

ATPM



*About This Particular Macintosh™ 6.03: About the **personal** computing experience™*

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Online and downloadable issues are available at the ATPM Web Page:

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Info-Mac and all its Mirrors

<http://www.macupdate.com>

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The CD-ROMs Accompanying:

MacFan,

[Macintosh Magazine & Internet](#),
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Any others? Let us know!

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Thanks for reading ATPM.

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Welcome

Welcome to the March issue of *About This Particular Macintosh!* We call it ATPM for short. New readers often wonder how we selected our e-zine's rather peculiar name. Well, our founder, RD Novo, came up with it. Danny had a long-standing ambition to create an Internet magazine that talked about the "personal computing experience." We believe that means something different to everyone who owns a Mac. ATPM is about your particular Macintosh and our particular Macintoshes.

Through the long years of ATPM's short history, our e-zine has undergone many changes. Now published by Michael Tsai, ATPM is one of the longest-running Macintosh Internet magazines available today. We pride ourselves on providing our readers with informative and entertaining insights into the world of Macintosh computing. This issue we welcome Adam Zaner and Johann Campbell, our newest copy editors, to the ATPM staff. Although the names and faces of the people who contribute to ATPM may change, our commitment to producing a quality freeware product remains the same. We're grateful to the hundreds of thousands of Mac users who frequent our electronic pages each month.

A 21 Mac Salute

The staff of ATPM was saddened to hear of the untimely passing of Don Crabb and we extend our heartfelt condolences to his family and friends. Don was an extraordinarily gifted man who successfully combined an intellectual mastery of modern technology with an old fashioned American work ethic. He authored many books on Macintosh computing and worked tirelessly to evangelize the platform at colleges and universities. He will be missed.

Caution: Speed Bump Ahead

Most often this sign is a bummer for people who "feel a need for speed" For Mac users it's a welcome sign that products are getting faster...and better. Attendees at Macworld Tokyo witnessed the introduction of new iBooks and PowerBooks, including a speed-bumped iBook in a graphite-colored shell. PowerBook G3 users welcomed the release of new G3 PowerBooks with FireWire ports and clock speeds up to 500 MHz.

One of the more interesting aspects of Apple's new portable products is the unchanged form factor. With the exception of the graphite-colored iBook, a casual observer wouldn't be able to distinguish the new products from their predecessors. This not only reduces Apple's manufacturing costs, it also alleviates concerns among buyers that the product they buy today will be noticeably outdated tomorrow.

Rumors Versus Reality

Chris Turner's [column](#)¹ in last month's issue of ATPM ignited a fire storm of responses. Some readers were angered at what they considered to be a swipe at some very popular Mac-related sites, while others congratulated Chris for his courage and candor.

The updated portable products Apple unveiled in Tokyo are evidence that rumors often differ greatly from reality. We all enjoy reading rumors about new products to come. But people need to base their purchasing decisions on the products that are available today, not on speculation of what might be available tomorrow. This is especially important for Windows users who are considering migrating to the Macintosh platform. In that case, waiting one more day is one more wasted day.

Owners of pre-G3 Macs who continue to postpone upgrading their hardware because of rumors that the next product to be released will be twice as fast or three times as colorful as the one that they can purchase today are doing themselves a disservice. Postponing the purchase of a much-needed hardware upgrade can cost users time and money. One must factor into a purchase decision lost productivity as well as the lost opportunity to enjoy the benefits of today's technology while waiting on the announcement of a rumored product that may never be released. The updated iBooks and PowerBooks announced in Tokyo are the same size and weight of the products that they replaced. While they offer users a few improvements, it would have been silly for someone who really needed a new portable computer to have delayed purchasing one.

Very few car buyers would wait an extra year to replace an outdated jalopy because the following year's new models were rumored to come with slightly larger engines, a bigger gas tank, or a greater selection of exterior paint colors. The truth is no one really knows what next year will bring until next year. If you hear a rumor that next year's Macs will be so revo-

1. <http://www.atpm.com/6.02/jasonpismo.shtml>

lutionary that you will regret the purchase of any new computer today, please use a little common sense.

If you need a new Mac today, buy it today. That's using uncommon sense. There will always be tomorrow. But what you can't buy tomorrow is the increased productivity and enhanced ease-of-use that a new Mac may provide you today.

If you hear another rumor that the next generation of Macs will feature Batmobile-style tail fins, contain a processor that's a year away from production, or have a sticker price lower than a packet of gum, we know a bunch of sites that might post your musings. But don't call us, we'll call you.

How Much Is Too Much

The editors of AT^PM have been engaged in an ongoing debate about the [financial rewards](#)² granted Steve Jobs by Apple's board of directors. Is the gift of a personal jet and options on 10 million shares too much for a job well done?

Some of our editors believe much of Mr. Jobs' compensation would have been better spent on research and development and beefing up the company's developer program. Other editors believe it was money well spent in light of Apple's stunning turnaround. What's your view? How do you think Apple should spend or invest its resources? Send your comments to editor@atpm.com. Representative samples of responses may be included in our April issue.

How Many MHz Does It Take to Sell a Wintel PC

The truth is no one knows for sure. The proliferation of processors for Wintel PCs is causing confusion in the minds of buyers. At least one Intel executive has finally [admitted](#)³ that processor MHz is not an accurate way to determine a computer's performance. No kidding. Mac users have been heralding this truth since the introduction of the PowerPC.

Comparing the performance of a G4 Mac to a Pentium III based on processor MHz alone is akin to comparing the performance of an 8-cylinder car to a 4-cylinder car based on engine RPMs. A 4-cylinder engine has to work much harder and generate many more RPMs to produce the same amount of power as an 8-cylinder engine. Furthermore, the variety of chips

2. <http://www.sjmercury.com/svtech/news/indepth/docs/jobs022000.htm>

3. http://dailynews.yahoo.com/h/nm/20000215/tc/intel_chip_2.html

designed for different purposes (especially lower cost, lower performance chips) for the Wintel market only adds to consumer confusion. For Wintel buyers all MHz are not created equal. Buyers beware.

Windows 2000: Too Much, Too Late

The Windows operating system has millions and millions of lines of code. Much of this code is of little use to home or small business computer users. The complexity of Windows has opened the door for the ascent of Linux and the rebirth of the Mac OS. Mac OS X will revolutionize the desktop computer market similar to the way the original Mac OS transformed the way people used computers. Mac OS X is guaranteed to run on any Mac that originally shipped with a G3 chip. That's good news for Mac users and for those non-Mac users who are desperately searching for a better way to get things done. Computer buyers were hoodwinked by the release of Windows 95. Unsuspecting consumers lavishly spent hundreds of millions of dollars to upgrade their Wintel PCs to accommodate the requirements of Windows 95. Consumers will not be fooled again.

It's not the U.S. Justice Department and its anti-trust suit against Microsoft that will bring an abrupt end to the dominance of the Windows operating system. It will be free market innovation and the collective decision of millions of people around the world who are tired of having their intelligence insulted and their wallets raided.

Two members (Mike Boich and Andy Hertzfeld) of Apple's original Macintosh development are among the founders of a [new company](#)⁴ that is aggressively working to create a friendly graphical user interface for Linux. An easy-to-use interface is one of the biggest obstacles to the broad acceptance of Linux in the business and home markets.

The editors of AT[®]M will be closely following the Mac OS X and Linux stories in the months to come. Stay tuned!

4. <http://www.eazel.com>

Adobe Systems

Often overlooked in the hoopla over Apple's continuing success is the performance of Adobe Systems. At press time Adobe's stock is trading at a price roughly five times higher than its 52-week low. Several months ago the common stock underwent a two-for-one split, and the price has continued to rise.

Adobe's decision to support the Linux operating system is a good one and has won the company favor on Wall Street. FrameMaker is being ported to Linux and it's Adobe's hope that the application will become the standard authoring tool for Linux Web developers. A Linux version of Acrobat Distiller Server should be available by the end of this month. If Adobe is successful in positioning FrameMaker as the application of choice among Linux Web developers, Acrobat will gain greater acceptance as the format of choice for cross-platform, Web-based communication.

Also helping to spur the rise in Adobe's stock price is the apparent success of the company's InDesign layout and design software. It has been well received by professional users and has won the company many critical awards. The birth of Adobe Systems was funded in part by an investment from Apple, and the companies have shared a sometimes rocky, but usually affectionate, symbiotic relationship. Adobe's PostScript technology helped launch the Macintosh and aided Apple's efforts to transform desktop publishing. Adobe's continuing support of the Mac OS has helped Apple maintain its strong position in the pre-press and content creation markets.

Adobe Systems will be a major player in the eBook industry. Apple's leadership position in the education market will benefit from Adobe's leadership in this emerging industry. To save dollars and increase productivity, public schools and other educational institutions will be moving to replace paper books with electronic alternatives. Watch for interesting news from Apple and Adobe as we get closer to the release date of Mac OS X.

ATPM Wants You

The good news for Mac users is that the list of available software programs continues to grow. It seems that everyday another software company announces its support for the Macintosh platform. All these new products are beginning to overwhelm our dedicated staff of reviewers (good news can have its problems too!). If you believe you have the knowledge and skill to join our product review team, please send a sample of your written work (or the URL of a Web page that contains your work) to editor@atpm.com.

Please enjoy our latest issue!

The ATPM Staff



Grandmommie

“Grandmommie” just bought a home computer for my two kids, and yesterday I found myself installing a PC in my home for the first time. Today found me reading your [February issue](#)¹, including [Three Kids and an iMac](#)². I may just put the Windows machine and my Mac in the same room and let them slug it out. In response to [The Question](#)³, let me add this:

Several years ago, I worked on a project for Hewlett Packard. Knowing that I have been a Mac user since 1988, they asked me what the **real** difference is between a PC and a Mac. I explained that for a Mac’er, working on a PC was like visiting Canada...it seems a lot like home, but if you let down your guard, somebody’s gonna dump vinegar all over your french fries! (Then they’ll try to convince you it’s really better—once you get used to it and the only way that actually makes sense!) Pass me the ketchup!

Chris Carey

...

Pismo and the Channel

Your article [Why Jason Needs a Pismo](#)⁴ makes a passionate and reasoned argument, with many good points, but you offer one flawed argument that I am forced to call your attention to.

You suggest that the delay in the introduction of Lombard was due to the need to clear the large supply of laptops in the channel. Uhh, are you calling Steve Jobs a liar? Apple has been

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1. <http://www.atpm.com/6.02>
 2. <http://www.atpm.com/6.02/aka.shtml>
 3. <http://www.atpm.com/6.02/userpreference.shtml>
 4. <http://www.atpm.com/6.02/jasonpismo.shtml>

boasting for a year that they carry an “industry leading” less than one day of inventory. If that is accurate, I can only ask, what large inventory of laptops in the channel? At dealers? If so, is that Apple’s problem? Apple has not treated it as such in the past, have they?

If Apple is running a lean “assemble as needed” manufacturing control, as they claim, it strikes me that all they’d need to do is stop the line and retool it for the new model. That is, provided the new model **and** its needed software revision is ready, and all indications suggest that the latter was the problem that prevented the introduction of a revised laptop at Macworld San Francisco. Is that the fault of the rumors sites? Not remotely. Stories of a “big backlog” strike me as simply an alternate rumor, but not a very logical one.

I took exception to Robert Morgan’s column lambasting the rumors sites as hurting Apple’s sales, and I must take exception to yours. I think Apple is doing exactly what it should be doing, by trying to keep any and all details and timing of upcoming products from the public, but equally I think the rumors press is doing exactly what they should be doing, as investigative journalists, to try to discover that information, despite Apple’s efforts to keep it secret. Anyone who chooses to delay a purchase will in fact get a newer generation of equipment. Always. You argue the improvements or changes in Pismo won’t be significant, but guess what? Even if a buyer agrees, and chooses to buy a Lombard after all, they’ll save \$500 by buying at the “close-out price” after the new models are released. Not a bad consolation prize.

I think Apple is quite capable of protecting itself from the dubious might of the rumors press. Anyone who chooses to buy or not buy on a rumor, is obviously making an informed decision to bet on a rumor, rather than a sure thing. They’re big boys, and if they are upset about the choice they’ve made, let them sue the rumor sites for disseminating “false rumors”, if there is such a thing. I would emphatically suggest that the public does not need to be protected against information, or against making mistakes.

Heck, Apple doesn’t even always get its own release dates right. I’m writing this on my G4/450 & Cinema Display combo. I ordered it at 12:01 AM on October 1st, 1999, and received the display on January 4th, 2000, although when I placed the order Apple promised it would be delivered in 45 days, if memory serves me. So who is full of beans with their predictions of when new products will ship? Apple, O’Grady, or sometimes both?

A lot of what is on the rumors sites is just common sense, and requires no “insider info.” If you look at Apple’s Tech Info Library articles on PowerBook models, and look when they

were introduced, you'll see that a new model PowerBook comes out every eight to nine and a half months.

I don't think Apple needs us to protect it any more. It is a \$16 billion corporation, on quite a roll. If you feel the need to protect a large corporation, pity Apple's competitors. They'll need it.

Arthur Leeper

(A consumer, fan, shareholder, and reader of rumors sites, and happy to be all four)

Thank you for your letter. I enjoy receiving feedback from the readership, whether it be positive or negative. However, I need to address what you say is "one flawed argument" in my column.

You made a point regarding Apple's inventory, and my notice of the Lombard delay due to a large supply of laptops in the channel. First, let me apologize—I should have been more clear in my definitions, and I shall do so now.

No, I am not calling Steve Jobs a liar. Steve is correct in stating that Apple carries less than a day of inventory. But that is **Apple**, not the retailers that receive and sell systems. These retailers and the suppliers that provide them with product are considered "the channel," as in the retail channel. Just because Apple has less than a day of inventory of PowerBook G3s doesn't mean that MacMall, MacWarehouse, CompUSA, MicroCenter, and other Macintosh retailers nationwide have that same less than a day inventory. In some cases, like CompUSA, they may have a couple of weeks worth of inventory in their respective channel.

Apple is indeed running a lean assembly process now, and they are able to retool their lines relatively quickly for new models. However, Apple has to maintain extremely good relations with its retailers, and rolling out a new model while leaving tons of merchandise out there among retailers and not giving them any price breaks is not going to win them friends.

According to remarks made by Apple CFO Fred Anderson to Wall Street analysts following last year's 2nd calendar quarter announcements, Apple had significant in-channel inventory and lots of parts on PowerBooks when the Lombard rumors began appearing on the major Mac rumor sites. After the Lombard was rumored, demand for the predecessor drooped off a cliff. I believe Mr. Anderson held up shipment until the last possible moment. Had demand not fallen off the Lombard might have been released at the end of the first calendar quarter. This is a prime example of rumor sites hurting Apple sales, even though Apple had done as much as possible to streamline the manufacture-to-retail process.

I would not call what the rumor sites are doing investigative journalism. This may simply be a matter of opinion, and an area where we will have to agree to disagree. In my eyes, the rumor sites do no service to Apple customers. They often raise false hopes with misinformation, constantly adjusting the claims made by their sources. Which brings up another point—as much as Jobs has done since his return to cut down on information leaks, it is a wonder the rumor sites have as many varied sources as they do inside Apple. Those close enough to projects to offer accurate, dead-on information are not going to risk their jobs just so a Web site can get extra hits a day.

—Christopher Turner

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A Hot Rumor

Heard the latest rumor? I have it on good authority that Jason, *et al.*, is a Microsoft mole paid handsomely to disseminate false information to the loyal, but often not so bright, troops, leading them down the primrose path of high expectations and ultimately disappointment. The lengths Bill will go to for a good time.

Chris Brown

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Pismoitis

Thanks for your [article about the Macintosh rumor sites](#)⁵ and PowerBooks. Having just ordered a Lombard to replace the 12.1"/233MHz Wallstreet, I've been feeling pangs of doubt about the wisdom of doing this.

Why? Pismoitis! Good for Apple for updating the product line. That's what companies do. Unless you're Wonder Bread, sticking to the same formula is bad business.

However, your article has helped me regain my perspective on the nature computer purchases, and reminded me how easy it is to get too geeked up about what machine is lurking in the shadows. I don't need FireWire; I do need SCSI. AirPort? Nice but I don't need it. Plus, both technologies are easily adapted to a Lombard.

All I have to do is remember back four or five years ago and actually running Photoshop and Quark on a PowerBook 180 (true!) to clear out the notion I need the fastest bus, 128-bit graphics and ATA-66 hard drives and whatever else is rumored to be in Pismo.

What I need are more CPU punch, a bigger screen, bigger drive, and less weight. Lombard has all that a more, and it has it in three days (if I can believe the mail-order house).

5. <http://www.atpm.com/6.02/jasonpismo.shtml>

Let the rumor sites pontificate and predict away, I actually find them interesting and entertaining. But, it very helpful to see article such a yours that prevents them generating a false reality that detracts from prudent decision-making.

Shortly (ten days or so) after ordering the previously mentioned Lombard, (which I'm using to write this) the latest generation of PowerBooks were released, "PowerBook 2000." Immediately the price dropped \$500 on the G3/333 I had just bought. It made me sick.

Obviously, I wish I had known that these new machines were really being released. I wish I'd known the price points for the new models. I wish Apple would change it policy regarding providing "official" information on new models. How do the rumor sites figure into this? I'm not really sure.

I guess I'm just sitting here stewing and trying to find someone to blame for, in effect, my feeling that I lost \$500.00 for no apparent reason except bad timing.

Joe Mahoney

Denver, CO

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Sherlock

This topic may be old to most of you, but many columnists still like to complain about it. I'm talking about Sherlock banners.

What's wrong with them? I am willing to wager that if search engines didn't need to support themselves with banner ads, Sherlock wouldn't have them. Most search engines (and Web sites) make money by running banner ads. It would be a money losing venture for sites to use Sherlock without ads, and Sherlock would loose most of it's functionality without having support for search engines.

Ads in Sherlock are a result of companies trying to pay for their free services, not some evil advertising campaign by Apple. If you don't like the ads, don't look at them. It's really easy. I

do it every time I use Sherlock. I'd change my stance, however, if ads started showing up the local search areas.

Quentin Hill

I agree with you that there's nothing wrong with displaying a search site's ad when looking at results from that site. The controversy stems, I believe, from Apple's change of policy for Sherlock II. With Sherlock II, only Apple-approved search engines get to display their banners. All other engines, as well as the Sherlock window before a search has been performed, display **Apple** banners. Although it doesn't bother me that much, I can see how one could view this as an evil advertising campaign by Apple.

—Michael Tsai

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We'd love to hear your thoughts about our publication. We always welcome your comments, criticisms, suggestions, and praise at editor@atpm.com. Or, if you have an opinion or announcement about the Macintosh platform in general, that's ok too.

Send your e-mail to editor@atpm.com. All mail becomes the property of ATPM.



Which Router Wood You Take?

You know, the life of a Public Information Officer isn't as glamorous as you may think.

First, there are the endless meetings you have to attend to fulfill the obligations required of the many committees you sit on. Then, there is the drudgery of being creative every single day as you write speeches, news releases, and articles. Finally, there is the frustration you feel explaining to the fast food counter worker that yes, you do appear on the local government access TV station from time to time, but no, you don't normally give autographs.

It's enough to drive a relatively young man such as myself crazy.

So, to battle back and maintain my sanity, I am required to find some interesting and exciting diversions. Sure, some diversions I have chosen in the past weren't all that good for me. After all, smoking all of those [cigars](#)¹ and drinking all of that [beer](#)² really didn't help me all that much in the health department.

So, I have simplified my life, re-examined my priorities, and whittled my list down to two diversions that are relatively benign and, in some ways, beneficial.

First, I closely follow [my favorite men's college basketball team](#)³ as it marches on towards its first NCAA Division I championship.

I can only hope.

1. <http://www.macanudo.com>

2. <http://www.samadams.com>

3. <http://espn.go.com/ncaa/clubhouses/120.html>

My other diversion is woodworking. After years of watching [my idol](#)⁴ build furniture in his Massachusetts-based workshop that has about every gadget and tool you could imagine, I figured I would try my hand at this art. My first attempt went well—I built a cedar chest for my wife. Hey, you think that was easy? I was just using a hand saw, a couple of chisels, and a power drill—hardly a professional workshop. And, I’ll tell you, trying to cut all of that lumber with a hand saw can really work those arm muscles. Heck, I was able to cancel my gym membership and still keep my buff physique!

My wife’s first reaction the day I unveiled my creation was, “Wow! I can’t believe you didn’t mess that up as badly as I thought you would.” This was followed by a very pointed question, “Just where did you learn how to do this?” Lately, the most indispensable tool in the woodworker’s arsenal isn’t the table saw, the router, or the drill press—it’s the Internet. What the Internet has done is taken the knowledge that would have stayed with professional craftsmen and given it to the masses—even more than books or TV shows. After all, you don’t have to buy a book, check one out at the library, or set your VCR to tape a particular show. Instead, you can access plans, techniques, and tips whenever you want. Experts in the field sponsor sites which go into great step-by-step detail on such advanced procedures as hand cutting half-blind dovetail joints. The beginning woodworker has the option to go back an unlimited amount of times in order to examine project plans in detail and really absorb what he wants to study.

Well, I say an unlimited number of times, but is that necessarily true? Believe it or not, some sites are having trouble keeping their Web presence up and running due to the rising costs of being on the Internet.

A perfect example of this is one of the sites I referred to frequently while I was learning to build furniture—[Amateur Woodworker](#)⁵.

This is actually one of the best laid out woodworking sites I have seen on the Net. It offers a selection of free woodworking plans, a primer on wood selection, tips on how to make clean joints, and other information that has proven to be quite valuable as I learn this craft. And, the best part: it’s a great site for beginners like me, not the folks who have fully bedecked workshops. Amateur Woodworker’s philosophy is simple:

4. <http://www.newyankee.com>

5. <http://www.am-wood.com>

At Amateur Woodworker, we believe that woodworking should not be an expensive hobby. Sure, if you want to spend thousands of dollars on the latest table saw gizmo then you can. But the point is that you don't have to in order to make our projects.

The only problem is after three years of providing this service to woodworkers free of charge, Amateur Woodworker is now considering some major changes.

What's the reason for these changes? Well, it is becoming more expensive to have a site hosted on the Internet. To explore the challenges facing people who offer such sites, I interviewed the site's editor, Eddie Hold. Back in early 1997, Amateur Woodworker paid \$100 a month to have the Web site hosted. But, as the number of hits rose—nowadays, it registers over two million a month—the hosting costs rose too. The original plan to fund Amateur Woodworker was to raise money by luring advertisers to the site. Unfortunately, advertisers haven't yet made the commitment to sponsor the site (Hey, [Black and Decker](#)⁶, the advertising cost is a measly \$500 a month! You may want to look into it!), which means the cost has been coming out of the editorial staff's pockets. "We've been concerned about the problem for the past year," Eddie says. "The overhead of running the magazine—time, materials, hosting and so on—have simply become too much to justify."

While this doesn't seem like a whole lot of money, it's a very generous service to provide strangers who are looking for information on how to create heirloom furniture pieces. I'm sure the local Vo Tech school isn't as generous with its cabinet-making classes.

So, what's the answer? Well, Amateur Woodworker has recently suggested that perhaps it would start charging a small user fee to get access to the site. "So far the readership response has been great. We've had a couple of no's but most people seem open to the idea of a small fee," Eddie says. But, he also points out one of the shortcomings of this idea. "Of course, there is obviously going to be a big difference between those that say 'yes' and those who actually send cash! But we have our fingers crossed. We'll leave the letter out for about a month to get a better idea before we make any decision one way or another."

What is happening to the promise of the Internet being open to everyone so they could get their word out—a free exchange of ideas? Even if you can't afford to produce a TV show, there is still Public Access TV in most communities, which would allow you to get your viewpoint to the public. And, why is it that such sites that offer some redeeming value have trouble staying online, but you can find so many sites devoted to something as prurient as

6. <http://www.blackanddecker.com>

pornography? Heck, a search for the word “woodworking” on AltaVista found only 128,265 pages, but a search for the word “sex” found 8,796,565—over 68 times the number of pages.

Unfortunately, we seem to be coming to a crossroads in the life of the Internet. A certain type of economic censorship is at work—if you want to increase the number of folks who come to your site, you had better be prepared to charge for your service or work very hard to get some committed advertisers.

But, wait, wouldn't that make your diversion a real job?

“Apple Cider: Random Squeezings from a Mac user” is copyright © 2000 Tom Iovino, tiovino@atpm.com.



The Question (Part II)

As you may recall, The Question is, “Scott, why are you such a Mac nut?” Having divided the question into two parts ([how I came to use a Macintosh](#)¹, and why I love the Macintosh) I’m attempting to answer the question in two columns. Previously in *User Preference* I told you all about how I became a Mac user—that is, I set forth the events that led me from my first sight of a Mac, to owning one, clear up to the present day. Now, in Part II, I’ll have a go at explaining exactly why I’m so gosh-darned giddy over the Macintosh platform.

Cool Company

Perhaps a good place to start is the company itself—Apple Computer, Inc. I certainly don’t claim to be an expert on the history of Apple. If you’re interested in such things I understand that there are several books available on the subject. I myself have never read any of them. Nevertheless, I would like to make one simple point: Apple is cool. Ask yourself this question—would you rather:

1. Buy a computer from a company that was founded by two long-haired phone phreakers (Apple) or
2. Buy a computer whose original hardware standard was designed by a company whose dress code once included ankle garters (IBM)?

