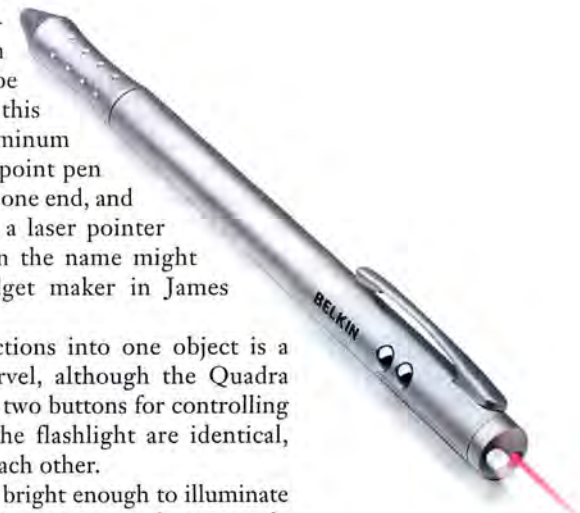
Following on the success of the company's FireWire DriveDock—an exposed ATA drive connector with a FireWire port and an AC adapter plug in the back—the ComboDock ratchets up the features. It now offers two FireWire 800 ports and a USB 2.0 port (the ports are backward-compatible to FireWire 400 and USB 1.1 speeds), and it works without drivers on Mac, Windows, and Unix platforms.

The ComboDock also includes a plate and screws to insulate a drive's circuit-board underside, a FireWire 400-to-800 cable, and a carrying case. Three LEDs let you know whether the AC adapter is plugged in, the unit is turned on, and data is flowing.

The ComboDock is easy to use, requires no configuration, and comes with a one-page manual that offers all the troubleshooting and guidance you'll need—letting you avoid the more complicated (and mundane) experience of a hard-drive case.

Point, Tap, Shine, Write

Belkin's $25 **Quadra 4-in-1 Pen** (www.belkin.com) might seem to be an ordinary pen, but this slightly elongated aluminum cylinder has both a ballpoint pen nib and a PDA stylus on one end, and an LED flashlight and a laser pointer on the other. The *Q* in the name might evoke the prolific gadget maker in James Bond movies.



Putting all four functions into one object is a minor engineering marvel, although the Quadra is slightly hefty, and the two buttons for controlling the laser pointer and the flashlight are identical, unlabeled, and next to each other.

Still, the LED bulb is bright enough to illuminate notes in the dark, and the pointer works extremely well. The beauty of the pen is marred only by a giant federally mandated warning label across the laser end—but we can all use a reminder now and then to resist the temptation to look into a laser. □

GLENN FLEISHMAN edits the daily news blog Wi-Fi Networking News (www.wifinetnews.com) and writes a regular column on the Mac for the *Seattle Times*.

MAC ON WHEELS

Anyone can plug an iPod into a car stereo, but Czech wiz Jirka Jirout decided to go a little further (www.mujmac.cz/art/hw/tatra_mac_eng.html). He built his own mobile computer from a 450MHz Power Mac G4 and his Czech-made Tatra automobile.

Jirout, who lives and works in Holland but drives to the Czech Republic on a regular basis, wanted not only a custom MP3 player he could control from the dash, but also a way to navigate tricky European roads. So he added a G4 to the trunk; a 6.5-inch LCD to the dash; an AirPort card and PowerMate controller; an infrared keyboard; and an Ethernet port in the rear armrest. The system also has Bluetooth, five digital thermometers, and a GPS receiver. Jirout spent more than $1,000 and six months of his free time building the system.

He then wrote an OS X app (named Tatra) to turn the LCD into an interface for his MP3 player and for Route 66 Europe 2004, a navigation program. And as if that weren't enough, the screen also displays time, fuel, speed, and temperature information. He even added an LCD screen in the backseat so passengers could watch a movie on long drives.—CYRUS FARIVAR

Geek Factor is a monthly guide to pushing your Mac to its limits—for fun, for increased productivity, or for both. We want to hear from you! If you've got secrets to share or suggestions for column topics—or if you just want to tell us what you think of *Geek Factor*—e-mail us at geekfactor@macworld.com.

Mac 911

DO YOU WONDER WHETHER SENDING APPLEWORKS DOCuments to PC users is strictly for the birds? Do you seek the means for sending a Mail message to one user's many e-mail accounts? If so, then this month's *Mac 911*, in which we examine Apple's bundled applications, is for you.

Will AppleWorks Work?

I volunteered to help our local nature center catalog its library. If I create a document in AppleWorks' spreadsheet program, can it be translated to Excel for use on PCs—without sending us all screaming into the hills behind the nature center?

Marti Hokans, *Santa Ana, California*

Probably. I waffle because a successful translation from AppleWorks to Excel depends on the elements you include in the spreadsheet. With a straightforward table—one including headings, colored text and cell backgrounds, a book title, an author name, and an ISBN number, for example—you should have no problem. Excel for both the Mac and Windows can read spreadsheets that include lists and standard formulas. To save the file in a format acceptable to Excel, just select Save As from AppleWorks' File menu; then, in the Save: AppleWorks 6 dialog box, choose the appropriate Excel format (Excel Win 97, 2000, XP, or 2002, for example), and click on Save.

You'll run into trouble, though, if you place charts in the AppleWorks spreadsheet or slap an image of a black-crowned night heron into the file. The data should be readable, but any charts and graphics you've inserted won't appear in Excel.

TIP OF THE MONTH

Although you can assign images to contacts in Address Book or iChat applications, wouldn't it be nice if your i-apps recognized *all* your friends and loved ones? Here's a tip for doing just that.

Find a TIFF image that represents the person in question (around 64 by 64 pixels works best). Name it with the e-mail address of your contact, and make sure to include the *.tiff* file extension. For example: person64@example.com.tiff.

Create a folder called Images. Within that folder, create another folder called People. Drag the Images folder into the Library folder at the root level of your OS X volume to make the picture available for all users on your Mac. (To make it available for a single account, use the Library folder in that user's Home directory.)

Now whenever you look up "Person 64" in Address Book, and whenever he sends you an e-mail or joins you in an iChat session, you'll see the image you assigned to him.

Chuck La Tournous, *Port Reading, New Jersey*

One Recipient, Many Addresses

I have some people in my address book who have multiple e-mail addresses. How can I pick a person's name once when typing it in the To section of Mail and have my e-mail sent to all of his or her available addresses?

Mike Drinks, *Baltimore, Maryland*

You can't do it by default, but I know a workaround. Create a group that includes multiple e-mail addresses for one individual.

Let's say I wanted to generate a group that sends a message to your home, school, and work addresses. I'd create one contact that I might call Mike Drinks Home (with your home e-mail address), another called Mike Drinks School (with your school e-mail address), and another labeled Mike Drinks Work (with your work e-mail address). I would then create a new Drinks Contacts group and drag the three Mike Drinks contacts I'd made into this group. When I wanted to send a message to all those addresses, I would use that Drinks Contacts group.

Secret Schedule

A friend would like to publish her vacation itinerary as an iCal calendar, but she wants to restrict access to only her family members. How can she do this?

Amy R. Miller, *Austin, Texas*

Your friend can do this with her .Mac account, but I recommend that she do so only if she has a nearly pathological trust in her family. To password-protect her calendar under .Mac, she must provide family members with her .Mac user name and password—the same user name and password she uses to purchase Mac goodies from the Apple Store and music at the iTunes Music Store. With that user name and password, others can log in to her .Mac account.

If this gaping security flaw doesn't bother your friend, she need only select an iCal calendar, choose Publish from the Calendar menu, select On A WebDAV Server from the Publish Calendar pop-up menu, and enter http://idisk.mac.com/*username*/Documents (where *username* is her user name). Then she must enter her .Mac user name and password and click on Publish for the calendar to be published to the Documents folder of her iDisk.

To share the calendar, she can pass along its address (which will take the form of webcal://idisk.mac.com/*username*/Documents/calendar.ics) and her user name and password.

Family members can access her calendar by choosing Subscribe from iCal's Calendar menu, entering the URL for the calendar, and placing her user name and password in the Authentication dialog box that appears.

I strongly advise your friend not to allow this kind of access to her .Mac account. She can use a far safer service such as iCal Exchange (www.icalx.com) or iCal World (www.icalworld.com/hosting.html), both of which allow you to publish password-protected iCal calendars for a small fee ($12 a year for iCal Exchange and $25 a year for iCal World).

With Your Permissions

I have removed a user account in OS X 10.3, but many of the permissions are set to the account I deleted. How can I change all permissions from the old account to the new one?

Darrell Keach, *Robstown, Texas*

There's a way to do this in Terminal, but I don't recommend going this route unless you and Unix are on very friendly terms (failing to enter the proper commands in Terminal can lead to disaster). Instead, I suggest Renaud Boisjoly's free BatChmod utility (http://macchampion.com/arbysoft)—which places a friendly face on the Unix chmod, chown, and chgrp commands.

To change those permissions, launch the program and drag an affected folder or file to the BatChmod window. The path to that item will appear in the File field. From the Owner and Group pop-up menus, select the entries that match your user account—darrell (if that's your user name) and Staff. If you're changing the permissions of a folder and its contents, enable the Apply Ownership And Privileges option in the BatChmod window. Click on Apply, and then click on Apply again in the resulting "Are you sure?" sheet. Enter your administrator password in the Authenticate window that appears, and click on OK in that window to make the requested changes.

'Ware, oh, Where?

My ISP says that there are invisible files placed on my system by sites I visit, and that these files regularly send information about me back to those sites. The ISP used terms such as *adware* and *spyware*. What's *really* going on?

Walt Hammonds, *Monte Vista, Colorado*

If your ISP were more in tune with the Mac world, it would have prefaced its message with "For Windows Users Only." Currently adware and spyware—which, respectively, are bits of code that display pop-up ads and send information from your computer to a third party without your permission—are all but unknown on the Mac.

There are applications that can log keystrokes and capture snapshots of what someone is doing on a Mac. Unlike much of the adware and spyware made for Windows, these applications aren't installed by a malevolent software download. Rather, they're placed on your Mac by someone who has access to your computer—a parent concerned about a child's Internet activities, a prying boss, or a jealous mate, for example.

Such tools are designed to be difficult to detect, so if you suspect that your activities are being monitored, you might take a look at Aladdin Software's $30 Internet Cleanup (831/761-6200, www.aladdinsys.com). Among its components is SpyAlert, a utility that searches your hard drive for traces of applications known to track your activities. When it finds such traces, it alerts you to them and—with your permission—attempts to remove the offending software. When Aladdin learns of new spyware applications, it updates Internet Cleanup to deal with new threats. □

UNSOLICITED ADVICE

iPhoto 4's slide shows are far more flexible than those created in previous versions of the program. You can not only elect to play an entire iTunes playlist behind a slide show, but also rate and rotate pictures as you view a slide show.

What's a little less obvious is that you can perform all these actions from the Mac's keyboard. For example, to rate pictures as they slide by, press 0 (zero) through 5 (0 for no stars, 5 for five stars). To rotate pictures clockwise, press ⌘-R. To rotate pictures counterclockwise, press ⌘-option-R. Press delete to remove a picture from the selected album. To change the speed of the slide show, use the up-arrow key to display pictures for a shorter amount of time and the down-arrow key to slow things down. To pause the slide show (but not the background music), press the spacebar.

Faster Photos Rating iPhoto pictures is far more fun when done within a slide show.

Contributing Editor CHRISTOPHER BREEN appears each Tuesday on TechTV's *Call for Help* program, and he's the author of *Secrets of the iPod,* fourth edition (Peachpit Press, 2004).

Mac 911 helps you solve your Mac problems. For more of the same, visit the Mac 911 Weblog (www.macworld.com/weblogs/mac911). Send your tips to mac911@macworld.com. We pay $50 for tips selected for publication in *Macworld.* All published submissions become the sole property of *Macworld.*

MACWORLD minifinders

Want to know what our experts thought of the past year's products? Check out this comprehensive collection of summaries—which includes the mouse rating of every product we reviewed between May 2003 and April 2004, as well as a review synopsis. On page 98 is a chart that gives an overview of our reviews of all current Apple laptops and desktops. For complete reviews of the products listed here, visit Macworld.com or use the Minifinders listing on this month's *Macworld* CD.

3-D Software

Carrara Studio 3 ($399), from Eovia (www.eovia.com): Carrara Studio 3 is an exceptional value, and its new features, particularly in rendering and modeling, make the midlevel 3-D program faster and more sophisticated (March 2004).

ImageModeler 3.5 ($750), from Realviz (www.realviz.com): This fun tool for making 3-D models from photographs may be pricey for hobbyists. But for architects, product designers, and animators, ImageModeler 3.5 is a great buy (September 2003).

MotionBuilder 5 ($995), from Kaydara (www.kaydara.com): As a tool for creating real-time 3-D character animation, MotionBuilder 5 is unbeatable. It's also an excellent complement to other 3-D packages (April 2004).

Pixels 3D 5.0 ($399), from Pixels Digital (www.pixels3d.com): Although this 3-D program doesn't provide the ultimate tool set for making 3-D animations and still images, it's certainly an excellent choice for beginners (December 2003).

ZBrush 1.5 ($399), from Pixologic (www.pixologic.com): If you need an easy-to-use 3-D–modeling facility, ZBrush is a great tool to have, as long as it isn't the only 3-D brush in your tool kit. (July 2003).

Audio Hardware

imp ($30), from SiK (www.sik.com): This iPod power adapter for your car is unique in that it provides third-generation iPods (with Dock) with a line-level output jack (March 2004).

inMotion ($149), from Altec Lansing Technologies (www.alteclansing.com): If you're looking for external speakers to use with your iPod, look no further than inMotion. This portable unit is small, light, and easy to tote around, and it lets you listen to your iPod without the hassle of earphones (April 2004).

iPods, third generation ($299 to $499), from Apple Computer (www.apple.com): Apple's new players are a solid improvement over the old. A smaller size and a new button layout make them refined; updated software makes them easier to use (July 2003).

Mini-Me ($1,495), from Apogee Digital (www.apogeedigital.com): A professional-quality digital-analog converter at a professional price. The converter requires a computer-based USB port and works well in both OS 9 and OS X, though there are some limitations on its use in the latter (October 2003).

PocketDock ($19), from SendStation (www.sendstation.com): This tiny adapter for the new iPods with dock connectors provides them with a FireWire port. Anything you could do with an older iPod, you can now do with the newer ones and the PocketDock (January 2004).

PowerMate ($45), from Griffin Technology (www.griffintechnology.com): It looks like a mad scientist's panic button, but the PowerMate is a USB controller that you can program for just about any application to scrub audio, scroll through documents, and more (June 2003).

PowerWave ($100), from Griffin Technology (www.griffintechnology.com): The USB-based PowerWave is a great way to get a little more audio into and out of your Mac, with no drivers required (June 2003).

