

ATPM



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Contributors

Eric Blair

Daniel Chvatik

Paul Fatula

Scott Feldstein

Edward Goss

Tom Iovino

Robert Paul Leitao

William Lovett

Jamie McCornack

Grant Osborne

David Ozab

Mike Shields

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Online and downloadable issues are
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<http://www.atpm.com>

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Info-Mac and all its Mirrors

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The CD-ROMs Accompanying:

MacFan, [MacFormat](#),

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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 February issue of *About This Particular Macintosh!* While the weather outside is frightful the PC fires are so delightful! That's right. In retail stores across America desktop PCs are being replaced by hand-held computing appliances and cellular devices. Tough times for the beige box boys! PC component prices are climbing, and profits are declining (for most PC companies). Take a look inside our latest offering of Audacious Tidbits and Puckish Musings to see why more and more consumers are choosing to "Buy different."

The Gates To Hell?

No. Bill Gates hasn't been sent packing to the netherworld but the changes at the top of the world's largest software company are intriguing. Mr. Gates has chosen to turn his attention to software while Steve Ballmer has been assigned the hard job of leading Microsoft into the new millennium. While many analysts characterize the executive changes as much ado about nothing, we believe Mr. Gates' decision to vacate the top position at Microsoft signals a toughening of Microsoft's position with the Department of Justice and the states that filed the anti-trust suit. We expect many changes under Mr. Ballmer's watch.

Almost Heaven?

Well, not exactly, but we were impressed with Apple's quarterly numbers. For the quarter ended January 1, 2000 Apple Computer reported:

- A net profit of \$183 million, or \$1.03 per diluted share (including the sale of shares in ARM Holdings, the cost of Mr. Jobs' new plane, and some minor one-time items).
- Revenues for the quarter jumped to \$2.34 billion. This was an increase of 37% from the year-earlier period.
- Gross margins were 25.9%, down from 28.2% in the year-ago quarter. (They had to air-freight a lot of units to have them in stores for the holiday rush.).

- The company sold 1,377,000 computers (give or take a couple of thousand). This included more than 700,000 iMacs and 235,000 iBooks.
- Unit sales were 46% higher than a year earlier. This clearly shows the benefit of better technology (not to mention a longer sales quarter than last year).
- Apple's growth in units sold was about 2.7 times that of the estimated growth for the PC industry (In other words Apple's gains came at the expense of other hardware companies).
- Not including Apple's investments in ARM and Akamai, the company ended the quarter with over \$3.6 billion in cash and short-term investments.

At press time we expect more major brokerages to upgrade their ratings of Apple and for a sharp improvement in its rating among the major debt rating agencies. Enough said. We believe this impressive performance speaks for itself

Da Plane, Boss, Da Plane

It might seem like Fantasy Island, but who wouldn't want Steve Jobs' reward for a job well done? Options on ten million Apple shares and a Gulfstream V with all taxes paid. Considering that Apple shareholders have benefited to the tune of \$15–\$16 billion dollars since his return to Apple as iCEO (interim CEO, not to be confused with his new title of Internet CEO or iCEO), he certainly earned some compensation. Actually, had Mr. Jobs held onto a portion of the \$400 million in Apple stock he received from the NeXT buyout he would have realized substantially more for his efforts.

Did You Hear All The Hardware News?

Neither did we. And for good reason. Readers may remember the long delay in the release of the Lombard (a.k.a. Bronze Keyboard) PowerBook. That's because widespread anticipation of the Lombard PowerBook caused a sharp drop-off in the sales of its predecessor. Ill-informed rumors and media speculation about new Apple products can skew buying patterns and increase costs. Don't take our word for it; listen to Apple's CFO Fred Anderson. In order to maintain margins and strict inventory controls, Apple will not release new products when there is significant in-channel inventory of the products being replaced. Do everyone a favor. If you need a new Mac, buy one. Don't worry. There will always be newer, faster

machines coming to market. Skewed sales patterns only increase prices and delay product innovations. Trust us. The next Mac you buy will probably not be your last one.

The Sun Never Sets

With the addition of Grant Osborne and Raena Armitage to the ATPM staff, the sun never sets on our expanding empire. Grant is from the U.K. (which is also long-time American staffer Tom Iovino's favorite hot spot for fun and frolic) while Raena hails from the land down under. Our staff now works around the clock (and around the globe) to bring you the most interesting news and delightful views about the world of Mac computing. We welcome Grant and Raena to our staff.

WD-40

Go ahead and look around. There's probably a can of WD-40 somewhere in your home. That's right, there's one can. Few people need two cans of the ubiquitous household lubricant. The point is most homes now have at least one PC. Few people need two or three. The PC that was purchased three or four years ago is being replaced with a less expensive model. The ascent of hand-held organizers, sophisticated cellular phones, and computing devices is changing the market for personal productivity hardware.

Sure there is still a market for the beige box PC, but consumers will no longer pay a premium for an old-style PC. Apple's colorful offerings are grabbing market share from the company's hardware rivals. Style, function, and ease-of-use are more important to today's consumers than Intel's claims about megahertz. Our only question: when will the company that pioneered hand-held computing devices with the Newton bring to market a new and better product?

Parting Notes

The staff of ATPM has enjoyed watching Apple Computer regain its place among the world's top PC manufacturers. In our view much work still needs to be done. The professional content creation and graphic design markets are among the most lucrative markets for hardware manufacturers. Although consumer-level PCs outsell professional models there is an extraordinary opportunity for Apple Computer to regain profitable market share and increase gross margins by tending to the needs of power users and professionals.

The RISC processor, QuickTime, and the forthcoming Mac OS X provide Apple Computer with a unique opportunity to reestablish itself as the platform of choice among content creators, graphic designers, and media professionals. Read more about this in our March issue.

The ATPM Staff



QuickTime Question

I read your [article on QuickTime](#)¹, pretty good. My problem is the file size with QuickTime 4 versus QuickTime 3 Pro. Edited clips from movie files used to have a smaller size file with QuickTime 3. With QuickTime 4, the new cut clippings are the **same** size as the original! Any suggestions on how to export correctly?

Bill

wmstone@funtunnel.com

QuickTime does have two options for exporting, according to whether or not you click the “self-contained” checkbox. Basically, in “self-contained” mode, the movie is self-sufficient so it is full size, where as an unchecked box results in a much smaller movie size. The latter option, however, depends on the original movie for playback, kind of like linking. We hope this is what you were referring to.

The second thing that comes to mind is the fact that you are using QuickTime 3 “Pro” in relation to QuickTime 4. Starting after QuickTime 2.5, Apple disabled the exporting features of movies except in the “Pro” version. This means although you can save in QuickTime 4, you cannot really control the exporting options (as in the compression algorithms: M-JPEG, Animation etc.). Now if you compare the native default QuickTime 4 against some other algorithms, the difference could be very substantial (we’re talking even 1:8 ratios here) so basically what we would suggest here is to upgrade to the Pro version of QuickTime 4. Hey, it’s only 30 bucks, which is pretty good considering what you can do with it.

You should note that the QuickTime 4 native format, compared to QuickTime 3, does tend to produce larger files but with minimal difference and certainly not what you are experiencing. Which means that teaser trailer of *Star Wars: Episode I—The Phantom Menace* is going to be slightly larger if it were rendered natively in QuickTime 4, rather than the QuickTime 3 it was originally rolled out in. Gee, I knew I could work a *Star Wars* reference in here somehow. :-)

—CT

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1. <http://www.atpm.com/5.08/quicktime4.shtml>

Popup Folder

Though your review is from 1997 I thought I'd ask you if [PopupFolder](#)² is still suppose to work on a G3 running system 8.6. The demo of version 2 I downloaded will not load. Petty because I loved it. Any alternatives?

Thanks a lot.

Paul Delcour

Hilversum, Netherlands

I loved it too. As far as I know, PopupFolder doesn't work with any version of OS 8 or 9. The best alternative is probably [FinderPop](#)³. William Lovett [reviewed it](#)⁴ in *ATPM* 5.04. —MT

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HyperCard

Michael Tsai, in [his column](#)⁵, wrote that Apple still doesn't know what it had with HyperCard.

In 1989 I worked with both Macs and PC's, and it was HyperCard that convinced me of the superiority of the Mac for me.

We needed to write a number of small utilities for some specialised tasks. Some had previously been written for the PC, and they just looked so rough. Sure enough, they did the job, but boy did they look home made!

I stumbled across HyperCard, and realised that it had all the elements needed to solve these problems. Not only solve them, but solve them with outrageous style. My employers simply couldn't believe that I had written the first ones until I showed them how easy it was.

2. <http://www.atpm.com/3.04/page15.shtml>

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

4. <http://www.atpm.com/5.04/roundup.shtml>

5. <http://www.atpm.com/6.01/paradigm.shtml>

We were running a TV editing facility, and style and elegance are fundamental to the business. These new utilities looked cool, and had a sense of humour. The interactive graphics and use of sound all added to the experience. Clients would often tell their friends about these utilities!

Personally, I was so impressed that I bought my first Mac simply due to the ease with which I could use HyperCard to write useful stacks. There was a little more development to come, leading up to HyperCard 2.0, and then it was left to wither and die.

I can't remember the last time I wrote anything in HyperCard. That seems such a shame.

Today, I can do some of those things using FileMaker Pro, or AppleScript, but neither comes close.

Apple had provided me with a tool that made it possible to justify buying a Mac, rather than a PC. I was able to make the Mac truly work for me in a way that no mere PC could do.

It's a shame that Apple never fully appreciated what Bill Atkinson had created, but it is complete folly to just let it fade away. We all need to do custom jobs from time to time. HyperCard should be brought up to date and be available as the means to allow programming "for the rest of us."

Alan Taylor

alan.taylor@freegratis.net

I encourage all HyperCard fans to check out [Serf](#)⁶. —MT

...

Elegance

I have yet to try Serf. Your article was the first mention that I have seen. I am not an accomplished programmer, but have had quite a lot of success with scripting applications. Serf sounds very promising indeed, and I look forward to having an opportunity to try it. Particularly as you say that it is elegant.

6. <http://www.best.com/%7Eserf/>

Elegance is always a welcome attribute. It's what distinguishes much of what we like about Macs, from what others encounter in the PC world.

I am slightly concerned that Apple might be overlooking elegance as being at the heart of the Mac, confusing it with just being fashionable.

Elegance is a process that starts at the very core, and continues through to the surface. Fashion is just a pretty outer surface. The new looks for QuickTime, and Sherlock 2, are fashionable - not elegant. But the technologies themselves are elegant.

Elegance is always attractive. Fashion is transient.

Alan Taylor

alan.taylor@freegratis.net

I couldn't agree more. —MT

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Pentium Question

Can you run Painter 3D on an IBM Pentium?

Thank you,

Glenn

Yes, you can (provided that you have the Windows version of the program). MetaCreation's Web site states that Painter 3D runs on everything from a 486 up:

<http://www.metacreations.com/products/painter3d/datasheet.html#system>

System Requirements: Windows 95 or Windows NT 4.0, 486, Pentium, or Pentium Pro, minimum of 16 MB of system RAM (32+ MB recommended), Hard Drive with 30 MB free space, CD-ROM drive. —DC

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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.

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Three Kids and an iMac

What's a parent to do when several members of a family need to share one computer?

I purchased an iMac for my family the first day they were available for sale, August 15, 1998. It's been a fun family computer. The multiple user features of Mac OS 9 now make it possible to create a uniquely personal computer for each member of my expanding family. My eight-year-old daughter is learning to use the Internet for school research and to learn more about the world around her. My seven-year-old son, who is just learning to read, likes to play educational CD-ROMs and shareware games. The multiple user capabilities allow me, as the "owner," to assign access privileges to each user of the iMac so my daughter can surf the Internet safely and my son can play his CD-ROMs without the risk of disturbing anyone else's files. As importantly, he can't install new software or shareware (one of his favorite pastimes) without my authorization. My fiancée's four-year-old has a unique desktop comprised of buttons that are easy to navigate and understand. All in all, the multiple user features of Mac OS 9 allows each user to have a specially tailored user environment on an iMac that everyone shares.

KidSafe, one of the [new iTool features](#)¹ available on Apple's Web site, allows parents to control the Internet content their children can access and view. There's no more keeping one eye on the popcorn popper and the other eye on Web site link your child just clicked in the few nanoseconds you've been away from the chair. KidSafe is lock-solid. Only sites that have been educator-approved are available for view. It's a wonderful tool for parents who want their kids to explore the Internet safely.

Download the iTools software from the Apple site. It's worth the time and effort. Don't forget to get your free mac.com email address. While you're on the Apple site explore iTool's other cool features such as iDisk (a great way to share files across the Internet and with friends and

1. <http://itools.mac.com/WebObjects/Tools>

family members around the world) and HomePage (an easy way to build the home page you first promised yourself sometime back in 1995).

No News is Good News

Many veteran Apple watchers were disturbed by the lack of hardware announcements at the recent Macworld Expo. There's good reason no announcements were made. Wall Street is far more concerned with margins than with megahertz. In order to keep Wall Street's favor Apple must maintain a high gross margin per unit sold. The past several months have seen big increases in prices for computer components. Coupled with the downward trend in PC prices, profitably selling computers at an attractive price has become both an art and a science. Processors are most expensive when they are first released. Someone has to pay for the R&D and the production runs. Further, until full production begins supply problems are a significant risk.

Apple's recent decision to introduce the Sawtooth motherboard into the G4 product line, prior to the release of machines with faster processors, was a good one. When the new processors are available in reasonable quantities, rest assured that faster machines will be introduced. In the meantime, Apple is in the business of making money. It can only do so by strictly controlling inventory. Older products don't sell once their successors have been announced.

Anti-Trust Problems?

No. I'm not talking about our friends in Redmond. I'm talking about the not-so-silent whispers concerning Apple. If the Mac controlled a high percentage of the desktop PC market anti-trust problems would be a real possibility. No other major PC company makes both proprietary hardware and an operating system to go with it. The fact that Apple controls a small segment of the PC market is what is shielding it from anti-trust problems. The benefit to Mac users is that one company is responsibility for the look, feel, and operation of their PC. There are many reasons (smart reasons, too!) that Apple has chosen to eliminate most hardware peripherals from their product line. It increases the level of third-party investment in the platform, allows users to benefit from innovative technology made by others, and helps to reduce the risks of anti-trust actions. Apple doesn't need to be the top PC manufacturer in order to make money, and Mac users don't need the Department of Justice raiding the party.

My Predictions For 2000

Below are my predictions for the year 2000:

1. Apple will end the fiscal year (the period ending in September 2000) with net income before non-recurring items of \$3.75 per share.
2. By the end of the fiscal year Apple's stock price will reach \$150 per share.
3. Apple's domestic PC market share during the fiscal year will grow by 25% over year-earlier levels.
4. The release of Mac OS X Consumer will be a big success, spurring greater interest in the platform among consumers and developers.
5. Adobe Systems will be among the main beneficiaries of the release of Mac OS X Consumer. Watch for a continued close relationship between the two companies and a few startling surprises.
6. Multi-processor Macs will be unveiled no later than August 2000.
7. There will be big fallout from among the nation's PC manufacturers. The PC market may grow in terms of units shipped, but the number of companies that can profitably remain in the business will shrink. Watch for major moves by Compaq and Gateway to reduce costs and increase margins. Both companies will continue to realign their product and service strategies in order to maintain profits.
8. Apple will announce new long-term supply contracts with component manufacturers including IBM.
9. KidSafe will help Apple reestablish itself as the undisputed PC leader in the K-8 education market, outselling Dell for the top spot.

10. Electronic books will soon become the rage. It will transform the way we access reading material, from comics to classics. Adobe Systems will play a key role in this emerging paradigm.

See you in May!

“Apples, Kids, & Attitude” is copyright © 1999 Robert Paul Leitao, rleitao@atpm.com.



The Play-Doh Principle

Being the dad of a two-year-old son can have its moments.

First, can someone please explain just what language my son is speaking? I know that my wife and I are only using English around the house, but he is speaking some type of hybrid Toddler/English creole. Of course, the only words he can say clearly are the bad ones daddy uses when the college basketball team he is rooting for decides to turn the ball over late in the game.

Also, can anyone explain the magical power that the [Teletubbies](#)¹ exert over young children? Now, for breakfast, my son only wants Tubby Toast and Tubby Custard. Do you know how stupid you look when you walk into a grocery store and ask the sales clerk where they keep the Tubby Toast? I'm surprised I haven't had to post bail yet.

And, can someone please tell me how to get crayon marks off the walls? Or [Play-Doh](#)² out of the carpet? I realize these items can help my son explore his creativity, but why aren't there cleaning instructions on the containers they come in?

Cleaning problems aside, it is a lot of fun to watch my son attack a can of Play-Doh. He puts those little hands into the mound of brightly colored goo, kneads it, then drops it all over the carpet and moves onto the next project.

I have discovered, however, that when he can stay with a project for a while, he can create masterpieces. He works his magic in one of two ways—he can either slap a couple of cans of

1. <http://www6.pbs.org/teletubbies/>

2. <http://www.playdoh.com/consumer/history/playdohhist.htm>

this stuff together and sculpt something huge, or he can pull the glob apart and create smaller mini-sculptures.

In much the same way, the companies that form the high-tech industry have and are undergoing similar dynamic reconfigurations. Corporate mergers and splits are not a new phenomena—as anyone who may have followed business news during the tumultuous 80s can attest. The only thing that marks these new information mergers is the frequency and speed at which they happen.

Some companies act sort of like snowballs. Their initial idea or product gains momentum, and soon they roll merrily along, incorporating other smaller start-up companies. A perfect example of this is Adobe, which, over the years has grabbed Aldus, Frame Technologies, and Go Live.

Other companies are being mashed together in large mergers. For instance, the recent acquisition of Time Warner by America Online goes on record as the largest business merger in history. Time Warner, which owns such well known brands as CNN, *People* magazine, and Bugs Bunny, will provide AOL with an incredible amount of exposure.

Time Warner also brings to the table an enormous pipeline into the living rooms around the country. As with many cable customers out there, my cable company is Time Warner. That's not the company I first signed up with—that company was bought out by Time Warner about five years ago. In fact, if you look around the Tampa Bay media market, you'll see that Time Warner has jumped in and taken over the lion's share of cable operations in each of the surrounding counties. And, with the popularity of Time Warner's [Road Runner](#)³ high-speed cable modem service, well, AOL's Steve Case finds himself in the catbird seat.

So, what does this mean for the average Internet user? Well, a quick visit to ZD Net's user feedback page shows that the people who are weighing in are not liking this merger one bit. A sampling of the comments runs as follows:

I too am a Road Runner subscriber and I have **never** been more disgusted with the prospect of having to deal with the BS from AOL on any level. If the Exec's at Time think that the Power Users of RR will keep their service they are in [for] a **big** surprise. I guess

3. <http://www.rr.com/rdrun/>

we'll have to wait and see what happens.

Austin, Texas

All of a sudden, Bill Gates doesn't seem so creepy...and we all thought **he** was the monopolist.

Rhode Island

AOL is bad news. Especially for anyone who wants freedom. They are dominating the Internet market totally. I had AOL for a while and then switched because of the way they control their customers. You are bombarded with all kinds of ads, and it is not enough that they charge an outrageous price for their service, they charge for just about everything else that they have for you to use.

San Diego, California

Other changes to the landscape involve splits. The biggest split-up looming on the horizon involves everyone's favorite company from Redmond, Washington—Microsoft. As you are all aware—especially if you hold any Apple stock—Federal Judge Thomas Penfield Jackson has found, based on the evidence provided by the US Department of Justice and 19 states, that Microsoft indeed fit the description of a monopoly.