I thought so. Now try this one—would you rather use an operating system whose design was spearheaded by:

1. <http://www.atpm.com/6.02/userpreference.shtml>

1. A guy whose vision and passion for excellence made him an eccentric jerk to work for and who hoisted the Jolly Roger over his design team's building (Steve Jobs), or
2. A guy who's mostly known for his business acumen and who's currently in court for anti-trust violations (Bill Gates)?

Pretty much a no-brainer, eh? There are certainly volumes that can be written about why the name Apple means “cool” in a way that the names Microsoft or Dell never will, but I think I'll let the issue stand on your answers to the above two questions. The fact that Apple is cool allows me to be excited—rather than cynical—about things like the Macworld Expo keynote address and new product announcements. I love to hear about Apple and follow its every move. The plain truth is, I can't help but cheer Apple on. I honestly don't know of a single Windows user who feels the same about eMachines or Microsoft. Do you?

Innovative Hardware

Apple is in a unique position among its competitors: it's the only one that has total control over its hardware designs. Apple can turn on a dime to make its hardware better, whereas other companies must get dozens of other companies to sit down and agree upon it first. Consider what happened with Universal Serial Bus (USB). Intel, as you probably know, invented USB some time ago. The problem was that all the PC manufacturers kept right on including the old nasty ports in their machines because they didn't dare lose a sale over not having “backwards compatibility.” And in fairness, they were quite right—peripheral makers weren't making USB devices in large numbers. Rather, they kept right on making devices designed for the old outdated ports. Why were they doing this? It's simple, really. When faced with a choice between retooling to make USB devices or not retooling and making the same old same old, they chose the easy way out. None of them wanted to take the hit; not a one among them had it in them to do the bold thing. The bottom line is, the USB port on PC computers was little used for some time.

Apple, on the other hand, realizing that USB was the right way to go, was able to decide in a heartbeat that it would quickly phase out the older ports on all Macintosh computers. This put peripheral manufacturers in a new situation. Those whose market consisted mainly of Windows users could now simply write Mac drivers and have the product work on both systems. As for the peripheral manufacturers who had high volumes of Mac sales to begin with, they had little choice but to adopt the new standard because Apple was making the old ports obsolete. The result? Peripheral manufacturers started making USB devices in record num-

bers. It took Apple to act boldly and bring us the USB revolution, even though they didn't invent the technology.

Firewire is another case to be considered. Until FireWire, the ability to have true plug-and-play devices that also used high data bandwidth (digital video cameras, external drives, etc.) was but a dream. Previously, one was stuck with slow or complicated or expensive methods of connecting such devices. Apple brought the industry FireWire, and now it's an industry standard (IEEE 1394). Computer and peripheral manufacturers alike are including it in increasing numbers of their products. Forget about us Mac users—all computer users should thank Apple for this innovation. How long do you think it would have taken, say, Gateway or Packard Bell to bring us something like this?

Now let's talk about processors. You don't have to get around very much to know that there are endless arguments about which processor is faster than which other processor. I myself don't really care that much. The very fact that intelligent people engage in seemingly endless debate over this issue is enough for me to conclude that all computer processors sold today are both very fast and also not very different from one another in terms of general performance.

I'm reminded, however, of an article I read in [Ars Technica](#)² by Jon "Hannibal" Stokes recently, entitled [The G4 and the K7: an architectural look at two post-RISC processors](#)³. I'll admit right off the bat that much of the article was over my head, since I'm neither an electrical engineer nor a computer scientist. One passage at the end of the comparison, however, caught my eye. Mr. Stokes wrote:

Motorola's design team did an amazing job in packing a clean, fast, elegant design onto a small die with low power consumption. As a result, the [G4] is product with incredible range: all the way from high-end servers to workstations to appliances. I personally have to admit that for these (mostly esthetic) reasons I'm partial to the [G4] over the K7...

Here is this super-geeky engineering-type guy who is now admiring the "esthetic" qualities of a microprocessor. I find that both amazing and refreshing. He sums it all up nicely a bit further on, when he concludes, "The K7 is a big hairy beast of a CPU, whereas the [G4] gets the job done with elegance and simplicity—two traits that appeal to [me]."

2. <http://www.arstechnica.com>

3. <http://arstechnica.com/cpu/1q00/g4vsk7/g4vsk7-1.html>

Those are traits that appeal to me as well, Hannibal. So are Mac processors faster than those found in PCs? I honestly can't tell. Are they better engineered? I just might argue that they are.

Apple is a niche player in the computer-making world, to be sure. But that position is a great one to be in, for lots of reasons. They can do something that other companies often dare not do—innovate.

Operating System

As I've said previously, I'm neither an engineer nor a historian. I call 'em as I see 'em, folks, just like you do. From this simple perspective it's quite clear to me that the people in Redmond who designed the Windows interface are very likely a cage full of chimps on crack. I mean, the sheer idiocy of having a menu bar on each and every open window—to say nothing about having “parent” and “child” windows—is completely beyond my understanding. And what about file extensions? Heck, even OS 2 managed to get beyond that to a certain extent. Windows users will brag that they can have file names of about four billion characters, and that they can choose to hide those embarrassing file name extensions. But the reality of using Windows is that nobody in their right mind gives a file a name that long. And in fact, the only files that have intelligible names at all are the ones you create yourself; most of the files on the Internet and the files that comprise the system still adhere to the old “eight-dot-three” rule of arcane unintelligibility.

Now, I must seize this opportunity to tell you one of my biggest pet peeves in using Windows—the Start menu. I can certainly understand the desire in Redmond to rip-off the Apple menu. What I don't understand is how they managed to get the most basic principle of the thing so completely wrong! The purpose is to have a quick and handy way to start programs. It's a program launcher of sorts. It is not a file navigation system. Without constant manual deleting of Start menu items, the average Windows user soon finds himself with a Start menu that cascades wildly, filling half the screen, when all he wanted was to quickly start a frequently used program. All convenience is lost. Does anyone really need a directory, an executable, a readme, an uninstaller and god-knows-what else in there for every single program installed? Does a fish need a bicycle? Please. Incidentally, do you know what happens if you do manually rid your Start menu of these superfluous items? If you don't, ask a Windows user. I'm sure he'll have a story or two about uninstallers for you.

Don't get me wrong, ATPM readers—there are things I don't like about the Mac OS. I'd rather gnaw off my own leg and pack the bleeding stump with salt, however, than trade my Mac OS for Windows.

Ghost in the Machine

Finally, I'd like to suggest that the above items, as well as a good many others that I don't have time to go into, all come together to form a single fact that's greater than the sum of its parts. This fact is the most important reason why I love the Macintosh. It confronts me every single minute of every single hour I spend in front of the machine, and it is simply this: the Macintosh is not just a computer.

Living and working in and around Milwaukee has introduced me to another product line that's also much more than it seems—Harley Davidson motorcycles. Ask a Harley owner if he'd ever consider trading in his hog for a new Honda. Chances are (if you don't get your nose broken), he'll laugh in your face. Even if you point out a hundred reasons why he should switch bikes he'll still refuse. Why? Because Harley owners, like Mac users, know something that's not readily apparent to those who don't own one: there's an elegance and beauty to the thing that cannot be reproduced or substituted. It's as if someone, somewhere, put his or her soul into it. It's something that you can feel right down to your bones when you ride one of those roaring beauties. It's the very same something I feel when I power up my blue-and-white G3.

The Macintosh is most certainly not “just a computer.” It's nothing less than functional art. Things like that are rare in this world of “good enough for the marketplace.” Seize them with both hands wherever you find them, and don't let go.

You can be sure I won't be letting my Macintosh go anytime soon.

“User Preference” is copyright © 2000 Scott D. Feldstein, sfeldstein@atpm.com. Scott D. Feldstein is a full-time techie at Marquette University where he also a graduate student in educational psychology.



Reader Response to Aqua

My column last month, titled [Mac OS X: Aqua Included](#)¹, generated lots of reader mail, most of it quite opinionated. This month's column prints some of the more interesting responses.

...

Apple Will Get Aqua Right, in Time

It's good to remember that many of the refinements we enjoy in the Mac OS evolved over time. I am sure that Aqua will have many shortcomings that will be ironed out over time. In my opinion, the user interface refinements in 8.5 were what 8.0 should have brought to us. Aqua 1.5 will fix what Mac OS users have complained about.

Jobs isn't stupid. Arrogant, yes, but stupid, no.

Neema Agha

neema@onebox.com

...

Ideas for Improving Aqua

Regarding the recently announced Aqua interface to Mac OS X, I (like many people) have some thoughts on how it might be improved. Your readers may be interested to have a look

1. <http://www.atpm.com/6.02/paradigm.shtml>

at an interactive [Flash movie](#)² which demonstrates some of my suggested changes. (It does take a few minutes to download.)

Kal

starkis.kal@mail.starkis.com.au

...

Worried About the Finder

Contrary to popular opinion, Apple has not replaced the Finder we know and love with the NeXT FileManager. The new Finder borrows heavily from the Mac and NeXT worlds and looks, to me, like the best of both. It supports the traditional icon and list views, as well as a new Columns view taken from the NeXT FileManager. Although by itself Columns is horribly inadequate as a replacement for the Finder, it makes a wonderful addition to the Finder.

Apple **has** replaced the Finder as we know it, because the an integral part of the Finder is the desktop, and the desktop is gone. No longer will FireWire drives or Zip disks appear on the desktop. Now they will appear within a window. Deleting the crucial extra layer of abstraction is a major loss at least in my book. Also, I don't know if you got to see the developer demos at Macworld, but the part of the FileManager that works like the old Finder is only partially Finder-like. The root view, for example, contains that horrible oversized icon bar. And as you note the disclosure triangles are gone in the list views. This is not the Finder as I know it, but someone's attempt to fix something that isn't broken.

Browsing in place is intended to reduce window clutter and can potentially make the interface less confusing. But it remains to be seen whether this will be offset by the disadvantages of breaking the desktop metaphor that has served Apple well for more than fifteen years.

You are too generous. Browsing in place is great for newbies, but a disaster for professionals who need simultaneous access to multiple files in different parts of the hierarchy.

The new Finder has me very worried.

Raul Gutierrez

2. <http://www.starkis.com.au/macosex/>

...

Color Considerations

Thank you for your balanced review on Aqua. Most reviews I have seen have been strong supporting or trashing the new user interface. But there is one aspect of the interface that is a genuine problem, not just aesthetic.

Being one of the many men in the world who has trouble seeing the difference between red and green, I find the emphasis on color cues over pattern cues disturbing (and I think having pattern cues available on mouseovers stupid). I have seen the same screen shot you showed, and I cannot for the life of me see the difference between the yellow and green buttons. And most computer users don't give 100% attention to the user interface, so I **know** I will accidentally hit the wrong one many times, especially since they are clustered together. Oddly enough, the way Win95 clustered together their widgets was criticized by Mac OS users. Now the knee-jerk Mac OS boosters seem to think it is a good idea. I hate it when people get it in their heads that their computer companies can do no wrong, be they for Jobs or Gates.

I have voiced my concerns on Mac message boards only to be dismissed as a whiner. It is not surprising that those who dismiss me have normal vision and think red-green color weakness is a minor problem. It is only a minor problem when something doesn't depend so much on color. I cannot ever be an electrician (colored wires and coding will confuse me) or a commercial pilot. I have heard reviews say that the shade difference will be good enough...wrong! I can't tell any shade difference between the yellow and green widgets.

People think that red-green weakness only affects red and green. No it doesn't. Pink looks grey, light green looks yellow, dark red or green looks brown, and purple looks blue (red component drops out for me). And subtle shades of these colors are often hard for me to distinguish. I am lucky to see some red and green at all...some are so bad that they cannot see difference between red and green.

I can adapt to the new Mac OS, but what will really concern me is if other software developers follow Apple's lead and design their interfaces to conform to Aqua. Can you imagine working with Photoshop (yes you can still do graphics work with my problem...you just have to ask people what color something is from time to time) with color coded buttons like in Aqua? Also, the use of translucent effects only makes it harder for me to tell the difference.

Red-green is the most common color blindness, but there are others that will make my problems with Aqua seem like a cake-walk.

Ronald Chan

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I've always been a GUI Junkie, even before I began using a Mac. When I was cutting my teeth on Windows 3.x, I was constantly changing my desktop, even creating my own bit-maps when those I found elsewhere bored me.

The great thing about the Macintosh is that its interface is very customizable. Don't like the standard Platinum interface? If you were lucky enough to scarf one of the extra themes from Apple (Hi-Tech, Gizmo, or Drawing Board), you can completely change the look of the menu bar, windows, icons, and the cursor. Third-party themes have popped up since then as well.

The granddaddy of overall Mac customization, however, is [Kaleidoscope](#)¹. The invention of Greg Landweber and former Apple Interface Group member Arlo Rose, Kaleidoscope is an amazing piece of software that uses schemes to change the look of your Macintosh. An entire subculture has grown up around the creation of third-party schemes, as evidenced by those at the Scheme Archive on the Kaleidoscope site. To the right is a current favorite among Kaleidoscopies.



In addition, Mac users have long been able to change the icons on their system, and even before OS 8 we could change our desktops thanks to various shareware programs.

As a GUI Junkie, there are several Web sites you can troll for the latest goodies, but the place I begin every week is [ResExcellence](#)². Michael Coyle originally began the site as a place for users to share ResEdit hacks of the Mac interface, but it has greatly expanded since its incep-

1. <http://www.kaleidoscope.net>
2. <http://www.resexcellence.com>

tion. Updated every Monday, Wednesday, and Friday, you can not only get the latest ResEdit hack from ResExcellence, but updates on new icons, desktop pictures and patterns, and interface-enhancing software.

I also frequent the [IconFactory](#)³. The IF guys have rewritten the book on icon design for the Macintosh, in more ways than one. They started with cutting-edge design and original concepts, then expanded into changing the way other folks assemble icons with their product [IconBuilder](#)⁴, a Photoshop plug-in for icon creation. Now they're changing the way you can alter the individual icons on your system, with their new product [iControl](#)⁵.

ResExcellence and IconFactory are two sites worthy of any Macintosh user who would call himself a GUI Junkie.

Aqua and Other OS X Goodies

At this year's Macworld Expo in San Francisco, Steve Jobs dazzled the computing world by demonstrating the new Macintosh interface of OS X, code-named Aqua. If you've been living in a hole and haven't seen it yet, get yourself over to the [Mac OS X Web site](#)⁶.

This prompted a slew of themes and schemes that mimicked (at the very least, the overall look of) the Aqua interface. The best I've found are the Aqua scheme from the guys at [InterfaceLift](#)⁷, and [a theme from Ben Mackin](#)⁸ for those of you who are scheme-less. There are also numerous OS X icon sets available; one is included with the scheme from the InterfaceLift guys. A good place to search for more OS X icons is ResExcellence, referenced above.

OS X-Style Browsing Today

One of the new ways users will be able to hunt through their Macs under OS X is with a NeXT-style browser. This was demonstrated at the Apple WorldWide Developers Conference last year, and has made an appearance at every OS X demo since. Many users were alarmed initially, as it appeared Apple was going to replace the current style of file and folder

3. <http://www.iconfactory.com>

4. http://www.iconfactory.com/ib_home.asp

5. http://www.iconfactory.com/ic_home.asp

6. <http://www.apple.com/macosx/>

7. <http://www.interfacelift.com/Aqua/index.htm>

8. <http://www.agccosprey.org/theme/>

browsing with the NeXT style. Jobs & Co. have since assured Mac owners that both methods will be available under OS X.

But if you'd like to get a jump on getting use to another form of file browsing, you can pick up a piece of shareware that's been around for quite a while—[Greg's Browser](#)⁹. Yes, Greg Landweber does more than just Kaleidoscope, and before he and Arlo Rose hooked up for that masterpiece, Browser was one of Greg's crown jewels.



As experienced Mac users can see, this NeXT-style browser is a bit different from the “double-click the hard drive icon, double-click the folder icon, double-click the file icon” process we’ve come to know and love.

I sat down with Greg’s Browser for two weeks, using it on my G4 at work, my iBook, and my G3 at home, and the more I used it, the more I liked it. You can have multiple browser windows open, which is especially handy if you have more than one hard drive and you’re constantly moving files back and forth. Shared drives even show up in Greg’s Browser, so copying files over the network is a bit easier as well, since you can burrow very quickly through the various levels of a drive.

I’ve now traded one GUI Junkie trait for another—since I have at least two browser windows from Greg’s Browser open all the time, most of my screen real estate is taken up, which

9. <http://www.kaleidoscope.net/greg/browser.html>

makes the use of a cool desktop picture moot. But being the true junkie that I am, the pictures remain!

Greg's Browser is shareware, and at \$20 is worth the experience. Get used to folder burrowing with this thing, and you'll be all set for Mac OS X later this year.

Finally, I'd like to share with you what my current desktop looks like.



As you can see, I'm a rabid [Star Wars](http://www.starwars.com)¹⁰ fan. The desktop picture is from [MacDesktops](http://www.macdesktops.com)¹¹, a wonderful source of desktop pictures of all sorts, but especially Macintosh-centric. The icons are from various sets I've collected from around the Web. Notice I have a partition already set aside for OS X, and one for LinuxPPC, should I decide to play with that OS. Finally, what theme would a *Star Wars* fan use but the one whose code-name was Vader? It's

10. <http://www.starwars.com>

11. <http://www.macdesktops.com>

the Hi-Tech theme, which was only in beta and never released in a final version of the Mac OS.

I hope you've enjoyed this first installment of the *GUI Junkie*. Next month we'll get into more detail on customizing your Macintosh, going over the basics of icon and desktop replacement for the new users out there (and for you long-timers who may have forgotten).

When he isn't scouring the galaxy for downloads to customize his Mac, Contributing Editor Christopher Turner can be found churning out press releases for ATPM and fielding support questions while holding off hordes of bounty-hunting scum with his trusty lightsaber.



Part II: The Specifics of Sampling

Last month, we introduced the fundamentals of audio, analog representation, and digital representation. To review, an analog system allows a continuous variation in voltages which corresponds analogously to a continuous variation in air pressure. A digital system must make discreet measurements that approximate this continuum of values. The greater the number of measurements, the more accurate the result. The decision, therefore, is between accuracy and storage space.

Sample Rate

A sample is a single measurement of amplitude. The sample rate is the number of these measurements taken every second. In order to accurately represent all of the frequencies in a recording that fall within the range of human perception, generally accepted as 20Hz–20KHz, we must make sure that we choose a sample rate high enough to represent all of these frequencies. At first consideration, one might choose a sample rate of 20KHz since this is identical to the highest frequency. This will not work, however, because every cycle of a waveform has both a positive and negative amplitude and it is the rate of alternation between positive and negative amplitudes that determines frequency. Therefore, we need at least two samples for every cycle resulting in a sample rate of at least 40KHz. This principle is known as the Nyquist Theorem. It is usually stated as follows:

$$\text{sample rate} = 2 \times \text{highest frequency}$$

or in another version:

$$N = 1/2(\text{sample rate})$$

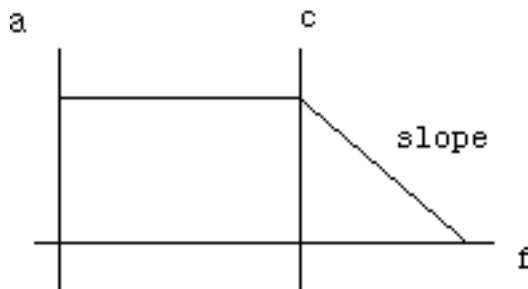
The Nyquist frequency (shown here as “N”) is therefore defined as one half of the sample rate and is the highest frequency that can be accurately represented. So given some standard sample rates, we can easily find the Nyquist frequency:

Media	Sample Rate	Nyquist Frequency
CD Standard	44.1KHz	22.05KHz
DAT (alternate)	48KHz	24KHz
DVD	96KHz	43KHz

In each case, the Nyquist frequency is above the highest frequency in the range of human hearing. What advantage is there in representing these extra ultrasonic frequencies?

An Aside on Filters

As you recall from [Part I](#)¹, a low-pass filter is used to smooth out the steps in the waveform. Frequencies within the range of human hearing pass through unaltered, while ultrasonic frequencies are attenuated. This attenuation increases a certain amount for every octave above the cutoff frequency (c) of the filter.

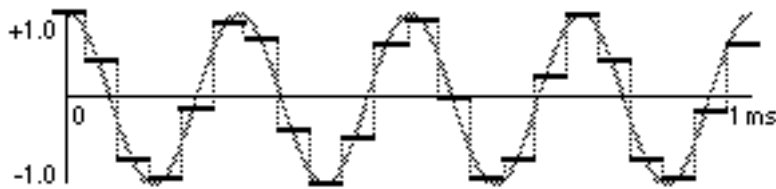


In general, a smooth slope yields a more natural sound. Much of the harshness attributed to early CDs, in fact, was due to sharp “brick wall” filters. So given a fixed cutoff frequency (around 19KHz), a higher Nyquist frequency allows for a smoother slope.

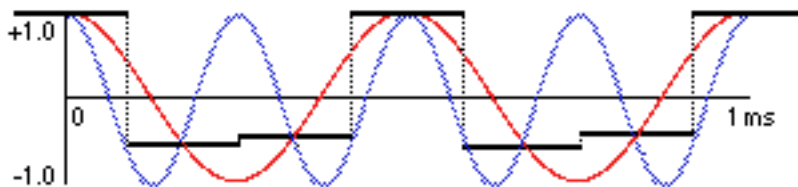
1. <http://www.atpm.com/6.02/digitalaudio.shtml>

Aliasing (or Foldover)

What exactly happens to frequencies that lie above the Nyquist frequency? First, we'll look at a frequency that was sampled accurately:



In this case, there are more than two samples for every cycle, and the measurement is a good approximation of the original wave. A low-pass filter will smooth out the steps and we will get back the same signal we put in. If we undersample the signal, though, we will get a very different result:



In this diagram, the blue wave is the original frequency. The red wave is the aliased frequency produced from an insufficient number of samples. This frequency, which was in all likelihood a high partial in a complex timbre, has folded over and is now below the Nyquist frequency. For example, a 11KHz frequency sampled at 18KHz would produce an alias frequency of 7KHz. This will alter the timbre of the recording in an unacceptable way.

Sample Resolution

Each sample can only be measured to a certain degree of accuracy. The accuracy is dependent on the number of bits used to represent the amplitude, which is also known as the sample resolution. The sample resolution determines the optimal signal to noise ratio of the digital medium in question as follows:

$$8\text{-bit (X 6)} = 48\text{db SNR}$$

$$12\text{-bit (X 6)} = 72\text{db SNR}$$

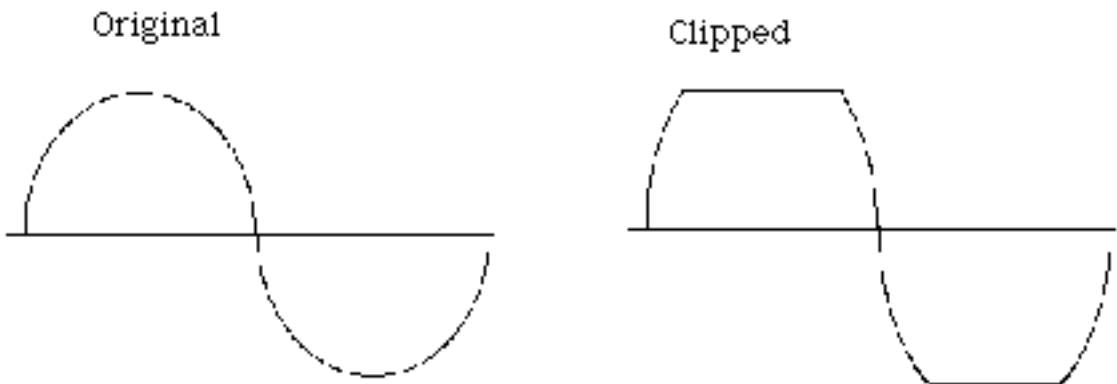
16-bit (X 6) = 96db SNR
24-bit (X 6) = 144db SNR

To put these numbers in perspective, consider the following: the dynamic range of human hearing from the threshold of perception to the threshold of pain is between 130 and 140db. In contrast to that, the dynamic range of high quality audio tape is around 70db and the dynamic range of CDs (16 bit) is 96db. DVD, however, has a sample resolution of 24 bits, allowing it theoretically to capture the full dynamic range of acoustic music.

The other point to consider is that every six decibels adds one bit to the sample resolution. Why is this important? Because, if the hottest signal in a 16-bit recording is at -6db (with 0db the loudest signal the system can represent) the result is the same as a 15-bit recording with the hottest signal at 0db. In fact, if you normalized this file (raising the highest amplitude to 0db), the result would be identical to a 15-bit recording.

Clipping

Both analog and digital media have an upper limit beyond which they can no longer accurately represent amplitude. Analog clipping (or overdrive or distortion) varies in quality depending on the medium. A tube amplifier, for example, has a much warmer distortion than a solid state amplifier. In each case the upper amplitudes are being altered, distorting the waveform and changing the timbre, but the alterations are slightly different. Digital clipping, in contrast, is always the same. Once an amplitude of 1111111111111111 (the maximum value in a 16 bit resolution) is reached, no higher amplitudes can be represented. The result is not the smooth, rounded flattening of analog clipping, but a harsh slicing of off the top of the waveform, and an unpleasant timbral result.



