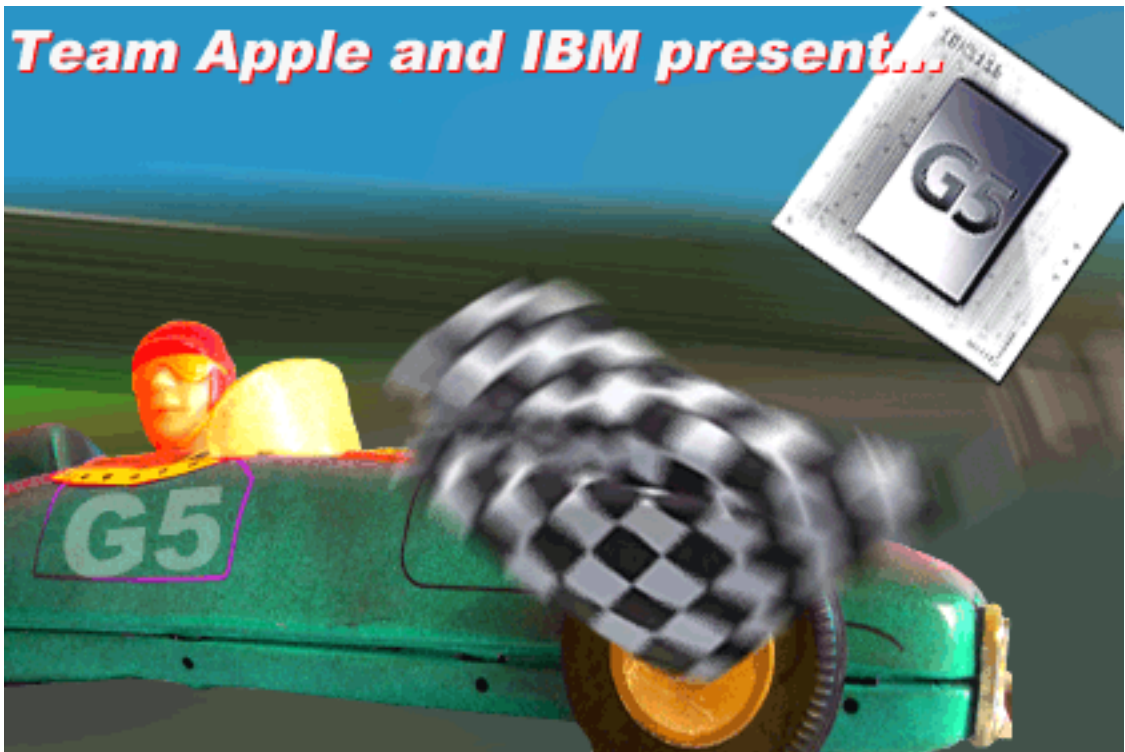


ATPM

9.07 / July 2003
Volume 9, Number 7



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

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ISSN: 1093-2909

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Welcome

by Robert Paul Leitao, rleitao@atpm.com

Welcome to the July issue of *About This Particular Macintosh!* What a time it's been since our June issue was released! The Federal Reserve Board reduced interest rates to their lowest levels since 1958, Apple Computer announced what it calls "the world's fastest personal computer," and Arnold Schwarzenegger stated he would soon decide whether or not he wishes to become California's new governor. An interesting month indeed!

G5s

At the annual conference for Apple's software developers, the Mac maker unveiled its next generation computer technology. The new Power Mac G5 computers sport a 64-bit processor designed and manufactured by IBM. With speeds ranging from 1.6 GHz for a single-processor model up to 2 GHz for a dual-processor configuration, the new Macs also sport a hefty price tag starting at \$1,999. Tricked out with most of the goodies (including eight *gigabytes* of RAM), the dual 2 GHz G5 comes in at a bit over \$10,000.

Pay It Again, Sam

Apple has announced that Panther (a.k.a. Mac OS X 10.3) will carry a retail price of \$129. This exciting upgrade to Apple's Unix-based OS will be the fourth major iteration of the product for which consumers will be charged a fee if one includes the Public Beta. Promising many improvements over prior versions of the OS, Apple has scheduled Panther to hit retail shelves in the fall.

Web Surfin' Safari

Apple finally released a non-beta version of its popular Web browser called Safari. This Cocoa-based Web browser has matured quite nicely. The release of Safari 1.0 comes on the heels of Microsoft's announcement that the Redmond, Washington-based software giant plans to discontinue development of Internet Explorer for the Mac. Safari costs about five minutes to download.

iSight

OK, enough already with the funky “i” nomenclature. Apple has a new video camera called iSight to complement its latest public beta product, iChat AV (just when we thought all of the beta versions of new products were gone from the Dock). iSight is an aluminum clad video camera powered from a Mac’s FireWire port. It costs \$149.

Final Cut Pro 4

Apple’s latest upgrade to its Final Cut Pro video editing software has arrived at an Apple Store near you. FCP4 comes at a retail price of \$999 and an upgrade price of \$399 for owners of any earlier version of the product.

Economic Deflation

Economic deflation is a phenomenon in which prices decline rather than rise. The opposite of deflation is inflation. Due in part to concerns that the US economy might be headed for its first deflationary cycle since the Great Depression, the Federal Reserve Board recently reduced interest rates to their lowest levels since the Eisenhower Administration.

Apple Inflation

Apple inflation is a phenomenon in which the company ignores the economy and announces premium-priced new products as other companies in the PC industry stagger to maintain pricing at current levels due to the effects of economic or industry deflation mentioned above.

A Word About PC Market Share

Apple’s market share is reported to be somewhere between three percent and five percent of the US market. While this may be true, most people don’t realize that the vast majority of PCs sold are in the low-priced or budget tier of the PC market. Not all market share is created equal.

Most of Apple’s PC products are priced well over \$1,000 and most of the company’s CPU sales are in the top tier of the market. Last fiscal quarter Apple had a gross profit margin on PC units sold of over twenty eight percent. That’s more than twice the industry average. This means Apple makes at least twice as much on each dollar of sales than most of its competitors. Contrary to popular opinion, Apple doesn’t just need more unit sales.

The company needs more of its kind of profitable unit sales. There's a difference. The new G5s undoubtedly deliver more speed. The question for Apple is how well they will deliver new CPU sales. Premium-priced products such as the iSight and Final Cut Pro 4 are designed to add to the profit picture. The economically challenging times in the PC industry make Apple's pricing decisions an interesting factor to watch.

Just One More Thing...

Prior to announcement of the new G5s, Apple's aging G4 mini-towers had already lost their allure despite Apple's deflationary steps to drop prices in order to maintain sales. But in yet another announcement at WWDC, Apple CEO Steve Jobs revealed that total iPod sales had passed the million-unit mark. The iPod has quickly become a significant contributor to Apple's revenues and earnings.

In the August issue of ATPM we'll look at Apple's quarterly results, but we'll leave the issue of Arnold's potential gubernatorial run to the people of California.

In the July issue of ATPM, we might deflate some PC industry egos and inflate your Mac knowledge while providing some entertaining summer time reading. There's just one sure way to find out! Please take a look through this month's digital pages.

The ATPM Staff

Our July issue includes:

The Candy Apple: Gadgets in the Toolbox

For her *About This Particular Web Site*-esque column this month, Ellyn Ritterskamp compiled a collection of online reference Web sites as she searched for the definition of "ungenius polyunfatuated."

Machine Language: Clone Wars

Matt Coates continues about the iTunes Music Store in the second installment of our new *Machine Language* column, noting that “the brilliance of Apple’s plan is that it wasn’t especially brilliant. It was just common sense uncommonly well-executed.” Matt also offers his take on the end of Internet Explorer for Macintosh and his latest candidate for mystery Apple technology.

Quick Tips in Design: Using Value

Andrew Kator goes back to basics with this first-in-a-series article, explaining the importance of shades, value, and gradations, and giving a real-world example of these principles by updating a logo.

Networks in Action: Clandestine Wireless Networking and MacStumbler

An overview of wireless access points, covering basic use and misuse. Includes a functional review of MacStumbler and some notes on warchalking, a low-tech aid for high-tech network users.

Roll Your Own: Getting the List of It—Part 2

In this month’s *Roll Your Own*, Charles Ross continues his instruction with complex list objects by adding functionality with AppleScript’s built-in `list` data type.

How To: A Little Help, Please? Tips for Getting Good Tech Support

Most people hate having to work with technical support people, and we’ve all laughed at the stories circulating the Internet about some of the crazy dialog that has come from some of the calls. But as long as we have computers, we’ll probably have to deal with tech support. Sylvester Roque tells us how to prepare for future tech support encounters to make them as painless as possible—for both you *and* the person you call!

Cartoon: Cortland

The desktop wars continue in the latest round of *Cortland* cartoons by Matt Johnson.

Cartoon: Crazy Andy

Andrew Kator shows us what happened when the MacMania II and CruiseTrek gatherings were held on the same ship at the same time.

Desktop Pictures: Landscapes

ATPM reader Katherine Sears-Lent offers up a fantastic collection of pictures for your desktop enjoyment. Katherine's photos feature Savannah and Calloway Gardens in Georgia; Sonoma Valley in California; Long Island; and Tampa, Florida.

Review: Little Snitch 1.0.3

Paul Fatula reviews Little Snitch, a Mac OS X preference pane utility that monitors outgoing network connections. While it doesn't handle emulated environments ideally, it does a good job of letting you control when OS X can send data out over the Net.

Review: Myth III: The Wolf Age

Evan Trent reviews this real-time strategy game from God Games. The latest addition to the series of Myth Games, Myth III takes full advantage of the latest processors and graphic cards to project a visually stunning environment, but the storyline isn't quite as good as in previous Myths.

Review: Steal This Computer Book 3: What They Won't Tell You About the Internet (book)

Steal This Computer Book offers a great deal of information about some of the lesser-known or more hazardous aspects of the Internet. However, reviewer Eric Blair has a hard time seeing whom the book is aimed at, as it as it covers both common sense and rather technical topics.

Review: Two Books for Switchers

Kirk McElhearn offers reviews of two books aimed at computer users switching to the Macintosh: *Mac OS X for Windows Users* and *Switching to the Mac: The Missing Manual*. While the two books cover similar topics, they actually speak best to two rather different audiences. Read the review to find out which book is best for your switching needs.

Review: Uplink 1.3.1

Ambrosia's latest game, Uplink, pumps the adrenaline as well as a shoot 'em up but it's actually a hacking game. Matthew Glidden tells you all about being an "agent," breaking into computers to destroy or steal data, or of course to make money.



E-Mail

Apple IIGS on the Net

I have a Apple IIGS computer, and I was wondering if there is any way I could get it connected to the Internet. Would you be able to give me any information on getting a server or something like that maybe?

—*PlyrCool*

Take a look at [Derek Taubert's IIGS page](#) and [Marinetti](#). These will let you use SLIP, MacIP, or PPP to connect to the Net. The problem is that the IIGS did not have support for TCP/IP built in. So these guys developed a TCP/IP stack. Because the IIGS never had an Ethernet port, you need to either use a serial port connector or a PhoneNet (serial to two RJ-11 ports) via SLIP, or you can hook up a modem and dial in to the Internet using PPP. —*Evan Trent*

Script Menu

Because of a screw up I had to recently reconstruct my user folder. I have managed to get almost everything working again except the AppleScript icon in the menu bar. Apple Help is of no help here; it only mentions the script folder. Can you please point me in the right direction?

—*Martin Wain*

The AppleScript menu bar icon is located in the AppleScript folder (/Applications/AppleScript) and is called Script Menu.menu. On my system, it looks like a folder instead of a file, so if you just see a folder called Script Menu, this is probably what you're looking for.

There are two ways to add this to your menu bar. First, you could double-click it and have it added to the left of your other menu bar icons. After doing this, you can Command-drag the icon to wherever you want on the right-hand side of the menu bar.

The other way to activate the Script menu is to drag the Script Menu.menu file where you want it to appear on the menu bar. —*Eric Blair*

Apple Goes to Ex-streams

Well said. Thanks for your thoughtful words on this unfortunate situation. Some people clearly need to wake up to reality and realize they shouldn't do whatever they want. Apple is doing an incredible job trying to work with the music industry and at the same time guarding the user's best interest. Is Apple perfect? Of course not. But whether you like it or not, the music industry is here to stay, at least for the time being, and Apple has little choice but to work with them. Can we at least respect Apple's attempts at rectifying a situation far from ideal? It seems some people just can't. I guess that's just too much to expect.

—*Erick*



People steal music. That's a fact. Apple knew that from the start. The entity that needs to get a rap on the head is Apple. As you point out, the security measures in place to protect purchases on the iTunes Music Store work quite well, so why couldn't they have implemented something similar for the music streaming? This doesn't seem like hard logic to follow and the bottleneck in performance should be the network connection and not the computer (concerning handling overhead for the security on streaming media). Doesn't Apple have such technology with QuickTime Streaming?

—*Jason M.*

Jumping to Jaguar

Evan did a fine job atomizing beefs many of us have in OS X.

Why is the Dock such an issue? Not because we're luddites, but because many of us "veterans" feel forced to move forward into interface behaviors and mouse locations that are not a part of our hard-earned skill sets; forced to cope with this or that new feature, with imprinted body memories which simply don't want "features" like the Dock in our faces when we try to get work done.

I work as a professional editor in Avid and Final Cut Pro and I max out my screen real estate for very practical reasons. My timeline runs edge-to-edge. Believe me when I tell you the exquisite annoyance I experience when the Dock makes its vaudevillian pop-up appearance from its hidden state—often with clients present (“Hey, what the hell was that?” “Nothing, just a feature.”)—when I least need entertaining distractions.

—Loren S. Miller

Page Sender

I’m gonna add another note of praise for Page Sender here, as well a tip for small office users. If you’re looking for a multi-user fax system, Page Sender is a godsend. They’ve got a bulk discount thing going on, so, the more copies you buy, the cheaper it gets. We bought seven copies for our office. That may seem like overkill, but there’s a good reason. OS X’s printer sharing lets us send faxes from any of our computers through the one old iMac that we’ve got plugged into a dedicated phone line. Compare the price of a bulk pack of Page Sender to any other networked fax solution, and you’ll be amazed.

—Matt Quirk



I’ll also endorse Page Sender. I struggled with FaxSTF for years, four different times, starting way back in System 7 and 8 days. I always hated it. Update to OS X, and it was the only game in town. Finally, I discovered Page Sender and achieved Satori. Page Sender is simple, inexpensive, and it just works! (Very well, too!) If you need fax software, give it a try. You’ll pay the shareware fee without hesitation. It’s worth every penny. Fair winds and happy bytes!

—David Flory

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Gadgets in the Toolbox

I have a friend with whom I cannot have a phone conversation without one of us needing to sit down at a computer and look up a word, a word origin, or a factoid about whatever we're discussing. One e-mail exchange had him claiming to be an "ungenius polyunfatuated." I spent twenty minutes trying to figure out what that was. Answer is at the end.

One evening we both started on the same Web page, and an hour later had each been through a dozen more pages in different directions. We began on a page about American Vice Presidents. I ended up reading about Messerschmitt engines while he was checking to see if The Stratosphere really is the tallest building west of the Mississippi River. We related what we found, and an hour later, had each learned a dozen more tidbits of information. We could not have had these kinds of conversations a few years ago, not at this level of detail, but there are tons of tools available now that make learning efficient and fun. Here are some of my favorites.

