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

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Welcome

Welcome to the March 2002 edition of *About This Particular Macintosh*! We're getting ready to do some spring-cleaning at ATPM headquarters in New Gotham. Ever since we added all that extra square footage to our lease, it's meant more places to put stuff. The problem is, although we have more space to put stuff, we'd rather make room to place new staff.

In honor of our new accommodations, we'd like to invite members of our readership to consider joining the ATPM staff. We're planning to increase the content in our publication and continue to improve the quality of the text we put to pixel.

Our international assemblage of talented but crazy Mac zealots is interested in adding new people to the ATPM team. Please e-mail Michael Tsai, our publisher, if you'd like to be considered for an ATPM staff position.

With the publication of this issue we are announcing the departure of opinions editor Tom Iovino. During Tom's long tenure with ATPM, not only has our readership grown, but so has his family. Tom has chosen to devote more of his time to the needs of his expanding family. We wish Tom and his family all the best.

Tom's departure is not the only change we'd like to announce this month. We've made some internal changes at ATPM headquarters, too. For example, we've banished from our lexicon any references to Apple Computer as beleaguered, challenged or embattled. We've also done away with references to the Mac's market share as dwindling, meager, pressured, miniscule, or dropping.

While these changes may not necessarily help us find additional staff or just the right place to stow all our stuff, they do clear our heads of old baggage that no longer fits the current state of the Mac. We're now free to devote our time and attention to all good stuff and new stuff in the world of Macintosh computing.

Photoshop for X

Or is that Photoshop for 9 and X? Adobe Systems has announced Photoshop 7, which is compatible with Mac OS 9 and Mac OS X–native. The release of an OS X–compliant version of Adobe's venerable pro-level image-editing (and darn near essential) application has long been on the wish lists of many Mac enthusiasts. What seemed to take so long? We figure Adobe waited to release an OS X–compliant version of Photoshop until the time of its next major upgrade of the product. The Windows version of Photoshop 7 is also fully compatible with Windows XP. We're happy to report that Adobe Photoshop 7 for Mac and Windows will be shipping as early as the second calendar quarter of 2002.

Endangered iMac?

Recent press reports have suggested that Apple is way behind in manufacturing and shipping its newly redesigned desktop computer. Some have suggested sightings of the new iMac are so rare that it should be added to a special endangered computer list.

The demand for the new iMac has clearly outstripped supply. Apple may be challenged in ramping up production of the restyled computer in time to meet demand by the end of the company's second fiscal quarter that ends in March. Nonetheless, the new iMacs are arriving at stores and homes as quickly as Apple can make them. In fact, Apple is air-shipping the computers from Taiwan to the States in order to save time and reduce delays.

Scientific Proof

Forget the megahertz myth. Buy the computer that scientists are purchasing by the boatloads: the Macintosh G4. There's no better high-performance/low-power-consumption PC on the planet. Macs would make even greater inroads into the scientific community if it weren't for one fact: there's no way to stack the mini-towers! That's right: for cluster computing, the stylish mini-tower is definitely overdressed. We hope Apple meets the needs of the scientific community by developing a scientific version of its high-end PC that can be stacked and racked.

We've heard from the greatest minds in science about the benefits of the Mac. Now we'd like for you to benefit from the great minds on our staff. Our March 2002 issue includes:

Apple Cider: And now, the end is near…

"Ditching the old LC 580 for that sleek, translucent covered baby was one of the happiest days of my life. But, boy was I wrong. I realized this when my two boys were born." After nearly five years, Tom Iovino finishes his *Apple Cider* run with ATPM and issues a challenge to our readers.

Beyond the Barline: And the Award Goes to…

Well, you know who. Or maybe you don't. As David Ozab informs us, Apple wasn't the only worthy recipient of a Technical Grammy this year.

Hollywood: I'm Not Happy

At the Super Bowl, the Rams lost and Apple was a no-show. Mike Shields suggests what Apple could have done, and then he goes on to chronicle QuickTime Dead, err, Live and Apple's Grammy.

Segments: I Hate it When That Happens

Paul Fatula shares his experiences signing up for AT&T Cable Internet, which turned out to be not nearly so easy as one would like. After professional installers who couldn't get it installed and unsupportive technical support, Paul got the service working himself, only to be beleaguered by AT&T not keeping up its end of the billing bargain.

About This Particular Web Site

This month's *ATPW* shows you sites that let you change the look of OS X and see the changing looks of license plates around the world. You can also check out some Russian art or some Lego art. But only if you don't have cyberphobia.

Networking: Setting Up AirPort

Matthew Glidden explains what Apple's AirPort wireless networking is and how to set it up.

How To: The Mops Programming Language—Part 1

Ed Williams takes us on a tour of Mops, an "intrinsically Macintosh programming language" that blends Forth with the object-oriented paradigm. The language may seem backward at first, but it has a rare elegance and lets you create real Mac applications that run on everything from the Mac Plus to the latest G4 iMacs.

How To: Downloaded Files Challenge—Followup

Gregory Tetrault reports on the results of his extended challenge for readers to send links to downloadable files that can't be opened without editing their file type or creator codes.

Desktop Pictures: Oregon and Washington

David Ozab and Julia Harris follow up last month's set of Oregon Coast pictures with another collection, taken during their trip along the southern Washington and northern Oregon coasts over Thanksgiving weekend.

Reviews: Can Combine Icons 2.1

Eric Blair checks out Can Combine Icons 2.1, a tool for building your own icons on Mac OS X.

Reviews: Centipede

Centipede, a famous arcade game of a past generation, reappears as a Macintosh game with 3D graphics and new gameplay options. How does the modern version compare to the classic twitch-and-shoot game? Read the review by Gregory Tetrault and find out.

Reviews: Mac OS X: The Missing Manual (book)

Johann Campbell reviews the latest book from Mac author extraordinaire David Pogue.

Reviews: Nisus Writer 6.5

If you use Word and aren't very happy with it, then think hard about Nisus. If you use AppleWorks or ClarisWorks, and you wish there were more, Nisus is certainly a more affordable alternative than Word. Nisus also has lots of other features the freebies don't, and it seems very Mac-friendly.

Reviews: Survivor: The Interactive Game

Outwit. Outplay. Outlast. Survivor: The Interactive Game is pretty cool. Not perfect, but not bad. For her first foray into live-action gaming, Ellyn Ritterskamp was mostly impressed.

Reviews: Workflow Automaton with AppleScript Training CD

Can a CD training tool bring you up to speed with AppleScript? TECSoft repurposed a workshop into a self-paced CD tutorial. Read Gregory Tetrault's review to see it the effort was successful.

FileMaker Server Review

Another missing feature is serving databases via the Web. You would think a server product would do this, but, alas, FileMaker Server is only able to serve databases to FileMaker Clients. You need another program, FileMaker Unlimited (for real Web serving) to do this. And yes, you need another machine to run Unlimited from.

So, for those of you keeping score at home, that's two dedicated machines, plus two software packages to serve a database to both clients and the Web. Oh and one other thing: if you want to use anything more that just the pathetic FileMaker Web options (no support for scripts) you have to buy yet another product, FileMaker Developer, to get access to the JDBC or XML files to develop a true Web face.

Thanks FileMaker, but no thanks. WebObjects, here I come.

—*Carib Mendez*

Router Question

I posted this question at tsmacs.org, and they referred us here. I think we've got everything set up correctly but still experience this problem. We have not yet tried to go directly to the modem from one of the Macs, so I suppose that's next, but we'd appreciate any other suggestions.

We've installed a new cable modem with the Optimum Online service, running over a network with a Linksys router. It seems to work pretty fast on Windows, and FTP speeds on either platform are great. But on the Macs, there is a noticeably longer delay displaying a Web page (in both IE and Netscape); it is as if there is like a 30-second search, and then all of a sudden the page appears. This happens on Mac OS 8.6–9.1, iMacs, G4, etc. All machines (both Macs and one PC) are connected to an 8-port hub which is plugged into the router. TCP/IP is configured as DHCP (pretty much as outlined above, but we did put

the DNS address we got from the PC in manually, though it does not seem to matter one way or the other). We updated the Linksys firmware, and this also did not do anything. Any ideas what specifically to look for?

—Jonathan Cloud

This sounds to me like a problem with the DNS resolving. You indicated that you have tried punching the numbers into your TCP/IP control panel manually and that it made no difference. It sounds to me like the first number in the list of name servers is causing problems. The Mac (and most any TCP stack) will try resolving DNS using the first server listed and after a specified timeout will then try the second server in the list. If you are experiencing a delay but then are successful in accessing the Web, it sounds to me as if the first name server is simply bogus or unresponsive. Try removing it from the list (or, if you prefer, stuff it at the bottom) and see if that fixes your problem. *—Evan Trent*

File Sharing User Limit

I teach at a high school and have a AppleTalk network set up. I have 14 G3s on the network, however, only 10 students can login to the shared server folder at any given time. What am I missing?

—Sandy Snyder

File Sharing supports a maximum of 10 users per shared machine. To support more users, you need to use AppleShare IP or Mac OS X Server. *—Chris Lawson*

Why Does Internet Explorer Own My HTML Files?

I see that whenever I download an HTML file via the Internet, it gets an Internet Explorer icon, although the default browser selected in my Internet control panel is iCab. How has Microsoft managed to get themselves established as the default format, despite my saying "no thank you"? And how I can change it?

—David Kettlewell

Selecting iCab as your browser is separate from selecting which applications will own downloaded files. Go to the Internet control panel, and then go to the Advanced tab. Go to File Mapping. Select .html or .htm or whatever suffix you wish to edit. Then map the file type onto the appropriate application. *—Evan Trent*

Virtual PC 5.0 Review

I've seen a bunch of these comments about it being unusable with OS X and wonder if my requirements are so low, or is there something else going on.

I'm on a Pismo (G3/500 PowerBook with 640 MB RAM), and did my small corporate taxes over the weekend using TurboTax Business on Windows 2000. It was a breeze, except for the part where I had to enter about 100 assets and each one required a recalculation, which took about a minute per asset. Six hours later, I printed directly to my HP 990 over USB, since it didn't print the forms correctly over the standard "through the Mac" printer setup.

I typically use VPC to verify Web site designs using Win 98 and Win 2000, and to contact a client through Checkpoint's SecureID VPN over Win 2000. I then use Timbuktu or telnet to work on the client's systems. I've found it extremely useful and don't have any major complaints about the speed. My network to the outside world is a 384K/384K DSL line with a static IP for the Mac as well as static IPs for each of the PC flavors. Transferring files through VPC is just as fast as using the Mac directly.

—Mike Schienle

Digital Pianos and the Mac

My kids are taking piano lessons. I do not have room for a piano in my living area. I'm interested in getting them an external USB keyboard that mimics the performance of a piano keyboard so that they can use their iBooks to practice and perhaps use piano lesson CD-ROMs.

Any recommendations on keyboard/software combos?

—Robert

I still use the old Miracle Piano, a keyboard with 49 full-sized keys and a software program that controls it, presents piano lessons, and monitors your playing. The software has 40 lessons and many drills (disguised as games). I also bought extra song packs for Miracle Piano. Unfortunately, Software Toolworks and its successor Jump! Music both went out of business, and the program is an orphan.

Midiman USB Keystation keyboards come with the MIDI interface built in. You just install the driver and plug the keyboard into your USB port. Musican's Friend sells the 61-key Midiman for $200 and the 49-key Midiman for $160. Other keyboards will usually require you to buy a separate MIDI in/out device, since they have only MIDI ports.

The Musician's Friend site also has digital pianos priced from $550 (Kurzweil SP76 76-key Stage Piano) to a Yamaha YDP-121 88-key piano (that looks like a real piano and takes up as much space) for $1100. You can get fancier digital pianos for much more, of course. I own an upright piano, so I have no experience with digital pianos. I did buy a two-tiered stand that holds my Miracle Piano keyboard on the lower tier and a shelf with a PowerBook (for running the Miracle software) on the upper tier.

Musicians' Friend has lots of different stands. Some are easy to assemble and disassemble, which is important if you need to regain floor space. The one I bought collapses into a relatively small package and has a built-in carrying handle. We brought it and the Miracle keyboard with us when visiting relatives at Christmas break.

There are no good beginning piano instruction programs for the Macintosh (and only a few for Windows). The iSong CD-ROM classical piano series (published by Hal Leonard) is cross-platform (but only works with Mac OS 8.6 and earlier). These are teaching tools that use recorded music and progressively more difficult arrangements of the music. I haven't tried iSong, and I could not find independent reviews of its three classical piano modules. (The guitar modules seem most popular.)

PG Music has the Band-in-a-Box software and add-ons. This isn't educational software but lets you create a music accompaniment that can be played on a MIDI synthesizer or keyboard. It got 4 out of 5 mice from *MacUser UK*. *—Gregory Tetrault*

And now, the end is near…

and so I face the final curtain.

Ahh, the words of the immortal Francis Albert Sinatra as he croons into the Capitol records microphone. There's nothing that screams *class* as loudly as Old Blue Eyes, a highball in one hand, a fedora dipped rakishly over one eye, singing his classic songs through a cloud of cigarette smoke in a Vegas lounge.

And me, as I sit here in front of my computer, listening to the melodious tone of Sinatra's voice, I look around to see the living room littered with toys. Spit-up stains mark the carpet, and a mountain of dirty dishes lies in wait in the sink.

I think back to the days before Rhonda and I had kids, and I think about how different my life was. It seems that everything I did five years ago had a lot more pizazz. It had a lot more of that *Je ne sais quois*. Yeah, back then I hit the ground running and never stopped.

That was me back in the early days of writing for *About This Particular Macintosh*. I remember my first article I wrote for the magazine—the Mac-In-Bash Attack. I was so eager to turn the article in, and the first draft was full of such anti-Windows bile that Michael and Robert asked me to redraft it and take some of the edge off.

I was full of such passion for the Macintosh platform that I refused to work on anything Microsoft. When the computer guys at my previous job threatened to take away my beloved Macintosh Performa 6116, I got indignant, storming into my supervisor's office and demanding that they stop. And they did. They saw how productive I was using the Mac.

And, when I bought my blueberry iMac 333 MHz, I thought I was in hog heaven. Ditching the old LC 580 for that sleek, translucent covered baby was one of the happiest days of my life.

But, boy was I wrong. I realized this when my two boys were born, and my life changed dramatically. Gone were the mornings of sleeping in until 9:30 or 10. They were replaced with early morning diaper changes, late night feedings, and smiles whenever I enter the room.

My house has gone from a tidy, well-decorated showplace to an overgrown toybox, the carpet showing memories of accidental food spills and bright red children's Tylenol drips. I now wonder less about buying that dream sports car and more about how many miles we can get out of our new minivan.

My job has changed as well. I went from a guy who did some marginal public relations work to one of the first people contacted when something goes wrong in the county. Nearly one million people watch the news generated by my news releases, and their safety and security may ride upon my communications skills. The days have been getting longer as more county officials have come to know the quality of my work and seek my assistance in media relations.

Indeed, my life has become far more complicated and rewarding than it ever had been back in those days.

But lately, I have found myself feeling spread very thinly. As Bilbo Baggins put it in *The Fellowship of the Ring*, I feel like butter scraped over too much bread. Rhonda has asked that I take a good look at what I'm currently active in and simplify my life a bit.

I am going to take her advice and, with this article, I am stepping down as an opinions editor for AT℗M.

