ATPM

happy new year

2003

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About This Particular Macintosh: About the personal computing experience™

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ISSN: 1093-2909

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Thanks for reading ATPM.

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Welcome to the January 2003 issue of *About This Particular Macintosh!* The release of this particular issue marks the start of our ninth calendar year of publication. What began as a fun idea for a monthly Mac-based magazine has turned into a veritable Mac Web institution! ATPM is one of the longest running Internet-based Macintosh publications in continuing publication.

The Top 10 Reasons People Read ATPM

We recently took a poll of our readership in to discover why ATPM is so popular. Below are the top ten replies to our poll question:

Question: Why is ATPM among the longest-running and most popular Macintosh publications on the Internet today?

10. I first thought ATPM was a silly e-zine about automated teller machines. Come to find out it's a lot more than that so I just keep reading the magazine each month.

9. Nostalgia, actually. A friend gave me a copy years ago when ATPM could fit on a floppy. I lost the floppy and misplaced the friend so I just keep reading the magazine each month.

8. The *Welcome* section. I really like the *Welcome* section. The guy who writes the *Welcome* really knows what he's talking about so I just keep reading the magazine each month.

7. After nine years of publication it's the longest continuing thing in my own life. It even outlasted my grape iMac so I just keep reading the magazine each month.

6. I can't get them to take me off the notify list. So I just keep reading the magazine each month.

5. I had a colored iMac. ATPM is even more colorful so I just keep reading the magazine each month. I just wish it came in grape.

4. It has really cool reviews, like this month's StuffIt review. The guy who wrote this month's StuffIt review really knows what he's talking about. The reviews are almost as good as the *Welcome* section so I just keep reading the magazine each month.

3. Somebody told me that somebody at *MacAddict* once had a copy so I just keep reading the magazine each month. Does that make me an ATPM Addict?

2. I started my subscription to ATPM in college. College was fun. Work isn't fun, but ATPM is still fun. So I keep reading the magazine each month.

1. What's ATPM?

There you have it! The top ten reasons for our long-running popularity!

iPods Galore

This holiday season many music lovers and computer enthusiasts were delighted to find an Apple iPod under the tree on Christmas morning. The ubiquitous MP3 player and external FireWire drive was a hot seller this holiday season with many retailers reporting complete sell-outs of iPod inventory.

Industry data also indicate that unit sales of PCs will mark their first yearly rise during the second half of 2002 since the tech slump began. The ATPM staff will be tracking sales and earnings reports from the major PC makers as fourth calendar quarter results are reported in January. We expect Apple Computer to report brisk sales of the iPod, the $999 iBook, and the new 1 GHz Titanium PowerBook.

Macworld San Francisco

In just a few days the annual Macworld San Francisco trade show will open its doors to industry professionals and Mac enthusiasts. Apple has recently announced that the company will delay for about six months the plan for new Macs to boot only in OS X. We await the opening of the San Francisco Expo and the announcements of new Apple products and Mac OS X enhancements. Our February issue will cover all of the major Macworld announcements and include a careful look at Apple's fourth calendar quarter results.

The ATPM Staff

Our January issue includes:

The Candy Apple: Resolutions

If one of your New Year's resolutions is getting in shape, go for it! But don't forget your Mac. Ellyn Ritterskamp gives us some pointers on keeping your favorite computer in top shape for 2003…and beyond.

The Legacy Corner: Bluetooth and 68K Browsers

After a short digression to a definitely-not-legacy topic, Chris Lawson discusses some options if you are looking for a Web browser for your 68K Mac.

The Personal Computing Paradigm: E-Mail Archiving with Eudora and Mail.app

We all get too much e-mail, but some of us cannot throw all that stuff out! Michael Tsai shows us how to archive old messages and, more importantly, how to find them later.

Roll Your Own: How to Handle Anything

In his continuing series on using AppleScript to develop your own programs, Chuck Ross teaches us about "handlers" and how useful they are.

How To: Buying a New Mac

Saint Nick has been and gone for another year. If he didn't leave a brand new goodie from Cupertino under your tree, all is not lost. Sylvester Rogue shows all you dear readers how to choose the right Mac…if you want to become your own Santa.