[Google](#)—Without a doubt this is the page I visit most often. Even on a word definition or etymology question, I often end up at Google. Google remembers how many visitors stay on which pages, and which pages get the most hits and incoming links. Then it adjusts the results of your search to reflect how useful various sites are. Genius. If you practice with phrasing a search you can make this tool even more effective—judicious use of quotes around words forces the engine to look for specific sequences, which will refine your results.

[Merriam-Webster](#) and [dictionary.com](#)—Need to know what a word means now? It's here. My favorite part of looking up words, though, is finding out what they used to mean. It helps me get a handle on how they have evolved. Knowing what a word meant to its original users gives its current meaning more depth. One of my favorite conversations in which this came home was when my friend described the hoopla surrounding the Super Bowl. He finished his sentence and waited for my answer, but I was looking up "hoopla" and left him hanging. Go look it up. It's fun. It's French.

[Babel Fish](#)—As a translation device, it is far from perfect. It is free and sometimes helpful. It's sometimes fun to see how a literal translation can make something awkward. Ask it to convert this phrase from English to French: Take it like a man. Then cut and paste the translated bit into the new window, and ask it to go from French back into English. I read somewhere this is how they came up with the delightfully stilted backward syntax for Yoda in the *Star Wars* films, by the way—they had one student translate the lines into Japanese, and then another from Japanese back into English.

[The Fifty States](#)—There's a wealth of stuff here. Click on the state you want to learn about, and find out the state fossil and state beverage, if they have one. It has all sorts of other good stuff about state history and notable residents.

[The Phobia List](#)—OK, this one's more for fun than actual research. I don't want to make fun of anyone who suffers from these, but some of these phobias are really pretty funny. At least the names are funny. Who knew alektorophobia was a fear of chickens?

[The Internet Movie Database](#)—It's not perfect because it's a volunteer project which does include occasional errors, but mostly these tend to get corrected over time. If you're watching TV and see an actor and can't figure out where you've seen him before, this is the place. It also shows awards, goofs, and links to other reviews. It covers movies and TV shows both; there's tons of info here.

[World Atlas](#)—This page has lots of fun stuff, lists of all sorts. Aswan, Egypt is the driest inhabited place; Buenaventura, Colombia, the wettest. Vatican City's population is 770. The largest cool coastal desert is the Atacama. Maps. A link to Olympic host cities. Stuff like that.

[Absolute Shakespeare](#)—Plot summaries, characters, quotes, study guides, and lots more.

[Guinness](#)—Oh, just wander around for a while. You never know what's in here.

Oh, and the "ungenius polyunfatuated"? Here was my guess at what it meant: "Merriam-Webster online isn't equipped for you. I've got the 'ungenius' part, I think—it looks like you're trying not to get a big head. But 'polyunfatuated' is proving difficult. INFatuated, I can find. POLY, I can find. FAT, I can find. A-ha! FATUOUS is silly or simple. So I'm betting that you are in many, many ways (poly) NOT silly or simple.

“So you are claiming to be appropriately complex. But humble about it. I like it. But I don’t think it will fit on a vanity license plate.”

He responded that he is a walking vanity plate and a bunch of other stuff including a perched loon. With which I could hardly argue. When pressed for the meaning of “ungenius polyunfatuated,” he said...

“I made it up. Don’t take everything so seriously.”

Which is a good thing to be reminded of now and then.

Onward.

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Clone Wars

“Apple’s Music Store Shocks the Industry.” That was the headline on a dispatch from the Associated Press back in early May, shortly after Apple announced it had moved a million songs in its first week of selling music online. Two months later, Apple’s iTunes Music Store has sold more than five million tracks, and many of them are playing on the more than one million iPods snapped up by both Apple and Windows users.

The only people who don’t seem surprised by these developments are Mac users; we’ve been watching Apple build its music store for the past few years, even if we didn’t always know it at the time.

iTunes. iPod. FireWire. When the iTunes Music Store opened its virtual doors, all the parts came together. And even though most computer users (among them many Mac users) couldn’t shop there, the store was an instant hit, far surpassing the expectations of music industry executives who reportedly would have been happy if Apple had sold a million songs in the first month, much less the first week.

Stampede

Apple didn’t invent the online music business; it just proved it can work. And that has the music industry’s attention. Having seen Mac users move a lot of product even as their own online sales efforts tanked, music execs are salivating at the prospect of Apple-magnitude sales in the PC universe. And they’re not the only ones—the iTunes Music Store’s success has triggered a stampede of companies into online music sales, each one convinced they can do better than Apple.

They can’t, and here’s why:

- iTunes. A brilliant combination of music player, CD burner, and retail Web site, there’s nothing even remotely like it. And there’s no reason a Windows version can’t be just as good.

- The iPod. Already enormously popular among Windows users and widely considered the best and most stylish portable player. Seamless integration with iTunes makes it even more compelling.
- The iTunes music store. Streamlined, straightforward, easy to use, and ad-free.

As the online sales wars begin, the music biz would be smart to give Apple every advantage by opening their vaults wide because the company has proved it knows more about selling music online than anyone else does. No official numbers have been released by Pressplay, Rhapsody, and the other first generation companies, but no one believes their sales were anything close to Apple's.

Common Sense Isn't So Common

The brilliance of Apple's plan is that it wasn't brilliant. It was just common sense uncommonly well executed, pretty much what most of us would try to do if we opened an online music store. And it's exactly what the music industry and their pre-Apple partners *didn't* do. Apple catered to the people who matter when it comes to selling music online: the artists and the customers. The music industry listened to bean counters and pushed subscription-based music. Never mind that the subscription model has nothing to do with any way we've ever bought music. The industry saw it as new revenue stream.

The public did, too, and stayed away.

The sellers of subscription-based music should not require the wisdom of consultants, focus groups, and overpaid executives to understand why. They need to go look on the doorstep: you subscribe to a newspaper and each morning a paper arrives. That's the entire transaction, and it's what we think a subscription should be. The newspaper doesn't charge you for a subscription and then charge you again when you read the paper.

And don't you think that the music biz would have looked around at other media industries which sell by subscription and realized that consumers view many of them as intractable pickpockets? That's not the image the already-suspect music industry should engender.

But the kicker is the twist the music biz gave to its subscriptions: music that vanishes if you don't keep up with the payments. If you don't pay your newspaper bill, they stop delivering but they don't come around to pick up your old papers. If you cancel cable, you aren't required to forget everything you've seen. But unless you transfer downloaded subscription music to a CD, it's gone when your subscription ends.

It's like car payments that never end. And what happens if the service you subscribe to goes out of business, something we'll probably see several times in the next few years?

Yet as their subscription services flopped, the music industry scratched its collective fat head and wondered why. The record companies and RIAA, their trade association, blamed Kaaza and LimeWire and the other "file sharing" services for teaching people to steal music, but couldn't (and still can't) see that their own services were not a compelling alternative to free music. After a century of selling—not renting—records, the music industry suddenly has trouble understanding that people want to own the music they buy, no strings attached.

Napster Reloaded

April 28, 2003. Apple debuts an entirely new concept for selling music (the operative word is "selling"), and moves five million tracks in two months. The feeding frenzy begins.

Roxio buys Pressplay and revives the Napster name. RealNetworks acquires and retools Rhapsody. Amazon, Yahoo, AOL, and Microsoft's MSN shift plans into high gear. And Best Buy, Borders, Tower Records, and several other retail chains create Echo, another iTunes clone. And with the enemy in disarray, Apple's invasion of PC Land quietly gets underway as hundreds of thousands of iPod shock troops slip behind enemy lines to wait for D-Day: The arrival of iTunes for Windows.

Apparently, the key strategy of the iTunes wannabees is to declare victory over Apple and *then* come up with a real plan. They're whistling past the graveyard, nervously hoping they won't become its permanent resident.

A sampling of comments:

A spokesman for Listen.com quoted by Bloomberg News: “We’re happy that Steve Jobs is bringing attention to online music, but he’s selling to what, 2 percent of the market? We’ll settle for the other 98 percent.”

Zack Zalon, general manager of Radio Free Virgin, Virgin Entertainment’s online music service, talking to CNET about Apple: “They’re an excellent software company, not a music retailer.”

Roxio CEO Chris Gorog, who told CBS Marketwatch (apparently with a straight face) that iTunes Music Store is not competition for his Napster revival because Apple only has a small market share. Please note that Napster Reloaded doesn’t exist yet. And once Apple launches iTunes for Windows (likely before Napster’s return)? “We have a monster competitive advantage with the biggest brand in the online music business, and it’s recognized as a music brand and not a computer brand.”

Big talkers *now*. But not one of these companies had the spine to jump first.

(Would you want to be the Roxio exec who has to negotiate deals with the record companies? Roxio software has burned millions of tracks of purloined music onto CDs and the company plans to hustle music online under the most famous brand name in music piracy—“Say, have you guys met our new consultant, Shawn?” And we thought “Rip. Mix. Burn.” might be a problem.)

Lessons Still Not Learned

Apple’s competitors plan to sell downloadable music tracks, and some services will let you move the songs to a portable player, but they haven’t given up on renting music and neither have some in the music business:

“Subscription services are ahead of their time...ultimately, there will be a huge audience for this,” a senior record label executive told CNET recently. But the news service also spoke with another unnamed industry exec who doubted the subscription model would become “a significant part of the music industry.”

Microsoft reportedly is hard at work trying to cram its current PC-based digital rights management technology into portable players, so you’ll be able to be cut off from your music on the road as well as at home.

And then there's Rob Glaser of RealNetworks, a CEO with the arrogance of Steve Jobs but none of the charm. "One of our challenges is teaching consumers about digital music," Glaser told *Wired* magazine's Scott Menchin. Translation: to teach them not to gag as we ram subscription music down their throats.

Glaser told *Wired* that Rhapsody will be "an all-you-can-eat service" offering streaming music and CD burning of downloadable tracks.

Guys Like Steve and Me

Glaser chides Apple for passing up streaming, but at least he has the decency to thank the company for kick-starting online music: "It's hard to design a better scenario for us than what Apple did," Glaser told Menchin. "It's great having Steve Jobs get the word out, since we have the best service for the 95 percent of people who don't use a Mac."

In another interview, the RealNetworks CEO told *Fortune* magazine that Rhapsody's streaming music will be a better deal for the little guy who can rent a 200-song streaming library for \$9.95 a month. "If you use Apple," Glaser said, "it's \$200."

"Maybe guys like Steve and me can afford that," Glaser told *Fortune*, "but I'm trying to run a service for everyone else, too."

Glaser is a fatuous twit, but at least he has an actual business. Echo CEO Dan Hart, who does not, also sends thanks to Jobs: "If he's the one who gets the game going—great," Hart told May Wong of the Associated Press. Echo plans to sell music online and in the brick and mortar stores of its retail music partners but it does not have technology and licensing deals yet. "But the time is right," Hart says.

Say, did I mention my plans for a cross-country road trip? I'm leaving just as soon as I find a map and put some wheels on the car.



Surfin' Safari

Microsoft has pulled the plug on Internet Explorer for the Mac, and I can't say I'll miss it. IE was a solid browser in its day, but it was also a certified weapon of the Microsoft monopoly, the cudgel that beat the daylights out of Netscape.

Some Mac users are concerned that the Mac version of Microsoft Office could be next, but Microsoft Mac product manager Jessica Sommer says otherwise. She told MacCentral that "Office is still intact and going strong (and) there are no plans to stop development on Office for Mac even after the next version is released." That makes sense, although the phrase "even after" is a bit worrisome. Office for the Mac makes money, Internet Explorer does not. And while the current political climate is favorable to Microsoft, it may not always be; Office for the Mac is a good hedge against further monopoly allegations.

Still, a demise of Office would have serious consequences in the effort to court Windows switchers unless Apple comes up with a workable alternative to Word, such as a revamped Office-compatible AppleWorks. But Apple also has an option which could head-off any problems with Office and make the Mac more appealing to both Mac users and potential Windows switchers. It's something Apple should have done years ago: bundle Office with every new Mac.

But back to Internet Explorer. There's more to the Microsoft decision than the Mac. It wasn't commented on much in Mac circles, but a couple of weeks before the company officially acknowledged the end of development of the Mac version of IE (actual development appears to have ended a couple of years ago), Microsoft announced the demise of its free-standing Windows version of IE. From now on, new versions of Explorer will be available only as part of the Windows OS.

You could see that coming. Although a ruling that Microsoft used its legal monopoly in operating systems to undermine Netscape was left hanging when the Justice Department and the company settled the antitrust case out of court, the question wasn't whether Microsoft destroyed its rival, just whether it did so legally. It's easy to forget that Netscape was a very successful commercial product until Microsoft turned browsers into freebies and wound up with an estimated 95 percent of the browser market by giving away Internet Explorer. Netscape didn't defend its turf very well, to be sure, but it's hard to compete with free.

One of the highlights of the antitrust trial was Microsoft's awesomely bungled defense of its claim that Internet Explorer was not a free-standing application but an integrated part of Windows that could not be removed. Continuing to offer a free-standing PC version would be tantamount to admitting the government was right in asserting that the bundling of IE with the Windows OS was part of the assault on Netscape and not a technical necessity.

But of course Microsoft didn't put it that way. Instead, Microsoft's Sommer slyly drew a parallel between Apple's development of the Safari browser and Microsoft's antitrust trial claim that IE, and by extension all browsers, is properly part of the OS. She said Microsoft can't compete with Safari because Apple has superior access to the Mac operating system, the implication being that Apple would never grant Microsoft the access it needs to keep IE in the game.

The irony could not be lost on the Windows developers who have complained for years that Microsoft stifles competition by limiting access to its OS, guaranteeing that Microsoft programs work better in Windows than anyone else's do.



This Season's Inkwell

I'm still contemplating the big picture when it comes to the new Mac G5s and the upgrade of OS X to Panther, but I'm ready to nominate a candidate to join Inkwell in Apple's technology-waiting-for-something-to-do queue.

There may be as many as two or three actual users of Inkwell, the OS X handwriting-to-text technology derived from the dear departed Newton. But Inkwell is not in the OS for no reason. Apple has plans for it (or maybe had plans for it) we just don't know yet what they are (or were). My guess? A removable iMac or PowerBook screen that becomes a tablet Mac. But I think, like Newt, it got Steved. At least for now.

Anyway, this season's candidates for mystery technology are the optical digital audio jacks on the G5s. The technology itself isn't a mystery; it's common on MiniDisc and DAT recording decks and, increasingly, on other audio system components such as receivers. But are the jacks on the G5 just for our general convenience or is Apple planning to sell us something to plug into them?