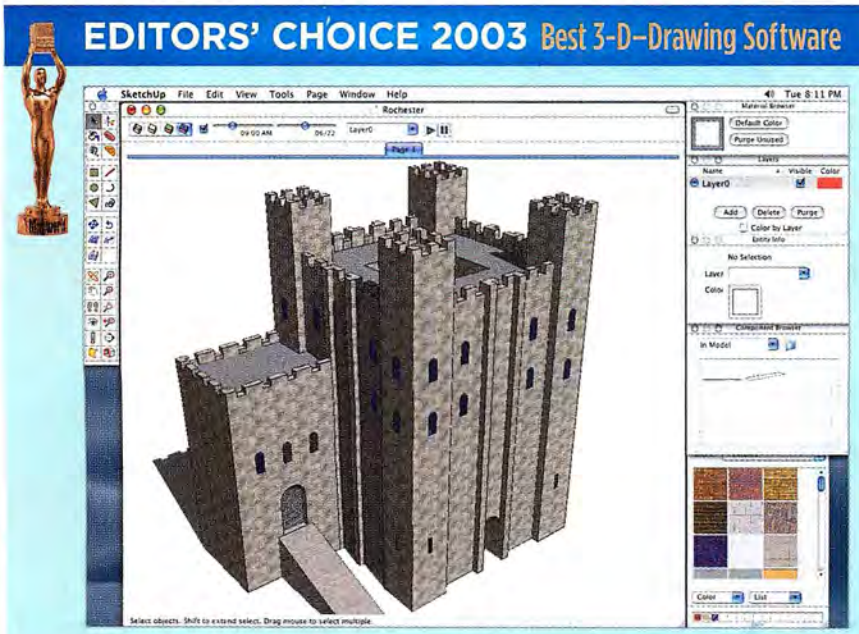
Pyramat PM300 ($150), from Pyramat (www.pyramat.com): It's a three-cushion mat! It's a subwoofer and pair of speakers! It's both! For those who like foldable furniture and also like to feel every thump of the bass right between their shoulder blades, this reclining wonder is for you (November 2003).

Squeezebox ($299), from Slim Devices (www.slimdevices.com): It's the perfect device for anyone who wants a seamless stereo-component experience from an iTunes music collection. Its advantages include wireless networking and the ability to play uncompressed audio (April 2004).

Audio Software

B4 ($235), from Native Instruments (www.native-instruments.com): B4 is a virtual instrument that beautifully re-creates the sound of a Hammond B3 organ. Its clean and mesmerizing sounds are excellently true to life (March 2004).

EDITORS' CHOICE 2003 Best 3-D–Drawing Software



SketchUp 3.0 ($495), from @Last Software (www.sketchup.com): SketchUp is CAD software for the rest of us—we recommend it to anyone who has a desire to visualize in 3-D, whether you're redecorating your living room or building a whole house (October 2003).

Digital Performer 4.1 ($795), from Mark of the Unicorn (see "Editors' Choice 2003: Best Digital-Audio and MIDI Application," this page).

iTunes 4 (free), from Apple Computer (www.apple.com): If you're interested in improved sound quality with AAC files, want to browse and buy from the iTunes Music Store, or would like to share music, you'll dig iTunes 4 (July 2003).

Live 2.1 ($399), from Ableton (www.ableton.com): DJs and live musicians will love Live's ease of use, implementation of OS X music technologies, and cool Tap Tempo feature. Version 2.1 adds enhancements like multichannel audio-input and -output support for Digidesign hardware, support for Rewire, and a snappier response time (November 2003).

Lounge Lizard EP-2 ($249), from Applied Acoustics Systems (www.applied-acoustics.com): This virtual instrument produces great Rhodes electric-piano sound and has excellent presets and parameter controls (March 2004).

MasterWriter ($289), from MasterWriter (www.masterwriter.com): This songwriting utility features thorough rhyme generation and filtering to help lyricists get past writer's block. In addition, a useful date-of-creation registry service helps lyricists take credit for their creations (November 2003).

Nicecast ($30), from Rogue Amoeba (www.rogueamoeba.com): Nicecast lets you set up your Mac to stream audio over the Internet. It's simple but powerful—the best streaming-audio solution for Mac OS X (March 2004).

Phrazer 2.0 ($299), from BitHeadz (www.bitheadz.com): This loop-based sequencing application works reasonably well in Mac OS 9, but it doesn't support MIDI input or audio input in Mac OS X (July 2003).

Pro Tools LE 6 ($75), from Digidesign (www.digidesign.com): Pro Tools LE 6 doesn't hold any surprises, but it does provide a comfortable transition to Mac OS X. Its new file-management tools and MIDI capabilities are excellent additions (June 2003).

Sonicfire Pro 3 ($299), from SmartSound (www.smartsound.com): Sonicfire Pro 3 is a useful app for video pros who need to add high-quality, made-to-fit, royalty-free music scores to their productions (November 2003).

SoundSoap 1.0 ($99), from Bias (www.bias-inc.com): This noise-reduction utility is simple enough for a preschooler to operate. If you want to remove hiss and hum from a recording, this is pretty much all you need. But if you want to enhance recordings, look to a more sophisticated product, such as Arboretum Systems' Ray Gun Pro X (August 2003).

Soundtrack 1.0 ($299), from Apple Computer (www.apple.com): This addictive program lets you quickly create original, royalty-free music for video and multimedia projects. It won't instantly transform you into a pro musician, but its intuitive workflow does make creating music a pleasure (December 2003).

Traktor DJ Studio 2.0 ($199), from Native Instruments (www.native-instruments.com): Traktor DJ Studio lets you mix, speed up or slow down, and apply cool filter effects to your songs. It's easy and fun to use, and it's a great alternative to lugging around your DJ hardware (June 2003).

WireTap 1.0 (free), from Ambrosia Software (www.ambrosiasw.com): Although a number of tools out there let you capture audio on your Mac, the free WireTap is clearly the easiest to use (January 2004).

CAD

formZ 4.0 ($1,495), from autodessys (www.formz.com): This completely reengineered version of the venerable solids and surface modeler and renderer was worth the wait. Architects will appreciate the new network-based renderer and the NURBS tools, although the latter still need work (August 2003).

SketchUp 3.0 ($495), from @Last Software (see "Editors' Choice 2003: Best 3-D–Drawing Software," page 88).

VectorWorks 10.5 ($895), from Nemetschek (www.nemetschek.net): This upgrade to the CAD software for engineers and architects isn't earth-shattering, but it does add some very useful capabilities. If you're using an older version, it's time to switch (March 2004).

Computers—Desktop

iMac G4/1.25GHz, 17-inch ($1,799), from Apple Computer (see "The Latest Macs," page 98).

iMac G4/1.25GHz, 20-inch ($2,199), from Apple Computer (see "The Latest Macs," page 98).

eMac 1GHz ($1,299), from Apple Computer (see "The Latest Macs," page 98).

Power Mac G4/dual-1.42GHz ($2,699), from Apple Computer (www.apple.com): This Power Mac G4 is not astonishingly faster than the dual-1.25GHz—but for $700 more, you get nice extras that make it a good value (June 2003).

Power Mac G5/1.6GHz ($1,799), from Apple Computer (see "The Latest Macs," page 98).

Power Mac G5/1.8GHz ($2,399), from Apple Computer (www.apple.com): Nearly silent and ultra sleek, this 1.8GHz giant is significantly faster than its G4 ancestors. With a standard DVD-burning SuperDrive and three PCI-X slots, this 64-bit star reaches new levels of coolness and is an excellent choice for Photoshoppers who need more power than their G4 can deliver (November 2003).

Power Mac G5/dual-1.8GHz ($2,499), from Apple Computer (see "The Latest Macs," page 98).

Power Mac G5/dual-2GHz ($2,999), from Apple Computer (see "The Latest Macs," page 98).

Computers—Laptop

PowerBook G4/1.25GHz, 15-inch ($2,599), from Apple Computer (see "The Latest Macs," page 98).

PowerBook G4/1.33GHz, 17-inch ($2,999), from Apple Computer (see "The Latest Macs," page 98).

iBook G4/800MHz, 12-inch ($1,099), from Apple Computer (see "The Latest Macs," page 98).

iBook G4/1GHz, 14-inch ($1,499), from Apple Computer (see "The Latest Macs," page 98).

iBook G4/933MHz, 14-inch ($1,299), from Apple Computer (see "The Latest Macs," page 98).

PowerBook G4/1GHz, 12-inch ($1,799), from Apple Computer (see "The Latest Macs," page 98).

PowerBook G4/1GHz, 15-inch ($1,999), from Apple Computer (see "The Latest Macs," page 98).

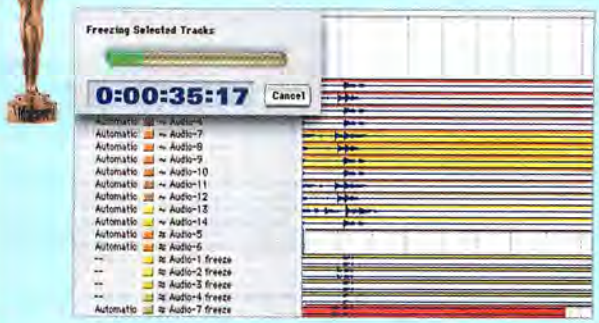
iBook G3/900MHz, 12-inch ($1,299), from Apple Computer (www.apple.com): Weighing just less than 5 pounds, this laptop is great if you want to use the Web, an e-mail program, a word processor, or even some of Apple's iLife apps, but be aware that the keyboard may cramp your style and the G3 processor might slow you down (August 2003).

PowerBook G4/1GHz, 17-inch ($3,299), from Apple Computer (www.apple.com): It pushes the limits of portability, but the 17-inch model has the best combination of features and performance of any PowerBook. It's an excellent workstation for video pros and designers (June 2003).

Computers—Server

Xserve (second-generation) ($2,799), from Apple Computer (www.apple.com): The Xserve isn't yet perfect, but with the latest tweaks, including a faster CPU and improvements to the cooling and ventilation systems, it just got closer. It's still the easiest server to manage (September 2003).

EDITORS' CHOICE 2003
Best Digital-Audio and MIDI Application



Digital Performer 4.1 ($795), from Mark of the Unicorn (www.motu.com): This music-production application's comfortable interface, adherence to Apple's OS X technologies, and new Audio Units support make for a great working environment (January 2004).

Development and Scripting

4th Dimension 2003 Standard Edition ($349), from 4D (www.4d.com): It's not easy to learn or to use, but the company is trying to fix that, as evidenced by its well-integrated XML and Web-services support. If you're an established 4D developer, it's well worth buying this edition (July 2003).

RealBasic 5.0 ($100), from Real Software (www.realsoftware.com): With a rebuilt compiler and debugger, and the incorporation of Mac OS X's interface features, RealBasic remains the most enjoyable way to develop modern and muscular Mac applications (July 2003).

Revolution 2.1 ($149), from Runtime Revolution (www.runrev.com): Revolution 2.1 is an accomplishment: a development environment for newbie programmers and experienced consultants who need to get working apps quickly into the hands of clients (February 2004).

TextWrangler 1.0 ($49), from Bare Bones Software (www.barebones.com): This is a moderately powerful tool for sorting, processing, and editing text files. If you spend a lot of time looking at config files or database exports, TextWrangler is a good option (July 2003).

Digital Cameras—Consumer

C-740 Ultra Zoom ($499), from Olympus (see "Our Favorite Digital Cameras," page 90).

Coolpix 3100 ($349), from Nikon (www.nikonusa.com): This is a good camera with a unique scene-mode feature: It puts gridlines or other aids on the LCD to help you compose better shots. The image quality is good but a bit noisy (July 2003).

Coolpix 5400 ($699), from Nikon (www.nikonusa.com): With a 4× zoom lens, a 5-megapixel CCD, a complete set of manual controls, a hot-shoe, and an incredible 1cm macro mode, this is one of the best high-end cameras out there (January 2004).

Cyber-shot DSC-P72 ($329), from Sony (http://eqmac.station.sony.com): This camera is a little bigger and has a few less features than its sibling, the P8; the trade-off is between size and battery life (the P72's battery lasts longer). The movie mode is the best we've seen (July 2003).

Cyber-shot DSC-P8 ($399), from Sony (http://eqmac.station.sony.com): The P8 has a few more features than its sibling, the P72; the trade-off is between size and battery life (the P72's battery lasts longer). The movie mode is the best we've seen (July 2003).

Cyber-shot DSC-V1 ($699), from Sony (http://eqmac.station.sony.com): This 5.0-megapixel camera supports full manual mode, has a very good user interface, and includes a hot-shoe. Despite a well-designed metal body, the Cyber-shot disappointed with poor battery life and photo quality (October 2003).

D-560 Zoom ($349), from Olympus (www.olympusamerica.com): This easy-to-use camera provides good-quality images. It has the same feature set as the Stylus 300, without the fancy body (July 2003).

Digital Rebel ($899), from Canon (see "Our Favorite

Digital Cameras," this page).

Dimage F300 ($599), from Minolta (www.minoltausa.com): This camera is worth considering. It has a tracking autofocus mode, which keeps moving subjects in focus, and it features sharp images and full manual controls (July 2003).

Dimage Xt ($399), from Minolta (www.minoltausa.com): This ultracompact 4.2-ounce, 3.2-megapixel camera has a nice movie mode; however, in our testing, soft images didn't turn out as well as those from a digital camera with a standard lens system (October 2003).

EasyShare DX6490 ($499), from Kodak (www.kodak.com): This digital camera has a 10× optical zoom and a healthy number of manual controls. Photo quality is very good, but the most interesting part of this camera is the EasyShare software package, which lets you mark photos for later e-mailing, printing, or saving in photo albums (January 2004).

Finecam L3v ($349), from Kyocera Electronics (www.kyoceraimaging.com): This is an average 3.2-megapixel model that's interesting only because of its 2.5-inch LCD. Photo quality is decent, but images are on the soft side (January 2004).

Finecam S5 ($599), from Kyocera Electronics (www.kyoceraimaging.com): The Finecam S5 is mediocre in all respects, unfortunately. It isn't a bad camera, but it can't handle the fierce competition in the 5-megapixel category (July 2003).

FinePix F700 ($600), from Fuji (www.fujifilm.com): This camera is compact, well designed, and fast, and it produces good-quality photos. In addition to its native 3.1-megapixel resolution, it can interpolate to 6 megapixels. It is a tad expensive, though (January 2004).

FinePix S5000 ($499), from Fuji (www.fujifilm.com): This camera can produce 6-megapixel images, but their quality isn't as good as that of the F700's images. In the end, the FinePix S5000 is just average in a growing field of ultrazoom cameras (January 2004).

Lumix DMC-FZ1 ($449), from Panasonic (www.panasonic.com): This fast automatic camera has a stabilized 12× zoom, good picture quality, and no manual controls except for white balance. Considering its price, the DMC-FZ1's 2.0-megapixel resolution is surprisingly low (October 2003).

PDR-M700 ($449), from Toshiba America (www.toshiba.com): This digital camera has a 2.5-inch LCD, but it's too bad that the resolution of the LCD isn't very high. The photo quality is good, but not spectacular. It's an average ultrazoom camera (January 2004).

PowerShot A70 ($399), from Canon (www.powershot.com): A full suite of manual controls, a nice movie mode, and support for conversion lenses and for an underwater case put this 3.2-megapixel digital camera way ahead of the competition (July 2003).

PowerShot G5 ($899), from Canon (www.powershot.com): A good 5-megapixel camera with impressive features and excellent photo quality. However, our photos had a surprising amount of purple fringing for a camera this expensive (October 2003).

PowerShot S400 Digital Elph ($599), from Canon (see "Our Favorite Digital Cameras," this page).

PowerShot S50 ($699), from Canon (www.powershot.com): Almost identical to the PowerShot S45, the 5-megapixel S50 has a full suite of manual controls, an AF illuminator, a good movie mode, and excellent photo quality (July 2003).

Stylus 300 ($449), from Olympus (www.olympusamerica.com): What makes this point-and-shoot camera stand out is its weatherproof metal body. It's easy to use and its picture quality is good, but it could use an AF illuminator (July 2003).

Digital Camera—Professional

EOS 10D ($1,999), from Canon (www.powershot.com): The EOS 10D is simply a great digital SLR camera. Its well-balanced mix of features, comfort, image quality, and reasonable price should appease even finicky film-camera stalwarts (September 2003).