Segments: Mac Addicts to the Rescue

Here's an uplifting story to start off the New Year right. Jason Eric Smith describes his incredible story about catching an eBay scammer and the help he got along the way from the Mac community.

What's Under the Hood: New Year, More Utilities

In this month's installment, Robert Lewis examines a slew of utilities to make your Mac experience more effective and enjoyable.

Cartoon: Cortland

More goings on in the world of computer graphics and software.

Desktop Pictures: Tetons

This month's desktop pictures are from Grand Teton National Park[1] in Wyoming and were submitted by Janet Mobley.

Shareware Roundup: Reading, Writing, and Arithmetic: Educational Tools

In her *Shareware Roundup*, Brooke Smith reviews a number of educational tools: ISSA puts magnetic poetry on your desktop, Proofreader helps teach grammar, and FlashMath teaches mathematical skills by means of a flash card game.

Review: EarthDesk 1.2.5

Never say we never gave you anything: Lee Bennett gives you the world in his review of EarthDesk, or, well, he tells you about a program that puts regularly updated pictures of the world on your desktop, which you have to admit is the next best thing.

Review: iSkin Keyboard Protector

We'd also like to acKNOWLEDGE Chris Turner's review of the iSkin Keyboard Protector. If you have a recent iBook or PowerBook, iSkin can cover up your keyboard and protect it from pet hair, spills, and more!

Review: Kinesis Advantage Pro

Paul Fatula has taken it upon himself to review another strange-looking keyboard, this time the Kinesis Advantage Pro. By placing your hands into two separated "bowls" of keys, the keyboard offers several ergonomic advantages over more traditional keyboard designs.

Review: Macintosh Troubleshooting Pocket Guide (book)

The very small *Macintosh Troubleshooting Pocket Guide* received a relatively short review from Paul Fatula. The book's question-and-answer format covers common hardware and software problems you might encounter with your Mac, and helps you get back up and running.

Review: Phaser 8200

Evan Trent got a new high-speed color printer, the Xerox Phaser 8200, and offers an extensive review. The printer was selected for its superior color print quality, and greatly outdoes the quality offered by color laser printers, at the expense of speed and text sharpness.

Review: StuffIt Deluxe 7.0.1

Robert Paul Leitao reviews the latest version of Aladdin's flagship Macintosh compression utility.

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1. http://www.nps.gov/grte/

E-Mail

'Tis the Season[1]

I have just finished reading and copying your "'Tis the Season" and found it to be exactly what I wanted to know. I found it a valuable source for anyone looking for compare games for the Mac. Thank you for a job well done.
—*David F. Tiedt*

Greetings from France

I'm 62 and half retired (that is, the right foot in an activity of Web site design and translation, the left one resting…). More seriously I receive my copy of ATPM with delight and want just to say that I really appreciate the "spirit" not that caustic or gothic because I find the just info I need to stay in touch with the reality of Mac world.

Your issues curiously bring to me like a fresh breeze from other side of the Atlantic ocean and after reading articles and laughing after cartoons or admiring nice photographs from everywhere on the little planet I feel like "a papillon."

Well just to say thank you again for the quality of your work and the involvement of your team.
—*Jean Pierre Belliard, from coastal Picardy (North France)*

Mac OS X: Powerful But Awkward[2]

I hope to completely avoid going back to Classic soon. As soon as I can find an OS X version of FoxBase Pro, I will use OS 9 for utilities only. Yes, it does take time to get used to OS X, but the rewards outweigh the issues, in my opinion.

Memory handling is much better. I usually have 12 to 14 apps open at once. Memory issues are gone. The system is stable. The only time I restart the computer is after I install a package that requires it. I happen to be a fan of the Dock. Between it and the Favorites Finder window, I don't need to look any further for all of the things I use daily. Speaking of Finder windows, the 10.2.2 forward and back arrows are a great way to navigate to places you often go. Other customizable menu items in the Finder windows make them far more useful than in OS 9. OS X has a good user interface…it is just different. I would not volunteer to go back.
—*Jayk6*

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I don't necessarily agree about running back to OS 9 after using OS X. Once you get used to it, what you originally thought of as problematic becomes less problematic. There are numerous small programs that bring the OS 9 interface back to OS X. The biggest benefit? No more crashes. And the screen is so easy to read.