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Quick Tips in Design

by Andrew Kator, akator@atpm.com

Part 1: Using Value



June 8, 2003

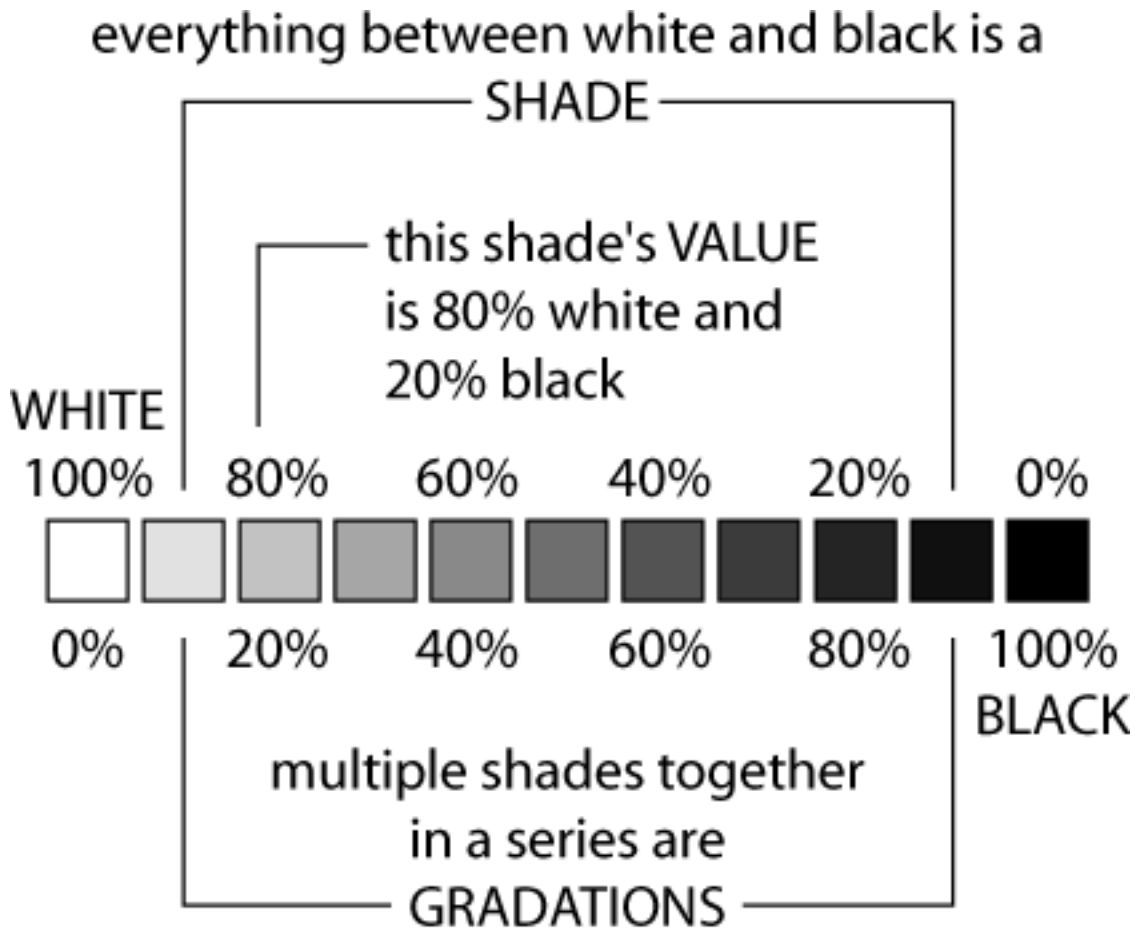
Crazy Andy Copyright © 2003 Andrew Kator. All Rights Reserved.

Most people recognize good design when they see it, but even those trained in design often get “in a rut” and need a different perspective once in a while. These articles are based on the foundations and principles of basic design. Anyone can go out and buy a book on basic design principles, so instead we’re going to show you more visual, real world examples of ways to apply these techniques.

Design principles are based on the way the human brain processes visual information. Depending on your desired results, you can use these techniques to change how the viewer reacts to your work. It should be noted that most of the basics of design are based on human audiences, and will have different results when viewed by cats or extraterrestrials.

Shades, Value, and Gradations

A shade is a combination of white and black to produce a particular shade of gray. All of the shades of gray between white and black are values, and when used together are also called gradations. Computers have made using value easy, with straightforward and evenly mixed values presented on a nice gradation scale.



So what's value good for? Value is great for suggesting volume, creating spacial effects, changing mood, creating visual interest, and changing impact.

Contrast

Contrast describes the range of gradation between different values.



LOW
CONTRAST



BALANCED



HIGH
CONTRAST

A balanced image will have the most values between white and black. A high contrast image has fewer gradations. A low contrast image is missing the ends of the spectrum, white and black and the values closest to them.

High contrast is often used for greater impact; lower contrast can quiet things down and even create harmony.

Increasing the contrast of objects in the foreground of an image, and decreasing the contrast of objects in the background, can create more spacial effects. In the image below, the contrast was increased on the people and decreased on the background, giving the image more spacial impact and emphasizing the subjects.



*THE CONTRAST IS
INCREASED IN THE
FOREGROUND SUBJECTS
AND DECREASED IN THE
SURROUNDINGS*

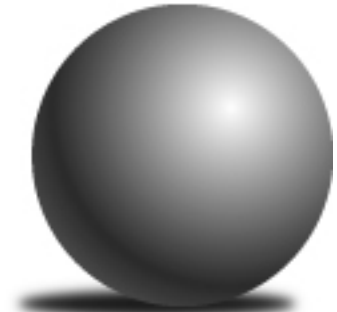
Suggesting Volume and Space



FLAT



VOLUMETRIC



SPACIAL

What's the difference between drawing a circle and a ball? Value. Because of the way the human brain interprets the world, value can be used to create the illusions of volume and space.

People naturally interpret that lighter values indicate a light source. By using shading our flat circle is instantly given volume, and becomes a sphere.

Shading and value can also be used to create shadows, further adding the suggestion of space and volume. Without shadows the sphere is floating in space. Lighter changes in value are also used at the far right edges of the sphere to suggest that light is being reflected back from a surface.

Why does the sphere with shading work to represent volume and space? The shadow matches the shape of the sphere and the shadow is off-centered to the left to match the direction of the "light source" which appears to be coming from the top-right. If the shadow were dead centered beneath the sphere, it wouldn't match the lighting direction and would be less convincing.

Problems with drop-shadows or combining multiple photographs into one image are often caused by the light-source not matching the shading and shadow.

Using Value to Create Balance and Visual Interest

Here is a way to use value to spruce up a letterhead and even create an identity and logo by using value changes. The Department of Physics, Computer Science, and Engineering is often identified with the acronym PCSE.

Using Helvetica Neue Bold Condensed, we created a the first line at 72 points and the trailing text at 14 points. These point sizes create a dramatic presentation and added visual balance by generally matching the width and height of PCSE to the following text.

PCSE

**DEPARTMENT OF PHYSICS
COMPUTER SCIENCE
AND ENGINEERING**

But something is still missing.

The 72 point PCSE type is visually much heavier than the following text and feels somewhat top-heavy. Why not balance the top-heavy text by lightening the value? Instead of black text, we'll make it mid-gray.

PCSE

**DEPARTMENT OF PHYSICS
COMPUTER SCIENCE
AND ENGINEERING**

Lightening the value of the large PCSE makes it more balanced with the other text. But it isn't very interesting.

Leave the first letter 50% gray, but let's change the rest. Make the C and E lighter and the S slightly darker.

PCSE

**DEPARTMENT OF PHYSICS
COMPUTER SCIENCE
AND ENGINEERING**

Using the basic design principle of value, mixed with two type sizes, and we've got a department letterhead and logo that can even be created in a word processor.

Psychology and Value?

Value and contrast can also be used to change the mood of an image or design. A good example is old vampire movies and how the underexposed and dark scenes created a sense of danger. The next time you watch a horror movie or a sci-fi movie with a bleak subject, notice how the use of darker values and contrast are applied throughout the movie to affect mood. From the very beginning of the movie the titles will often use value as a technique to set the mood for the audience. It wouldn't be a good idea to use that technique when trying to create an advertisement for laundry detergent.

Another time to avoid using many darker values is when creating a presentation for a lecture, since excessive use can lead to a cranky and disinterested audience. An audience can actually be encouraged to pay more attention by slightly tweaking images to create higher contrast (just don't go overboard).

On the flip side, value can be used to create a more soothing and relaxed effect. Look for this technique in television programming that is targeted to calming viewers. Some instructional, gardening, home-oriented, and “feel-good” shows tone down the contrast, especially the extreme lights and darks.

Value is just one of the basics for creating good design and modifying images. In Part 2 we’ll discuss color and simple ways to use color to help with your images and design.

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Clandestine Wireless Networking and MacStumbler

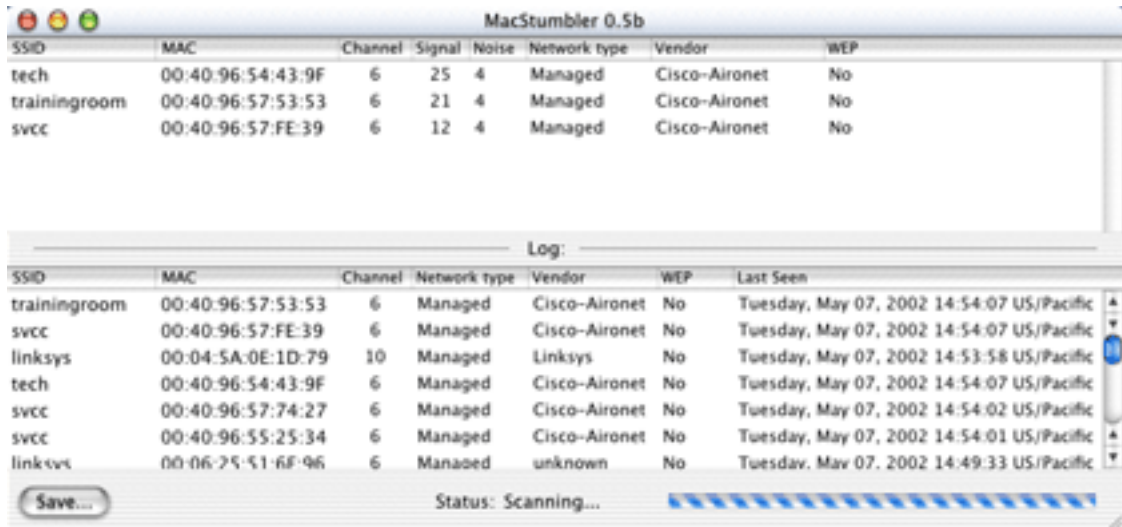
“At last,” sang Etta James. “My love has come along.”

Network geek, admittedly. Experienced cable-and-socket jockey, perhaps. The common availability of wireless is still a welcome networking gift. Away with bad hair day Ethernet snarls! Fie to protracted battles with computer desk dust bunnies! Cables swapped for a single AirPort card, I consider the transition from network maven to network slacker an upgrade. Using my mental RAM for “location of car keys” is vastly preferable.

“My lonely days over and life is like a song.”

Fortunately, there’s more to wireless than just, well, nothing. Many use wireless access points (WAPs) to share their high-speed Internet connection within their home or office. WAPs broadcast their signal in every direction, much like radio stations. If your AirPort card is within signal range, access is yours—assuming you’re allowed in (more on that later). As neighbors, coffee shops, and offices add access points, the likelihood of encountering multiple signals increases. Some Starbucks, for example, let you browse wirelessly [as you sip](#).

"At last, the skies above are blue—my heart was wrapped up in clover the night I looked at you."



The screenshot shows the MacStumbler 0.5b application window. It features two tables. The top table lists detected networks with columns for SSID, MAC, Channel, Signal, Noise, Network type, Vendor, and WEP. The bottom table is a log of connection events with columns for SSID, MAC, Channel, Network type, Vendor, WEP, and Last Seen. A 'Save...' button and a 'Status: Scanning...' indicator are visible at the bottom of the window.

SSID	MAC	Channel	Signal	Noise	Network type	Vendor	WEP
tech	00:40:96:54:43:9F	6	25	4	Managed	Cisco-Aironet	No
trainingroom	00:40:96:57:53:53	6	21	4	Managed	Cisco-Aironet	No
svcc	00:40:96:57:FE:39	6	12	4	Managed	Cisco-Aironet	No

SSID	MAC	Channel	Network type	Vendor	WEP	Last Seen
trainingroom	00:40:96:57:53:53	6	Managed	Cisco-Aironet	No	Tuesday, May 07, 2002 14:54:07 US/Pacific
svcc	00:40:96:57:FE:39	6	Managed	Cisco-Aironet	No	Tuesday, May 07, 2002 14:54:07 US/Pacific
linksys	00:04:5A:0E:1D:79	10	Managed	Linksys	No	Tuesday, May 07, 2002 14:53:58 US/Pacific
tech	00:40:96:54:43:9F	6	Managed	Cisco-Aironet	No	Tuesday, May 07, 2002 14:54:07 US/Pacific
svcc	00:40:96:57:74:27	6	Managed	Cisco-Aironet	No	Tuesday, May 07, 2002 14:54:02 US/Pacific
svcc	00:40:96:55:25:34	6	Managed	Cisco-Aironet	No	Tuesday, May 07, 2002 14:54:01 US/Pacific
linksys	00:06:25:51:6F:96	6	Managed	unknown	No	Tuesday, May 07, 2002 14:49:33 US/Pacific

MacStumbler Connection Details

[MacStumbler](#) is a simple application that catalogs and measures nearby WAPs. AirPort does something similar with its connection strength icon and menu of available connections, but MacStumbler shows a comparative overview in one window. It profiles each WAP by name (technically, its Service Set ID or SSID), showing network details and connection status. Pick the best connection, coolest name, or whatever floats your network boat.

"I found a dream that I could speak to, a dream that I could call my own."

The ease of wireless ostensibly solves a business money problem in reduced cable and maintenance costs. The downside? Careless installation leaks network (and Internet) connectivity beyond its intended bounds, letting anyone within range listen in. Disregard security settings for your wireless network and people are eventually going to notice. Some wireless users go [warchalking](#), using hobo-inspired pavement symbols to indicate nearby access points. Savvy users see the marks and know a free Internet connection is close at hand.

"I found a thrill to press my cheek to, a thrill that I have never known"

Don't confuse warchalking and casual Internet access with cracking. Most users aren't out to read your e-mail, just piggyback off your free-for-them Internet connection. Since you're paying the bill, though, feelings of righteous indignation may result. Check your WAP or router instruction manual for help with securing your network and lowering your blood pressure.

"oh, and then the spell was cast and here we are in heaven, for you are mine at last."

MacStumbler is a tool for both warchalkers and wireless network owners, regardless of the esteem you hold for either group. You don't need to be a business to spill your signal around. Home users should be just as aware. It's not hard to secure your access point or wireless router, just read the instructions. Omit that step, however, and be ready to foot the Internet bill for some morally flexible neighbors.

Copyright © 2003 Matthew Glidden, mglidden@atpm.com. Matthew Glidden is the webmaster of Threemacs.com, a guide to constructing and maintaining home and small-office Macintosh networks. He can also tango and juggle, not necessarily at the same time.



Getting the List of It—Part 2

Welcome back to *Roll Your Own*, the column where we learn how to create software with AppleScript.

The last few columns have been spent learning about object-oriented programming, and [last month](#) we began creating a complex list object. This time we're going to take our list object a bit further, adding functionality that isn't available with AppleScript's built-in `list` data type.