Now that the determination has been made, the penalty phase will begin this month. Word has it that the Department of Justice attorneys are going to recommend that Microsoft be broken into at least two pieces—one that handles the Windows OS and another that handles such applications as Microsoft Office. These 'Baby Bills'—similar to the 'Baby Bells' created after the AT&T break up in the early 80s—would then have to compete in the market independent of each other.

One interesting side effect of such a breakup would be that the OS segment of Microsoft would still be in charge of the OS running on about 90% of personal computers in place. In effect, this 'Baby Bill' would still have a monopoly over operating systems—hardly a good solution. Perhaps other penalties would need to be added in order to level the playing field.

Needless to say, this would open the door for Apple to make some headway back into the homes and offices which unceremoniously dumped Macintosh during the dark days of the mid 90s.

A break up of Microsoft would also be a boon for anyone who happened to be holding the company's stock. If AT&T's break up is any precedent, you can bet that the stock of these 'Baby Bills' will make many people rich as the world only becomes more dependent on computer technology.

And, what about the CEO every Apple fan loves to hate? Well, on January 13th, Bill Gates announced that after 25 years of being the big man, he was going to turn the reins of Microsoft to long-time colleague Steve Ballmer.

Bill Gates has got to be part cat—he has nine lives and always manages to land on his feet. Just think about the beauty of this move. Gates has developed one of the largest software juggernauts on the planet. He has made an obscene amount of money (check out Brad Templeton's [Bill Gates Wealth Index](#)⁴ for some interesting facts). And, now, he won't have to be the man in charge when the government's axe falls.

And, what about Mr. Gates? Will he just go fishing? Take up golf full-time? Nah. According to Gates, "I'm returning to what I love most—focusing on technologies for the future." He'll serve as Microsoft's Chairman, as well as Chief Software Architect.

Now that he's slowing down and taking things easy, maybe he can spend some time working with Play-Doh.

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



4. <http://www.templetons.com/brad/billg.html>

Five Years

50 plus columns, probably close to 60,000 words. I've written a book. I've written a couple of dozen reviews. This column has seen three different titles, and as many focus changes. I've held two different jobs, and I shared with you when my son was born. I discovered ATPM while surfing available downloads on eWorld, may it rest in peace, over five years ago, and became an instant subscriber. Entered a few of Danny's contests, and even had the pleasure of meeting him online. Made the mistake of taking him up on his offer of writing for him. Best decision I ever made. I've made some fantastic friends, and even have a loyal following of three readers. (You know who you are). Saw Apple at its lowest stock price ever, and told everyone to buy, when most of the rest of the world was signaling the end of an era. Too bad I didn't have any money of my own.

The one constant throughout my experience? The Mac has always been there for me. I started with a Quadra 605 at home, and whatever they deigned to give me at work. For about a year, I've stepped into the 90s with a Power Mac, which should serve me well for about another year, until the coming of OS X. I lamented the loss of eWorld along with the rest of you, but I still managed to stay with you monthly, by submitting my column from work. I wrote about my experience at Huge, which became Ray-O-Hac, and currently, I walked the streets of Hollywood, in search of the next greatest DV extravaganza, while working for Rocket Science Central. Okay, I'm not really a streetwalker. And I don't really work for them; I'm a contractor, something I've talked about on more than one occasion.

I completed two screenplays, one of which won a couple of contests. Also, I'm currently looking for financing, to put into practice what I've been writing about lately. Anyone got a million? Okay, *The Blair Witch Project* was made for 31K, but you wouldn't have known about it if:

1. Sony hadn't spent 20 million on advertising, and
2. They hadn't generated an incredible buzz on the Net.

It also helped that it was made on a Mac. Ok, it helped me. I got to write about it. I've been to the ShowBiz Expo a few times, and reported on the latest and greatest coming out of Hollywood for the Mac world, (not to be confused with Macworld, to which I've never been), in what's become an annual thing for me. Also, I get to write about the craziness that you probably know as Super Bowl hype, and the resurgence of Apple's role in it, which I'll talk about a little later. I've weathered the growing pains of two CEOs, and now recently a third, trying to set the sail right. I think Steve's done a pretty good job, although, he did enter into an agreement with Mr. Bill. :-)

When I started this thing, we were experiencing the pain of OS 7.5.2 on the 7200s, while Apple was experiencing shrinking market share. At Huge, the Macs were on their way out. Of course, five years later, they're still going strong. Sometimes, you do have a choice, despite what your CIO who has never touched an actual computer thinks. And if nothing else, what the last five years have shown me is that that choice should be a Mac.

What will the next five years bring? I don't know. I leave the predicting to Dionne Warwick's friends. Of course, they're no longer around, and a direct quote from them is: "We didn't see it coming!" If there's one thing I've learned while trying to finance a film in this town, it's this: Nobody Knows Anything. (With apologies to William Goldman.) I think it applies to Apple and the Mac as well. You can take all the prognosticators in the world (except for the ones that write for ATPM, of course), wrap 'em up in a tight little ball, and throw them out as far as I care.

And now, to be hypocritical, I'll tell you what I think the next five years will bring. Well, for me at least. I'll get my production company up and running, shoot a film or three on DV, use Final Cut Pro to edit on the latest and greatest Mac, transfer it to film, and it'll be coming to a theatre or drive-in near you. Unless of course, there aren't any near you, in which case, you'll need to move. For Apple, I hope it'll mean increased market share after the fallout from Mr. Bill's anti-trust trial. Have you heard the latest? Windoze[®] is a work of art, and therefore, it is what the creator of said piece of art says it is, and is therefore protected by copyright. But I digress. Hopefully, I'll be here to tell you about it all, as I continue to write here each month, or thereabouts. Deadlines are a tricky thing, you know. Ask my editors. :-)

Let's Play Some Football

Recently, I [reviewed Backyard Football](#)¹ from Humongous Entertainment, and last month, Eric chimed in with a [review of Madden 2000](#)². Elsewhere, a review (well, really a recommendation) of Playmaker Football appeared at Mac Central. By the time you read this, Super Bowl XXXIV will be a memory, and my favorite team will have won. This is the tricky part, I'm writing this before the championship games have been played, so, I'll let you guess which team is my favorite. I'll give you a hint: they used to play in Los Angeles, where I still live.

What does this all have to do with Hollywood, in general, and the Mac, specifically? I alluded to it earlier. And I have the unique perspective of having played all three games. Each has its strengths and weaknesses. It really depends on how much thinking you wanna do. If you want pure entertainment, Backyard Football is for you. If you wanna play with actual NFL players, Madden 2000 is the way to go. If you want to build your team from scratch, Playmaker Football is outstanding. Personally, the week before the Super Bowl, I'll be playing the Rams vs. the Titans on Madden 2000. And we already know who I'll be rootin' for.

SuperBowl.com

Well, Madden 2000 came up with Titans 31, Rams 24. Apparently, Scott McNair was too much for the Rams' defense. Or, I couldn't hit the arrow keys fast enough. As you know by now, reality was quite different from simulation. And that wasn't the real story anyway.

An argument can be made that Apple started the whole Super Bowl commercial spectacle tradition back in 1984, and I've alluded to this on more than one occasion here. Since then, every year companies, including Apple, from far and wide have blown half their marketing budget, maybe more, to get their word out to Super Bowl viewers across the planet.

This year, Apple was conspicuously absent. I was expecting a rousing follow-up to last year's HAL commercial. At the very least, a variation on the G4 commercial released at Seybold. Among all the dot coms, I was hoping for a ray of sunshine. But I didn't get it. What I did get, was Fox Sports, on QuickTime TV at their Web site. Which was infinitely better, because during the breaks on the Web site, we got to see one of the Apple commercials that ran at

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

2. <http://www.atpm.com/6.01/madden.shtml>

Macworld. We didn't get lost among all the dot com ads this year. I liked the FedEx ad anyway. :-)

72 and sunny in Redondo.

e You next time.

Disclaimer: After the success of his script in a previous contest, Mike has entered another, where it's the 13th script, in the 13th pool. You can wish him luck at mshields@atpm.com.



The Question (Part I)

I get asked The Question now and then. I'm sure you do, too. If you're like me you probably feel somewhat unable to answer it in a brief statement. I've been meaning to write down a thorough answer, something that I can refer people to, something that will finally speak definitively to the all-important question, "Scott, why are you such a Mac nut?" Here is my answer.

This question can really be divided in to two parts: first, how I became a Mac user and second, why I'm so enthusiastic about the Macintosh. In part one below I outline the events that led me to being a Mac user, from my very first glimpse of one to the present-day Mac guru that you see before you. Next time in part two I will explain why I'm so crazy about the company Apple Computer, Inc., it's history, and of course the hardware and software itself.

First Encounters

I was mid-way through college when I met up with my first Mac. It was a Color Classic, I think. I had wandered into my school's computer lab, out of boredom more than anything else, and found myself seated in front of this intriguing box. The only thing I can remember about the experience was that in spite of the fact that I had absolutely no idea what I was doing I found myself at the MTV Web site looking at various multimedia files that they had posted.

Please understand that I had no concept of what a Web browser was. The term "the Internet" had never crossed my lips. The icon labeled "Netscape" had simply drawn my attention, as did the "What's Cool" button that I saw upon double-clicking it. By the end of this brief encounter I was delighted at the results and I remember asking myself, "Am I really talking to a distant computer owned by MTV?" I marveled at this idea.

Not long after this, I was working on a lengthy academic paper, which would require several graphs to make my point. I had actually written a couple of other things already using computers in the lab, but nothing this complicated as yet. After a couple of false starts on the Windows machines, during which I had utterly failed to make anything like a decent graph, I finally wandered back to the intriguing Macintosh.

What happened next simply stunned this newbie: I made a graph. A nice one. Then I made several more. I typed out my paper and put the nice graphs into it. I was done.

I looked at my finished product and realized that, with the help of this machine, I had just earned an “A.” I began to wish I owned one of these delightful things.

Gift Mac

I carried that desire to own a computer into my junior year in college. I asked representatives of the college computer lab if they would let me purchase an old computer from them. “Perhaps one of the older Macs?” I suggested. They didn’t go for it. Being a student I was quite broke and had no real way to purchase a new machine. I began asking various people whether they knew where I could get a computer on the cheap.

Somewhere along the way I mentioned this idea to a professor. I had been majoring in psychology since entering college, but after having taken a required course in Religious Studies I had taken that subject on as a second major. My assigned advisor for this major was a terrific lady. She had a way of sparking my interest in the field of Religious Studies like no other instructor at the school. I found myself continually challenged and inspired by her courses. She also, it turned out, was a Mac user through and through.

“Nice Macintosh,” I said one day in her office. “I’ve been looking for a used one for some time now.” She told me that she loved hers and would never use anything else. Some weeks later this kind professor offered to give me the very Mac I had seen in her office. “I know you need one,” she said. “And I’m ordering a new one at the end of the semester anyway.” I asked how much she wanted for it. “Nothing,” she said. “All you have to do is come and get it when its replacement arrives.” Needless to say I was both grateful and delighted!

A brief time later I was dismayed when her courses were taken over by another faculty member. The good professor, it seemed, had taken ill. I had completed all of my coursework for the Religious Studies major and had been planning my final project with her—an indepen-

dent course of study, which was to culminate in a large research paper. In light of her absence I postponed further work on the project.

After the term ended the professors' husband (also an instructor at the college) met me on campus to give me the Mac that she had promised me. As he was helping me put it in the back of my car he informed me that her illness was quite serious. I immediately went home and wrote a letter to the professor. I thanked her for the computer and expressed my deep concern regarding her failing health. That letter was the first thing I ever did on that Mac SE/30.

Alas, I never saw the good professor again. She passed away shortly after I wrote the letter. Feeling a bit numb with grief I never did complete my final project. I dropped the major and claimed a minor instead. Even so, upon graduation I was unexpectedly inducted into Theta Alpha Kappa, the national honor society for religious studies. She had at some time evidently nominated me for this honor.

I had received so much from this wonderful lady. She had inspired my interest in a field of study that to this day forms a basic part of who I am. She had taken measures to see that I was recognized for my work by submitting my name to the honor society. She had also shared her passion for the Macintosh with me, even going so far as to give me her own Mac as a gift. In short, she was and remains an inspiration to me, and to this day I have my very own "Think different" poster of her in my head.

One day, not long after the good professor passed away, I was amazed to receive a letter addressed to me in her own handwriting. In it was a glowing letter of recommendation for my application to graduate school. I sat that letter down next to the Mac she had given me and began writing letters of interest to various grad programs.

Several years have passed since these events and I have never really spoken or written of them to anyone until now.

Thank you, Professor.

Me, My Mac, and the Internet

A year or so later found me enrolled in graduate school and in a somewhat better financial condition than I had been as an undergraduate. I decided to buy a newer Macintosh. My

wife and I began to discuss and plan our purchase. I, of course, wanted to get a Mac. She, however, hadn't taken much interest in the SE/30 set up in the basement and was somewhat unsure of the Mac. She thought it wiser, perhaps, to go with "what everyone else used." I was insistent, however, and in spite of her skepticism we purchased a Macintosh Performa 630CD on sale from CompUSA. I'll never forget her first words upon seeing our daughter (then only about five) sit down and play an educational game on the Mac: "Hey! We can **all** use this computer!"

I bought two other things with the Performa: a book entitled "System 7.5 For Dummies" and a dial-up Internet connection. The book took me from total newbie to a respectable level of Mac knowledge. The Internet connection had been arranged because of a friend of mine who was moving to Seattle. He and I sat down one day and discussed our wives. "They're going to be calling each other often," he remarked. "Yeah," I replied. "You better get on the Internet," he said. "Email is cheaper."

And so it was. His family and my own exchanged email regularly. Some months later we arranged for them to stay with us over the week of Christmas. My friend was a programmer who owned a PC. He had been trying to install Windows 95 at home. During his visit he seemed skeptical of my Mac at first. He hadn't used one in quite some time and was now thoroughly entrenched in that "other" platform. I showed him how I had made a Web page using SimpleText after having read a how-to article in a magazine. He showed me how to FTP it to my Internet Service Provider. In between the holiday festivities he and I spent quite a bit of time using my Mac and discussing computers and the Internet.

A few months later I received an email from him. "I'm getting a Mac," he wrote. I think he had had enough with his PC and Windows 95. I like to think that the week spent using my Mac helped in his decision as well. Since that time he and his family have moved back to the town in which I live and to this day he is a staunch Mac enthusiast, owning both a beige G3 and a "Lombard" PowerBook.

Hobbyist to Professional

Meanwhile I was in graduate school and getting short on money again. One day I spotted an employment notice on the wall of the building where I studied. It was for an entry-level "Academic Computer Consultant" right there on the university campus. "Mac experience a must," it said. I pulled that notice right off the wall and, wearing my sweats and dragging my

son behind me I marched to the university Information Technology Services office. I presented the notice to the people there and proclaimed “I can do that.”

Computers had become my hobby by this time. I had learned a great deal about them, especially the Macintosh. I had also learned a great deal about the Internet. The fact was, if there was something wrong with your Mac I could probably fix it pretty quick.

So they hired me. Working at the university supporting computers of every flavor rocketed me from “hobbyist” to “professional” at lightning speed. Perhaps the most educational experience I got there was installing and supporting 75 new Windows NT workstations. I even had one on my desk. Because I love computing in general I soaked up information on these systems quickly. Still, nothing made me happier than the day replaced that NT box with a blue & white Power Mac G3. It perfectly matched the one I had just gotten at home.

I had said goodbye to the old Performa. No matter what anyone says about the Performa line I still feel a bit misty-eyed when I think about it. My mother-in-law has it now. My wife and I had decided that it would be a nice gesture to give our old computers away to people who could use them. We had done the same with our first Mac, the SE/30. It seemed quite fitting, as we ourselves had been given our first computer as a gift.

And that, dear AT^{PM} readers, is the whole story of **how** I became a Macintosh user. Stay tuned for next time when I discuss exactly **why** I’m so downright in love with the Mac platform.

“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.



Mac OS X:Aqua Included

In the commodity market of personal computers, three factors sell boxes: price, performance, and design. Apple cannot make cheaper machines than the competition, and Macs are arguably faster than PCs, but not enough to make performance a deciding factor for the majority of computer buyers. Therefore, Steve Jobs wants Apple to be known for design, an area where it has traditionally excelled: witness the original Macintosh, the first PowerBooks, and Apple's current four-square lineup. Bill Gates missed the point when he quipped that the Apple now had leadership in colors. Had the iMac and iBook been unsubstantiated flash, their stations at the tops of best-seller lists would have been ephemeral at best. Apple's consumer lineup has succeeded because it combines good form with good function.

So far, the Aqua interface that Steve Jobs demonstrated for Mac OS X has generated the same sort of comments that the iMac did. Nearly everyone is wowed when they first see it. After that, they either can't wait to get their hands on it, or dismiss it as substanceless eye candy (or Apple-branded iCandy).

I believe that, as usual, the truth is somewhere in between. Aqua is certainly the nicest looking interface I have seen, and it makes Windows look like the ugly stacks of grey rectangles that it is. Aqua is vaguely reminiscent of the original Macintosh interface. Its windows again have a clean, borderless appearance, and the familiar pin striping is back, updated for the post-iMac era. But the similarities end there. Although Aqua is clearly designed in the Macintosh spirit, Apple has made many refinements and



down-right changes. Now is the time to examine them and provide feedback, for by the time most of us are able to actually use Mac OS X, much of it will be set in stone.

The New Finder

Jobs said that (aside from inducing tongue movements) the goal of Mac OS X's new interface was to make Macintoshes easier for beginners and more powerful for experienced users. The Finder seems like a fine example of this philosophy. 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.



In the latest demonstration, the new Finder has a row of buttons in place of the FileManager's shelf. The first is reminiscent of Microsoft's My Computer window; it displays all the volumes accessible to you. The other buttons are Home, Apps (which presumably finds all the applications you have installed), Docs, Favorites, People, and View. The View button toggles the window's display between Icon view, List view, and Columns view.

At the top right of the Finder window is a search box. In Mac OS 9, Sherlock's feature set is adequate for my needs, although regular expression and Boolean searching would be nice, but I rarely use it because of its speed (or lack thereof). If Apple makes the Finder's search box fast and incremental it will be my favorite addition to the Finder.

The popup menu is the new location for the hidden menu that you used to get by command-clicking in the title bar of a window. Now it's in the open where newbies can easily discover it—a nice idea, but I hope I can optionally choose the old behavior to save space.

Next to the popup menu is the most radical change. The left-pointing triangle is a “Back” button that behaves just like in a Web browser. By default, the new Finder browses in place: double-clicking a folder icon opens it in the current window, rather than spawning a new one. 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.

One of the reasons the current Finder is so efficient for me is that I have many windows open at once and can easily recognize them by their shapes, sizes, locations, and icon arrangements. The new Finder will let **me** work that way, but I question whether the browse-in-place mode should be the default; for although it looks nice in demonstrations, it appears to deprive users of the sense of control that the Mac Finder has always given them over their work spaces.

Different people have different work styles. If Apple makes it easy to switch between the new and old Finder looks and behaviors, they can make nearly everyone happy. However, I am concerned that the list view Steve Jobs demonstrated did not have disclosure triangles to expand folder contents. This was one of System 7's best innovations, and Apple would be wise to keep it.

Open and Save Dialog Sheets

Open and save dialog boxes now slide out from document window title bars, making it clear which document they pertain to. These dialogs have always been the most difficult part of the OS for new users to intuit. The Navigation Services dialogs introduced with Mac OS 8.5 were merely an enhanced version of the originals, but Mac OS X introduces something completely different and, in my opinion, better for everyone. The new dialog contains a text box to name the document and a popup menu for choosing where to save it.