The biggest unsolved problem? Use a USB floppy drive and you get a new definition for *slow*.

I wouldn't go back. There is just too much going for OS X when you get used to it.
—*Gene*

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I enjoyed reading this article. However, from my experience, it is just a little negative.

I have not gone back to Classic for several months now, and I use a wide variety of programs from Adobe through Microsoft, and FileMaker Pro to a multitude of others.

The one area where I would appreciate more help is in the area of HP drivers; in particular for the LaserJet 2200D.
—*Patrick Long*

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It does take a while to get used to OS X. It is, in general, a whole new way of doing things. At first, I wanted apps that let me do things the old way. I found that the more I used OS X the less I felt this way. In fact, the only old style helper app I find that I need is WindowShade. When I gave up on doing things the old way, got used to the new way, and started to find and use the many key shortcuts of OS X, I finally no longer wanted to go back. In fact, I no longer use OS 9 nor Classic. I boot into OS 9.1 about once a week to archive my e-mail in Eudora. I use Mail in OS X and love it. It's the first mail app besides Eudora which I find usable. I set Mail to leave messages on the server and Eudora saves the messages and removes them from the server. One day, even that will no longer be done! OS X has opened a whole new world of wonderful video editing apps that just aren't available for OS 9 at any price.
—*Will S.*

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If only the OS X UI were "pretty" as deemed by the author. In addition to its mindless difficulties, it is about as aesthetically appealing as a pinball machine—an old pinball machine. (Well, better than a new pinball machine anyway.)

And Steve Jobs once charged Microsoft (quite rightly) with having no culture. Now Apple has joined the barbarians.
—*Ed Williams*

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1. http://www.atpm.com/8.12/under-the-hood.shtml
2. http://www.atpm.com/8.12/segments-jaguar.shtml

I couldn't agree more. It's obvious the NeXT programmers developed the UI. It's an interface only a programmer could love. But hey, the geeks are happy. Who cares if it takes twice as long to manage your files with OS X. It's finally got a terminal window, man!

My OS 9 machines connect to my networked laser printer with a single click on the Chooser. My laptop running Jaguar has options to select AppleTalk, TCP/IP, HTTP, USB printers, and more. Unfortunately none of them can find my printer.

Oh well, it gives me a hobby. Someday I'll find just the right combination to be able to print. In the mean time, when I need to work I'll use OS 9.

—*RTMac*

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I do computer support for education. I've used OS X from the get-go on the theory that my customers would be using it. After, what—two years now?—I'm finally getting to the point where I miss some parts of OS X when I go back to OS 9, mostly in the smoother multitasking and better memory management.

But still, after "OS X immersion training," it's like a refreshing drink of water to go back to OS 9. The speed! The crisp screen display! The infinitely better file management! And, sadly, the superior user interface.

This is not a comment from someone who's simply having trouble adjusting. I've got computers in the house running various Windows and Linux revs, and I use them comfortably. OS X eye candy is designed to be *sold*, not to be used.

—*Scott Schuckert*

Resolutions

Most of the time, my only New Year's resolution is not to make any resolutions. I dislike the idea of using an arbitrary event (turning a page on a calendar) to trigger doing something we should have been doing all along. That said, I've decided that maybe it's okay to use such an event as motivation, if that's what it takes to get us moving. But I still think if we *really* thought it was a good habit, we'd have been in the habit already. But more on habit later. For now, let's dive into those resolutions.

Computer Things

Change my passwords. We know we should do this every now and then. Sometimes our operating systems are set up to remind us to do it, but mostly we disable stuff like that. And then two years later we need to sign into something and can't remember what the password was. So we're changing all of 'em. Right now. I'm stopping to do it *right now.*

See, if I just think, "Oh, that's something I should do when I get around to it," I'll probably never get around to it. So I did it just now. It took five minutes, well, for all the places I could think of. On Web sites where I'm logging in, I've made an appointment with myself for next Tuesday at 3. A whole hour to visit all my bookmarked pages and change my passwords. Time: ten minutes.