Here's the programming behind our list object from last month.

```
on MakeList(newList)
    script ListObject
        property theList : newList
        to Normalize()
            if class of theList is record then
                set theList to theList as list
            end if
            try
                repeat with i from 1 to count of theList
                    set item i of theList to ¬
                        ((item i of theList) as string)
                end repeat
            on error errMsg number errNum
                if errNum is -1700 then
                    error "List cannot be normalized to list" & ¬
                        " of strings." number 501
                else
                    error errMsg number errNum
                end if
            end try
        end Normalize
    to SetList given listToSet:newList
        set tempList to theList
        try
            set theList to newList
            Normalize()
        on error errMsg number errNum
```

```

        set theList to tempList
        if errNum is 501 then
            error "List cannot be normalized to list" & ¬
                " of strings." number 501
        else
            error errMsg number errNum
        end if
    end try
end SetList
to GetList()
    return theList
end GetList
to MemberCount()
    return count of theList
end MemberCount
on ItemX given theIndex:x
    if x is greater than MemberCount() or ¬
        (x * -1) is greater than MemberCount() or ¬
        x is 0 then
        error "Invalid index passed to ItemX()" number 502
    else
        return item x of theList
    end if
end ItemX
end script
tell ListObject to Normalize()
return ListObject
end MakeList

```

We left the list in this form, which pretty much duplicates what AppleScript's built-in `list` does. AppleScript's `list` however does not support sorting, or the ability to insert an element at an arbitrary point. We'll expand our `ListObject` to include these two features this month.

First we'll add the ability for the list to return a sorted version of itself. There are numerous algorithms available for sorting data. Each of them has tradeoffs and advantages. If you're interested in a thorough discussion of sorting algorithms, you may want to check out a computer science textbook, or perhaps visit one of the many Web sites dedicated to the topic, such as [Wikipedia](#) and [notes from the University of Hawaii](#).

Sorting

Sort algorithms have different names, and the one we'll be using is called Selection Sort, which is actually taken from [Apple's Web site](#). It loops through the values to be sorted, extracting the lowest member of the list and inserting it at the end of a new list. Perhaps an example will help make this clear. Remember, computers are stupid, and every task given to a computer must be minutely directed.

Let's begin with a `list` of four numbers, `{3, 1, 4, 2}`. We want to sort this in ascending order, so that the lowest number comes first and the highest number comes last.

We initialize two new `lists`, one to store our sorted version and one to store the indices of members that have already been sorted. We'll call these two new `lists` `sortedList` and `indexList`, and both are empty to begin with. We need a variable to store our current lowest value, and we'll call this `lowItem`, which begins as a blank string to indicate that it hasn't been set yet.

We now loop through the `list`. The first item in the `list` is 3. Since our `lowItem` is currently blank, we store this number in `lowItem`. Moving to the next number in the `list`, we find a 1. This is lower than our `lowItem`, so we set `lowItem` to 1. Next we come to the 4. This is greater than our `lowItem`, so we leave it alone. Similarly, when we come to 2, our `lowItem` variable is lower.

So, with our first pass through the `list`, the lowest value is 1. We add this to our `sortedList`, which now has a value of `{1}`. We also record the index we found that value in, so our `indexList` has a value of `{2}`.

Now we initialize `lowItem` to a blank string again, and loop through the `list` again. First, we again come to the 3. Since `lowItem` is blank, we store the 3 in it. Then we come to the 1. But this has an index of 2, which is in our `indexList` variable, so we ignore it. Next we come to the 4, which is greater than our `lowItem`, so we ignore it too. Finally, we come to the 2, which is less than our `lowItem`. We set `lowItem` to 2, and since we've finished looping through our `list`, we've found the next lowest value we need. We add 2 to the end of our `sortedList` so it has a value of `{1, 2}` now, and we store the index of the lowest value we found, so `indexList` has a value of `{2, 4}`.

Rinse and repeat. Set `lowItem` to a blank string. Loop through again. First, since `lowItem` is blank, record the 3. Since the index of 1 is in our `indexList`, ignore it. Since 4 is greater than 3, ignore it. Since 2's index has been sorted, ignore it. We're done looping through the `list`, so record the index of the current lowest item and add the item to the end of the `sortedList`. `sortedList` now has a value of {1, 2, 3} and `indexList` has a value of {2, 4, 1}.

In our final loop through the `list`, this time we ignore 3 because it's been sorted. We also ignore the 1, and then store the 4 in `lowItem`. We ignore the 2 as it has already been sorted, and we're done. Add the 4 to the end of `sortedList` so that it now has a value of {1, 2, 3, 4}.

Keep in mind, there are more efficient ways to sort data. However, this one is fairly easy to understand and, therefore, easy to write in AppleScript.

We're going to add a bit of functionality to this algorithm, so it lets the user specify whether the sort should happen in ascending or descending order. To do this, we will need to add another property to our `ListObject`. We'll call this property `sortOrder`. It will hold one of three strings: "none", "ascending" or "descending", and it will be initialized to a value of "none".

In your `ListObject` definition, just after the declaration of the `theList` property, declare a new property with the following line of code:

```
property sortOrder : "none"
```

Since we now have a property that stores the sort order of the `list`, we need a way to set that property. Add the following `setSortOrder()` method to your `ListObject` definition.

```
on SetSortOrder given theSortOrder:newSortOrder
    if newSortOrder is not in ¬
        {"ascending", "descending", "none"} then
        error "Invalid sort order sent to " & ¬
            "SetSortOrder()" number 503
    else
        set sortOrder to newSortOrder
    end if
end SetSortOrder
```

If you recall, when we discussed object-oriented programming, we mentioned that methods come in two forms: public and private. Additionally, although AppleScript does not explicitly support private methods, you, as the programmer, can always obey these concepts. This `setSortOrder()` method falls under the private category. It is not meant to be called by any code other than that which exists within the `ListObject` definition.

We now have a handler that will set the `sortOrder` property. We should also provide one that allows calling code to get this property. Here's the AppleScript code for such a handler. Go ahead and add it to the `ListObject` definition.

```
on ListSortedBy()
    return sortOrder
end ListSortedBy
```

In keeping with the philosophy that object methods shouldn't alter internal data unless specifically told to do so, our sort method will generate a new `list` that contains the current `list` in the specified sort order. Add the following `sorted()` handler to the `ListObject` definition:

```
on Sorted given theSortOrder:orderToSort
    if orderToSort is not in {"ascending, descending"} then
        error "Invalid sort order passed to " & ¬
            "Sorted()" number 504
    else
        set indexList to {}
        set sortedList to {}
        repeat MemberCount() times
            set lowItem to ""
            repeat with i from 1 to MemberCount()
                if i is not in indexList then
                    set thisItem to item i of theList as text
                    if lowItem is "" then
                        set lowItem to thisItem
                        set lowItemIndex to i
                    else if thisItem comes before ¬
                        lowItem then
                        set lowItem to thisItem
                        set lowItemIndex to 1
                    end if
                end if
            end repeat
            set end of sortedList to lowItem
            set end of indexList to lowItemIndex
        end repeat
    end repeat
```

```

    if orderToSort is "ascending" then
        set newList to MakeList(sortedList)
        tell newList
            SetSortOrder given theSortOrder:"ascending"
        end tell
    else
        set newList to MakeList(reverse of sortedList)
        tell newList
            SetSortOrder given theSortOrder:"descending"
        end tell
    end if
    return newList
end if
end Sorted

```

After performing a quick check that the sort order specified is valid, we follow the algorithm discussed above to sort the `list` in ascending order. Like we did in the last column, we're using the `MemberCount()` method to get the number of members in the `list`. This ensures that if we ever change how we store our `list`, and therefore change how the number of members would be computed, this handler will still work.

Once we have the `list` sorted in ascending order, we then cover the two possibilities for the sort order. If the sort order was specified to be `ascending`, then we use our `sortedList` as the parameter passed to `MakeList()` to generate a new `ListObject`. If the sort order should be `descending`, we simply pass the new `list` as it is. If, however, the sort order is `descending`, we pass the `reverse` of the new `list`. Once we've created our new `list`, we set the sort order property of the new `list` using the method we wrote above.

Counting Occurrences

Now we will add to `ListObject` the ability to count how many times a member appears. This will be related to a future method that will return the index of a given item. The following listing should be added to our `ListObject` definition.

```

on OccurrenceCount given itemToFind:theItem
    set occurrenceCounter to 0
    repeat with i from 1 to MemberCount()
        if item i of theList is theItem then ↵
            set occurrenceCounter to occurrenceCounter + 1
        end repeat
    return occurrenceCounter
end OccurrenceCount

```

This is a fairly simple handler. After initializing a counter variable to 0, we loop through the members of the `list`. Whenever the current member is equal to the item being searched for, we increment the counter by 1. Once we're finished looping through the `list`, we return this counter to the calling code.

Note that this handler can also serve as a way to determine whether an item is in the `list` at all. By passing a possible member to this handler, we know that if it returns 0, the item is not in the `list`.

Now that we've provided the means for the user to check whether an item is in the `list` or not, we'll next provide a way to get the index of an item given the item and which occurrence of the item to find. Add the code for `IndexOf()` to the `ListObject` definition.

```
on IndexOf given itemToFind:theItem, whichOccurrence:occurrence
  if class of occurrence is in {real, integer} then
    try
      set occurrence to occurrence as integer
    on error
      error "Cannot get occurrence of " & occurrence & ^
        "of an item." number 505
    end try
    if occurrence is less than or equal to 0 then
      error "Cannot get occurrence of " & occurrence & ^
        "of an item." number 505
    else
      if theItem is not in theList then
        return 0
      else
        set occurrenceCounter to 1
        repeat with i from 1 to MemberCount()
          if theItem is item i of theList then
            if occurrence is occurrenceCounter then
              return i
            else
              set occurrenceCounter to ^
                occurrenceCounter + 1
            end if
          end if
        end repeat
        return 0
      end if
    end if
  end if
else
```

```
        error "Invalid parameter passed to IndexOf()" number 506
    end if
end IndexOf
```

The first thing we need to think of with this handler is what could go wrong. The handler expects two parameters: the item to find and which occurrence of the item to return the index of. We don't need to worry about `theItem`. It can be pretty much anything. However, we do need to perform some error checking regarding the `occurrence` parameter.

First of all, `occurrence` should be either an `integer` or a `real` number that can be converted to an integer (such as `5.0`). So the first thing we do is check whether the parameter is one of these two data types. If it is, we attempt to coerce the parameter into an `integer`. If it either already is an `integer` or is a `real` with no fractional part, this will work without a hitch. However, if an error occurs, then it must have been a `real` with a fractional part (such as `5.1`). Since we captured this error within a `try` block, we can report the error back to the calling code.

If we've gotten past the `try` block in our handler, then the `occurrence` parameter is now certainly an `integer`. However, not all integers are useful. Only positive integers make sense as an `occurrence` of an item. Therefore, we check that `occurrence` is positive, and if it isn't return an error to the calling code.

Finally, we're sure that `occurrence` makes sense, so we check whether the item is in the `list` at all. After all, if it isn't in the `list`, we don't need to loop through the `list` and waste time. If the item isn't in the `list`, then we immediately return a `0`.

If we're still in the handler, we know that there is at least one occurrence of the item in the `list`. So we loop through the `list` until we find the item. Once we do find it, we check our `occurrenceCounter` variable against the `occurrence` parameter. If we've found the specified `occurrence`, we return the index of the current item. If we haven't yet found the right `occurrence`, we increment `occurrenceCounter` and continue looping.

There's one last scenario we need to account for. Perhaps the item is in the `list`, and the `occurrence` is a valid positive integer, but the `occurrence` parameter is greater than the number of occurrences of the item. For instance, perhaps there are 3 occurrences of the

item, but the `occurrence` parameter was passed a value of 5. We have two choices: we can return an error, or we can return a value of 0. The version of the handler does the later, but a case could be made for generating an error.

Inserting at an Arbitrary Index

As mentioned previously, there is no built-in way of inserting an item into an AppleScript `list` data type at some arbitrary point. This next handler adds this functionality to our `ListObject`. Add it to the object definition.

```
on InsertItem given itemToInsert:theItem, atPosition:thePosition
    if class of thePosition is not in {real, integer} then ¬
        error "Invalid position passed to InsertItem()" number 507
    if thePosition is 0 then
        error "Can't set item 0 of list" number 508
    else if thePosition is less than 0 then
        if (thePosition * -1) is greater than ¬
            MemberCount() + 1 then ¬
                set thePosition to (MemberCount() + 1) * -1
    else
        if thePosition is greater than MemberCount() + 1 then ¬
            set thePosition to MemberCount() + 1
    end if
    set newList to theList
    if thePosition is less than 0 then
        if (thePosition * -1) is MemberCount() + 1 then
            set beginning of newList to theItem
        else
            set newList to reverse of newList
            set thePosition to (thePosition * -1)
            set newList to (items 1 thru ¬
                (thePosition - 1) of newList) & ¬
                theItem & (items thePosition thru -1 of newList)
            set newList to reverse of newList
        end if
    else
        if thePosition is 1 then
            set beginning of newList to theItem
        else if thePosition is (MemberCount() + 1) then
            set end of newList to theItem
        else
            set newList to (items 1 thru ¬
                (thePosition - 1) of newList & ¬
                theItem & (items thePosition thru -1 of newList)
            end if
    end if
end if
```

```
endif
return MakeList(newList)
end InsertItem
```

The first thing our handler does is make sure that `thePosition` is an `integer` (or can be coerced into an `integer`). If it isn't, an error is generated, since only `integers` are valid for `thePosition`.

Then our `InsertItem()` handler checks that the `thePosition` parameter makes sense. If `thePosition` is zero, an error is generated, since we can't set the 0th item of a `list`. If `thePosition` is greater than 0, we check to see if the absolute value of `thePosition` is also greater than the number of items in the `list` plus one. If it is, we have two options. We can either generate an error as we did when `thePosition` was zero, or we can reset `thePosition` so that it makes sense. This handler does the latter, so that if `theList` contains 5 members, and this handler is told to insert an item at position 10, it will instead insert an item at position 6, since that is the largest position it can set.

Notice that we allow negative indices of AppleScript `lists`, which indicate that counting should start from the end of the list, rather than the beginning. It makes the code more complex, but keeps the base functionality of the AppleScript `list` while still providing our additional features.

Now that we know that the `thePosition` variable is within the required range, we create a new variable, `newList`, that is set to our `theList` property. If a negative number was passed for `thePosition`, we reverse this `list` and multiply `thePosition` by `-1`, and then insert the item into the indicated place within the `list`. If the `thePosition` is positive, then we simply insert the item into the place indicated.

Let's go through an example of using the handler to clarify how it is working. We'll assume that `theList` has a value of `{"Apple", "Script", "Programming"}` and that `InsertItem()` is called with `InsertItem given itemToInsert:"Language" atPosition:2`.

Since `thePosition` has a value of 2, which is an `integer`, the first error checking is successful. Since it is not 0, the second error check is also successful.

2 is not less than 0, nor is it greater than the number of items plus one, so the value of `thePosition` doesn't change. `newList` is now set to the value of `theList`, so `newList` also has a value of `{"Apple", "Script", "Programming"}`.