It's not an easy decision for me to make. Part of me feels like I'm letting the rest of the AT℗M team down. After all, we have come so far together, working as a team. And, believe me, a better team of people to work with would be hard to find. Without the guidance, encouragement and excellent copy editing skills of the team, I wouldn't look anywhere near as good as I do.

Many thanks to Michael and Robert. To Daniel. To Ed Goss, my counterpart in most, if not all, of the mayhem on the staff list. To Chris Turner, my birthday buddy. And, to the entire staff which I am reluctant to name for fear that I might leave someone out and leave hurt feelings. From the folks who I worked with way back when I was a wet-behind-the-ears

opinion writer looking for a chance to have my work published, to the most recent staff additions, you have given me the opportunity work with you—shoulder to cyber shoulder. In fact, some of you I count as my closest friends, yet I have never seen your faces or shaken your hands.

Kinda bizarre how that Internet thing works.

And to our readers, I have enjoyed writing my piece for these past years. Sometimes—probably more often than not—I have left you scratching your heads wondering just where the heck I was coming from. In fact, about a year and a half ago, I was having a crisis, wondering if I should continue writing my *Cider* columns. After one article, I noticed the debate I had started, and felt as if I could continue writing.

But, lately, getting my stories in on time has been more of a chore than a pleasure. And, I don't want to subject you to inferior writing just so I can say, "Hey, check me out, I write for a great e-zine!"

And, if you thought you were going to get off that easy, you are wrong. I'm issuing a challenge to our readership right now. I challenge one of you out there—one of you with a wacky enough imagination, a love for computing, and a desire to make someone smile by your writing—to step up and pick up the flag where my run now ends. This thing is only going to work as long as people who care as much about the computing industry and the Macintosh in particular offer their opinions and keep spurring others to great things.

As for me—well, I don't think I can truly say goodbye forever. My career with ATPM has been rewarding for me professionally, and I have too much of me invested in the magazine to just walk away forever. With Michael's and Robert's permission, I would love to poke my head in every so often and make some wise crack remark from the peanut gallery.

So, gang, as I end this column, I just wanted to let you know how much fun this has been, and I look forward to reading upcoming editions of ATPM. Unfortunately, it's 9:30 PM, my little one is screaming because he is cutting new teeth, and I have to get to bed soon to ply my trade another day.

There. That's said. It was harder than I thought. But, as Frank Sinatra finished his outstanding ballad:

I did it my way!

And the Award Goes to…

Apple Computer! But you probably knew that already. On Tuesday, February 26 (one night before the actual awards show) Apple received a Technical Award for Lifetime Achievement from the National Academy of Recording Arts and Sciences. So maybe the Grammy means something after all. Maybe Homer Simpson was hasty in trying to give his award to a waiter in lieu of a tip. After all, in pioneering a user-friendly personal computer, Apple was a huge contributor to digital music revolution of the 80s and 90s.

But my column isn't about Apple's award. Instead, it's about the other award given that night: an award given to an individual who helped pioneer the analog music revolution which set the stage for Apple, MIDI, and all those software companies that arose in the 80s. Over a decade before the Steves gave us the first Apple—and almost two decades before the Mac, MIDI, and the software sequencer brought about the digital music revolution—the voltage controlled synthesizer was born, thanks in part to the other award winner.

And the Award Goes to…

Robert Moog, the inventor of the Moog Synthesizer. Though Moog was not solely responsible for the development of the voltage-controlled synthesizer (Don Buchla's Buchla 100 and Paolo Ketoff's Syn-Ket, also developed in the mid-60s, were contemporaries), the Moog Synth was the most influential on subsequent development.

The State of the Art, Circa 1960

The RCA Mark II was the first self-contained analog synthesizer. Like computers of the day, it filled an entire room and read data off punch cards (well actually a punch roll, but the idea was the same). It cost $100,000 in its day, and was anything but user-friendly. The demand was growing among composers (synths were not yet a part of pop music) for a

system that was self-contained (rather than assembled ad hoc out of various electronic components), flexible, and affordable. Moog's solution, one of the first modular synthesizers, was one tenth the price of the Mark II.
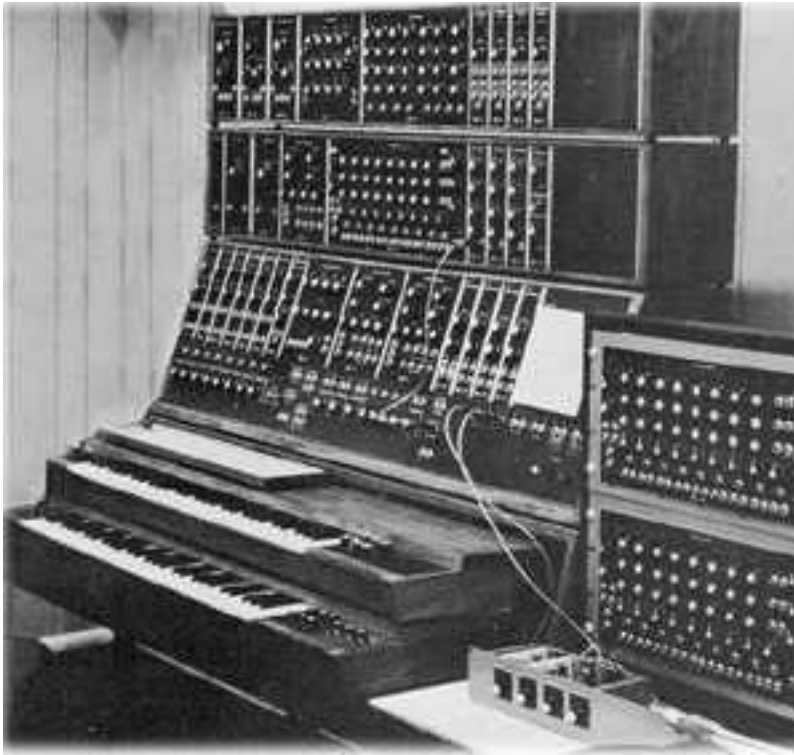
A Moog Modular Synth (1967)

What's So Hip About Mod?

Modular synthesizers are both flexible and expandable. Components aren't hard-wired. Instead, the user must "patch" the synth with patch cords (the term "patch" is still used on today's digital instruments) to get the desired sound. The user can also add components as desired. Modularity was shared by both the Moog and Buchla synths, while the Syn-Ket was hard-wired. What the Moog Synth had that the Buchla 100 didn't, though, was a keyboard. Yes, I'm sure some of you are wondering what use a synth is without a keyboard. Honestly, though, the choice of a keyboard as a controller is purely a practical one, since a keyboard is basically a set of switches in a very familiar pattern.

Buchla was philosophically opposed to keyboards, believing that a new instrument should have a new interface. Otherwise, he feared, the synth would just become another electric organ. His fears, as it turns out, were totally justified.

The Reasons for Moog's Success

First, the Moog Synth was a perfect compromise between the Syn-Ket, which, with a keyboard but no modularity was geared solely toward performance, and the Buchla 100, which, with modularity, but no keyboard, was geared solely toward the studio. The first Moog Synth was certainly too big and too expensive to go on the road, but Moog's decisions regarding its design paved the way for the very popular and very affordable Mini-Moog, his most successful instrument. Secondly, the first best-selling electronic music record, Walter (now Wendy) Carlos' *Switched on Bach* (1969), popularized synths in general and the Moog in particular. Within a few years, many of the "art rock" groups (Pink Floyd, Yes, ELP, Tangerine Dream, etc.) had synths.

But it Didn't Last

Bigger companies like ARP, Roland, Oberheim, and Sequential Circuits rose up to meet the huge demand, and Moog got out of the synth business completely by the end of the 1970s. He returned to his first passion, the Theremin, an instrument so weird and wonderful, it deserves its own column. His present company, Big Briar, sells Theremins (both pre-built and kits), analog effect pedals (under the moogerfooger brand), and Theremin and Moog related gifts.

On the Shoulders of Giants

So congratulations to Apple Computer and to Robert Moog. Without them, I, and many others like me, wouldn't have the opportunities to create electronic music in homes, schools, and studios. To paraphrase Issac Newton, I only saw so far because I stood on the shoulders of giants.

I'm Not Happy

The Rams lost, 20–17. Ok, that's not why I'm not happy. Ok, it is. In part. But also, I was treated to another lackluster year of Super Bowl Commercials. And to top it off, no Apple commercial again, from the company that arguably started the Super Bowl commercial phenomenon with "1984." Granted, two million dollars for a thirty second spot is probably Apple's entire commercial budget for the quarter, but once a tradition is started, shouldn't it be maintained? Of course, it could be hard to do better than the Kevin Bacon VISA commercial, but let's see what I can do.

Right after "1984" premiered (and don't believe the hype—it ran more than once, although in an abbreviated form), a lesser known and almost forgotten commercial was created, entitled "Lemmings". It showed several what would be today called IT managers, walking off the edge of a cliff. The mantra of the time, and of many today is, you can't go wrong buying IBM. However, as we, my loyal three readers know, there is a superior choice—which this commercial attempts to show. Well, actually, it tells. Which is why I think we don't see it anymore.

As the new G4 iMac was released a scant month earlier, it was prime time for a modern day version of the Lemmings idea. Imagine the 1812 Overture playing in the background. On each crescendo, a PC compatible or peripheral comes crashing down into a pile, one on top of the other. The guy from the VISA commercials comes in with the following narration: "With all the advertisements out there promising low cost PCs, you might get the impression that they're cheaper than the new G4 iMac. However, after you pile on all the extras that come standard with an iMac, the G4 iMac comes out on top." Boom. The iMac drops down from out of the sky and flattens the pile with it's pancake-like base, and lands perfectly with its monitor forward, running Mac OS X 10.1 like a banshee. Fade to white. In nice big 48-point Apple Garamond: "Get an iMac."

It would be relatively cheap to produce, and to make it even cheaper, I'd do the narration for scale. Of course, then someone would have to come up with the two million to air it. If every Mac owner that reads this were to send Apple a dollar….of course, I'd rather they sent it to me.

QuickTime Dead

My new six favorite words in the English language are, "I can get you press passes." In most cases, for what I do, it allows me to walk around with authority and get intelligent answers to my questions, as opposed to being some Joe Schmo saying, "Hi, I wanna make a movie…." Which is how I felt at the DV Expo that I recently reported on. To which I also could've received a press pass, but I didn't know it at the time. Of course, I still didn't receive a really cool QuickTime Live tote bag, as they were reserved for registered attendees, and speakers—apparently, everyone except me.

So the pass I got was for the recent QuickTime Live event held at the Beverly Hilton Hotel in Beverly Hills, California. The good guys wear black. Again. Of the 35 companies with booths, Apple had the biggest space, with the dreariest presentation. The walls were black. The T-shirts were black. Black screens on the, OK, grey, Macs when they weren't being used.

And the big announcement of the entire piece? QuickTime 6 is being previewed. That's right, previewed. Let me say that again, previewed. Meaning, not released yet. And do you want to know why? MPEG LA. Specifically, the MPEG-4 standard has this really interesting small print in its license agreement, that they seem to be in control of. And before you go firing off an angry letter to us here in Los Angeles, that's not what the LA stands for.

Anyway, it seems that there's this thing called a use fee that boils down to this: if you intend to broadcast content with MPEG-4 embedded, you have to pay for the privilege. Every time. Each download. That's right, for every one download of your iMovie, you pay. Welcome to the wonderful world of distribution nightmares. Of course, according to the MPEG LA Web site, "Details will be covered by the actual License Agreement, which is still in development and will not be available for several months."

Apple, quite rightly in my not even remotely humble opinion, did the right thing by delaying the release of QuickTime 6 until this untenable situation is resolved. So, before you Mac bashers out there go to it, just remember that, this time at least, it's not Apple's fault. So, when do we get QuickTime 6? Hopefully before I get my film financed. Or else, my budget goes up, yet again.

Something good did come out of QuickTime Live: I met the fine folks at Eovia software, with a very interesting 3D rendering tool called Carrara. The special effects for my movie can be bought for a mere $400. So, I guess it's a break-even.

The Grammys

How many of you attended the Grammys? Like me, you didn't go either. But not for lack of trying. I found out that Apple had won a Technical Grammy—the first of its kind—for its outstanding technical contributions to the music industry and recording field. When I found this out, I went after the above-mentioned press passes. Unfortunately, it was two days after the deadline for press pass requests. And again, I missed out on a really cool gift bag—this one worth $17K. Ok, I probably wouldn't have gotten that anyway, but it's nice to dream.

At this point you're saying to yourself, "Self, I didn't see Steve Jobs give an acceptance speech Wednesday night between performances of Destiny's Child and Bono; did I blink and miss it?" No, you didn't. As is done with the Oscars, the technical awards are handed out the day before, at a low-key dinner, without all the fanfare and hubbub. After all, what is fanfare without a little hubbub, anyway?

72 and sunny in Redondo Beach.

e You next time.

I Hate When That Happens

My ISP's customer service has become increasingly nonexistent as it's gotten bought out by increasingly large companies, and sadly, my search for a small company that cares about its customers only turned up one option. Minutes after my request, I was given a free two-week trial. When it expired, I asked to become a paying customer. I never got a response. A few weeks later when my phone bill came, I found that the number they said was a local call actually wasn't.

Being stuck with an enormous phone bill really got me thinking about Internet through some other means. AT&T had been barraging me with junk mail (postal, not spam), two or three times a week, begging me to sign up for cable Internet. I was promised my first three months for $19.95, and Premium installation (when they say it on the phone, you can hear that capital P) for $9.95. So I called.

The purpose of this article is to document my experience, for what it's worth. In case that sounds too dry to hold your attention, let me add that my experience was pretty much a worst case scenario.

The Call

My initial call to sign up for service was undoubtedly the most professional part of the whole experience: AT&T wants you to feel comfortable with signing up. I talked to a fellow named Jimmy, who had a slight accent but was perfectly understandable. There was decidedly some pressure from him to make me sign up; in spite of what it says in the brochure, you're not calling "with questions" about the service; you're calling to sign up. If you hesitate about something, they will push, gently. (Nothing like Ameritech; I called them about the phone bill, only to get transferred to an extremely hard sell on their Internet service. I was a piece of raw meat to Ameritech's starving wolves. Eventually, they got sick of me saying no and hung up on me.)

Jimmy was able to answer all the questions I had about the service. I was asked, among other things, which browser I used: Internet Explorer, Netscape, or other. I said other; I use iCab. He said, "No problem."

He only asked me four or five times to buy a cable modem (from AT&T of course, for $150, or about $20–40 more than I could find it for online). Then there was the strange detour around discounts off the Internet service if I had cable, and upgrading my cable to digital cable for even more of a discount, and some trick mathematics that left my head spinning. You get only five dollars off regular cable, compared to ten off a digital package. No thanks. OK. It would take two weeks to send out a technician, who would come sometime between 8 AM and 8 PM. They couldn't narrow it down.

Installation

Two men, each approximately the size of a bear, showed up around 11 AM on the day of installation. Neither was in uniform, though one wore a baseball cap declaring him an "AT&T Contractor." I later learned that they aren't AT&T employees; they're paid by the job.