What could be simpler? Alternatively, you can use a Columns view to quickly tunnel up and down directory hierarchies.

I hope that Apple will incorporate “Click, There It Is” functionality so that it’s easy to choose a folder that’s already being displayed in a Finder window. Other than that, the new dialogs, or “sheets,” seem great.



Dock

The Mac OS X Dock is a combination of the Windows 95 TaskBar and Unix window minimization, on steroids. The dock holds icons for every running application, as well as previews of minimized windows and the icons of any files or folders that have been dragged onto it. The Windows TaskBar becomes unwieldy when it contains a lot of items, because the names get so collapsed that it’s impossible to read them. OS X solves this problem (not!) by showing icons without names. To see the names of icons in the Dock, you must scrub the mouse over them individually. As with the browse-in-place Finder, this seems to trade usability for lack of clutter. The current WindowShade model of minimizing windows creates a lot of clutter, but windows are easily differentiated by position, size, title, and proxy icon. With the Dock, everything is neat and tidy, except that with so many unlabelled icons, how can one find anything?

Another potential problem is that, since the Dock is at the bottom of the screen, there’s no place for pop-up windows. These were one of my favorite additions in Mac OS 8, and OS X appears to offer nothing to replace them. Apple could kill several birds with one stone by

moving the dock to the right (or left) side of the screen. This would create space at the bottom for pop-up windows and make more vertical screen space available for document windows. (Vertical screen space is more valuable.) Since the Dock would then fill vertically, it would always use a constant amount of horizontal space, which could be used to display names for every icon.

If done right, the Dock can improve upon Mac OS 9's tear-off application palette and WindowShade model. However, Apple clearly has some more work to do.



Icons

Icons in OS X look like photographs, rather than the symbolic line drawings to which Mac users are accustomed. On the plus side, this means that if a developer makes one icon at 128 by 128 pixels (the new maximum size), the system can reduce the size of the icon to pretty much any size without it looking too bad. This makes the Dock's flashy rollover effect possible.

Nevertheless, I think the original symbol-style icons are preferable because they are easier to interpret and recognize (especially at small sizes). The old icons are designed to make good use of screen space, while the new ones seem designed mainly to look pretty. Apple's Web site states that since screen resolutions have increased so much since 1984, it's time that icon resolutions did too. But in my opinion, larger icons do little to improve clarity and consume screen real estate that, if anything, has become more valuable. My 21" monitor shows approximately six times as many pixels as the original Macintosh's screen, but I use it to run twelve times as many applications at once, and to navigate hard disks with hundreds of times as many files. Frugal use of screen space is more important than ever.

Menus

Steve Jobs says that Macintosh menus are the best, so Apple decided not to change them much. Good call. There are two things that bother me, however.

First, there is no longer an application menu on the right side of the menu bar. I'll miss it because when there are many items in the dock, a sorted application menu will still be very useful. Also, a great improvement in OS 8.5 was the ability to display the active application's name in the menu bar. It would be a shame to lose this in OS X.

Second, the center of the menu bar now contains an inert Apple icon. This is **not** the new location for the Apple menu (which, as we know it, appears to be history). Instead, it's Apple's way of branding the OS—as if we didn't know we were using a Mac already. The worst part is that menu names **wrap around** the Apple when they become too long to fit on the left side of it. Apple is supposed to be known for **good** design!

Windows

The new traffic light controls for closing, minimizing, and maximizing windows have drawn a lot of attention. I don't personally find the colors intuitive, but the symbols (X, -, +) make the meanings clear enough. It may take a while to get used to the new colors and symbols, but I don't expect them to be a source of lasting frustration.

The more important question is how Apple chose the placement for the new buttons. Twenty-five million Mac users are accustomed to having Close on the left and Zoom and Collapse on the right. About ten times that many are accustomed to having all three on the right. Apple chose to group the buttons, like Windows does, but to put them on the opposite side of the window and in a different order from either established system. If they have convincing evidence from user testing to justify this change, then I will accept it. But absent that, Apple deserves serious criticism for changing something that wasn't broken.



The Aqua Look

Aqua replaces the Advanced Macintosh Look & Feel box in last year's OS X schematic. Most of its functional changes could just as well have been implemented using the familiar platinum appearance, but obviously Apple decided that Aqua was cooler and more marketable. I agree, and although there are questions about whether it will be too distracting or go out of style, I am cautiously optimistic about it.

However, there are unanswered questions about how well it will work with the variety of applications that we have today. This is a bit confusing because on the one hand, Apple's schematic (see above) shows Aqua on top of the Classic box. This is clearly wrong because Apple has stated that Classic applications will look as they have always looked. This makes sense from a technical standpoint, and even conceptually because Classic applications **are** different. However, Apple's questionable changes, the moved window widgets and rearranged menubar, will make Classic applications stand out more than necessary. Perhaps Apple has done this on purpose to pressure developers into Carbonizing as soon as possible. But what it really does is penalize everyone who makes use of old software that still works.

Carbon applications, on the other hand, will be first class citizens in OS X. They'll enjoy the latest look and feel—or will they? Carbon applications will certainly use new-style menus and traffic-light window widgets. However, Carbonizing does not necessarily include rewriting an application's user interface. Since most applications use a mix of custom, library, and Apple-supplied code to draw buttons, popup menus, checkboxes, and other user interface elements, there's no way that Apple can give Carbon applications a uniform Aqua appearance **inside** their windows. Developers will have to do a lot of work to make their Carbon applications look at home both in OS X and in OS 9. Making their custom interface elements fit with the Aqua look may be especially difficult, because it is so much more complex than knowing which shade of grey to make buttons and which size font to use. Apple should be making it **easier** to write good Mac applications, not harder.



Conclusion

Much that is new in Mac OS X is good. The plumbing is first-rate, and the user interface has some nice improvements. But I question some of the changes Apple has made. From day one, Macintosh users have enjoyed the simplicity of disks that appear and disappear from the desktop as they become available and unavailable. Apple pioneered the desktop metaphor, but the new Web browser-style Finder eschews it in the name of reducing clutter. The Dock reduces clutter, but it will quickly be filled with beautiful but nameless icons. Apple seems overzealous in embracing the new and the cool. It should remember that the Macintosh interface, and the loyalty it instilled in its users, is the reason Apple is still around after a decade of poor management. In the past, the company has shown remarkable ability in combining power, ease-of-use, and coolness. I hope they have not forgotten the proven formula.

“The Personal Computing Paradigm” is copyright © 2000 Michael Tsai, mtsai@atpm.com. Michael thinks that Steve Jobs’s executive compensation package was way too excessive, even though Steve is probably the only guy in the world who could have done what he did. Although Michael wrote the last sentence of this column after reading Bruce Tognazzini’s take on Mac OS X, readers are invited to consider it in light of [Tog’s New Coke analogy](#)¹. Screenshots in this article appear courtesy of Apple Computer, Inc.



1. <http://www.asktog.com/columns/034OSX-FirstLook.html>

BY CHRISTOPHER TURNER, CTURNER@ATPM.COM

Why Jason Needs a Pismo

Like many Macintosh users, I was anxiously awaiting the announcement of the new PowerBook, code-named “Pismo,” at Macworld Expo in San Francisco.

And like most Macintosh users, the reason I was anxiously awaiting the announcement of the Pismo PowerBook was because various online sources, including [Mac OS Rumors](#)¹ and [AppleInsider](#)², had been telling us for months that Pismo was coming, and Macworld Expo in San Francisco was its coming-out party.

No one, however, doted on the Pismo release at Macworld SF more than Jason O’Grady. So I waited, with a smirk, to see what Jason had to say after the product was **not** announced.

His answer came in his latest [The O’Grady Files column on January 7th](#)³. In it, he offers many thoughts on why Pismo was not announced, yet he never offers the one thought he should have as a dedicated journalist—he was wrong.

Not to single out Jason O’Grady, but he [has a history](#)⁴. Just as he tries to pass off the fact that it was all Apple’s fault that the Lombard PowerBook and/or iBook were not announced at **last** year’s Macworld SF, he does so again this year with Pismo.

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

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

3. <http://macweek.zdnet.com/2000/01/02/ogradey.html>

4. <http://macweek.zdnet.com/1999/01/10/ogradey.html>

Lest readers of O'Grady.com, Mac OS Rumors, and AppleInsider forget, it was Jason, Ryan Meader, and the AppleInsider guys who built the anticipation for the PowerBook and iBook then, and they did the same thing again this year. Rodney O'Lain stated in [one of his recent columns](#)⁵ that he spoke with a gentleman from the U.K. at Macworld Expo, who had come to the Expo with cash in hand **just to purchase a Pismo PowerBook**. I wonder where this gentleman got his information from?

Jason, here's a clue: Apple is not in the habit of announcing a new hardware product at every Macworld Expo. That has not been the case since the first one was held, and that will continue to be the case until the last one, hopefully decades and centuries from now. The habit here is in **your expecting there to be one**. Yes, Apple often does, in fact, choose Macworld Expo to announce new hardware products, for all of the reasons you list in your above-mentioned column.

But just because it can doesn't mean it will. And Macintosh users shouldn't expect it to.

Apple has its reasons for why the Pismo PowerBook was not announced. I'm sure it was not because "they had too much on their plate," as Jason theorized. My guess is that his second theory is more correct, that Pismo is not quite ready for primetime, and Jobs and Company don't want to pre-announce another almost-ready product.

So why is it that I choose to jump on Jason O'Grady, Ryan Meader, and AppleInsider? Because they hurt Apple. PowerBook sales have been in the toilet ever since the first Pismo rumors began floating around back in October. What should have been a strong retail season for all Macintosh products was not; laptop Mac users were waiting for Pismo.

The current Lombard PowerBooks had been selling exceptionally well since their release, and there was no reason for that not to continue. As someone who has set up, configured, and supported eight of these machines, I can tell you that they are fabulous pieces of hardware. And yes, there will always be a faster, more-bang-for-the-buck machine on the horizon.

5. <http://www.mymac.com/expo/realist.shtml>

Interestingly enough, the Lombard PowerBook release was held up last year, just as Pismo is this year. One of the reasons for the Lombard's "lateness" was because Jason O'Grady and the other rumor-mongers had built up the anticipation for Lombard so much, there was too large a supply of the previous PowerBook G3s still in the channel, and Apple needed to clear those out.

Macintosh users need to base their purchase needs on whether a current system will suit their needs now, or whether they can afford to wait. I'm betting that quite a few folks out there would be plenty satisfied with a Lombard, but opted to wait for Pismo based on information they received from rumor sites. Now they're left in the cold, and their purchase decision is that much harder, since now everyone is guessing when Pismo really will be announced.

I'm sure Jason O'Grady and the others are already in contact with their "sources" regarding this as well, because they need Pismo to be announced to justify their rumor-mongering.

What strikes me as humorous is that Pismo will be no revolutionary step for PowerBooks, as many of my online journalist colleagues have stated. There will be no G4 in Pismo, no radical departures in the PowerBook plastics, no earth-shattering new technology that has never been seen before.

Pismo is an **evolutionary** release—think Lombard, with a faster processor, FireWire instead of SCSI, and AirPort connectivity. That's about it. Oh, you'll likely get much better power management for extended battery life as well. To be honest, Pismo really sounds pretty boring if you're a Lombard user. Unless AirPort is a necessity, which I'm guessing it is not for practically everyone at this stage, stick with that Lombard. The only Mac users out there who would really need a Pismo over a Lombard PowerBook would be those video professionals working with digital video that could use Pismo's FireWire ports to maximum effectiveness, a small minority among PowerBook users to be sure. I guarantee you that outside of the Macintosh community, Pismo will receive very little media attention, unlike the iMac and iBook.

Jason, Ryan, AppleInsider: be real men. You owe your readers apologies, not just excuses. You should be ashamed of being self-serving Macintosh "journalists" who place their own interests above those of Apple's customers and shareholders.

Apple Computer has given no indication whatsoever that a new hardware product was to be announced at Macworld Expo. This rumor came completely from you and your “sources.” I realize you need to generate hits to your Web pages as often as possible to satisfy your advertisers, but do your readers a favor and turn to real journalism, as my pal Rodney O’Lain has stated.

Then you would be doing the Macintosh community a real service.

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BY PAUL FATULA, PFATULA@ATPM.COM

Welcome to Bloat OS

When I first installed my shiny new copy of Mac OS 9, I immediately noticed two things: scrolling through large windows in the Finder was noticeably slower, and applications opened up a little faster. The former, though it sounds bad, is in many cases a good thing: with the amazing speed of G3s and G4s, it's easy to fly past what you're looking for in the time it takes to click and release your mouse button.

Take a moment to think about that; it's pretty amazing. The hardware is so fast that the term "too fast" actually becomes, in this instance, not just possible, but a fact of life. And the hardware is—by all clock speed, operations-per-second, and other such measurements—far faster than the machines we were using just a few years ago. Moving from a Centris 650 to a G3/400 gave me an eightfold increase in clock speed alone, not even considering the advantages of the G3 chip over a 68040, increased bus speed, a faster hard drive, graphics acceleration, ten times as much RAM, or a level 2 cache.

OK, enough awestruck praise. Because my cynical mind is starting to wonder...so how come my G3 isn't even twice as fast as the Centris? For all the speed increases in the hardware, applications take longer to open, system startup time is still abysmal, the time it takes between hitting command-F and getting a Find window has actually increased significantly, and a machine that is supposedly capable of hundreds of thousands of calculations per second still takes over five seconds to calculate the size of my system folder.

In the case of applications, poor opening speed can't be blamed entirely, or even mostly, on the OS. The problem is in the applications themselves: Word 98, for example, takes significantly longer to open than good ol', does-what-you-want Word 5.1a. The way Microsoft decided to go in creating successive versions was to pack in more features, rather than optimize what they already had. And, well, I dunno about you, but there's nothing Word 98 offers that 5.1 doesn't that I actually want, need, or, frankly, even like. What I need is com-

patibility with what everyone else uses...and if everyone else upgrades to 98, I'm stuck with it too...unless I'm clever enough to grab a copy of MacLink. (An awful program that performs a vital task with some to many errors, written by a company even less responsive to user feedback than FileMaker, and marred even further by a user interface that makes me wish for the ease-of-use of Windows NT...but it has no competition, and is moderately better than opening the file with BBEdit and zapping gremlins...) So people run to the stores to upgrade, spending money for bloat: features they don't particularly need or want, at the expense of speed, which is to say, usability. In effect, software writers are filling up the time saved by faster processors by bloating up their software, so that in spite of huge speed increases in the hardware, the software, by and large, still crawls.

Sound familiar? I'm thinking about our beloved Mac OS now...because Apple is doing the same thing Microsoft, and most other software companies, do...they keep time (startup, program opening, finding) essentially constant across processors with tenfold speed differences. They are so excited about new features, that they give no thought to optimizing old features, and it never occurs to anyone to ask whether the new features are worth their cost in speed. A computer today that does things at the same speed as a machine five years old isn't breaking even; it's taking a huge loss.

Apple loves Sherlock. And I have to admit, once I run all the (third-party, definitely not carrying the Apple seal of approval) [patches to get rid of the non-standard UI](#)¹ and [the flashy, annoying ad banners](#)² (you do realize you just paid \$99 for the privilege of having a blinking billboard in your very own home, don't you?), I like Sherlock too. It doesn't offer anything particularly new: its Web searches are available from portals like hotbot.com, and have been since before Sherlock was a glimmer in Steve's eye. The people-finding features go way back to the days of gopher. BBEdit (and, no doubt, some of the full-fledged word processors) has long had the ability to find by content, searching your drive for a snippet of text. CNET Shopper gives you shopping price comparisons. What Sherlock does is integrate these various functions into one convenient place. A really great, "Why-didn't-anyone-think-of-this-before?" sort of idea. It performs all of its functions well (as well as, or even better than, the various individual programs/functions it combines), but not without cost. That cost is that it now takes significantly longer to just open up the Find dialog when you just want to look for a file on your hard drive.

1. <http://www.teamdraw.com/raul/stuff>

2. <http://www.bol.ucla.edu/%7Eawatters/hacks.html>

Perhaps it's worth the price to you. But I, ever cynical, say Apple should have done better. In any of several possible ways:

- Keep the old Find command for finding things on your computer, and add Find By Content, making a new, separate application for Internet searches.
- Or: instead of making new ways to find different things, expand the capability of the basic Find command...say, to allow the use of regular expressions.
- Or: keep Sherlock the way it is, but when a user hits Command-F, only load the application-finding program. Just like OS 7.x, it'll pop up instantly. If the user clicks on the shopping cart button, then you load that portion of the software...that way, you won't cripple the basic function of finding an application in order to get the more advanced function of Internet finds. (I think of Apple in this respect as very much like Microsoft, which went from making Help available, through a help viewer program, when you asked for it...to making a dancing RAM-hogging animated help cartoon that appears whether you need it or not, demanding huge chunks of processor time so it can watch you type and interrupt your train of thought to offer unwanted advice.)

The third of those suggestions is the one you, dear reader(s, I hope!), will probably like best. because it would require no sacrifice of anything you currently know and love about Sherlock. All it took for me to come up with it was a little common sense and a desire to optimize a piece of software rather than merely expand it. Back in the day of 5 1/4" floppy drives in computers with no hard drives and less RAM than my Casio digital wristwatch (really), programmers had to make every tiny bit of every program they wrote as resource-efficient as possible. The programming game wasn't about adding features; it was about getting the task the program was written for done, as quickly and efficiently and painlessly as possible.

(And yes, ladies and gents, I know that's the origin of the Y2K bugs the media was screaming about pretty much constantly in the latter half of last year...programmers decided it wasn't worth the resources (like storage space) to hold all those 19's before the years. Back in '60 and '70 it was a good call. But at some point people stopped thinking about whether it was a good idea and just kept doing what they had always done. A classic example of tradition trumping common sense.)

Apple, like Microsoft and most (though not all, God bless Nisus) other software companies, have long since stopped asking "archaic" questions like "is it worth it?" because as far as they

are concerned, the answer is, “Computers are Fast. RAM is Cheap. Hard drive space is Cheap,” perhaps followed by “Features sell upgrades.” But long lost are words of wisdom passed down from grandfather to grandson, “If it’s worth doing, it’s worth doing right.”

Apple and friends will say they are doing it right. And they’ll point to two things: features and stability. If they talk about speed at all, they’ll be touting the potential of the G4, and hiding the fact that their OS is keeping the hardware from living up to its potential by unnecessarily overburdening it with nonessentials (or even niceties, like Sherlock, QuickTime, etc.). (You can do a “minimum install” of the OS, and it’ll come in at around 13 MB. That’s a lot more than the days of emergency 3.5" startup disks, but it’s a sharp improvement over 160 MB of the recommended install. What’s in that extra 140 MB or so, and did anyone at Apple ever ask if it’s worth it, or if the same job could be done in 120 MB?) To me, doing it right means taking the existing product and making it more sleek, more usable, faster...before adding new features. That’s how you avoid what I call bloat...asking “How do we make what we have better?” rather than just “What can we add to what we already have?”

Apple has added a lot to the Mac OS, but there’s been pitifully little improvement to some of the most basic functions of the OS that have been around since System 7...calculating folder sizes, finding a file on your hard drive, starting up your computer, emptying the trash, starting up programs...none of these has improved much in the last several major releases, and several have actually deproved...in spite of significantly faster hardware. (If you question...How much improvement is possible here?...check out BeOS. On a Power Mac 9500, it is literally jaw-droppingly fast, beating a G3 with 8.6 or 9.0 head-to-head, hands down, at tasks like emptying trash, calculating folder sizes, and performing finds.) Apple has simply stopped concerning itself with mundane things like performance, favouring the flashier and more advertisement-friendly New Amazing Features.