An Ideal Recording

We should all strive for an ideal recording. Based upon what we've covered so far, we can draw some basic conclusions that will help us reach this goal. First, don't ignore the analog stage of the process. Use a good microphone, careful microphone placement, high quality cables, and a reliable analog-to-digital converter. Strive for a hot (high levels), clean signal. After all, a CD-quality sample of a cheap cassette sounds no better than the cheap cassette itself. Second, when you sample, try to get the maximum signal level as close to zero as possible without clipping. That way you maximize the inherent signal-to-noise ratio of the medium. Third, avoid conversions to analog and back if possible. You may need to convert the signal to run it through an analog mixer or through the analog inputs of a digital effects processor. Each time you do this, though, you add the noise in the analog signal to the subsequent digital reversion.

Next Month: Digital Audio and the Mac—Part III: Software.

Copyright © 2000 David Ozab (<http://darkwing.uoregon.edu/~dlo>). David Ozab is a Ph.D student at the University of Oregon, where he teaches electronic music courses and assists in the day-to-day operation of The Future Music Oregon Studios.



The People vs. the Recording Industry

In the short time it has been in existence, [MP3.com](http://www.mp3.com)¹ has become one of the most popular sites on the Internet. It began as a promotional resource for independent artists, who were invited to post recordings online in the popular MP3 (MPEG 1 Layer 3) audio format. A great idea, both for new, undiscovered bands, and for artists outside the musical mainstream. In January, however, MP3 broadened its scope by introducing “My MP3.com.” Among the features of My MP3.com are a personal account where members can store MP3 files encoded from their CD collections, and the Instant Listening Service which allows MP3.com customers to listen to CDs purchased through MP3.com immediately (and again in MP3 format) rather than waiting until they arrive.

Within ten days of this announcement (January 21 to be exact), MP3.com was sued by the RIAA (Recording Industry Association of America, representing the five major labels: BMG, Universal, EMI, Warner Record Group, and Sony Music) in the Federal District Court in New York. The RIAA claims that MP3.com is guilty of copyright infringement by building “an unauthorized digital archive... without making the slightest attempt to obtain permission from copyright owners to do so.” That same day, Hillary Rosen, the President and CEO of the RIAA wrote a letter to Michael Robertson, the CEO of MP3.com, informing him of the lawsuit. This letter has since been posted at the [RIAA's Web site](http://www.riaa.com)². What was Robertson's response? According to an article on [Wired.com](http://www.wired.com)³ posted on January 27, he claims that MP3.com's actions fall within Fair Use Rights, such as the right to copy a CD that one has purchased to cassette for use in a car stereo. He has since counter-sued the RIAA claiming they “have published a multiplicity of negative and disparaging statements.”

1. <http://www.mp3.com>

2. <http://www.riaa.com>

3. <http://www.wired.com>

As a creative artist, I take the issue of copyright infringement very seriously. My copyright is my only guarantee that I will receive fair compensation for my work. I advise musicians to never give up their copyright, no matter how much they are offered in return. Anything else can be compromised, but the identity of authorship is sacred. Given my view on this subject, my first reaction upon hearing this story was to think that MP3.com had, intentionally or otherwise, overstepped both legal and ethical bounds. On further examination, though, their actions are well within Fair Use Rights. The files stored in individual accounts are assumed to be encoded copies of CDs owned by the account holders. The files accessed through the Instant Listening Service are expressly from CDs purchased by the account holders. In no case is MP3.com encouraging the illegal exchange of recordings, and they are no more liable for someone encoding a borrowed or bootlegged CD than the manufacturer who built the CD rack in which this ill-gotten plastic disk resides. Furthermore, it is my opinion that both the RIAA and their lawyers are completely aware of this fact. So why have they pursued this case?

Because MP3.com and the Internet in general are the greatest threat the recording industry has ever faced.

First, ask yourself this question: What purpose does a record label serve for an artist? I can raise money to pay for a recording, hire an graphic artist to design an attractive cover, and duplicate CDs for less than two dollars a pop. Sure it's a large investment, but it's no longer completely out of the question. What I can't do is get recordings into record stores outside of a small area within a short drive from my home. That's the role of a record label—distribution, and until recently only a few large labels could cover the entire country and abroad. The Internet changed that, and soon it will make the record labels as we now know them obsolete.

The five major record labels as represented by the RIAA claim to be fighting for the rights of both artists and consumers. If this were true, it would be a first. The big record labels have never cared about anyone but themselves and their own interests. If they did, they wouldn't ask artists to sign away their copyrights for a multi-album contracts with escape clauses in case the first (or second or third) album flops. They also wouldn't have pulled LPs out of record stores in the late 1980s in order to keep the price of CDs at an outrageous average of \$15.99 per unit.

It's only a matter of time before a major label artist with a loyal fan base already in place leaves his or her record label to sell recordings exclusively on the Internet for far less than the

artificially inflated “retail price.” That artist will still make a very good living and fans will be far less tempted to pirate a \$9.99 CD.

The Other Case

Napster.com provides a service that also has the recording industry up in arms. Instead of supplying the MP3 files themselves, though, Napster provides an Windows application (a Mac client called “Rapster” is now available online, as are Macster and MacStar) that searches for MP3 files across the Net. Although Napster offers to sign up artists voluntarily, and they post both a clear copyright policy and a disclaimer, their legal defense is much weaker. Though I suspect the RIAA’s motivation in suing Napster (the suit was filed back in December) is the same as in their suit against MP3.com, they have a stronger case thanks to the Digital Millennium Copyright Act. (A side question: Why does everything these days have to be tied to the so-called millennium?) This law, passed in 1998, makes it easier to sue the manufacturers of tools that are subsequently used for piracy, whether the manufacturer had that intent or not. I do wonder how enforceable this law is. Can the manufacturers of every CD burner, VCR, or cassette deck be sued? I use these tools (well a burner at least) to reproduce my own work, not to pirate others’.

The Case That Never Was

Myplay.com is another up and coming competitor to MP3.com. What do they offer? A “locker” that holds up to 25 MB of MP3s and the ability to setup playlists and share them with others. It seems that this company is overstepping the same copyright protections as MP3.com, and, by encouraging users to share their collections, facilitating piracy to an arguably greater degree. So where is the expected lawsuit from the RIAA? To answer this question look at the standard “About Myplay Inc.” blurb at the bottom of their press releases. They list themselves as “the legal and industry-supported Web-based service” and boast the support of major record labels. Why would companies affiliated with the RIAA also affiliate themselves with Myplay.com while suing MP3.com for providing a similar service? It’s because of what Myplay.com doesn’t deliver. MP3.com exists principally to promote independent artists outside the mainstream of the recording industry. MyPlay.com, in contrast, features only those artists already signed by the recording industry. They do not threaten the RIAA’s distribution monopoly.

Elsewhere on the Web

On January 26th, Music.com, a principal competitor to MP3.com, announced that they had selected Microsoft's Media Player "as the preferred format for online music distribution" on their Web site. In choosing a proprietary format (Media Player) over a universal one (MP3), Music.com has acted to limit the choices of consumers to the benefit of themselves and Microsoft. No, I am not bringing this up just because of Microsoft's involvement. The MP3 format is an accepted standard on the Internet, and doesn't require a specific player to download it. Media Player is free and accessible to Mac users now, but only by Microsoft's choice. At a later date, they could change their policy, bundling it with Internet Explorer for example and thus restricting browser choice as well.

I also have to take issue with a couple of statements in [their press release](#)⁴. They claim that their choice was based on performance, citing a test conducted by ZD's labs. No offense, but I don't trust ZDNet's impartiality in regards to anything Windows related. The press release also never explains how this test was conducted. They then proceed to laud Media Player, claiming that "music comes out sounding the way it was meant to" and that it "makes the technology transparent." If only Music.com's motives weren't so transparent. In the same press release, Media Player is referred to as "the leading digital media platform" even though it rates behind both Real Player and QuickTime in number of users.

If You Can't Beat Them

On February 4th, BMG, Universal, EMI, Warner Record Group, and Madonna's Maverick Label announced a large but undisclosed investment in Listen.com. Sony Music has already invested a large sum in this little known competitor of MP3.com, and the inclusion of the five major U.S. labels that constitute the RIAA represents a substantial investment in a technology that these labels previously claimed to be such a threat to both artist and consumer interest. Obviously this technology poses no real threat to the recording industry, as long as they control it.

The Real Danger

So it all comes down to fewer and bigger corporations attempting to wrestle control from the people they claim to service. The recent AOL/Time Warner merger threatens to create a media monopoly that Bill Gates could only dream about. What piracy exists on the Internet,

4. <http://www.music.com/aboutus/pr012600.shtml>

while inexcusable, is insignificant compared to the real danger: one company controlling both what we hear and how we hear it.

Copyright © 2000 David Ozab (<http://darkwing.uoregon.edu/~dlo>). David Ozab is a Ph.D student at the University of Oregon, where he teaches electronic music courses and assists in the day-to-day operation of The Future Music Oregon Studios.



BY COLIN MANSFIELD AND LISA HALLER OF SAVE OMS

No Valentines From Nashville: A Post-NAMM Report on the Save OMS/ SOS Vision Campaign

“In a plot that would be more at home in a John Grisham novel than the music industry, Gibson Guitars looks set to kill off all Opcode products.” — *The Mix UK*, March 2000.

Cyberspace (14 February 2000)—Supporters of OMS and Opcode’s Vision attended the NAMM 2000 show in Los Angeles February 4–6. Many wore Save OMS buttons; some also wore SOS Vision buttons, including employees of major companies and distributors, users, and a number of well-known musicians. Many people at NAMM were concerned about the future of OMS. Among developers there was significant interest in ensuring OMS continues to work with Apple’s recently announced OS X for Macintosh. The vast majority of companies in the music industry are using OMS in some way or another. According to informed industry sources at the show, many, including Yamaha and Digidesign, are very worried about the future development of OMS and Vision.

Henry Juskiewicz, CEO, Gibson Musical Instruments, met with at least one distributor and one major manufacturer at the show to discuss the future of Opcode products. But reportedly there was no change in Gibson’s position—no announcements were made about either OMS or Vision, leaving the question of future development unanswered.

At the same time, Gibson turned away a large number of distributors, companies, reporters and users who wanted to meet with Juskiewicz. Many industry people were left wondering what was going on, especially with OMS, but also with Vision.

“Although Opcode have traditionally majored on Mac software, they do have PC software and have produced hardware for the PC. This could all be in jeopardy.” — *The Mix UK*, March 2000.

On February 1, articles appeared in the online editions of *MacWorld UK*, *MacWEEK*, and *AudioMIDI*. The story also has been reported in the March issue of *The Mix* (UK), several times on *MacInTouch* and updates on the situation have been included in *MacCentral*’s “Musical Macs” column. Editorial letters have been published in *Keyboard* and other music magazines around the world (twelve to date), and the story has been translated for distribution in seven languages.

In the first 24 hours after news stories began appearing, the OMS petition gained more than 200 user signatures. Since 1 February, nearly 600 people have signed the [petition](#)¹, bringing the grand total to 3,628 signatures, including 174 developer signatures. The amount of developer support is ironic, given Gibson’s interest in promoting GMICS as an industry standard. By the company’s actions, it is ignoring not only a strongly supported current industry standard—OMS—but also it is affecting the very developers who would support GMICS.

Petition supporters represent organizations and individuals as diverse as NBC, Red Hat Software, Blue Oyster Cult, GVOX, Digidesign, Emagic and the Glasgow City Council Education Committee, along with countless universities, a multitude of music, video and production studio representatives, musician Larry Fast (Synergy, Peter Gabriel) and Craig Anderton, technology editor for *EQ* magazine, contributor to *Keyboard* and author of *Home Recording for Musicians*. Signatures are coming in from all over the world—Japan, France, Spain, the United States, Germany, Sweden, the Netherlands, Denmark, etc.

David Leishman, whose weekly “Musical Macs” column appears online at *MacCentral*, has reported that Gypsy Carns, head of customer support at Gibson—and by extension, Opcode—is committed to getting the patches that are missing from the [Opcode site back up](#)².

Supporters of OMS and Vision will be attending MusikMesse in Frankfurt next month. None of this would be possible without the continued support and assistance from the

1. <http://www.saveoms.org>

2. <http://www.opcode.com>

musicians and composers who use Vision and OMS. Special thanks to the F.O.E.s, Christopher C., Danny D., Gunnar E., DBL, Fred M. (for the “bug” reports), Christian McC., Davor P., Dave S. (a survivor), Ward van G., Jochen W.—and the countless others whose voices have been instrumental in keeping this issue alive.

Contributing Editor’s Note: *One piece of good news came out of the NAMM show. Doug Wyatt, the original developer of OMS has been hired by Apple. Whether this means that Apple is interested in acquiring OMS, or in developing their own compatible MIDI standard, it demonstrates Apple’s commitment to the music community, and gives us all hope for a favorable resolution. Send your Segments submissions to editor@atpm.com.*



Frequently Asked Network Questions

Q: I want to use Apple's (free) LocalTalk Bridge or LaserWriter Bridge, but it doesn't work for me. Why not?

A: LocalTalk Bridge and LaserWriter Bridge are fairly old and haven't been updated by Apple for some time. While version 2.1 of both programs is compatible with Open Transport, an article in the Apple Tech Info Library states that "Apple has done only limited testing with Apple LocalTalk Bridge under Mac OS 8.5. LocalTalk Bridge 2.1 is not completely compatible with Mac OS 8.5, and no update to this product is expected."

This is primarily because of the large number of under-the-hood modifications to 8.5's networking software, and thus there doesn't seem to be a way around it. You may want to consider using a hardware Ethernet-to-LocalTalk adapter instead. [Asante](#)¹ and [Farallon](#)² both make such adapters.

For more information on LocalTalk Bridge and LaserWriter Bridge, see these links:

- [LocalTalk/LaserWriter Bridge Setup Instructions](#)³
- [LocalTalk/LaserWriter Bridge Specs](#)⁴
- [LocalTalk Bridge compatibility](#)⁵

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1. <http://www.asante.com/>

2. <http://www.farallon.com/>

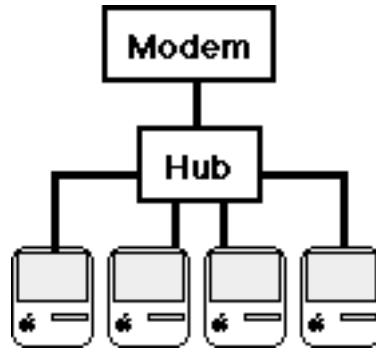
3. <http://til.info.apple.com/techinfo.nsf/artnum/n17476>

4. <http://til.info.apple.com/techinfo.nsf/artnum/n20679>

5. <http://til.info.apple.com/techinfo.nsf/artnum/n30774>

Q: To share access to a high-speed Internet connection, can I just connect my Macs to a hub and start using them right away?

A: How you connect more than one Mac to high-speed Internet depends on what kind of account you have. In order to just use a hub and attach all your Macs to it (see figure below), your Internet provider must allow you to get an IP address for each connected Mac. Most Internet providers let you use additional IP addresses for an extra fee of \$10–15 per month.

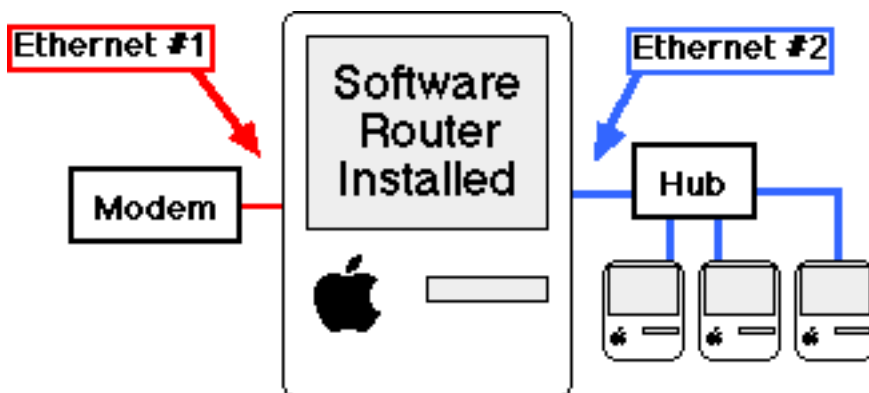


If you only have a single IP address and want to share the incoming signal with more than one Mac, you need to use a hardware or software router to create “virtual” IP addresses for each Mac, since they’re all actually sharing the same address. Software routers are less expensive than hardware routers, but are also more complex to set up. For information on this kind of setup, see [this section of the Threemac.com Web site](http://threemac.com/network/add_network/share_modem/index.html)⁶.

If you use a software router to share your Internet connection, I suggest adding a second Ethernet port to the host Mac (see figure on next page), for security reasons. If you connect the incoming signal directly to a hub, your Internet Service Provider can “probe” the Internet connection and retrieve a list of all connected Ethernet devices. If you connect the incoming signal to a second Ethernet port, it will only see the second port, keeping your

6. http://threemac.com/network/add_network/share_modem/index.html

other Macs secure. Sharing the Internet connection may violate your service agreement, and the provider may choose to disconnect the service.



If you connect more than one Mac to a hub without additional IP addresses or a router, the first Mac that powers up will grab the available IP address. Any other Mac that powers up afterwards won't be able to use the IP address, since it's already taken.

...

Q: I tried to switch my Mac to “Ethernet” in the AppleTalk control panel, but it tells me to check my Ethernet connections and switches back! Why?

A: When you get this message, it means that your Mac tried to send signals through the Ethernet port, but didn't get anything in return indicating there were other Ethernet devices. Typically, this happens when using a single “crossover” cable to connect two Macs without a hub. In order to make this kind of connection work, you usually need to switch both Macs over at the same time, so both Macs will send signals to each other. Unless the Macs are right next to each other, this probably means you'll need help from a friend so you can get both Macs switched at the same time.

...

Q: What's the cable length limit for Ethernet?

A: For twisted-pair Ethernet (the most common kind), the maximum cable length between hubs or computers is 100 meters. If you need to run a length of cable over that amount, you

can purchase a “repeater,” which amplifies the signal and allows it to travel another 100 meters. Keeping cable lengths down is tricky, though. Generally, the best way is to calculate distances in advance, and determine the best place for the hub that is the closest possible point to all networked computers.

...

Q: I have a Power Mac (75/85/9500, et al.) that has built-in RJ-45 and AAUI Ethernet ports. Can I use both at the same time?

A: If your Mac has two built-in Ethernet ports, you can only use one or the other because both ports use the same internal Ethernet hardware. Note that having two ports built in to your Mac is different than adding a second Ethernet port via a PCI card or other expansion device. If you add a second Ethernet port via expansion, you can use both ports at the same time, although they must be for different networks (one for AppleTalk and one for TCP/IP, for example).

...

Q: I installed an Ethernet card in my Mac, but I can't switch to Ethernet in the AppleTalk control panel or it's not working like I think it should. What should I do?

A: When you install an Ethernet card in your Mac, it's important to also install the correct software to go along with it. Your Mac needs the software so it can “see” the card correctly.

There are two kinds of Mac Ethernet cards: those that come built in to your Mac and those that are installed afterwards. Most beige-colored Power Macs have 10Base-T Ethernet built-in, and the more recent colored G3s, G4s, and iMacs have 10/100Base-T Ethernet built-in. If your Mac has built-in Ethernet, make sure that the “Ethernet Built-in” extension is in your Extensions folder. Owners of older Macs, like Quadras, with built-in Ethernet may need to use the “Apple Built-in Ethernet” extensions instead. This should let you switch to Ethernet in the AppleTalk control panel.

If you added Ethernet to your Mac with an expansion card, you need to install the software for the card so it will work correctly. Note that not all Ethernet card makers support the Mac, so you can't always just pull an Ethernet card from another computer and have it work in

your Mac. If the card you have didn't come with software, check on the card maker's Web site for the Ethernet software (which is usually called a "driver"). If the card supports the Mac, you should be able to get the software you need online. When you install the software, make sure you also disable other Ethernet extensions (such as the aforementioned "Ethernet built-in"), unless you're using it for another Ethernet port.

...

Q: Is 100Base-T Ethernet actually ten times faster than 10Base-T?

A: Although 100Base-T is rated at ten times the speed of 10Base-T, that's a theoretical maximum and is hard to even approach in real life. 100Base-T is typically more like three to five times faster than 10Base-T. The exact performance of a network will vary according to software, hardware, amount of traffic, traffic type, and other factors that seem to work primarily towards reducing the overall transmission speed.

Copyright © 2000 Matthew Glidden. Matthew Glidden is the webmaster of [Threemacs.com](http://www.threemacs.com)⁷, a guide to constructing and maintaining home and small-office Macintosh networks. He can also tango and juggle, not necessarily at the same time.



7. <http://www.threemacs.com>

Snazzing Up Your iMovie Titles

If you have an iMac DV, chances are you're already producing videos with it. It came with iMovie software installed, which is a nice piece of work, and if you followed the iMovie tutorial from one end to the other, you probably have the skills needed to capture, edit, and title your very own QuickTime and Digital Video movies. The only problem is that all your videos have a certain similarity. What's worse, all your videos have a certain similarity to everyone else's iMovie productions. You're probably feeling *déjà vu* before the opening title fades from the screen—which is exactly what the title will do if you chose Centered Title from the twelve standard titling options. You and a million other iMovie users get a ten-frame fade in and a ten-frame fade out every time you select Centered Title. Also, the text will be roughly 1/16th as tall as the window for all your iMovies, and everyone else's.

This is the strength and the weakness of iMovie: it's so simple you can master it in a day, so what are you going to do tomorrow? Tear out your hair and gnash your teeth, that's what. By day two you'll realize that (1) the fixed title size is truly a nuisance (a Mac graphics program that won't let you change the size of your text?), (2) you don't always want your opening title in the center, and (3) the other iMovie titling options make your video look like a ransom note.

Luckily for you, your iMac DV came with all the software you need to create clean, readable, and original opening titles—though it didn't all come in the iMovie folder. You can have placement and size control, overlapping titles, fade control, and even text color transitions, without the learning curve or (gulp) price tag of professional video editing systems. And luckily for the software industry, this is going to leave you hankering for more. At the very least, you're going to want a more sophisticated photo-editing program, because—let's face it—AppleWorks isn't the sharpest pencil in the box when it comes to image manipulation.

But we'll get into that next month; for now, let's see what we can do without spending any money.

1. **Open the iMovie Tutorial.**

Better yet, open a copy of the tutorial. Copy the whole iMovie Tutorial folder and rename the copy "DogTitle Tutorial." Then go inside the folder and name its iMovie document "DogTitle Tutorial." Double-click this DogTitle Tutorial, and you'll have your iMovie tutorial before you, just the way you left it but under a different name. (If you haven't done your tutorial yet, now's the time; we'll be working with laddie.pict, which is a single-frame image you make during the tutorial process.)

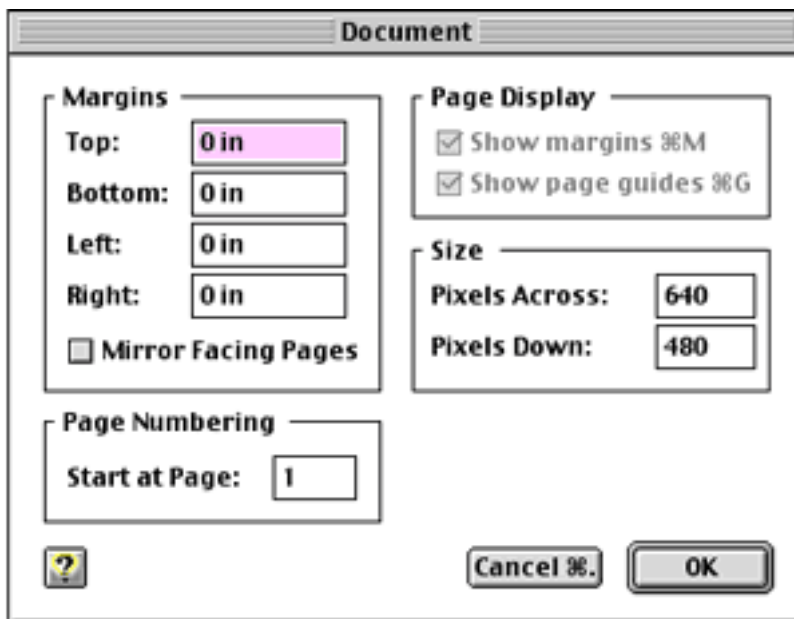


Recognize this pooch? He's the star of Apple's iMovie Tutorial

2. **Open an AppleWorks PT Document.**

Fire up a new AppleWorks Painting document. Open the Format menu and select Document. Set all the margins to zero (we won't be printing this) and the Pixels Size to 640 Across and 480 Down. Zoom it down to a handy size (66.7 is good) with the zoom button at the lower left of the window, and adjust the window size so that there's a bit of gray around the bottom and right of the image area. Save this as a Stationery document, and name it "640 x 480 (PT)," or whatever will make it easy to find and recognize again. If you're going to manipulate individual iMovie frames, you'll be using this stationery a lot.

After you Save as Stationery, you'll still have an untitled AppleWorks (PT) document open—that's what we'll be working with.