The first thing they did was ask to see my computer, so they could look for Internet Explorer. When I said I didn't have it, they said there was nothing they could do, and they would leave. Internet Explorer 4.0 or higher was required. I protested that that wasn't what I'd been told; they were unsurprised I'd been misinformed but there was nothing they could do. I didn't want them to go, leaving me to wait another two weeks, so I suggested downloading IE over my modem while they ran the cable line. Nope, they wouldn't go for that. Then I remembered Apple includes Internet Explorer with their system software. I grabbed my 8.5 installation CD, and sure enough, it had IE 4.0.1. The contractors were satisfied, so they went to work.

Within half an hour of their arrival, they had split the cable line coming out of my wall and wired up the cable modem to the computer. Then the fun began.

Internet Explorer returned error messages about security certificates being out of date when they tried to connect to a Web site to register me, through a proxy, but they could click through them. So they got to the registration page, typed in the registration number, and hit submit, but instead of going to the next screen, it just cycled back to the

registration page. The installers didn't have a computer with them, which really surprised me, so they kept trying the same thing, countless times, and getting, predictably, the same result.

They called in for help. More failures. Oops, one technician noticed the other was entering the wrong number. But the right number didn't work either. I dug out my OS 9 CD and suggested a newer version of Internet Explorer. OK. So I installed version 4.5. There were no more security error messages, but the registration page problem persisted. By then, one technician had left, moving on to another job. Both had called AT&T "incompetent," complained that they get paid by the job rather than by the hour, and blamed the trouble they were having on AT&T. They also predicted AT&T would blame the trouble on them. While I can sympathize with their sentiments, it's neither professional nor reassuring when contractors kill time by bashing the company that hired them.

In the end, the technician never got around the problem. After trying for some two hours total, he left, leaving the equipment behind, along with a phone number I should call in 24 hours. Then, just before leaving, he said he had a CD in the car he wanted to give me. OK. "I think it has Internet Explorer on it," he added, suggesting that I install the latest version, from this CD he would give me, and try the registration again myself. When he came back in with the CD, he gave me the numbers I would need to register, and described how the process should go from there, if it worked. Then, apologetically, he left.

So, three rather colossal screw-ups here:

- They were going to leave because I didn't have software installed on my computer which I was told by Jimmy I didn't need, and which they had in the car all along.

- The technician left rather than trying to get the registration to work with the current version of IE.

- The technician wasn't properly equipped to do the job in the first place: he should have had a laptop with him.

Trying Things

The CD-ROM I was given, labeled "Virtual Technician," had, I was told, come out only the day before. There was a manual, with a section on installation for Macintosh. It was very clearly written, designed so a user could insert the CD, run the installation, and it would put software on the computer and go through the registration process, all as documented in a series of pictures.

I installed Internet Explorer from the CD, version 5.0. It gave me the same problem as ever, cycling back to the initial registration screen after I entered my data. So I ran the installer. It looked like everything worked OK, but it skipped a bunch of steps, namely, the registration process. After I clicked "Yes" to installing Outlook Express on my computer, a few more screens went by, and I was told installation was successful.

Not only was I still not on the Net, but Outlook Express hadn't been installed—not that I'm complaining; I didn't want it in the first place. The dialog box had given me the choice of installing it or cancelling installation of cable Internet. So I'd figured OK, I can always delete it later.

Using my dialup account, I tried the registration page, and it gave me the same problem as I'd had through the cable modem. Well, at least it's consistent. I also downloaded IE 5.1; it took about 20 minutes, meaning if the technicians had let me download it in the first place, it would have been done about ten minutes before they were ready for it. But it didn't make any difference; whenever I submitted my registration numbers, it just cycled back to the same page.

The Second Call

The next day, I called the number I was given, and, after navigating through a rather confusing system of button-pressing (1 was for "trouble with your cable service"; when I finally got through to a person, I was told that option was just for TV cable, and you have to wait for options 4 or 5 if you have problems with cable Internet), a recording told me to call a different phone number. I did. More button-pressing.

Finally, I got through to Joseph. When I told him the problem, he replied, "I hate when that happens." Finally, someone who knows what's going on. The technicians yesterday had said this had never happened before. Joseph knew it had; he'd seen it.

He transferred me.

Shilo had not seen the problem before. He tried walking me through basic setup, putting me on hold several times to check on things, because he wasn't familiar with Macs. He screwed up by telling me it was safe to trash my TCP/IP preferences, assuring me nothing would be lost, that all that did was make a new copy of them. I was concerned about losing the preferences because if this didn't work, I'd still want to be able to connect to my dial-up. He repeated that there wouldn't be a problem with trashing the preferences, that I didn't need to make a backup copy. I did anyway.

Of course, Shilo didn't get me anywhere either; he never even had me configure proxies in the Web browser, nor did he ask what version of Internet Explorer I had, or check any of its preferences. He only knew I had a Mac because I volunteered the information.

He did ask about the installation. Basic installation right? Someone just comes over and drops off the modem. Nope. I tell him I got this deal with Premium installation for $9.95. (Its regular price is $99.95.) He was astonished, and very apologetic. You had premium installation, and you haven't been online yet? That's right. Wow. The technician shouldn't leave until you're connected. He'd transfer me to schedule another technician. I wouldn't have a long wait, he said. "This should never happen."

The hold time for scheduling the technician was the longest yet, at 10 or 15 minutes. Three songs worth, or enough time for my cat to eat breakfast, puke up a hairball, and then for me to clean it up and start reading the paper.

My conversation with Angel didn't last long; if my situation was at all unusual, you wouldn't know it from her. A technician was scheduled to come the next day, within a two-hour window. I specifically asked her to make a note that the technician should have a computer with him (Shilo had said they're all supposed to have a laptop with them) since this problem likely wouldn't have happened if the technician had a computer on which he could go through the registration process.

If You Want Something Done Right…

Yep, I did it myself. I tried getting to the registration page from my computer at work, just to see if it was possible to get past that initial registration screen. My old machine has a copy of Internet Explorer, and when I loaded the page, it asked if I would accept cookies.

Aha! My browser at home is set to always reject the suckers. I clicked Accept, and got through to the next page, no problem. Deleted the cookie, restarted IE, tried again, and rejected the cookie, only to return to the registration screen after I entered my data. So I'd duplicated the problem. I must at one point have had IE installed at home; and after I deleted it, the preferences, set to always reject cookies, remained behind.

So when I got home, I set IE to accept cookies, went through the registration process, and voila, the cable Internet was finally working. I decided to be a nice guy and call up to cancel the technician, explaining that I'd gotten it working myself.

They weren't sure, when I phoned, whether it would be possible to cancel the technician, but they'd try. (No technician ever showed, so the cancellation must have worked.) Saying that I'd solved the problem myself didn't prompt the simple question, "How?" This level of indifference is astonishing. The problem has been encountered before, and doubtless will be encountered again. A few seconds of someone's time to ask how I solved the problem, and make a quick entry in their internal tech support DBs, or add a note to the front registration page saying that cookies are required, would save AT&T (and its contractors) many hours of failed troubleshooting, and hold off a source of unhappy customers.

Conclusion?

A week later I got a "courtesy call" asking how things went. When I said that the technician had failed to get things working, but that I'd gotten it working myself, the heavily accented gentleman on the other end of the line was apologetic, even suggesting that I call and ask to be credited for the cost of the installation. But he showed no interest at all in finding out what the problem was or how it was solved.

Two days later, I got another "courtesy call." "Again?" I asked. Oh. Sorry. Polite, maybe a little embarrassed. I get the impression this happens all the time.

Anyway, I'm happy with the Internet service. It works well, and I've had no problems with it in the three weeks since I got it working. The speed is hardly "blazing" (I'm spoiled by a T1 at work) but it easily beats a modem. My phone bill's back to normal, and I never have to worry about getting disconnected, or someone phoning me only to get a busy signal.

Billing

You didn't really think this story would have a happy ending, did you?

When the bill for my cable Internet service showed up, it didn't reflect the deal I'd signed up for; AT&T had charged the full price for a month of Internet, completely disregarding the first three months for $19.95 deal that I'd signed up under.

So I went back to the phone, with more fighting through a labyrinth of button-pressing. Eventually I was shuffled through to Emily, who listened patiently, put me on hold for a very long time, and came back saying she couldn't fix the problem; she would have to fill out a form and send it to billing. She gave me the form number. Meanwhile, she said, don't worry about paying the bill, and billing should have it taken care of in a few days. I'd get my next bill long before my account became delinquent, and everything would be cleared up by then.

A week and a half later, I called back to check on the credit. The problem still hadn't been fixed. Carlos told me a credit will be placed on my account, two months from now, to make up for the error, but that I'm still expected to pay the bill—even though they acknowledge that it's wrong. There's nothing Carlos can do about it. It's how their system works. I asked to speak to a supervisor; Carlos agreed and put me on hold. After fifteen minutes and counting on hold for a supervisor, the line went dead. I guess the supervisor wasn't interested in helping either.

I waited a few minutes, in the vain hope that, hey, they have my phone number, maybe they will realize we were cut off, and call back. It didn't take long to realize how unbelievably stupid that was. So I called back, and asked for a supervisor. After only a few minutes on hold, I was talking with a lady named Ray. She's in Ohio, and likes to ski, but strongly prefers real snow. After hearing my problem, she proposed giving me a $78 credit (three times the difference between what I'm being charged and what I should be charged). Emily, it seems, had completely screwed up.

My new balance, meanwhile, had been updated with a new month's worth of charges (Ray couldn't understand why my billing cycle went the way it did), plus a late fee for not paying the bill Emily told me not to pay. There was nothing Ray could do about that. She was really trying to be helpful, so I let it go. After some 45 minutes of complicated discussion, it finally came out that what I should do is pay my next bill, minus $78.

I repeated this intention back to Ray, more than once, to be absolutely clear; she assured me that this would be fine, it wouldn't generate any more late fees for me. The only possible problem is if the credit doesn't go through, though she couldn't see why it wouldn't. I can call back in a week ("at least a week") to find out about that.

Meanwhile, it's well past the deadline for getting this article in, so there you have it, complete with cliffhanger. I'll post a comment about how all this turns out. Meanwhile, readers, please post comments about your experiences, good or bad: however painful my experience with AT&T has been, it's just one person's experience, and should only be taken as such.

The Phobia List

If you're afraid of something, there's probably a word for your fear, if not several. This site is the place to find it. Not recommended if you suffer from hippopotomonstrosesquippedaliophobia (fear of long words) or epistemophobia (fear of knowledge), but if your only problem is geniophobia (fear of chins) or anamblephobia (fear of looking up), you should be okay.

XThemination

Just because Steve Jobs thinks Aqua is the only theme anyone should ever want (or be allowed to have) doesn't mean you do. From this site you can view a nice selection of alternative themes for OS X, including a few that attempt to bring back the look of Classic Mac OS. Support for themes isn't built into OS X, of course, but the freeware application Duality is one of several applications you can use to switch to a non-Aqua theme in OS X. Not recommended if you suffer from metathesiophobia (fear of changes).

License Plates of the World

No matter what it is, somebody out there collects it. Which we all know means there's a Web site about it. From this site, you can see pictures of pretty much every licence plate type there is, not just from the US but from countries around the world. Pick a region for a list of countries in that region, pick the country, and sit back while you gaze lovingly at a Ugandan licence plate, or relive your recent road trip to Tadjikistan. Links on the page point to articles about the grading of licence plates, collectors' clubs, and more.

Gallery A

I usually avoid commercial links here, but I like what this site is trying to do. A marketplace for a number of Russian artists, mostly from the St. Petersburg area, the site shows off galleries of artwork in various styles. Short resumé-style biographies are also available for most artists. The English language translation on the site isn't perfect, but you're there to

look, not to read. Prices for displayed artwork are not listed, but there's a form you can fill out to inquire if a particular piece strikes your fancy. (I haven't ordered from them; I just like the site.)

Lord of the Rings

A few months back, I mentioned a site which showed several Bible scenes re-enacted in Lego. This site does the same sort of thing with J. R. R. Tolkien's classic. More on the cute side than the humourous, but still nicely done. From the site's main index, you can see scenes from various other stories re-created in Lego, including *Robin Hood* and *Moby Dick*. If you don't suffer from legophobia (OK, I made that one up), you can also check out the Lego Manic's Webring.

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Setting Up AirPort

What is AirPort?

Apple makes a type of wireless network called AirPort. Apple's AirPort significantly changes how you set up and use networks, making them more practical for the average user. AirPort removes the need for network wiring by using a network transmitter called a Base Station and treating the computers on the network like radio receivers. (Each client computer needs an AirPort card to receive these network signals.) The Base Station transmits network data through most solid obstacles, and works up to a few hundred feet away, although performance drops as distance increases.

Although AirPort is the Apple-branded method of wireless networking, it's based on a common wireless network standard, so it is also compatible with most other wireless networks. This is especially useful at corporations or colleges that are installing wireless network transmitters. Macs with AirPort antennas can also communicate with each other without a "real" Base Station using the Base Station software. Connecting to other wireless networks won't bypass platform differences, but you can surf the Web and do other platform-independent tasks.

The AirPort Base Station includes a built-in 10BaseT Ethernet port, enabling it to bridge the AirPort network to an Ethernet network or a high-speed Internet connection. It also has a 56K modem and can share the modem connection with other Macs on the network.

How Does It Work?

The AirPort Base Station (hardware or software) is a type of radio transmitter. It sends out network data at a specific frequency, which other Macs can connect to using their own AirPort card or antenna. When a Mac connects to the Base Station, the two establish a secure, encoded connection, to prevent unauthorized users from viewing the network data. Note that wireless security is not as robust as some other computer security measures, so you should be aware of its limitations.

AirPort transmits data at up to 1 MB per second, about the speed of 10BaseT Ethernet. Future versions of AirPort may increase this speed further.

Plugging in an AirPort

AirPort's wireless nature leads to a very quick setup process. Once you plug the Base Station in, just connect it to the Ethernet hub (if you have an Ethernet network), plug it in to the nearest phone jack (if you'll use the modem), and you're done.
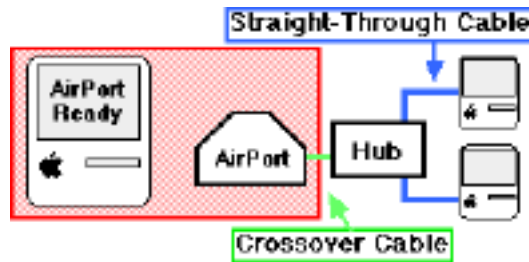
In the above diagram, the AirPort Base Station is connected to the Ethernet network and is transmitting wirelessly to the AirPort-ready Mac on the left. Any Mac on the network (wireless or Ethernet) can see the others because the AirPort Base Station bridges the two networks together.

Software Setup

If you have an AirPort-ready Mac (built-in or with an installed AirPort card), all you need to do is install the AirPort software and choose AirPort in the AppleTalk control panel to start using the network.

If you also use the AirPort for Internet access via the modem or Ethernet port, open the TCP/IP control panel. Set the "Connect via" to AirPort and "Configure" to DHCP Server. This tells the AirPort to automatically generate an IP address for your Mac when it connects to the Internet.

If you have problems getting the AirPort to communicate properly, you may need to reset or reconfigure the internal Base Station settings. See the AirPort manual for exact instructions.

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The Mops Programming Language—Part 1

A rich part of the personal computing experience is writing your own programs, useful or otherwise. There is a slight danger that doing so can be addictive, or at least habit forming. In any case, if you have any interest in doing some Mac programming, a suitable freeware programming system exists named Mops. It is designed exclusively for the Macintosh.