Run the virus protection software. Or open it up and set the preferences to auto-connect once a week, Sunday mornings when I know I'll be asleep. Time: two minutes. Stop and do it now.

Dust. Really. Clean off the air vents and the backs of the equipment. It gets kind of icky back there. Time: three minutes.

Print something in color. This only applies to people who rarely use their printers. I found out the hard way last year that if I never printed anything in color, the ink dried up. It cost more to replace the ink than the printer was worth. So now I make myself print something in color every couple of weeks. Time: one minute.

Do other technical stuff. Stuff I dunno what it is, but you guys do. Defragging and reformatting and zapping and clearing the cache and rebuilding the desktop. That stuff you know you're supposed to do every so often? Stop and do it now, or make a date with yourself to do it this week. Time required: I have no idea. I just use this thing; I dunno how it works.

Non-Computer Things

This is where the notion of putting belief into practice comes into play. Once we decide something is important, we make time for it. We go to the gym, or get exercise somewhere else. We arrange time to meditate or study or be still. We schedule time with people who are important to us. Those are things that matter to me. Other people have other things that matter to them.

This is the measure of the strength of a belief: how do we put it into practice? A belief is worthless without commitment. When I believe I should be a useful member of my community, I cannot then in good conscience walk by a piece of trash without picking it up. Else my belief has no meaning.

If I believe I love my cat and want us to have a good relationship, I put that into practice by deliberately spending time with him, bringing joy to us both. Just feeding him and scooping out the box does not a good relationship make. At least not for this particular cat, and not for me. Your mileage will vary. Cats are like that.

The point is, we choose a belief, a thing about which we feel strongly. And then we put it into action. That's it. If we really believe whatever it is, then the action part will not be hard. In 1890's *Principles of Psychology*, William James said this of habit: "No matter how full a reservoir of *maxims* one may possess, and no matter how good one's *sentiments* may be, if

one has not taken advantage of every concrete opportunity to *act*, one's character may remain entirely unaffected for the better. With mere good intentions, hell is proverbially paved."

Which is a long way round of saying: It's not enough to think about it. We hafta do it.

Now go out there and do it.

Onward.

Bluetooth & 68K Browsers

I'm going to apologize in advance for the digression from legacy topics this month, but I simply had to share my wonderment with the new technology Apple debuted about a year ago in Mac OS X: Bluetooth. For those of you who don't know, Bluetooth is a wireless technology that allows devices to communicate among each other over a short range (about 10 meters or so) at moderate speeds (think LocalTalk or marginally faster, up to about one megabit per second). So far it has found applications primarily in the cellular telephone and PDA markets, and when combined with such software as Apple's iSync, allows the user to sync a cell phone, PDA, and/or Macintosh without any encumbering wires.

As a graduate student, I have free dialup access on my school's network, but unfortunately, the dialups are all local to my home state of Michigan. When visiting out-of-state relatives for Christmas, and long distance charges being what they are, keeping on top of my e-mail becomes rather difficult. Enter my cell phone, an Ericsson T68, and my national coverage from T-Mobile. Simply by installing the D-Link Bluetooth adapter, available from the Apple Store for $50, I could connect to my phone quite easily. After downloading Ross Barkman's Bluetooth modem scripts[1] and selecting the Ericsson T39 script at 9600 bps, I merely had to initiate a PPP connection as usual and I was connected, albeit terribly slowly, so that I could keep my e-mail under control.

There's also something quite enjoyable about cruising down the freeway at 70 MPH (Dad's driving) and being able to check up on the weather ahead, chat with friends on AIM, and check my e-mail. Yes, I know I'm a hopeless Internet junkie, but business e-mail doesn't take vacations, so I can't either (at least not for longer than a day or two).

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Now for a somewhat more legacy-related topic. Our publisher, Michael Tsai, suggested I take a moment to discuss Web browser options for 68K Macs. I plan on doing a full review just as soon as I can get some time, but here's what I recommend based on limited experience up to this point.