OUR FAVORITE DIGITAL CAMERAS

BEST POINT-AND-SHOOT DIGITAL CAMERAS

PowerShot S400 Digital Elph ($599), from Canon (www.canon.com): This great 4-megapixel digital camera features a stunning all-metal body with a special scratch-resistant coating, quite good photo quality, and no red-eye problems (July 2003).

Optio 555 ($550), from Pentax (see "This Month in Digital Cameras," page 40).

BEST DIGITAL CAMERAS WITH MANUAL CONTROLS

Dimage A1 ($899), from Konica Minolta (see "This Month in Digital Cameras," page 40).

C-5060 Wide Zoom ($699), from Olympus (see "This Month in Digital Cameras," page 40).

BEST ULTRA-ZOOM DIGITAL CAMERAS

C-740 Ultra Zoom ($499), from Olympus (www.olympusamerica.com): This camera has a 10× zoom, 3.2 megapixel resolution, and full manual controls (October 2003).

Lumix DMC-FZ10 ($599), from Panasonic (see "This Month in Digital Cameras," page 40).

BEST DIGITAL SLRs (D-SLRs)

Digital Rebel ($899), from Canon (www.canon.com): The Digital Rebel is an excellent camera if you're ready to dive deeper into digital photography. It's a particular bargain if you've got a collection of Canon lenses you want to keep using (February 2004).

E-1 ($1,799) from Olympus (see "This Month in Digital Cameras," page 40).

Displays—LCD

Cinema Display ($1,299), from Apple Computer (www.apple.com): This 20-inch flat-panel monitor manages to maintain consistent color no matter what your vantage point is. If your Mac has an Apple Display Connector, you'll be happy with this display (August 2003).

CinemaLift ($369), from Innovative Office Products (www.lcdarms.com): This clever product allows you to suspend your LCD screen above your desktop. Unfortunately, if you aren't into do-it-yourself tasks, you might want to look elsewhere: some assembly is required (November 2003).

CML200B ($1,443), from Hitachi (www.hitachidisplays.com): This LCD has great speakers 2.5 inches wide, but you may be frustrated by hidden control buttons, and by the fact that color changes with viewing angle (August 2003).

DoubleSight DS-1500 ($799), from DoubleSight Displays (www.doublesight.com): This wide-screen LCD is really two 15-inch displays side-by-side in one case. It's great for helping with space limitations, but the image is a little soft-focused and it's VGA only (April 2004).

Gallery 2010 Oxygen ($1,099), from Formac (www.formac.com): If you're looking for attractive style, this LCD fits the bill with a translucent picture-frame design and a one-legged leaning stand. It's also inexpensive, but it won't give you a whole lot of flexibility (August 2003).

LL-T2020B ($1,799), from Sharp: Though it didn't fare as well with older graphics cards, this flat-panel LCD takes the cake when it comes to its adjustment options (August 2003).

MultiSync LCD2080UX ($1,699), from NEC (see "Editors' Choice 2003: Best Display," page 91).

SDM-X202 ($1,499), from Sony (http://eqmac.station.sony.com): You'll find good built-in speakers in this model; however, this monitor has a bluish cast (August 2003).

SyncMaster 213T ($2,399), from Samsung (www.samsungusa.com): If you're willing to spend just a little bit more money, this LCD offers a slightly larger screen than some others. But if you need a monitor that is highly customizable, and whose colors don't change with the viewing angle, you'll want to keep looking (August 2003).

VX2000 ($1,689), from ViewSonic (www.viewsonic.com): If solid overall image quality is very important to you, this flat-panel LCD might suit your needs. But be aware that you may run into trouble with older graphics cards, and you won't get good-quality sound from its tinny speakers (August 2003).

E-mail Software

4D Mail 5.3.2 ($149), from 4D (www.4d.com): This e-mail–server software package may be inexpensive, easy to use, and easy to integrate with other 4D products, but it's missing secure services and has the least-powerful spam controls of the e-mail servers we compared (April 2004).

CommuniGate Pro 4.1.8 ($499), from Stalker Software (www.stalker.com): Along with Kerio MailServer, this e-mail server software is one of the best of the bunch. It's the best choice for very large organizations with money to spend and the administrators who want the most control under the hood (April 2004).

Eudora 6.0 ($50), from Qualcomm (www.qualcomm.com): If it got a thorough update to its interface, Eudora could be the hands-down best e-mail program on the Mac. Instead, it's a cult favorite with a face only a mother could love (January 2004).

Kerio MailServer 5.7.4 ($395), from Kerio Technologies (www.kerio.com): This e-mail server package, with its dedication to security, ease of administration, and flexibility, is simply spectacular, right out of the box (April 2004).

KidzMail 1.1.2 ($10), from KidzCan (www.kidzcan.net): If you have a child who is learning how to use the Internet, KidzMail is a great beginning e-mail program. Its overall functionality and security provide an excellent introduction (December 2003).

Mailsmith 2.0 ($99), from Bare Bones Software (see "Editors' Choice 2003: Best E-mail Client," page 91).

PostOffice 3.5.3 ($295), from Tenon Intersystems (www.tenon.com): A good choice for organizations that want their e-mail administration as hands-off as possible, this e-mail server package still leaves us wary of its lack of secure services and spam control (April 2004).

Education Software

Accordance 5.5c ($139), from OakTree Software (www.oaksoft.com): Anyone who's interested in studying the Bible would do well to invest in Accordance. It offers tools for serious scholars, but it's simple and flexible enough for a novice to use (September 2003).

Easy Grade Pro 3.6 ($49), from Orbis Software (www.orbissoft.com): A stellar grade-tracking software package with loads of features, Easy Grade Pro allows you to store multiple classes in one file, provides extensive reporting features, and lets you create seating charts (November 2003).

Gradekeeper X 5.4 ($20), from Daniel Ethier (www.gradekeeper.com): A relatively inexpensive piece of grade-tracking software with some serious limitations, such as the inability to open more than one file at a time or have more than one grade book per file (November 2003).

Master Grade X 1.5 ($44), from Maxium Developments (www.maxium.com): No attendance tracking, an awkward interface, and a lack of standard features (such as being able to drop the lowest grade) mar this grade-tracking software (November 2003).

MicroGrade 6.02 ($90), from Chariot Software Group (www.chariot.com): A confusing interface hampers this relatively expensive grade-tracking software package. Other limitations, such as being able to include only one grade book per file and have only one file open at a time, can be maddening (November 2003).

Perfect Score 1.1.6 ($15), from Matt Fahrenbacher (http://homepage.mac.com/fahrenba/perfectScore/perfectScore.html): For an inexpensive grade-tracking software package, Perfect Score has a surprising number of features, like the ability to include photos of your students in a seating chart. However, the inability to store more than one class per file and the lack of cross-platform or Mac OS 9 support work to its detriment (November 2003).

Read, Write & Type ($80), from Talking Fingers (www.talkingfingers.com): This game gives kids ages six to nine all the tools they need to hone their keyboarding skills as they learn to read and write. It's compatible with operating systems as far back as System 7.5, but it looks awkward in Mac OS X, due to its fixed resolution of 640 by 480 (August 2003).

TimeLiner 5.0 ($80), from Tom Snyder Productions (www.tomsnyder.com): TimeLiner provides teachers with an effective tool for teaching across the curriculum, putting any chronological or numerical information on screen for students to see (June 2003).

Visual Thesaurus 2.0 ($30), from Plumb Design (www.plumbdesign.com): While it's no match for a real-world thesaurus, this singular application is a fun diversion that some users may find educational. Overall, it's a clever idea that doesn't live up to its own hype (November 2003).

Personal Finance

Budget 4.3.3 ($30), from Snowmint Creative Solutions (www.snowmintcs.com): With its conceptually vivid envelope metaphor, this personal-finance software helps you organize your money before you spend it. You won't find strong stock-tracking features or asset- and tax-reporting capabilities, though (April 2004).

iCash 1.4.3 ($25), from Max Programming (www.maxprog.com): This program is a conundrum: it's an elegant-looking Aqua application that's extremely confusing to use (April 2004).

Moneydance 2003 ($30), from Reilly Technologies (www.moneydance.com): Several bugs detract from this personal finance program's overall usability, but it's nonetheless comprehensive and extensible (April 2004).

PigMoney 1.1 ($13), from SweetCocoa Software (http://homepage.mac.com/sweetcocoa): This is a great personal-finance program for beginners who are just starting to keep track of their money. But we say "for beginners" for a reason: PigMoney has no check-printing capabilities and no way to balance a checkbook (April 2004).

Quicken 2004 ($70), from Intuit (www.intuit.com): This is still the most comprehensive personal-finance program remains out there. Quicken 2004 is largely unchanged from Quicken 2003, though it adds integration with iCal, an Emergency Records Organizer, and tools for managing your stock portfolio (April 2004).

Fonts and Typography

FontBook 3.8 ($10), from Lemke Software (www.lemkesoft.de/en/index.htm): The best little font-specimen tool for Mac OS X, FontBook offers a wide range of pages for printing. It doesn't perform well when displaying hundreds of fonts—but not everyone is as font-crazy as our reviewer (July 2003).

FontDoctor 5.5 ($70), from Morrison SoftDesign (www.morrisonsoftdesign.com): If you have a large collection of fonts that sometimes causes trouble, FontDoctor can cure what ails you. It's an industry standard for a reason: it knows how to diagnose and treat font problems (September 2003).

FontLab 4.5 ($549), from FontLab (www.fontlab.com): Fontographer (or something like it) is back. Font designers who take the time to tackle FontLab's somewhat confusing maze of toolbars will be rewarded with the power to create full-featured OpenType fonts (July 2003).

Suitcase X1 ($100), from Extensis (www.extensis.com): This version of font manager Suitcase is faster, easier to use, and more efficient than its predecessors, thanks in part to its keyword and QuickFind features (February 2004).

Typeset 1.6 ($25), from Vizspring Software (www.vizspring.com): A worthwhile type utility if you want to compare fonts on screen, Typeset has a nice slide-show feature for displaying customized text, and it lets you load uninstalled fonts (July 2003).

Games

Across Lite 1.2 (free), from Literate Software Systems (www.litsoft.com): Across Lite 1.2 is a Mac OS X 10.2 version of Literate's crossword client. It works fine, and it's tough to beat the price (June 2003).

Active Lancer ($20), from Freeverse Software (www.freeverse.com): Like many shooters, Active Lancer is tough to beat but very rewarding if you make it all the way to the end. It's more proof that there's a lot of life left in this genre (March 2004).

After Dark X + Fish ($10), from Infinisys (http://en.infinisys.co.jp): This update on the classic screen saver offers few new graphics, underexploiting the power of the modern line of Macs (November 2003).

Age of Mythology ($50), from MacSoft (www.macsoftgames.com): Age of Mythology's impeccable credentials and flawless Mac conversion make this an instant classic for real-time strategy fans (March 2004).

Aliens vs. Predator 2 ($50), from MacPlay (www.macplay.com): This shooter took plenty of time to arrive on the Mac, but it was worth the wait—Alien vs. Predator includes frightening effects and varied game play (December 2003).

America's Army: Operations ($6), from America's Army (www.americasarmy.com): A recruitment tool from the U.S. Army, this first-person shooter is quite passable, especially for something you can download for free. Both the 300MB download and the online game play require a high-speed Internet connection (November 2003).

EDITORS' CHOICE 2003 Best Display

MultiSync LCD2080UX ($1,699), from NEC (www.necmitsubishi.com): This highly flexible flat-panel LCD is tops when it comes to retaining consistent color from any angle. It offers great quality in a sleek, attractive package (August 2003).

Barrage (free), from Derek Arndt (www.macgamefiles.com): Simple, repetitive fun can be a great stress reliever every once in a while. That's what this shooting game provides. And what's more, it's free (September 2003).

Bloodrayne ($30), from Aspyr Media (www.aspyr.com): It's got lousy graphics, poor sound, a lame story, and tepid game play—so you may wonder whether there's anything good about Bloodrayne. There is. It works with game pads (September 2003).

Burning Monkey Casino ($20), from Freeverse Software (www.freeverse.com): Burning Monkey Casino offers cute, lighthearted fun for players looking for some quick-and-dirty Vegas-style action (March 2004).

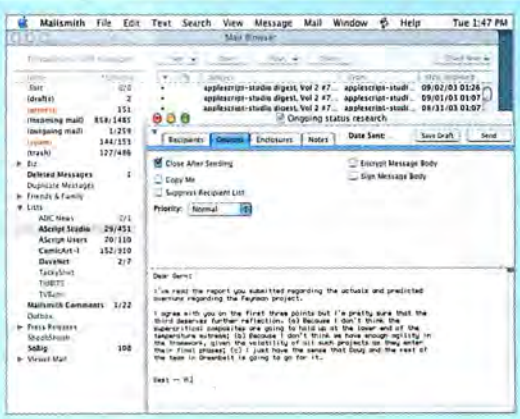
Burning Monkey Solitaire 3 ($25), from Freeverse Software (www.freeverse.com): With Internet rankings and tons of variety, Burning Monkey Solitaire 3 is a worthy successor to a great set of card games (December 2003).

Crazy Golf ($19), from Danlab Games (www.danlabgames.com): This is a miniature-golf action game full of creative course designs and traps. It's a competent, hardy little shareware offering that will challenge minigolf enthusiasts (December 2003).

CrosswordMaster 1.1.2 ($25), from Yin Yan Software (www.yinyansw.com): If you want help creating crossword puzzles, then this little app is for you. CrosswordMaster displays a list of words that could meet the space-and-letter-combination requirements of a given horizontal or vertical space within a grid design of your choosing (November 2003).

Cube It ($10), from Dracosoft (www.dracosoft.net): This take on the classic Collapse is an unimpressive replica and could

EDITORS' CHOICE 2003 Best E-mail Client



Mailsmith 2.0 ($99), from Bare Bones Software (www.barebones.com): New and improved, this version of the widely respected e-mail client has even better mail-filtering and text-manipulation features. It's a good program marred by a poor user interface that lacks some of the amenities to which Entourage users have grown accustomed (November 2003).

use some performance tuning. Still, it is a competent little puzzle. Plus, it's cheap and tiny (August 2003).

Deluxe Board Games ($20), from Freeverse Software (www.freeverse.com): This gaming software answers the call for simple, well-crafted, online-capable board games. A great value, it may also draw new players to online gaming (July 2003).

Dr. Blob's Organism ($10), from Digital Eel (www.digital-eel.com): If you're looking for a complex game to immerse yourself in, Dr. Blob's Organism isn't it. But if brainless arcade fun is more your style, give this game a try (February 2004).

Dungeon Siege ($50), from MacSoft (see Editors' Choice 2003: Best Game," this page).

Enigmo ($25), from Pangea Software (www.pangeasoft.net): In this beautifully detailed puzzle game, you must clear a path for dropping liquid before time runs out (October 2003).

EverQuest ($50, plus $13 monthly subscription fee), from Sony (http://eqmac.station.sony.com): The extremely popular, massively multiplayer online role-playing game has nineties-era graphics but is still highly addictive and fun to play. The Mac version allows you to interact only with other Mac users, which is either a good or a bad thing depending upon your point of view (November 2003).

Freedom Force ($40), from MacPlay (www.macplay.com): Oozing charm and cheese, Freedom Force is an incredibly fun and well-executed game that's sure to appeal to strategy gamers, role players, and comic-book fans (July 2003).

GameRanger (free), from GameRanger Technologies (www.gameranger.com): GameRanger is a chat service that is an indispensable resource for Mac gamers looking to play online, even if public chat can get unruly. The premium service is a bit overpriced at $50 per year (June 2003).