The Mops system has been developed over the past 13 or 14 years by Mike Hore, an indefatigable and gifted Australian programmer, as a part-time effort. Given the size of the system currently in distribution, Mops just might be the best Mac software value around. (Let's see, 7.4 MB divided by $0—no, no, that won't work.)

Mops, Forth, and OOP

Mops is unusual in that it is an intrinsically Macintosh programming language by design, much as AppleScript is an intrinsically Macintosh scripting language. This lends itself to (relative) ease of use in both cases, though programming is never an easy task. Furthermore, Mops is unique in that it seamlessly blends the best of the old and the new. Its language is based on Forth, the oldest programming language in common use. Mops adds to its Forth "backbone" a very robust and complete form of object-oriented programming (OOP). The Mops implementation of OOP includes just about everything that an OOP system is supposed to provide, up to and including multiple inheritance.

Since Mops is Macintosh-specific it doesn't need a separate API or framework in order to provide necessary Mac Toolbox and system services. In a sense, these are built-in. (The Toolbox classes will be further described in Part 2 of this article.) Thus, you can implement any sort of Mac program and you can build the kind of shared libraries (with callback routines and such) that are rapidly taking over from system extensions. The AltiVec real-number coprocessor in G4 Macintosh models is supported for wizard-level vector mathematical processing. (Ever wonder why Photoshop runs so fast on a G4?)

For those not yet familiar with the Mac's programming services, the Toolbox has been the traditional programming interface for the humongous number of services that the OS provides: windows, menus, and dialogs, to mention the obvious few. The Toolbox is invoked by any one of many defined "Syscalls" that are intercepted by the system when executed. In recent OS versions, the CarbonLib shared library intercepts most of those calls for "carbonized" programs—those built to co-exist under Mac OS 9 and Mac OS X—and attempts to provide the same or similar services.

Forth: A History

The Forth language merits some historical background. Charles H. Moore is credited with inventing Forth single-handedly; his ideas began to take form in the late 50s at the Smithsonian Astrophysical Laboratory, where he employed a few key elements of the language-to-be. By 1969 Moore had developed a fully-fledged Forth language, so named, initially for the IBM 1130 mini-computer. Moore wrote computer graphics programs in Forth, among other things. With the advent of microprocessors, Forth was a natural for use in embedded control processors. Those devices had little space for the control software, let alone a sizable program development system. Forth lent itself to cross-compiling and produced small object programs.

Although there is an ANSI Forth standard, the Forth world is actually characterized by a host of variants that differ somewhat from each other and from the standard. So it is reasonable to describe the Mops coding backbone as Forthish, although Mops is certainly a member in good standing. Mops does define many additional Forthish words specifically for Macintosh programming, for convenience, and for object-oriented operations. (Mops can readily be converted to a standards-compliant ANSI Forth compiler, and just as readily back again.)

Mops can be described as a good Forthish language underneath higher-level OOP constructs. One might (but probably shouldn't) say that Mops is Forth wearing an OOP overcoat. Coding, as in all Forth-based languages, is characterized by three major features: explicit stack operations, postfix notation, and language extensibility.

When Forth evolved, the memory available for programs was tiny by present standards. It follows that the curious nature of Forth's notation was not adopted by its inventor arbitrarily or for its novelty value. Now that memory is cheap and plentiful, the compact code produced is equally valued for its speed of execution.

You can download Mops V.4 at The Mops Page. The Web site contains a number of other useful and tutorial items and has links to Forth documentation and resources, including the "Evolution of Forth" paper from which I quote later in this article.

A Mac OS X native version of Mops is currently available in beta form. The 'old' standard Mops produces programs for 68K processors, as far back as the Macintosh Plus. (A "legacy" compiler?) The newer PowerMops compiles native for PowerPC machines, and fat applications (for both 68K and PowerPC machines) can be built.

Naked Stacks and "Backward" Notation

Whereas the great majority of compilers make extensive use of stack operations internally, for efficiency Forth brings one stack out into the open, so to speak, so that it is directly under the programmer's control. This is called the data, or parameter, stack. It is used to pass program data from one Forth word, or procedure, to another.

A second stack, the return stack, contains mostly program return addresses rather than data but is available for use by an experienced Forth programmer. Any unqualified reference to "the stack" always means the data stack, which by the nature of the language must be managed by the programmer. (Assembly language programmers also generally employ one or more stacks in their code, again for efficiency.)

Mops—and every other Forth-based language—uses the common push-down stack, also known as the Last In First Out (LIFO) list. The coding style and "grammar" of Mops, i.e. the rules for forming proper language expressions, are dictated by appropriateness in expressing LIFO list operations.

Forth expert Elizabeth Rather states the case concisely in her paper "The Evolution of Forth" that she presented to the Association for Computing Machinery:

> Forth's explicit use of stacks leads to a "postfix" notation in which operands precede operators. Since results of operations are left on the stack, operations may be strung together effortlessly, and there is little need to define variables to use for temporary storage.

(The paper is historically fascinating in that Ms. Rather was always "at the scene" with Moore, or else right next door. She herself had an influence on the language.)

I believe she is saying that stack programming naturally leads to use of a postfix or Reverse Polish Notation (RPN) as being right for the job, and that stack usage radically reduces the need for declared variables. Incidentally, Hewlett Packard handheld calculators also use RPN and—you guessed it—are also stack oriented.

Figure 1 shows three sequential stages or points in the life of one data stack.
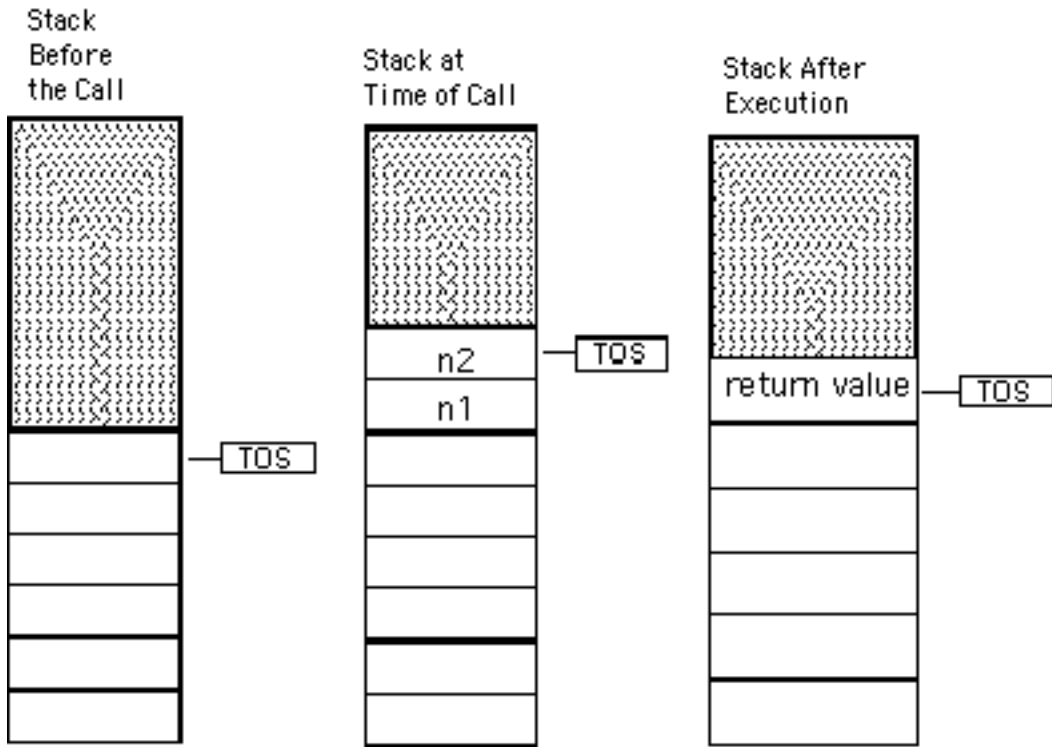
Three Stages of a Stack. TOS labels the Top Of the Stack.

Next is a really simple-minded Mops word definition which we will call Add, for obvious reasons:

```
: ADD     ( n1 n2 -- sum )
          +           ;
```

All that the Add word does is add two values that it expects to find on the stack when it is called. The n1 and n2 symbols in the word's stack comment (within parentheses) indicate that. The "sum" symbol indicates that (by the nature of arithmetic operations) the word will leave the result on top of the stack when it returns to its caller. Note that the only code in the definition is the single add operator, or plus sign.

Now back to the stack diagram; the left-most drawing shows a condition of the stack just prior to a call to Add. The stack content might be values waiting to be used by nested (partly executed) words and information pushed on the stack by Toolbox routines. The middle drawing shows two integers pushed on the stack by a caller of the Add word. These are pushed specifically for the execution of the Add word.

The right hand side drawing shows the result of the operation placed on top of the stack. Note two things: One, that Mops operators uniformly consume or "use up" their operands and, two, the top of stack (TOS) pointer is automatically maintained by Mops. (In general, operands never remain on the stack but intermediate results or more complex procedures do.)

The following is a little more interesting sample of Mops coding.

```
Value   TEMP     ( at top level )
    .
    .
    .
: SUM-OF-SQUARES   ( n1 n2 -- n3 )
    DUP * -> Temp
    DUP * Temp +
;
```

The Value declaration creates a global variable named Temp. The ':' (colon) is the Forth word for defining new words. The colon initiates the definition and is followed by the name of the new word, SUM-OF-SQUARES in this case. (A sum of squares operation produces the squares of two or more values and adds them together.) The comment, in parentheses, is called a stack-effect comment or sometimes stack notation. While stack comments are optional, purely for documentation, they are considered very important in

Forth programming. Using a comment makes clear what the defined word, when executed, requires to be on the stack as input and what it will leave on the stack as output. A stack comment may become very complex, and that is when it is needed most.

In this example there must again be two integers on top of the stack when the word is called, symbolized by n1 and n2. Any mismatch between the caller and called word in this respect means big trouble in computer city. The stack will rapidly become incoherent if the called word "eats" some stack data that doesn't belong to it. (The n2 or right-most symbol always represents the top of stack value but that is not significant in this case.) The n3 symbol indicates that the defined word will push one value on the stack as it terminates (the calculated sum-of-squares, naturally).

Note that the stack comment is in no way a map of the data stack. There may be many, many values on the stack below the ones relevant to a given word execution. The lower data items are the business of other words to consume.

The DUP word, a specialized stack operator, duplicates the top of stack value, symbolized by n2, creating a new top of stack cell. The multiply operator—'*'—multiplies the top-of-stack and next-on-stack values, consuming those values and creating a new top of stack cell containing the product. The Mops-specific '->' operator (called the "gazinita" for serendipitous reasons) is a store operator that moves the top of stack value into certain kinds of variables, such as Temp in this example. So the square of n2 is has been moved off the stack and n1 is now on top. (Of course, we mean the data values signified by n2 and n1.)

The second line of code produces the square of the value symbolized by n1 as before, but then the value of Temp is pushed on the stack, simply by naming it, and the top of stack (n2 squared) and the second on stack (n1 squared) are added together. Both addends are consumed by the add operation and the sum is pushed on the stack as the word's return value. (The SUM-OF-SQUARES word would properly be considered a function in some other languages.) The stack comment's usefulness has been demonstrated I think, even though it is literally just another program comment in the usual sense.

The ';' (semicolon) word ends the word definition. A whole lot was going on in those two little lines of code, no? A somewhat more slick and proper version of the same routine, requiring no variable declaration, is as follows:

```
: SUM-OF-SQUARES   ( n1 n2 -- n3 )
    DUP * SWAP DUP * +
;
```

The very useful SWAP word, another specialized stack operator, swaps the values of the top two stack cells. It consumes nothing. Having explained that much I'll leave the rest as an exercise for you, the student. Just concentrate on each word separately. Dead easy.

There are several ways, using Named Input Parameters and Local Variables, that explicit stack manipulation can be largely hidden or limited, at the discretion of the programmer. At times a required operation can be so complex that use of such magic variables may be required. (The Named Input Parameter and Local Variable are Mops-specific language features.)

Direct benefits of Mops' stack orientation to the programmer include:

1. The ability to produce fast and compact code. (Mops programs are sometimes competitive with assembler code.)

2. Much-reduced need for global variables because both input and output parameters can be passed onto the stack and the stack can be used for holding intermediate results, thus reducing both the programmer's error-prone housekeeping chores and the program's memory requirements.

3. Mops procedures are naturally re-entrant as long as external variables are not used, a decided gain in coding simplicity. (Re-entrancy is the ability of a procedure to call itself during its execution, which can be very useful and a necessity in certain applications.) While most languages provide for some re-entrancy, they do so by means of special, additional compiler code whereas Mops procedures are simply and inherently re-entrant.

4. Mops programs that use only the normal high-level Mops words are inherently structured and modular (by the Dijkstra/Parnas definitions), excepting only the use of EXIT and EXECUTE (which take program control out of line). In programming theory, code that is structured and/or modular is more likely to be reliable, or in my interpretation less likely to contain hidden "gotchas."

Words, Words, and More Words

Another face of Mops' Forthish simplicity is its very simple lexical rules (the rules that tell you how to form valid basic elements of a language). In Forth the syntactic elements or identifiers are space-delimited character strings, period. Anything you want can be in that string, excepting only a white-space character. The string can be as long or as short as you like.

The Mops grammar, consists of a simple notation for defining new words, which you have seen above (: and ; space delimited) and several other equally simple notations. There are many different kinds of Mops words of course, but lexically they are all the same. The OOP constructs require a few additional rules but they are also few and very simple. Indeed, some say that Forth has no syntax because it doesn't need any. The syntactic simplicity leads to the third major feature of the language: user extensibility.

Normal (high-level) Mops words fall into three categories: named data items, named procedures, and defining words. The defining words allow the user to declare named procedures, that is, new Mops words, and also what are called action words. Executable words, or "definitions," are functionally analogous to routines, subroutines, and functions in other languages and sometimes are equivalent to commands in other languages. Much as algebra is the metaphor or model for Fortran, for example, Forth's metaphor is natural-language prose. (Some would say German, with the "verbs" at the end.) Any arbitrary character string can represent a wide variety of functionally different elements. There are virtually no reserved words (: and ; are a few exceptions). The name of almost any word in the dictionary may be redefined.

The Forthish emphasis on the word "word" stems in part from its use of the dictionary construct. All pre-defined Mops words, such as '+' for example, as well as—at some point—all the words that comprise the user's program, are in a dictionary. The dictionary in large part *is* the user's program. (The interpreter for the dictionary is a matter of a few fast machine instructions.) Conceptually below the dictionary there is a small nucleus that contains the compiler/interpreter's primitives.

All these lexical considerations lead to a fully extensible language in which the user freely makes new words out of combinations of existing ones. This provides the ability to easily factor a program, a very important programming technique.

The veteran Phillip J. Koopman says:

> Writing a Forth program is equivalent to extending the language to include all functions needed to implement an application. Therefore, programming in Forth may be thought of as creating an application-specific language extension. This paradigm, when coupled with a very quick edit/compile/test cycle, seems to significantly increase productivity. As each Forth word is written, it can be tested from the keyboard for immediate programmer feedback.