68000-based Macs are essentially useless as browsers. Samba (MacWWW) works only on pages ending in .htm or .html and isn't very reliable. It also fails to handle modern DOCTYPE declarations and will ignore a page entirely rather than attempt to render it if it fails to recognize the DOCTYPE. Virtually all other 68K Macs with at least 4 MB RAM can (and should) use iCab for graphical browsing, or WannaBe or MacLynx for text browsing. iCab works best on a 68K if you put its cache on a RAM disk and turn off multiple connections, although on RAM-limited Macs like the LC, LC II, Color Classic, Classic II, and Mac TV, this will likely be impossible. Running any variant of Netscape—2.02 and 4.08 are the only ones worth using—will require at least 16 MB RAM, and both versions of Netscape are buggy enough that they'll keep eating RAM until they crash, which unfortunately seems to be rather often. Don't ever expect to do anything useful with Java or Flash. Although both can be installed, neither version is new enough to work with modern Java or Flash sites, which generally require at least a 2.0 version of the Java Virtual Machine and 5.0 version of Flash. (The highest 68K versions are 1.x and 3.x, respectively.)

The bottom line? Throw as much RAM as you can into the Mac and use iCab with the cache on a RAM disk (or with images turned off entirely) for maximal speed with graphical browsing, or use a text-based browser if your browsing habits allow you to get anything useful done with text-only browsing. Use Netscape if you absolutely can't get iCab to work well for you, but don't even bother with 1.x or 3.x versions of Netscape, and forget entirely about IE, the 68K versions of which are at least as bad as Netscape but with poorer standards support and expired (and irreplaceable) security certificates.

Further reading on 68K browsers is available from macfaq.org[2] and Gamba's browser page[3].

Good luck, and as always, feel free to post comments if you have corrections, questions, or problems.

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1. http://www.taniwha.org.uk

2. http://macfaq.org
3. http://home.earthlink.net/%7Egamba2/browsers.html

E-Mail Archiving with Eudora and Mail.app

Why Archive

Back in November, Ken Gruberman wrote[1] about how to slim down your Outlook Express or Entourage mail database. As the databases get large, the software slows down, the files become harder to back up, and the potential for data loss increases. One option, of course, is to delete mail older than a specified age. Another is to keep only a small amount of old messages that you think you may need in the future. My philosophy is that it's not worth the time and chance for mistakes to pick and choose which mail to save; I just save everything. By moving, or *archiving*, old messages outside the program's mail database, you can make your mail client zippy again while still keeping the old messages available if you need to search them some day. This article will teach you how to archive old mail compactly and in a way that you will be able to find old messages when you need them.

E-Mail Clients

Emailer, Entourage, Mailsmith, Outlook Express 5, and PowerMail are all clients that can benefit from e-mail archiving. All but Mailsmith store mail in a single database file. This means that they slow down when you have a lot of mail and that the database file is a single point of failure if you ever run into disk trouble. A single large file is hard to back up, and yet it's all the more reason to backup frequently. If you use one of these clients you should definitely think about e-mail archiving.

Mailsmith, unlike the others, uses one database file for each mailbox. This makes it less susceptible to the above problems, but there are several reasons[2] to keep its mail store from growing too large. First, the program slows down as you add more mailboxes, even if you aren't viewing them. Second, Mailsmith sometimes modifies mailbox files that you aren't using, so your incremental backup software will waste time and space backing them up even if they haven't really changed. Third, its database files use about five times more disk space than other clients'.

Archival Methods

Entourage Email Archive[3] and other AppleScript-based solutions purport to solve the above problems by saving your e-mail messages to one of the following:

- One text file (in various formats) per message.
- One text file (in various formats) per mailbox.
- A FileMaker Pro database.

A lot of people like to do this, but I don't find any of these solutions acceptable, because:

- Archiving tens or hundreds of thousands of messages to individual text files will slim down your mail database but slow down your file system.
- It's not very convenient to browse messages stored in text files.
- FileMaker databases can't store more than about 64K per field, so long messages will be truncated. Also, FileMaker databases, in my experience, are slow and unreliable when they get to be very large.
- With the above methods it's easy to lose track of attachment files and which messages they were attached to.
- The tools for searching text files and FileMaker databases are not optimized for searching e-mails.