All of the recent additions to Mac OS have proven that Apple can and does Think Different. What I’d really like to see, however, is an Apple that can Think Better.

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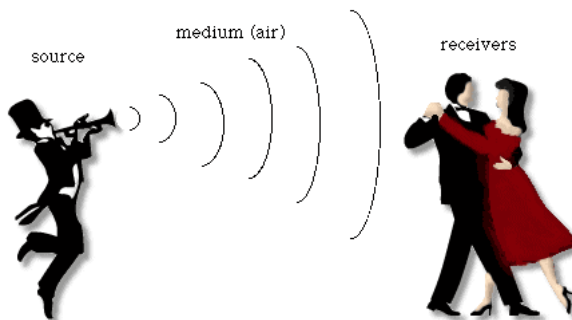


Part I: Fundamentals

Before we can discuss the specifics of digital sampling and synthesis, we need to ask some fundamental questions. What is sound? What causes us to perceive pitch, loudness, and timbre? How do we record and reproduce music? What are the differences between analog and digital recordings?

Sound

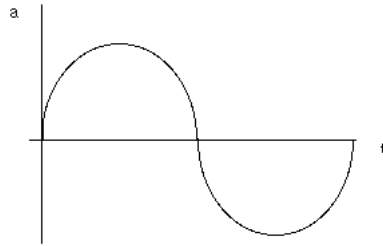
The phenomenon we call sound has three parts, all of which are necessary for its existence. First, a medium must be present that can transmit sound. This medium is usually air, but could also be water or a solid object, as sound passes through all three. Second, something must disturb this medium in order to create waves. These waves are generally alternations in air pressure, but they behave just as waves in water. Third, a receiver needs to be present in order to perceive the disturbance. The transmitter and receiver might be the same person, or two different individuals, but either way sound is perceived by anyone present.



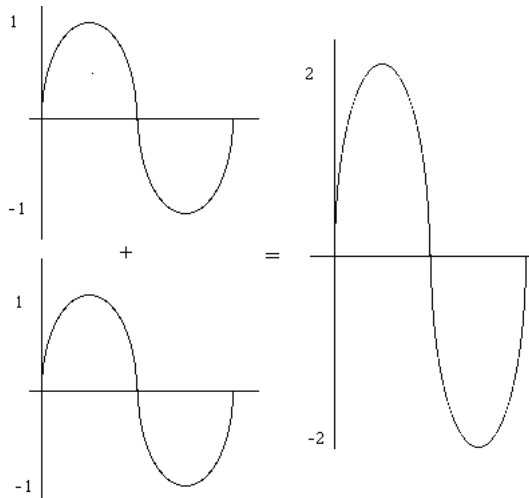
If any of these parts is absent, like an exploding TIE fighter in deep space (no air) or a tree falling in the forest (no one to hear it), there is no sound.

A Complex Phenomenon Simplified

All the sounds we hear are a complex mixture of waves, of all different sizes travelling in all different directions. Yet we only hear three things: frequency, amplitude, and phase. Frequency is dependent on the length of each wave. Since the speed of sound is constant within a given medium, then the shorter the wave, the higher the frequency. Amplitude is the literal strength of the wave measured in air pressure. The relationship can be shown easily by drawing a graph of amplitude over time.

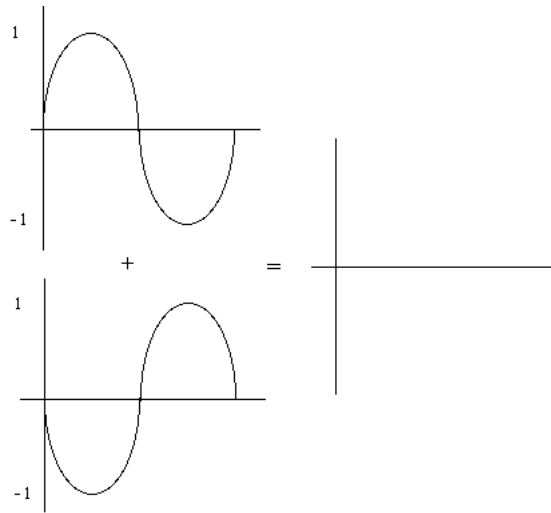


High and low pressure alternates at regular intervals, resulting in a simple periodic waveform (in this case, a sine wave). The length of the wave, $1/440$ sec., also tells us the frequency indirectly. Since there are 440 cycles of pressure every second, we know the frequency is 440 Hz. The indicated amplitudes (1 and -1) simply indicate an arbitrary maximum and minimum.



If we add a second wave at the same amplitude and frequency and begin both waves at exactly same time, they will reinforce each other and the result will be a doubling of amplitude. These waves are said to be 'in phase.' We can delay the onset of one wave, though, and

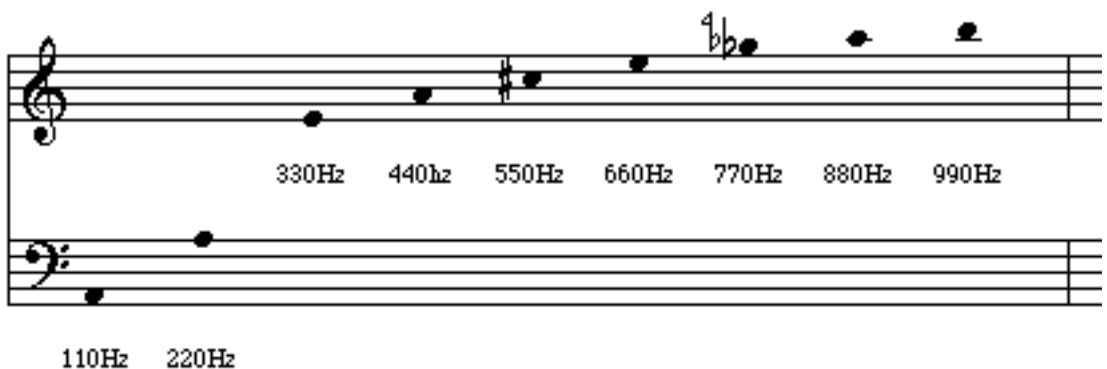
shift it out of phase. In the extreme example, with the two waves 180° out of phase, they cancel each other out altogether.



These examples are the clearest ones, but they never occur in nature. Waves are constantly cancelling and reinforcing parts of each other, but in much more complex ways. Not only are there many more than two waves present on most occasions, but the waves themselves are complex and contain many frequencies.

Partials

All natural sounds (and most artificial sounds, with one notable exception) are made up of multiple frequencies, each of which has a unique amplitude. These frequencies are called partials (partial frequencies). In the special case of musical notes, though, the partials have a particular “harmonic” relationship that allows us to perceive a unified pitch.



Some of you recognize this construction as the harmonic series. The frequencies are all related to the fundamental, or first harmonic, by whole number relationships. In this case, all the other waveforms will line up with the fundamental wave at each cycle, resulting in a clear pitch. Any time a number is doubled, it's an octave. Other intervals are pure, and are approximated by the tempered scale (a discussion of tuning systems is way beyond the scope of this article—maybe later). The same structure exists in a piano note, a cello note, a bassoon note, etc. The amplitudes and phase relationships differ in every case, though, and these help us to distinguish between timbres.

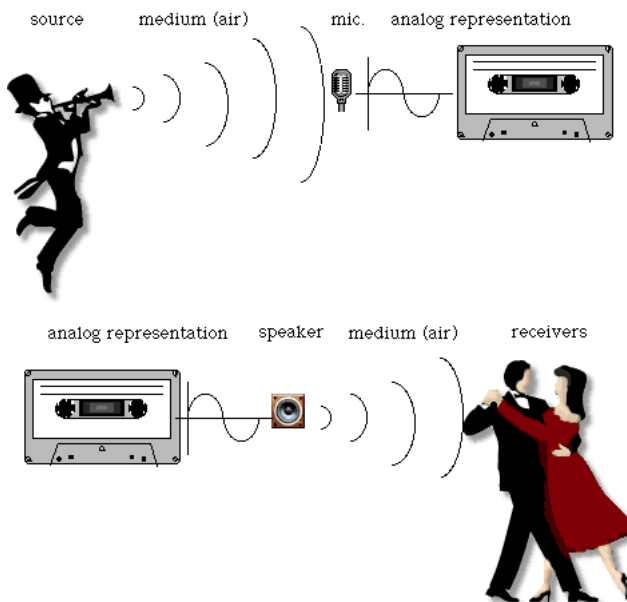
Aside: Why Harmonics Instead of Overtones

The construct above is also referred to as the overtone series. I avoid the word overtone for the following reason: the overtone that determines the pitch is still called the fundamental, but it isn't the first overtone. The frequency an octave higher is the first overtone, and the other overtones are numbered upward from there. It's like stepping into an elevator in London (ok, a lift), pressing the button for the first floor and getting out one floor too high. Like a British lift, the overtone series has a ground floor that complicates matters. If I asked you "What's the relationship between the 24th overtone and the 49th overtone?" you would just scratch your head, but if I asked you "What's the relationship between the 25th harmonic and the 50th harmonic?" you would know immediately. They're an octave apart.

Analog Recording

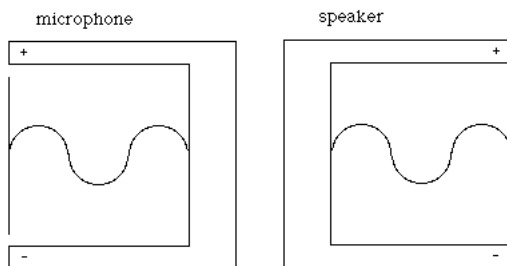
Before there were CDs and MiniDiscs and MP3s, there were LPs and cassette tapes. Even if you've long since parted with your record player, and haven't used your cassette deck since you picked up that cool MP3 player, understanding how analog works is essential. It is still the intermediate step between you and your digital recording, and if you take it for granted you'll regret it later. The term analog is short for analogous representation. The alternations in air pressure that we perceive as sound are transformed into analogous electrical voltages,

sent up and down wires, through amplifiers and other components, and stored on magnetic tape. Let's go back to our first diagram and add the analog stage.



Transducers

In the diagram above, the microphone and the loudspeaker are the doors in and out of the analog world. Both are transducers: devices that change one kind of energy to another. The only difference between the two is the direction of the process.



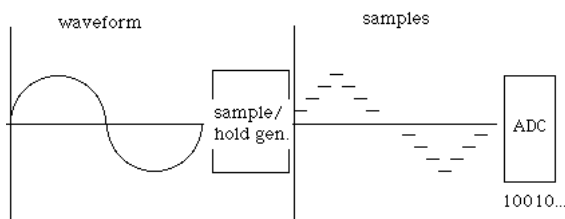
Have you ever used a set of headphones as a really cheap microphone? Now you know why it works. Each contains three parts, a membrane (diaphragm or speaker cone), a coil, and a magnet. The only difference is whether the membrane moves the coil or the coil moves the membrane. Well, that and the size. Loudspeakers are much larger than microphones because they have to handle much stronger signals. Next time you lift a speaker, remember that you're only lifting a box, some paper, and a really big magnet.

Digital Recording

A digital recording is simply a series of numbers representing analog waveforms. The trick is in making the measurements. Since a continuous waveform can be measured at an infinite number of places, yet we can only make and store a finite number of measurements, the result will always be approximate. The trick is to make a lot of measurements at regular intervals.

What “Sampling” Really Means

The first step in making a digital representation is an analog component called a sample/hold generator. This device reads the continuous signal, and outputs fixed voltages at regular intervals. A strobe light is a good visual metaphor. The next step is an analog to digital converter (ADC), which measures each voltage output by the sample/hold generator. The measurements are output as binary data, which can then be stored on any appropriate medium. CDs, DAT tapes, and hard drives can store any kind of digital information including digital audio.



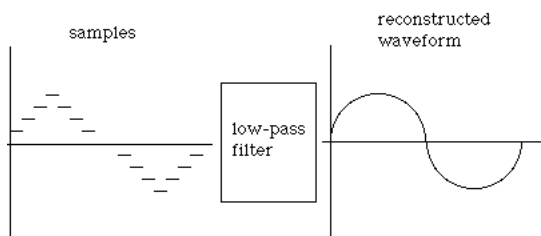
The Advantages of Digital

Once a signal enters the digital domain, it is simply a series of numbers. These numbers can be transferred between media repeatedly without degradation. Tape, on the other hand, accumulates noise with each generation. The other advantage is flexibility. Digital audio can be easily edited on a hard drive. It can also be modified in any way that can be mathematically modelled. A sound source can be placed in a bathroom, a gymnasium, or the Taj Mahal just by pressing a few buttons.

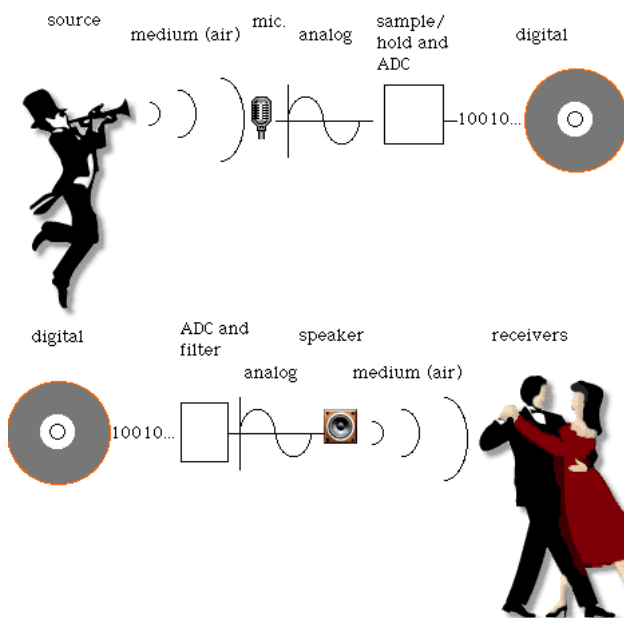
Digital Reproduction

No matter how you manipulate them, though, they're still numbers. At some point the sound must be reconstructed out of all those numbers. A digital to analog converter (DAC) produces voltages for each number. As long as the DAC and the ADC run at the same rate

(like a movie camera and a projector must run at the same rate), the original wave is reproduced. Well, not quite. Just as a sample/hold generator is needed to break up a continuous signal, a low pass filter (more on filters next month) smooths out the digital stairsteps.



Put all the pieces together, and it looks like this.



Next month: Digital Audio and the Mac—Part Two: The Specifics of Sampling.

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 THE ATPM STAFF, EDITOR@ATPM.COM

Back in ATPM 5.11, we had an [issue all about fonts](#)¹. So, logically, we asked our staff members what their favorite shareware fonts were. Here the summary:

Brooke Smith (Who is Really into Canadian Fonts)

- [Robotic Attack Fonts](#)², especially: “Girls Are Weird”, “Kathleeniefont” and “Horse.”



- [Larabie Fonts](#)³

Chris Turner

- Robotic Attack (see Brooke)
- [Cool Dog](#)⁴



1. <http://www.atpm.com/5.11>
2. <http://www.sentex.net/%7Ejmartz/attack/>
3. <http://www.larabiefonts.com/>
4. <http://www.philsfonts.com/phils/sectionsnov98/typecf1.html>

- [Nu Sans, by Marty Pfeiffer](#)⁵

Nu Sans & Nu Serif

If you like Apple's Espy Sans, this is your font! Worth the \$12 shareware fee, as it looks just as good on paper as it does on screen. I use this font for reading e-mail in Claris E-mailer.

- [Rosie, by Sean Cavanaugh](#)⁶, the author of Digital Type Design Guide, The Page Designer's Guide to Working with Type.

This is a great replacement for Geneva. Use it as your system's small font, for icon names and such. I've even used it as my main font for Web surfing, though any point size beyond 10 or 12 is going to suffer.

- Skia, by Apple. There is currently no URL for this font, as far as I know. The last place I saw it available was a System 7.5 CD. Imagine my pleasant surprise to find it on the final candidate disk image for OS 9 we're testing where I work!

5. <http://www.scootergraphics.com/nusans/>

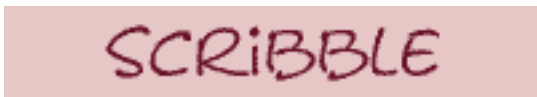
6. <http://www.mvd.com/seanc/dlfonts1.htm>

Edward Goss

- [Ransom Note](#)⁷
- [First Grade Display Caps](#)⁸



- [Scribble](#)⁹



Paul Fatula

- [Jeni's fonts](#)¹⁰

Especially the one called “jeni”, which is about the only script font I’ve ever not loathed, let alone actually liked...

Mr. Ramsey,

Listen carefully! We are a group of individuals that represent a small foreign nation. We do respect your business but not the country that it serves. At this time we have your daughter in our possession. She is safe and unharmed and if you want her to see 1997, you must follow our instructions to the letter.

You will withdraw \$118,000.00 from your account \$100,000 will be in \$100 bills and the remaining \$18,000 in \$20 bills. Make sure that you bring an adequate size attaché to the bank. When you get home you will put the money in a brown paper bag. I will call you between 8 and 10 am tomorrow to instruct you on delivery. The delivery will be exhausting so I advise you to be rested. If we manifest you getting the money early, we might call you early to arrange an earlier delivery at the

7. <http://home.earthlink.net/%7Evortextube/font.html>

8. <http://www.aloha.net/%7Ejoym/fonts/fonts.htm>

9. <http://www.creative-edge.net/fonts/handwriting.html>

10. <http://www.buffnet.net/%7Ejeni/fonts.html>

- I also very much like, and often use, the Junius fonts in the [Old English Font Pack](#)¹¹

Junius Rough makes amazing headers, and Junius Standard just plain looks good.

The impression conveyed by the story of the fight at Finnsburg and of Hygelac's raid on Merovingian Gaul is of a society which would have seemed anarchical to any Roman provincial governor of the fourth century. The many homes and farmsteads which have been excavated on some of the larger Baltic islands, notably Bornholm, once the home of

David Ozab

Personally, I'm not a big font hoarder. Times, Courier, and Palatino are my text fonts of choice, and Finale's new Maestro font is a long overdue replacement for Petrucci. There are other options for those of you who want to give your printed music a different look. Rather than listing them all here, though, I will refer you to an extensive list that I found [on the Web at RPM Seattle](#)¹².

Send your Segments submissions to editor@atpm.com.



11.<http://www.engl.virginia.edu/OE/Fonts.About.html>

12.<http://www.rpmseattle.com/rpm/coda/index.vs>

Macworld Expo 2000

Music at the Expo

The biggest news of the Expo was, of course, OS X—followed by Internet strategy, desktop video, and graphics. Music, though, is still an important part of the Expo, as evidenced by the bustling Audio and Sound Pavilion. I wish I could have made the trip myself, but there was a conflict with the start of the Winter Quarter at the University of Oregon. Why couldn't I be at a school with semesters? Oh well. Instead I spent my free time scouring the net for info. Here's what I dug up from various sources.

Best of Show

In another sign of the Mac's resurgence, Creative Labs have brought consumer-priced audio cards to the Mac. The SoundBlaster Live! Platinum Card gives both music hobbyists and gamers a compromise between the standard 1/8th" analog output of the G3 and G4 systems, and the high-end audio cards produced by Digidesign, MOTU, and Sonorus. For \$199, any Mac with a PCI slot can have stereo digital (SP/DIF) and analog (1/4" TRS) ins and outs, MIDI in and out, a 1/4" headphone jack, built-in wavetable synthesis, and an Emu EMU10K1 effects processor with 32-bit internal processing. The card supports both 44.1 KHz and 48 KHz sample rates at a 16-bit sample resolution.