Since 2 is greater than 0, the `else` block is executed that checks if `thePosition` is 1, followed by a check that `thePosition` is equal to 1 plus the number of members in the `list`. Neither of these tests is `true`, so the final `else` block is executed. The line that does the actual job reads:

```
set newList to (items 1 thru ¬
  (thePosition - 1) of newList) & ¬
  theItem & (items thePosition thru -1 of newList)
```

Replacing all of the variables in the expression with their values and doing a bit of math brings the code fragment to:

```
set newList to (items 1 thru ¬
  1 of {"Apple", "Script", "Programming"}) & ¬
  "Language" & (items 2 thru -1 of {"Apple", "Script", "Programming"})
```

Evaluating the `items x thru y` portions of the code fragment results in:

```
set newList to {"Apple"} & "Language" & {"Script", "Programming"}
```

Finally, applying the ampersand operator to the expression results in:

```
set newList to {"Apple", "Language", "Script", "Programming"}
```

This would then be passed to `MakeList()` and the new `ListObject` returned by that handler would be returned the original calling code.

Try working through the handler with `InsertItem` given `itemToInsert:"Language"`, `atPosition:-3`. (Hint: the final result will be the same as what we just got with `thePosition` being passed a value of 2.)



As you can see, our object is becoming more complicated yet more useful each time we add functionality to it. I hope you'll join me next time when we continue to improve our `ListObject`. Until then, happy programming!

Copyright © 2003 Charles Ross, cross@atpm.com. Charles Ross is an independent developer and author. He's written articles for ISO FileMaker Magazine and is currently writing a book on creating applications with AppleScript Studio.



A Little Help, Please? Tips for Getting Good Tech Support

One of the things my wife likes about the Mac is that as long as I don't touch them, our Macs are remarkably stable and we have experienced relatively little downtime. Unfortunately, no matter how stable your Mac is, if you use any computing platform long enough you will experience problems that require either troubleshooting or technical support. This is not an [article about troubleshooting](#) those problems. ATPM contributor Paul Conaway has discussed this issue far more thoroughly and effectively than I can at this time. This article is about what happens on those rare occasions when your troubleshooting efforts don't resolve an issue and you need assistance from technical support.

Maybe I look at the world from a different perspective, but years of using both Macs and PCs have convinced me that getting good tech support begins before you buy a product. If a manufacturer has a reputation for providing good support, your odds of having a good tech support experience are better than they would be if the company had a less than stellar reputation for support. Before you make your next hardware or software purchase, try to get a feel for which vendor seems to have the best technical support. If two programs or pieces of hardware have comparable feature sets and pricing, you will probably be happier in the long run with the one that seems to offer the best technical support. Many Mac hardware and software vendors put a great deal of time and energy into this aspect of their business. They deserve our recognition and our financial support when it's time to buy new products.

When All Is Right With the World

I conceived this article based upon the premise that the best time to prepare for a tech support call is when all is well and you don't need help. This is the time to prepare for future problems. Taking some basic steps now can minimize the impact that a computer crash will have on your life. One of the things we'll do is take some time and build a notebook that contains information to help technical support help you.

Right now, while all is well, back up your data. You're likely be more tolerant of problems if you know your data is safe. How often you back up will depend upon how you use your Mac. The more critical your data is the more frequently you should back up. It's also probably a good idea to [clone your system](#) so that you can easily reload your system software if necessary.

Now that you have backed up the system and your valuable data, it's time to do a few other things while your computer is healthy. One of the most important things you can do is gather the kind of information that technical support personnel are likely to need in order to help you. Troubleshooting software issues, for example, often requires knowing which version of the software you have installed, which operating system you have installed, etc. Fortunately, even if you are a novice Mac user, Apple has provided an easy way to gather system information and it's called Apple System Profiler. This handy utility provides a wealth of information about your computer's hardware and software. I think it would be good to print this information out and have it handy. If you have never run Apple System Profiler before take my word for it, it's easy. Here's what to do:

- If you are running Jaguar, go to the Apple menu at the far left of your screen and choose About This Mac. Click the More Info button to launch Apple System Profiler. Once the program has gathered all the information you can either print the result or save it to disk.
- If you are running some earlier versions of OS X you may not be able to run Apple System Profiler from the About This Mac window. Never fear, there is an alternative. Go to your boot drive and open OS X's Application folder. Look inside the Utilities folder and you will find Apple System Profiler. A quick double-click will launch it.
- Our readers who are still running OS 9 are not left out in the cold. You can still run Apple System Profiler. You should find the program in your Apple menu at the far left of your screen. Once you launch Apple System Profiler you must choose New Report (Command-N) or you won't be given the option to save or print the results. In the dialog box, click on any boxes that are unchecked; otherwise, System Profiler may not gather information about your control panels and extensions.

Now that you have gathered this information, let's add a few other things. Using your favorite word processor or spreadsheet program, create a table that has the technical support contact information for the manufacturers of your hardware and software. This may seem unnecessary but most of my frustration with technical support has come from the amount of time wasted looking for this information.

The format that this contact information is in is not as important as the content. As you build this file, put this information into a layout that is easy to read and makes sense to you. Here is some of the information I am going to include in some type of notebook:

- Company Name
- Software Title and Version Number (can be taken from ASP report)
- Date Purchased
- Serial Number or Technical Support ID Number
- Tech Support Contact Information: URL, telephone number, e-mail addresses, etc.
- Notes: Hours of operation, cost, user name, passwords, customer ID, etc.

Until recently I would not have written this information down, but that's a lot to remember. I don't exactly like having user names and passwords written down, but some companies such as Roxio require a login name and password just to download program updates. I can never remember these things when I need them.

We are almost through compiling our technical support notebook. There are only a few more things to add. It's probably a good idea to include a page that lets you track when you add new hardware or software to your system. When your system suddenly starts acting up, check this list to see whether something has been added to the system recently. This might be the culprit. Also, add a few blank pages. When problems occur and you begin troubleshooting, use these pages to write down the steps you have taken *and* the order you performed them in. I cannot stress how important it is to write this stuff down. After a week troubleshooting a hard drive problem once, I no longer remembered the order of the troubleshooting steps I had performed.

If you notice any pattern to the problem (i.e. the program always crashes during printing), make a note of this as well. Include any error messages that have appeared on your screen. Some of these messages are gibberish to you and me but may be helpful to support technicians.

All Is Right With the World (Not)

Until now, everything we have done has focused on what you might call emergency preparedness: things that you can do before problems occur. From now on we will focus on some things to do when problems do occur. As I said, I'm not actually going to go into troubleshooting issues here. I'm talking about preparing for the possibility that your troubleshooting skills won't be able to resolve the problem.

OK here's the situation. You are happily working in your favorite application when you experience a crash. Try as you might to fix things, something is not right in your little corner of the universe and you want things put right before your sense of well being is shattered completely. Let's look at some things you can do to get some help. Remember the technical support notebook you created? It's about to come in very handy.

If your computer can still access the Web, check the company's Web site. Many companies maintain a searchable database or have an area where you can e-mail your questions to technical support staff. There may also be a user forum with helpful information. Remember when you wrote down that user name and password? You may need them now.

There are other forums that might be helpful such as [MacFixIt](#) or [Macworld](#). As you check out these forums, you may need to create a user name and password or one may be assigned to you. Although you can usually read posts from other users without a password, posting questions usually requires a user name and password.

Now that you have exhausted other avenues, it is time to make the dreaded technical support phone call. This is where your little notebook will really come in handy. I have tried to make these comments general enough to apply to most of the situations you will encounter. Here are the steps that seem to me to be most helpful.

It's usually best to make technical support calls with the machine that is having problems present. Things tend not to work so well if you call from work about a problem on your home computer since there is no way to test the offending machine.

Make sure you are calling the right place. If your favorite application is the only thing crashing, the best place to start is probably the manufacturer of that program, not some hardware vendor. Providing technical support is expensive and companies don't usually want to provide support for someone else's product.

Using your contact information, check the hours of operation for technical support. I confess I have made calls to technical support a few times only to discover that they were gone for the day.

Before you pick up the phone to make the call, remember that you are likely to spend some time on hold. Eventually you will speak to a real person rather than the automated phone system. Remember, the technician you speak with is human and will greatly appreciate being treated as such. No matter how angry you are, or how justified your anger is, taking it out on the technician won't help. Right now, while you are nice and calm, look at the world from a [technician's perspective](#). It's always nice to use the technician's name rather than some of the less palatable names I've heard used in reference to technicians.

When speaking with the technician, briefly describe the hardware or software that seems to be causing a problem. Let the technician guide you through the process. Each company has different procedures for handling this part of the process. Some companies do not even begin to provide technical support until you provide a serial number or other proof of purchase. Remember when you wrote down those serial numbers and technical support ID numbers? You will probably need them now.

Once you have gotten this far it's probably a good idea to tell the technician what efforts you have made to resolve the problem. That troubleshooting page that you created will really come in handy now. You did write down the steps you have already taken, didn't you?

Throughout this process, don't get too upset if the technician asks you to repeat a step that you have already performed before you called. In most cases this is company policy and the technician has no control over this. If he has to pass your case on to someone else, they are going to look for this information. I know of at least one ISP, for example, that refers problems regarding static IP addresses to the third level of their technical support

department. Even if you have experienced the problem before and know that you have a static IP address, the first technician cannot just send you up to the next level. You have to complete his checklist before going any further.

Sometimes a technician will ask you to do something that may take several steps to complete. Don't be afraid to write the steps down in order. If you're a novice user and really uncomfortable performing the steps that you have been asked to perform, mention this to the technician. No matter how much of a novice you may be, the technician has probably encountered someone with even less knowledge. Most of them are willing to walk you through the process.

While we are at this stage in the process, don't feel the need to rush. The technician may have other calls on the line but that does not mean you should feel pressured to rush through the call. Technicians are busy and don't usually have time for small talk, but that doesn't mean that you should be rushed through the call either. Hopefully your advance preparation and the technician's skill will result in a quick resolution to your problem. If they don't, try to remain as calm as possible. Even if you have to make a second or third call for support, don't get upset just yet. If, you are given several things to try and asked to call back when you have completed them make sure you understand exactly what to do and in what order. You should also find out whether there is a case number that your problem has been assigned. Also find out whether you need to speak to a specific technician.

If you make enough technical support calls there may come a time when you and the technician are not communicating very well and you think you need to be transferred to someone else. If this becomes necessary, be as courteous as possible. Once or twice now I have been on the verge of doing this because the technician that I spoke with spoke English well but with such a heavy accent that his instructions were difficult to understand. This is not intended to be an insult to him; it's simply a statement of one of the problems that can arise.



Hopefully you will rarely have to use these tips. If you do, keep in mind that advance preparation and good humor can make things easier. It also helps if you have a cordless phone that will accept a headset and microphone. This way, you have a way to move about while you are on hold and both hands are free to carry out the technician's directions.

Good luck, and may all your crashes be small ones.

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Cartoon: Cortland

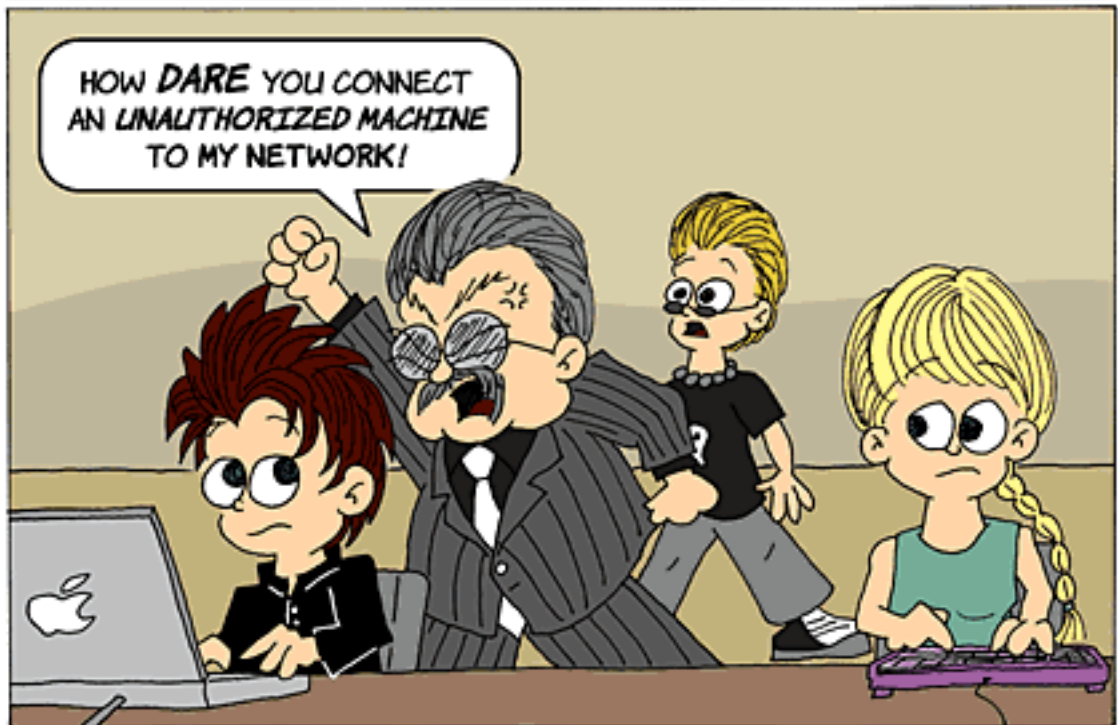
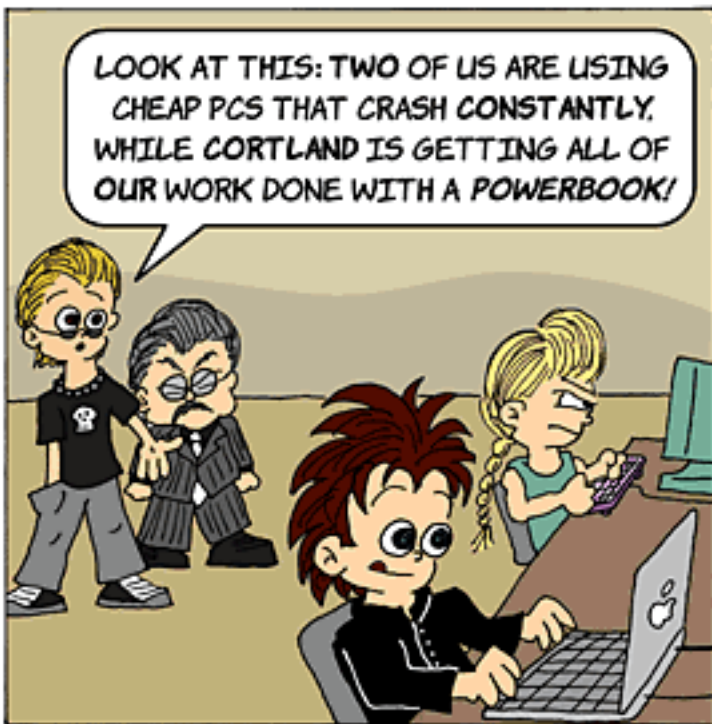
by Matt Johnson, mjohnson@atpm.com