I propose that it's better to archive old mail into *another e-mail client*. Eudora and Mail.app are both available for free and both have many advantages when dealing with vast quantities of mail. There are many reasons why you might prefer to use another program for your day to day mail. However, the criteria that make a program good for downloading, reading, and composing messages are for the most part quite different from those that make a program good for storing and searching large quantities of messages. Eudora and Mail.app have much nicer interfaces than any FileMaker database I've seen. BBEdit may be good at searching folders of text files, but it can't compete with programs that were designed for searching mail.

Importing Mail

Both Eudora and Mail.app have Import features, for bringing in messages from your primary e-mail client. Most other clients can export in mbox format, which both Eudora and Mail.app know how to read. The mbox format is standard and compact. It preserves attachments, but you will lose client-specific metadata such as message colors and the markers that show whether you've replied to or forwarded a message. Emailer doesn't have a built-in mbox export feature,

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1. http://www.atpm.com/8.11/strikes.shtml
2. http://www.atpm.com/8.04/mailsmith.shtml
3. http://www.softhing.com

but Robert Shapiro has written an [AppleScript](#)[1] to do the job. Entourage's mbox export feature is hidden; you can drag a mail folder to the Finder to save it as an mbox file.

Where the Mail is Stored

Of course you will want to back up your e-mail archive, and to do that you'll need to know where it's stored. The current version of Eudora stores is data in the Eudora Folder inside your Documents folder. The actual messages are stored in the Mail Folder inside the Eudora Folder. Mail folders in Eudora correspond to folders inside the Mail Folder. If you like, you can replace the Mail Folder or any of the folders therein with an alias to another folder. In this way, you can store portions of your mail archive in separate places. For instance, I keep a separate folder outside Documents for mailbox files that I don't want synchronized with my iBook (for lack of disk space).

Mail.app stores its data in the Mail folder of your Library folder. The actual messages are stored in the Mailbox folder inside the Mail folder. As with Eudora, mail folders in Mail.app correspond to Finder folders inside the Mailboxes folder. The alias trick also works with Mail.app except that rather than creating an alias you have to create a symbolic link (basically a Unix-style alias). The easiest way I've found to do this is to use [Path Finder](#)[2], but you can also do it using the ln -s command in Terminal.

How the Mail is Stored

Both Eudora and Mail.app store messages in the standard mbox format. This has the advantages of being compact and human-readable. That is, even if an mbox file gets corrupted you'll still be able to read the intact parts by opening the file in BBEdit. Since the mbox format is standard, you'll surely be able to find programs that can read it after your current Mac has been retired.

Eudora and Mail.app also store auxiliary information for each mailbox file, such as colors for the messages, the sort order, which messages you've replied to, and a "table of contents" so that they can display the list of messages without having to load the whole mbox file. What's really neat is that both store this auxiliary information separate from the message data.

Eudora can either store it in the resource fork of the mbox file or in a separate, adjacent file. I recommend the latter, which you can enable by clicking "Use old-style '.toc' files" in the Miscellaneous Settings. Using separate .toc files means that if you change the sort order of a mailbox or color one of the messages, Eudora won't have to modify the mbox file that contains the messages themselves. Since this (much larger) file hasn't been modified, your backup software won't waste time or space backing it up again. Plus, if you want to save some disk space you can easily delete the .toc file without losing any essential information.

Mail.app stores each mailbox in a file package whose name ends with ".mbox." A file package acts like a file, but it's really a folder. You can see what's inside by control-clicking in the Finder and choosing Show Package Contents. Inside the package is an Info.plist file, which holds the mailbox's sort order, a "mbox" file that stores the message data (in mbox format), a table_of_contents file (much like a Eudora .toc file), and several mbox.SKindex files that store the indexing data that Mail.app uses to make searching faster. You can delete the index and table of contents files to save disk space, and they will automatically be re-created as needed.

Eudora and Mail.app scan their folders (Mail Folder and Mailboxes, respectively) to determine which mailboxes are available and how they are organized into subfolders. You can quit the mail program and re-arrange the mailboxes and subfolders, and the changes will be reflected in the mail program. (Don't do this if you have filter/rules set up, but if you use Eudora or Mail.app for archival only, this typically won't be a problem.) You can move a mailbox file out of Mail Folder or Mailboxes if you want to store it elsewhere. To "re-attach" it, just drag it back into the appropriate folder and it will show up when you re-launch the program. (Additionally, with Eudora you can double-click a mailbox file outside of Mail Folder to open it directly.) If you'd rather save space without moving anything out of Mail Folder or Mailboxes, you can compress select mailbox files that you seldom use. Making them available again is as simple as decompressing the files and re-launching the mail program.