640 x 480 pixels is the standard iMovie frame size. It looks good in video, and scales well for all sizes of QuickTime movies.

3. **Insert laddie.pict.**

Select Insert from the AppleWorks File menu. You'll find laddie.pict in your DogTitle Tutorial Media folder (that is, if you did the tutorial). If it's not there, run through the iMovie Tutorial again and make one. The instructions are in Tutorial:Producing a movie:Step 2: working with clips.

4. Overlay a Title.



You'll have to hunt-and-peck to get the text where you want it in AppleWorks.

Use the AppleWorks text tool to make your opening title the way you want it. This font is **Impact**, at 72 points, in light yellow. The text is roughly 1/8th the height of the image window. (Note that nearly every paint/photo/image program except AppleWorks will let you click-and-drag your text around after you've placed it. In AppleWorks, if you don't like where your text lands when you type it in, you'll have to hit command-Z, reposition your cursor, and try again.)

The **Impact** font is easy to read, even in small sizes. However, if we were washing a Gothic dog in Old English Text MT, or a '40s dog in Script MT Bold, the title would be unreadable using iMovie's built-in title functions and a Web-sized movie. I think the iMovie development team chose small titles for a modern, sophisticated look, but also because small titles are less likely to smother the picture (which is a problem if the title is going to be planted right in the middle of the frame).

Here, the "Washing" graphic is well to the left of center, so it doesn't obscure Laddie's face, and slightly raised from center, so it doesn't fade into the yellowish vegetation in the background. If you don't like a particular draft, reinsert laddie.pict and try again. If

you're using a more sophisticated graphics program for your title art (e.g., Photoshop), you may have the option of sliding text layers into position—but AppleWorks will do the job, and it came free on your iMac.

5. **Save Title as a PICT.**

Go to the menu bar, select File:Save:Save as:PICT, give your art a descriptive name (e.g., “Washing.title”), and save it in your DogTitle Tutorial folder.

6. **Repeat Steps 4 and 5 as needed.**

I added a subtitle in 64-point Impact, a slightly darker yellow, and saved that as “DirtyBigDog.title.” Then I used the paint bucket to fill the “dirty” word with light orange, and saved that as “OrangeDirty.title.” These are saved as PICT files because that’s a still frame format iMovie can recognize, and because PICT is a lossless file format. Now quit AppleWorks and go back to iMovie.



7. **Import and Sort the Title Frames.**

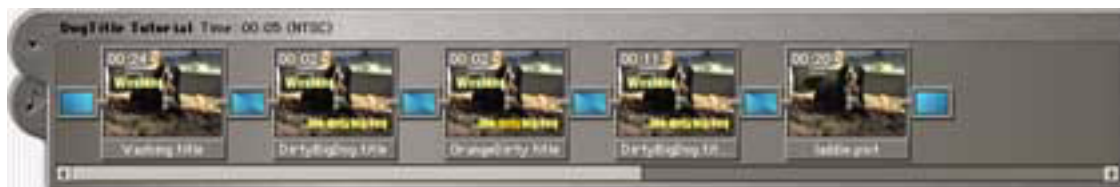
In the iMovie File menu, select Import File, choose the frames you want, and click the Import button. You can either import DirtyBigDog.title twice, or import it once, drag it to the Clip Viewer bar, and split it in half using the Split Clip at Playhead command in the Edit menu. The newly imported still clips will appear on your iMovie Shelf (which, depending on where you've set your screen resolution, has either nine or twelve spaces available). If your shelves are full of other clips, you'll have to drag the clips down to the Clip Viewer as you go along—otherwise you'll see the dreaded “no-room-on-shelves” alert. Arrange the still clips like so: Washing.title, DirtyBigDog.title, OrangeDirty.title, another DirtyBigDog.title, and finish off the series with laddie.pict.



Tracking from left to right, the Clip Viewer looks like a mini-movie running at a very low frame

8. Add Transitions and Crop the Clips.

Click the Transitions button in the middle of the iMovie window, select Fade In from the options, move the duration slider to 00:16, and drag the Fade In icon to the front of the Clip Viewer. This will give you a sixteen-frame fade, which is roughly half a second (30 fps). Now select the Cross Dissolve option, and set the slider to 00:20. Drag the Cross Dissolve icon between Washing.title and DirtyBigDog.title. Put 20-frame cross dissolves between DirtyBigDog.title and OrangeDirty.title, and between OrangeDirty.title and the second DirtyBigDog.title. Now put a ten-frame cross dissolve (move the duration slider to 00:10 before you drag the Cross Dissolve icon onto the clip viewer) between the second DirtyBigDog.title and laddie.pict, tag a ten-frame Fade Out to the end of the sequence, and we're almost done.



The magic happens in those little blue boxes—iMovie's icons for Transitions.

What's wrong with this title sequence? It's almost a minute long, that's what. Knock it down to five seconds by shortening the title clips. From Washing.title to laddie.pict I've cropped the clips (using the aptly named Crop command in the iMovie Edit menu) to 00:24, 00:02, 00:02, 00:11, and 00:20.

Ta-dah. We have an intro title that fades in with the word “Washing.” The subtitle “the dirty big dog” fades in a half-second later, the word “dirty” grows gradually orange then fades back to yellow, the titles fade out, then the image of the dog fades out. By using Cross Dissolve transitions between similar frames, only the differences are transformed. With you in control of size, placement, color, style, and speed, your titles will be clear, tractating (the opposite of “distracting”), and distinctive.

Plug In and Turn On

iMovie doesn't have to stay simple. Like many high-end Macintosh programs, iMovie accepts plug-ins. Your iMovie application folder contains a folder called Resources, which in turn contains a folder called Plugins. That's where iMovie stores its instructions for titles and transitions.

The first batch of aftermarket plug-ins is available now from [Apple's iMovie Web site](#)¹. All iMovie-makers should visit this site now and then, for tutorials, updates, and assorted add-ons. You should certainly download the latest update, and probably the latest iMovie Plug-in Pack as well. You may also want to download a few Music, Background, and Sound Effect sets.

iMovie Plug-in Pack #1 includes Center Large Title, which (as you might suspect) is much like Center Title, except the title is about 50% bigger. This improves readability, though it slightly increases the likelihood of the title obscuring your subject. In most cases, it's a real improvement over Center Title.

The Dark Side of Plug-ins

“Give a kid a hammer, and everything looks like a nail.” —Anonymous

We can expect a plethora of iMovie plug-ins coming down the pike, despite Apple's efforts to discourage third-party developers. Not since Photoshop has there been a program so ripe for widgets, so hungry for enhancements, so susceptible to feeping creaturism. Plug-in Pack #1 offers a few more exotic title and transition effects, which could distract you (and your audience) from your craft. Do you want to dazzle your viewers with the artistry and message of your film, or with Zoom Multiple titles and Flying Words? Should you simply cut to the next exciting scene, or wow your audience with a Warp In or Radial transition?

Be sparing with your power. Film editors earn Academy Awards with nothing but a Fade In followed by numerous Cut To's. If your audience remembers your editing, you probably did too much of it.

Next Month: the most popular special effect in forty years of broadcast video—and you can do it with iMovie.

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1. <http://www.apple.com/imovie/>

This can be a very stressful time of year. April 15th is just over the horizon, we're paying the price for spending too much during Christmas, and the unseasonably warm weather is a constant invitation to play hooky. And college students who'll be graduating this spring have another reason to be stressed—getting a job.

Making the transition from college into the work force can be a terrifying and overwhelming process. You've had all the schooling but don't know how to make yourself stand out from the crowd. Even worse, you don't know how to get your name out to the right employers.

Getting a good job is a full-time job in itself. It takes time, planning, research, and selling yourself. The good news is that there are a number of Web sites dedicated to helping you make the perfect resumé. They will also post your resumé for employers to see. The bad news is that many of these sites pass off bad advice. Many people have set up shop on the Internet, offering resumé building services, but they give poor tips or don't give you the proper exposure, leaving you with fewer job opportunities.

Treat building your resumé using tips on the Internet with caution. There is a lot of great advice, but you have to know where to find it. Search for tips that are as specific to your job as possible. A banker's resumé should look very different from a graphic artist's resumé.

Posting your resumé on Web sites that prospective employers can browse is a great tool. But don't make the mistake of just posting your resumé out there in one location, expecting hordes of employers swamping you with phone calls and emails. Put your resumé out on several sites. Many professional organizations (specific to your job) have Web sites that let you post with them. Employers in your field check these sites out and could give you the exposure that you need to get that all-important interview.

The sites listed should be used as a jumping off point for your particular career interests. They're a good reference for the fresh-out-of-college student as well as anybody looking to make a career change. Happy job hunting!

careers.wsj.com

Web: <http://careers.wsj.com>

A Complete Suite of Tools for Job Seekers

From the publishers of *The Wall Street Journal* comes a Web site dedicated exclusively to job hunting. Everything you'll need to get started with finding your new career is here. You can search the job database by career and further focus your search by state or city. There's a wealth of advice from recognized experts on job seeking. You'll also find feature columns by big name employers—what they look for in resumés and employees. A tool that I found particularly interesting is the “Job Alert” feature. Whenever new employers come to careers.wsj.com, you can be notified by email about them. You'll find some big name companies working with

careers.wsj.com already—including United, Dell, Blockbuster, and AT&T. Students getting ready to enter the job market will appreciate a section devoted entirely to them. Expert advice is given to the new graduate who is looking to make his first step into a new career. Not sure what the average salary is for your job? Check out the “Salary Data” area, where you can find how much you can expect to earn. It's even broken down into various cities around the nation. I looked up my job and became very depressed. A Television Producer in Dallas makes over \$15,000 more than I do! Very, very depressing.



CareerPath.com

Web: <http://new.careerpath.com>
Thorough Searches and Career Management

One of the great strengths of CareerPath is its job searching feature. Not only does it search Web postings of jobs from many companies, but it can also search newspaper job listings. You can select from a large number of newspapers from all across the country. Many non-professional jobs are found only in the classifieds. This tool leaves nobody out—helping a wide variety of people that are looking for jobs. You can post your resumé on the site and place it in a specific category that fits your job. Before you go into that interview it helps to do some research on your career and the company you're interested in. Here you can get to know more about many different companies, trends in your career, advice on relocating across the country, and salaries. You can even take a skills assessment to determine whether you're a leader or a follower.



Bakos Group

Web: <http://www.bakosgroup.com>

Resumé Service for a Price

When it comes to paying someone else to prepare my resumé, I tend to be wary. Bakos promotes just such a service. It claims that professionals will prepare your resumé and all but guarantees that you'll get a job. If you don't see immediate success, Bakos will rework your resumé. Personally, I cannot in good conscience recommend using this kind of service, especially since this company is Internet-based. But there are some other helpful tools on the site that you might be interested in. Bakos will perform a free resumé critique—all you have to do is fill out a submission form and send your resumé to them. Experts will pore over your work and return it with their own assessment. I tried this service and had mixed results. Some of their suggestions were legitimate, others were not. They're strong in passing along general tips, but when it comes to your specialized field, they can miss the mark.



JobSearch

Web: <http://www.jobsearch.com>

Power Search for the Perfect Job

Searching for the perfect job? Look no further than JobSearch. What makes JobSearch really shine are its search tools—you can find a job by industry, geographical location, and part-time or full-time positions. You can even filter the results by what your salary requirements are. Also included is a place to post your resumé. As with most sites, the service is free, and it leads you to believe that posting your resumé will guarantee a great job. As with all the other job posting sites, it doesn't hurt to use the service, but you probably won't get as many replies as you would by sending your resumé directly to employers.



The Square

Web: <http://www.thesquare.com/career>

An Assortment of Helpful Links and Tools for Getting a Job

The Square has many of the same services that other sites have—resumé posting, searching, etc. What makes The Square unique are all its great links to other sites dedicated to almost any information about getting a job. You'll find information for college graduates who are thinking about going to graduate school and a site dedicated to people already in the workforce who want to change jobs or beef-up their skills. One very interesting section that I found was an interactive interview game. In this role-playing game, you play an applicant during the all-important interview stage of hiring.

Career Builder

Web: <http://www.careerbuilder.com>

Getting a Job and Keeping It

Getting a job is hard enough, and keeping it is a job in itself! In addition to the usual staples of these kinds of sites—like job searches—there's an area dedicated to keeping your job.

Here, you'll find proven suggestions that will help you get that promotion without becoming a complete workaholic or getting a reputation for being the company brown-noser. Career-Builder does have one distinctive job search feature. It has a meta-search engine that scans the Web's 40 largest career sites. You can create a complete job profile and have it stored on the database. Whenever something pops up that fits your requirements, you'll get an email notification.

Copyright © 2000 David Spencer. David Spencer has been a Mac advocate since 1991, when he traded in his IBM PC Jr. for a Mac Classic. He can be reached at dspencer@atpm.com. The Web sites mentioned here are not endorsed by ATPM, they are simply suggestions for your own browsing endeavors.



Desktop Pictures XI: Landscapes

This month, TriBall software contributed [some interesting desktop pictures](#)¹. Each picture has been made from the same scenery. The differences between them are the type of weather, the time of day, and the country characteristics. Now you can set your desktop to the current time of day and type of weather. The desktop pictures were created in Bryce 4. TriBall software intends to make such a desktop picture each week. They can be found at <http://www.redrival.com/triballsw>. There they are also offered in 832 by 624.

If you haven't seen the older parts of the series, they are: [Yellowstone National Park](#)², [Drops](#)³, [Toronto](#)⁴, [Niagara Falls](#)⁵, [Monaco](#)⁶, [Montréal](#)⁷, [Bahamas](#)⁸, [Clouds](#)⁹, [Aerial](#)¹⁰, [Made with Macs](#)¹¹, [Landscapes](#)¹².

Placing Desktop Pictures

Mac OS 8.5 and Newer Go to the “Appearance” control panel. Click on the “Desktop” tab at the top of the window. Press the “Place Picture...” button in the bottom right corner, then select the desired image. By default, it will show you the images in the “Desktop Pictures”

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1. <http://www.atpm.com/6.03/landscapes>
 2. <http://www.atpm.com/5.03/yellowstone.shtml>
 3. <http://www.atpm.com/5.05/drops/>
 4. <http://www.atpm.com/5.07/toronto/>
 5. <http://www.atpm.com/5.08/niagara/>
 6. <http://www.atpm.com/5.09/monaco/>
 7. <http://www.atpm.com/5.10/montreal/>
 8. <http://www.atpm.com/5.11/bahamas/>
 9. <http://www.atpm.com/5.12/clouds/>
 10. <http://www.atpm.com/6.01/aerial/>
 11. <http://www.atpm.com/6.02/madewithmacs/>
 12. <http://www.atpm.com/6.03/landscapes>

subfolder of your “Appearance” folder in the System Folder, however you can select images from anywhere on your hard disk.

After you select the desired image file and press “Choose,” a preview will appear in the Appearance window. The “Position Automatically” selection is usually fine. You can play with the settings to see if you like the others better. You will see the result in the little preview screen.

If you are satisfied with the selection, click on “Set Desktop” in the lower right corner of the window. That’s it! Should you ever want to get rid of it, just go to the desktop settings again and press “Remove Picture.”

Mac OS 8.0 and 8.1 Go to the “Desktop Patterns” control panel. Click on “Desktop Pictures” in the list on the left of the window, and follow steps similar to the ones above.

Random Desktop Pictures If you drag a folder of pictures onto the miniature desktop in the Appearance or Desktop Pictures control panel, your Mac will choose one from the folder at random when it starts up.

DeskPicture An alternative to Mac OS’s Appearance control panel is Pierce Software’s DeskPicture, available [here](http://www.peircesw.com/DeskPicture.html)¹³. You can also find a review of DeskPicture on [this page](#)¹⁴.



13.<http://www.peircesw.com/DeskPicture.html>

14.<http://www.atpm.com/5.10/roundup.shtml>

CDFinder 2.7.1



CDFinder, [originally reviewed](#)¹ in issue 5.03, has been updated to version 2.7.1. AppleScript support has been improved in this version with an integrated “Scripts” menu and several new sample scripts. The new version includes fixes for bugs including USB scrolling mice and file renaming. CDFinder now supports live scrolling when running on computer with OS 8.1 or later. Finally, this version boasts compatibility with the upcoming release of Mac OS 9.0.2.

eFax Messenger



eFax Messenger was released as an update to the eFax Microviewer software [originally reviewed](#)² in AT^{PM} 5.09. eFax Messenger adds the ability to listen to voicemail messages, a feature that has since been added to the free eFax service [reviewed](#)³ in AT^{PM} 5.06. Also, an immovable advertising bar has been added to the top of the screen when the application is active.

ShrinkWrap 3.5.1



Since AT^{PM} [reviewed ShrinkWrap 3.5](#)⁴, Aladdin has made several improvements. ShrinkWrap now creates StuffIt 5.5 archives, self-mounting images (SMIs) now mount with color icons, and several bugs have been fixed (but not the one mentioned in the review). ShrinkWrap 3.5.1 also creates smaller images when using the “Don’t copy unused blocks” preference, and when using StuffIt compression for HFS+ volumes.

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1. <http://www.atpm.com/5.03/cdfinder.shtml>
 2. <http://www.atpm.com/5.09/efax.shtml>
 3. <http://www.atpm.com/5.06/efax.shtml>
 4. <http://www.atpm.com/5.10/shrinkwrap.shtml>

Voodoo3 drivers v1.0b11



The new beta version of the [Macintosh Voodoo3 drivers](#)⁵ sports three major improvements over the previous beta. First, Star Wars Episode I Racer now works with OpenGL acceleration. Second, multiple-monitor support using the Macs built-in ATI graphics card is improved. Third, fog is now supported. These are still beta drivers, however, so there are still some issues that need to be worked out. For instance, multiple-monitor support, while improved, still has one known bug that can be seen when switching the menu bar between screens.

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There are far too many Mac products these days for us to review each one, or even keep up with all the ones we have reviewed. Indeed, many shareware authors are revving their products more than once a month! The Update section is where we acknowledge significant new versions of products that we have previously reviewed. If new features, bug fixes, or other revisions are substantial enough to change our assessment of a piece of software, we will generally publish a full review of the new version.

Send update information to update@atpm.com. Reviewing in ATPM is open to anyone. If you're interested, write to us at reviews@atpm.com



5. <http://www.3dfxgamers.com/view.asp?IOID=30>



BY ERIC BLAIR, EBLAIR@ATPM.COM

Disk Warrior 2.0

Company: Alsoft

Web: <http://www.alsoft.com>

List Price: \$69.95 (\$29.95 for DiskWarrior 1.x owners)

Requirements: 68020 processor, System 7.1 or later (8.1 or later for rebuilding HFS Plus drives and the DiskWarrior Extension), 16 MB RAM



A wise man once told me something along the lines of “The closer you are to your deadline, the more likely your computer will crash.” Granted, anybody who spends any amount of time with a computer eventually deduces this. That line is not the reason this man is wise, but it seemed like a decent way to start a review of Alsoft’s DiskWarrior, a program designed to save you from those crashes.

There are a variety of reasons why computers crash. Sometimes you run out of memory. Sometimes two programs just don’t get along, or sometimes Jupiter and Venus line up in such a way that the resultant vector of their combined gravitational fields is just strong enough to scramble the next sector your hard drive is going to read. Although the causes of crashes are numerous, they generally have a shared root. Along with this shared root, crashes also have a shared result. The root and the result are usually the disk directory.

The Expert Tailor

I suppose the best way to describe disk maintenance software is to compare the programs to a tailor. Most maintenance programs look at individual problems and try to fix them without looking at the problems’ relations to the whole. Think of this as the tailor sewing up the holes in your pants as he comes to them. According to Alsoft, the problem with this approach is that many of these programs accidentally damage something else while fixing a problem. Going back to our tailor, after he has sewn up every hole, you try on your pants, only to realize your pant legs are sewn shut.

Sticking with our analogy, DiskWarrior would be a new type of tailor. This tailor would look at your old, damaged pants and sew you a new pair based on how the old pants should have looked. In the disk world, this means examining the entire disk directory, moving files around in the directory, cleaning out the damaged sections, and creating a new directory.

There are several advantages to this approach. First, you eliminate the risk of accidentally creating new problems when focusing on the individual problems with the drive. Second, DiskWarrior gives you the opportunity to see what the new directory will look like before overwriting the old directory. This lets you make sure all your files are intact. Finally, when DiskWarrior moves files around in the directory, it places them in a logical order. This optimization of the directory tends to result in faster boot and file access times.

The Basics

If rebuilding damaged disks is all you're interested in doing, you can be up and running in under five clicks. After launching DiskWarrior, you see the "Disks" tab. Select the drive you want to repair from the pull down menu and click "Rebuild." As long as this drive is not the drive containing DiskWarrior or the startup drive, DiskWarrior will run through the first eight steps of the rebuilding process.

After the eighth step you're presented with a report that gives you a rundown of the drive, which includes any errors or notes that the user should be made aware of. From the report screen, you can preview the new disk directory to make sure all the files were preserved and undamaged. Finally, clicking "Replace" will overwrite the old directory and finish the process.

Repairing the startup disk is slightly more difficult. You must start by booting off another drive. One of the advantages of the shrink wrapped version of DiskWarrior 2.0 is that the CD contains a bootable system folder. When you boot up and run DiskWarrior off this CD, you can then repair your drive.

If you purchased the downloadable version of DiskWarrior, you need to supply your own startup disk. Typically, this would be the system software CD that you either received with your computer or purchased when upgrading to the latest system. Then, you must run DiskWarrior off another disk. If you have one of the newer Macs and don't have a second hard drive or some sort of removable media (Zip drive, super floppy drive, etc.), you could be out

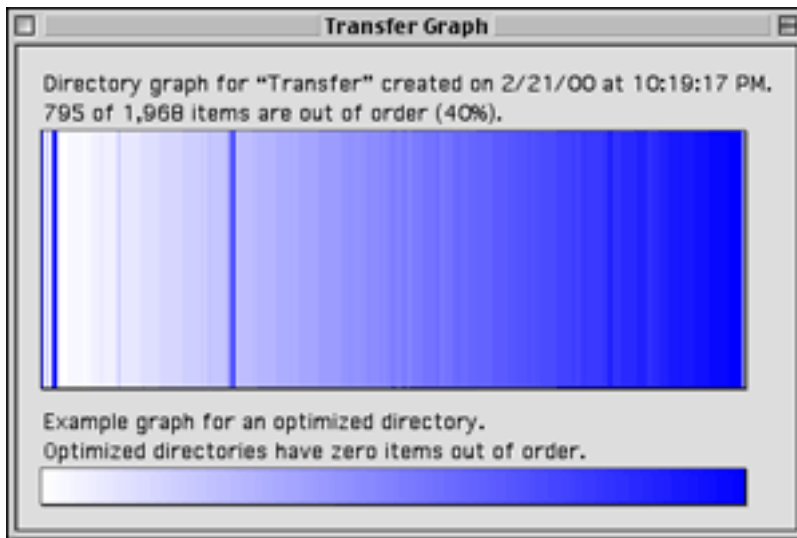


of luck with the downloadable version. If you use the CD-ROM drive to boot from the system CD, you will have no disks from which DiskWarrior can be run.

Advanced Options

Along with the ability to rebuild the disk directory, DiskWarrior includes three advanced features. The first is the ability to show a graph of your disk directory and a graph of how an optimized directory will look. While this isn't overly functional, it can be used as a guide to determine when you should rebuild your directory.

The second option is called Scavenge. Sometimes another disk repair utility can repair the errors on the drive but make the data inaccessible at the same time. Normally if DiskWarrior detects no major errors in the disk directory, it does not search for lost files. Using Scavenge forces DiskWarrior to look for the files, giving you an opportunity to recover them. Scavenge is accessed by holding down the option key and clicking the "Scavenge" button, which will appear in place of the "Rebuild" button.



The final advanced option in DiskWarrior is the new DiskShield. As far as I can tell, this is the only major change in version 2.0. To use DiskShield, you must install the DiskWarrior Extension. I must admit, when I first saw this, I thought of CrashGuard, which was included with several versions of Norton Utilities. Contrary to what the name would have you believe, CrashGuard apparently caused more crashes than it prevented. This doesn't appear to be the case with DiskShield.

DiskShield watches over your computer and monitors the programs that you are running. If it detects a program that's trying to do something to the disk directory that it's not supposed to, DiskShield presents you with a warning message explaining the problem. If the program is supposed to be modifying the disk directory, you can elect to have it added to the list of applications to ignore.

In theory, that is how DiskShield is supposed to work. In practice, I have not yet gotten an error message from DiskShield. I tried forcing an error by modifying portions of the system with ResEdit (not recommended, by the way), but still no message. It is entirely possible that I was not modifying the proper area, though.

Conclusion

As far as disk maintenance software goes, I am thoroughly impressed with DiskWarrior. It does its job, it does it faster than the competition, and the application is very small (at 1.1 MB, it will actually fit on a floppy disk). As a computer user, I'm glad that DiskShield never displayed any warnings. As a reviewer though, I would have liked a warning or two. Even



without DiskShield, DiskWarrior is one of the best maintenance programs available. I recommend it to anybody looking for a program to help keep her system running. Unless I see some sort of results from DiskShield however, I do question the importance of version 2.0 for owners of version 1.x. As a new application, I rate DiskWarrior as Very Nice. As an upgrade, I honestly don't know what to rate it, since I'm having a hard time picking out what's new.