Ghost Master ($50), from Feral Interactive (www.feral.co.uk): This is a strategy game with a twist—the more you scare folks, the better. In Ghost Master, you've got a great game with great execution, especially for fans of horror movies (March 2004).

Halo: Combat Evolved ($50), from MacSoft (www.macsoftgames.com): By any measure, Halo is an absolutely fantastic game. Westlake and MacSoft truly pulled out all the stops to make this one of the best first-person shooters the Mac has ever seen (February 2004).

Harry Potter and the Chamber of Secrets ($40), from Aspyr Media (www.aspyr.com): Harry Potter and the Chamber of Secrets offers casual gamers a fun tie-in with the book and movie. It's better than the game that went with the previous Harry Potter movie, but the save feature is inconvenient (September 2003).

Hollow Ground ($19), from Aescapia AB (www.aescapia.com): Hollow Ground combines the classic appeal of coin-op gaming with Quake-like violence. It's an interesting blend if you can stomach the gore (February 2004).

Imaginext Battle Castle ($20), from Vivendi Universal Games (www.vugames.com): Imaginext Battle Castle is a great tie-in for kids who already play with Medieval World toys. It's also a fun romp for kids who want to be a knight for a day (March 2004).

Imaginext Pirate Raider ($20), from Vivendi Universal Games (www.vugames.com): Just the thing for wannabe Captain Sparrows (ages four and up, that is) looking to hoist the mainsail and weigh anchor, Imaginext Pirate Raider is a ton of fun (December 2003).

Kelly Slater's Pro Surfer ($30), from Aspyr Media (www.aspyr.com): Although it's highly reminiscent of the Tony Hawk series, Kelly Slater's Pro Surfer is well executed and fun to play (March 2004).

MacMAME 0.60A (free), from The MAME Project (www.macmame.org): If you're a fan of old arcade games, the MacMAME simulator should be the centerpiece of your collection—along with a drawerful of ROM chips (June 2003).

Marble Blast ($15), from GarageGames (www.garagegames.com): Marble Blast is a refreshing bit of arcade fun; you roll through a maze from the point of view of the marble. It's got a lot of challenging levels, but it may be too difficult for younger players (June 2003).

Momo Racing ($100), from Logitech (www.logitech.com): The Momo Racing wheel adds realistic effects to force-feedback-compatible racing games—all two of them. It's worth the money if you're a true racing enthusiast (June 2003).

NASCAR Racing 2003 Season ($30), from Aspyr Media (www.aspyr.com): This version improves on its predecessor with an updated driver, a team and sponsor roster, all 23 real-world NASCAR tracks, and a dramatically reworked physics engine (January 2004).

Neverwinter Nights ($50), from MacSoft (www.macsoftgames.com): This game is a fun role-playing romp that can cause enough sleepless nights and missed work to make it a worthwhile purchase (December 2003).

Noiz2sa (free), from Kenta Cho (www.victoly.com/~adam): Noiz2sa is a shoot-'em-up game that's a visual extravaganza in motion. You have to see it to believe it (January 2004).

Orbz 2.0 ($20), from GarageGames (www.garagegames.com): Version 2.0 is this game's debut on the Mac, and it was definitely worth the wait. Its simple mechanics, nonviolent play, and cartoonish graphics make it a hit for families who want a game everyone can play (August 2003).

Payback ($30), from Freeverse Software (www.freeverse.com): Violent subject matter, cheap and amateurish graphics, and bad level design make this crime-spree game one to miss (June 2003).

Pocket Tanks Deluxe ($16), from Cornerstone TSP Games (www.ctspgames.com): Pocket Tanks is a 2-D battle-strategy game. While there's room for improvement, it's phenomenally fun to play, and the Deluxe version is well worth the modest fee (June 2003).

Power Chips & High Roller ($20), from MacPlay (www.macplay.com): If you're intrigued by action puzzles, this disc may be worth a look. It's not especially original, but it does offer nice graphics, music, and sound effects (August 2003).

EDITORS' CHOICE 2003 Best Game

Dungeon Siege ($50), from MacSoft (www.macsoftgames.com): This almost perfect action-packed dungeon crawl will appeal to fans of Diablo and to real-time strategy gamers. It offers tons of action and a unique skill-development system for characters (August 2003).

rRootage 0.22 (free), from Adam Green (www.victoly.com/~adam): This game has fast-paced action, pulse-pounding sound effects, and a great soundtrack, but it may not appeal to everyone because of its spare, minimalist design and lack of Mac documentation and tech support (August 2003).

SimCity 4 ($50), from Aspyr Media (www.aspyr.com): This updated version of the Mac classic allows users to reach new heights of obsessive micro and macro city management. Watch out for sluggish performance as cities grow (November 2003).

Snood V3 ($15), from Snood (www.snood.com): Snood is a bona fide Mac classic, now native on Mac OS X (October 2003).

SpyHunter ($30), from Aspyr Media (www.aspyr.com): This is a good game that was ported rather late. Despite some stability issues, it's still a fine example of a genre we should see more of on the Mac (October 2003).

ThinkTanks ($20), from GarageGames (www.garagegames.com): This game retains what's best about Combat and has new elements that bring the game up-to-date. It's a steal at its price (September 2003).

Tiger Woods PGA Tour 2003 ($50), from Aspyr Media (www.aspyr.com): This is a superlative golf game that looks beautiful, especially with optional levels of detail activated; it's a new standard for golfing on a Mac (October 2003).

Tom Clancy's Ghost Recon: Desert Siege ($35), from Aspyr Media (www.aspyr.com): This expansion of the squad-based tactical action and strategy game is perfect for folks who'd rather be in Tom Clancy thrillers than read them (January 2004).

Tony Hawk's Pro Skater 3 ($40), from Aspyr Media (www.aspyr.com): There are new skating challenges and improvements, but Pro Skater 3 is incomplete (no multiplayer or force feedback) and old news. Mac gamers can opt for version 4 instead (July 2003).

Unreal Tournament 2003 ($50), from MacSoft (www.macsoftgames.com): Evolutionary, rather than revolutionary, improvements make Unreal Tournament 2003 a solid game that definitely belongs in the arsenal of any Mac first-person-shooter enthusiast (September 2003).

Warcraft III: The Frozen Throne expansion pack ($35), from Blizzard Entertainment (www.blizzard.com): This expansion pack adds new heroes, buildings, characters, units, and single-player missions to Warcraft III. It's well worth the somewhat lofty price (November 2003).

Warrior Kings ($50), from Feral Interactive (www.feral.co.uk): Warts and all, Warrior Kings is a lot of fun to play. It will particularly appeal to real-time-strategy fans looking for new challenges (February 2004).

Worms Blast ($40), from Feral Interactive (www.feral.co.uk): Beguilingly simple, yet extraordinarily challenging, Worms Blast hides a demonically difficult game behind cute graphics (July 2003).

X-Plane 6.5 ($60), from Laminar Research (www.x-plane.com): X-Plane is the king of the hill in Mac flight simulators. It's not a game, so expect to spend a few hours learning the basics and the interface. It's worth the effort (June 2003).

Zoo Tycoon ($50), from Aspyr Media (www.aspyr.com): This real-time strategy game lets you build, stock, and maintain your own zoo. It combines the voyeuristic thrill and strategic planning of Sim City with a nice dose of learning (January 2004).

Graphics—Consumer

EasyShare 3.0 (free), from Kodak (www.kodak.com): The best feature of this solid alternative to iPhoto is its tight integration with Kodak's Ofoto Web site. Still, EasyShare's inability to easily create slide shows and its inability to integrate with Mac OS X's built-in screen saver give iPhoto the edge (November 2003).

iView Media ($30), from iView Multimedia (www.iview-multimedia.com): This solid photo-cataloging program handles a wide variety of formats and often outperforms iPhoto; it's perfect for people who need to manage multiple media on a tight budget (October 2003).

Mac FlipAlbum 3.0 ($40), from E-Book Systems (www.ebooksys.com): Home users who are looking for a conceptual alternative to iPhoto may find FlipAlbum's interface refreshing, but there are still many things it can't do (July 2003).

PhotoEdit 1.3 ($30), from macXware (www.macxware.com): As an image editor—and even as an adjunct to iPhoto—PhotoEdit 1.3 comes up short (February 2004).

QuickImageCM (free), from Pixture Studio (www.pixture.com): This is a handy image-viewing utility that is more convenient and has better editing capabilities than Preview. And you can't beat the price (October 2003).

Graphics—Professional

Canvas 9 Professional Edition ($400), from ACD Systems (www.deneba.com): If Illustrator and Photoshop lack the precision you want, and if a CAD program stifles your creative expression, then Canvas is the tool for you (February 2004).

Correct+Apply Color ($49), from Asiva (www.asiva.com): This Photoshop plug-in's results can be very good. If you do a lot of color-correction work, Correct+Apply Color's elegant interface might ease your chores (January 2004).

Flash MX 2004 ($499), from Macromedia (www.macromedia.com): This comprehensive update of a fantastic application has some great new features for rookies, experienced users, and ActionScript aficionados alike (January 2004).

Genuine Fractals PrintPro 3.0 ($299), from LizardTech (www.lizardtech.com): This Photoshop plug-in does an excellent job of scaling low-resolution images to high resolution. While it's very powerful, its workflow is somewhat quirky, hampered by a proprietary file format and an unintuitive user interface (October 2003).

iView MediaPro 2.0 ($160), from iView Multimedia (www.iview-multimedia.com): This media-management program is just the thing for photographers, designers, and graphics pros. It does an admirable job, and it has a justifiable price tag (March 2004).

Illustrator CS ($499), from Adobe Systems (www.adobe.com): Illustrator CS's wealth of new typography and text-formatting controls makes this upgrade a no-brainer. You'll get a few new drawing tools and improvements, as well as nice 3-D features (February 2004).

Mask Pro 3 ($200), from Extensis (www.extensis.com): This latest upgrade to Extensis's excellent masking plug-in for Photoshop offers a number of new selection tools and masking utilities, as well as Mac OS X support, making it essential for the avid Photoshop user. We recommend it to anyone who needs to make quick, accurate masks (August 2003).

Mystical Lighting ($179), from Auto FX Software (www.autofx.com): This photo-editing tool comes with 16 creative lighting and shading effects and hundreds of preset variations designed to impart a dramatic flair to your photographs (December 2003).

PhotoKit 1.1 ($50), from Pixel Genius (www.pixelgenius.com): This Photoshop plug-in can perform effects that film photographers have been doing for years. Since it does its magic in a new layer, you never lose your original image (June 2003).

Photoshop CS ($649), from Adobe Systems (www.adobe.com): Photoshop CS is an awesome upgrade for every type of Photoshop user. Its slick, user-friendly new features make a huge difference in both productivity and image quality (February 2004).

Photoshop Camera Raw ($99), from Adobe Systems (www.adobe.com): Photoshop Camera Raw offers an elegant way to bring images into Photoshop. However, this plug-in isn't a substitute for an industrial-strength converter (June 2003).

hpxl SmartScale ($200), from Extensis (www.extensis.com): This Photoshop plug-in does an excellent job of scaling low-resolution images to high resolution, and with its intuitive Photoshop-esque interface, it's easy to use (October 2003).

Sharpen+Soften ($69), from Asiva (www.asiva.com): With its well-designed interface, this Photoshop plug-in provides a streamlined tool for creating targeted adjustments. However, you'll need a very fast Mac to use it (January 2004).

Illustration

EazyDraw 1.0 ($95), from EazyDraw (www.eazydraw.com): This Mac OS X-only, vector-based drawing tool is less than perfect; it buries its full and complex features beneath an unintuitive interface. Unfortunately, this, along with limited output capabilities, will slow you down (August 2003).

FreeHand MX ($400), from Macromedia (www.macromedia.com): If you're using Dreamweaver, Flash, or Fireworks, then this illustration program is an essential piece of your Web-design puzzle; it integrates with the other members of Macromedia's MX family (July 2003).

Painter 8 ($299), from Corel (see "Editors' Choice 2003: Best Natural-Media Drawing Program," this page).

EDITORS' CHOICE 2003
Best Natural-Media Drawing Program

Painter 8 ($299), from Corel (www.corel.com): This newest version of the venerable natural-media painting software, with its many new brushes and tools, is well worth purchasing. The sweeping interface improvements make Painter so intuitive that you'll be glad you switched (August 2003).

Input Devices—Keyboards

rfkey ($69), from Macally (www.macally.com): The rfkey wireless keyboard comes with easy-to-use software, but it's prone to interference with its companion mouse. Plus the keyboard and mouse require separate base stations (March 2004).

Wireless Keyboard ($69), from Apple Computer (www.apple.com): This wireless keyboard had the longest effective range of the models we tested, mainly because it uses Bluetooth. Another plus is its conveniently small footprint (March 2004).

Input Devices—Keyboard and Mouse Combinations

Cordless MX Duo ($100), from Logitech (www.logitech.com): Logitech's wireless keyboard-mouse combo has a long-range mouse and a keyboard with nice programmable keys and a good media-key setup (March 2004).

Wireless Optical Desktop ($135), from Kensington (www.kensington.com): Kensington's mouse-and-keyboard combo has highly programmable features and a good effective range. The batteries charge via USB (March 2004).

Wireless Optical Desktop ($85), from Microsoft (www.microsoft.com): Microsoft's keyboard-and-mouse package has the best wireless mouse, thanks to its software, horizontal scrolling, and integration with the keyboard. The keyboard has good application-specific settings (March 2004).

Input Devices—Pointing Devices

Bluetooth Wireless Optical Mouse ($89), from Belkin (www.belkin.com): Although this wireless mouse has a long range, we don't recommend it. One of its buttons doesn't work on the Mac, and there are a few other firmware-related glitches (March 2004).

CintiqPartner ($200), from Wacom (www.wacom.com): This 6-by-8-inch tablet works with the same tablet pen as the Cintiq, which means you can use the tablet and Cintiq at the same time without having to switch pointing devices. For $200, this tablet is a minimal investment compared with the two grand you've already dropped for a Cintiq (November 2003).

iceCAD ($49), from Macally (www.macally.com): At 4 by 4.5 inches, the iceCAD is probably the tiniest pressure-sensitive graphics tablet you'll ever see. The small size makes it a great convenience for travel, but it's also slightly uncomfortable to use (January 2004).

rfmouse ($49), from Macally (www.macally.com): This wireless mouse comes with easy-to-use software and programmable buttons, but it requires a separate base station, so you'll need two if you also use a wireless keyboard (March 2004).

ShuttleXpress ($60), from Contour Design (www.contourdesign.com): This compact, useful controller follows neatly in the footsteps of the ShuttlePro. It offers solid construction, stylish design, and customizable features. The only downside is that its programmable buttons can't be labeled (August 2003).

WingMan Cordless RumblePad ($50), from Logitech (www.logitech.com): If the convenience of a wireless game pad and future support for force feedback appeal to you, the WingMan hits a home run (July 2003).

Wireless Mouse ($69), from Apple Computer (www.apple.com): One of the first Bluetooth input devices to hit the market, Apple's Wireless Mouse has a useful tension switch to let you adjust how hard you have to press for a click to register. Also nice is the on-off switch that covers the optical sensor when it's off (March 2004).

Mobile-Mac Accessories

iCurve ($40), from Griffin Technology (www.griffintechnology.com): The iCurve is a Lucite PowerBook stand with small rubber feet that keep it from sliding around. It might not seem like much, but you'll find yourself missing the stylish stand when you work without it (June 2003).

PodSleevz ($20), from RadTech (www.radtech.us): PodSleevz are thin (less than 1mm thick) microfiber covers that fit your iPod like a glove. They are tough but soft, and they come in a variety of colors (December 2003).