Reading Mail

Whether you prefer Eudora or Mail.app for viewing old mail is a matter of taste. Here are a few criteria that I considered. Mail.app lets you set separate fonts for the message list and the message contents (I recommend Osaka 9 and ProFont 9), while Eudora makes you use the same font for both. Both support two-pane browsing. Mail.app supports three-pane browsing (via the Mailboxes drawer), while Eudora has a separate Mailboxes window and a Mailbox menu. Both show the standard columns in mail list windows.

In Eudora, you can reverse the sort direction by option-clicking on a column header. In Mail.app, simply click the column header again (like in the Finder). Eudora lets you sort by multiple columns at once. For instance, to view messages grouped by subject and sorted (within each subject) by date, you can click on the Subject column and then shift-click on the Date column. To can option-click on part of a message in a message list to select all the messages that are similar to the part you clicked on. For instance, option-clicking in the Who column (not on the column header) will select all the messages sent by the person whose name you clicked on and

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1. http://www.fogcity.com/files/Emailer/2.0/ImportExport3.1.hqx
2. http://www.cocoatech.com

group them together. Mail.app doesn't support these fancy message list tricks, but it does have the option to color-code messages that are in the same thread as the selected message.
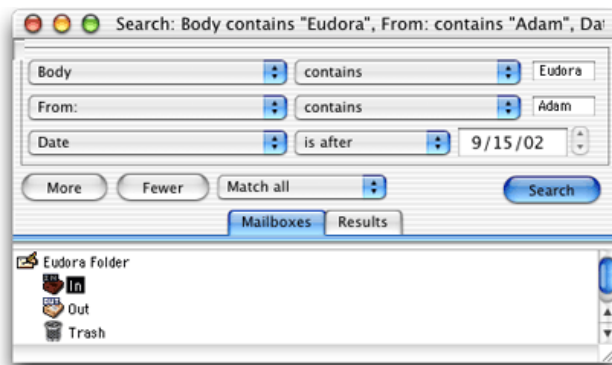
Eudora lets you label important messages in various colors. Mail.app only lets you mark them as flagged or unflagged, although you can use the color panel to *temporarily* color messages.

Eudora is much faster than Mail.app at mail browsing tasks such as switching between different mailboxes. It hardly seems to slow down at all as individual mailboxes grow larger, though there is a limit of about 32760 messages per mailbox. With Mail.app, on the other hand, there can be a long delay when you switch from one mailbox to another as the program loads the message list. You can reduce the delay by keeping fewer messages in each mailbox and by leaving mailboxes sorted by Number or Status, to reduce the time it takes Mail.app to sort the message list. You can click the Stop button when Mail.app starts "Updating color for messages." Also, if you know that you will want to view the same mailbox again, you can leave its window open and make a new Viewer window for viewing other mailboxes; that way, you can avoid the delay as Mail.app reloads the first mailbox. Although Mail.app is much slower than Eudora in absolute terms, its performance is improving with each release and it has the advantage of being very well threaded. You can browse a mailbox, search in another window, and transfer messages from one mailbox to another, all while Mail.app is indexing yet another mailbox. If your Mac has multiple processors, Mail.app can take advantage of them.
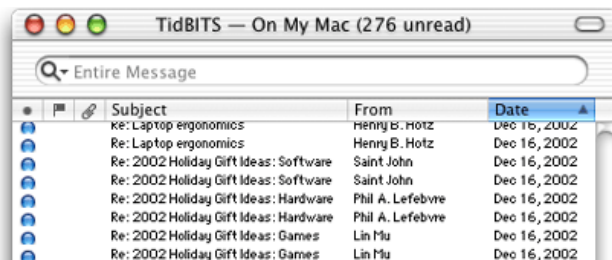
Searching with Eudora

Eudora has a sophisticated search feature for finding messages. You can select one or more mailboxes to restrict the search to only those mailboxes, and you can perform more than one search at a time. The search window itself lets you specify multiple criteria. Each criterion can match against a field such as Body, From, or Date, and you can search for words, phrases, and regular expressions. You can require that Eudora find messages that match *all* the criteria,

or ones that match *any* one criterion. The search options are almost as powerful as those in Mailsmith, and searching is fast even though Eudora doesn't rely on content indexes.