Dolby Keynote

Steve Jobs wasn't the only CEO (sorry, iCEO) with an Internet strategy. Thomas Dolby Robertson, the CEO of Beatnik, delivered a keynote address on Friday that focused on the role of music and sound design on the Internet. He compared today's Internet to film during the Silent Era. He stated that "not unlike the silent movies that had a live piano player accompanying a prerecorded film, audio on the Web is currently seen as a separate enhancement

rather than an integrated component.” His emphasis was on technology, highlighting Beatnik’s ability to mix, crossfade, and sync short clips (about 15–20K), rather than music on the Web as a whole, but the basic concepts of mixing (and remixing) on the net promises great artistic potential. I hope that other companies follow Beatnik’s example.

AmpRadio—Internet Radio on a Mac

While interaction with the Internet holds great promise, the experience of music as passive entertainment will remain the most common musical activity. In addition to the popular MP3 format, Web Radio has risen as an important means of dissemination. Jason Bernthol, director of business development at Play Media Systems, presented AmpRadio, a \$10 shareware program, on Friday. According to Bernthol, the application allows users to access almost all of the 25,000 stations presently broadcasting over the net.

For iMac DV Owners Only—the iSub

Harman Kardon, designers of the speakers on the new iMac DV, announced a February release of the \$99 iSub. The iSub is a six-inch subwoofer that promises to drop the low end of the iMac’s frequency range to 44 Hz. While this is no where near the 20 to 30 Hz bottom of professional subwoofers (which are also bigger and more expensive), it is a vast improvement over the range of the original iMac, which rolls off around 250 Hz, and beats comparable computer subwoofers as well. The iSub was featured at Harman Kardon’s booth. One more qualification: you also need OS 9.

For Everyone Else—iCube

This five-speaker system (four satellites and a subwoofer) by Ice Technology connects to either the G3/G4 audio output or any Mac sound card through stereo RCA inputs. The cost (\$69) and frequency range (35 Hz–20KHz) should overcome iSub envy among users without a new model iMac. This system also makes a great companion to the Sound Blaster Live! Platinum PCI audio card described above.

U & I Software—A Video “Instrument”

The company that united visual art and sound design in Metasynth introduced Videodelic, a new video synthesis application. Though primarily a computer animation program, Videodelic promises an interface that can be played like a musical instrument or controlled by

either MIDI or audio input. The company also threw a U & I Macworld Party during the conference, featuring a multimedia performance demonstrating Videodelic.

K.I.S.S. Revisited

No, not the band (sorry Gene) but the principal of Keep It Simple Stupid (see [Tom Iovino's article in issue 6.01](#)¹). My own articles on fundamentals clearly demonstrate my interest in education, and I was understandably happy to see two presentations along these lines: a "Beginners' Guide to Music on the Mac" presented on January 6th by Scott Scheinbaum of Atomic Digital Studios, and "MIDI Demystified" presented the same day by Paul Jones of Home and Garden Television. For those of you who couldn't make it to the Expo, my series entitled "[MIDI and the Mac](#)"² (issues 5.10–5.12) will get you caught up.

Miscellaneous Stuff

On Friday, Josh Gabriel demonstrated "Remixing on the Mac" using Mixman Studio, while elsewhere, a panel asked the question "Is Tape Dead?" Meanwhile, Dan Brown of Apple discussed the needs of "The Mobile Musician." On Saturday, Beatnik teamed with Steinberg to discuss "Music on the Web," and a presentation on "Software Synthesis for the Mac Musician" compared QuickTime Music Instruments, Koblo, Bitheadz, Native Instruments, and Virtual Sound Canvas. Elsewhere on the pavilion, Digidesign and Mark of the Unicorn reaffirmed their positions as the senior developers of audio and MIDI software on the Mac.

Conspicuously Absent

No, this isn't an excuse to go back on my promise from last month and write yet another Opcode update. Instead, the most notable absence was Bias (Berkeley Integrated Audio Systems). Their audio editing software, Peak, has supplanted Digidesign's defunct Sound Designer II as the stereo hard disk editor of choice on the Mac. They're just up the road in Petaluma, yet couldn't make an appearance. They've also taken their time with OS 9 compatibility, discouraging behavior from a company that develops primarily for the Mac.

1. <http://www.atpm.com/6.01/cider.shtml>

2. <http://www.atpm.com/5.10/music.shtml>

Final Thoughts

The emphasis on software and the Internet in Jobs' keynote speech was also reflected throughout the Audio and Sound Pavilion. This point isn't made to belittle the importance of hardware, since other conferences like the NAMM show more than make up the difference. Instead, it highlights an important trend that I believe will continue well into the future. One more thing: I'd like to thank Steve Jobs for the inspiration for my new column's official title. I see a parallel between the "Think Different" philosophy and my own artistic view. I believe it's this common ground that brought me, and many other musicians, to the Mac in first place. As long as Apple keeps it up, I'll remain a devoted Mac user.

Next Month: The People vs. the Recording Industry.

References

- [Beatnik](#)³
- [Creative Labs](#)⁴
- [Harman Kardon](#)⁵
- [Ice Technology](#)⁶
- [MacAddict—Dolby Keynote](#)⁷
- [MacCentral](#)⁸
- [Macworld Expo 2000—San Francisco](#)⁹
- [Wired—Music for MacHeads](#)¹⁰

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.



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

4. <http://www.americas.creative.com>

5. <http://www.harman-multimedia.com>

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

7. http://www.macaddict.com/news/news/01_07_2000/dolby.html

8. <http://www.maccentral.com>

9. <http://macworldexpo.com/mwsf2000/index.html>

10. <http://www.wired.com/news/technology/0,1282,33521,00.html>

If you've been watching television lately, you may have noticed a new ad campaign by Earth-Link Network. It features some of the more frivolous (or fun) creations spawned out of the Internet. This proves that just about anybody can forge a little place on the Internet to call home. A home can range from a mansion to a split-level trailer. The difference is that, on the Internet, the greatest mansion sits next to the rickety old shack. All sites pretty much have an equal opportunity to be visited. Now I just wish I could get that blasted hamster dance song out of my head!

I hope you enjoy this month's selections of interesting Web sites. I'm always on the lookout for interesting sites. If you have one, or if you know of a cool one, email the address to dspencer@atpm.com...just don't suggest the hamster dance!

Icon Town

Web: <http://www.icontown.de>

A virtual town of icons.

It was only a matter of time before someone decided to create a little world out of icons. Icon Town is just what it sounds like—a unique community of icons. Each plot contains an icon you design or choose from. You can also have a link to your site. Whenever a plot comes up for grabs, just click over to the town hall where you fill out a simple form and submit it to the Council of IconTown. Within a week you will be notified if you get the plot.

Icon Town really gives the Web a community feel to it. You can see where Icon Factory, a popular icon site, has put up a shop. Sprinkled around the area are other businesses and personal sites, all arranged like a small community.

The site supports icons up to 32 by 32 in size and can reflect whatever personality you like. The only cost for a plot of land is a promise to either donate some money or time to your local homeless shelter.

Mike Bonnell's Computer Wallpaper

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

Beautiful computer wallpaper.

I switch my computer wallpaper about once a week. That means I need a source for great wallpapers, and Mike Bonnell's Computer Wallpaper fits the bill.

When I first visited Mike's site, I was instantly addicted. The wallpapers Mike creates are absolutely stunning. You won't be able to distinguish between what's real and what isn't.



Live Weather Images

Web: <http://www.weatherimages.org>

Satellite images, weather maps, and citycams from just about anywhere.

Here you can view current satellite images from NOAA, among other agencies. You'll get very detailed images of cloud cover, live radar, infrared images of entire regions, and many other weather related visual tools.

Another part of this site that I found interesting is the citycam section. Many large cities around the U.S. have television cameras installed by local news stations. They have linked many of these cameras onto one page and arranged them by state. So, from one site, you can view live images of many large cities in America!

Fantasy Stock Market

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

All the excitement...none of the debt.

If I were to invest some money in the stock market, I'd probably be better off just flushing the money down the toilet. Fantasy Stock Market lets you dabble in the stock market without accidentally losing your home. Just by signing up, you're given \$100,000 to play the stocks and mutual funds of the New York, NASDAQ, American, and other US stock exchanges.

Trailervision

Web: <http://www.trailervision.com>
The movies that Hollywood didn't make.

Sometimes the movie previews we see on TV end up being better than the actual movies. So, why not just forget about making a movie at all and just make awesome movie trailers? That's the idea behind Trailervision.

Trailervision is made up entirely of fake movie previews. The trailers are outrageously funny, well scripted, and decently shot. Hollywood will probably be knocking on their doors someday, wanting one of these ideas.

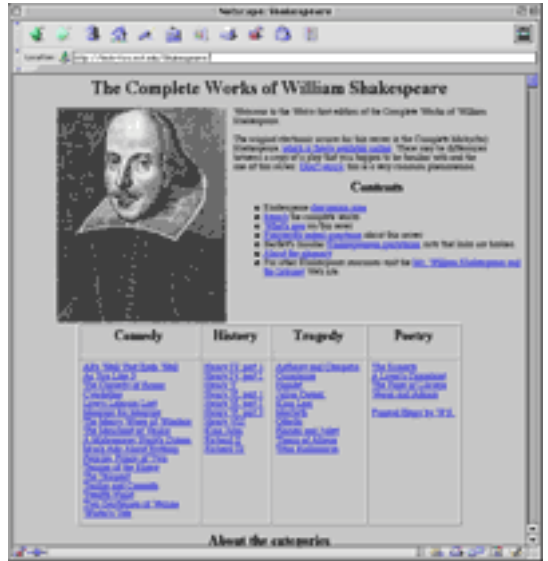


The Complete Works of William Shakespeare

Web: <http://tech-two.mit.edu/Shakespeare>
Calling all Shakespeare lovers.

I have a huge book weighing down my bookshelf—it's a compilation of most every play written by William Shakespeare. Searching through this tome can be a real chore. What I need is a way to reference any of his works quickly and thoroughly.

This Web site makes available every play that Shakespeare has written. It is arranged individually by play and further broken down into acts, and even into scenes.



Many other similar sites contain only a select few plays, in which portions of plays are cut out, or are just plain wrong. This site has it all laid out in a straightforward, complete fashion.

Real Age

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

Calculate your “real” age.

I found out that I’m five years older than what’s printed on my birth certificate. At Real Age, you fill out a detailed profile about your lifestyle, work habits, fitness, and more. After approximately half an hour of answering questions, your real age is calculated. The endless questions become annoying at times, but they’re necessary to give you an accurate score.

Once you find out your real age, the site highlights ways to improve your lifestyle. The suggestions are very personalized and detailed. For example, it doesn’t just say, “You need to exercise more.” Based on the information you provide, it tells you exactly what kinds of exercise would benefit you the most, how often to do it, and what kind of impact on your life it will have.

Virtual Crack Rock

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

A hilarious twist on e-cards.

What could be more delightfully refreshing than getting some fresh crack rocks in your mailbox! Go on over to Virtual Crack Rock and choose from an attractive selection of crack to email your friends. Add a little personal message and press the send button. Your recipient will receive an email with a link to a virtual pager, where he enters in his own personalized pager number. His dealer then gives him the crack.

The site is just like sending e-cards, but instead of cards, you’re sending pictures of crack cocaine.

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 X: Made with Macs

There's a slight change to the desktop picture series, brought to you this month by Grant Osborne. We all know that we can make great movies with our Macs, but imagine if some of the greatest movies were literally [Made with Macs](#)¹.

Introducing “Macspotting,” “Mac Wars” (Starring G3PO and i2D2), “Austin PowerBook,” “Reservoir Macs,” “The Mac Witch Project,” and “The Mac is not enough.”

The pictures were all drawn using indian ink. They were then scanned into Corel Photo-Paint and colored. Text was added using Strider Software's TypeStyler 3.

We are considering a sequel to the movie series, so if you have any other ideas for movies made with Macs, email your them to gosborne@atpm.com.

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.

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1. <http://www.atpm.com/6.02/madewithmacs/>
 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/>

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” 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.peircsw.com/DeskPicture.html)¹². You can also find a review of DeskPicture on [this page](http://www.atpm.com/5.10/roundup.shtml)¹³.



12.<http://www.peircsw.com/DeskPicture.html>

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

Emulation Fascination

Mac computers only run Mac applications. Windows computers only run Windows applications. Nothing could be more straightforward, right? As is often the case in the computing world, things aren't always as simple as they seem and a one-word answer just won't cut it in this case. The true explanation is something along the lines of yes-no-sortof-kindof, and that means we need to get technical. Today's topic: emulation.

G3s, G4s, and to a lesser extent the PowerPCs and 68k Macs of yesteryear are all modern-day computers. Not in relation to one another, of course, but in terms of the general history of computing. In ancient times, the Commodore 64 was cutting-edge technology. Ditto for the Atari video game console, and ditto for the original 8-bit Nintendo system. Each of these machines was once a viable computing platform of some kind that is now completely obsolete. But just because something is obsolete doesn't mean it's dead.

Emulation is the saving grace of old technology. It's a way for your humble, modern-day Mac to temporarily act like a completely different machine. In some cases, that other machine can be an old relic that's useless but nonetheless nostalgic. Or it can be another modern day machine like a PalmPilot or even a Windows PC. Pick a platform, any platform. Chances are, there's an emulator out there that can bring it to your Mac. All you need to supply is a reason why.

We've picked five emulators for this roundup, but there are a lot more out there. The definitive place to find out what's available is [emulation.net](http://www.emulation.net)¹.

1. <http://www.emulation.net>

iNes

Authors: John Stiles and Marat Fayzullin

Web: <http://www.komkon.org/fms/iNES/>

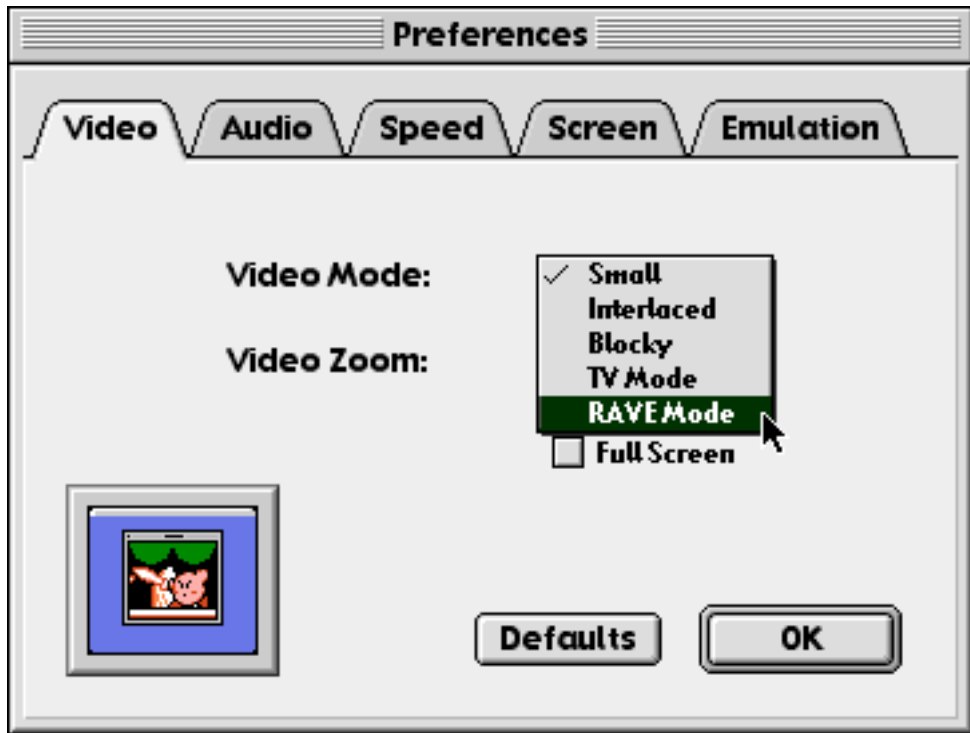
Price: \$15

File Size: 336K

Requirements: not specified



Video game emulators like iNes are pure reminiscence. In my younger days, 8-bit Nintendo was about as cool as you could get. Sure, it wasn't much. We didn't have any 3D graphics. It was just the barest minimum back then, a screen of blocky pixels with repetitive music.



iNES lets you play games in full screen mode or in miniature size.

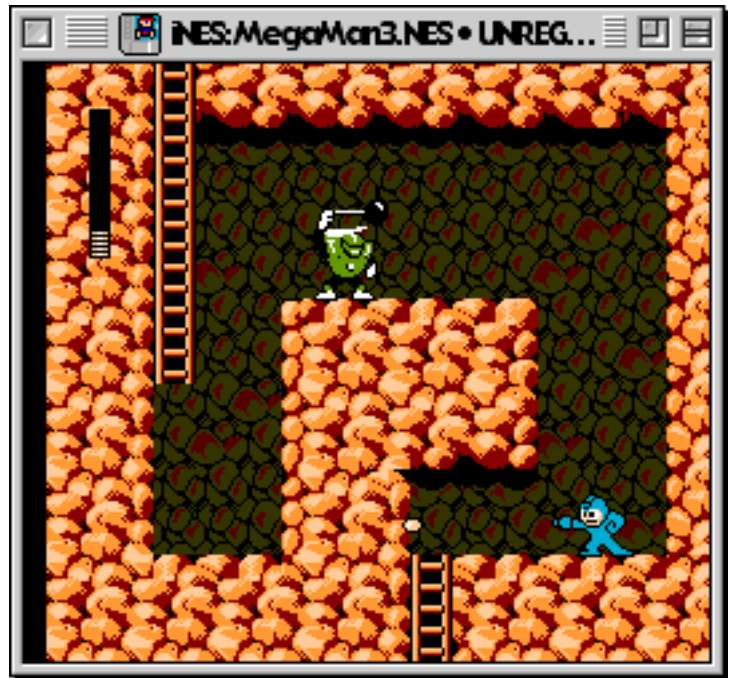
iNes brings you back to those olden days and makes you thankful they are long gone. This minuscule application is just as powerful as the old gray box was, and it adds a few new features like NetPlay. Just as many modern video games let you connect to the Internet to play against a friend or find an anonymous opponent, iNes allows the second person in a two-player game to play from his own computer. The faster your Internet connection, the smoother your game play will be.

Another nice feature of iNes is its array of preference settings. You can control all the major aspects of how iNes makes your Mac behave like a Nintendo, a handy feature when certain games don't perform as well as others. The settings may not make much sense without a bit of research, but at least they're there.

iNes is pretty much useless without some games to play on it. Hooking up your Nintendo to your Mac isn't an option. Instead, hit the search engines and start looking for Web sites that archive what are known as

ROMs. These are essentially disk images of the old bulky gray Nintendo cartridges. It's illegal to download and play ROMs unless you own a copy in its original form, but it's up to you whether to risk that Big Brother is watching.

Overall, iNes is a nice little app. I suffered a few crashes while playing certain games, freezing the game and my Mac as well, but that didn't block out the blast from the past. A Windows version is also available, as are Linux binaries. In addition, separate emulators are available for other Nintendo systems like Super Nintendo and Nintendo 64. Check [emulation.net](http://www.emulation.net)² for details.



2. <http://www.emulation.net>

Power64

Author: Roland Lieger

Web: <http://www.auto.tuwien.ac.at/%7Erlieger/Power64/index.html>

Price: \$25

File Size: 595K

Requirements: PowerPC processor



Moving even further back in time than the original Nintendo, we come to an emulator that resuscitates the Commodore 64. Why anyone would want to do this is beyond me, but nostalgia is nostalgia, no matter how crude the hardware being emulated.

Power64 is unique in its ability to perform several emulations at once. Whereas most emulators will only let you have one window open at a time (corresponding to one machine being emulated), Power64 can handle as many screens as your Mac's RAM has room for. So theoretically you could play two games at once. You know you want to.