Extending the language is reflected in the code compiled for a program. The dictionary, which initially contains only the definitions of the Mops language, is literally extended to include all of the user-program definitions. Execution of the program is tantamount to interpretation of the dictionary, either before or after the program is installed as a standalone, i.e. double-clickable, program.
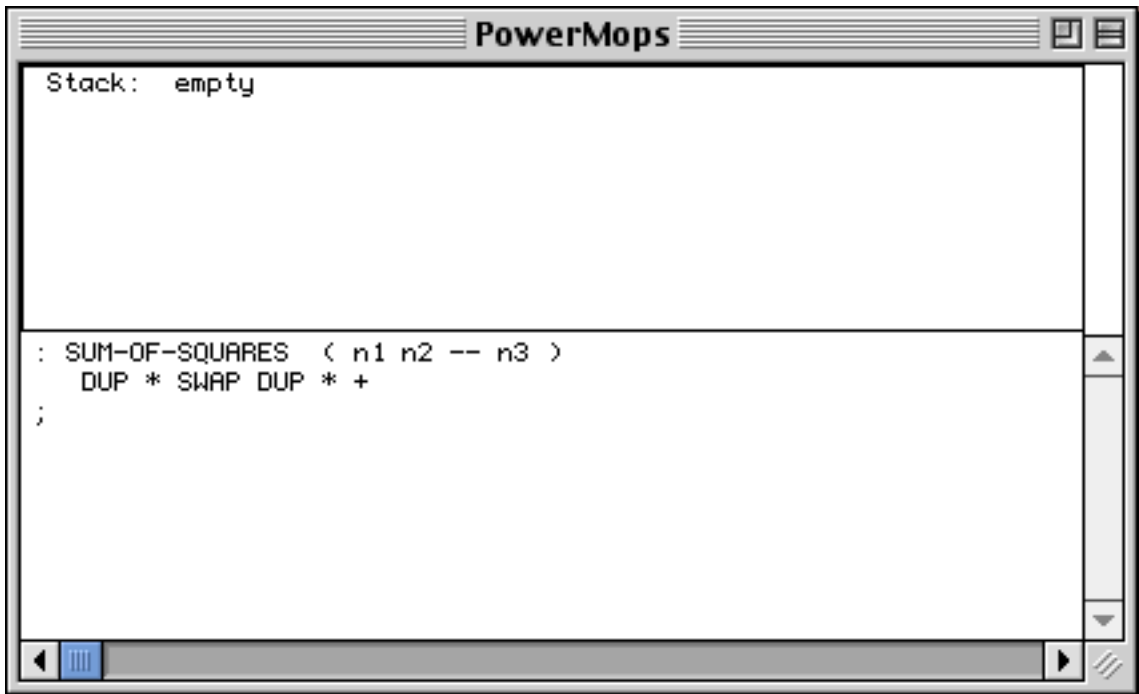
Interpreting Mops Programs

It might be well to reinforce the concept that when a Mops program is compiled for standalone execution, the program still executes in interpretive mode. This mode of execution is often associated with poor performance but that is not the case with Mops programs.

As a postfix, interpretable language, Mops has more in common with PostScript than with the other popular programming languages of today such as C, Java, and Pascal. (It does share Pascal's structured code.) AppleScript on the other hand is an interpretive language but is designed more for ease of use than "blazing speed."

One may test the definition of, for example, the SUM-OF-SQUARES word defined above, prior to incorporating it into any program source, by entering it into Mops' data entry window and making calls to it, in interactive interpretive mode. Very confidence making. As shown in Figure 2 below we have entered the sum-of-squares definition into Mops'

data-entry (and editing) window, which is the portion below the horizontal line. Even though we have selected the definition and pressed the Enter (*not* Return) key, which enters what has been typed, the stack remains empty, as shown in the upper window.
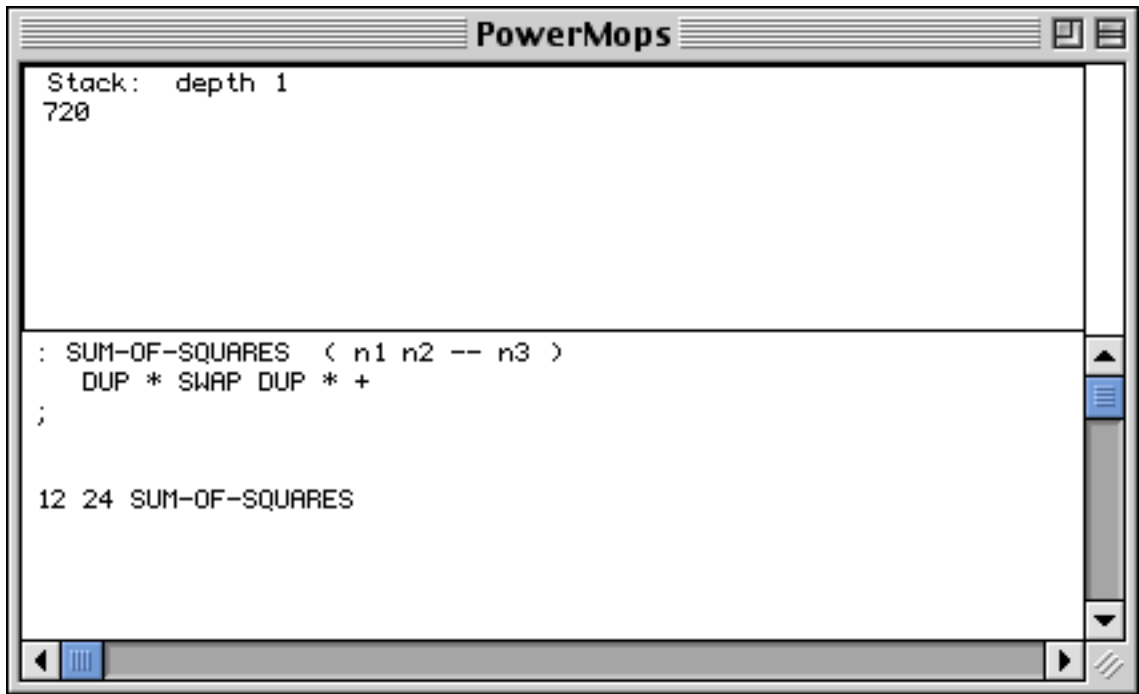
```
╔══════════════════════════ PowerMops ══════════════════════════╗
║  Stack:   empty                                                 ║
║                                                                 ║
║                                                                 ║
║                                                                 ║
║                                                                 ║
║─────────────────────────────────────────────────────────────── ║
║  : SUM-OF-SQUARES   ( n1 n2 -- n3 )                             ║
║    DUP * SWAP DUP * +                                           ║
║  ;                                                              ║
║                                                                 ║
╚═════════════════════════════════════════════════════════════════╝
```

Entry of Word Definition

That is because the SUM-OF-SQUARES definition has been compiled into the dictionary as a Mops word. (The colon word puts Mops into compile mode.) In Figure 3 we enter two values, 12 and 24, and call SUM-OF-SQUARES simply by naming it. (Followed by the Enter key.) Mops, in interpretation mode, places the numeric values on the stack (standard behavior) and searches for a match for the name in the dictionary—not far to look in this case—and executes the matching word when found. Finally we see the sum-of-squares result on the stack. (Maybe if we had some sort of alien high-speed vision we could have

seen the two numbers on the stack before they were eaten by the SUM-OF-SQUARES word. We could have entered the stack values by themselves of course and seen them there before invoking SUM-OF-SQUARES.)

```
┌─────────────────────────────────────────────────────┐
│≡≡≡≡≡≡≡≡≡≡≡≡≡≡≡≡    PowerMops    ≡≡≡≡≡≡≡≡≡≡≡≡ ▣ ▤│
├─────────────────────────────────────────────────────┤
│ Stack:   depth 1                                    │
│ 720                                                 │
│                                                     │
│                                                     │
│                                                     │
│                                                     │
├─────────────────────────────────────────────────── │
│ : SUM-OF-SQUARES   ( n1 n2 -- n3 )             ▲    │
│    DUP * SWAP DUP * +                          ▤    │
│ ;                                                   │
│                                                     │
│ 12 24 SUM-OF-SQUARES                                │
│                                                     │
│                                                ▼    │
├─────────────────────────────────────────────────── │
│ ◀ ▥  ▶                                            │
└─────────────────────────────────────────────────────┘
```

Entering Values for Testing

As can be seen, when a more complex word definition has been entered in the dictionary, you can sit at the keyboard and test it all day long with various values and combinations of inputs. The advantage of being able to test small pieces of a program independently of most other parts is obvious.

The Mops system includes a manual that runs to over 370 pages, in four parts. Except for the tutorial Part 1, it is not intended to cover the Forth language aspect of Mops in any comprehensive way. I found that I needed a good Forth reference manual to fill in the gaps, and I can recommend the *Forth Programmer's Handbook* offered by FORTH Inc. as an excellent value.

• • •

Part 2 of this article, in next month's issue of ATPM, will cover the object-oriented programming (OOP) aspect of Mops. OOP allows the user to build programs with clearly delineated and separate functional units, as runtime objects. It is also the mechanism by which Mops provides access to system services.

Downloaded Files Challenge—Followup

In my January How To column, Working with Downloaded Files without Special Utilities, I gave our readers a challenge. I asked readers to send me downloadable files (or their URLs) that might be difficult to open. I promised that persons who sent me an unadulterated file I could not open without resorting to ResEdit would win a prize.

I received no entries in January and extended the contest through February. I received only one contest entry! However, the file was in a proprietary Microsoft Publisher 3 format, and was disqualified. (There never has been a Macintosh version of Microsoft Publisher.)

So, I can conclude that one of the following statements is true:

1. ATPM readers ignored the contest and did not even try to find a file that was difficult to open after downloading.

2. It is almost impossible to find a downloadable, non-proprietary–formatted file that the Macintosh cannot handle.

by Mike Flanagan, sensible@sensible.screaming.net

Extras: Desktop Pictures

Oregon and Washington

These photos, submitted by Contributing Editor [David Ozab](#), were taken by [Julia Harris](#) during their Thanksgiving weekend trip to Astoria, Oregon; the North Oregon Coast; and Washington.

Astoria, Oregon

astoria1.jpg—astoria6.jpg: Views from the Astoria Column (11/23).

astoriabridge1.jpg—astoriabridge6.jpg: Astoria bridge. Julia took the first picture from our hotel room, and the other three from the column (11/23).

fortclatsop.jpg: Lewis and Clark's winter camp, restored and made into a national memorial (11/23).

North Coast, Oregon and Washington

northheadwa.jpg1 and northheadwa2.jpg: We drove out to the coast along the north bank of the Columbia river. Before crossing the bridge into Astoria, we stopped at North Head lighthouse and Julia took these two pictures of the Washington coast (11/22).

haystackrock.jpg: Off the coast at Cannon Beach. One of the most photographed spots on the Oregon coast (11/23).

terribletilly.jpg: The Tillamook Rock lighthouse, about a mile off Cannon Beach (11/23).

oceanside.jpg: A small town, just south of Cape Meares, along the Three Capes Scenic Route (11/24).

coast1.jpg—coast4.jpg: More shots from along the Three Capes Scenic Route (11/24).

kiwanda1.jpg—kiwanda4.jpg: Cape Kiwanda, just north of Pacific City, Oregon, at the end of the Three Capes Loop (11/25).

Previous Months' Desktop Pictures

Pictures from previous months are listed in the [desktop pictures archives](#).

Downloading all the Pictures at Once

iCab and Interarchy (formerly Anarchie) can download an entire set of desktop pictures at once. In iCab, use the Download command to download "Get all files in same path." In Interarchy, use HTTP Mirror feature.

Contributing Your Own Desktop Pictures

If you have a picture, whether a small series or just one fabulous or funny shot, feel free to send it to editor@atpm.com and we'll consider publishing it in next month's issue. Have a regular print but no scanner? Don't worry. E-mail us, and we tell you where to send it so we can scan it for you. Note that we cannot return the original print, so send us a copy.

Placing Desktop Pictures

Mac OS X 10.1.x

Choose "System Preferences…" from the Apple menu and click the Desktop button. With the popup menu, select the desktop pictures folder you want to use.

You can also use the pictures with Mac OS X's built-in screen saver. Choose "System Preferences…" from the Apple menu. Click the screen saver button. Then click on Custom Slide Show in the list of screen savers. If you put the ATPM pictures in your Pictures folder, you're all set. Otherwise, click Configure to tell the screen saver which pictures to use.

Mac OS X 10.0.x

Switch to the Finder. Choose "Preferences…" from the "Finder" menu. Click on the "Select Picture…" button on the right. In the Open Panel, select the desktop picture you want to use. The panel defaults to your "~/Library/Desktop Pictures" folder. Close the "Finder Preferences" window when you are done.

Mac OS 8.5–9.x

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.

Once 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, reviewed in issue 5.10 and available for download.

Review: Can Combine Icons 2.1

by Eric Blair, eblair@atpm.com

Developer: Infinity-to-the-Power-of-Infinity
Price: $10
Requirements: Mac OS X
Trial: Feature-limited (Adds a demo label to all created icons)

Many Mac users like to customize their computers. This can range from the involved, like custom painting your case, to the simple. When you're aiming for simple, it doesn't get much more simple than pasting down some custom icons. There are plenty of sources out there for good Mac icons; Icons.cx, Xicons, and the Iconfactory come to mind. Sometimes, though, you just can't find the icon you need.

When that happens, you have a couple of options. First, you could draw the icon yourself. Of course, that would require artistic ability. Second, you could ask somebody to draw it for you. In addition to finding somebody with artistic ability, this could cost some serious money. Third, if your icon needs are modest, you could use Can Combine Icons.

Like the name implies, Can Combine Icons is a program that combines multiple icons into one. One common use for this type of program is badging folders with an icon. There are programs that can accomplish this task in Mac OS 9, but I don't believe that any of them generate the extra information needed to create high quality Mac OS X icons. Furthermore, Can Combine Icons is not limited to just putting an icon on a folder.

Creating an Icon

The basic Can Combine Icons interface consists of a single window. Its main components are three vertically stacked image wells. The top image well is where you place your background icon. The middle well is for your foreground icon. The bottom well represents the combined icon. If you like the results, creating your own custom icon can be this simple. However, if you feel like doing some fine tuning, Can Combine Icons gives you this option as well.

One thing to remember about Can Combine Icons is that it's not a full-fledged icon editor. When I say fine tuning, I don't mean that you have the ability to edit each pixel to create the picture-perfect drop shadow. What you can do is decide how the icons will interact with each other.

Can Combine Icon has presets for most of the popular icon badging approaches—the center and the corners of the folder. There is also a special option for badging Aqua folders. Instead of just placing the foreground icon in front of the background icon, the Perspective Folder Badge (Aqua Folder) option rotates the foreground icon so it matches the angle of a standard Aqua folder and places the foreground in the center of the Aqua

folder. The resulting icon is much more appealing than just putting the foreground icon in the corner of a folder. For more imaginative designs, there is also a collection of miscellaneous patterns.

Creating the ATPM folder.

If you want more control over the icon appearance, you can access the Extra Option drawers. There are two drawers—one for the background icon and one for the foreground icon—and each drawer has three tabs. The first tab lets you control the individual icon's position and rotation in the composite icon. The second tab lets you control the icon's color and transparency. Based on a preference setting, the color option either rotates the hue of the icon or changes the color for the entire icon. The third tab lets you scale the icon.