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BY WILLIAM LOVETT, [WLOVETT@ATPM.COM](mailto:wlovett@atpm.com)

Interaction 3.03

Company: Media Design in•Progress

Web: <http://www.in-progress.com>

Requirements: a local Mac-native Web server

Price: \$279

The days of HTML are numbered. XML, the whiz-bang successor to HTML with the ubiquitous distinction of being a Very Good Thing, is poised to give Web pages a much needed upgrade by providing them with the inner skeleton they've never had. Interaction would like to help make that happen.

Most of the articles on XML are long on theoretical explanations, but short on practical advice. They're quick to point out that XML frees you from the fixed tag vocabulary of HTML, and that it lets you whip up new tags as often as you like, as well as the rules that govern how Web browsers should display them. That's great, but how do you actually implement XML right now? Today's Web browsers have enough trouble as it is with regular HTML; feeding them new tags isn't going to get you anywhere. For that reason you need an intermediary between your XML documents and the Web browsers that visit your site.

Interaction is one such middle man. Whenever a page is requested from your Web server, Interaction steps in and converts the XML into browser-friendly HTML code. You take care of the structure of your pages and the way they should be displayed, and Interaction will worry about cross-browser compatibility.

The Proper Setup Is Everything

XML is great, and Interaction provides an equally great service, but don't get excited just yet. There are a few caveats to consider before you jump on this cutting edge of Web page technology, and first and foremost is price. Interaction's abilities are better suited to larger sites,

especially those that are heavily template or database driven, so at \$279 (\$195 for an educational license), it's generally not for small-scale use. Then there's the fact that Interaction is only available for the Mac. It works with all the Mac-based web server programs (Quid Pro Quo, WebStar, MacHTTP etc.), but if your Web site is currently hosted on a Unix machine of some sort you're out of luck, likewise if your Web host uses Apache.

One last bit of bad news: if you're hosting your own site, either from a corporate locale or from a DSL or cable location, Interaction may hurt your server's peppiness since you're making the serving process more complicated. Even though server speed is contingent on a number of factors, of which Interaction is only one, it's still something to keep in mind.

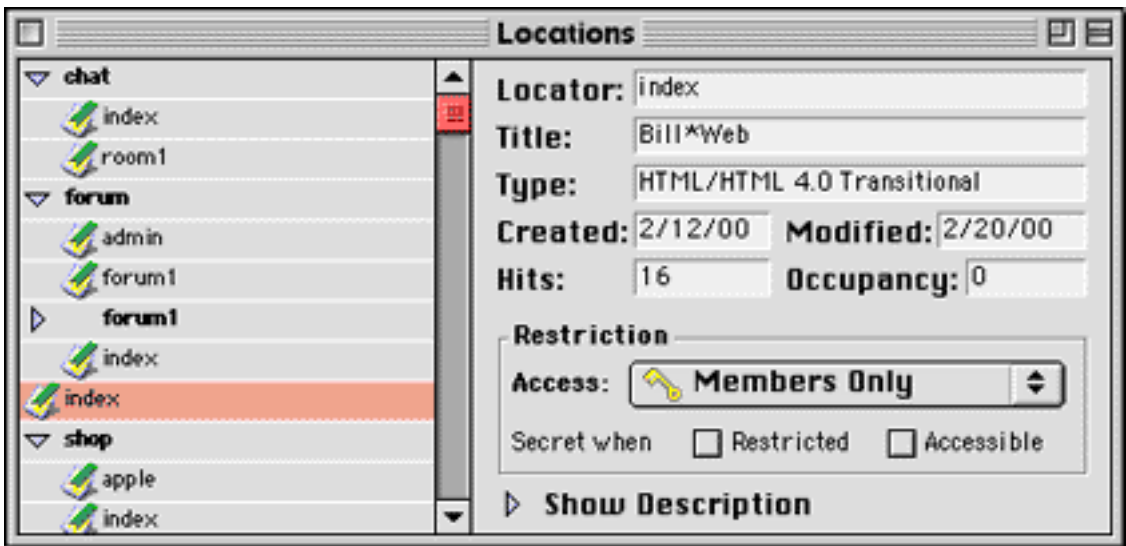
Building the Skeleton

Creating Web pages in XML is very different from coding HTML. The basic concepts are still the same—content is surrounded by pairs of tags that can optionally take one or more attributes—but XML forces you to consider the big picture. If you're building an e-commerce site, for example, and you already have a database with the relevant information, the job is not so bad; you'll probably create tags like `<PRICE>` or `<DESCRIPTION>` or `<PRODUCT NUMBER>`. Other types of sites will need different treatment.

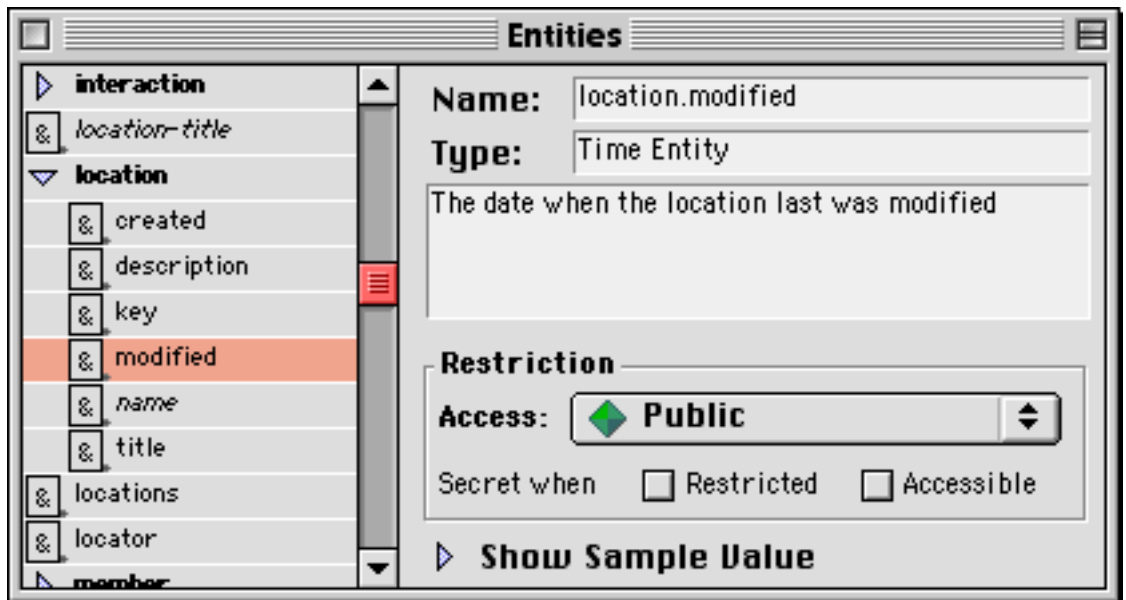
If you're re-coding an existing site, you may want to put certain things like your header or footer or navigation table into separate files, and have each page link to them. Interaction will then merge all the files into one. The Web browser requesting the page gets a single page, but from the server side there can be any number of pieces. You can already do this with regular HTML and Server Side Includes, so this isn't exactly a new feature. In general, Interaction and its implementation of XML doesn't give you anything you couldn't do some other way, but on the other hand it does make things much simpler, and it doesn't require the expertise of a back-end programmer.

The road to XML with Interaction begins with the Locations window, which lists all the “pages” on your site. They really aren't pages until they're served, but for the sake of simplicity we'll stick with the traditional terminology. Existing HTML files can be imported and edited from here, and you can create new ones. Interaction uses Emilé as its text editor, which was reviewed in [last August's shareware roundup](#)¹. In addition to adding custom-made tags, you can also include entity references, similar to the environment variables in

1. <http://www.atpm.com/5.08/roundup.shtml>



CGI programming but broader in scope. An entity reference can display what browser someone is using, or the current date and time, as well as the last time a page was uploaded or the number of hits it has received. You can also make your own entity references.

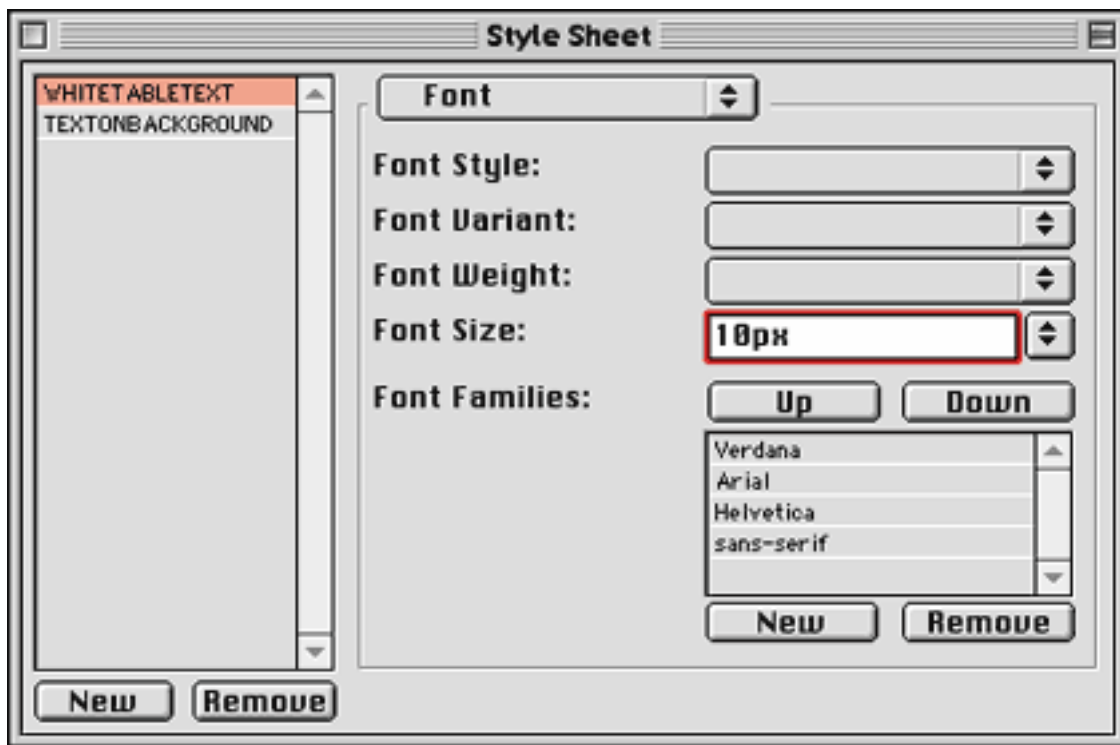


Creating structures for individual pages is only the beginning; Interaction also allows you to implement several services that may have previously been off limits because of their technical complexity, including shopping systems, chat rooms, and forums. Examples of each are included with the Interaction demo.

The Right Style Is Everything

By far the most useful feature of Interaction is its ability to provide scalable style sheets. After installing an extra component called the Stylizer, Interaction will serve different versions of a page depending on which browser asks for it.

Incompatibility is the main problem with style sheets right now. Neither of the major browsers supports them fully, and support in previous versions is worse or nonexistent. So far, the solution has been to use style sheets with extreme care and caution so that a given page looks reasonably the same, no matter which browser is viewing it, even if it involves inefficient HTML code along the way.



Interaction's solution is to base each individual style on an existing HTML tag. You make the choice, then Interaction does its best to hard-code the style information for older browsers. I might want to create a headline for a page that is 20 pixels big, has bright pink flashing text, and sits in front of a tiled image of brightly burning flame. Relax, it's just a hypothetical example.

In XML, said headline would be wrapped in a <HEADLINE> tag. If I viewed it under Netscape, I'd get a <H1> tag with a CLASS attribute pointing back to the style sheet at the top of the page. If I viewed it with iCab, however, which doesn't support style sheets yet, I'd get an <H1> tag plus a tag containing the necessary attributes. The results might not be identical, but at least I've made an attempt to reduce incompatibility. More sensible page designs would have perfect or near-perfect results.

The beauty of all this is that you don't have to code two versions of the same file, or worry about serving different style sheets depending on a viewer's browser. Interaction takes care of all the details.

Is It Worth the Price?

Small businesses could go a long way with Interaction thanks to its shopping component and overall power, further than they might using regular Web development tools. That said, Interaction provides comparatively little in the interface department. It's not something you can just jump into. All the windows are menu based, so nothing pops up when you launch the application; entering style sheet information is tedious—you can't duplicate styles from within the program—and the text editor is decidedly minimalist.

In terms of features, context is everything. Yes, you can implement a chat room, but not like the ones you find on AOL or Yahoo!, rather a page that must continually be refreshed. Its ability to tell you how many people are on your site or on a particular page is similarly questionable because a countdown clock is used, which can only describe traffic within a certain window of time. Like the chat service, it's almost real-time, but not quite. Finally, the speed question; if you use Interaction, you run the risk of slowing down your site.

Version 3.01 is the latest full release of Interaction. An upgrade to version 3.03 is available as a separate download, adding server-side support for the W3C's new XHTML recommendation.

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BY PAUL FATULA, PFATULA@ATPM.COM

MindControl 1.0

Company: MindVision Software

Web: <http://www.mindvision.com>

Price: \$19.95 (shareware)

Requirements: Mac OS 7.5 or greater, with at least 8 MB of RAM and 750K available hard disk space.

Call it a victory for my MS DOS upbringing, but even with many years of Mac use under my belt, I sometimes find myself really hating the mouse. Don't get me wrong; for some tasks, it's indispensable, and it makes other things easier than they might be without it. On the other hand, however, I really wish I could do basic things like launch programs easily from the keyboard. Yes, I know it's possible in the Finder to type names of folders to select them, Command-O to open them, and eventually get to the program I want to start; but frankly, that doesn't hold a candle to just typing the name of the program, like I could in DOS a decade ago.

Enter MindControl. I know what you're thinking, "Hold on a minute, Paul, you're saying you can launch programs with your **mind**!?" I wish. (And we're closer to that day than you might think; check out <http://www.ibva.com> for the hardware and software to get your mind on the computer.) MindControl would better be called KeyboardControl; not only does it let you launch programs from the keyboard, but it lets you do several other things as well, all in an impressively unobtrusive way.

The Setup

When you download MindControl and double-click on its icon, you get a Setup Assistant that looks remarkably like the Mac OS Setup Assistant. From the first page of the assistant, you know MindVision really thought about their product: it tells you that the entire setup process can be done with the keyboard, and it tells you how to move to the next screen from the keyboard, so you aren't stuck with the mouse. On successive screens, you are told how to

navigate from item to item with the keyboard, and how to select or de-select your choices. Minor detail? Absolutely! But how well a product handles minor details tells you a lot about it, and can make all the difference between its being a pleasure or a pain to use.

The setup process basically gives you an initial set of programs you'll be able to start up from MindControl, letting you select things like recent applications, all applications, recent servers, etc. I'd love to see them add the Favorites folder to that list of initial possibilities: I keep aliases to my most-used programs and files in there, so that would ease the setup process a bit. You are also prompted for a favorite Web site and email address: not only can you launch programs with MindControl, you can type in a URL, and it will automatically open your Web browser and go to the site. You can also set up an alias to email: type it in from MindControl, and it will open your email program with a new email to that person. It only lets you create one Web site address and one email address each from the setup program, but you can add more later.



Once you get through the setup process, you see a list of the applications and other commands that can be handled by MindControl: your applications, documents, servers, Web sites, email addresses, as well as commands to shut down, restart, and sleep the computer. You aren't stuck with the application or file's name as what you type to open it; you can change the command to anything you want, useful if a whole bunch of programs have names that start with Microsoft and you want to save yourself the typing without renaming the files themselves.

From the same window, you can add applications, files, servers, etc. to the list of things MindControl can open, and add more email addresses and Web sites for it to recognize as commands. It's all straightforward; you won't find me complaining about the lack of a manual because the short readme displayed after the setup process is really all that's necessary. I stop short of saying MindControl can open anything openable—you can't add a folder to the list of commands in order to open it. But that's the only exception I've come across.

There is a keyboard shortcut to get you access to MindControl's preferences, but unfortunately once the preferences dialog opens, you're stuck with the mouse. You can select one of four key combinations that will open MindControl's command line, and have it automatically make the contents of your "Recent..." folders available for typing.

I got confused once I had closed the installer program. The program was installed, so I threw it away. But then I wanted to add another application to the list of those MindControl would handle...but how? Turns out, the installer is the program, so hold on to it after the install is complete, or else you won't be able to add more commands or change your preferences.

Using MindControl

Once it's installed, MindControl is so easy to use, you barely know it's there—exactly how a product like this should be. When you want to open a program, put your computer to sleep, send someone an email, etc., you type your key combination, and a command line appears on your screen, with a list of the commands you can type running up the side of the screen. You can either use the arrow keys to select a program (takes time, if you've got a long list) or start typing. MindControl has the same “auto-complete” feature found in modern Web browsers, so you can usually get away with typing just the first few letters of the command you want, hit return, and MindControl does the rest.

After you've been using MindControl a little bit, you inevitably start to think of other things you wish it could do: empty the trash, connect to your ISP, etc. The good news, however, is that those things, and pretty much whatever else you can think of, are indeed possible. All you have to do is write an AppleScript, save it as an application, and add it to the list of programs MindControl can run. This is a real strength of the program: it's incredibly versatile, and you don't have to learn anything new.

I also found myself wishing I could open up Telnet windows just as easily as I could open Web sites and start emails. While there's no built-in feature to allow for Telnet sessions, all you have to do is save a session from your Telnet program and add that saved file to the list of MindControl commands. Voila! And if your Telnet program is AppleScriptable, you can go even further: write an AppleScript that opens Telnet, opens a connection, and logs you on. With fewer keystrokes than you'd usually use typing in your username, you can open up a Telnet window and start working.



Room for Improvement

The only real bug I found is MindControl's behavior if you open the command line, and then change your mind. If you click somewhere on the screen, you aren't moved to that program. Instead, the command line blinks. Clicking a second time produces the desired effect, but that second click shouldn't be necessary. If you start using the keyboard to call a program, then move your hand to the mouse and click somewhere, the program should regard that as a deliberate action rather than an accident, and behave accordingly. Similarly, if the command line is open and you want simply to go back to the program that was frontmost before you activated MindControl, you can't simply close the command line. Repeating the key combination you used to open MindControl closes it, which is good; but unfortunately, you aren't returned to the right application.

A few other little things could be cleaned up. Removing a command from MindControl's list is done with Command-D rather than the Command-Delete which is more familiar to users from Web browsers and the Finder. Also, you'll frequently see applications and documents listed several times when you open up the command line and see the list of commands MindControl will accept: you'll see it once because it's on the list you gave MindControl, and again because it's in your Recent Applications folder, for example. This should be fixed so each application only appears once.

Conclusion

MindControl, while not nearly as cool as its name might lead you to believe, is a useful and versatile utility that allows you to perform many everyday tasks without taking your hands off the keyboard. It never gets in your way when you don't want it to, and, with a little creativity and AppleScripting, you'll find that MindControl lets you do some pretty amazing things with just a few keystrokes.

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BY DANIEL CHVATIK, DCHVATIK@ATPM.COM

MP3 Player Roundup—Part I

MP3 software has been shooting onto people's desktops like mushrooms from the ground. Currently, there are well over 30 MP3 products available for the Mac. Some are general players, others have more specialized and fine-tuned purposes. Which one is the best? Well, that is probably the wrong question to ask. It's more appropriate to ask which one fits your needs the best. While ultimately only you know the answer to that question, ATPM will try to be your guide through the wonderful universe of MP3 software and help you find the best program for you. There is a lot of ground to cover, so we will separate this series into three parts. It will not explain what MP3s are, so if you are wondering what I am talking about, look [here](#)¹ for some discussion of the MP3 sound format.

Most of the programs we are covering here have one major purpose: to play MP3 sound files over your computer speakers or sound output. Naturally, one of the major criteria to judge players by is sound output quality. Unfortunately, this criterion is subjective, and all the players perform similarly in this regard, so I will try to stay away from such quality comparison except at a very general level. Instead, I will compare the programs based on features, ease of use, stability, etc.

Some of the programs also allow you to encode MP3 files, i.e. create new music files. Again, encoding quality is relatively hard to measure objectively, however [this article](#)² has done a very nice job at comparing encoding software.

The large number of available software products and their rather restricted purpose, together with some intense competition in the market, has resulted in programs that have rather subtle differences within categories. Once you have narrowed down your choice, I

1. <http://www.atpm.com/5.12/art.shtml>

2. http://www.raum.com/mpeg/reviews_quality.html

recommend that you give all your candidates a try and see which one suits your needs best. After all, they all play your files, so the biggest determiner is your personal taste.

SoundJam MP 1.6

Company: Casady & Greene

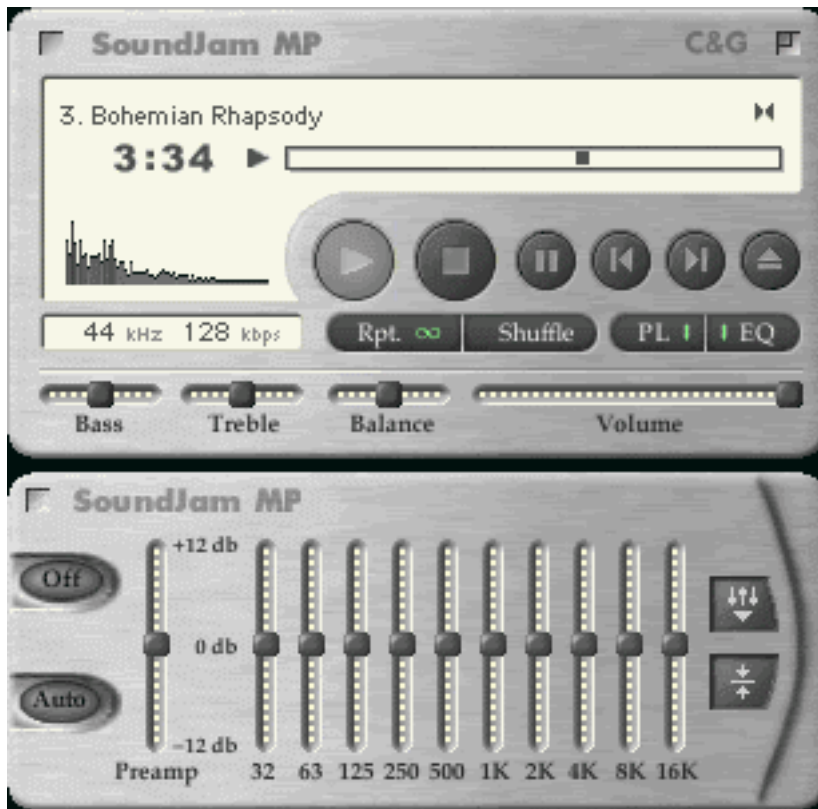
Web: <http://www.soundjam.com>

Price: \$49.95 (demo available)

Requirements: Mac OS 7.6.1 or higher; PowerPC 603 with 100 MHz or faster; G3 or G4 recommended



SoundJam is the king of the MP3 kingdom. It does pretty much everything your heart desires. SoundJam combines a player, encoder, and converter in one application. Casady & Greene markets it as the one and only program you will need for MP3, and that is not far from the truth. SoundJam even goes beyond MP3s. It supports MP3, MP2, CD playback, AIFF, WAV, and Sound Designer II, as well as conversions between these formats.



Its MP3 encoding is state-of-the-art, supporting all possible options including variable rate encoding (VBR). The encoding is Velocity Engine–optimized, making it extremely fast on a G4. SoundJam includes a 10-band graphic equalizer, similar to those found on other players.

Another standard feature on all higher-class MP3 players is custom ‘skins,’ window definitions that radically transform the way your player looks. Some are included with the program, and many more can be downloaded from the SoundJam Web site. Although skins are a nice touch, they tend to get boring quickly, especially when the play list and other windows don’t change to the new look.



A new feature included with more recent versions of SoundJam is support for streaming Internet files right off Internet servers. That way you can listen to music through the Internet without downloading large files first.

Playlists let you manage your collection of MP3s, and a built-in ID3 tag editor lets you change file information such as artist and album name. The columns in the playlist are fully customizable. SoundJam also supports ‘plug-ins,’ little code snippets that take the sound output and transform it graphically into pretty and sometimes fascinating animations that change with the music—not that that has any real use.

As if that were not enough, SoundJam has one more feature going for it, and it’s unique. It is the only program on the Mac that supports the Rio 500 hardware MP3 player, allowing you to upload music to the Rio 500.

SoundJam’s strength, its complex array of features, is also its major weakness. Its complexity made SoundJam lose a basic elegance that so many people crave in Macintosh applications. If you want just a single program for all your MP3 needs or want the most powerful one there is, go for SoundJam. However, you pay for its power with a higher price than most MP3 players and by sacrificing the simplicity of the user interface.

Audion 1.5

Company: Panic Software

Web: <http://www.panic.com>

Price: \$17.95 (limited time, fully functional demo available)

Requirements: Mac OS 8.1, PowerPC 604 or faster



If SoundJam is the king of the MP3 kingdom, what does this make Audion? Probably the princess. Compared to the bulky SoundJam, Audion seems like a light-weight, elegant princess indeed. It doesn’t have quite the number of features, and most importantly Audion is lacking an encoder. Instead, Panic

recommends that you use it in connection with [N2MP3](#)³. (Together, Audion and N2MP3 come in at \$52.90, a little bit over SoundJam's \$49.95.)