Perhaps a more legitimate use of Power64 is to transfer old data onto your Mac, and thereby give it a new life. Power64 can copy and paste text and graphics onto the clipboard, or you can select the contents of a screen and drag them onto your word processor of choice.

Among the built-in programs that come with Power64 are SMON and the NEW Magician, which can come in handy if you're doing some Commodore 64 programming. Three games are also included, Block Out, Serpentine, and Quadromania. The manual is extensive, but the biggest drawback to using Power64 is its built-in time limit. Until you register, you'll only have ten minutes before the application stops responding.

MacMAME 0.35

Authors: John Butler, Aaron Giles, Brad Oliver, and more

Web: <http://www.macmame.org>

Price: free

File Size: 1.9 MB

Requirements: PowerPC processor

Note: More recent beta versions are also available



Console emulators like iNES are great, but where do you go to play the authentic arcade games? MacMAME (Multi-Arcade Machine Emulator) brings plenty of quarter-eating favorites right to your desktop in all their original glory.

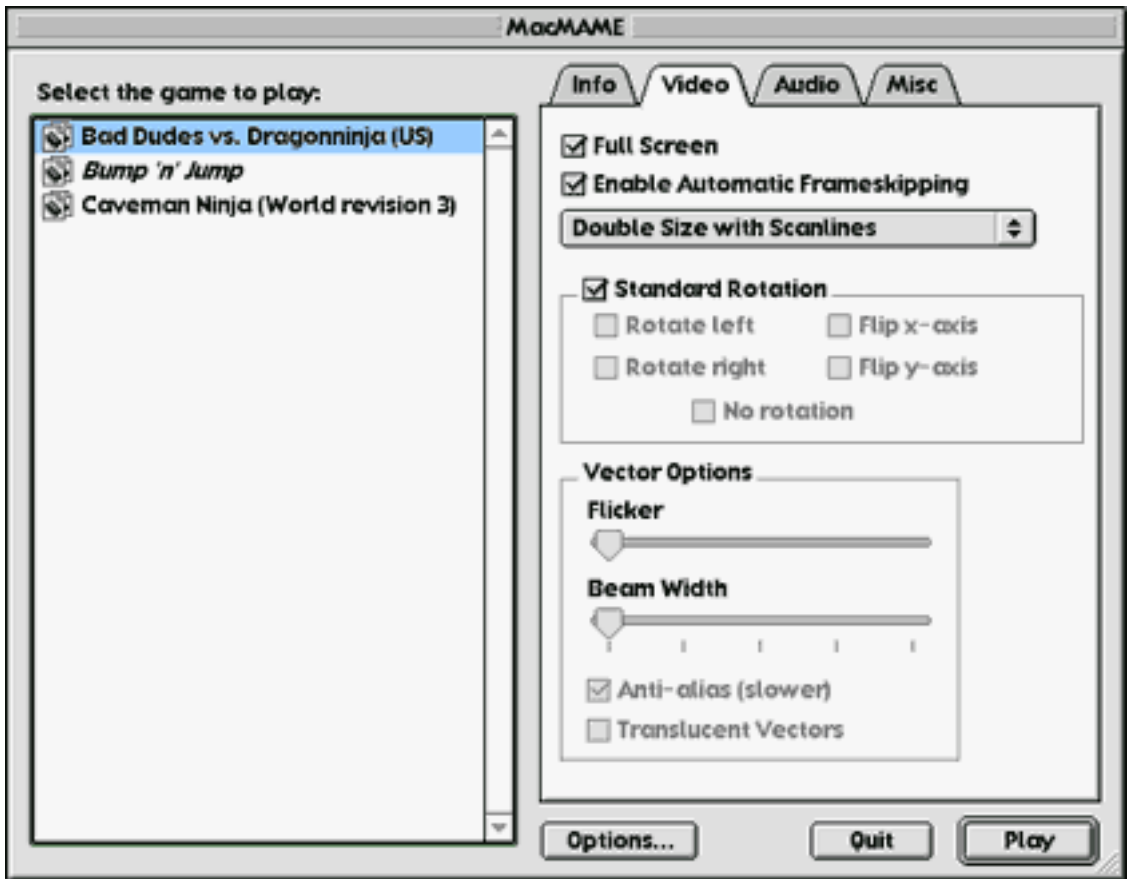
MacMAME supports close to 900 unique games. Its four-tabbed preference window has plenty of options for you to customize your gaming experience, highlights of which include OpenGL and Glide 3dfx graphics support. But that's just the beginning. True game wizards will enjoy the option to rotate the orientation of the game screen on your monitor, allowing you to turn your monitor sideways and utilize its maximum viewable area (obviously this depends on your monitor's dimensions). If nothing else, all of MacMAME's preference settings let you turn off unnecessary effects and get your game to perform at optimum speed relative to your Mac.

Game play is just as easy. First, scrounge up some games by visiting [MacMAME.org](http://www.macmame.org)³ and following one of the game archive links. A good place to start is [EMU Views](http://www.emuviews.com)⁴. Once you've downloaded the ROM image for the game you want (it's typically a Zip file), drop it into MacMAME's Roms folder. Launch the application, select the game, and you're off. There's

3. <http://www.macmame.org/roms.html>

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

no need to unzip anything. If you download a ROM file that MacMAME can't open, it won't be listed in the list of available games.



MacMAME has the potential to become the emulator to end all emulators, at least where video games are concerned. A new freeware emulator called MacMESS is an early step in that direction. Its interface is very similar to MacMAME, but it supports video game consoles like Nintendo, Sega, and many more. We didn't review it here since it's so similar to MacMAME, but check it out at [emuverse.com](http://mess.emuverse.com/)⁵. Whether you're using MESS or MAME, the obligatory warning still holds true: downloading ROMs can be an infringement of copyright, so be careful.

5. <http://http://mess.emuverse.com/>

Palm OS Emulator 3.0a2

Authors: 3Com

Web: <http://palm.3com.com/devzone/pose/pose.html>

Price: free (may require registration)

File Size: 3.2 MB

Requirements: not specified



There's more to emulation than just video games and old computers. If you've ever thought about buying a PalmPilot but wanted to try it out for a little while first, the Palm OS Emulator (POSE) might be able to help.

This emulator is a little different from the others we've talked about so far in that it's meant for developers. Palm makes this program available so that programmers will have an easier time writing software for the Pilot by allowing them to test it out on the same machine on which they write their code on.

Like most emulators, POSE needs a ROM file in order to work properly. If you already have access to a Pilot, you're all set—POSE can suck a ROM off a real PalmPilot with no trouble. If not, you'll have to download the file from 3Com. They're a bit stingy about giving them out (and rightly so, since this is the heart and soul of the Pilot) but as long as you're willing to pretend you're a developer it should work just fine.

With the ROM file downloaded, you're ready to start emulating. POSE will show you a graphic of the front of a Palm, and everything will respond to your mouse clicks the same way it would if you were holding a real one in your hand.

Outside of software development, the usefulness of this emulator is highly questionable. It's a novelty in its own right, but one that is largely useless unless you plan on buying the real thing.

MacBochs 991012

Authors: Kevin Lawton and David Batterham

Web: <http://members.xoom.com/macbochs/>

Price: \$25

File Size: 1 MB

Requirements: not specified



Now we come to one of the most daunting tasks you could ask your computer to perform: Windows emulation.

First, a few disclaimers. Since the Mac and Windows worlds are so radically different under the hood, emulating a Windows machine on your Mac is inevitably going to be slow. The faster your Mac, the faster it will be able to perform the emulation—G4 owners are therefore considerably better off in this regard than people with slower PowerPCs. Second, Windows emulation will probably crash your Mac, often repeatedly. If you're willing to brave these conditions, proceed on to MacBochs.

There are two commercial Windows emulators on the market today, Virtual PC and SoftWindows. If you need to do real work on your Windows-emulating Mac, look into buying one of these. MacBochs has some of the same features, but it's not quite as stable or robust. In general, MacBochs will only appeal to those who are extremely computer literate and also very patient. It is an experimental port of a Linux application, and therefore somewhat rough around the edges.

When you download MacBochs, you get a bare-bones disk image. It's not a ROM, as was the case with the other emulators, but rather a (potentially) huge file that acts like a hard disk when MacBochs is running. Virtual PC works in the same way. The advantage here is that you'll never need to worry about partitioning your Mac's hard drive. As long as your existing hard drive has the space for Bochs, all you have to do is launch the application.

One of the first things you'll want to do once you get Bochs up and running is create a new disk image which will house DOS, plus a version of Windows if you're feeling especially daring. Here's where the tricky part comes in. You should be familiar with disk images and DOS installation **before** you start fiddling with MacBochs's settings, at least if you hope to get any

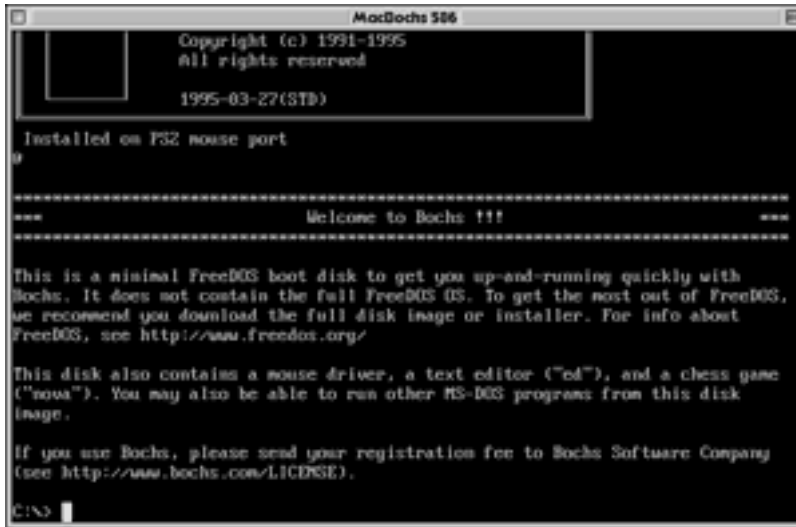
results. If you are, the Bochs Setup utility shown below should take care of all the basic details.



A few more disclaimers are in order at this point. MacBochs doesn't have CD-ROM support yet, nor does it offer sound or networking (more features are available in the Linux version, however). You're going to be emulating an extremely limited PC, at least until newer versions of MacBochs come out. Commercial Windows emulators have a definite edge here. The best reason to think about experimenting with Bochs is its price. At \$25, you're getting a respectable emulator that may be the ideal solution if your emulation needs are relatively minimal. Why bother with the advanced features offered in commercial emulators if all you need is a way to access some DOS programs?

That's not to say that Bochs can't play with the big boys. According to the Bochs documentation, Access, Excel, PowerPoint, and Word Perfect have all been run under emulation.

Whether you can get this to work on your machine will largely depend on how much time you spend configuring the system.

A screenshot of a MacBochs 586 boot screen. The window title is "MacBochs 586". The text displayed is as follows:

```
Copyright (c) 1991-1995
All rights reserved

1995-03-27(STD)

Installed on F32 mouse port
0
-----
***                Welcome to Bochs !!!                ***
-----

This is a minimal FreeDOS boot disk to get you up-and-running quickly with
Bochs. It does not contain the full FreeDOS OS. To get the most out of FreeDOS,
we recommend you download the full disk image or installer. For info about
FreeDOS, see http://www.freedos.org/

This disk also contains a mouse driver, a text editor ("ed"), and a chess game
("nova"). You may also be able to run other MS-DOS programs from this disk
image.

If you use Bochs, please send your registrations fee to Bochs Software Company
(see http://www.bochs.com/LICENSE).

C:\> |
```

Even with zero customization, MacBochs will still boot into a version of DOS.

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Madden NFL 2000 1.0.1

Just after we wrote last month's [review of Madden NFL 2000](#)¹, Aspyr announced that it was releasing a version 1.0.1 updater for the game. The updater addresses several issues. It includes two fixes for dealing with crashes at startup, and fixes for the global playbook crash, the Veteran's Stadium/Software rendering crash, and the franchise trade crash. It addresses two issues concerning timeouts and three issues concerning clock problems. It also fixes a cosmetic problem in the create player screen. Finally, it properly assigns jersey numbers when trades occur.

Download the Madden NFL 2000 1.0.1 updater from [IMG](#)².

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JChecker 2.1.1

JChecker has been updated to version 2.1.1. We [reviewed this HTML code validator](#)³ back in 5.08. The current version of JChecker now features a new link-checking function, as well as improvements to its HTML “beautification” feature. JChecker checks over fifty things to make sure your pages are operating at peak performance, things like the hierarchical relation of tags, corresponding ending tags, attributes, and spelling. Its power can be customized by editing the HTML Tag Dictionary.

JChecker is a 1.2 MB download, and is available [here](#)⁴.

1. <http://www.atpm.com/6.01/madden.shtml>

2. <http://www.insidemacgames.com/downloads/updates/99/madden/download.shtml>

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

4. http://www02.matsumoto.co.jp/product/jchecker/index_E.html

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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





BY DANIEL CHVATIK, DCHVATIK@ATPM.COM

A.I.D. 2.1 (formerly Bid Watch)

Company: Epigroove

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

Requirements: Mac OS 8.5.1 or higher, some functions require Internet connection

Price: \$29.95 online purchase, demo available

Online auctions have become a way of life for many Americans, and almost an economic force to be reckoned with. [eBay](http://www.ebay.com/)¹ still leads the pack, followed by [Amazon](http://www.amazon.com/auctions)², [Yahoo!](http://auctions.yahoo.com/)³, and some smaller, more specialized auction sites such as [AuctionMac](http://www.auctionmac.com/cgi-bin/amaff.cgi?id=atpminc)⁴. Even Apple has acknowledged the importance of online auctions by adding support for Amazon and eBay auctions to its Sherlock 2 search engine (in the shopping section). If you are engaged in a lot of auctions however, it's easy to lose track of the details. What items were you bidding on? Which ones were you selling? Did you get a check for that old Swiss clock? Did you ship your husband's old football helmet? Did you already pay for the Beanie Babies you won for your daughter? And did you leave a feedback for that auction? How much did you sell that TV for last year? With some people doing dozens or hundreds of auctions each year, it gets very easy to lose control. This is what auction management software is for. Many of these programs are [FileMaker](http://www.filemaker.com)⁵ standalone databases, and A.I.D. (formerly known as Bid Watch) from 'FileMaker Expert' Epigroove is no different in that respect.

A.I.D. is a tool for people who use online auctions. A lot. And it is very powerful for that. It allows you to view the items you are currently selling and the items you are currently bidding on. It archives winners and losers for both bidding and selling auctions. It also allows you to create various reports about your auctions that inform you about the status of pay-

-
1. <http://www.ebay.com>
 2. <http://www.amazon.com/auctions>
 3. <http://auctions.yahoo.com/>
 4. <http://www.auctionmac.com/cgi-bin/amaff.cgi?id=atpminc>
 5. <http://www.filemaker.com>

ments, shipments, feedback, and correspondence. Information is either downloaded over the Internet (saving you the hassle of having to type everything by hand) or entered by the user.

Data.jp3

ADD BIDDING SELLING SEARCH REPORTS PREFERENCES

VIEW LIST OF: CURRENT POTENTIALS WINNERS LOSERS Print List

Your winning bidding auctions are listed below [96 listed] Update Auctions Listed

End Date	Time	Item	Top Bid						
▶ 11/27/99	11:03 am	ANTAWN JAMISON 90-99 FINEST ROOKIE	\$1.75						
▶ 11/27/99	9:07 am	Katherine Hepburn ME MINT HCDJ FIRST EDITION	\$3.00						
▶ 11/26/99	7:24 pm	Me by Katherine Hepburn	\$2.99						
▶ 11/26/99	2:54 pm	Katharine Hepburn A GREAT CHRISTMAS GIFT!	\$5.99						
▶ 11/23/99	9:05 pm	95-96 Metal Magic Johnson #161 Lakers	\$1.51						
▶ 11/23/99	8:58 pm	Scottie Pippen metalized floor metal 1997	\$1.00						
▶ 11/20/99	2:01 pm	3 DIFFERENT TIM DUNCAN CARDS!!!	\$1.00						

View My Bidding View My Selling View My Feedback Total Amount: \$2,089.91

Data.jp3

ADD DELETE BIDDING SELLING SEARCH REPORTS PREFERENCES

Return to List

AUCTION INFO MORE INFORMATION

Auction Item **Katharine Hepburn A GREAT CHRISTMAS GIFT!**

Item Number 203894390 Fetch View

End Date 11/26/99 End Time 02:54 pm

Top Bidder

Top Bid \$5.99 My Max

Shipping \$3.75 Total \$9.74

STATUS INFO MORE INFORMATION

Mark as: Won Lost Pot.

Heard From 11/25/99

Money Sent 11/27/99

Item Received 12/13/99

Feedback Given

Return Feedback

SELLER INFO MORE INFORMATION

Seller's ID johndoe View

Email johndoe@domain.com Email

Real Name John Doe Feed

Address 123 Candy Land Lane
Make Believe, IL 60000

Phone eBay Rating 56

PICTURE INFO MORE INFORMATION

Import Picture

Paste Picture

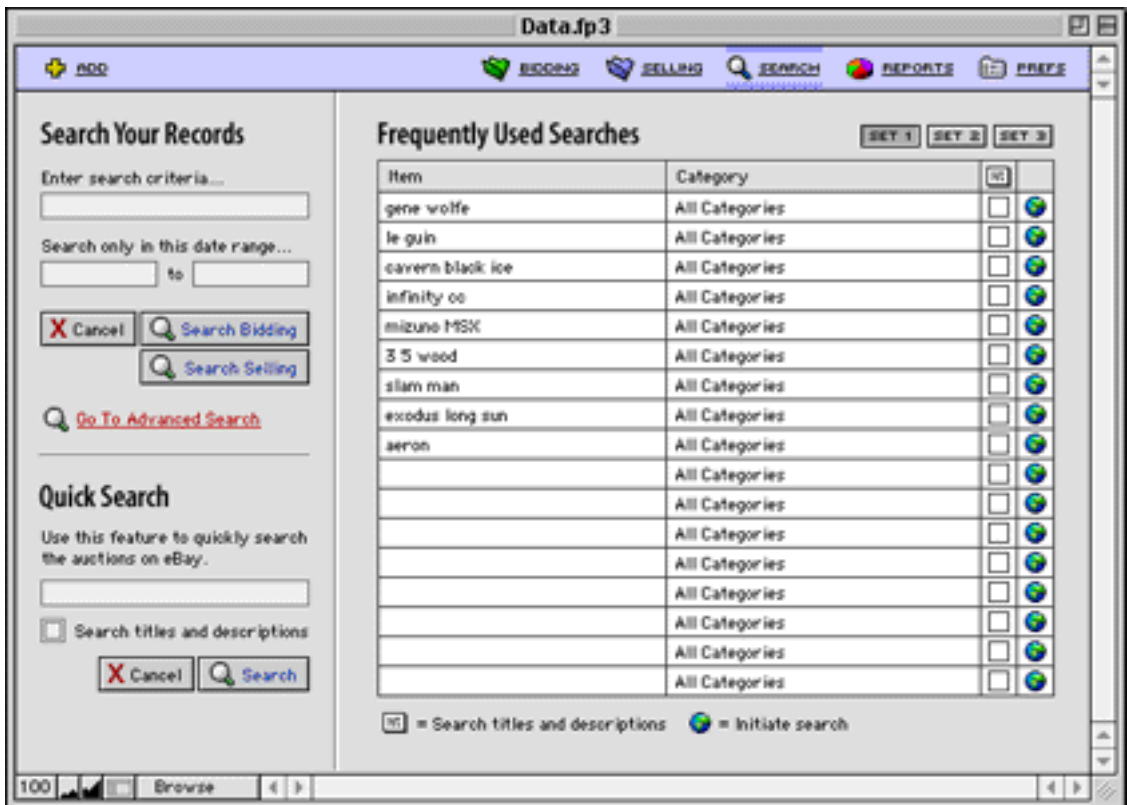
Clear Picture

Enlarge Picture

For example, you can toggle the feedback status of an item by simply clicking on the line of that item beneath the feedback icon. The interface is of course limited by what FileMaker supports, and while it is relatively pretty, I found it rather hard to use in the beginning. Once you get used to it, it's not quite as bad but it still doesn't thrill me. Information about an item is saved in a neat way, including the picture if available.