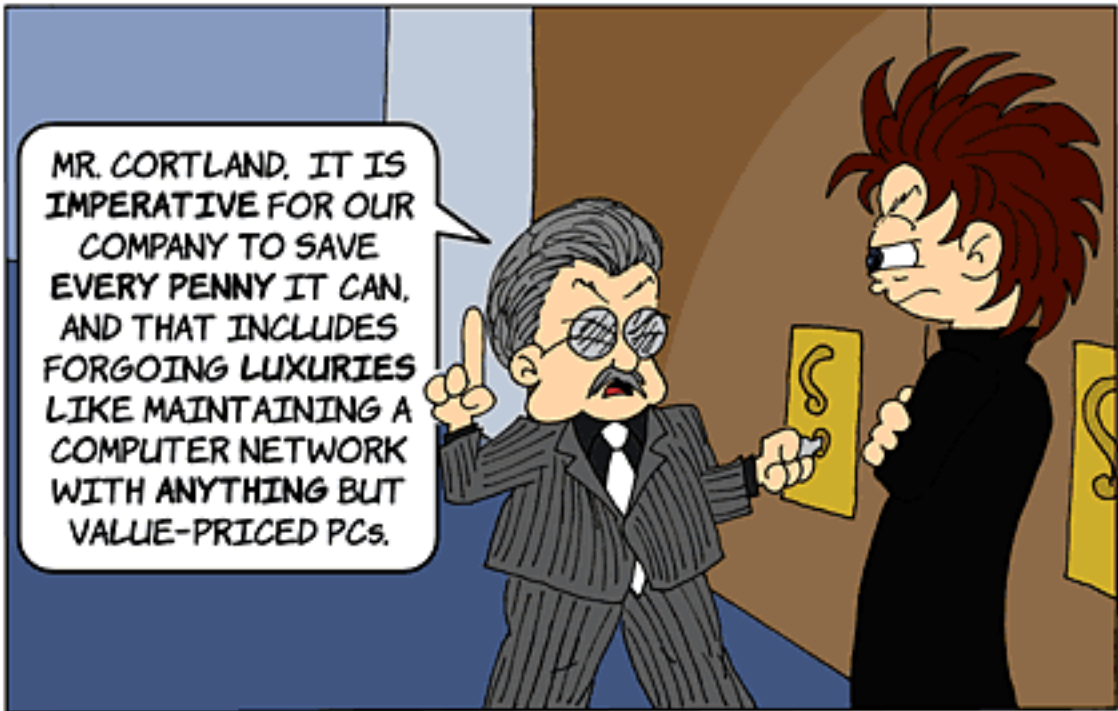
I haven't always been a fan of the Matrix, but while watching *Reloaded* a couple weeks ago, the struggle between man and an inhuman army of machines reminded me of the struggle between Macs and PCs. Actually, it reminded me of specific "Mac wars" I both heard about and encountered on college campuses and in the business world, where an IT

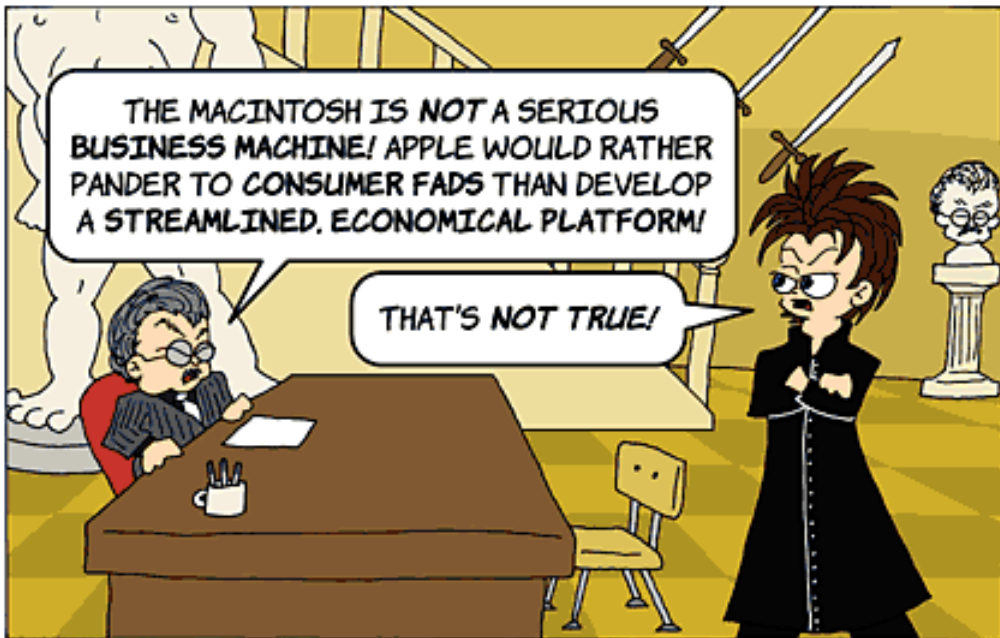
department arbitrarily decides that the world would be much better if everyone conformed and used whichever platform the IT decided was best. This was always Windows and Intel. I figured it'd be fun to create a *Matrix* parody to retell the story.











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Cartoon: Crazy Andy

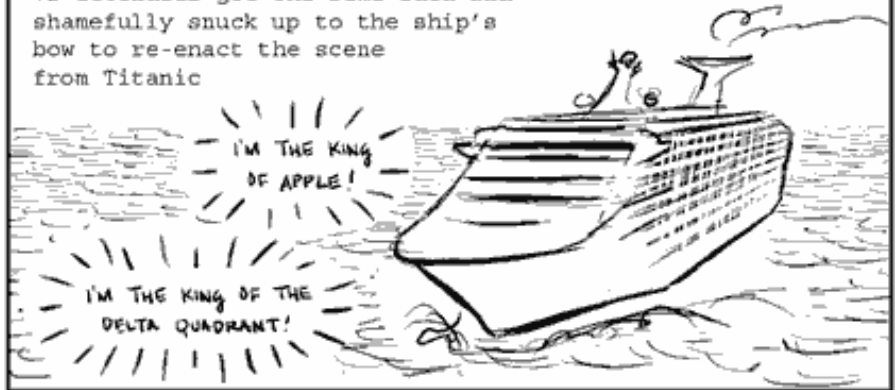
by Andrew Kator, akator@atpm.com

CRAZY ANDY'S JOURNAL

June 5

The MacMania II and CruiseTrek gatherings are on the same ship at the same time

72 attendees got the same idea and shamefully snuck up to the ship's bow to re-enact the scene from Titanic



Met Wil Wheaton, iBook user and panel member at both events



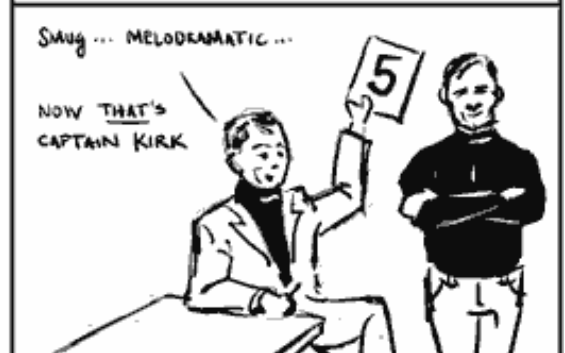
Innocent female cruise goers, not part of either group, were disturbed by pickup lines



MacMania costume contestants were ridiculed and bullied by the Star Trek fans



George Takei accidentally judged the Steve Jobs Look-Alike Contest



Angela Lansbury, innocently taking a cruise, was scared out of her wits

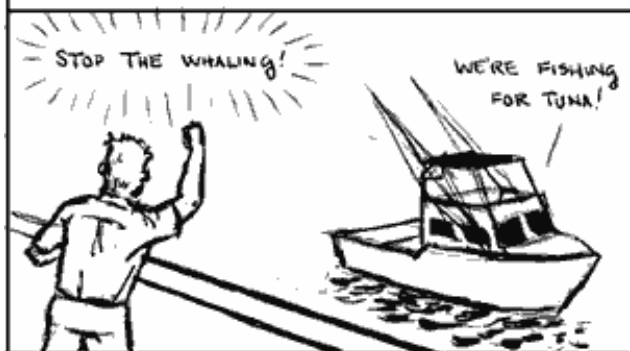
HEY! SHE WAS ON EPISODE 41
IN THE ORIGINAL SERIES!

NO, SHE USED TO
WORK AT APPLE!

A MURDER, A MURDER!
WHO'S GOING TO DIE?!!



An environmentally sensitive fan of the
Star Trek IV movie protested a fishing boat



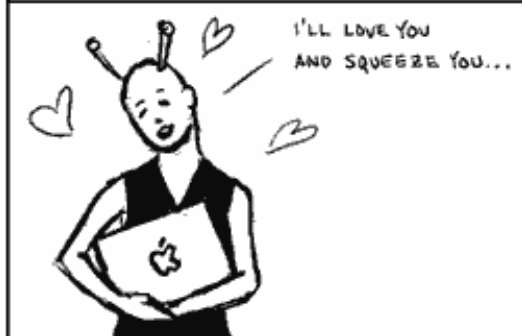
Joshua Livingston received a bad haircut
before the cruise

SORRY DUDE, YOUR EVENT
IS ON THE OTHER SIDE OF
THE SHIP

BUT I'M HERE
FOR MACMANIA!



A cross-species love affair began
in the hallway on B-Deck



All things aside, a magical time was had by all

IF ONLY DOUGLAS
ADAMS WAS ALIVE
TO SEE THIS

YEAH, I COULD USE A
PAN GALACTIC GARGLEBLASTER
ABOUT NOW...



June 14, 2003

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Landscapes—Part 2

Landscapes

The pictures presented here are the first in a series from ATPM reader [Katherine Sears-Lent](#). She writes:

When I moved to Savannah from New York last year, I got a better digital camera (an HP Photosmart 315). I know it is a cheap camera. Now I am expecting another baby so I am shopping around for a better one. I heard that the key to taking reasonably good pictures is to take as many as possible, so I use a 128 MB CF in my camera! I use iPhoto on a 1 GHz Titanium PowerBook.

I mostly enjoy pictures of close-up leaves and flowers and landscapes.

Many of the pictures are from Savannah, GA. Some are from the downtown area, (interesting compositions I see around—particularly of old places). There are pictures of Marshlands and Oaks dripping with Spanish moss taken at Oatland Island Nature Preserve in Savannah.

Some of the landscapes are from Calloway Gardens, GA. They have a butterfly aviary there and lovely orchids and other flowers.

Some of the flowers and one of a grape orchard are from Sonoma Valley, CA during a day of winery tours.

There are a couple with snow, and one out on the water that were taken on Long Island NY, and some flowers and foliage in Tampa, FL.

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 and 10.2.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 (10.1.x) or Screen Effects (10.2.x) 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: Little Snitch 1.0.3

by Paul Fatula, pfatula@atpm.com

Developer: [Objective Development](#)

Price: \$25

Requirements: Mac OS X 10.2

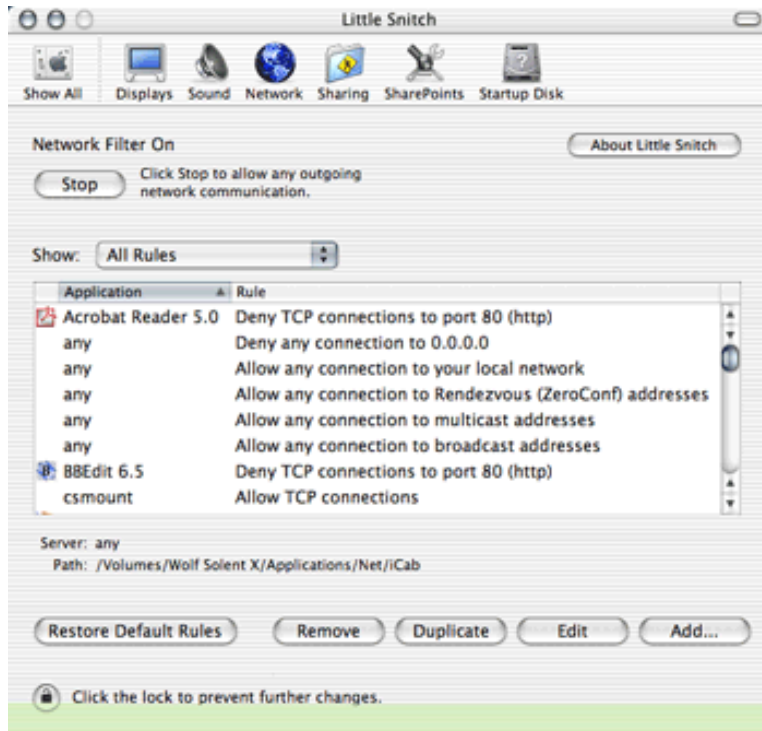
Trial: Fully-featured (quits after three hours)



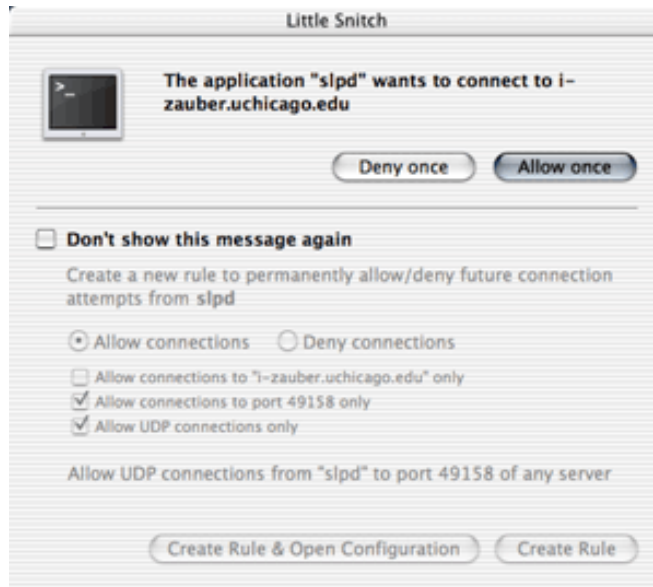
It's become increasingly common for programs to "check in" with their developer when you start them up, whether to look for available upgrades, prevent piracy, or permit companies to track your actions. While in some cases this sort of behavior may be desirable, it concerns me that the default is generally to permit such connections without asking the user first, and frequently companies fail to disclose just what information they suck from your computer.

Enter Little Snitch, a simple preference pane program that blows the whistle on programs attempting to access the network. If a program tries to access the Net, a dialog box appears telling you the program's name and the URL and port it is attempting to open a

connection with. (Unfortunately, Little Snitch can't tell you what data the program wants to transmit.) You then have the option to allow or refuse the connection, or to create a rule to govern future attempts.