Multimedia Authoring

USB Instant DVD ($229), from ADS Technologies (www.adstech.com): This hardware-software combination is a good option for Mac users who have the DVD itch but don't have Apple's iDVD or DVD Studio Pro. With some software improvements, this will be a real winner (June 2003).

Multimedia Software

Director MX ($1,199), from Macromedia (www.macromedia.com): Director MX is an excellent upgrade for existing Director users, though it isn't a revolutionary release in terms of new features. It now works with Mac OS X for both authoring and playback (June 2003).

DiscBlaze 2.1.1 ($19), from Radical Breeze (www.radicalbreeze.com): DiscBlaze expands on Mac OS X's CD- and DVD-burning capabilities and it provides all the functionality many users will ever need (February 2004).

iRecordNow 1.0.1 ($15), from Boinx Software (www.irecordnow.com): Ever want to use your iSight as a DV camera? iRecordNow lets you do it. The feature set is fairly basic, but it's easy to use and convenient for recording short video clips (February 2004).

MPlayer OS X 2.0b6 (free), from MPlayer OS X project members (http://mplayerosx.sourceforge.net): This is the Mac OS X distribution of the Movie Player for Linux. It's a good tool for the multimedia files QuickTime just can't seem to figure out (February 2004).

QuickPlayCM 1.0 (free), from Pixture Studio (www.pixture.com): This free plug-in lets you view any QuickTime-supported movie file in the Finder by control-clicking on the file and selecting QuickPlay from the contextual menu (February 2004).

Toast 6 Titanium ($100), from Roxio (www.roxio.com): This CD- and DVD-burning program's power and flexibility outshine anything you can get from a Mac's built-in burning capabilities. Toast 6's most impressive improvements are in the video arena (December 2003).

Network Hardware

Aria extreme ($80), from Sonnet Technologies (www.sonnettech.com): This card brings wireless networking to PowerBook G3s without AirPort slots, and brings AirPort Extreme to owners of Titanium PowerBook G4s and PowerBook G3s (March 2004).

ExtendAir Direct ($150), from Dr. Bott (www.drbott.com): If you need better AirPort Extreme range in one direction, this external antenna may be the perfect solution. The Direct is a good choice if you live in a narrow home with a long central hallway (September 2003).

ExtendAir Omni ($100), from Dr. Bott (www.drbott.com): If you need better AirPort Extreme range in all directions, this external antenna may be the perfect solution. The Omni is the best choice for most homes (September 2003).

Network-Management Software

iTools 7 ($349), from Tenon Intersystems (www.tenon.com): iTools provides a slick GUI interface to many popular and powerful free Unix Internet services, such as Apache 2 Web server and ProFTPD. Worth the price if you want powerful Internet services and are uncomfortable compiling Unix programs from source code (October 2003).

Organizational Software

Inspiration 7.5 ($69), from Inspiration Software (www.inspiration.com): This easy-to-use chart-drawing program handles the grunt work for you, so you can concentrate on being inspired. The 7.5 version includes new features like Transfer, which allows you to export your clever diagrams to Word or an AppleWorks document. New Fiction Writing and Biographical Essay modes expand Inspiration's already hefty feature set, further improving this innovative product (November 2003).

OmniGraffle Professional 3.0 ($120), from The Omni Group (see "Editors' Choice 2003: Best Organizational Software," page 95).

Studiometry 1.1 ($55), from Oranged.net Software (www.oranged.net): This project-management application for designers and illustrators doesn't quite fit the bill—specifically because of flaws in the Client Info interface, as well as the billing and invoice system (March 2004).

Tinderbox 1.2 ($145), from Eastgate Systems (www.eastgate.com): Tinderbox is a remarkable tool for storing, arranging, exploring, and publishing data. If you work with a lot of facts and ideas, it can provide vital clarity—and it just might spark your creativity (September 2003).

Printers—Label

LabelWriter 330 Turbo ($210), from Dymo (www.dymo.com): If you need to print black-and-white labels quickly and on demand in Mac OS X, the LabelWriter 330 Turbo is a winner (March 2004).

Printers—Monochrome Laser

B4300 ($528), from Oki Data (www.okidata.com): The Oki Data B4300 required an optional PostScript-emulation upgrade to work over a network with a Mac. The $528 tag reflects this. Its graphics were fair and suffered from posterization (June 2003).

HL 5070N ($499), from Brother (see "Our Favorite Printers," this page).

LaserJet 4300n ($1,879), from Hewlett-Packard (see "Our Favorite Printers," this page).

Phaser 4400N ($1,400), from Xerox (www.xerox.com): Though it's a little on the expensive side, this networked monochrome laser printer produces excellent text and very good graphics (June 2003).

T420d ($689), from Lexmark (www.lexmark.com): The T20d is a snappy USB printer with print speeds more in line with those of workgroup printers than with those at the lower end. However, it produced some banding in its graphics (June 2003).

Printers—Multifunction

LaserJet 3330mfp ($700), from Hewlett-Packard (www.hp.com): This black-and-white laser multifunction printer produced excellent text output. On the minus side: in our testing some copies were darker than they should have been, and printed images were sometimes grainy with banding (November 2003).

MFC-8420 ($549), from Brother (www.brother.com/usa/index.html): A cheap black-and-white laser multifunction machine, the MFC-8420 features excellent text output and an impressive cartridge life of 3,300 pages. However, the machine produced dark and blotchy printed images (November 2003).

PSC 2175 ($200), from Hewlett-Packard (see "Our Favorite Printers," this page).

X5150 All-in-One ($150), from Lexmark (www.lexmark.com): This color multifunction printer makes very nice black-and-white copies and smooth curves, but its poor scan ability and lack of a fax feature make it less attractive than some of the other products in this market (November 2003).

Printers—Photo

i900D ($250), from Canon (www.powershot.com): The Canon i900D ink-jet photo printer offers excellent value; it's relatively speedy, it has good computerless printing, and it uses individual ink cartridges (February 2004).

i960 ($200), from Canon (see "Our Favorite Printers," this page).

P-440 ($499), from Olympus (www.olympusamerica.com): Although the dye-sub-based P-440 showed fast printing on multiple copies of 4 by 6 images, it's just too expensive for its limited usefulness (February 2004).

Photosmart 7960 ($300), from Hewlett-Packard (www.hp.com): This printer should work well for people who print black-and-white images often, and it has very good detail reproduction. It is a bit slow, though (February 2004).

Stylus Photo 900 ($199), from Epson (www.epson.com/northamerica.html): The first ink-jet that prints directly onto CDs and DVDs for easy labeling, the Stylus Photo 900 is also an excellent photo printer. For the price, you won't find a better printer with these capabilities (August 2003).

Stylus Photo R300 ($179), from Epson (www.epson.com/northamerica.html): This photo ink-jet printer offers an excellent value. It has very good color matching and a wide range of computerless printing support (February 2004).

Z705 ($80), from Lexmark (www.lexmark.com): Despite the Lexmark Z705's low price, it isn't worth the hassle involved in getting it to produce good color (February 2004).

Printer—Wide Format

DesignJet 120nr ($1,895), from Hewlett-Packard (www.hp.com): This professional-grade wide-format printer has excellent print quality, but poor built-in color matching (October 2003).

OUR FAVORITE PRINTERS

BEST MONOCHROME LASER PRINTERS

HL 5070N ($499), from Brother (www.brother.com/usa/index.html): For people looking for an inexpensive laser printer, this monochrome networked laser's excellent text printing and its Rendezvous capabilities make it a great choice (June 2003).

LaserJet 4300n ($1,879), from Hewlett-Packard (www.hp.com): The LaserJet 4300n workgroup printer is more expensive than the Xerox Phaser 4400N, another printer we looked at in the same roundup. But the 4300n ships with more RAM and has a higher duty cycle. Also, it's Rendezvous-enabled (June 2003).

BEST 6-COLOR (PHOTO) INK-JET PRINTER

i960 ($200), from Canon (www.canon.com): The Canon i960's speed, color fidelity, detail and price make it a fabulous ink-jet photo printer (February 2004).

BEST MULTIFUNCTION, 4-COLOR INK-JET PRINTER

PSC 2175 ($200), from Hewlett-Packard (www.hp.com): This hardworking multifunction printer features crisp color copies and can generate fair images from its flatbed scanner. Sadly, no fax capability is included in this model (November 2003).

BEST MULTIFUNCTION, 6-COLOR (PHOTO) INK-JET PRINTER

Epson Stylus Photo RX500 ($249), from Epson (see *Reviews*, page 38).

Publishing—Print

Acrobat Professional 6.0 ($449), from Adobe Systems (www.adobe.com): Prepress professionals should upgrade to this version of Acrobat; it offers the control they've been waiting for. For other folks, the Standard version should be enough (September 2003).

Acrobat Standard 6.0 ($299), from Adobe Systems (www.adobe.com): Acrobat Standard 6.0 may finally make the paperless office a reality with its amazing workflow enhancements. If you're even slightly inclined to upgrade, do it without hesitation (September 2003).

InDesign CS ($699), from Adobe Systems (www.adobe.com): This is a more capable and more functional InDesign; in due time, this program will easily claim the publishing crown from QuarkXPress (February 2004).

MarkzTools 5 ($199), from Markzware Software (www.markzware.com): This anticorruption and first-aid package can save the day for those who rely on QuarkXPress to get their work done. It consists of seven modules that help you salvage corrupted files, switch between XPress 4 and XPress 5, and reduce file size (August 2003).

Portfolio 6.1 ($200), from Extensis (www.extensis.com): Taking advantage of OS X's interface and structure, this version gives you the power to quickly decide whether a file is a digital asset or digital detritus (July 2003).

QuarkXPress 6.0 ($1,045), from Quark (www.quark.com): The enhancements in this OS X-native version of QuarkXPress are worthwhile for any XPress-based production shop, and the upgrade pricing is easy to stomach (September 2003).

RagTime 5.6.5 ($699), from ComGrafix (www.comgrafix.com): Business users certainly need an integrated word processing, spreadsheet, and layout program. But despite this solid concept, RagTime's interface and feature implementation are severely flawed (April 2004).

Publishing—Web and Internet

BlogApp 1.3 ($6), from Tim Conner (www.objectivelabs.com): It's easy to use, but it doesn't offer any preview function or support for categories, multiple Weblogs, or keyboard shortcuts (July 2003).

Contribute 2.0 ($99), from Macromedia (see "Editors' Choice 2003: Best Web-Design Tool," this page).

Dreamweaver MX 2004 ($399), from Macromedia (www.macromedia.com): This industry-leading Web-design application is a great tool for any Web developer working on the cutting edge of CSS design. Too bad the same kind of innovation isn't demonstrated in other areas of the program (January 2004).

EspressoBlog 2.2.1 (free), from iAware (http://iaware.interalia.org): This posting Weblog tool has full support for keyboard shortcuts, and help for image uploading. However, the interface is confusing and there is no preview function (July 2003).

Fireworks MX 2004 ($299), from Macromedia (www.macromedia.com): Fireworks MX enjoys a well-deserved reputation as a solid tool for producing Web graphics, but this release maintains rather than enhances that status. This update offers very little reason to upgrade (January 2004).

GoLive CS ($399), from Adobe Systems (www.adobe.com): While this program offers many advanced features for building and managing Web sites, its lackluster support for current CSS techniques and its sometimes complex interface are serious drawbacks (February 2004).

iJournal 1.5 (free), from William Coldwell (www.planetcryo.com): Coldwell's Weblog tool is easy to use and supports keyboard shortcuts. A little bonus is that iJournal can automatically list the iTunes song you're currently playing (January 2004).

Kung-Log 1.44 (free), from Adriaan Tijsseling (www.kung-foo.tv): A rich feature set helps Kung-Log manage Weblogs on multiple servers. As a plus, the developer is very responsive (July 2003).

Lift NN/g ($549), from UsableNet (www.usablenet.com): If you have a complex Web site but would prefer to avoid the hassle of designing and testing it for maximum accessibility, look no further. This tool offers valuable references and great features for finding and fixing errors (August 2003).

NetNewsWire 1.0.1 ($40), from Ranchero Software (www.ranchero.com): Integrated with an RSS reader, NetNewsWire can manage Weblogs on multiple servers. But there's no image assistance, and it's relatively expensive (July 2003).

pMpost 1.0 ($20), from pMachine (www.pmachine.com): This Weblog tool supports custom fields for more flexibility, but it has no keyboard shortcuts and no image-upload assistance (July 2003).

Scanner—Consumer

Scanjet 4670 ($200), from Hewlett-Packard (www.hp.com): If you're looking for a scanner that's as beautiful as your Mac, the transparent HP Scanjet 4670 is the one for you. Just be sure to bring your own software, as the bundle is a loose amalgam of inconsistent utilities (February 2004).

Scanner—Software and OCR

Readiris Pro 9 ($130), from IRIS (www.irislink.com): The improvements to this optical character recognition program make it much more accurate when recognizing text from a clean scan. The spelling checker, however, needs to lay off the caffeine (March 2004).

Science and Engineering

Chartsmith 1.2 ($129), from Blacksmith Technologies (www.blacksmith.com): Despite a few rough edges, Chartsmith is a highly capable charting tool that's easy to use once you learn its idiosyncrasies (December 2003).

DeltaGraph 5.0 ($299), from Red Rock Software (www.redrocksw.com): This robust graphing program is perfect for scientists and other professionals who need advanced graphing features not available in Excel or PowerPoint (October 2003).

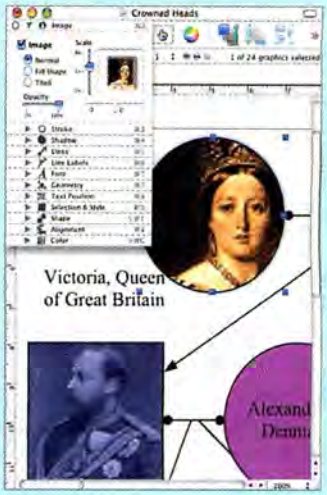
MacAstronomica 2.0.2 ($25), from EasySoft Creations (http://pages.infinit.net/trottier): This cool utility can turn any iBook or PowerBook into a portable guide to the nighttime sky. Just select your city from an extensive list, and you're ready to stargaze (December 2003).

Mariner Calc 5.2 ($80), from Mariner Software (www.marinersoftware.com): Although spreadsheet program Mariner Calc has customizable toolbars and the same formula conventions as Excel, it has a limited capability for opening Excel files and handles only basic Excel cell formats (March 2004).

Mathematica 5 ($1,880), from Wolfram Research (www.wolfram.com): With its enhanced authoring tool and its new graphics format, version 5 is the friendliest Mathematica yet for Web-based math collaboration. And its speed improvements more than justify the $350 upgrade price (January 2004).

SPSS 11 ($1,145), from SPSS (www.spss.com): If you have mountains of social-sciences or business data to analyze, SPSS 11 is uniquely designed to help you. For large-scale statistical problems, it's the best choice available on the Mac (June 2003).

EDITORS' CHOICE 2003 Best Organizational Software



OmniGraffle Professional 3.0 ($120), from The Omni Group (www.omnigroup.com): With design tools that rival those of many illustration programs—and some one-of-a-kind chart-making tools—this app is marching boldly into the future of diagramming in OS X (September 2003).

Storage

2.52TB Xserve RAID ($10,999), from Apple Computer (see "Editors' Choice 2003: Best Server," page 96).

250GB Fire800 ($550), from WiebeTech (www.wiebetech.com): This FireWire-800 drive comes with the compatibility program MacDrive 5 for Windows, which almost makes up for the fact that it comes as a DOS-formatted drive (September 2003).