One very nice feature of A.I.D. is the ability to automatically generate customized correspondence with the winner or seller of an auction, taking this tedious task out of your hands by filling in the actual information into a template you specify. I just wish it would do the feedback as well! :-)

You can tell the effort that went into A.I.D., and the developer constantly releases new and improved versions, but overall the program has several shortcomings. It is still buggy, failing to update information or updating it incorrectly. This is a big problem because the mistakes can go unnoticed and negate the entire advantage of such a tool if it requires you to check each auction by hand for a wrong update.



And although A.I.D. is a nice tool, it is simply overkill for the average user. eBay's "my eBay" feature provides some of A.I.D.'s functions for free. A.I.D. is also rather overpriced compared to its competition. While functionally at the top of the crowd, you pay a hefty premium for that. Most auction trackers are around \$10 to \$20. Although they offer less features, some nice ideas can be found in these cheaper clients that A.I.D. is missing, such as being acoustically notified if a new bid was placed on an item or notification if a buyer with bad feedback bids on your items. Another big drawback is A.I.D.'s limitation to eBay. There are many more auction sites out there as mentioned above, and it would be nice if A.I.D. supported them all in a consistent way. Auctioneer Pro, for example, is a commercial program for \$24.95 that supports Amazon, eBay and Yahoo!

Nevertheless, A.I.D. is a good idea, and if Epigroove can iron out the last bugs, adjust the price, adopt some ideas from its competitors and open its doors to other auction sites, it will become an invaluable tool for involved auctioneers.

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BY JAMIE MCCORNACK, JMCCORNACK@ATPM.COM

Canon Photo

Company: Canon Software

Web: <http://www.software.canon.com>

Requirements: Power Mac, System 7.5 or higher, 32 MB of RAM, 80 MB disk space

Price: \$34.95

As you'd expect from a division of Canon, this photo manipulation software is excellent. It's a winner in every way. And as you'd expect from a major publisher with deep roots in Windows, the company's sales department is not quite up to speed on its Mac products.

It sure is nice to see Canon getting on the Mac bandwagon. So often, when big companies get in the software business, they look at the huge installed base of Windows machines, look at the less huge installed base of Macs, and say, "There's a big pile of money (Windows) and a small pile of money (Macintosh), so let's not be idiots, let's take the big pile!"

Sometimes I call PR departments and ask if a Mac version of some program is in the works, and they chuckle and patiently explain the above paragraph to me. I've heard it often enough that I don't bother pointing out the fallacies, which are:

- You don't actually get the big pile of money, you get your market share of the big pile of money. If lots of companies are squabbling over the big pile, your share may not be very big.
- Both the money piles are big piles. You needn't give up the Windows pile to enjoy the Mac pile too.
- Thanks to the iMac, Macintosh is very strong in the home and new user markets, and has always been strong in graphics markets. Sure, if your product is customer scheduling software for dentists' offices, Windows may cover the market, but for a low cost-photo

manipulation product where your main selling points are high quality and ease of use...how many of your potential customers have gumdrop colored Macs on their desks or on their laps? [Hint: more than a couple million.]

Apparently, Canon Software (a division of Canon Computer, which is a division of Canon Camera) figured this out for itself.

Canon Photo for Mac coexists with a Windows product, so we'd expect a bit of interface weirdness, right? Well, we get it, but it's not your usual trying-to-be-Windows weirdness, it's more the MetaCreations-Bryce-and-Power-Goo weirdness: not what you were expecting, but clear and easy when you get the hang of it.

I may be showing my own prejudice. I've been using Mac OS for so long that the Mac interface seems "intuitive" to me, but with Mac OS X hurtling toward us I may soon have to intuit a whole new set of responses. It's possible the Canon Photo interface is more "intuitive" (a word which used to refer to intuition, and has degenerated to meaning "similar to what you already know how to do") than the Mac, since its interface is patterned after that most ubiquitous symbol of public access to technology, the TV remote control.

The Tools palette includes most of the high-end photo tools, such as a Crop tool (upper right), a Magic Wand (one left of the Crop tool), and a Clone tool (the linked brushes below the Crop tool), plus a Red Eye Removal and Dust Removal tools (bottom right). The Red Eye tool erases red only, and replaces it with a similar value of gray, thus making your kids seem human in flash pictures and avoiding the Little Baby Dameon look.

The four icons atop the remote control symbolize Get, Enhance, Share, and Internet.



Click the “Get” button, and you get four source options: Disk, Camera, Scanner, and Internet. “Disk” sends you through the usual hierarchical menu routine we all know and love. Select Open Picture from the File menu, and away you go; and “Scanner” (duh) lets you acquire direct from a scanner. The “Camera” option is nice, in that you can download from a digital camera without messing with any other software, and the “Internet” option offers you a variety of Web sites to search (presuming you have an Internet connection).

Now that you have something on the monitor, the next button puts you in Enhance mode.

Here’s a typical amateurish photo, of two guys hanging around an Alp, taken by a paparazoid with a cardboard camera costing less than \$10. It was blown up to a 4 x 6 print, scanned on a \$99 (street price) flatbed scanner, and saved as a JPEG. Thanks to a witty caption and some topical interest (That’s me getting instruction on how to stand like an action hero, and the caption was, “No, it’s shoulders **back**, stomach **in!**”), that photo was printed as-is in a trade publication.



Egotist that I am (that’s me on the right, by the way), I rather liked that picture. It might be crisper if it had been shot with an \$18 camera instead of a \$9 camera, but the magazine was in a rush, and as a story illustration, it did just fine the way it was.

And since I have it filed on my iMac as ActionHeros.jpg, and since the Mac shows files in alphabetical order, this was the first photo I opened in Canon Photo. I switched to Enhance, clicked QuickFix, and...voila!



Is that a significant improvement, or what? The subjects have lost the washed-out look and their features are crisper. The people in the background are more colorful. Even the stone-work looks richer and more detailed.

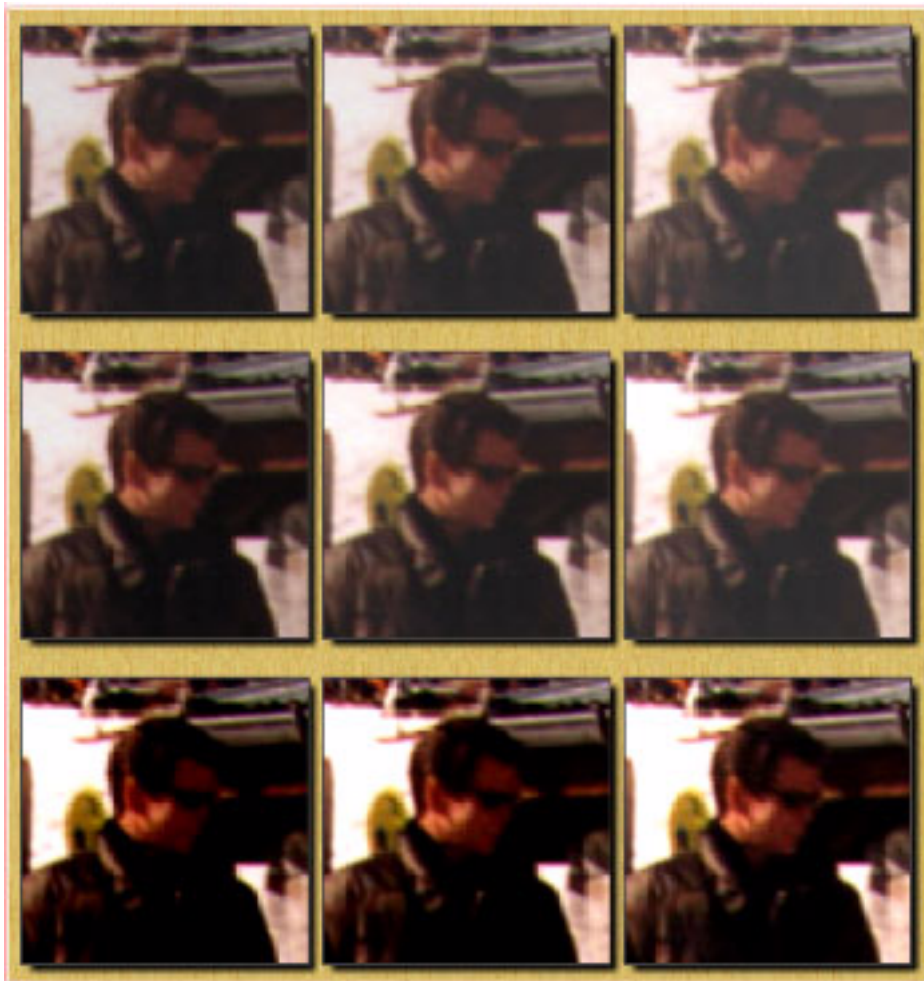
Sure, a hot Photoshop artist with the proper filters (probably Sharpen Intensify from Kai's Power Tools) could have produced similar results in not much more time, and an adequate Photoshop craftsperson could have done it in an hour of messing with Unsharp Mask and Histogram and Color Balance and assorted sliders for Radius and Threshold, but nobody could do this in the first two minutes of the first time they use Photoshop.

I have a friend who is not yet hip to the arcane ways of computers. She understands them on the level that five-year-olds understand television—if you push the right button at the right time, Barney comes on—so when I called her over to see this amazing transition, she put on her Queen Victoria we-are-not-amazed face and said, “Good, it doesn't look blurry and snowy any more. So? Computers are supposed to do stuff like that, aren't they?”

Well yeah, it's just impressive when a program will do that for \$34.95 and one click of a button.

She pointed to the button. "But it says, 'Quick Fix.' That's what you wanted, isn't it?"

Yes it was. She took it in stride, while I sat there like the aforementioned five-year-old when first confronted by the Thermos Bottle Mystery—it keeps cold things cold, it keeps hot things hot: how does it know?



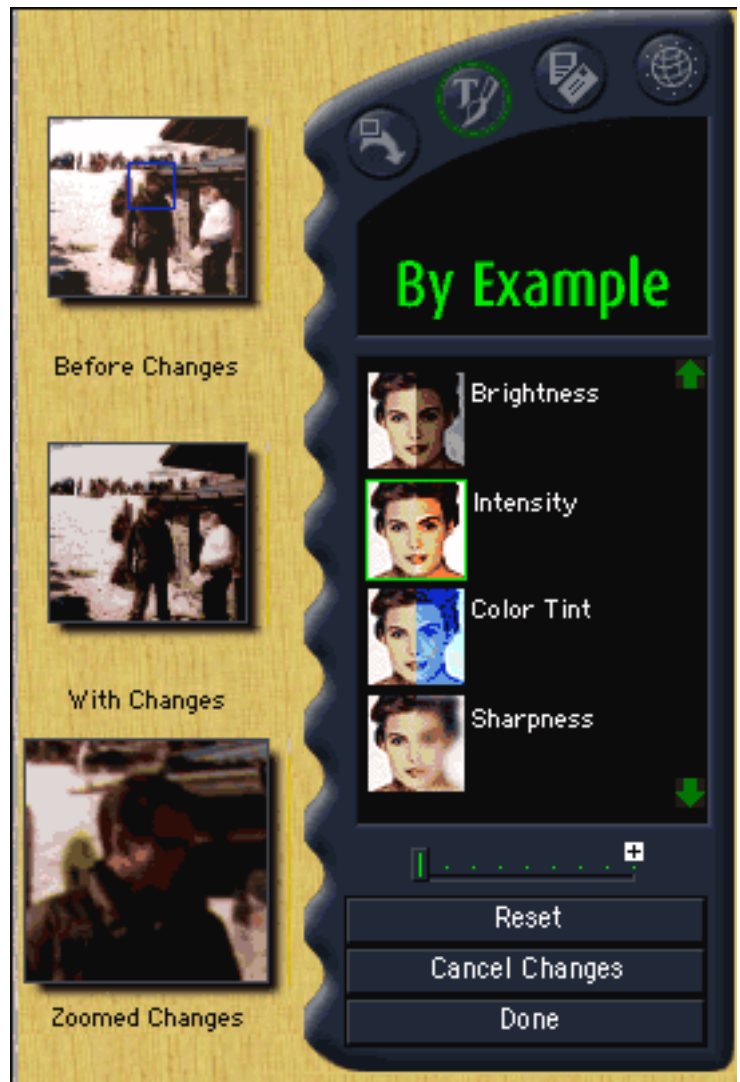
If you have your own idea of how a photo should be improved, or are looking for a particular effect, select Fix By Example. On the left of your screen, you'll get nine thumbnails showing eight different versions of the effect you are applying, Intensity in this example, surrounding a snippet of your original...while on the right, your remote gives you a selection of characteristics to change, an Amount of Oomph slider (that's a technical

graphics term meaning a slider with a "+" sign on one end and a "-" sign on the other), with a few work-in-progress thumbnails nearby.

Click on the thumbnail you like best (I chose the center left), and up pop nine more thumbnails, eight new ones surrounding the one you selected. You can adjust Brightness, Tint, and Sharpness the same way.

I prefer to set the Oomph slider (they don't really call it that) to Minimum Oomph, and make changes in a bunch of little steps. I don't say to myself, "This needs about seven degrees clockwise hue," I say, "The middle left picture looks nicer than the other ones," which is not only more intuitive, it keeps my self from wondering, "Clockwise hue? What on earth are you talking about?"

And like all modern photo editing programs, Canon Photo has a wealth of special effects you can overuse. Squishes and Textures and Paints, oh my!



The Special Effects shown here are (left to right) Under Glass, Cool Edges, and Oil Paint, and (top to bottom) Fracture, Puzzle, and Emboss. Great fun, and I expect to see all these effects in your upcoming birthday cards, interoffice memos, and ransom notes.

The package also includes some nifty features like an Internet postcard creation and distribution system, and templates for everything from awards to baby shower invitations to calendars, and so on. But that's all frosting on the cake, and I doubt I'll ever use those features in real life.



The reason I'm giving Canon Photo the coveted Excellent rating is that it is so good at what it's designed to do. I didn't give it extra credit for its extra features (if you like 'em, use 'em, if you don't, ignore them) nor did I give it demerits for extra features it lacks.

Listen, friends, Canon Photo is not going to replace Photoshop. Photoshop is a professional tool with many professional features (layers, for example), and people who make a career of photo manipulation need that kind of power. But photo editing for the rest of us?

For amateur and hobby photography, using Photoshop is like killing flies with a sledge hammer. Compared to the Photoshop/KPT combo gracing professional workstations, Canon Photo is 1/20 the price and at least 10 times easier to use.

It's even suitable for low-end pro use, such as a freelance writer that needs to illustrate his stories. This story, for example, was illustrated exclusively with Canon Photo—all the shrinks and crops and background removals—and I may never transmit another electronic photo without giving it a hit of Quick Fix first.

This is an excellent introductory photo editing product, powerful enough for prosumer needs, and priced lower than (for example) a shareware screen capture utility. At \$34.95 it's probably the best deal in its market.

I'm not yet impressed by Canon Software's support of this product, but I hope to be impressed by February. At this writing, the Mac version is a brand new product in the line, and the sales department is clearly confused by it. For example, searching the Web site, I couldn't find any way to buy Canon Photo for Mac—every link led back to the PC version. It doesn't matter what the price is if you can't find anyone to take your money. Canon Software assures us this will be fixed by the time you read this article.

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BY BROOKE SMITH, BSMITH@ATPM.COM

Silver and Wood

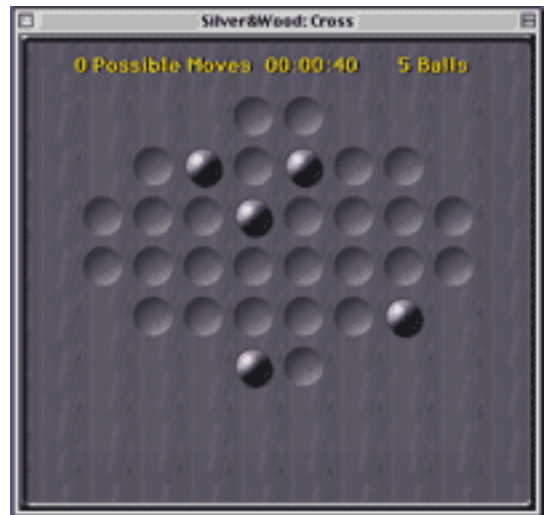
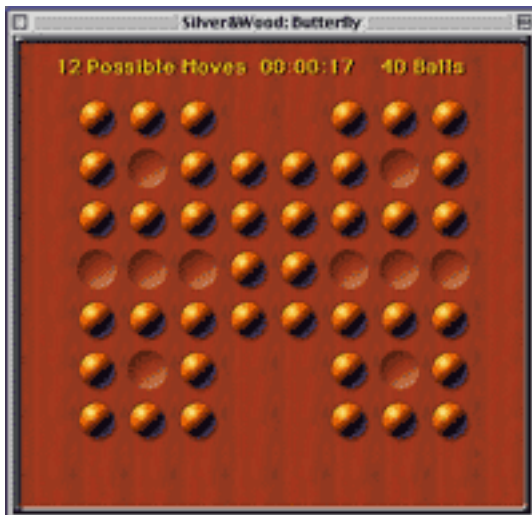
Author: Christine Zobel

Web: <http://SilverAndWood.purespace.de>

Shareware Fee: \$10 U.S. or 15 Deutschmarks.

Requirements: 68K or PowerPC Mac

Remember I.Q. Tester? The wooden triangle board with 15 holes and pegs, where you started with 14 pegs in the holes and jumped over a peg to remove it from the board? The object of the game was to leave just one peg. If you did, you were a genius. Well, Christine Zobel has developed the computer version.



In Silver and Wood, different shaped boards now replace that triangle board. Pegs are now balls that jump at the click of a mouse. Click on a ball to jump, then move over two spaces (either up, down, left or right, but **not** diagonally) from that ball and click in the empty field.

The jumped ball disappears immediately. The object is to have one ball remaining on the board.

There are nine board shapes in Silver and Wood, including a cross, an X, and a butterfly. You can even design your own board using the Edit Board command. The other options are: sound on/off; timer on/off, to see how many seconds it takes you to play; language, to choose from German or English instructions; and board design, to select a silver or wooden board.

Silver and Wood is designed for one person to play and is based on an ancient board game. In Germany it's known as Einsiedlerspiel.

For those of us who spend more time at the computer than away from it, Silver and Wood is a nice break from surfing the Internet, balancing your budget, or writing that essay. It's a cleanly designed game that will keep you playing. In fact, it will keep you clicking New Game because it's not easy to win. Be warned: frustration is inevitable, and patience is a must. The game lets you know when you've exhausted all possible moves. A little box appears with the following message: **No (more) moves possible. Try and try again...**

Leaving three or four balls on the board garners you **Not Bad**.

Leaving two balls compliments you with **Very Good**.

Unfortunately, the best I've been able to do is two balls (on the cross-shaped board), so I've no idea what little message appears when one ball remains. I imagine it's Excellent or some such congratulatory remark. I can only hope. But if any ATPM reader does get one ball, please email me at bsmith@atpm.com and tell me how you did it! Til then, stay sane.