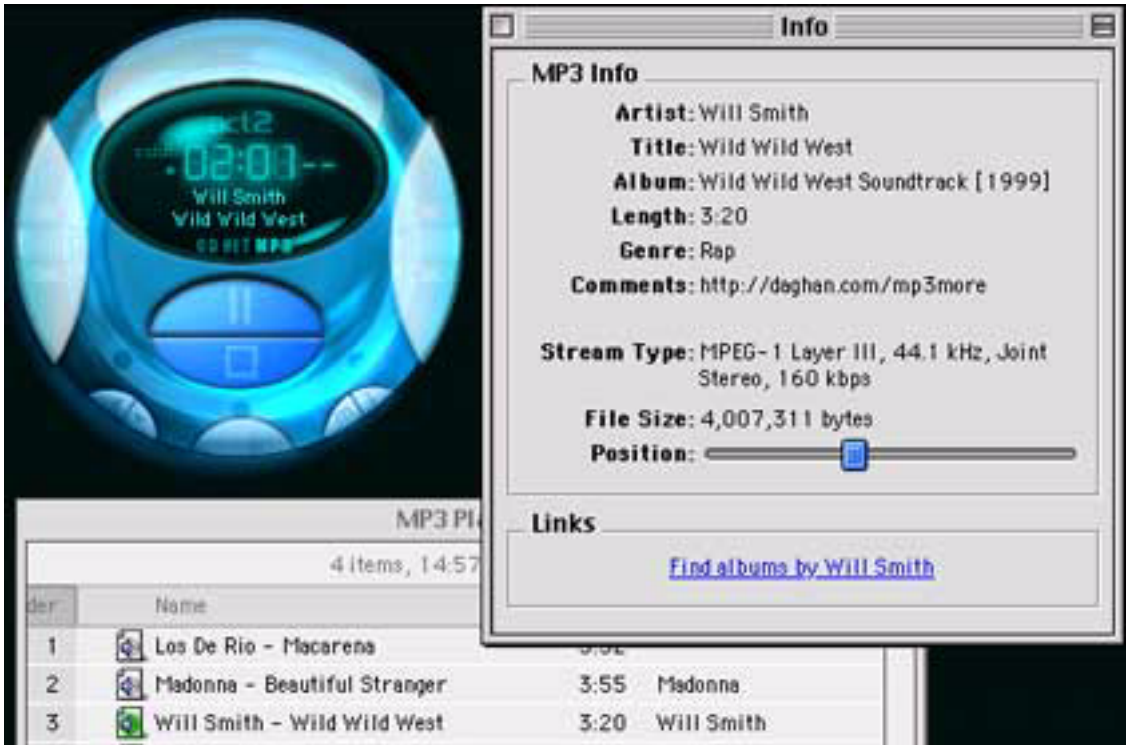


Most of the remaining features are somewhat similar. Audion includes a CD mode for playing audio CDs and a network mode to stream MP3s over the Internet. All versions of the MPEG audio formats are supported, but no AIFF. Audion comes with a bunch of custom skins and many more can be downloaded from Panic's [face gallery](#)⁴. Currently fewer (but still plenty of) skins are available for Audion, but they seem to be of higher quality. Audion does not support any sort of fancy graphical plug-ins. Instead, the playlist manager is much

3. <http://www.atpm.com/5.12/n2mp3.shtml>

4. <http://www.panic.com/ppack/audion/faces.shtml>

easier to use and more powerful, even supporting hierarchical folders within the playlist. Included as well is the obligatory 10-band graphical equalizer and integrated ID3 tag editor.



A nice new feature is the “alarm clock,” which tells Audion to start playing a selected music file or playlist at a certain time. Make sure your computer is started up and Audion is running for this to work. Another new highlight is the karaoke mode. How well the algorithm works depends on the particular song, though. The interface is highly customizable in terms of custom keyboard shortcuts for different functions.

Version 1.5 marks a major improvement in the program, and Audion is currently the player of choice for most of my colleagues and me. Some people complain about problems with its sound quality (especially with virtual memory on), and others praise it for its sound clarity. The only way for you to find out is to download the demo and compare with the competition.

Audion is a lean and mean alternative for people with who prefer an elegant yet powerful player. It has most of the features you need but it doesn't show them until you need them. Its playlists are modeled after a Finder window, making its use very simple and straight-forward. Unfortunately, its system requirements are a bit more stringent than MACAST's.

MACAST 1.0 (formerly known as MacAmp)

Company: @soft

Web: <http://www.macast.com>

Price: \$25

Requirements: Mac OS 7.5.5 with Appearance Manager, PowerPC processor, 4 MB of free RAM; at least 100 MHz and OS 8.1 recommended

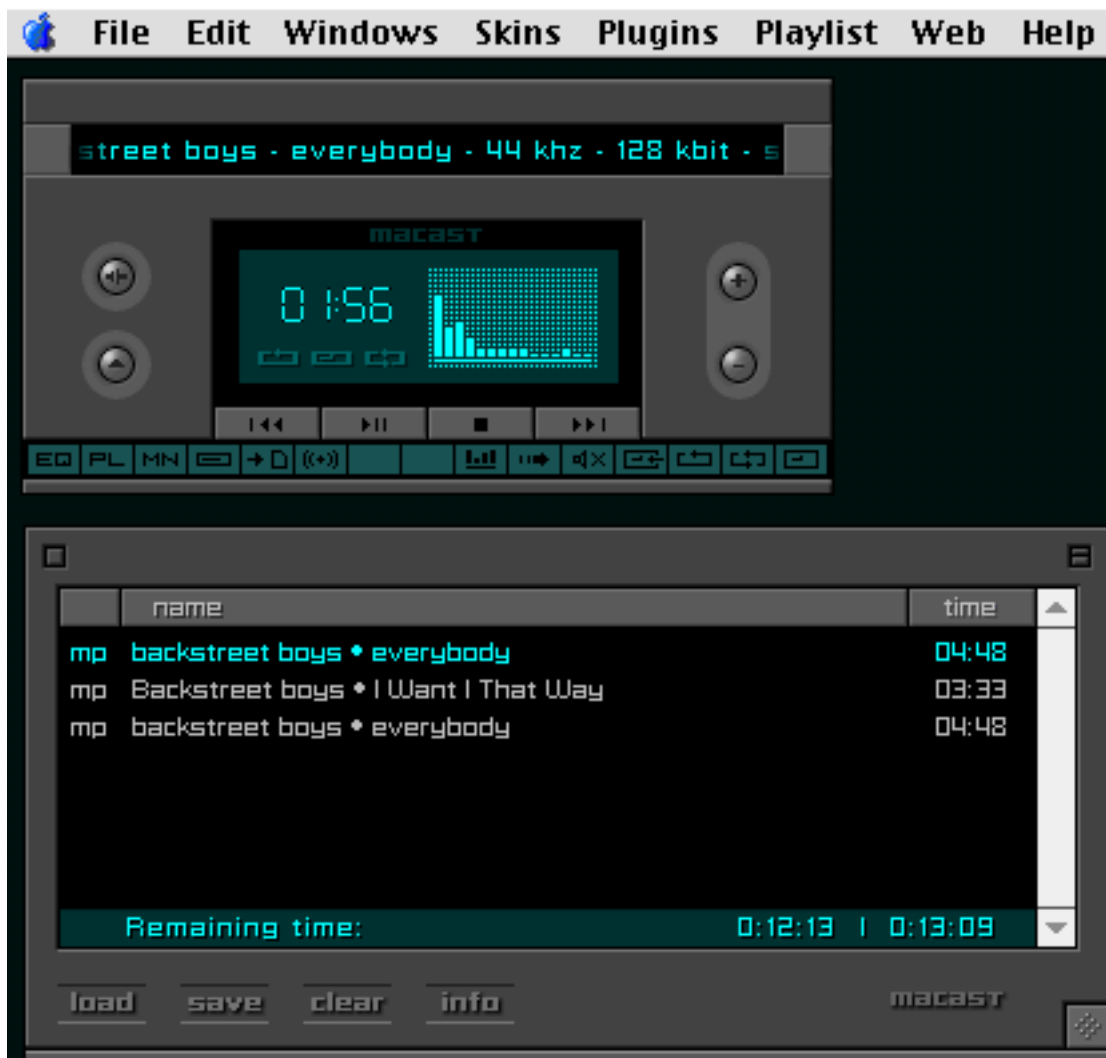


MACAST is the dinosaur among the Mac MP3 players. Its predecessor, MacAmp, has been around for much longer than most of its competitors. MACAST, despite its new name and redesign, couldn't fully shake the antiquated feel of the old version. Feature-wise, MACAST is a hybrid of SoundJam and Audion. Although it cannot encode files, it supports all file formats that SoundJam does as well as streams from MP3.com (after some tricks). It joins the other players with its 10-band graphical equalizer, skins, playlists, ID3 tag editor, and Internet streaming (though not as good as Audion's).



Like SoundJam, it supports plug-ins to 'enhance' your musical experience. MACAST is Velocity Engine-optimized to take advantage of the G4's power. A feature not found in SoundJam or Audion is the 'sleep timer,' which works similarly to the sleep mode on a radio or stereo. Activated and set to a certain time (e.g. 5 minutes) it will continue playing music

until the countdown is reached. Then you have the choice of MACAST quitting itself, putting the computer to sleep, or shutting it down automatically.



The analogy to a stereo system is a pretty close one because MACAST's interface seems to be modeled more after a home stereo than a Macintosh application. It isn't pretty by my standards, but some people might rejoice in the similarity to a well-known device. At least it is consistent in its interface, with the playlist adopting the same look as the control window. I have been bashing MACAST quite a bit for its looks and age, but I have to admit that to my ears, it has the best sound quality of all the players. However, the differences are minute, and in the end, I value Audion's user interface more. Another advantage of MACAST is the relatively modest system requirements.

MegaSeg 1.2

Company: Fidelity Media, Inc.

Web: <http://www.megaseg.com>

Price: \$199

Requirements: Mac OS 8.0 or higher, PowerPC with at least 150 MHz, 16-bit built-in sound



Fidelity Media calls its program MegaSeg 'DJ Music Automation Software'. Indeed, the idea is a good one. The program transforms your computer into a DJ music mixing station. Load your MP3s onto your PowerBook and take it with you. Hook it up to a set of nice loud speakers and get ready to throw the party of the millennium. Or use it on an iMac at your night job as DJ in a local disco.



MegaSeg is specially tailored to DJs of any sort. It allows you to organize your music by categories (songs can be in multiple categories at once) and search for songs in your collection. You can create special playlists that can be password protected to make sure no one messes up your perfect party mix. It contains a built-in tag editor to edit file information, as well as

a note pad to jot down quick pieces of information (such as song requests), and a log that keeps track of what you played when.

The user interface of the program is laid out especially for use in dark, clubby environments by novice computer users. However, I found this deviation from usual interface conventions very disturbing when I tried the software. I guess you can get used to it, though. The real strength of the program is in designing different fading effects between songs. You can either have the program automatically calculate those depending on your settings or assign specialized fadings by hand on a song-by-song basis. MegaSeg uses QuickTime 4.x to play the sound files. QuickTime 4.0 had some trouble with certain types of MP3s, so it is highly recommended that you update to QuickTime 4.1. It is also possible to import other sound types through QuickTime.

While the program is a very good idea, I found the interface extremely hard to use in the beginning. The included HTML manual, on the other hand, does an excellent job describing all the functions. The price tag of \$199 places the program out of reach for most amateur DJs, but I am not sure whether it is powerful and flexible enough for professional DJs. QuickTime playback also isn't quite as reliable as one would like, and sometimes has problems with sound quality, which is especially important in a professional setting. This is something that Apple has to work on, however.

mp3voodoo 1.1

Company: three-2-one interaktive Medien GmbH

Web: <http://www.three-2-one.com/mp3voodoo>

Price: \$25

Requirements: Mac OS 8.0 or higher, PowerPC



The purpose of mp3voodoo goes beyond simple playback. Its

German creators have recognized that many users have been overwhelmed by the amounts of MP3 files they collect from various sources and need better ways of organizing their collections. Mp3voodoo is the tool for just that. It allows you to group your files together in one or several 'collections,' each containing separate albums. In a sense, mp3voodoo is similar to [iView](http://www.atpm.com/5.07/iview.shtml)⁵, but with music in mind. Its individual functions are too numerous to list, but basically mp3voodoo provides you with endless ways to sort, orga-

5. <http://www.atpm.com/5.07/iview.shtml>

nize, edit, and search your collections and create playlists out of them. The playlists can then be handled by mp3voodoo itself or passed on to your favorite MP3 player to be played there.



Several functions, such as the playlist constructor, allow you to automatically generate playlists based on artist name, song title, label, and genre. The interface itself is rather pretty, very intuitive, and highly customizable. Unfortunately, the program has been very unstable for me, spontaneously quitting and displaying cryptic error messages. Once those problems are ironed out, I believe mp3voodoo will have a place in the hearts of serious MP3 power users.

SimpleMP3 1.0b3

Author: skyriser@mac.com

Web: <http://www.geocities.com/skyriser/simplemp3.html>

Price: beta version

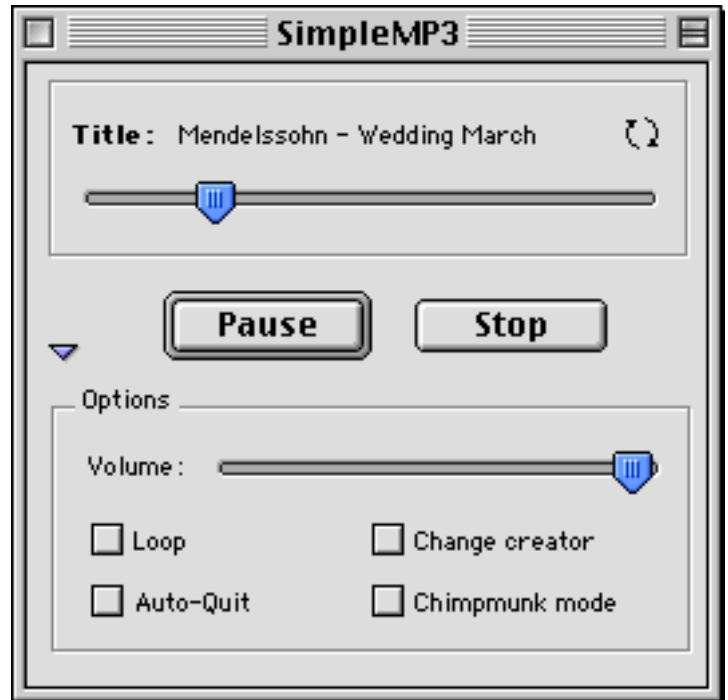
Requirements: QuickTime 4 and PowerPC



SimpleMP3 is still in beta, but I thought I would mention it anyway, because of its simplicity.

All it does is sit there and play your MP3s. It has a few options such as volume, pause/stop, loop and auto-quit. I was unable to set it to play a list of files. It uses the QuickTime engine to play a single file.

SimpleMP3's attractiveness lies in its simplicity and low cost. So far, the beta is free. The author might change his mind and charge a price later on when the program is finished. Of course, if you want free, you can use the QuickTime movie player as well. But some people dislike the way the QuickTime player behaves and looks, so SimpleMP3 is a cheap alternative for those new to the MP3 world. But if free is all you are after, you will probably be better off with GrayAMP below.



GrayAMP 1.2

Company: Digital Thoughts, Eckyssoft

Web: <http://www.digithought.net/software/grayamp>

Price: free

Requirements: System 7.5.x with Appearance Manager and PowerPC



GrayAMP is the next step up from SimpleMP3. It's still free, but it at least offers a playlist and features like shuffle and drag & drop. It even supports contextual menus and a randomized playlist. Its main advantages are its simple yet functional interface and its speed. It offers two different MP3 engines to play the music: QuickTime (for all QuickTime supported sound files) and the MPEGLib. It may not offer the bells and whistles of SoundJam and Audion, but it does what it is supposed to do, does it well and does not bog down your processor. And hey, it's free! GrayAMP fulfills the basic needs of many MP3 users, except for a few power users.



MP3 Rage 1.7.1

Company: Chaotic Software

Web: <http://www.chaoticsoftware.com>

Price: \$24.95

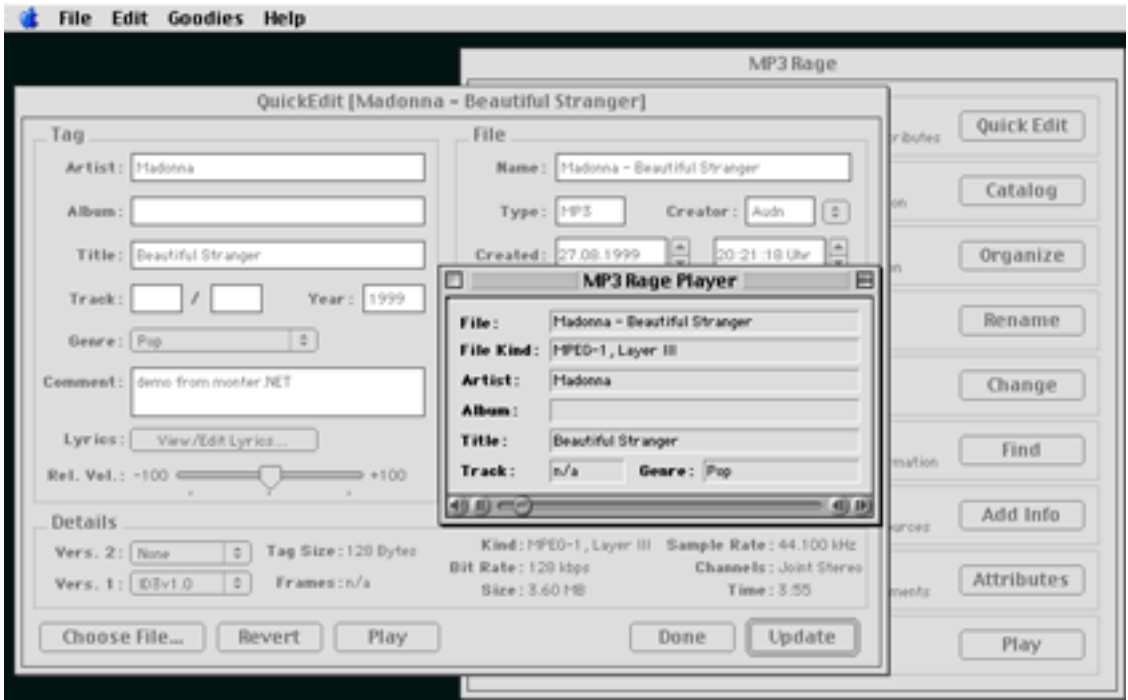
Requirements: Mac OS 8.0 or higher, PowerPC



MP3 Rage is the 'Swiss army knife' of MP3 programs. The list of functions is impressive: it lets you add, edit or remove ID3 tags; generate a text file catalog from MP3 file information; move, copy, rename or alias MP3 files by their tags; find MP3 files on your hard disk by their ID3 tags; add tags to a file's

resource fork; change the MP3 file and creator types; and other stuff that only real power users would ever want. Oh, it plays MP3s as well.

When you first start the program, you are confronted with a Norton Utilities-style window, just without the nice graphics. At first you wonder, “Heh, what do I really want here?” But once you get used to the program, you can appreciate and harness its power. Like Chaotic Software’s other product, Web Devil, most people won’t need this program, but those who do will be eternally grateful for it. If you’re a beginner, you might want to stay away from it, but once you are more familiar with MP3s, come back and give it a try. You won’t regret it.



An example of MP3 Rage’s power is the rename function. Operating on an entire folder, it can rename all files based on a ‘rename expression’ such as “%r. %t,” which means track number, followed by a period and a space and then the song title. The available expressions are song title, artist, album, and track number. You can choose to automatically append “.mp3” to the file name or enter any string you desire. I have chosen to omit the “.mp3” from all my sound files simply because it takes away four valuable characters from the Mac OS’s rather limited file name length. The placeholder expressions are filled in from the files’ ID3 tags, so be careful to have those entered correctly when you encode your files. Should you have a file (say from the Internet) with incorrect tags, MP3 Rage’s QuickEdit lets you change

all imaginable information from the tags to the Finder's file comments. Many of MP3 Rage's and other players functions are based on correct tag information, so I cannot stress their importance enough. MP3 Rage provides a sophisticated way to maintain your MP3 collection, gather information on the files and find specific songs.

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BY GRANT OSBORNE, GOSBORNE@ATPM.COM

PixelToy 2

Author: Leon McNeal

Web: <http://www.lairware.com/%7Ebeastie/pixeltoy>

Price: \$15 (shareware)

Requirements: Power Mac, QuickTime, Appearance Manager, Mac OS 8 or later recommended

Okay folks, quiz time...

Q1. Do you enjoy lava lamps?

Q2. Do you like fireworks?

Q3. What about those dancing flowers? (You know, the ones that groove to your tunes, via a sound-activated device?)

If you answered “No” to the questions above, then you might as well skip this review and read the next page. If, however, you answered an emphatic “Yes!” to any of those questions, then read on—this may be the thing for you.

PixelToy 2 is described by its author as “a very interactive lava lamp,” which is probably the best way to characterize it. Upon loading, you’re faced with the main window (which you can resize to take up the entire screen if you wish). Inside this window you can create all sorts of crazy, mind-bending, swirly patterns. Each pattern is called a set, and PixelToy 2 comes with several example sets to get you going.

The best way to get started with PixelToy 2 is to load an example set and play around with the settings. There are three elements you can change: Actions, Filters, and Colors.

The Actions menu tells PixelToy 2 what to draw in the window. You can choose one action or a combination of several. Each of the eight actions has several settings that are editable. All the actions continue until the window fills up.

1. **Bouncing Lines**

This draws several continuous lines that bounce off the sides of the window. Gradually, their momentum dissipates, and they are replaced by new, faster lines.

2. **Wander Balls**

These just wander around aimlessly and randomly.

3. **Insect Swarm**

This consists of a user definable amount of “bees” that will either follow a “queen bee” or your mouse. If a bee reaches the queen bee, it is replaced with a new bee at a random position.

4. **Raindrops**

This simulates an image of raindrops falling onto the screen, viewed from above. The “raindrops” are random sizes, so some of them are much bigger than normal rain—but hey, you get the idea!

5. **Soundwave**

This uses a sound input to draw a waveform on the screen, which oscillates up and down depending on the size. You can choose your input source (e.g. CD, microphone) via the Monitors & Sound control panel. Many of the other actions can be affected by sound input too, but we’ll discuss that later.

6. **Doodle**

With this, you can doodle in the window with the mouse. It’s just like Photoshop. (Well, nearly.)

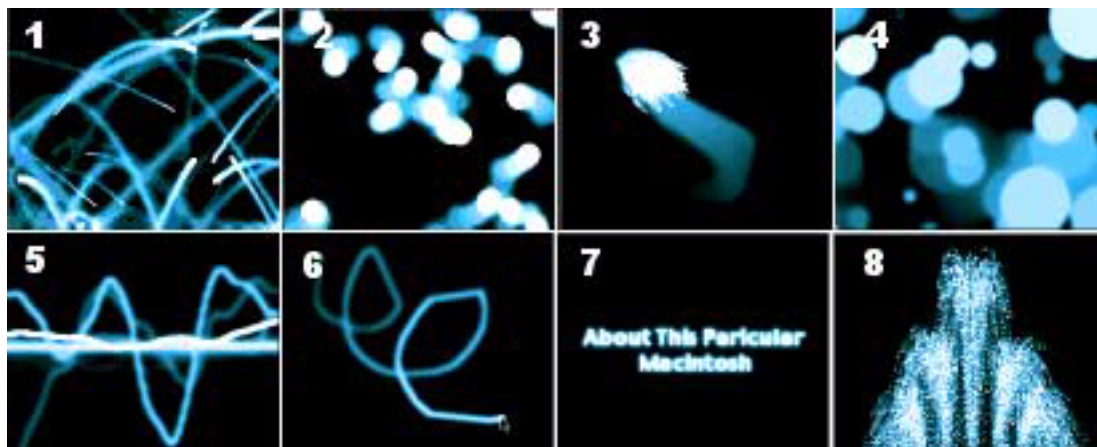
7. **Text**

With the Text option, you can insert text of any font and size into the main window. This text can be stationary, or it can bounce around your screen, pulsating to sound input.

8. **Particles**

This is a very complex action. You can use it to make fountains, snowstorms, and many other effects that involve the control of multiple tiny elements.

As an example, the picture below should help illustrate the different actions:



All the actions can be made to react to sound, so you can have the images pumping to your latest CD, or to your own voice (via the built-in microphone). Maybe it's just me, but it's strange how amusing it can be watching the screen move and pulsate in response to your voice. I spent a good twenty minutes talking to my Mac, much to the amusement of my family.

The Filters menu is where the fun really starts. The filters affect the pixels drawn on the screen, and like the actions, they can be used individually or in conjunction with others. I won't list them all (as there are too many to list, and it would no doubt bore you incredibly), but I will describe some of the common themes that occur.

1. **Blur Filters (Blur, Blur More, Fast Blur, Blur/Sink)**

These blur the pixels after they're drawn on the screen. These are the most commonly used of the themes in the sets provided, so you can see the different uses the different blurs can be put to.