The Extra Option drawer gives you access to just about everything you might want to change about the icon interaction. There are a couple of things I might like to see done differently, though. First, when you apply a pattern, it has no effect on the Extra Option tabs. Even though you're potentially scaling, moving, or rotating an icon, these three values don't change. This can be a little confusing if you want to undo a pattern transformation. Second, almost all of the adjustments are done via sliders. The only problem is that sliders can be somewhat inaccurate if you want to make precision adjustments. It would be nice if there were some way to do single pixel increments or decrements of the settings, or to just specify a value textually.

Can Combine Icons also gives you the option of adding text to your icons. You get access to most of OS X's text editing features, from basic font styles to automatic ligatures. After typing in and formatting your text, you place it in either the foreground or background image well. You also have the option to draw a bow or outline around your text.

The Styled Text window seems to be the least well-implemented portion of Can Combine Icons. First, there appears to be a bug in implementation of the outline function. When you click the checkbox for Outline, the outline is not drawn. It is only drawn when you click the Color option. Second, the checkboxes for Outline and Background are not

switched when you click on their names, as is normally the case. Third, it would be nice if there were a Size to Fit option for the text box in the preview pane, since the size of the box, and not the size of the text, is what's used by the built-in patterns.

Adding text to an icon.

Adding text to an icon.

Some Extra Niceties

Can Combine Icons' basic functionality works well, but it has some additional functionality that adds to its value. First would be the Library. The Library is a palette that holds common icons. Can Combine Icons includes libraries of common disks, folders, and symbols—basically, it's a collection of standard Finder elements. Also, the library can extract icons from some programs, although I'm not really sure how this works. I was able to extract icons from a bundled application (iPhoto) and a non-bundled application (BBEdit). I was unable to extract the icons from Mailsmith. Unfortunately, there doesn't appear to be any way to create custom libraries.

Can Combine Icons also offers batch image processing. Basically, both the foreground and background image wells keep track of everything you drag into them. When you do a batch output, each foreground icon is combined with each background icon. There is a bug in batch processing, though. The names of batch processed icons are determined by

the names of the items in the respective wells. If you have two elements with the same name in the same well, certain combinations will be overwritten. For instance, if you have two icons named "Photoshop" in the background well and a third icon in the foreground well, you will only get a single icon after batch processing. This problem becomes more apparent if you have multiple text elements in an image well—each text element is named Text, so you only get combined icons with the last text element added to each well.

Another feature included in Can Combine Icons is drag and drop within the application. You can drag an icon from the result well to either the foreground or background well. This way, you can combine multiple elements into a single icon. This is really useful if you want to do a combination and add text.

Can Combine Icons is also able to extract images from image files. If you drag a standard image file to an image well and hold down the option key, the contents of the file will appear in the well, as opposed to the file's icon.

Finally, Can Combine Icons doesn't require you to actually have something in each image well. Combining this and the previous feature, you could easily use Can Combine Icons to create thumbnails of images.

Conclusion

Can Combine Icons is an easy-to-use program that simplifies the process of creating certain custom icons. Along with the ability to create icons for OS X, Can Combine Icons includes many extras that set it apart from any comparable icons tools from OS 9. Unfortunately, there is the batch processing bug, which could be a major problem for some users. However, if you want to spruce up your computer without breaking out the paint, check out Can Combine Icons.

Review: Centipede

by Gregory Tetrault, gtetrault@atpm.com

Developer: MacSoft division of WizardWorks at Infogrames, Inc.
Price: $20
Requirements: G3-based Mac with Mac OS 8.6, 64 MB RAM, 8x CD-ROM.
**Recommended:** 333 MHz Mac, 8 MB of VRAM, 96 MB of RAM, 16x CD-ROM.
Trial: None.

Overview

Centipede was an old arcade game popular in the early 1980s. Your shooter had limited mobility at the bottom of the screen. You shot bullets at a segmented centipede, and each segment turned into an immovable mushroom after being shot. The object of the game was to blast the centipedes, spiders, and other enemies while acquiring special weapons or power-ups. Centipede went on to become an Atari 2600 game cartridge. The current incarnation of Centipede has a 3D Arcade version with game play similar to the original. The new game also has an Adventure version that combines the 3D Arcade-style game play with a five worlds "protect and rescue the good guys" action game.

Installation

The CD contains a data partition with the Centipede Vise installer. Standard installation places the application and some data files on the hard drive you designate. Custom installation lets you install most (215 MB) or all components (290 MB) except the movies. The CD contains installers for QuickTime 4.1.2, OpenGL 1.2.1, and GameSprockets 1.7.5. A second CD partition contains audio tracks for background music.
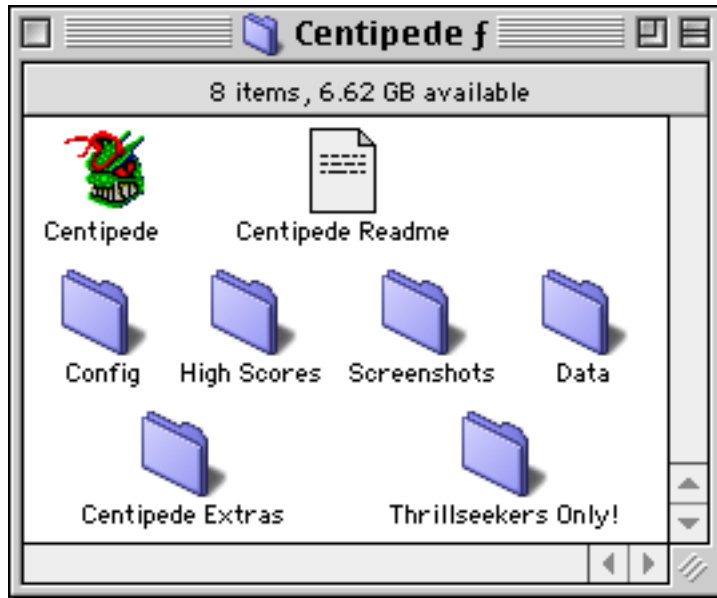
Files Installed on Hard Drive

Game Setup

The first time you launch, or anytime you hold down the Command key and launch, you are presented with a settings window. You can choose the screen resolution, refresh rate, rendering mode, detail and texture quality, and video extras such as fog, shadows, dithering, and 32-bit color. The manual provides no information on these settings. The Read Me file has a small amount of information.
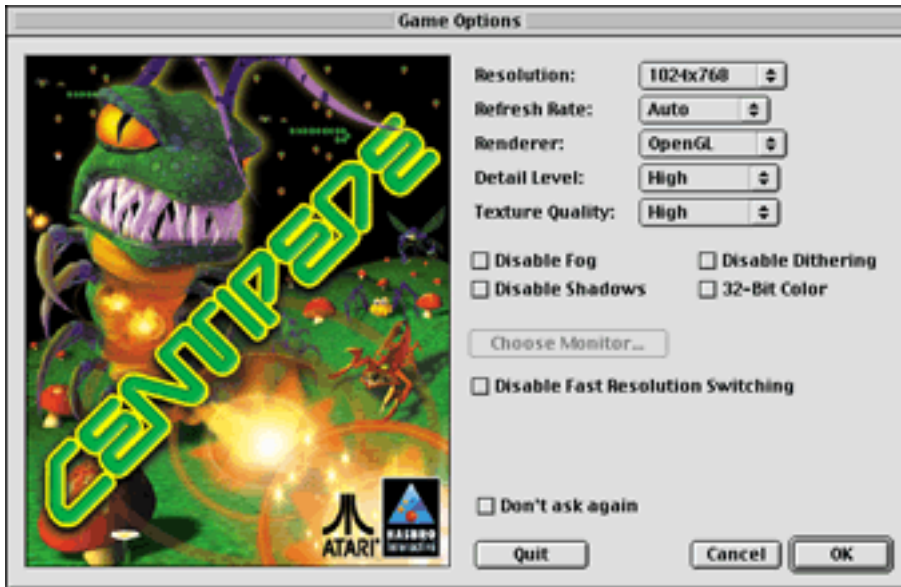
Centipede Resolution and Appearance Options

Game Play

Centipede has single-player and two-player modes. Single-player modes include Arcade (based on the old Atari game), 3D Arcade (new to this game), and Adventure. I could not get Arcade to work at any resolution. The 3D Arcade game resembles the original Centipede game. It is really a 2.5D game with a 3D perspective. Movement felt choppy and suffered from excessive lag time. The mushrooms are rounded tetrahedrons on stalks.

The spider enemy is just a spheroid associated with a spray of long triangular legs. I disliked the look and feel of the 3D Arcade game. Also, the repetitive background music quickly became annoying. Fortunately, you can turn it off.

Initial Game Menu
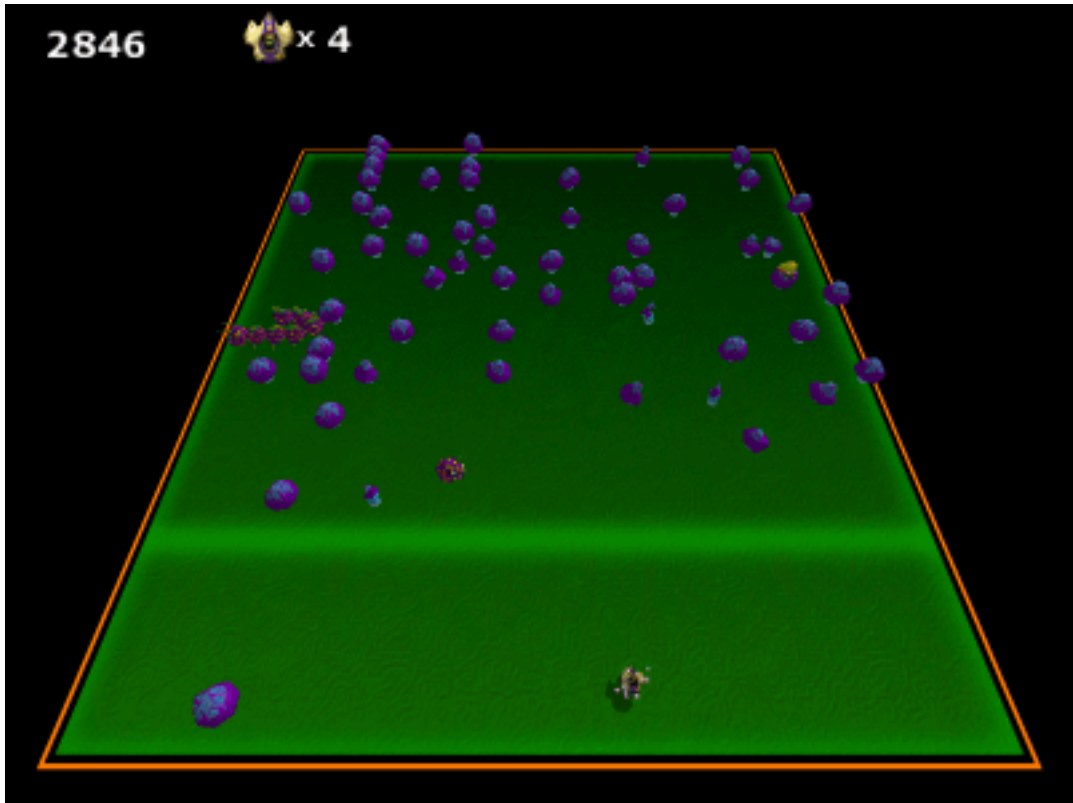
3D Arcade Game Screen Shot

Adventure can be played singly, with two players at one computer (that displays a screen split into left and right halves), or with two players over a network. I tested only the single player version. Adventure is a mixture of 3D Arcade Centipede and the old Defender arcade game. You appear on a playing field with rocks, walls, water barriers, bridges, and the inevitable mushrooms, centipedes, and spiders.

First Level of Adventure Game

There are also Wee creatures and Wee buildings that need to be protected. You maneuver your Shooter through the landscape, blasting mushrooms, spiders, centipedes, and other enemies to protect Wee buildings. You rescue the Wees by touching them with your shooter. You advance through the "worlds" (Weedom, Frostonia, Infurnium, Enigma, and E-Vile) by blasting or pushing back all the enemies. Again, I felt hindered by a perceptible

lag when controlling the Shooter. Jumping is hard to control. It is possible to get your shooter stuck against objects. Also, it is sometimes difficult to identify objects against the background.

Mission Description Window

Centipede has an undocumented feature: screen shots. If you type Command-Shift-3, a screen shot (in PictureViewer format) will be placed in a Screenshots folder within your Centipede folder.

Instructions and Help

Centipede comes with a CD jewel case–sized, 28-page manual. The manual adequately describes hardware and software requirements and the installation process. It does not describe the resolution and graphic details setup options at all. It skimps when describing how to set control options for mice, game pads, and joysticks. The manual doesn't describe the Arcade game (which doesn't appear on the screen shots of the "Select A

Game" screen). The manual uses "Arcade" when referring to the 3D Arcade option. The manual adequately describes game play in 3D Arcade and Adventure modes. Obviously, the manual is a slapdash rewrite of the Windows version.

No online help is available during game setup or game play.

Bugs

I could not get Centipede to launch when running Mac OS 8.6. Though I have a 3dfx card, the Glide rendering option was never selectable. Centipede intermittently crashed when launching under OS 9, probably due to resolution switching problems. I could not get the Arcade version to work no matter what resolution options I tried.

Summary

I did not enjoy Centipede in its 3D Arcade version at all. The Adventure game was somewhat more interesting, but it wasn't great. If the $5 price at GameStop.com isn't a mistake, then I would consider it acceptable for the money. However, Ambrosia Software's Centipede-like game, Apeiron, is more fun. Apeiron was created in 1995, but it still runs under OS 7–9 and doesn't cause crashes. It sells for $15.
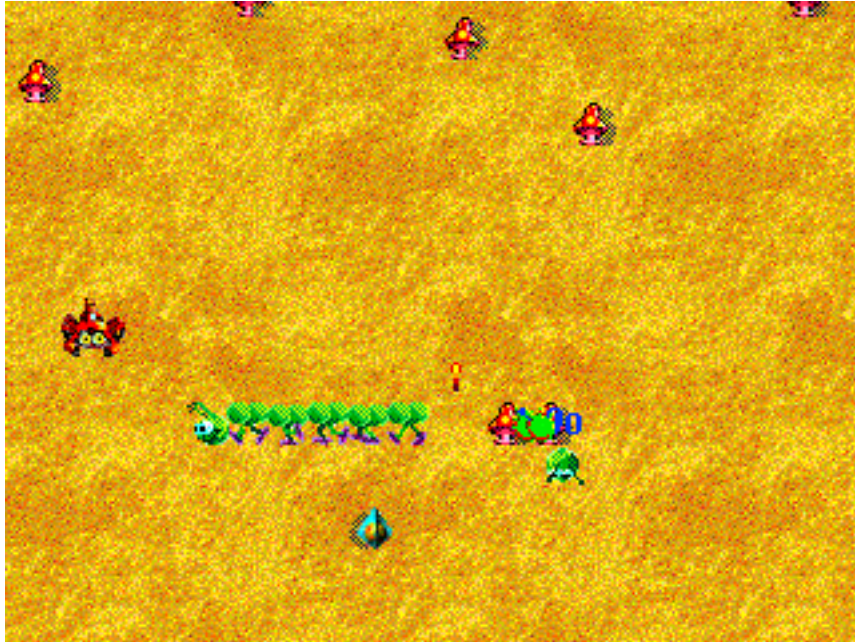
Apeiron Screen Shot

Review: Mac OS X: The Missing Manual (book)

by Johann Campbell, jcampbell@atpm.com

Developer: David Pogue, published by Pogue Press/O'Reilly & Assoc.
Price: $24.95
Trial: Sample chapter.