ABSplus ($279), from CMS Products (www.cmsproducts.com): Even for the backup novice, the ABSplus software-hardware combination is easy to use, right out of the box (January 2004).

EDITORS' CHOICE 2003 Best Web-Design Tool

Contribute 2.0 ($99), from Macromedia (www.macromedia.com): This Web-page editor seamlessly facilitates the easy maintenance of Web content by novice users. Features SFTP transfer support, quick setup, and easy integration with Dreamweaver (November 2003).

Bravo Disc Publisher ($2,495), from Primera Technology (www.primeratechnology.com): A useful machine that burns and labels CDs and DVDs, the Bravo is easy to use and more convenient than disc-duplication services. The only downside is that the software bundled with it is a little limited (October 2003).

Cobra FireWire 800/USBII ($599), from EZQuest (www.ezq.com): This FireWire 800 drive includes helpful backup utilities, Dantz Retrospect Express and InTech SpeedTools. It's a little bulkier than the other drives we reviewed (September 2003).

D2 U&I ($599), from LaCie (www.lacie.com): This FireWire drive has a nice case and comes with helpful backup utilities, SilverLining Pro and SilverKeeper. It's a good drive with no significant drawbacks (September 2003).

DV Bank ($1,100), from Datavideo (www.datavideo-tek.com): This nifty device isn't for every videographer, but for those who need an additional capturing facility or time-lapse capability, the DV Bank is a great tool (July 2003).

FireVue FireWire/IDE SMART Hot-Swap Drive System ($279), from Granite Digital (www.granitedigital.com): This backup device may be overkill for some users, but if your data is important to you, it could be the easy and reliable solution you've been looking for (January 2004).

JumpDrive Secure ($60), from Lexar Media (www.lexarmedia.com): This is a portable USB flash-memory device with a twist—software that creates public and private partitions. It makes sense for your top-secret data (December 2003).

Mercury Elite Pro FireWire 800 ($519), from Other World Computing (www.macsales.com): We recommend this 250GB FireWire 800 drive above all others; it has the lowest price of the drives we reviewed and includes a variety of ports that make it compatible with a wide range of machines (September 2003).

OneTouch ($300), from Maxtor (www.maxtor.com): This hardware-software combination backup product includes an inexpensive, quiet drive. The OneTouch is good for folks who want extra disk space and more backup flexibility (January 2004).

Upgrade Cards

Encore/ST G4/1.4GHz ($600), from Sonnet Technologies (www.sonnettech.com): This CPU-upgrade card works with any Power Mac G4 that has AGP graphics and Gigabit Ethernet. It works well, but the thermal paste used to install it becomes a real mess if you ever move the card to another machine. With a $60 kit, you can also install this card in a Cube (October 2003).

G-celerator GC1-800-S2 ($280), from Giga Designs (www.gigadesigns.com): This CPU upgrade card is a good performer, and its price is very tempting—it's one of the lowest-cost 800MHz upgrades available. It's compatible with Power Mac G4s from AGP Graphics through Quicksilver (July 2003).

G-celerator GC5-1000-S2 ($420), from Giga Designs (www.gigadesigns.com): We recommend this 1GHz CPU upgrade card (compatible with Power Mac G4s from AGP graphics through Quicksilver) for its competitive price, speedy performance, and trouble-free operation (July 2003).

G-celerator GC5B-1400-D2/A 1.4GHz ($559), from Giga Designs (www.gigadesigns.com): This able CPU upgrade card is compatible with any Power Mac G4 that has AGP graphics, Gigabit Ethernet, and a 100MHz bus. You must set the jumpers manually, which also means that you can overclock the chip (October 2003).

2.52TB Xserve RAID ($10,999), from Apple Computer (www.apple.com): For data-intensive work, the Xserve RAID truly delivers on performance, at an unheard-of price. It has awesome data-transfer rates, redundancy in most elements, and multiplatform support (September 2003).

Mercury Extreme G4/1.4-1.467GHz ($590), from Other World Computing (www.macsales.com): This adept CPU upgrade card is compatible with any Power Mac G4 that has AGP graphics and Gigabit Ethernet. You must set the jumpers manually, which also means that you can overclock the chip (October 2003).

PowerForce G4 Series 100 1.4GHz ($599), from PowerLogix (www.powerlogix.com): This capable CPU upgrade card is compatible with any Power Mac G4 that sports AGP graphics, Gigabit Ethernet, and a 100MHz bus. The card does not require setting any jumpers, but we had some difficulty fitting the supplied screws into the heat sink (October 2003).

Utilities—Backup

0 mice **Clone'X** ($50), from Tri/Edre (www.tri-edre.com): This miserable little backup utility does only damage (October 2003).

DV Backup 1.1 ($45), from coolatoola (www.coolatoola.com): This clever shareware hack lets you back up computer files to a domestic DV or Digital8 camcorder through your Firewire port (November 2003).

Utilities—Communication

24U Email OSAX 2.2 ($17), from 24U (www.24usoftware.com): This little widget is an AppleScript tool that lets you send e-mail messages without having to open your e-mail program (December 2003).

Business Card Composer 1.1 ($40), from BeLight Software (www.belightsoft.com): Create, lay out, and print professional-looking business cards with this easy-to-use program (December 2003).

disclabel 1.1 ($30), from SmileOnMyMac (www.smileonmymac.com): disclabel lets you create actual disc labels and design CD and DVD case covers and tray inserts, right down to the text on the spine. What really sets this disc-label software apart is its clever integration with the iLife suite of products (November 2003).

EvoCam 3.1 ($20), from Evological (www.evological.com): EvoCam is a powerful but easy-to-use program that turns any QuickTime-compatible FireWire video camera into a Web cam. You have access to QuickTime effects, so you can present yourself any way you like (September 2003).

Page Sender 3.0 ($30), from SmileOnMyMac (www.smileonmymac.com): This easy-to-use, Mac OS X-compatible fax application knocked our socks off by doing everything a fax machine does—except getting jammed (June 2003).

Utilities—Productivity

Addressix 1.3 ($13), from A Sharp (www.a-sharp.com): This application can print envelopes in any of 12 U.S. and international sizes, and lets you create custom sizes. Addressix is smart, and it does its task very well (July 2003).

AvantGo USB sync 1.2.1 (free), from Tom Whittaker and Florent Pillet (http://homepage.mac.com/s_d/malsyncx/malsyncx_en.html): This utility helps AvantGo junkies solve the Mac OS X problem. It combines malsync and USB-TCP Bridge to retrieve data from the Internet and send it to your Palm over USB (February 2004).

CaptainFTP 2.6 ($25), from Xnet Communications (http://captainftp.xdsnet.de): This FTP client provides accelerated downloads for slower Internet connections and supports Rendezvous. The interface is a little quirky—for instance, many buttons have inscrutable icons (September 2003).

Cookie Muncher 1.0.6 ($8), from dot software (www.dotsw.com): Despite some minor inconveniences, Cookie Muncher is a tasty solution for Web surfers who want to keep their browsers cookie-free (December 2003).

CopyPaste-X 1.5 ($20), from Script Software (www.scriptsoftware.com): CopyPaste-X goes well beyond just providing multiple Clipboard items that are available regardless of the app you're using. One nice extra is the basic word processor with support for fonts, colors, and text styles (June 2003).

F10 Launch Studio 1.2 ($29), from Chronos (http://chronos.iserver.net): This little utility tries to make your Mac life easier by putting all your applications, folders, and documents on a single launch pad. While it has several useful features, it's no match for TLA's DragThing (August 2003).

Faxstf X Pro ($90), from Smith Micro (www.smithmicro.com): This version is significantly better than its predecessor, but its price, inconsistency in receiving faxes, and limited address-book compatibility mean it's no match for SmileOnMyMac's Page Sender (July 2003).

Fetch 4.0.3 ($25), from Fetch Softworks (www.fetchsoftworks.com): This FTP client with a long history has some great features for previewing and editing graphics and text files before download, even though it hides these features away in menus. But there are definitely better FTP clients (September 2003).

FTP Client 4.0.1 ($35), from Vicomsoft (www.vicomsoft.com): This FTP client has a well-designed user interface and performs exceptionally well. It also gives you the invaluable ability to create fast-access droplets (September 2003).

Huevos 1.1 (free), from Ranchero Software (www.ranchero.com): If you spend a lot of time searching the Web, this keyboard-based, intuitive desktop search tool that accesses 15 different sites is a tremendous time-saver (September 2003).

Imprint 1.1 ($20), from Ampersandbox (www.ampersandbox.com): This little utility can print labels, as well as envelopes, and it includes more than 100 label templates. The interface isn't as smooth as Addressix's, but the program is powerful (July 2003).

Interarchy 6.2 ($45), from Stairways Software (www.interarchy.com): This FTP client has been around a long time, but it has embraced Mac OS X's navigation style, along with some Web-browser interface conventions (September 2003).

Internet Cleanup 1.0 ($30), from Aladdin Systems (www.aladdinsys.com): This program removes browser-related files and blocks pop-ups. If you use Internet Explorer, you may find it useful, but fans of other browsers should look elsewhere (January 2004).

iSeek 1.0 ($15), from Ambrosia Software (www.ambrosiasw.com): You can search the Internet for almost anything from within any application without taking your fingers off the keyboard, thanks to this slick search tool (January 2004).

KeyStrokes 3 ($250), from Niemeijer Consult (www.assistiveware.com): KeyStrokes 3 is an on-screen keyboard for people with disabilities. The program allows you to use a mouse or a mouse emulator to enter text, features shortcuts for commonly used text, and even offers word predictions (November 2003).

MacMaid 2.1 ($10), from Realmac Software (www.realmacsoftware.com): This limited maintenance utility represents a good start. You can set it to automatically move files with a certain extension (such as *.jpg*) to a certain folder (such as Images). However, you can neither create multiple if-thens that execute simultaneously, nor create a rule based on a file's Kind—so this utility's utility is limited (November 2003).

MacResponder 1.02 ($20), from Bruno Blondeau (www.brunoblondeau.com): MacResponder lets you easily set up and customize automated replies for your e-mail. It can not only send different missives to different senders, but also handle multiple accounts (December 2003).

The Missing Sync for Internet Sharing and AvantGo 1.0.1 ($20), from Mark/Space (www.markspace.com): This app basically turns your Palm into another computer on the network, for good and bad. Along with enabling AvantGo, it allows you to send and receive e-mail on your Palm (February 2004).

More Internet 1.0 (free), from Monkeyfood Software (www.monkeyfood.com/software): This great utility allows you to customize which Internet helper application handles a given Internet protocol. The welcome enhancement brings back one of the few great features of Mac OS 9 that didn't make it into OS X (November 2003).

PDF Browser Plugin 1.2 (free), from Manfred Schubert (www.schubert-it.com): This free plug-in turns your Web browser into a very capable PDF viewer. However, the version we reviewed isn't compatible with Internet Explorer; you'll have to use an earlier version if that's your preferred browser (December 2003).

PDFpen 1.1 ($30), from SmileOnMyMac (www.smileonmymac.com): This PDF utility lets you rearrange pages, add and edit graphics, and complete a digital form for a reasonable price. However, PDFpen is slow, and its Find function

and multiple page selection features are flawed (April 2004).

PDFshrink 3.0 ($35), from Apago (www.apago.com): If you need to compress PDF files, this utility is for you. PDFshrink allows you to alter the resolution of images in a PDF, remove unwanted content, and even perform batch conversions on sets of files (November 2003).

PocketMac Pro 2.0 ($70), from Information Appliance Associates (www.pocketmac.net): PocketMac Pro syncs PocketPCs with the Mac, so it's the only game in town if you can't live without a PocketPC. However, installation is tricky, and it can't sync all PocketPC data (June 2003).

PodQuest 1.0.1 ($10), from MibaSoft (www.mibasoft.dk): PodQuest is a handy little application that downloads MapQuest driving directions to your iPod (December 2003).

QuicKeys X 1.5.4 ($80), from CE Software (www.cesoft.com): This version edges QuicKeys X closer to the power of QuicKeys 5 by giving you more control over the Mac interface. It's the fastest route to Mac automation without learning AppleScript (June 2003).

QuicKeys X2 ($100), from CE Software (www.cesoft.com): With more shortcuts and a better interface, this version of the task-automation software can reduce many complex tasks to a single keystroke. We highly recommend it as an upgrade for version 1.5 users (October 2003).

RBrowser 3.1.2 ($49), from RBrowser (www.rbrowser.com): RBrowser is the most Mac OS X-like of the FTP clients we reviewed; it lets you switch between Icon, List, and Column views, and it's easy to use (September 2003).

SBook5 (free), from Simson Garfinkel (www.sbook5.com): This lightning-fast, free-form address-book database is destined to replace any other address book you use (January 2004).

SimpleFTP 2.0.1 ($15), from On-Core (www.on-core.com): This inexpensive FTP client gives you a limited interface and no advanced features (September 2003).

Spell Catcher X ($40), from Rainmaker Research (www.rainmakerinc.com): Spell Catcher X is undeniably good at checking spelling in the background, and it works systemwide (June 2003).

Spring Cleaning 6.0 ($50), from Aladdin Systems (www.aladdinsys.com): This drive cleanup utility is a good choice for managing the digital junk you've created. But some of its features make Spring Cleaning potentially dangerous for those don't know what they're deleting (January 2004).

TimeCache 5.1.5 ($50), from The PandaWare Company (www.pandaware.com): This program helps professionals who bill for their time keep track of where the hours went. It includes several useful features as well as a few interface quirks (December 2003).

TNEF's Enough (free), from Joshua S. Jacob (www.joshjacob.com): This free utility solves that annoying problem of getting unopenable e-mail attachments from Windows users. Drag the offending attachment onto the TNEF's Enough icon for quick relief (December 2003).

Transmit 2.5 ($25), from Panic (www.panic.com): Transmit is the most easy-to-use and powerful FTP client available. We appreciate its intuitive interface, excellent features, and solid performance (September 2003).

TypeIt4Me 1.0 ($27), from Riccardo Ettore (www.typeit4me.com): This powerful and systemwide autocomplete utility is easy to use, but it's not perfect. Despite the flaws (it can fall behind, and you need to start it manually), TypeIt4Me is extremely useful (July 2003).

Utilities—Security

HomeGuardian 2 ($25), from SubRosaSoft (www.subrosasoft.com): HomeGuardian uses a Web cam and the Mac's microphone to monitor activity in a room. It works perfectly in a single room, with excellent movement sensitivity (March 2004).

Utilities—Speech Recognition

iLife Voice Solution ScriptPaks ($25), from MacSpeech (www.macspeech.com): This handy, inexpensive package extends the command-and-control abilities of iListen to Apple's iLife family of software. The iTunes scripts work the best of all (September 2003).

EDITORS' CHOICE 2003 Best Video Editor

Final Cut Pro 4 ($999), from Apple Computer (www.apple.com): Though it's flawed, Final Cut Pro 4 has hundreds of improvements, and the new bundled applications are amazing, even taken on their own. The interface is very customizable, and the real-time–effects features are great (September 2003).

iListen 1.6.1 ($99), from MacSpeech (www.macspeech.com): This voice-recognition software doesn't require the use of a proprietary word processor for editing. However, limited hands-free computing and poor documentation are definite liabilities (October 2003).

Utilities—System Enhancement

Alepin 2.53 ($10), from MacChampion (www.macchampion.com): Alepin truly replaces the lost Mac OS 9 Scrapbook and Notepad. You can create files that contain pages holding text and images, then group those pages into categories (September 2003).