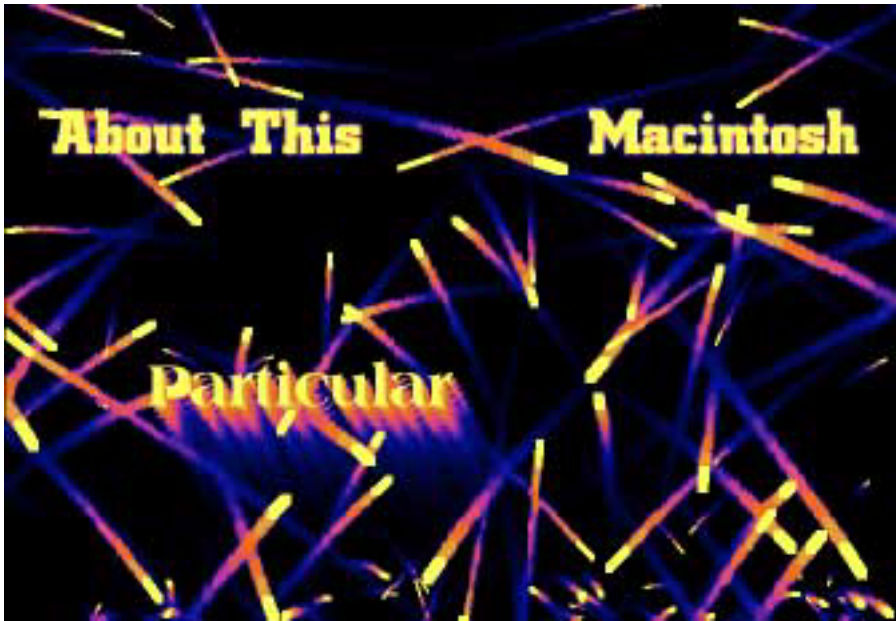
2. **Zooms (Zoom In Fast, Zoom In Smooth, Zoom Out)**

These provide a feeling of movement to the set. Consequently, they can make you feel a bit queasy if you look at them for too long. Not advised if you get seasick.

3. **Winds**

These give the effect of a wind blowing across the screen.

If you get tired of the filters provided, you can always create your own with the Edit Custom Filter menu. However, custom filters aren't as fast as the filters provided with the program, as the provided filters are optimized.

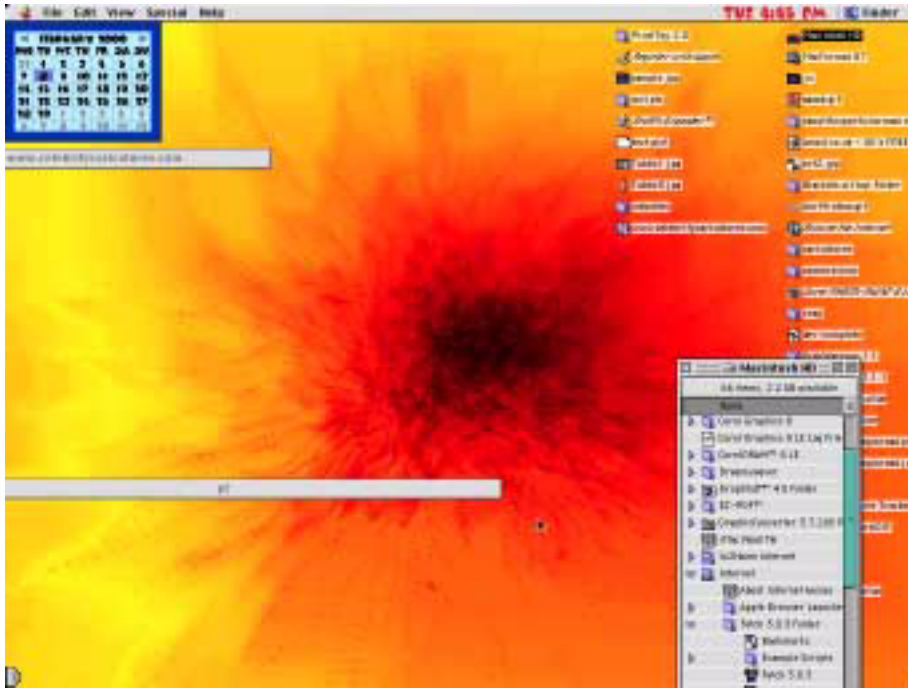


This set uses the Text and Bouncing Lines actions and the Fast Blur and Fade filters

The third option you can change is the active color palette. PixelToy 2 provides several built-in palettes (e.g., Water, Lava, Sunset), but also allows you to create your own. The Color Palette editor is very easy to use, so you'll soon be saving your own custom palettes to use with your own sets.

Once you've created your set, you have the option to export it as a QuickTime movie or to make a slide show of different sets. You could spend ages playing around with the different settings on PixelToy 2, but due to the nature of the program, it's unlikely to have much longevity for most people. It has no real productive use (hence the "toy" part of the name).

Having said that, you can pause the action at any time and save the image as a picture file, so you could certainly create some interesting desktop themes.



An interesting desktop theme

One thing I'd like to see in future versions is a screensaver option, where PixelToy could hide in the background, then pop up after a preset time. I'd also like to see a few improvements to the interface—at times, it seems a little unnatural and quirky. (I believe the author is changing the interface in version 2.1.)

Currently, I'm using PixelToy 2 to keep me amused while I download big files. It's an addictive little beast, so my PixelToy 2 sessions usually last longer than the downloads.

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BY MICHAEL TSAI, MTSAI@ATPM.COM

Player 1.5

Company: PreFab Software, Inc.

Email: sales@prefab.com

Web: <http://www.prefab.com>

Price: \$139 (\$79 Academic)

Runtime Price: \$25 each (\$20 each for 10 or more)

For a long time, AppleScript was the Macintosh's best-kept secret. The only problem was that no one wanted to keep it a secret—scripters and developers all benefit when more people start scripting. Thankfully, that's just what has been happening over the last few years. Scripting with AppleScript is much easier than programming in a language like C or Java because AppleScript manages most of the nitty-gritty details for you. Scriptwriters can concentrate on the task at hand and perform high-level operations with ease. For this reason, AppleScript has become the automation tool of choice for Macintosh users who work with scriptable applications. But two obstacles stand in the way of more widespread use of AppleScript: (1) too many applications provide minimal support for scripting, or none at all, and (2) AppleScript's English-like syntax makes it easy for novices to understand what a script does, but it can be confusing to master. Application dictionaries are great references for experienced AppleScript users, but novices have difficulty getting from dictionary definitions to working scripts.

Player, from PreFab Software, addresses both these problems. Normally, when you write an AppleScript, you look at an application's dictionary to find the commands and objects that you'll use. Then you try to figure out the syntax for combining them into something useful. If the application developer hasn't created commands to control the relevant part of the application, then that part is off limits to your script. Indeed, I'm often faced with "scriptable" applications that aren't sufficiently scriptable to do what I want.

Enter Player, which essentially acts like a player piano. The piano is your Mac, and the scripts you write are the rolls of paper tape. Player mimics keystrokes and mouse movements, and applications (scriptable or not) respond to them as if they came from you. Just tell Player what you would do to accomplish a task, and it will perform the steps for you. You can instruct Player to push buttons, choose items from menus, set and clear check boxes, and just about anything else you can think of. Your script can even inspect the properties of user interface elements (e.g., is a checkbox checked or a popup menu item selected?) and react accordingly.

Normal AppleScript dictionaries abstract operations (such as opening a file, resizing a graphic, or finding a database entry) from the steps that the user would take to accomplish the same task. With Player, the correspondence is direct, so the translation from “what I would do” to “what I should tell the script to do” is simple. If you can write the steps down in plain English, little extra work is required to translate them into Player’s command set. And once you learn Player’s commands, you can use them to control virtually **any** Mac application; there’s no need to learn new terminology for each one.

By now you might be thinking that Player is another utility along the lines of [One Click](#)¹, [QuicKeys](#)², or [KeyQuencer](#)³. These macro utilities let you control applications more or less by telling them what you would do. But they have a different focus from Player, and for the automation freak both types of utilities are essential. Unlike Player, macro utilities provide palettes or keyboard shortcuts for executing macros. They generally have ready-made commands for controlling your Mac—changing the monitor resolution, switching between applications, and the like. By design, Player provides none of these; it focuses instead on letting you control your Mac from within AppleScripts. Some macro programs support a “do script” functionality that lets you embed commands in their languages inside your AppleScripts, but this is messy and error prone. Player’s solution is elegant: its commands **are** AppleScript commands.

What Exactly is Player?

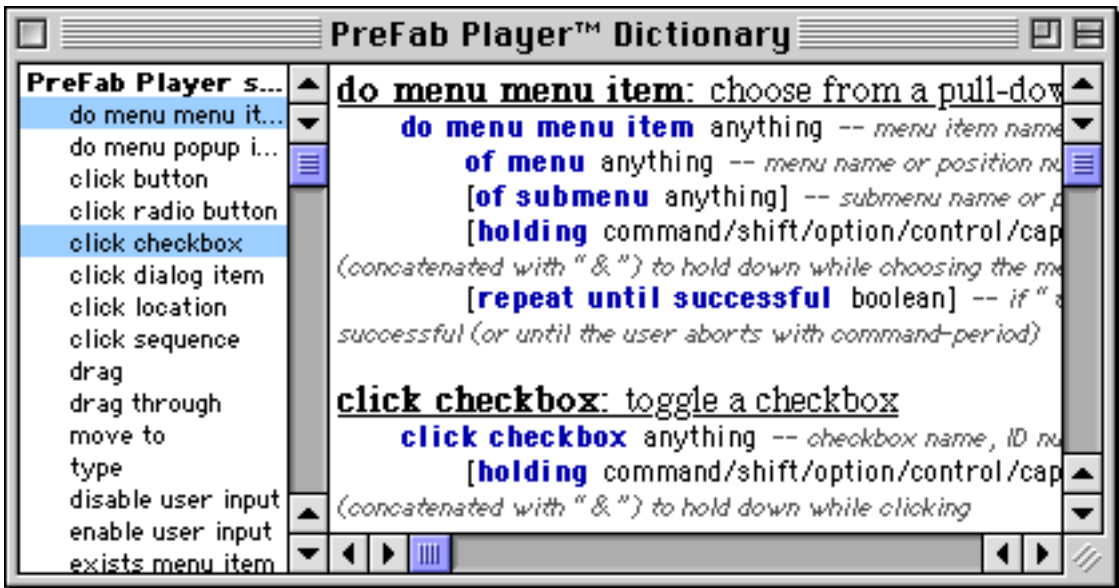
Now that you know what Player does, it’s time to see what it is and how to use it. Player is a faceless background application that launches whenever your Mac starts up. (It’s therefore less likely to cause compatibility problems than macro programs implemented as extensions

1. <http://www.atpm.com/4.09/page13.shtml>

2. <http://www.atpm.com/3.06/page16.shtml>

3. <http://www.atpm.com/3.07/page15.shtml>

or control panels.) Like all scriptable applications, Player has a dictionary that lists the commands and objects that it supports.

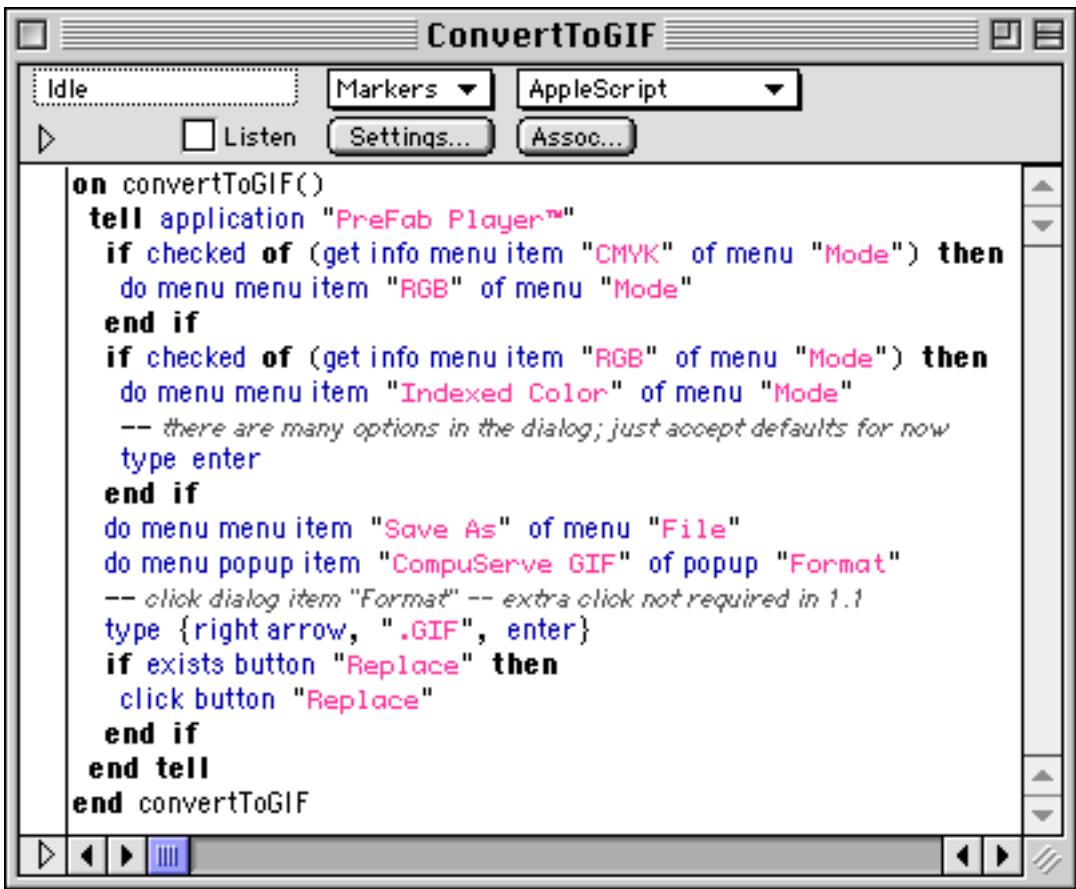


What's different about Player is that its verbs are for “playing” the user interface. Below is a sample script that uses Photoshop to convert the frontmost window to a GIF.

Notice that even though we're controlling Photoshop, the **tell** statement is for PreFab Player. Player is “playing” Photoshop for us. The first line inside the **tell** checks to see if CMYK is checked in the Mode menu, demonstrating Player's ability to inspect the state of the interface as well as change it. As you can see, writing commands in Player is intuitive. Like most of AppleScript, they read almost like plain English.

There are some cases, though, when it's not so easy. Sometimes, Player can't figure out the name of an interface element, so you have to refer to it by number or (failing that) pixel position in its window. To find out what these are, you can use Player's novel balloon help feature. Switch on Player's balloon help, and whenever you mouse over a button, popup menu, etc., a balloon pops up to tell you its type, name, number, and coordinates. If you require information about lots of items at once, you can use the **outline dialog** command to dump information about all the current window's items into the Log window of your script editor.





Using Player

Player is a bit more difficult to learn than a macro program, but far more flexible. (And once you know what you're doing, typing is quicker than entering statements through dialog boxes!) Because you talk to Player through **tell** statements, it's easy to use Player in conjunction with other scriptable applications or OSAXen simply by embedding messages to it in your scripts. Rather than a new language (à la a macro program), I think of Player as an extension to AppleScript. You can control the flow of your Player scripts using AppleScript's full range of looping constructs and handlers, and you can view its dictionary and write scripts for it using the AppleScript tools of your choice. It comes with a glue table for User-Land Frontier, which provides Frontier-style verbs for each command. In short, it plays well with the rest of your scripting arsenal.

Player's commands are easy to learn and use. Unlike the dictionaries of some applications, Player's dictionary genuinely feels like AppleScript. Also, PreFab has done some really elegant things with the commands themselves. For instance, the `type` command has an optional holding `[holding <command | shift | option | control | caps lock>]` argument. So one way to paste the clipboard is to say `type "V" holding command`.

You can also supply a list of keys to hold, so to print one copy of a document (in an application that supports such a command) you could write `type "P" holding {command, shift}` (where `{command, shift}` is a list literal). Here's where the elegance comes in: since AppleScript's concatenation operator is `&`, the above command can also be written as `type "P" holding command & shift`. Scripting doesn't get much cleaner than that, folks.

Another cool feature is the `click sequence` command, which lets you specify a list of coordinates where the mouse should be clicked. You can do similar things with macro programs, but Player makes it elegant, both because it's easy to enter the coordinates from the keyboard, and because you can easily calculate the coordinates at runtime, since they're really just AppleScript lists.

Criticisms

Player's internal workings, which are generally what make it such a pleasure to use, lead to a drawback. It's slower than the macro programs, by far. The flip side is that I almost never have to insert delays to make my scripts work properly, as I always had to do with QuicKeys. Another problem is that in some applications (like BBEdit), the balloon help feature doesn't work properly; the balloons flicker so fast that I can't read them. Finally, Player doesn't have a record mode, so you have to create all your scripts by hand.

Also, buying Player is more difficult than it should be. It's apparently only available direct from PreFab Software, and although they support several methods of payment, a secure online order form isn't one of them. I would mention that the price is steep for a utility in Player's class, except that I don't know of any other utilities that can do what Player does. So I'll simply say that it's expensive compared to macro programs, but worth every penny if you're a serious AppleScripter (or UserTalker).

Conclusion

Player is a great little utility. It uses about 300K of RAM and less than 200K of disk space. Unlike some of the macro utilities, it hasn't made my Mac unstable. It comes with a free copy of the Player Runtime, which lets you run scripts (but not edit them) on a second machine. Additional copies of the Runtime are available, and are much cheaper than the developer version. A [free trial of Player](#)⁴ is available from PreFab Software's Web site. Although I've used Player to automate many little tasks, such as entering meta information in the PDF edition of ATPM, large-scale repetitive tasks are where it really shines. When I had to automate the processing of several thousand Excel graphs, Player let me control parts of Excel that its AppleScript dictionary doesn't expose. With Player controlling two G3 Macs, the project took about a week of solid processing time. But Player was doing the grungy work, not me. I'm sure other Player users have similar success stories.

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4. <http://www.prefab.com/playertrialversion.html>



BY NICK KRATZ, PPC@SIBER-SONIC.COM

TechTool Pro 2.5.3

Company: MicroMat Computer Systems, Inc.

Web: <http://www.micromat.com>

Street Price: \$100

Oh those repair utilities... gotta love 'em, at least until someone gets us that stable, protected-memory OS we keep hearing so much about, with the look, feel, and friendliness of the Mac OS we've come to love (and loathe, when things get unstable and all productive work stops).

Once Upon a Time

Roughly a decade ago, Mac users generally chose from three popular repair utilities when the going got rough and Disk First Aid was insufficient to correct the problem(s) at hand: Public Utilities, Norton Utilities for Macintosh (NUM), and MacTools Pro. Over the years, Symantec, publisher of Norton Utilities, bought Public Utilities and MacTools Pro. At that point, practically speaking, they had a monopoly on high-power Mac repair and diagnostic utilities. Did they continue to develop and support Public Utilities and MacTools Pro, as promised? No! They took what they wanted from each, and effectively killed both off. Since they had eaten the competition (and NUM was eating HFS+ users' data) the market was ripe for a new entrant.

MicroMat to the Rescue(?)

Seeing a need (and an opportunity), MicroMat, a small company in Windsor, California, who (I believe) may have been or may still be involved with Mac repair themselves, rolled up a number of its older diagnostic products, added a bunch of additional features, and created TechTool Pro. More recently, as dissatisfaction with Norton, Symantec, and Norton's non-

support of HFS+ began to reach fever pitch, MicroMat decided the time was right to take on Snortin' Norton. Hence, TechTool Pro 2.

TechTool Pro follows a long lineage of diagnostic and repair products from MicroMat. Many readers are probably already familiar with their excellent freeware utility, TechTool, a nearly indispensable aid for basic Mac maintenance. If you don't already have it, definitely get the latest version of TechTool (version 1.1.9)—you are not likely to regret it! You can read more and get it at [this site](#)¹.

Around January 1998, I decided to take up MicroMat's offer to buy the waning TechTool Pro version 1, and get TT Pro 2 for no extra cost when it shipped. The remainder of this review highlights what I have learned as a TechTool Pro user, up to the currently-shipping version 2.5.3.

“Yeah, it'll work on that” (System Requirements)

The Program Itself

Tired of computer products that do not meet their published claims? I sure am... really tired! Here's what MicroMat claims TechTool Pro 2.5.3 supports (paper manual MM00777, page 4):

- Macintosh Plus or above.
- System software version 7.0 or above.
- Minimum 4 MB of RAM.
- Hard disk drive.

Since it is not possible to install more than 4 MB of RAM on an unmodified 68000-based machine, and since the smallest possible System 7 consumes close to 1 MB by itself, there is no way for TTP 2 to run on a 68000 (unless it can do so in a 2.5 to 3 MB memory slot). Any responsible company should know this, and MicroMat needs to change the documented system requirements to reflect reality. In all tests performed, the actual RAM required by TTP 2.5.3 itself was at least 5 MB, often closer to 6. To make a long story short, TechTool Pro 2 does not run on the Mac Plus (or other 68000-based Macs), even though the manual clearly says it will.

1. http://www.micromat.com/techTool/index_techTool.html

To date, nowhere in any read-me file anywhere (CD-ROM, updaters, Web site) have I found any updated system requirements. Truth please, MicroMat! Honest declarations of minimum system requirements plus informative messages when one runs software on unsupported configurations are expected of all software suppliers, and MicroMat needs work here. Users of vintage Macs and OSes (and especially 68000 and/or System 7.0 users) should consult [my full review](#)² for repair utility suggestions and serious bugs/workarounds affecting both TechTool Pro and the freeware TechTool.

The TechTool Pro 2 bootable CD-ROM

Older TTP 2 CD-ROMs could only start Macs that supported OS 8.1. In the latest release, MicroMat has given the CD-ROM the “ability to selectively boot the proper system folder according to Macintosh model. The TechTool Pro 2 CD-ROM can now boot most 68020, 68030, 68040 and all PowerPC machines.”

“Most” is an important qualification, one I hope MicroMat will elaborate on in future versions. Thanks to AT^{PM} reviews editor Paul Fatula, we know that the TTP 2.5.3 CD-ROM can successfully start up and run on his particular LC III. Paul reports some quirks involving holding down keys at startup and needing to keep extensions off (on the CD-ROM!) to have enough of the 8 MB of RAM left for TTP to run. Otherwise, smooth sailing.

On his particular Centris 650 with 12 MB of RAM, Paul reports needing to start from the TTP CD-ROM with extensions off in order to have enough RAM to run TechTool Pro 2 (the CD-ROM chose OS 8.1 as the startup system). Both he and I wonder what would happen to a Centris 650 with the original 8 MB of RAM. We suspect that there would be no way to get the CD-ROM to successfully start an 8 MB 650, whereas if the CD-ROM had chosen the smaller OS 7.6, there might well be sufficient RAM for it to work.

In summary, it seems that “most 68020, 68030, 68040” means those machines which have sufficient RAM. Paul thinks (and I agree) that at least 12 MB on an '040 and 8 MB on an '030 is required, with extensions off. Add about another 4 MB to start from the TTP 2 CD-ROM with extensions on. It would be kind of MicroMat to document these limitations for prospective and current users. It would be even better if they could continue to tweak this amazing CD-ROM to successfully start 68K Macs which still have their original shipping amounts of RAM.

2. <http://siber-sonic.com/mac/TTPprorev.html>

TechTool Pro Updater Requirements

One of the advantages of dealing with a user-friendly company such as MicroMat is the timely availability of free updates to registered users (a lesson apparently totally lost on Symantec). Thankfully, the 2.5.3 updater is a one-step update for any version of TechTool Pro 2 (unlike the tedious multistep upgrade process for older versions). Thank you, MicroMat! Unthankfully, the updater (in Stuffit SEA 5.0 format) requires more RAM and a newer OS than TechTool Pro 2 itself, meaning that your particular Macintosh may be unable to unstuff the updater even though the updater itself and the updated TTP would otherwise run fine on your Mac! Not only MicroMat, but all software suppliers, need to ensure that their installers/updaters will be usable on the full range of supported Macs.

Using TechTool Pro 2

Using TechTool Pro 2 is mostly pleasurable. The interfaces are pleasing, intuitive, and informative, in the finest Mac tradition. Note the plural on “interfaces”: TechTool Pro 2 provides three different user interfaces, suited to different levels of troubleshooting expertise and test rigor.

The Simple interface will be familiar to users of other Mac troubleshooting utilities, and is a quick, easy way for both the novice and the busy expert to test for common crippling Mac dilemmas. It is very similar to the interface of NUM with the stupid and pointless animated lab coat dude.

The Standard interface is an expanded version of the Simple interface, allowing the deselection of individual tests for users who may not wish to perform all tests on all mounted drive volumes. Since my 8600/300 usually runs with no fewer than eight mounted partitions, not all of which need regular testing, I use the Standard interface often and appreciate its presence.

Anyone can use the Simple and Standard interfaces to execute meaningful and helpful diagnostic tests. The same is true of the Expert interface, which is still easy to use for both non-technical and techie folks, and provides numerous hardware and software tests, many of which are inaccessible in the Simple and Standard interfaces. Still, some folks might be frightened off by the myriad of choices in the Expert interface, and not even all techies wish to mess around with options when the basics will do, so it is good that MicroMat gives us these three choices for interacting with TechTool Pro 2. (The Expert interface was the only interface in the original TechTool Pro).