A lot of changes happened in the world of Macintosh in the years that followed iMac's introduction back in the latter half of 1998. Internal floppy drives were slowly jettisoned from all future Mac models, as well as serial and SCSI ports in favour of the then emerging, now prevalent USB and FireWire. Even the venerable Cathode Ray Tube monitors that used to come with every Macintosh system (even iMac) have now been usurped by flat-panel Liquid Crystal Displays.

One less-noticed but slightly more worrying aspect of the "Think Different" campaign that Apple has otherwise so successfully executed, however, is the fact that Apple-supplied hardware and software manuals have been shrunk to the size of your average pamphlet. While this is progress in the sense that it takes a whole lot less effort on the user's part to set up their brand new iMac, it creates more headaches when it actually comes to finding out how to use the system software and other pre-installed software.

While Mac Help (and formerly Apple Guide) does a good job in helping you solve problems, there is still a lot to be said for the printed manual. You know, a big book which you can read from cover to cover while curled up in the comfort of your living room sofa, or dip into from time to time when you want to find out something specific about your new product. So when Apple unleashes a brand new, ground-up, brave new world operating system on the masses and expects the masses to be proficient in using this OS from reading a thirty-page pamphlet, it's expecting a lot.

Maybe dumbing down manuals was a good move on Apple's part, as it's certainly created a void, which book publishers have quickly and gratefully filled. The latest in the Missing Manual series, covering Mac OS X, will come as a godsend therefore to many Mac users baffled, curious, or even scared about this Unix-based OS and what it means to the Macintosh community. You couldn't be in better hands, either; author David Pogue has written a slew of Mac-oriented titles in the past, notably all six editions (to date) of the

brilliant thousand-plus page Macintosh Secrets (in collaboration with Joseph Schorr), and at least two other titles in the Missing Manual series. Not to mention of course the countless articles that have appeared in *Macworld* magazine, amongst others.

I'm surprised this guy has any free time at all. Not even a permanent wrist ailment could stop Pogue from using dictation software to write this latest book, and remain good-humored *all of the time*. From reading this book, I distinctly get the impression that Pogue actually wants to be my friend, take my hand, and show me around the complex beast that is OS X. I'll come back to that point later, though.

So, what does this book cover? Being a manual, it covers pretty much everything about Mac OS X. The introduction takes you through some of the history behind OS X, briefly compares it with its predecessor, OS 9 (as it will continue to do throughout the book), and explains just what you, as a Mac user, need to be able to do (use the mouse) and recognize (menus, icons, and the like). The first two chapters cover the basic stuff: working with folders and windows, and organizing your data, most of which will be common knowledge among existing Mac users.

From then on the book focuses in greater detail on various aspects of the supplied applications, such as iTunes, Mail, and Sherlock; and even a small crash-course in using the underlying Unix layer of the OS. Mac users upgrading to OS X from OS 9 or earlier will find two appendices worth reading: one dealing with the installation process, and another containing an A-to-Z of OS 9 features missing, moved, or otherwise different in OS X.

What this book does not do is teach you the ins and outs of Unix. If you want to really get to know and use the command line buried within OS X, the book helpfully points you to the bunch of **man** files (electronic documentation for Unix) available to you, but it stops short of teaching you how to become proficient in using the command line. For that, you'd need another 600-page book if the man files just don't cut it. The book doesn't touch on iMovie, because that is fully covered by *iMovie 2: The Missing Manual*, also by Pogue; and Apache—arguably the best Web server out there, and included as part of OS X—is an entirely different beast, also covered in greater detail in another publication.

Don't expect this book to teach you exactly what to do with everything on your grey Developer Tools CD, either. Its focus remains on the installed operating system, although it does from time to time mention certain fun applications on the CD such as Bomb and Pixie. Nevertheless, don't let that hold you back from buying this book, as it still contains a lot of information that you'll want to digest.

The Missing Manual series dispenses with the usual CD-full of software on the inside back cover, offering any pieces of software mentioned in the book for download from its Web site instead. In a development world where new versions of applications such as GraphicConverter seem to be released on an hourly basis, this is an especially good move as the book claims it slashes $5 off the cover price (a figure I don't quite believe myself), and saves taking the time to produce a CD that effectively becomes obsolete within a matter of weeks.

The Internet comes into its own linking in with this book, as besides software downloads the Web site offers an errata section detailing any reader-submitted corrections, omissions and the like, as well as e-mailing lists you can subscribe to in order to receive information on updates to the book itself (remember the update pamphlets periodically sent to owners of the Macintosh Bible editions?) and new and existing titles in the Missing Manual series.

So, along with its Web site connections, *Mac OS X: The Missing Manual* remains an indispensable wealth of tips and tutorials interspersed with anecdotes and interesting bits of history. Pogue's flawless writing style, as noted above, retains the feel-good factor throughout, and will teach every new (and some seasoned) OS X users something they didn't know before. Definitely a recommended read, this book well deserves an Excellent rating.

Review: Nisus Writer 6.5

by Ellyn Ritterskamp, eritterskamp@atpm.com

Developer: Nisus Software, Inc.
Price: $99.95; $49.95 (upgrade); $69.95 (competitive upgrade for owners of any previous version of MS Word, Word Perfect, AppleWorks, Claris Works, and Write Now).
Requirements: Mac OS 8.5, 35 MB disk space. Note: runs in Classic, but Mac OS X–native version is not available.
Trial: Fully-featured (30 days)

The first two questions in the FAQ are: how do you pronounce Nisus, and what does that cool logo signify? They answer, "If you refer to your Nisus Writer manual or your nearest unabridged dictionary, you can confirm that 'nisus' is an ordinary English word deriving from the Latin 'Niti' meaning 'a striving, effort, or endeavor.' It is pronounced to rhyme with 'Nice us.' Hence the pun, 'We have the Nisus word processor in town.'" Good thing they answered that—I thought it was pronounced Nee-sus, as if someone had their sister's daughters to babysit one day…

This dude in the logo is intended to evoke the memory of Hermes, the Greek god who delivered messages. Nisus sees it as their business to help you deliver your messages, and they seem to be doing so very well. They have several products designed to help you

create, send, and display your message, in several different formats…and languages…and characters…oh, and you want it spoken? Can do. In Italian? No problem. Export to e-mail? Sure, Nisus has an e-mail program, too.

Here's my secret: I'm not a 'super user,' who knows all the gadgets to look for on this program, to see what it can do. But since this e-zine is supposed to provide information about real products for people like me, I thought I'd find out if Nisus could teach me how to do some things. First off, installation was a snap. You can download the program or purchase a CD. I suggest you try one of the free programs first, to be sure you're getting something you'll be able to use. There's a Nisus Compact and a Nisus Writer 4.1.6, although the latter has some restrictions if you're using Mac OS 9.1 or later. Oh, and if you buy the CD, when you open it, push *down* on the button in the middle of the CD case. Your CD case-opening experience will be much more fruitful than if you don't.

Real-Life Gadgets

So how much progress have we made with an untrained user? I'm writing this review in Nisus. I've used their Help file at least five times already, plus visiting the Nisus home page and checking out the FAQ (in the Help section). These are all very informative, a must for a regular, ignorant user like me. I'm green but teachable, so having access to all this stuff means a lot.

The program is auto-saving, so after I started work on this file it asked me to name it and tell it where to save, so that the auto-save could continue. A feature like that is really helpful for folks who don't save very often, but if you hate it, you can turn it off.
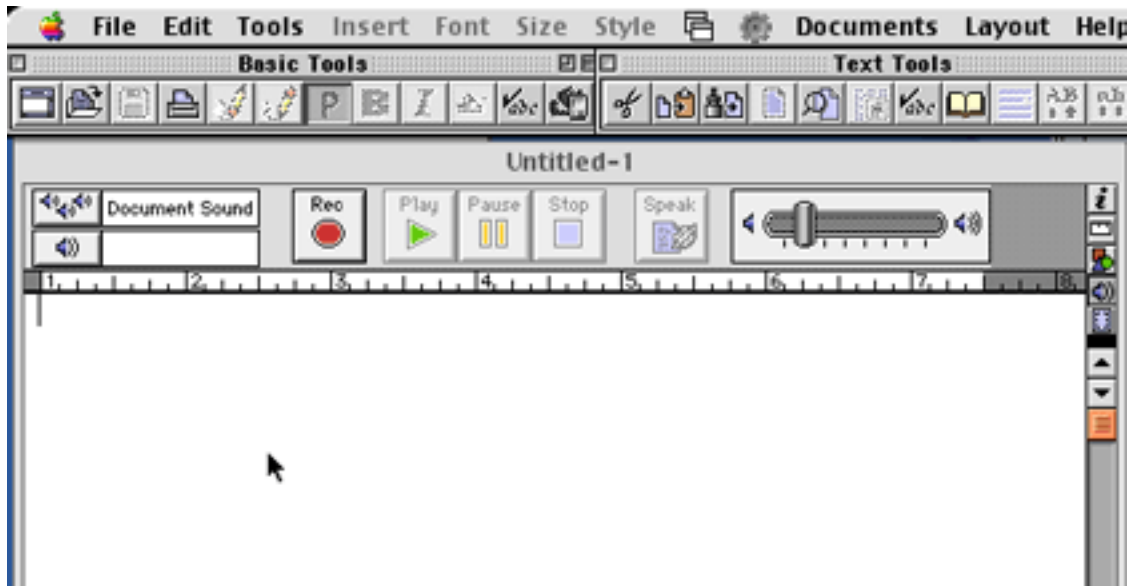
Just now, I asked it how to import a graphic from Photoshop, and the Help advice was succinct: open the graphic in another application, Copy, and then in Nisus, Paste. Simple. The Nisus logo will probably have to be reformatted by our crack design team, but the point is that it was easy for me to learn how to get the software to do something I wanted to do. They've made it easy by building a tiny toolbar on the right side of the window, with five buttons on it. Each adds a menu for us to play with: text, tabs, graphics, sound, and a layout preview. I don't know what all this is called, but even I can click on stuff and see what it does.

And oh, what it does! I got nothing done for an hour after I found the sound menu. Lots of languages, lots of voices. I think I've found a good way to practice for a trip to Paris in May—write the stuff in English, and then have Nisus read it back to me in French!

Nisus Compared To Others

You know how, in AppleWorks, when you select a word and delete it, you also have to select a space before it or after it, so that you don't end up with two spaces between the words? And how you don't have to do that in Word, because it's smart enough to know that if you want to remove a word, you also want to remove that extra space? Nisus knows that, too. Shoot, as much as I write, I believe that'd be enough to justify the cost of the competitive upgrade over AppleWorks, which was free with the OS.

Not that I'm knocking a free program. AppleWorks has done the job for me for two years of undergrad and five semesters of grad school. That's ten 30-page papers, near enough, and they're all still here and readable. I'm looking forward to being able to post some of these papers on the Web, though, and it looks as if Nisus will be able to teach me how to do that. I've started monkeying around a bit with HTML—the Style menu has lots of ways to code text and graphics that make it easy for non-techies like me. You just write it, same as always, and then pick a Style.

The Bottom Line

Like I said, I don't know a lot about other word processing programs. I hope I'm writing this from the perspective of many of our readers, who don't have time to explore lots of different pieces of software. Here are my recommendations: if you're using MS Word, and you're 99% satisfied with it, then stick with it. Nisus is as good or a little bit better for the average user, but even the competitive price isn't enough of a bargain for me to want to swap.

This is purely a matter of what you're willing to put up with. If it's worth 70 bucks to you to get rid of the nagging aggravations that come with Word, then you know the answer. If you use Word and aren't very happy with it, then think hard about Nisus. Try the free Nisus Compact; most likely you'll want to go ahead and buy the full version. If you use AppleWorks or ClarisWorks, and you wish there was more, Nisus is certainly a more affordable alternative than Word. Nisus also has lots of other features the freebies don't, and it seems very Mac-friendly.

Review: Survivor

by Ellyn Ritterskamp, erritterskamp@atpm.com

Developer: MacSoft division of WizardWorks at Infogrames, Inc.
Price: $19.95
Requirements: G3-based Mac, 96 MB of RAM, Rage 128 or better, 150 MB disk space.
Recommended: 128 MB of RAM
Trial: None

Outwit. Outplay. Outlast.

Survivor: The Interactive Game is pretty cool. Not perfect, but not bad. For my first foray into live-action gaming, I was mostly impressed. Gorgeous video footage from the CBS TV show set in the Australian Outback was, at times, breathtaking. I was really holding my breath because the outdoor shots were so stunning. The animated segments were less impressive, but again, not too shabby.

Gameplay itself was slower than I would have preferred, but maybe part of the experience is supposed to be slowing down and experiencing things in real time. And to be fair, I was playing the single player version, which is hardly the way this game is meant to be handled. It cries out for multi-player carnage, which I'm sure will be at the heart of its popularity—that, and newer versions based on Survivor Africa and future expansion packs based on other locations.

Installation is easy, but takes a lot longer than any other game I've ever installed. Recommended hard drive allocation is 150 MB, and they mean it. It took at least 6 to 7 minutes to install, which, in real time, is nothing, but when you've been used to 1 to 2 minutes, seems like a lot. Once we started the game though, the need for all that space

became apparent. There are lots of external shots and footage from the TV show on this game. All those movies eat up space on your hard drive. If you're short on space, there's a custom install feature that allows you to refrain from installing some of the movies.

Gameplay

Back when I used to play dice-based role-playing games, the best part for me was always rolling up the character. That's the spot where you have the most control over your destiny. Survivor has a similar allowance for character creation, only here it's not dice-based. You have an allocation of character points to spend however you like. If you're

creating a custom character and you want gobs of strength, you can lower your cooking ability to nothing and raise your strength points to the max. With lots of character attributes involved, you have plenty of choices about how to set up your character.

You can also choose to play as one of the characters from the TV show. The only change I'd make to this aspect of the game is to allow custom characters to carry custom names, rather than the pre-chosen ones on the game. There's no reason I shouldn't be able to type in my cat's name if I want to.

Survivor has three main activities: Survival Periods, Challenges, and Tribal Councils. The Survival Period: haul water or tend the fire or whatever, and chat with other players. Alliances and rivalries get set here. After each of these is a Challenge, either for a Reward or Immunity. If you're playing a longer version of the game, you begin with two teams, so the earlier Challenges are team-based. Later on, once you've consolidated to one team,

the Challenges are individual—half are puzzles to solve and half are physical activities. The final segment in the sequence is the Tribal Council. Here you vote off other members of your team. You'll play better than I did and not get voted off yourself!

I found that when I played the long version with 16 players at the start, my character was better received by the others than when I played the short version. The character I created was long on strength and physical skills, but short on empathy and communication. By the end of the survival test, other players wanted more touchy-feely stuff from me and I didn't have it to give.

Once you get the hang of the Survival Period, this is where you can get good at forming alliances and establishing good relationships with other players. Your character will perform your duties automatically, so you can concentrate on bonding with others or undermining their confidence—whatever you like.

On the whole, I enjoyed the Challenges the best. The ones that went well were lots of fun. The trouble was that a few of them didn't go well, and I couldn't figure out how to just concede to the other team and move on. One of them was especially bad, in which I was

supposed to roll a boulder up a hill and then two of my teammates would do the same with their own boulders. Trouble was, I didn't have the necessary strength to roll the boulder up the hill very far. Eventually it began rolling back down the hill and into the river.