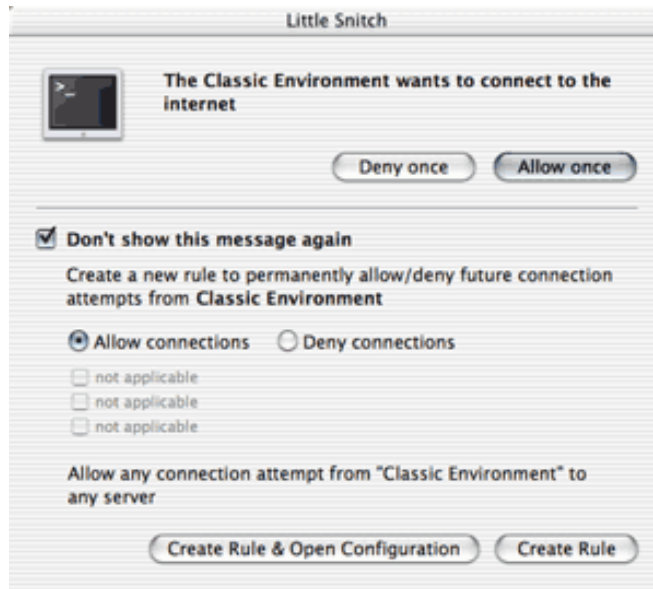


Little Snitch comes with a default set of rules, allowing local connections by any program, permitting Internet Explorer to surf the Web, and such. (I don't use Internet Explorer, thus the error message in the picture above.) It's a simple matter to add a rule for a program that's not part of Little Snitch's defaults, either from the preference pane or by creating a rule the first time that program attempts to access the Net.



The window above shows the only connection attempt Little Snitch caught that caused some concern: mostly, it's caught things like BBEdit and Acrobat Reader trying to look for updates. But I'd never heard of slpd or the URL it was attempting to contact. A complete search of my computer turned up no matches of a program by that name, heightening my concern. A search on Google turned up [this excellent site](#) which lists and explains a number of background processes that run in OS X, including slpd.

See, for me, part of the draw of a program like Little Snitch is that OS X sometimes leaves me feeling like I'm not really in control of my computer: it's off doing things that I don't understand and may not even be aware of. Little Snitch lets me feel a little bit more in control: if data is going to leave my computer through some unusual channel, I'd like to know about it. In turn, I can become a more informed computer user.



The only real drawback of Little Snitch is its inability to identify connections made by programs running in the Classic environment. It can either permit or deny *all* connections from *all* programs running in Classic; limitation by application, URL, or port is not possible. Frankly, I consider this a minor issue since testing Little Snitch's Classic compatibility marks the first time I've fired up the Classic environment in many months. Still, it's a shortcoming you might want to be aware of if you use Classic.

Curiously, Little Snitch does a bit better with VirtualPC. While it cannot recognize which program within VirtualPC is attempting to make a connection, it can tell you the URL and port being contacted, affording you a greater level of control than you have under Classic. It's still not perfect, though: if you want to allow IE for Windows to connect to port 80, for example, you have to allow *all* Windows programs that VPC might run to connect to that port.

Little Snitch is a simple program that does an admirable job keeping you informed of outgoing network connection attempts you may not have knowingly or deliberately initiated. Its interface is clean and straightforward, and rules can be easily created to prevent Little Snitch from becoming a Little Pest. If you'd like to feel a bit more secure and in control of your Mac, Little Snitch is well worth a look.

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Review: Myth III: The Wolf Age

by Evan Trent, etrent@atpm.com

Developer: God Games/Mumbo Jumbo, Mac version by MacSoft/Infogrames

Price: \$20 (Mac available from the Apple Store)

Requirements: 400 MHz G3, Mac OS 9.2.2 or Mac OS X 10.1.3, OpenGL-compatible video card with 8 MB of VRAM, 128 MB of RAM, QuickTime 5.

Recommended: Fast video card with at least 16 MB of VRAM, 600 MHz G3.

Trial: Feature-limited (two levels of solo play, Net play only with other demo users)



For Myth fans, the announcement that there would be a sequel to Soulblighter (Myth II) was no doubt exciting. Personally I feel that both Myth and Myth II were among the best games ever to grace the Mac platform. Myth wasn't just a great game because of its revolutionary 3D engine: it combined superb graphics, exciting gameplay, humor, intellectual legwork, and problem solving. In short, Bungie seemed to have pinned exactly the right combination of ingredients, in just the right proportion. As much fun as both games were, even Myth II was growing old and increasingly out of whack with modern day graphics cards and processors. The graphics still looked pretty impressive (especially on a 3dfx card), but clearly there was room for improvement especially given the newest generation of Macs and their performance characteristics.

Enter Myth III, which interestingly enough is not a Bungie product. God Games purchased the engine from Bungie and has refined it and developed their own sequel (actually it's a prequel). But fear not, the result is every bit as impressive as the original series, and if anything the gameplay is more challenging.

The Graphics Engine

The new graphics engine in Myth III is much improved. For one thing, images simply look more realistic: there is more detail on characters, and more definition in landscapes. For another, the engine is optimized for, and designed around, modern graphics cards. The benefit is remarkable rendering with smooth panning, zooming, and exquisite detail when characters are magnified even during complex combat scenes. However, all of this comes at a price: a reasonably peppy machine with a fairly current video board is required. I tried running Myth III on a 500 MHz G4 tower with the stock ATI Rage 128 card, as well as a Formac video board (which I have set up for my second monitor) and on either card the game was virtually unplayable even with rendering detail all the way down, and resolution

at minimum. Then I threw it on my new 15" PowerBook G4 and, conversely, I was able to play at full resolution with rendering detail cranked all the way up. So clearly the graphics performance varies depending on the hardware available, but assuming a fairly recent machine, graphics will look sensational and gameplay will be responsive.

Every aspect of the game has been freshened up a little. Even the progress bar that displays as levels load is snazzier. The entire interface is fancier, although in some cases it is sort of obnoxious because it is less intuitive and functional than a standard application (particularly when saving games and configuring settings). But that is not terribly uncommon in the world of computer gaming.

Characters

Veterans of Myth TFL and Soulblighter will find that Myth III is virtually identical in terms of gameplay. And while many familiar faces reappear in Myth III, there are new characters as well. Some of my favorites include the Dwarven Warriors who sport axes and heavy armor, and are just as grumpy and ornery as their projectile heaving brethren. Dwarven Warriors pack a mighty punch and despite being somewhat lethargic they are very effective in hand to hand combat.



Dwarves

The Trow are back, and play an important role in the game. But in Myth III they are still enjoying the height of their civilization. They have throngs of Ogre slaves, and the Trow themselves wear enormous suits of armor that are virtually impenetrable. Dwarves can inflict substantial damage if you have enough of them, and are able to spread them out far enough so they do not get wiped out in one swift kick from an enemy Trow. But forget using your archers as you did in the past, for they will have no effect. And hand to hand combat with Trow is a very, very bad idea in Myth III. Unless you have the game on the easiest setting, you will lose all of your men very quickly. Even on the easiest setting, your casualties will be frightening though you can actually defeat a Trow or two if you are skillful. Later on, the Trow lose their armor (when you turn their Ogre slaves against them in one of my favorite levels!) and then become easier to deal with, as in the past.



Trow



Ogres

Warlocks are present on many levels and using them properly becomes an important skill if the game is to be won at a difficult setting. Archers in Myth III are able to project flaming arrows (one per archer, per level), which when combined with satchel charges can be a useful offensive. There are many other new characters as well, and too many to discuss without going into extensive detail.



Archers

In addition to new classes of characters, there are also some important individual characters that serve to bind the narrative of Myth III together. Connacht (The Wolf) is foremost among these. Described as a barbarian, he wields an axe and does so with great prowess. Myth III follows his career, as he is accompanied by other heroes. In most respects the game revolves around Connacht although he is not present in every level.



Connacht

Levels, Narrative & Gameplay

I have to say that Myth III's narrative falls somewhat short of Myth TFL and Soulblighter. Neither of those games had fabulous plots, but they seemed a little bit more well conceived and flowing to me than Myth III's. And in some respects I feel that there are levels in Myth III that are more or less contrived. That having been said, I do not feel that this really takes away from the game in any significant sense. The plot is not a key concern—I mean let's be realistic, it's not as if we enjoy annihilating the enemy to smithereens because the plot is so compelling.

Some of the voices are kind of weak in Myth III as well. They are not as amusing as the Bungie voices. And some of them are just bad impressions of Bungie voices. The dwarves, for example, are fairly inconsistent and half the time they either sound constipated or simply in dire need of a cough drop. Connacht just sounds silly much of the time. So I suppose they are just as amusing as the Bungie voices, but for a different reason—in this case we are laughing at the voices, not with them. This is hardly an important consideration, and frankly were it not for the original two Myth games there would probably be little basis on which to criticize the new voices. But the original Bungie voices were very clever and highly entertaining. The new voices in Myth III sound kind of like knock-offs to me.

While the game itself it just as much fun as the previous two, I do feel that the levels in Myth III are not as strong overall. Some of the levels in the first two games were simply fantastic in that they combined landscape, characters, weather, and specific objectives in clever ways. Myth III does not accomplish this as artfully. Some of the levels, as I mentioned, seem contrived and are not nearly as entertaining. However, on the whole they are much more challenging. Some of the levels are quite difficult even on the easiest level, and I still have yet to conquer certain levels on the most difficult setting. Yet I breezed through the first two Myth games on “Legendary” without much difficulty after beating the games on the easiest setting.

Myth III’s levels are harder for a variety of reasons. For one thing, some of the enemy characters are just plain fierce. They are harder to kill, inflict more damage, and are otherwise difficult to overcome. I am not merely referring to Trow. The Myrkridia are much more vicious than they were in the past two games, and they are all over Myth III. There are other units which are like Myrkridia in terms of ferocity, speed, and strength, and still other units which present different challenges. Most legacy units such as Soulless, Ghol, and their elk are really no more difficult than in the past and are dealt with in similar fashion. But there are some levels where the authors simply piled on the enemy units to the point where they grossly outnumber yours. True, this was the case in Myth and Myth II, but the ferocity of some of the units, combined with their sheer numbers equates to some very challenging levels in Myth III.

I am not so much complaining about this aspect of the game because, as I mentioned, Myth III is still proving challenging for me and a handful of levels are really driving me nuts on the hardest setting. I consider this to be positive, as I like a good challenge and prefer not to beat a game after one week of play. But it is worth mentioning. The fun in Myth III

comes more from the challenge of winning than from the actual design of the levels themselves. In Myth TFL and Soulblighter, I really enjoyed setting up my characters on cliffs and ambushing enemy units and goofing around because I knew I would win the level regardless. In Myth III, the fun comes more from figuring out how to beat the level, not in toying with the enemy.

Network Play

I did not get a chance to engage in any network play because I did not see very many Myth III games hosted on Playmyth.net, which is the Net-wide server directory for Myth and Myth II multi-player games. However, Myth III does support network play, and I imagine it would be just as much fun as Myth or Myth II but with better graphics and all the other benefits that come from the new engine. As I understand it, however, you cannot use Myth II maps or other plug-ins with Myth III. So until new maps are more widely available, network game play may be somewhat slow to catch on. Nevertheless, you can always play multi-player games over a LAN, or host your own game on Playmyth.net!

So Go Buy It

Buying Myth III was a no-brainer for me. I loved the first two Myth games, and had been craving a new set of levels, and an engine that would take advantage of, and showcase, my newer video board. I do have a 3dfx board in my G4 tower, and Myth II on that machine looks pretty good, even by today's standards. But there is no comparison to Myth III. Myth III smokes Myth II in terms of graphics performance and speed, and it is a pleasure to play for that reason. The ability to zoom way in and enjoy exquisite detail, or zoom way out and move around briskly while maintaining shadows, reflections, and extensively rendered landscapes does really add to the gaming experience. Everything about Myth and Myth II that impressed in terms of graphics is that much more impressive in Myth III. While the levels may not be quite as well designed as Bungie's, and the plot is a little hokey, overall Myth III is a worthy successor to Soulblighter. The graphics are stunning, the gameplay is highly entertaining, and on the most difficult setting some of the levels are incredibly challenging. If you enjoyed Myth or Myth II, you really owe it to yourself to go out and grab a copy of Myth III!

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Review: Steal This Computer Book 3: What They Won't Tell You About the Internet (book)

by Eric Blair, ebclair@atpm.com

Developer: Wallace Wang, [No Starch Press](#)

Price: \$25

Trial: [Chapter 17](#)



From spam to computer virii to outright theft, there are a number of unfortunate things that can happen once you connect your computer to the Internet. *Steal This Computer Book 3* attempts to point a spotlight at some of the darker corners of the Internet and give you some pointers for protecting yourself. That is a lot of information to cover in 358 pages and, as you might expect, some topics are covered in greater depth than others.

Steal This Computer Book 3 is broken down into five parts, each part containing several chapters with similar base topics. The five parts are as follows: information on the Internet, threats on the Internet, accessing computer systems, protecting yourself, and protecting your computer. Together, these parts cover a wide range of information. While it's nice to have all this in one place, I'm a bit confused as to whom this book is aimed at. On the one hand, some of the information is extremely basic (i.e., if something sounds too good to be true, it probably is). On the other hand, some of the stuff is fairly in depth (i.e., a brief discussion of Loadable Kernel Modules). I have a hard time envisioning somebody who can read this book from cover to cover without eventually saying to themselves either "I already know this; it's common sense" or "All right, that just went completely over my head."

In the first part of *Steal This Computer Book 3*, "Information Overload (Lies, Damn Lies, and Statistics)," Wallace Wang reminds us that we need to take point of view and biases into account when we gather information. That is something you should also remember when reading.

For instance, Wang basically condemns spam as having no redeeming qualities (no argument here) and provides pointers for deciphering e-mail headers for reporting spammers to the appropriate authorities. Several chapters earlier, though, he discusses

ways to inexpensively get computer software—photocopy the cover of a friend’s copy of Lotus 1–2–3 to get the competitive upgrade price for Microsoft Excel or “borrow” a friend’s copy and use a CD key generator if you don’t have the CD key. I just find it curious that Wang condemns one activity that is largely legal, though extremely annoying, while openly discussing other activities of questionable legality.

Steal This Macintosh?

I was rather disappointed by *Steal This Computer’s* coverage of the Macintosh. While the majority of the topics in the book are platform-agnostic, there is a fair bit of platform-specific discussion as well. Most of this coverage is Windows-based, but both Macintosh and Linux are discussed as well. However, I believe the only references I saw to OS X were a mention of Safari in the section on pop-up ads and a mention of [Firewalk](#), an OS X-only firewall application.

Oddly enough, the section on firewalls includes detailed instructions on activating Windows XP’s built-in firewall without mentioning that OS X 10.2 includes its own firewall software that you can turn on in three fewer steps than the Windows XP firewall. I suppose it’s possible that most of this book was written before 10.2 was released (late August 2002), but Wang managed to mention Safari, which didn’t debut until January 2003.

There is also an appendix that lists various applications for Windows, Macintosh, and Linux systems, broken down by category. Again, the vast majority of the programs listed are for Windows. Many categories don’t have any Macintosh programs listed. In some cases, there just aren’t any Macintosh programs in that category, but in other cases it seems like Wang just didn’t include the Macintosh software. When Macintosh applications are listed, they are often applications that have not been updated in years, don’t run under OS X, or have been discontinued.

The most egregious example of this is probably the anti-virus section, which lists Agax, Disinfectant, and McAfee VirusScan. Agax was updated last year, but doesn’t run under OS X. Disinfectant is rapidly approaching the 5th anniversary of its last update. McAfee seems to have discontinued the Macintosh version of VirusScan.