The Standard Interface

If your particular Macintosh is an older black and white model, you will come to loathe all three TTP interfaces, which will provide big blotches of black and other anomalies that will effectively prevent you from fully using the product. We can only hope that MicroMat either fixes these bugs or locks B&W users out (and tells us!).

The TechTool Pro 2 program itself is a bit chunky compared to older utilities in both hard drive footprint and RAM required for running, though nothing unusual compared to other current major software packages. Launching takes awhile, as TTP has quite a bit of work to do checking your particular Macintosh in preparation for testing.

The test results provided by TechTool Pro 2 are fairly easy to read, though perhaps not as detailed as true techies would wish. When a test fails, TTP attempts to provide clear, informative advice as to how the user should deal with the failure. I found the advice to be correct and generally useful, though one significant bug I found was that certain Advice panels fail to display at all in the Expert interface, including once in the Drives test panel when I really could have used TTP's advice!

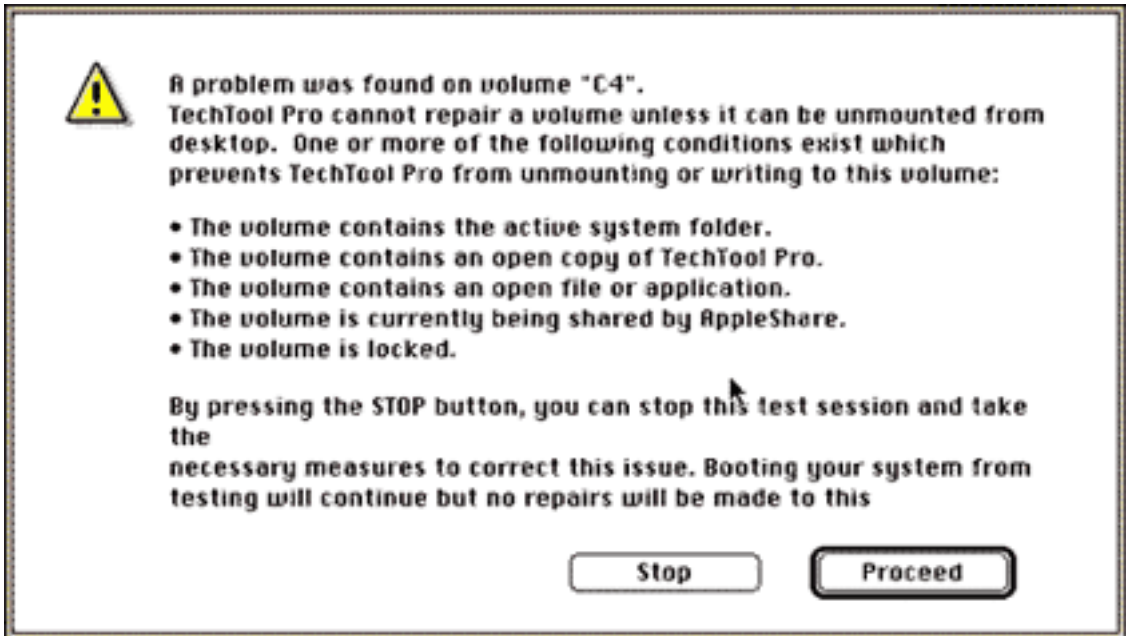
How Is the Documentation

This is a review in and of itself. For starters, there is no Balloon Help or Apple Guide with TechTool Pro 2. Yes, I read manuals... usually cover-to-cover, as a matter of fact. Still, there are times—many times—where it is nice to get a quick explanation of something on the interface. For example, in the Standard interface, with the Drive Select... window open, there is a “P” next to each drive. What does it mean? With decent balloon help, I would know. (There’s no mention of the “P” in the manual.) There is no excuse for a lack of Balloon Help (other than keeping costs low and/or a rush to market). There’s no Apple Guide either, though I’d prefer balloons.

While testing the IICI serial ports, I discovered that the Serial Ports test will gray out the Printer Port option if AppleTalk is active, with no indication of the problem in the program. The paper manual has no mention of AppleTalk under the Serial Ports section. Items like this need to be documented and findable!

Speaking of the paper manual, Paul Fatula found that his TTP 2.5.3 manual is the very same version number that I received over two years ago when I purchased TechTool Pro 2.0.2. This is downright rude, especially considering that the original TechTool Pro 2 had only two of its current three user interfaces!

Not only are there important items missing from the manual, the software itself contains some wacky typos. Here's an on-screen example (focus on the bottom):



The manual is not all bad news: there is a graphic illustration of what exactly TechTool Pro 2's installer installed, and where it put it—much easier to read than the common text listings. Any software company that does not supply something easy to interpret like this should be shot (at least in an arcade game). Further, what is present in the manual is generally understandable and accurate.

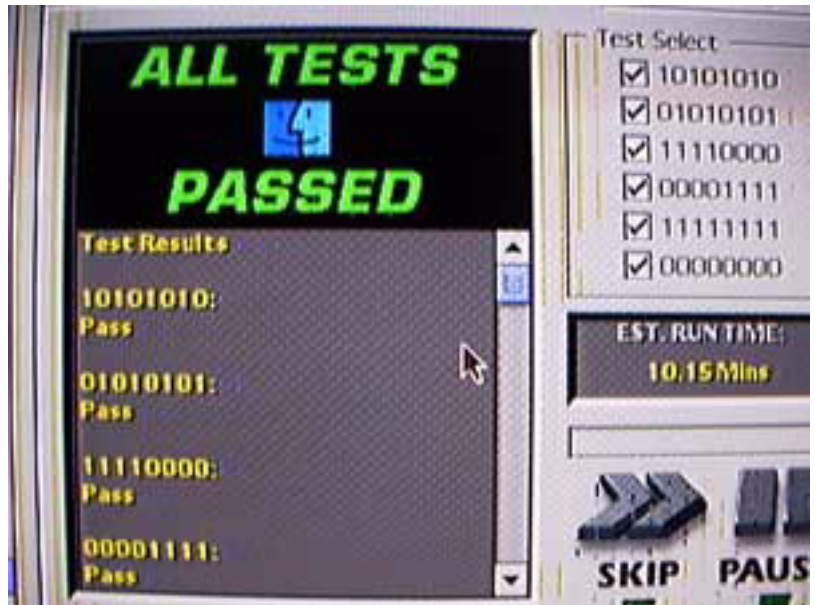
Does TechTool Pro 2 Work

TechTool Pro 2 attempts to be a comprehensive, one-stop diagnostic system for Mac hardware and software problems, something no one else (to my knowledge) has ever attempted. Does it succeed at this lofty goal? Yes and no...

The most stellar example of success I have had with TechTool Pro 2 was while testing a known-flaky hard drive. Unbeknownst to me, the drive's mechanical failure had worsened as it sat unused. Running all of the Drives tests in the Expert interface reliably caused the drive to cease functioning entirely (without extraordinary recovery means). This is a feature...it demonstrates that TechTool Pro 2's drive test will stress a drive beyond its everyday limits, and will ferret out a failing drive before it is totally gone. In this instance, I knew the

drive was bad, but no formatter or other testing utility found anything wrong with the drive! This does imply that one may wish to back up a marginal, yet functioning, drive before running this particular test suite. **Note:** I have run these same tests on many, many hard drives, and properly functioning drives are not damaged in any way by these tests.

One major advantage MicroMat claims for TechTool Pro over any other competing utility is its ability to test your Mac's hardware as well as its software. Well, awhile ago I bought two 1 MB VRAM DIMMs for my 8600/300. Here's what TTP2 said, and what I saw (see right).



Note the red line in the cursor arrow, the bluish “ghosts” in the test results window, and the golden vertical lines in the Test Select box and around the control buttons. The VRAM is obviously bad, and TechTool Pro 2 tests indicate no problems. In fairness, as far as I know it would be very difficult, if not impossible, to detect this sort of failure in software without having some kind of dongle connected between the Mac and the monitor. Nevertheless, this is exactly the sort of hardware failure that TechTool Pro 2 claims to be able to find.

Here is another example of a hardware problem it totally missed: a IIci which starts up spontaneously and/or refuses to start up. Previous human-driven troubleshooting eliminated the power switch, the power supply (substituted), and the keyboard/mouse (still happens when they're unplugged). It's a motherboard problem, and TechTool Pro 2.5.3 found nothing wrong with the IIci hardware. Again, MicroMat tells us that this is precisely the arena where TechTool Pro 2 is supposed to excel.

Although I like MicroMat as a company and TechTool Pro 2 as a product, TTP has yet to find a hardware problem of which I was unaware through ordinary usage of my particular Macs (all 8 of them). Because of this, I am forced to join the doubting minions who wonder

whether the TTP hardware tests really test anything useful. Given MicroMat's extensive Mac hardware history, the tests probably do work, and we doubters have merely been "lucky". Still, I hope MicroMat can redouble their efforts and improve the hardware tests to find more of the problems we out here in the "real" world are encountering.

There are also bugs relating to certain hardware configurations which can stop TTP dead in its tracks. Certain models with near-original small amounts of installed RAM cause the RAM test panel in the Expert interface to halt with an Insufficient Memory error, despite plenty of RAM assigned to TTP still available.

Please be warned that TechTool Pro 2 is extremely optimistic when it comes to calculating test times (displayed only in the Expert interface), especially for the RAM and VRAM tests. The underestimates ranged from about 1200% (actual test 12 times as long as estimated) to 2500% or more. For example, in running all VRAM tests on a IIci, TTP 2 estimated 1.38 minutes. I stopped the test, only 4% completed, after 50 minutes. Trust me, this was not uncommon. Luckily for the casual user, the (unlisted) testing time of tests in the Standard and Simple interfaces is quite reasonable, at least on faster Macs.

What About HFS+

Since I have not had any major disk meltdowns recently (and since I still use HFS almost exclusively), I had to fabricate some failures using some specialized tools plus expertise from my time testing drive-related stuff at Apple.

I set up a "challenge" between Disk First Aid 8.2 (free from Apple) and TechTool Pro 2 to find, then fix, the same error. I gave TechTool Pro 2 the first crack at a fix, and was pleased to see it make multiple repair passes automatically. I had badly trashed the test disk, and even though TTP 2 could not fix everything, it did fix many of the problems. Disk First Aid, which reported some problems, was unable to fix any.

Next, I modified the test disk (boot blocks) so that it would no longer act as the startup disk (flashing ? resulted), first subtly then extremely. Both TechTool Pro 2 and Disk First Aid 8.2 proclaimed the disk had no problems. This is an issue, since errors in the "boot blocks" are not uncommon, and are causes of serious problems, such as the inability to start up.

On a third fabricated test, DFA found a problem it described as "HFS wrapper damage", and told me what to do about it. TechTool Pro 2 found nothing wrong. -1 for TTP 2.

To me, the results of my admittedly limited and fabricated tests indicate that while Tech Tool Pro 2 is indeed a usable HFS+ repair utility, it is by no means as comprehensive as we all might wish. As always, use the latest Disk First Aid first, then follow up with anything else you may own. If you're still having startup problems, give up on the diagnostics, reformat, and restore from a backup (some suggest doing this anyway, no matter what the problem).

Responsiveness to Reported Bugs

How is MicroMat in terms of addressing bugs reported after product release? Well, notwithstanding their regular presence in forums such as MacFixIt, my particular experiences have been mixed.

Within a month of receiving my first TechTool Pro (version 1.0.6), I reported 14 bugs to MicroMat via email. We had a nice, seemingly productive dialog, and soon 1.0.7 was released. Precisely zero of the 14 bugs I reported were fixed in TTP 1.0.7. At least three of these old bugs are still with us in TTP 2.5.3.

Not exactly blazing a trail of brilliant customer support, in my book. Sadly, par for the software industry, and results I would expect from lesser companies (such as, oh say, Symantec or Microsoft).

MicroMat recently contacted me regarding the bugs listed in [the full version of this review](#)³, promising to address them all with the announced upcoming TechTool Pro version 3. Stay tuned to the above URL and possibly ATPM for updates on their success.

Other Thoughts

One way in which NUM bests TechTool Pro (last time I checked Norton) is Norton Disk Editor. I learned about as much about the inner workings of Macintosh storage devices from using it as I did from my colleagues and other sources during my stint as a software tester at Apple. TechTool Pro has nothing like it. Given MicroMat's expertise, if they took the time to do it correctly, it could be even more informative and useful than NDE. Given the number of bugs in what is already there, I guess MicroMat should stay focused on making what they have work correctly before branching out into this other realm.

3. <http://siber-sonic.com/mac/TTProrev.html>

While we're on the subject of NUM vs. TTP (of which many MB of text by many folks have been written over the last few years), there has been quite a debate about each program's ability to optimize data on disks. Optimization helps to ensure system stability and maximize performance by gathering together pieces of files scattered hither and thither on one's drive(s). More precisely, one uses software such as Speed Disk from the NUM package, or the Optimization panels of TechTool Pro 2. The software takes over your Mac, reassembles the fragments into one piece each, and hopefully arranges them in such a way as to minimize further fragmentation. The latter point is the bone of contention between supporters of each product.

On particular Macs I have used, Speed Disk (3.5.2 and older) is substantially faster than TTP 2, and arranges my files in a manner which seems to promote slightly less future fragmentation (I have not used current versions of Speed Disk). In fact, I was dismayed to find out that after TTP 2.5.3 had given its best shot—several times—at optimizing, Speed Disk 3.5.2 showed the very same volume having all kinds of suboptimal optimizations, which it happily rearranged.

Do You Recommend TechTool Pro 2

If you own a 68030-based Mac or earlier, the situation is gray, and you would do well to consult [the full review](#)⁴ for important considerations.

If you own a 68040 or any PowerPC-based Mac, TechTool Pro 2 is a valid choice for a comprehensive Macintosh diagnostic utility, and the only currently available product this reviewer can recommend, despite documented flaws in the current version. Trust me, you don't want to deal with Symantec, any more than you would want to deal with Microsoft.

I am disenheartened with all the bugs I have encountered with TechTool Pro and with its lack of support for older Macs. Further, I am saddened that TechTool Pro 2 is unable to find blatant hardware problems I have had. I'm still waiting for something which really works on my Plus... something promised years ago.

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4. <http://siber-sonic.com/mac/TTProrev.html>

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The Acrobat PDF edition is optimized for printing, but it can also be viewed on-screen, and we've increased the font sizes to make this easier. It may be viewed online in a browser, or downloaded and viewed in Adobe's free [Acrobat Reader](#)² on Macintosh or Windows. PDFs may be magnified to any size and searched with ease.



The Offline Webzine is a HTML version of AT^{PM} that is formatted for viewing offline and made available in a StuffIt archive to reduce file size. The graphics, content, and navigation elements are the same as with the Online Webzine, but you can view it without being connected to the Internet. It requires a Web browser.



The eDOC edition of AT^{PM} is a self-reading document that, like our old DOC-Maker format, may be read on just about every Mac ever made, without any additional software. It features a table of contents, clickable URLs, high-quality printing, and easy magnification and searching. Oh, and it's **very** fast.

What Are Some Tips For Viewing PDFs?

- You can [download Adobe Acrobat Reader](#)³ for free. If you have a Power Macintosh, Acrobat Reader 4 has better quality and performance. AT^{PM} is also compatible with Acrobat Reader 3, for those with 680x0 Macs.
- You can zoom the PDF to full window width and scroll through articles simply by single-clicking anywhere in the article text (except underlined links).
- You can quickly navigate between articles using the bookmarks pane at the left of the main viewing window.
- For best results on small screens, be sure to hide the bookmarks pane; that way you'll be able to see the entire page width at 100%.

1. <http://www.atpm.com/search>

2. <http://www.adobe.com/prodindex/acrobat/readstep.html>

3. <http://www.adobe.com/prodindex/acrobat/readstep.html>

- Try turning Font Smoothing on and off in Acrobat Reader's preferences to see which setting you prefer.
- All blue-underlined links are clickable. Links to external Websites are reproduced in footnotes at the bottoms of pages, in case you are reading from a printed copy.
- You can hold down option while hovering over a link to see where it will lead.

What Are Some Tips for Printing the PDF?

The PDF edition uses large fonts for on-screen readability. The side effect is that they then print larger than desired. We think that if you print AT^{PM} at two pages per sheet, the fonts will come out perfectly sized for reading from paper. Go to the Layout page of the Acrobat's Print... dialog box and choose "2" from the popup menu.

Why Are Some Links Double-Underlined?

In the PDF edition of AT^{PM}, links that are double-underlined lead to other pages in the same PDF. Links that are single-underlined will open in your Web browser.

What If I Get Errors Decoding ATPM?

AT^{PM} and MacFixIt readers have reported problems decoding MacBinary files using early versions of StuffIt Expander 5.x. If you encounter problems decoding AT^{PM}, we recommend upgrading to StuffIt Expander 5.1.4 or later⁴.

How Can I Submit Cover Art?

We enjoy the opportunity to display new, original cover art every month. We're also very proud of the people who have come forward to offer us cover art for each issue. If you're a Macintosh artist and interested in preparing a cover for AT^{PM}, please e-mail us. The way the process works is pretty simple. As soon as we have a topic or theme for the upcoming issue we let you know about it. Then, it's up to you. We do not pay for cover art but we are an international publication with a broad readership and we give appropriate credit alongside your work. There's space for an e-mail address and a Web page URL, too. Write to editor@atpm.com for more information.

4. <http://www.aladdinsys.com/expander/index.html>

How Can I Send A Letter To The Editor?

Got a comment about an article that you read in ATPM? Is there something you'd like us to write about in a future issue? We'd love to hear from you. Send your e-mail to editor@atpm.com. We often publish the e-mail that comes our way.

Do You Answer Technical Support Questions?

Of course. E-mail our Help Department at help@atpm.com.

How Can I Contribute To ATPM?

There are several sections of ATPM to which readers frequently contribute:

Segments—Slices from the Macintosh Life: This is one of our most successful spaces and one of our favorite places. We think of it as kind of the ATPM “guest room.” This is where we will publish that sentimental Macintosh story that you promised yourself you would one day write. It's that special place in ATPM that's specifically designated for your stories. We'd really like to hear from you. Several Segments contributors have gone on to become ATPM **columnists**. Send your stuff to editor@atpm.com.

Hardware and Software Reviews: ATPM publishes hardware and software reviews. However, we do things in a rather unique way. Techno-jargon can be useful to engineers but is not always a help to most Mac users. We like reviews that inform our readers about how a particular piece of hardware or software will help their Macintosh lives. We want them to know what works, how it may help them in their work, and how enthusiastic they are about recommending it to others. If you have a new piece of hardware or software that you'd like to review, contact our reviews editor at reviews@atpm.com for more information.

Shareware Reviews: Most of us have been there; we find that special piece of shareware that significantly improves the quality our Macintosh life and we wonder why the entire world hasn't heard about it. Now here's the chance to tell them! Simply let us know by writing up a short review for our shareware section. Send your reviews to reviews@atpm.com.

Wishful Thinking: Is the space for Mac enthusiasts who know exactly (if you do say so yourself) what Apple should do with its advertising campaigns and product introductions. Have you come up with a great advertising tag line? What about that Mac campaign that has

been stewing in the back of your mind? Send your big ideas (or your art) to editor@atpm.com.

Which Products Have You Reviewed?

Check our reviews index at <http://www.atpm.com/reviews> for the complete list.

Will You Review My Product?

If you or your company has a product that you'd like to see reviewed, send a copy our way. We're always looking for interesting pieces of software to try out. Contact reviews@atpm.com for shipping information.

Can I Sponsor ATPM?

About This Particular Macintosh is free, and we intend to keep it this way. Our editors and staff are volunteers with "real" jobs who believe in the Macintosh way of computing. We don't make a profit, nor do we plan to. As such, we rely on advertisers to help us pay for our Web site and other expenses. Please consider supporting ATPM by advertising in our issues and on our web site. Contact advertise@atpm.com for more information.

Where Can I Find Back Issues of ATPM?

Back issues of ATPM, dating since April 1995, are available in DOCMaker stand-alone format from <ftp://ftp.atpm.com> and <http://www.atpm.com/Back>. In addition, all issues since ATPM 2.05 (May 1996) are available in HTML form at <http://www.atpm.com/Back>. You can search all of our back issues from <http://www.atpm.com/search>.

What If My Question Isn't Answered Above?

We hope by now that you've found what you're looking for (We can't imagine there's something else about ATPM that you'd like to know.). But just in case you've read this far (We appreciate your tenacity.) and still haven't found that little piece of information about ATPM that you came here to find, please feel free to e-mail us at (You guessed it.) editor@atpm.com.



This is the latest in ATPM's series of Trivia Challenges. Answers to this month's Trivia Challenge will be found in the next issue of ATPM. If you have any suggestions for future Trivia Challenges, or would like to contribute a Trivia Challenge, please email me at egoss@atpm.com.

This month's Trivia Challenge is a puzzler to match US States and countries of the world with their capitals. See if you can match the nickname or description of the state or country on the left with the capital on the right as you take part in:

Trivia Challenge 6.03—Confused Capitals

- | | |
|-----------------------------------|-------------------|
| 1. The Land Of Lincoln | A. Lansing |
| 2. The Show Me State | B. Austin |
| 3. The Beehive State | C. Dover |
| 4. The Lone Star State | D. Harrisburg |
| 5. The Land Of The Rising Sun | E. Nashville |
| 6. The Constitution State | F. Tokyo |
| 7. The Home Of The Wolverines | G. Salt Lake City |
| 8. The Home Of The Badgers | H. Providence |
| 9. The Sunshine State | I. Springfield |
| 10. The Volunteer State | J. Canberra |
| 11. The Ocean State | K. Madison |
| 12. The Keystone State | L. Tallahassee |
| 13. The Home Of The America's Cup | M. Jefferson City |

Trivia Challenge 6.03—Confused Capitals

- | | | | |
|-----|--------------------------|----|------------|
| 14. | The Home Of The Kangaroo | N. | Wellington |
| 15. | The Diamond State | O. | Hartford |

Last Month's Answers—6.02—Historical Highlights

- | | | | |
|-----|---|----|-------------|
| 1. | On national TV, Billie Jean King defeats Bobby Riggs in tennis' "Battle Of The Sexes." | Q. | (or R) 1973 |
| 2. | Elvis Presley is born in Tupelo, Mississippi. | J. | 1935 |
| 3. | The radioactive element "Radium" is discovered by Pierre and Madame Curie. | F. | 1898 |
| 4. | The U S Air Force closes its UFO investigation, "Project Blue Book." | N. | 1969 |
| 5. | The Ku Klux Klan is formed in Pulaski, Tennessee. | B. | 1865 |
| 6. | Massachusetts Republican Edward Brooke becomes the first Black U S Senator elected by popular vote. | M. | 1967 |
| 7. | The controversial TV series "All In The Family" debuts on CBS. | O. | 1971 |
| 8. | Mrs. O'Leary's cow reportedly starts "The Great Chicago Fire." | C. | 1871 |
| 9. | The Dow Jones Average closes over 2000 for the first time. | T. | 1987 |
| 10. | The New York baseball team, the Giants, move to San Francisco, California. | K. | (or L) 1958 |
| 11. | The "Boston Tea Party" takes place in Boston Harbor. | A. | 1773 |
| 12. | Hattie Caraway becomes the first woman elected to the US Senate. | I. | 1932 |
| 13. | Nellie T. Ross becomes the first woman Governor in US history. | H. | 1925 |

Last Month's Answers—6.02—Historical Highlights

14.	The Russian nuclear plant at Chernobyl melts down.	S.	1986
15.	George S. Custer makes his “Last Stand.”	D.	1876
16.	The Union of Soviet Socialist Republics is formed.	G.	1922
17.	The US Submarine “Nautilus” sails under the North Pole.	L.	(or K) 1958
18.	Apollo 17 becomes man’s last visit to the Moon.	P.	1972
19.	Tchaikovsky’s “The Nutcracker Suite” opens in Russia.	E.	1892
20.	The American Baseball League adopts the “Designated Hitter” rule.	R.	(or Q) 1973

The Rules

Each question has only **one** correct answer. The answers are stored in a hermetically sealed envelope guarded by a playful Siamese cat named “Macintosh” who lives in our house.

This Month's CD Recommendation

“[New Beginning](#)¹” by Tracy Chapman—her third foray into introspective, personal song writing finds Ms. Chapman in familiar territory—her guitar and voice share equal billing as she weaves tales of discovery and discouragement. Each well-recorded song is a story shared, and none will leave you without feeling her mood. To find this CD you might have to search under “Folk Music” in your local record shop, but your efforts will be rewarded.

Parting Pointer

The “Parting Pointer” is ATPM’s “Tips and Tricks” section. If you have a pointer that you would like to share with other readers to make their Mac experience easier or more enjoyable, please send it to me at egoss@atpm.com. Here’s this month’s “Parting Pointer”:

1. <http://www.amazon.com/exec/obidos/ASIN/B000002HKC/aboutthisparticu>

How To Diffuse The Built-in Flash From A Digital Camera

Digital cameras with built-in flashes can produce washed-out or over-exposed images. To diffuse the harsh light from the flash, tape a small piece of tissue paper over the flash. This method works fairly well, especially with close-ups. For the best results, experiment with multiple layers of tissue in combination with your camera's manual exposure adjustment (if it has one).

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