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BY ERIC BLAIR, EBLAIR@ATPM.COM

Voodoo3 3000 PCI

Company: 3dfx

Web: <http://www.3dfx.com>

Requirements: Mac OS 8.1 or higher, PCI slot, 32 MB of RAM

Street Price: \$139.95



All right. It's not really a Mac product. There's no official Mac support from the company. There never has been in any of their previous products. Yes, 3dfx has said they will fully support Macs with their upcoming Voodoo4 and Voodoo5 cards, but that is still in the future. None of that changes this simple fact: the Voodoo3 3000 PCI is one very cool piece of equipment.

If you walk into a computer store or department and look in the Mac section for any of the Voodoo3 line of video cards, you will end up banging your head against the wall. Officially, that product does not exist. Thankfully, 3dfx has chosen to release unsupported beta drivers so that Voodoo3 line will work on the Mac. Venturing to [the Web site](http://www.3dfxgamers.com)¹ will present you with a collection of drivers for various systems. Right in the middle, you will see "[Voodoo3 Macintosh OS 8.x, 9.x Version: 1.0b10 \(Beta10\)](http://www.3dfxgamers.com/view.asp?PAGE=V3Drivers)"².

After you download and unstuff the drivers, you do not get an installer. Unlike drivers for most everything else you can install on a Mac, the Voodoo3 drivers must be installed by hand. Basically, you drop four files into your extension folder and one file into the preferences folder. That's simple enough. Along with dropping the extensions in the correct place, you've also got to flash the card's ROM. When somebody described the procedure to me, I think my face went white. It's really not as bad as it sounds, though. 3dfx supplies a console-based application that will save the current ROM on the card then load the necessary Macin-

1. <http://www.3dfxgamers.com/view.asp?PAGE=V3Drivers>

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

tosh ROM onto the card. There are two things you need to be sure of, though. First, make sure you specify the proper ROM file. There are two included in the download—one for Voodoo2 cards and one for Voodoo3 cards. The second thing you should do is save the PC ROM that is originally on the card. This will be saved in a file called “PC-ROM save.rom.” If you decide for some reason to move the card to a PC (say you sell it used to confused PC user), you will need to reinstall the PC ROM or the card will not work on a PC.

Pretty to Look At

Assuming everything works as it should, setting up the Voodoo3 3000 PCI should be a one-time deal. Once it's taken care of, you shouldn't need to think about it again. What you will think about is how your graphics look. Unlike previous Voodoo cards on the Mac, the Voodoo3 series acts as both your 2D and 3D graphics card. Unless you have more than one monitor, you likely won't have anything hooked up to the built-in graphics port on you Mac.

For testing the 2D graphics capabilities of the card, I decided to play with some images in Photoshop. I opened a 13.7 MB TIFF file and tried out a few filters and image adjustments. Image manipulation seemed about the same speed as with the built-in ATI graphics. Keep in mind, these are rough comparisons. I'm not a graphics professional and I make no claims to be one. For a card whose true strength is 3D, though, I was pleased with the how it handled 2D images.

That's not to say there aren't a problems with the Voodoo3 3000 PCI as a general-purpose graphics card. So far, I've only really come across one. Before installing the card, I was using a desktop picture that contained various shades of gray. Once I switched to the Voodoo3 card, I noticed a greenish tinge in portions of the image. While this is nothing major, I would not suggest the Voodoo3 as your main 2D card if you need to do any sort of color matching.

3D graphics are where the Voodoo3 3000 PCI really shines. The first game I tried out after installing the card was Madden NFL 2000. As I said in [my review last month](#)³, the difference



between the software-rendered graphics and the Glide3 graphics was simply amazing. Colors that were once inconsistent became sharp and clear. Details that were dull and muddy looked almost life-like.



I then moved on to look Myth II, which was recently updated to run under Voodoo3. Again, the graphics were far superior to what I had seen using the ATI card that came with my Mac. Previously, I had thought Myth II looked good, if not great. Now, it looks stunning.

In its current incarnation, the Voodoo3 3000 PCI supports the following types of 3D graphics: Glide2, Glide3, and OpenGL. The Mac drivers do not support DirectX, Microsoft's implementation of 3D. This isn't a big deal, since I don't believe there is any DirectX software for the Mac. This isn't likely to change any time in the near future, either. Also missing from the list RAVE, ATI's 3D implementation. This means that games like [Pangea's](http://www.pangeasoft.net/)⁴ Nanosaur and Bugdom, which have only RAVE acceleration, will run slowly, if at all, under the Voodoo3 card.

3. <http://www.atpm.com/6.01/madden.shtml>

4. <http://www.pangeasoft.net/>



Conclusion

For Mac gamers who want an alternative to ATI, the Voodoo3 3000 PCI is a tantalizing option. OpenGL and the Glide variants are used in most major games that feature 3D acceleration. Although using the card involves using beta drivers, flashing the ROM, and dealing with some discoloration problems, it is one of the only ways to get top-of-the-line 3D acceleration on a Mac. Along with a lack of RAVE support, the aforementioned issues are the only real problems with this product. If 3dfx follows through on their statement of full Macintosh support for the Voodoo4 and Voodoo5 lines, I would not be surprised if these problems were non-existent on those cards. At this time, however, those issues are what is keeping a Very Nice product from being an Excellent one.

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BY EVAN TRENT, ETRENT@ATPM.COM

X-Router MIH-120

Company: MacSense

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

Price: \$299.99

What Is It?

Technically speaking, the X-Router isn't really a router. It's an "Internet Sharing Hub." Essentially, it performs as a bridge, hub, firewall, and DHCP server all in one. It provides a wealth of functionality in a small, affordable package. While it's a good value, it does have some shortcomings, namely its performance, its limited number of NAT port mappings, and its lack of AppleTalk support. Overall, however, the X-Router is the perfect solution for a DSL or cable modem user who needs to connect multiple computers to the Internet and faces the limitations of using only one IP address as assigned by an ISP.



Why You Need One

These days it's becoming easier and more affordable to connect to the Internet via a cable modem or DSL (Digital Subscriber Line). Yet many ISPs limit their customers to one IP address, or charge extra for additional addresses. Several solutions present themselves to remedy this situation.

One option is to use gateway software such as [Vicom Software's Internet Gateway](http://www.vicomsoft.com/vig/vig.main.html)¹ which is priced per user starting at \$215 for a five-user pack. Another software product is [Sustainable Softworks' IPNetRouter](#)² which is \$89 for a single license and will serve an unlimited num-

1. <http://www.vicomsoft.com/vig/vig.main.html>

ber of users. Both of these products are versatile and flexible, although many network administrators feel that Internet Gateway is the more powerful and configurable of the two. These solutions do have their disadvantages, however. Most obvious among them is that many people may not have the luxury of owning an extra computer which they can dedicate solely to the task of hosting the gateway software. This translates to less than optimal performance since the computer will not be able to dedicate all of its processing power to the gateway software. For users transferring small amounts of information, this may not be a large concern, but for users who perform processor-intensive tasks on the machine running the gateway (such as working in Photoshop or editing large sound files in SoundEdit 16), Internet access will slow down to a snail's pace for all computers connected. Additionally, if the computer running the gateway crashes, all Internet access will be cut off. Setting up these applications can be a daunting task for net newbies as well.

Enter the hardware solution. It eliminates the need for a dedicated computer and all the problems entailed with that dependency, and it may be easier to configure and setup. Many network hardware manufacturers sell DSL routers or cable modem routers which connect directly to the DSL or cable jack. One example would be [the Netopia R7100/7200 series of SDSL routers](#)³. Similar devices exist which connect to the DSL modem, cable modem, or any other Ethernet device (i.e. an Ethernet to Ethernet router). Again, Netopia provides a solution which serves as an example: [the R9100](#)⁴.

The X-Router is essentially a watered down version of this type of device. Until recently, products such as the X-Router cost more than \$299. Now, however, one can find cheaper versions of such routers, such as [the NetGear R311 router](#)⁵, which sells for \$50 less than the X-Router. It doesn't have the four-port hub that the X-Router does, so it is less of a plug and play solution, requiring a hub to be connected (which also entails a modest additional expense, though hubs are practically free these days!).

What it Does

The X-Router is intended to be used as an "Internet Sharing Hub." This functionality is achieved by plugging the cable or DSL modem into the WAN (Wide Area Network) port on the X-Router via a Category 3 or Category 5 patch cable, and plugging up to four computers

2. http://www.sustworks.com/products/product_ipnr.html

3. <http://www.netopia.com/equipment/routers/r7100/index.html>

4. <http://www.netopia.com/equipment/routers/r9100/index.html>

5. <http://www.netgear.com/products/routers.shtml#rt311>

into the X-Router's built in 10Base-T hub using the same type of cable. Should more computers need to be connected to the net, the fourth port on the X-Router's hub may be toggled between straight through and crossover mode. Hence, another hub may be plugged into the fourth port, and additional computers may be plugged into that hub.

The X-Router can act as a straight through Ethernet to Ethernet bridge. In such a scenario, each computer connected to the X-Router's hub (or any additional hubs connected to the X-Router) would need to have its own IP address provided by an ISP. Should the ISP not be willing to provide multiple IP addresses, or should they charge for them, the X-Router will enable all of the computers connected to it to access the net using only one IP address. This is achieved by assigning the X-Router that one IP address (alternatively the X-Router can obtain its IP address dynamically from an ISP) and configuring each computer connected to it to obtain an IP address via DHCP. The X-Router will then automatically assign each computer an IP address within the "private" subnet of 192.168.1.xxx. Alternatively, each computer may be manually assigned an IP address in this block. These IP addresses are not accessible from the Internet. Only computers connected to the X-Router's hub may access one another. Hence setting up a Web server (or any other kind of server) could be problematic. To facilitate servers and computers with similar needs, the X-Router utilizes a protocol known as NAT (Network Address Translation). NAT enables the network administrator to define a port mapping table.

For example, Web servers typically use port 80. If a user wanted to set up a web server and connect it to the X-Router, he would assign it an IP address such as 192.168.1.100. Then the X-Router would be configured to route all requests which are received on port 80 to the IP address 192.168.1.100. Then users could access the Web server by typing in the IP address of the X-Router itself. This setup would require the ISP to provide one static IP address such that the domain name for the server (such as www.myserver.com) could be assigned to an IP address.

So What's the Bad News?

One limitation of the X-Router is that it only allows for ten port mappings. While ten mappings may seem like a lot, it is limiting for more advanced setups. The initial release of the X-Router only provided for five port mappings which was far too restrictive. A recent firmware update increased the mapping limit to ten. Additionally, the firmware update added the DMZ (Demilitarized Zone) Host feature which allows one computer connected to the X-Router to have full in/out access. This is a welcome feature and aids in setting up a server, or

Virtual Servers Settings

Virtual Server

Ports	Redirect IP Address	Well-known Port
80	192.168.1.100	
23	192.168.1.101	7 (Echo)
25	192.168.1.102	21 (FTP)
110	192.168.1.102	23 (Telnet)
0	192.168.1.0	25 (SMTP)
0	192.168.1.0	53 (DNS)
0	192.168.1.0	79 (finger)
0	192.168.1.0	80 (HTTP)
0	192.168.1.0	110 (POP3)
0	192.168.1.0	161 (SNMP)
0	192.168.1.0	162 (SNMP Trap)

Apply

Undo

hosting network games. It also relieves the ten-port mapping limit somewhat, although more mappings would provide for greater flexibility.

Another problem with the X-Router is that it seems to be sluggish in terms of network bandwidth. I found that when I connected through the X-Router to my local file server, download speeds were decreased by as much as 25-30%, which is quite substantial! For Internet access this will have minimal impact since download speeds over the net are relatively slow (whereas generally, download speeds from a local server are an order of magnitude greater), but for internal file transfers between machines or for servers connected to the X-Router, this is a major concern.

Worse yet, the X-Router does not appear to support the AppleTalk protocol. When I connected the X-Router to my network, none of the X-Router's clients could access my AppleTalk network. When I checked in the manual and on the Web site, there was no mention of AppleTalk as a supported protocol. Unfortunately this is an increasingly popular trend in network hardware. Even Apple is moving away from AppleTalk as a protocol. Even so, many

people will find the lack of AppleTalk support problematic. The Netopia R7100 and R9100 don't support AppleTalk out of the box, but for \$149, they can be upgraded to support it.

Software Support

The X-Router is configurable via a Web browser from any machine connected to it. This is slick, although it has become a *de facto* standard in all such devices. The configuration engine is straightforward and well implemented. Should any user not find the configuration options self explanatory, the manual included with the X-Router is concise, thorough, and well-written. There does appear to be a bug in the Status Monitor display, however. I never managed to get the DHCP Client display to show any clients connected, even when there were definitely clients connected via DHCP.

Status Monitor	
Internet	
Public IP Address	207.241.81.207
Public Subnet Mask	255.255.255.0
Default Gateway IP Address	207.241.81.1
Domain Name Server 1	207.241.81.198
Domain Name Server 2	207.241.81.201
Domain Name Server 3	207.241.81.199
Intranet	
Private IP Address	192.168.1.1
Subnet Mask	255.255.255.0
DHCP Clients Table	

Conclusions

All in all, the X-Router is a good little box. For most home users, it is a great way to go. It provides an inexpensive way to connect multiple computers to the Internet via a cable modem or DSL using one IP address. It is as close to plug and play as such a device can get, and the documentation is good. The quick development of a firmware update, which pro-

vided changes for which users had been asking indicates that MacSense is dedicated to supporting the device.

However, the lack of AppleTalk support and sub-par performance are bothersome. The cheaper Netgear doesn't provide AppleTalk routing either, nor does it provide a hub. I have no idea how its performance compares, but at \$50 less it may be a smarter move, especially if you already have a hub. For more advanced users, a device such as Netopia's R9100 is probably a better way to go for it will offer greater flexibility and the option of AppleTalk routing, albeit for an added expense of \$150.

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What is ATPM?

About This Particular Macintosh (ATPM) is, among other things, a monthly Internet magazine or “e-zine.” ATPM was created to celebrate the personal computing experience. For us this means the most personal of all personal computers—the Apple Macintosh. *About This Particular Macintosh* is intended to be about your Macintosh, our Macintoshes, and the creative, personal ideas and experiences of everyone who uses a Mac. We hope that we will continue to be faithful to our mission.

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The Online Webzine edition is for people who want to view AT^{PM} in their Web browser, while connected to the Internet. It provides sharp text, lots of navigation options, and live links to AT^{PM} back issues and other Web pages. You can use Sherlock to [search](#)¹ all of the online issues at once.



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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).

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

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

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

- 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%.
- 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.

Why Are Some Links Double-Underlined?

In the PDF edition of ATPM, 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?

ATPM and MacFixIt readers have reported problems decoding MacBinary files using early versions of StuffIt Expander 5.x. If you encounter problems decoding ATPM, 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 ATPM, 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.

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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 match-em-up puzzler mating historical events with the year in which they occurred. So fire up the Way-Back Machine as you try to conquer:

Trivia Challenge 6.02—Historical Highlights

- | | |
|---|---------|
| 1. On national TV, Billie Jean King defeats Bobby Riggs in tennis' "Battle Of The Sexes." | A. 1773 |
| 2. Elvis Presley is born in Tupelo, Mississippi. | B. 1865 |
| 3. The radioactive element "Radium" is discovered by Pierre and Madame Curie. | C. 1871 |
| 4. The US Air Force closes its UFO investigation, "Project Blue Book." | D. 1876 |
| 5. The Ku Klux Klan is formed in Pulaski, Tennessee. | E. 1892 |
| 6. Massachusetts Republican Edward Brooke becomes the first black US Senator elected by popular vote. | F. 1898 |
| 7. The controversial TV series "All in the Family" debuts on CBS. | G. 1922 |
| 8. Mrs. O'Leary's cow reportedly starts "The Great Chicago Fire." | H. 1925 |
| 9. The Dow Jones Average closes over 2000 for the first time. | I. 1932 |
| 10. The New York baseball team, the Giants, move to San Francisco, California. | J. 1935 |

Trivia Challenge 6.02—Historical Highlights

11. The “Boston Tea Party” takes place in Boston Harbor.	K. 1958
12. Hattie Caraway becomes the first woman elected to the US Senate.	L. 1958
13. Nellie T. Ross becomes the first woman Governor in US history.	M. 1967
14. The Russian nuclear plant at Chernobyl melts down.	N. 1969
15. George S. Custer makes his “Last Stand.”	O. 1971
16. The Union of Soviet Socialist Republics is formed.	P. 1972
17. The US Submarine “Nautilus” sails under the North Pole.	Q. 1973
18. Apollo 17 becomes man’s last visit to the Moon.	R. 1973
19. Tchaikovsky’s “The Nutcracker Suite” opens in Russia.	S. 1986
20. The American Baseball League adopts the “Designated Hitter” rule.	T. 1987

Last Month’s Answers—6.01—Games Galore

1. What is the name of the “Advanced Dungeons and Dragons” (First Edition) monster who has two antennae and a propeller at the tip of its tail?	C. Rust Monster
2. In “Stalking The Night Fantastic,” players’ characters belong to an organization called:	A. Bureau 13
3. In “Call of Cthulhu,” who is dubbed “He Who Must Not Be Named”?	A. Hastur
4. Games are often derived from movies or other screenplays. Which game was released before the movie?	B. Judge Dredd
5. Which of these games does not use any dice?	C. Amber
6. “Dungeons and Dragons,” the first role-playing game ever commercially released, was first sold in what year?	B. 1974

Last Month's Answers—6.01—Games Galore

7. In “Alma Mater,” players’ characters are:	A. High School Students
8. “Delta Green” is a source book for which game?	C. Call of Cthulhu
9. In “Advanced Dungeons and Dragons,” which dragons are good?	B. Metallic
10. Which is the typical world setting for “RuneQuest” (Second Edition)?	C. Glorantha
11. Of these, which is the oldest sci-fi role-playing game?	C. Traveller
12. Which was the first role-playing game based on time travel?	A. Time Ship

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 “Yoda” who lives in our house.

This Month's CD Recommendation

“[Le Quattro Stagioni \(The Four Seasons\)](#)¹” by Antonio Vivaldi—Performed by Europa Galante; Fabio Biondi, Director. Classical music is a real conundrum for me. Most Classical music seems to me to be not much more than instrumental noodling about; while the most famous works, the real “Warhorses”—Mozart, Tchaikovsky, Strauss, etc.—have been unimaginatively played to death by every group that considers itself an orchestra. Only once in a very long while do I get excited about a piece of music that I know virtually note for note. Such is the case with Europa Galante’s reading of Vivaldi’s “Four Seasons.” Recorded lovingly in Austria in 1991, Fabio Biondi and his eleven friends breathe more life and spirit into this recording than I have ever heard. Played using superb-sounding period instruments, and with a quick-paced passion, “Le Quattro Stagioni” by Europa Galante will have you emotionally involved after two measures—and the fun doesn’t stop until the last note

1. <http://www.amazon.com/exec/obidos/ASIN/B00000G3ZQ/aboutthisparticu>

fades away. Of the many (over 150!) versions of “The Four Seasons” available, this is the only one I listen to.

Parting Pointer: “Threading” Messages in Eudora 4.x

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”:

Eudora lacks a “thread messages” command to group emails by subject, then by date, so you can easily follow the flow of digital conversation. However, you can mimic threading by sorting any mailbox twice. Click the “Date” column head, then the “Subject” column head. You’ve just sorted the messages by Subject, then within each subject, by Date. Both categories will appear in ascending order: A to Z for Subject, and oldest to newest for Date.

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