Another category with a questionable list of applications is the MP3 tools section; it lists Macast Lite and SoundJam MP Free. Personally, I think iTunes would at least warrant a mention, since it is probably the most widely used MP3 player on the Macintosh and, unlike the other two programs, runs under OS X.

Conclusion

I found *Steal This Computer Book 3* an interesting compendium of the threats you can encounter on the Internet, but I'm still a little confused about the target audience for this book. I was interested in some of the hack-related topics, but found some of the spam-related topics so blindingly obvious that I found myself questioning the reason for their existence. Conversely, somebody who is reading this book and finds the section on spam educational might not even comprehend the sections on virii and Trojan horses. Also, as I said earlier, you shouldn't read this book if you're expecting a lot of Macintosh-specific information.

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Review: Two Books for Switchers

by Kirk McElhearn, kmcelhearn@atpm.com

Mac OS X for Windows Users: A Switcher's Guide

Author: David Coursey, published by [Peachpit Press](#)

Price: \$20

Trial: None



Switching to the Mac: The Missing Manual

Author: David Pogue, published by [O'Reilly/Pogue Press](#)

Price: \$25

Trial: [Sample chapter](#)



If you're reading these words, you're probably already a Mac User. Unless you're a recent convert to the Mac, you won't need these books for yourself. But if, like me, you often get questions about the Mac from envious Windows users (You mean there really are no viruses? It doesn't crash? How do you live without a Registry?), you may want to recommend these books to your friends, relations, and colleagues who are thinking of changing platforms.

We Mac users have long known the advantages of using the Mac: better stability, easier installation and uninstallation, a dearth of viruses, a more intuitive interface, and just plain cooler hardware. (We don't deny that there are some disadvantages as well.) Many Windows users may scoff at the Mac, saying that if only a few percent of people use it there must be something wrong, but that logic doesn't hold water: after all, I drive a Swedish car, and fewer than 2% of the world buys the same car; no one says that I'm a fool for that.

But let's get beyond the zealotry and look at the reason for these two books. In 2002, Apple launched a successful advertising campaign to entice Windows users to switch to the Mac. With large numbers of people doing so, it seemed logical that publishers follow the trend and release books specifically written for these new Mac users. These are two

very different books, which take different tacks and look at the Mac in different ways. After all, one was written by a long-time Mac user and author, and the other by a Windows user who switched and told the tech world about it.

David Coursey is a well-known columnist for ZDNet's AnchorDesk, and a "veteran Windows user." In early 2002, he got a flat-panel iMac, and much to his surprise he got hooked. (Well, to be fair, he wasn't actually a switcher; he had used Macs before but had strayed from the flock.) He loved the ease-of-use, the fact that the Mac is "more likely to be working flawlessly than [his] Windows machine," and the way it "just gets out of the way," letting him spend more time being creative.

His book is clearly written by a Windows user, and belies his lack of familiarity with Mac OS X. He says nothing incorrect about the operating system, but he doesn't say very much. The book is more of an overview than a real tutorial; it touches on different aspects of Mac OS X here and there, but never goes beyond the basics. He briefly talks about working with the Finder and the iApps, but doesn't go into any detail.

As for David Pogue, most Mac users know him. Author of the successful (and excellent) [Missing Manual for Mac OS X](#), as well as many other Mac books, Pogue gives Windows users the real tools to start using a new Mac. From how to get their files over to their Mac (to be fair, Coursey covers this as well) to a detailed look at the differences between Windows XP and Mac OS X, Pogue's book is far more comprehensive. (At 434 dense pages, it has twice as much information as Coursey's 292 pages.) In a way, this book is a pared-down version of the *Mac OS X: The Missing Manual*, combined with a section "translating" Windows concepts and showing how things work on the Mac.

David Pogue has written about Windows, and is also a Windows user, and this comes through clearly in his book. His familiarity with both operating systems is patent; he is thorough and precise in presenting the differences, and his coverage of Mac OS X is more than sufficient for any switcher who needs to get a handle on the Mac.

These two books can be seen as complementary: Coursey's book is a good introduction, and may work better as a book to read before someone buys a new Mac, but it pales in comparison with Pogue's book for depth and usefulness. Coursey doesn't go deep enough, and Windows users may find themselves lost after following his instructions

when they try to do more. Pogue gives the user a thorough explanation of the basics, and then goes further, telling switchers more than they'll probably need at first, but providing a reference for the questions they'll have after they've been working on Macs for a while.

My advice is simple: if you're recommending or buying a book for someone who hasn't yet switched, and wants to know more about the Mac before taking the plunge, then David Coursey's book is the best bet: it answers many of the questions prospective switchers will have. But if you want a book for someone who has already bought a Mac, don't hesitate: get David Pogue's book. It not only helps users become familiar with new concepts by comparing them with familiar Windows counterparts, but has enough information about using the Mac that they won't be calling you every day asking how to do something.

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Review: Uplink 1.3.1

by Matthew Glidden, mglidden@atpm.com

Developer: [Ambrosia Software](#), [Introversion](#)

Price: \$25

Requirements: Mac OS 9 or Mac OS X 10.1, 64 MB RAM (128 MB on OS X), 30 MB HD space, 300 MHz G3, OpenGL 3D video card, OpenGL 1.2, CarbonLib 1.6, DrawSprocket 1.7.5.

Trial: Feature-limited (limited hardware purchases in the Uplink store, cannot acquire higher-level missions)



Introduction

The hacker in all of us occasionally dreams of dropping in uninvited on our least favorite company's network and mucking about. Maybe you want to be sure they can't really sell your name and address to unsavory characters. Perhaps their stately "About the President" page would look better with "I337 h4xx0r 0wnz j00!" written across the top. Uplink turns this dream into an occupation, though admittedly not one that includes a 401K and tax returns—not your own, anyway.

It's worth noting that "hacker" as a malicious computer invader is media parlance, probably used by the game for convenience. Dictionary.com's first definition is neutral.

hacker

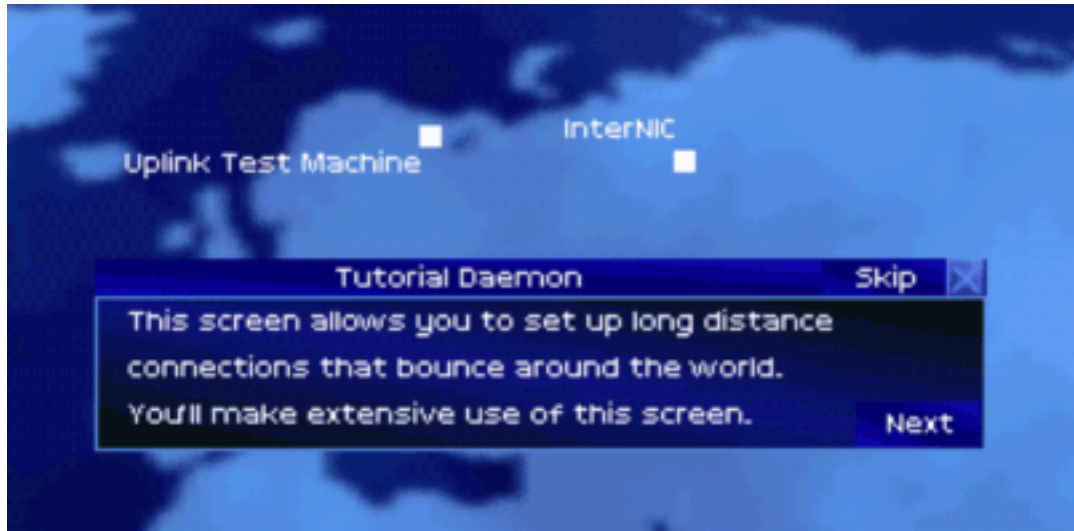
1. One who is proficient at using or programming a computer; a computer buff.

"Cracker" adds the connotation of maliciousness, though crackers aren't necessarily skilled, just malicious. Some will debate "hacker" versus "cracker" ad nauseum. The game sticks primarily to the generic title "agent."

Game Play

Start the game to work as an agent with the Uplink Corporation. Uplink gives you a basic gateway computer and will sell you hardware and software to augment it as the game goes on, charging a virtual membership fee for each month of game time. Uplink runs in real time, though there are controls on the main screen to accelerate time if you're waiting for new missions or otherwise want time to pass quickly.

Uplink's single tutorial mission helps you purchase equipment, examine targets, and crack basic security measures. That's it! The rest you learn on your own, usually the hard way. Get caught by a company and you'll probably pay a fine. Get caught by a bank or the government and it's GAME OVER. I watched several hours of game time go down the tubes by carelessly ignoring the need to cover my tracks.



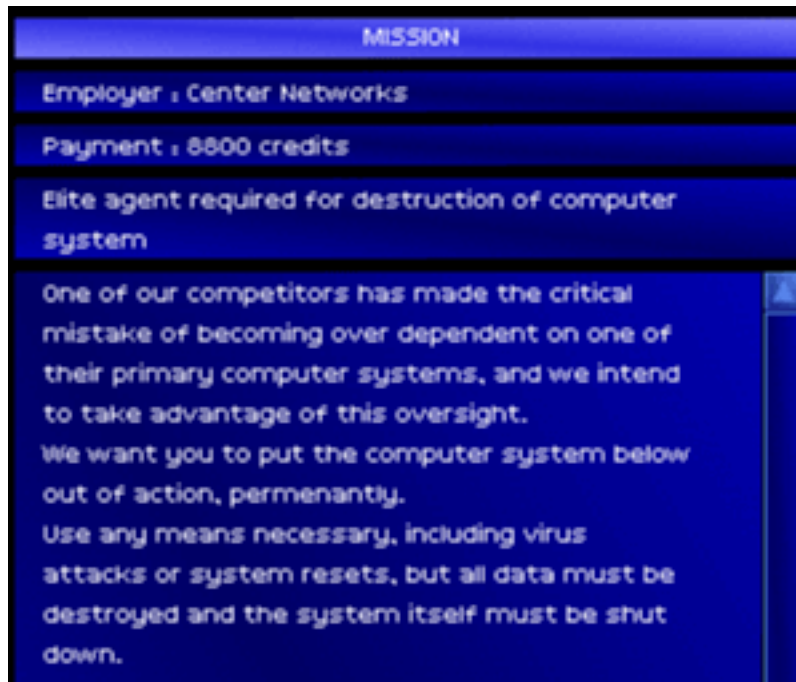
Uplink's Tutorial Daemon-in-a-box

The tutorial guides you in purchasing your first password cracking program, which you need to break into target systems. Dictionary crackers are faster and have good odds of working, but they're not guaranteed. Buy one for the early missions, then the other when you have the money to expand your options.

Targets immediately start tracing your connection when a password crack starts. Make it harder on them by bouncing your signal back and forth across the Internet and buy a trace tracker to estimate the time remaining before an active trace nabs you, so you don't get caught unawares.

Uplink revolves around the mission board, where companies post job offers and agents browse them. Your experience determines how many jobs you can see at a given time and pay is commensurate with the job's difficulty. This is very similar to Escape Velocity's

mission boards, another Ambrosia Software game. Early missions involve breaking into a company and stealing or destroying data. More advanced ones will involve destroying personal reputations and exploring corporate LANs.



An Uplink Mission Description

It's fun to steal stuff and obliterate years of research, but don't focus only on the Uplink mission board. A parallel story develops on the Uplink news page, rumors of strange goings-on at a company called ARC. Another Uplink agent will tip you off to ARC's activities. Follow his lead to be contacted by ARC, starting a series of missions centering

on a virus they're developing. A choice quickly appears: follow the money and work on the virus or help the government set ARC up for a fall. You play the game largely at your own pace, though ARC-related missions will come in sequence.



History of a Stock on the Market

Need more money? Invest in the stock market, easily found from the InterNIC site database. Your missions can directly impact stock prices, acting as a nice bonus to your pocketbook.

Graphics

Uplink is graphically spartan, but definitely isn't a text adventure. It'd almost be better that way, actually—several times during play, I thought “*Real* hackers would use command-line scripts, not just click around on everything.”

The game uses a heads-up display with components spread around the screen. You switch back and forth among most of them during even the simpler missions. In the upper-right corner is the world map, both a tool and status indicator. Expand it to show available Internet connections and plan multi-site connections. Minimized, it indicates the progress of an active trace started by your current target (if you have the necessary software). Icons along the bottom of the screen represent your gateway computer, installed software (including available space), and mission details.

Players should use the 800x600 resolution to avoid feeling visually cramped and 1024x768 is better if you can handle the small text. Uplink isn't graphically intensive, but can feel that way. The buttons don't respond quickly, so click carefully. This becomes annoying when seconds count and you're missing clicks on file sources or targets.

Strategies

Cracking passwords takes time and CPU power, especially when you're running multiple programs at the same time. Upgrade your gateway CPU as soon as possible and give higher priority to the cracker program (click the right arrow next to its usage window).

Make sure to start every mission through InterNIC. Its simple password interface provides easy access to the connection log, where you'll erase log traces of your actions, breaking the Internet trail that points back to you. Log Deleter 4.0 is perfect for this and should be high on your purchase priority list.

Go ahead and take on a bunch of missions early in the game. Doubling up missions on the same target means more money for less work. More CPU power is helpful and a worthy first hardware upgrade. If you plan to run "steal data" missions, expand your storage space as soon as possible, since you don't start with much.

Once you've cracked your way to fame and almost-fortune, consider a bank transfer to finance your leap to the elite levels. Some missions ask you to trace bank records, which usually lead to an account with lots of credits. Crafty work can net you the credits, but banks are unforgiving victims. Open an account at the same bank and write down the account number. Break into the traced account and transfer the money to your new account. Finally, delete the log entries for both the transfer and your receipt of same. Success means an increased rank and tons of cash.

The ARC story progression requires well-developed skills and hardware, especially near the end. Try each of the other mission types, especially cracking LANs, before you take them on. For additional game play help, visit [Ambrosia's Uplink site](#) and check out the Web boards. One interesting in-game feature is the ability to purchase an IRC client that connects to the real Uplink IRC channel (if you're connected to the Internet). It's a debatable source of game help, but cool nonetheless.

Annoyances

The keyboard adrenaline rush of Uplink will capture many, but there are some annoyances. The aforementioned slow button click response is the biggest. Text typos pop up, probably more notably because the game's so text-dependent. Labels on the world map can jump around when you show a bunch at once—clear your Internet jump path, then close and reopen the map to settle them down. Selecting something on the screen often closes the mission detail window. An option to “lock” a window open would help.

Summary

Uplink is a rare beast, twitch gaming adrenaline without a gun in your hands. Pull off a major heist or system crash with the clock ticking down and you'll feel like pumping your fists. Progress is saved automatically, so there's no easy “undo” of your actions, unless you back up your character file before playing. Mistakes stick with you, especially when you tick off one of the game's “big boys.” Uplink occupied four straight up-until-3 AM nights for me, providing an excellent change of pace for the gamer of varied tastes or lower-powered hardware. The story isn't as deep as Escape Velocity's, but Ambrosia ported Uplink well and it should satisfy tech-oriented gamers, in spite of its interface flaws.

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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. You can send press releases to news@atpm.com.

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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.