See how my character's fatigue bar is bright red? That means that even if you increase your effort, you're not going to be able to do any more on your task. That balance between fatigue and effort comes into play on several of the challenges, and you get to modify your teammates' effort on some of them, too, so pay attention to the instructions. On this Challenge, all I could do was keep rolling backward for what seemed like 15 or 20 minutes, until the other team finally won the Challenge. I got up and left the game for several minutes, since I couldn't figure out how to concede. Most of the Challenges aren't this dependent on brute strength, but choose your character's attributes wisely!

Game High Points

Excellent video footage. Good player control over character selection and attributes. Fun challenges that test a variety of abilities. Ability to play against real people online via GameRanger or over a local area network. Reasonable price for a first-effort game.

Something to Improve

The Field Guide instruction book could use more details about the Challenges and how to concede a lost cause if, in fact, this is possible. If it's not possible, that's definitely something to make available in future games.

Survivor is not available via download from MacSoft or Infogrames, and there is no demo. For $20, though, it's not much of a risk.

Review: Workflow Automation with AppleScript Training CD

by Gregory Tetrault, gtetrault@atpm.com

Developer: TECSoft
Price: $99 plus $10 shipping
Requirements: PowerPC-based Mac with Mac OS 8.5, 800x600 display with thousands of colors, 100 MB disk space.
Trial: None.

ATPM RATINGS
ROTTEN

Overview

This AppleScript tutorial focuses on using AppleScript to automate workflow in publishing. The three applications that are used in the tutorial are FileMaker Pro (database application), Cumulus (a multimedia cataloging application), and QuarkXPress (publishing application). The QuickTime-based tutorial takes you through some AppleScript basics and then shows you how to script the three applications listed above. The last two modules describe how to "build a solution" and how to script the Finder. The CD apparently was created from the contents of a live workshop.

Installation

The CD contains a "Course Installer" applet. The applet attempts to copy a 97 MB "AppleScript Course" folder to the desktop of your startup drive. Next, the applet installs a few fonts into the Fonts folder and OSA Menu Light into the Extensions folder of your

startup drive's System Folder. Next, the applet installs some Finder scripts. Finally, the applet attempts to install OS version–specific Folder Action files. Unfortunately, the applet only has scripts for Mac OS versions 8.5, 8.6, 9.0, and 9.1. Mac OS 9.2 is not listed.
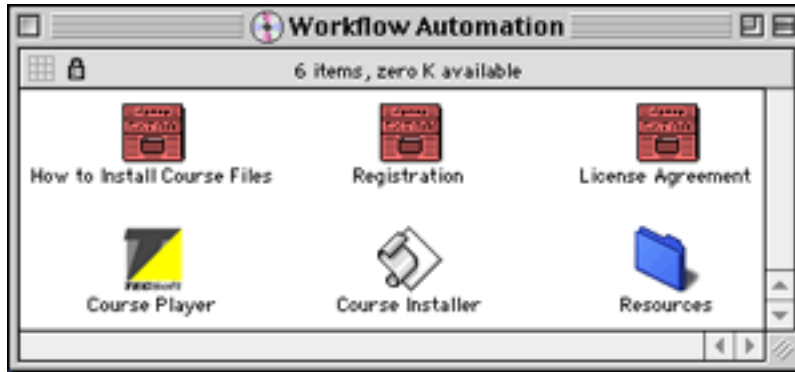
Workflow Automation Tutorial Installer

If you normally use OS X, you must reboot into an earlier OS to install the tutorial. If your startup drive has insufficient space, the installation aborts. There are no options for installing the folder on another drive. If you do not have one of the four OS versions above, then the Folder Action files will not be installed. Since I run OS 9.2 and do not have 100 MB free on my startup drive, I performed a manual installation. Here's how to do this.

1. Open the Resources folder on the CD.

2. Copy the entire AppleScript Course folder to the hard drive of your choice.

3. Open the Fonts folder in the Resources folder on the CD.

4. Drag the fonts onto your System folder.

5. Open the OSA Menu Light folder in the Resources folder on the CD.

6. Drag the OSA Menu Light extension onto your System folder.

7. If you performed a full installation of AppleScript 1.6, then you are done. If you don't have Folder Actions installed, then you will need to add the Folder Actions extension and the Folder Actions Menu contextual menu item. If you have one of the supported OS versions, you can drag the appropriate files from the Folder Actions folder in the Resources folder on the CD.

7a. If you are not running the latest version of AppleScript (1.6 as of this writing), you should download and install it.

Registration Window

The first time you launch the Course Player, a registration screen appears. You must enter your name, the serial number (on the CD case), and an activation number. You must then go to the TECSoft Web site and complete an online form to receive the activation number.

If you click the www.tecsoft.com link in the window, Netscape launches (from the CD, if it is not installed on your Macintosh) and goes to the TECSoft registration page. You can use a different Web browser and go to the TECSoft registration site directly.

TECSoft's Online Registration Form

Using the Tutorial
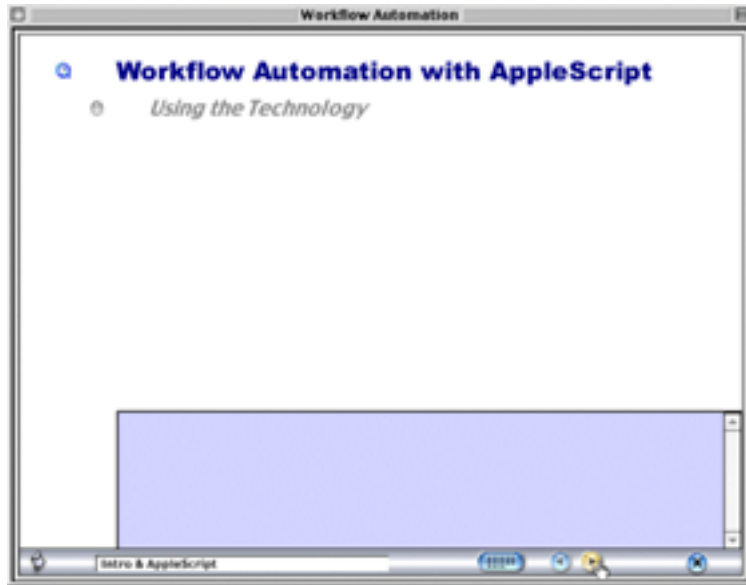
Tutorial Window

The Course Player tutorial application uses a single non-resizable window with some nonstandard interface elements such as the round quit button in the lower right corner. You navigate through each main topic window by clicking the clear bullets to the left of topic and subtopic names. Information for each topic and subtopic is presented within the small scrolling field with blue background at the bottom of the main window. You advance to the next topic window by clicking on the right-pointing arrow button at the bottom of the window. A QuickTime icon appears next to topics with associated QuickTime movie tutorials. You click on the icon to start the movie. When you are done, you click the back button (round button with left-pointing arrow) to return to the main Course Player window.

Topic Heading with QuickTime Movie Icon

The rounded rectangle button with the three rows of dots sends you to the index. Topics are listed sequentially with completed topics indicated as red-filled circular buttons. Topic and subtopic names are displayed as you move the cursor over each round button. Clicking the button sends you to that topic window. The index window contains a glossary on the right.
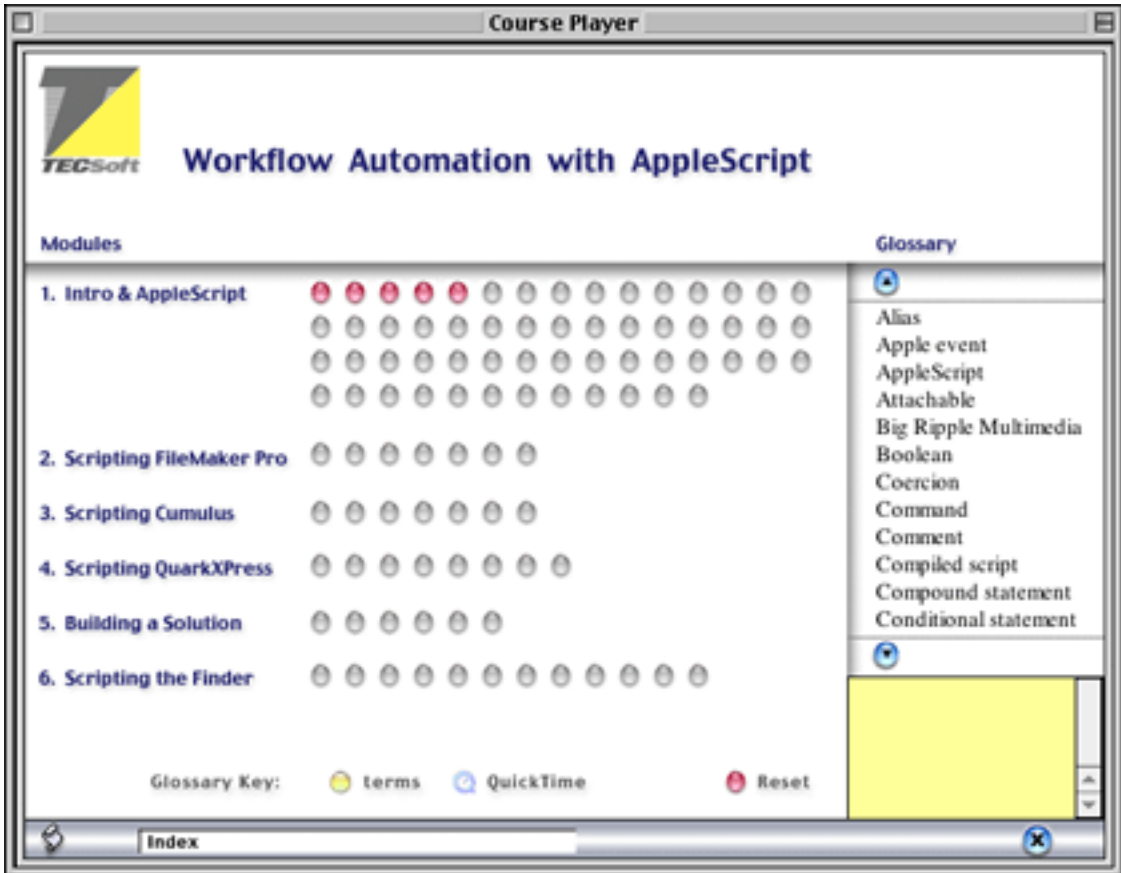
Index and Glossary Window

To look at demonstrations and to complete exercises, you must launch one or more applications. The Course Player text window lists what applications to launch and which documents to open. Course Player cannot launch the demonstrations for you.

Tutorial Contents

The TECSoft Web site contains a table of contents for the tutorial. It is geared towards users with a modest amount of AppleScript experience. Most of the tutorial (57 screens) is the introduction to AppleScript and the Script Editor application. The Scripting FileMaker Pro and Scripting Cumulus modules each get 7 screens. Scripting QuarkXpress gets 8 screens. Building a Solution gets 6 screens. The last module, Scripting the Finder, gets 12 screens. Some screens contain very little information and others just direct you to demonstrations or exercises.

The introductory material is accurate but incomplete. Moderately experienced AppleScript users will gain little new information. Beginners will gain some information, but not enough to write anything other than simple scripts. The exercises in this module are very simple.

The Scripting FileMaker Pro module gives an extremely brief introduction to creating internal and external scripts from FileMaker Pro. The exercises involve creating records or transferring the contents of records to another application.

The Scripting Cumulus and Scripting QuarkXpress modules are similar to the Scripting FileMaker Pro module. A cursory introduction is followed by fairly simple exercises.

The Building a Solution module is practically worthless. It gives profound advice such as find out what needs to be done, write it down, and create a written plan.

Problems and Bugs

The inflexibility of the installer caused major problems. It is ironic that a company producing a workflow automation tutorial releases the product with such a poor installer. The Course Player is just as bad. It has no buttons to open applications or launch demonstrations. Even a PowerPoint presentation can do those things.

The Publishing and Multipurpose Demos did not work. Both demos had QuarkXpress-related AppleScript errors concerning image locations.

Documentation

Other than two read me files, all documentation is contained within the tutorial itself.

Technical Support

TECSoft provides a toll-free phone number for customer service and technical support. The hours of availability of support are not listed, but the company is located in New York.

Strengths

- Includes demo versions of real applications.
- Information presented in a logical order.

Weaknesses

- Poor installer with no options and no ability to install while running OS X.
- Course Player doesn't display the initial block of text when you first open a new screen.
- Course Player uses a small information text box, even when there is empty space above.
- Course Player cannot launch files for demonstrations and exercises.
- Demonstrations require manual launching of multiple applications and documents. This should have been automated via applets.
- The exercises have no evaluator.

Alternatives

The book AppleScript for Applications: Visual QuickStart Guide by Ethan Wilde covers similar topics and is up-to-date.

Summary

Don't waste your time with this tutorial. You can buy a better book for one-fifth the cost.

FAQ: Frequently Asked Questions

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.

Are You Looking for New Staff Members?

We currently need a **Managing Editor**, several **Contributing Editors**, a **Copy Editor**, and a **Publicity Manager**. Please contact us if you're interested.

How Can I Subscribe to ATPM?

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Which Format Is Best for Me?

The **Online Webzine** edition is for people who want to view ATPM in their Web browser, while connected to the Internet. It provides sharp text, lots of navigation options, and live links to ATPM back issues and other Web pages. You can use Sherlock to search all of the online issues at once.

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

The **Print PDF** edition is saved in Adobe Acrobat format. It has a two-column layout with smaller text and higher-resolution graphics that are optimized for printing. It may be viewed online in a browser, or downloaded and viewed in Adobe's free Acrobat Reader on Macintosh or Windows. PDFs may be magnified to any size and searched with ease.

The **Screen PDF** edition is also saved in Adobe Acrobat format. It's a one-column layout with larger text that's optimized for reading on-screen. It may be viewed online in a browser, or downloaded and viewed in Adobe's free Acrobat Reader on Macintosh or Windows. PDFs may be magnified to any size and searched with ease.

What Are Some Tips for Viewing PDFs?

- You can download Adobe Acrobat Reader for free. If you have a Power Macintosh, Acrobat Reader 5 has better quality and performance. ATPM is also compatible with Acrobat Reader 3, for those with 680x0 Macs.
- You can zoom the PDF to full window width and scroll through articles simply by single-clicking anywhere in the article text (except underlined links).
- You can quickly navigate between articles using the bookmarks pane at the left of the main viewing window.
- For best results on small screens, be sure to hide the bookmarks pane; that way you'll be able to see the entire page width at 100%.
- Try turning Font Smoothing on and off in Acrobat Reader's preferences to see which setting you prefer.
- All blue-underlined links are clickable.
- You can hold down option while hovering over a link to see where it will lead.
- For best results, turn off Acrobat's "Fit to Page" option before printing.

Why Are Some Links Double-Underlined?

In the PDF editions 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 later.

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.

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. Email 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.

Which Products Have You Reviewed?

Check our reviews index for the complete list.

What is Your Rating Scale?

ATPM uses the following ratings (in order from best to worst): Excellent, Very Nice, Good, Okay, Rotten.

Will You Review My Product?

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

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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. In addition, all issues since ATPM 2.05 (May 1996) are available in HTML format. You can search all of our back issues.

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.