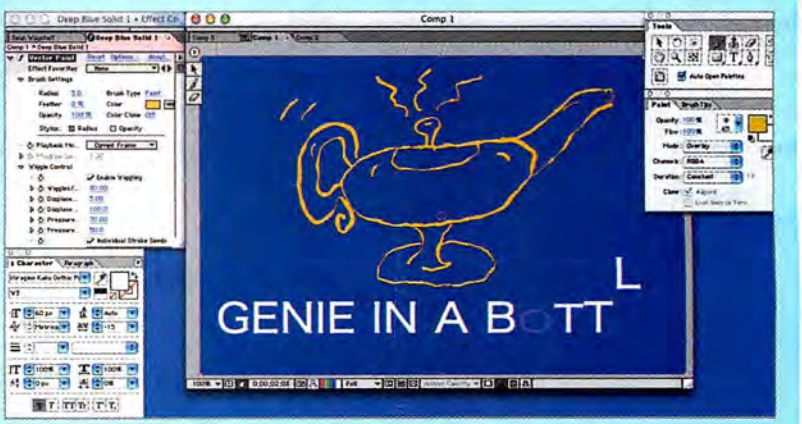
BuddyPop 1.0.1 ($7), from Tynsoe.org (http://projects.tynsoe.org/en): BuddyPop gives you quick and easy access to contact details from within any application, allowing you to cut and paste phone numbers and other information without having to wait for Address Book to load (October 2003).

DejaMenu 1.0 (free), from Karl Hsu (http://homepage.mac.com/khsu/DejaMenu/DejaMenu.html): DejaMenu brings menus to your mouse. You specify a key combination for your menus; when you press that combination, the program brings up a menu, directly underneath your mouse pointer, that contains all the menus for the current application—no more constant mousing to the top of the screen (January 2004).

EarthDesk 2.0 ($20), from Trygve H. Inda (www.timepalette.com): This program displays a real-time map of the world on your desktop, depicting where and when the sun is rising and setting (October 2003).

iClock 1.11 ($20), from Script Software (www.scriptsoftware.com): An enormously enhanced replacement for Mac OS X's menu-bar clock, iClock also gives you a timer, a stopwatch, floating calendars and clocks, and a Mac OS 9-style Application menu (August 2003).

EDITORS' CHOICE 2003 Best Motion-Graphics Application



After Effects 6.0 Professional ($999), from Adobe Systems (www.adobe.com): This animation, compositing, and postprocessing tool kit is a must-have for its new type-handling features alone. We recommend it to anyone who works with dynamic media (December 2003).

Macworld LAB TEST

THE LATEST MACS

In the past year, we've seen quite a few changes in Apple's laptop and desktop Macs—from the phasing out of the Power Mac G4 and the iBook G3, to the introduction of the aluminum PowerBook G4, the Power Mac G5, and the iBook

PRODUCT	PROCESSOR	DISPLAY	INCLUDED RAM	MAXIMUM RAM	HARD DRIVE	OPTICAL DRIVE	GRAPHICS CARD/RAM
iBook	800MHz G4	12-inch LCD	256MB	640MB	30GB Ultra ATA	Combo drive	ATI Mobility Radeon 9200/32MB
	933MHz G4	14-inch LCD	256MB	640MB	40GB Ultra ATA	Combo drive	ATI Mobility Radeon 9200/32MB
	1GHz G4	14-inch LCD	256MB	640MB	60GB Ultra ATA	Combo drive	ATI Mobility Radeon 9200/32MB
PowerBook	1GHz G4	12-inch LCD	256MB	1.25GB	40GB Ultra ATA	SuperDrive [B]	Nvidia GeForce FX Go 5200/32MB
	1GHz G4	15-inch LCD	256MB	2GB	60GB Ultra ATA	Combo drive	ATI Mobility Radeon 9600/64MB
	1.25GHz G4	15-inch LCD	512MB	2GB	80GB Ultra ATA	SuperDrive	ATI Mobility Radeon 9600/64MB
	1.33GHz G4	17-inch LCD	512MB	2GB	80GB Ultra ATA	SuperDrive	ATI Mobility Radeon 9600/64MB
eMac	1GHz G4	17-inch CRT	256MB	1GB	80GB Ultra ATA	SuperDrive	ATI Radeon 7500/32MB
iMac	1GHz G4	15-inch LCD	256MB	1GB	80GB Ultra ATA	Combo drive	Nvidia GeForce4 MX/32MB
	1.25GHz G4	17-inch LCD	256MB	1GB	80GB Ultra ATA	SuperDrive	Nvidia GeForce FX 5200 Ultra/64MB
	1.25GHz G4	20-inch LCD	256MB	1GB	80GB Ultra ATA	SuperDrive	Nvidia GeForce FX 5200 Ultra/64MB
Power Mac G4	1.25GHz G4	display not included	256MB	2GB	80GB Ultra ATA	Combo drive	ATI Radeon 9000 Pro/64MB
	dual-1.25GHz G4 [C]	display not included	512MB	2GB	80GB Ultra ATA	SuperDrive	ATI Radeon 9000 Pro/64MB
Power Mac G5	1.6GHz G5	display not included	256MB	4GB	80GB Serial ATA	SuperDrive	Nvidia GeForce FX 5200 Ultra/64MB
	dual-1.8GHz G5	display not included	512MB	8GB	160GB Serial ATA	SuperDrive	Nvidia GeForce FX 5200 Ultra/64MB
	dual-2GHz G5	display not included	512MB	8GB	160GB Serial ATA	SuperDrive	ATI Radeon 9600 Pro/64MB

Product lines current as of March 2004. Speedmark 3.3 scores are relative to those of a 1GHz eMac (G4), which is assigned a score of 100. Speedmark 3.3 requires at least 512MB of RAM, and all products in this table were tested with that 512MB RAM, except the iBooks. They ship with 128MB of internal RAM, so we tested them with 640MB of RAM. All systems were running Mac OS X 10.3.2. For more

G4. To sum it all up, we've compiled a list of all the *Macworld*-reviewed Macs in Apple's current product lines, along with Speedmark 3.3 scores and mouse ratings. (We've also noted where similar configurations are available.) Full reviews are at Macworld.com.

PRICE	SPEEDMARK 3.3[A]	MOUSE RATING	ISSUE DATE	STANDOUT FEATURES	COMMENTS
$1,099	78	●●●●	March 2004	4.9 pounds; AirPort Extreme ready; Bluetooth optional; USB 2.0.	This is our favorite model in the new iBook G4 line. It's a remarkably close match for the entry-level 12-inch PowerBook, which costs almost half again as much.
$1,299	88	●●●½	March 2004	5.9 pounds; AirPort Extreme ready; Bluetooth optional; USB 2.0.	The 933MHz iBook has better performance and a bigger screen than the 800MHz iBook, but it's a little on the heavy side.
$1,499	91	●●●	March 2004	5.9 pounds; AirPort Extreme ready; Bluetooth optional; USB 2.0.	Although it has better performance and a slightly larger hard drive than its G4 siblings, this iBook's added features don't justify a higher price tag.
$1,799[B]	102	●●●●½	December 2003	4.6 pounds; USB 2.0; mini-DVI out; AirPort Extreme ready; built-in Bluetooth.	The 12-inch PowerBook combines an iBook's size with PowerBook-level performance. For Mac users who so value smallness that they are willing to sacrifice some speed, this PowerBook requires very little sacrifice indeed. (It's also available with a Combo drive for $200 less.)
$1,999	100	●●●½	December 2003	5.6 pounds; USB 2.0; FireWire 800; DVI and S-Video out; AirPort Extreme ready; built-in Bluetooth.	This PowerBook is a good deal considering that it's $600 less than the 1.25GHz model without much of a speed difference. However, it also has that model's downsides.
$2,599	113	●●●½	December 2003	5.6 pounds; backlit keyboard; USB 2.0; FireWire 800; DVI and S-Video out; built-in AirPort Extreme and Bluetooth.	Poor battery performance and quality-control issues hamper an otherwise fine addition to the PowerBook line of machines.
$2,999	121	●●●●½	December 2003	6.9 pounds; backlit keyboard; USB 2.0; FireWire 800; DVI and S-Video out; built-in AirPort Extreme and Bluetooth.	Various improvements and a reduced price make this powerful PowerBook a great mobile Mac for people who don't want to compromise on speed or size.
$1,099	100	●●●●½	August 2003	AirPort Extreme ready.	The eMac retains its position as the best Mac desktop for education environments. And its squat, heavy, kid-resistant exterior and low price make it a great choice. (It's also available with a Combo drive, a 40GB hard drive, and 128MB of RAM, for $799.)
$1,299	not available for review	N/A	N/A	Apple Pro Speakers included; faster system bus (to 167MHz); USB 2.0; AirPort Extreme ready; Bluetooth optional.	N/A
$1,799	121	●●●●½	January 2004	Apple Pro Speakers included; faster system bus (to 167MHz); USB 2.0; AirPort Extreme ready; Bluetooth optional.	Apple's latest 17-inch iMac gets a 250MHz bump in processor speed and a system-bus increase, from 133MHz to 167MHz. Speed and improved performance make this a great all-in-one Mac.
$2,199	119	●●●●	April 2004	Large, high-quality display; Apple Pro Speakers included; faster system bus (to 167MHz); three USB 2.0 ports; AirPort Extreme ready; Bluetooth optional.	Sporting a huge 20-inch LCD monitor, this is one mighty Mac. It has the same features as the 17-inch iMac, but the larger monitor makes it larger, heavier, and somewhat more difficult to maneuver.
$1,299	not available for review	N/A	N/A	Boots Mac OS 9; plenty of room for internal storage.	N/A
$1,924	not available for review	N/A	N/A	Boots Mac OS 9; plenty of room for internal storage.	Also available with Combo drive, 256MB RAM for $1,599.
$1,799	154	●●●½	November 2003	FireWire 800; USB 2.0; 64-bit processor; AirPort Extreme and Bluetooth ready; optical digital audio in and out.	Near silent and wrapped in brushed aluminum, this single processor G5 is slightly faster than its dual-1.42GHz Power Mac G4 cousin (in previous line). With three PCI slots and a DVD-burning SuperDrive standard, this behemoth is a smart buy for people looking for a little more oomph from their computing system.
$2,499	199	●●●●½	See our review in a future issue.[D]	Three PCI-X slots; FireWire 800; USB 2.0; 64-bit processor; AirPort Extreme and Bluetooth ready; optical digital audio in and out.	The dual-1.8GHz Power Mac G5 delivers 97.5 percent of the performance of the top-of-the-line, dual-2GHz Power Mac for less than 85 percent of the latter's price. Any way you slice it, that's a bargain.
$2,999	204	●●●●½	November 2003	Three PCI-X slots; FireWire 800; USB 2.0; 64-bit processor; AirPort Extreme and Bluetooth ready; optical digital audio in and out.	Quiet and ultra sleek, this dual-processor powerhouse is the fastest Mac of 2003. With a DVD-burning SuperDrive standard and three PCI-X slots, this 64-bit star reaches new levels of coolness and is a must-have for people who need the next big thing *now*.

information on Speedmark 3.3, visit www.macworld.com/speedmark. [A] Longer bars are better. [B] A 12-inch PowerBook G4/1GHz with a Combo drive is available for $1,599. [C] Build-to-order option available only from the Apple Store. [D] The review is currently available online (www.macworld.com/2004/03/reviews/g5dual18ghz/).

Ittec 2.1 ($15), from Balance Software (www.balance-software.com): With Ittec installed, control-clicking on an item in the Finder brings up a menu listing that item's contents; Ittec can even show what's inside StuffIt archives and Mac OS X packages (February 2004).

Location X 1.2 ($10), from Alex Keresztes and Greg Novick (http://homepage.mac.com/locationmanager): This utility does most of what the old Location Manager did, and a little more. Location X is not a big deal, but it can make your life easier if you travel (July 2003).

Logorrhea 1.2.1 (free), from Spiny Software (http://spiny.com/software): Logorrhea is a great utility that can help you quickly find text in iChat logs via browse or keyword-search functions (October 2003).

Marine Aquarium 2.0 ($20), from Prolific Publishing (www.prolific.com): This seemingly frivolous screen saver can turn your Mac into a sleek and stylish aquarium complete with fish, coral formations, and even algae (September 2003).

Menu Master 1.0.1 ($10), from Unsanity (www.unsanity.com): This nifty little utility lets you add, modify, or delete shortcuts on most menus across multiple programs, including the Finder (October 2003).

MisFox 1.2 (free), from Alexander Clauss (www.clauss-net.de/misfox/misfox.html): This utility lets you edit the file mappings for Mac OS X. It provides a list of almost every file type you'll encounter on the Web and lets you decide which application should handle each file (March 2004).

PDF U 1.22 (free), from If Then Software (www.ifthensoft.com): This free app provides a number of useful scripts for creating and processing PDF files from within Print dialog boxes (October 2003).

Peripheral Vision 1.6 ($7), from Granted Software (www.grantedsw.com): Peripheral Vision monitors FireWire, Bluetooth, USB, and network connections; it notifies you when a new device is connected and when a connected device is no longer available (March 2004).

Salling Clicker 1.5 ($10), from Salling Software (www.salling.com): This preference pane lets you use your Sony Ericsson Bluetooth phone to control your Mac remotely. It's one of those wondrous little utilities that demonstrate the power of interconnected technologies (June 2003).

SharingMenu 1.0 (free), from Manfred Lippert (www.mani.de/en/index.html): A useful utility for anyone who often turns sharing services on and off, SharingMenu lets you quickly enable and disable sharing services from the menu bar (October 2003).

Smart Scroll X 1.1b1 ($15), from Balance Software (www.balance-software.com): Smart Scroll X lets you use various combinations of the shift, control, option, and ⌘ keys to scroll up, down, left, and right without ever moving your hands off the keyboard (February 2004).

To the Trash 1.1 ($20), from Mireth Technology (www.mireth.com): Two bundled applications clumsily schedule and automate the emptying of the Finder's Trash (October 2003).

WorkStrip 3.0 ($38), from Softchaos (www.softchaos.com): Designed to replace Mac OS X's Dock, WorkStrip promises simplicity and efficiency. Thankfully, version 3.0 is much easier to use than the previous one (December 2003).

XShelf 1.1.1 (free), from Karl Hsu (http://homepage.mac.com/khsu/XShelf/XShelf.html): This little utility provides a temporary storage area that lets you split drag-and-drop operations into two steps. You'll never be stuck with a file in mid-drag again (September 2003).

You Control 1.0 ($70), from You Software (www.yousoftware.com): Create and customize your own menus right in the Mac OS X menu bar. Besides giving you rapid access to every nook and cranny of your Mac, You Control contains a generous assortment of presets and dynamic Web modules (April 2004).

Utilities—System Maintenance and Repair

DiskWarrior 3.0 ($80), from Alsoft (www.alsoft.com): This version of the popular drive utility offers faster hard-drive rebuilds as well as a new SMART drive diagnostic feature. Unfortunately, the DiskShield feature did not make it into this version, but for IT professionals this utility is still well worth the price (October 2003).

Macaroni 2.0 ($9), from Atomic Bird (www.atomicbird.com): Macaroni ensures that Mac OS X runs three Unix maintenance tasks that often never have the chance to execute. It checks to see whether the tasks are overdue, then runs them if they are (March 2004).

Video Hardware

Fire-i ($99), from Unibrain (www.unibrain.com): This Web cam works well in low-light situations and sports an extra FireWire port. The color accuracy and picture quality are mediocre (December 2003).

iBot Standard ($99), from Orange Micro (www.orangemicro.com): The iBot Standard Web cam has great picture quality, but it's bulky and difficult to position at eye level (December 2003).

IO ($2,290), from AJA (www.aja.com): The AJA IO is an economical uncompressed and offline capture device that works hand in hand with Apple's Final Cut Pro. It assures that you can attach practically any video deck imaginable (March 2004).

iSight ($149), from Apple Computer (www.apple.com): No other Web cam comes close to this one by Apple, thanks to its excellent picture and sound capabilities and its superior industrial design (December 2003).

iSight Case ($24), from WaterField Designs (www.sfbags.com): With a ballistic-nylon exterior and custom-fit, padded compartments inside, the iSight Case holds your camera and its accessories in style (January 2004).

Mojo DNA ($1,695), from Avid (www.avid.com): Mojo DNA adds hardware acceleration to Xpress Pro, and it's a necessary addition, especially if you intend to use offline formats, 24P footage, or uncompressed video (March 2004).

Pyro 1394 WebCam ($109), from ADS Technologies (www.adstech.com): Pyro's price, software bundle, and great picture quality make it the best budget-conscious alternative to the superior iSight (December 2003).

SightClips ($15), from MacMice Workspace Products (www.macmice.com): These handy clips come in various shapes and sizes, and are perfectly designed to solve your iSight-mounting problems without making you resort to glue (November 2003).

Video Software

After Effects 6.0 Professional ($999), from Adobe Systems (see "Editors' Choice 2003: Best Motion-Graphics Application," page 97).

Cleaner 6.0.1 ($599), from Discreet (www.discreet.com): Improvements in performance and codec compatibility, as well as Mac OS X compatibility, make this video-encoding utility essential for anyone who needs flexibility and power (June 2003).

DVD Studio Pro 2.0 ($499), from Apple Computer (www.apple.com): The latest version of Apple's pro DVD-creation software features an elegant, scalable interface; thorough documentation; and thoughtful refinements throughout. It is a spectacular update (December 2003).

Final Cut Pro 4 ($999), from Apple Computer (see "Editors' Choice 2003: Best Video Editor," page 97).

Sorenson Squeeze 3.1 Compression Suite ($449), from Sorenson Media (www.sorenson.com): This all-in-one compression suite is easy to use and offers professional-quality compression and helpful Flash-stitching capabilities. But depending on the format you need, you may want to look into Discreet's Cleaner (August 2003).

Xpress Pro ($1,695), from Avid (www.avid.com): This pro-level video-editing software has a lot to offer video editors. If support for 24P film projects isn't enough, the generous third-party software bundle should seal the deal (March 2004).

Zoom & Pan 3.0 ($30), from Virtix (www.virtix.com): This plug-in collection for iMovie lets you add movement to still photographs, but only if you can decipher the program's confusing and awkward interface (December 2003).

Web Browsers

AOL for Mac OS X ($24 to $55), from America Online (www.aol.com): Though this Mac OS X Internet client's interface is cluttered, and spam filtering is limited, it offers great online activity reports for parents. It's also good for travelers who want convenient online access (August 2003).

ContentBarrier 10.0.1 ($60), from Intego (www.intego.com): This useful Internet-filtering tool for Web browsers and chat programs offers customizable keywords that can help parents protect their kids online (October 2003).

MSN for Mac OS X ($10 to $80), from Microsoft (www.microsoft.com): If you need elaborately organized e-mail, including an effective junk-mail filter, MSN for OS X may be all you need. Parents who want better control over which Web sites their children visit should also consider this Internet client (August 2003).

NewsMac 2.2 (free), from ThinkMac Software (www.thinkmac.co.uk/): This headline browser can keep hundreds of Web sites in order, which makes keeping up with the news of the world much easier than visiting every site on your favorites list (September 2003).

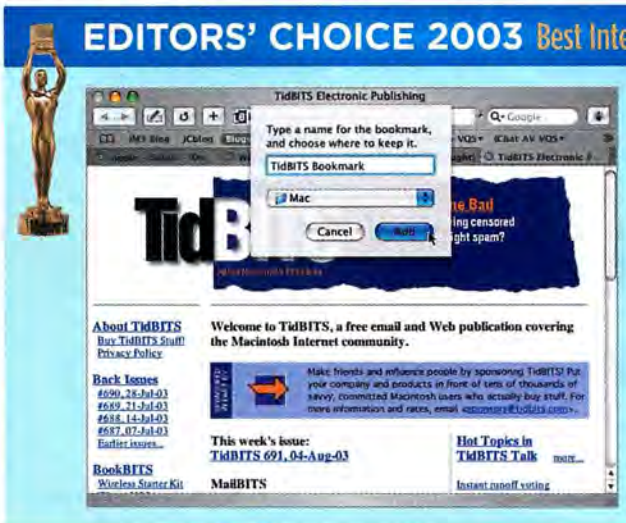
Safari 1.0 (free), from Apple Computer (see "Editors' Choice 2003: Best Internet Client," this page).

Word Processing

Mariner Write 3.5 ($80), from Mariner Software (www.marinersoftware.com): Mariner Write has excellent word-processing capabilities and easily translates most Word documents. It does have some problems in working with embedded graphics (March 2004).

Nisus Writer Express ($60), from Nisus Software (www.nisus-soft.com): Unless you can make do with the most basic features of a word processor, this program won't satisfy you (January 2004).

EDITORS' CHOICE 2003 Best Internet Client



Safari 1.0 (free), from Apple Computer (www.apple.com): The better browser from our friends at Apple has fast page loads, easy pop-up blocking, a clever bookmarking scheme, and streamlined tabbed browsing. Too bad some Web pages load inconsistently and some servers don't recognize Safari. Currently, it's the best browser for the Mac (November 2003).

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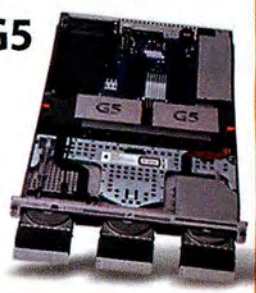

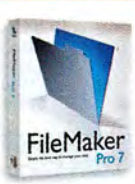

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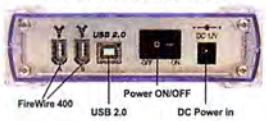

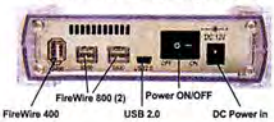

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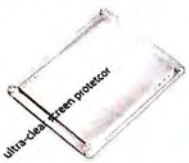

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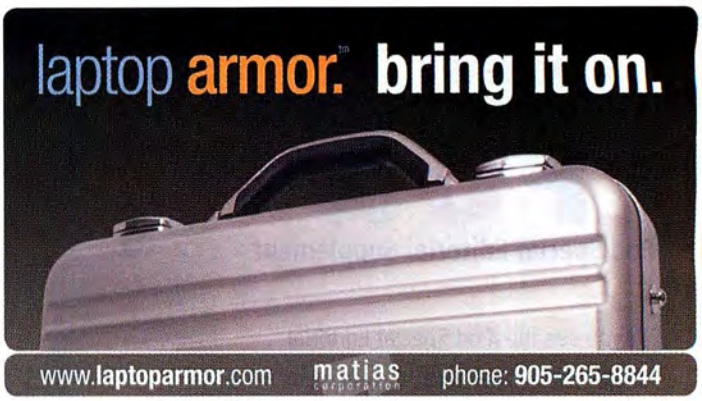

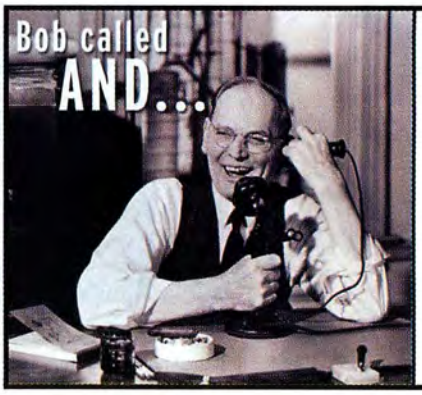

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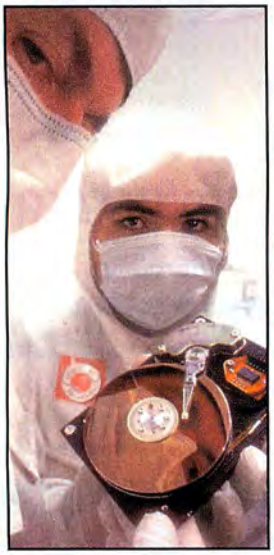

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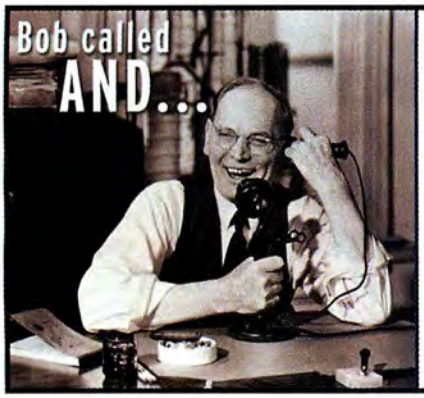

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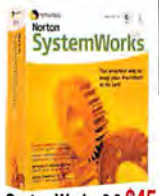

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Zip 750 $87*
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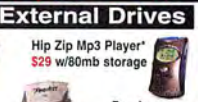
Hip Zip Mp3 Player* $29 w/80mb storage
Peerless 20 Gig base kit FW/USB w/cartridge* $84

LACIE AUTHORIZED RESELLER
Ext 160GB FW HD Porsche $164
Ext Bus Pwrd FW 24x10x24 CDRW $145
Ext 200GB FW800+400 USB 2.0 HD $264

FD FANTOM DRIVES
120GB FW & USB 2.0HD $159
8x FW DVD-RW w/Toast $231
52x24x56 CDRW FW $120

Preowned System Specials

Blue & White 17" Studio Display† w/G4 or G3 purchase	$49!
Blue & White 17" Studio Display†	$99!
Beige DT G3/233/64MB/4GB/CD†	$99!
Graphite G4/450/128MB/20GB/DVD/ZIP†	$639!
Graphite G4/450/128MB/20GB/COMBO/ZIP†	$669!
Gigabit G4/500DUAL/256MB/40GB/DVD-RAM†	$899!
24x Verbatim CDRs pack in sleeve 25/50/100	$9/17/29

Body Glove Notebook cases fits up to 17" $19

Tangerine iBook G3/300/64/6/CD† $399!

Mac O.S.

8.1	$34
8.5~	$89
9.1~	$49
9.2~	$69
X.1~	$39
X.2 Jaguar**~	$59
X.2 upgrade~	$44

G3/233 All In One† from $89

FREE Norton SystemWorks 1.0 (OEM) available with any $20 online purchase!

* After rebate * Refurbished, † Pre-owned w/30 day warranty, ~OEM, ** upgrade with previous version
‡FedEx 3 day online orders only prices rounded down and subject to change - not responsible for errors - credit cards accepted.

Get all for $49 (save $33!)

KidPix Studio $4

Kai's PhotoSoap SE- $4

Quicken2002~ $19
PCalc2, Acrobat 5, Stamps Rising, Earthlink for X, FaxSTF X, Otto Matic

World Book Encyclopedia~ $4

iLife 03 $19

GAMES CD~ $14
Bugdom, Nanosaur and CroMag Rally!

Williams Sonoma Cooking- $4

v2.01 OS 9.1~ $4
v2.03 OS X~ $4

Adobe Pagemill~ $9

IRIS and software bundle above only $149

FREE Office 2004 upgrade available soon from Microsoft!
Office Pro $379

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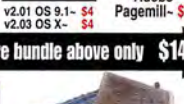

USB rollup keyboard $19

Archos External Drives

CDRW 8x8x24 FW USB 2.0 $44

Add Toast 5.0 lite for only $9

40GB Ext. HD portable FW $89

Hot Stuff

The Month's Coolest Developments

FROM THE EDITORS OF MACWORLD

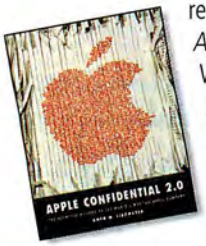
PETER BELANGER

COMPANION 3 MULTIMEDIA SPEAKERS

The rich sounds heard around the *Macworld* offices these days come courtesy of the Companion 3 multimedia speaker system, from Bose (www.bose.com). The analog system—a big block of a subwoofer and two garage-door-remote-size satellite speakers—simply plugs into your Mac's audio-out jack. But what's really music to our ears is the $249 system's convenient control pod, which features a touch-sensitive pad for quick and easy muting, a smooth volume-control knob, and even an input jack for hooking up your iPod.

Recommended Reading

With the Mac's 20th anniversary in full swing, now is the perfect time to brush up on your Apple history. For an overview, few resources are better than *Apple Confidential,* by Owen W. Linzmayer. In *Apple Confidential 2.0* ($20; No Starch Press, 2004), Linzmayer has added 60 pages of new content and revised older chapters to reflect the changes that have gone on in Cupertino since the first edition's release five years ago.

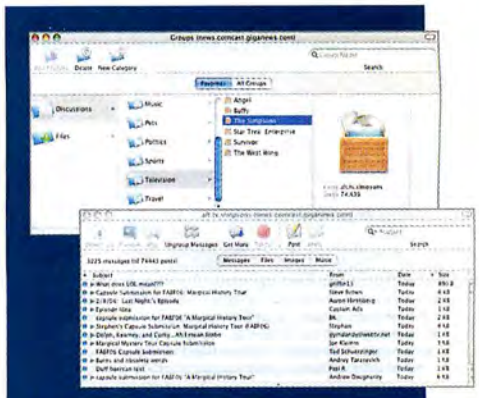


AutoScrubber

Sure, Panther's Secure Empty Trash feature removes all traces of a file from your hard drive. But it doesn't offer customizable configurations, fully automated operation, and other features that can put a paranoid Mac user's mind at rest. Jiiva's $60 AutoScrubber (www.jiiva.com) *does* offer all of that. It also obliterates cached files, such as print jobs, that Panther only insecurely deletes.

Scenario

MacChampion's $10 Scenario (www.macchampion.com) is a preference pane that runs AppleScripts at the drop of a hat. With Scenario, the power of AppleScript increases tenfold, since you're free to write scripts that make almost anything happen when certain events—logging in, waking from sleep, or any one of a number of examples—occur.



UNISON

If you spend any time cruising through Usenet for discussion groups, files, music, and photos, you ought to take Panic's Unison (www.panic.com) for a spin. The $25 news-reader client sports some impressive features, such as audio-file previews directly off a Usenet server, iPhoto-like thumbnail views of images, and a flexible download manager. But Unison really scores by providing what you'd expect from a Usenet news reader—quickly and via a clean, easy-to-use interface.

WHAT'S HOT A Quick Look at the World of Macs

1. **The iTunes Music Store celebrates its first anniversary.** *To mark the occasion, the RIAA went out and filed suit against half a dozen teenagers.*
2. **Despite critics' concerns over the iPod mini's $249 price, Apple reports 100,000 pre-orders for the music player.** *As a result, each mini will come loaded with 1GB of the sound of Apple executives gloating.*
3. **Rapper Eminem sues Apple over an iTunes television ad.** *Eminem decries the commercial as "patently inoffensive" and adds, "I've got a reputation to maintain."*
4. **Pixar's *Finding Nemo* wins a Best Animated Feature Oscar.** *We just hope that Steve Jobs doesn't go all Hollywood and remains the humble, self-effacing billionaire the world knows and loves.*

"It's not that other [computers] aren't getting used in shows—they are. But what's happening is that Apple computers are distinctive enough that you're recalling them."

—Alan Gould, chief executive of Intermedia Advertising Group, explaining the ubiquity of the Mac in movies and television shows to the *Atlanta Journal-Constitution*

Read the full article: http://tinyurl.com/32ttj

Star Power An iMac has a leading role in this scene from the TV series *24*.

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