Searching with Mail.app

Mail.app's search features are not as powerful as Eudora's, but they are more powerful than they appear at first glance. Like Eudora, you can select one or more mailboxes to restrict the search to those mailboxes, and you can perform more than once search at once by opening multiple viewer windows. The popup menu at the left of the search box lets you specify the type of search as well as whether to search the selected mailboxes or all mailboxes.

An Entire Message search looks in the message headers and the message body. You type some words into the search box and Mail.app shows the matching messages, ordered by relevance. To get the most out of Entire Message searches, you need to know a little bit about how they work.

You are essentially searching by word. Mail.app will only find matches that begin at the start of a word. For instance, if you search for "str" you will find messages containing "structure" and "street" but not "astronomy." An exception is that if a word contains capital letters; searching for "str" *would* find "MyStreet." As you can see, searche terms are case-insensitive.

Mail.app does not consider punctuation to be part of words. Searching for "example@domain.com" is equivalent to typing "example domain com." Since punctuation is ignored, you can't search for technical terms like "<h1>" or "$/."

In iTunes, entering several words separated by spaces finds only those songs that match *all* the words. In Mail.app, the opposite is the case; the search will find messages that match *any* of the words. The message with the highest relevance will not necessarily contain all the words; instead, it might have high relevance because it contains many occurrences of *one* of the words.

If you want to find messages that match *all* the words, you can separate them with "and." For instance, you could search for "example and domain and com." Note that this will *not* restrict the results to messages that contain the three words in that order; they can appear anywhere in the message so long as all are present. There is no way to do a phrase search, i.e. find messages that contain a sequence of words like "Mary had a little lamb." In addition to "and," you can connect words with "or," and you can group them with parentheses. Searching for "screen and (iMac or iBook)" would find messages that contain the word "screen" as well as either "iMac" or "iBook" (or both).

Sometimes Mail.app will get confused and an Entire Message search won't find messages that it should. In this case, you can often fix the problem by rebuilding the index file that Mail.app uses for Entire Message searches. The Rebuild Mailbox command does *not* do this. Instead, you should make a new mailbox and move all the messages to it, or open the mailbox's file package in the Finder and delete the mbox.SKIndex files.

Besides Entire Message searches, Mail.app offers To, From, and Subject searches. These searches work differently from Entire Message searches. They are not word-based, "and" and "or" have no special meaning, and spaces and punctuation are not ignored. This means that you can search for phrases.
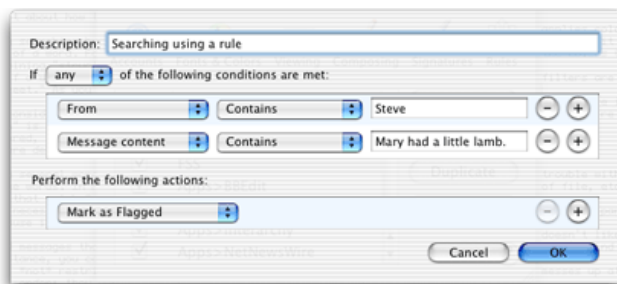
Advanced Searching with Mail.app

Mail.app's search features are quick and easy to use, but they are not as powerful as you might wish. Here are some workarounds for doing advanced searches in Mail.app.

If you know the mailbox that contains the message you are looking for, it may be easiest to import that mailbox into an e-mail client that has a better search feature. This is particularly easy with Mailsmith, as you can simply drag Mail.app's .mbox file into the Mailsmith mailbox list.

An intriguing option, if you don't mind pre-release software, is Steven Frank's Emila[1]. Unfortunately, the current version of Emila must import all your Mail.app mailboxes at once. This takes a long time and uses a lot of memory and disk space.

The Mail.app that comes with Mac OS X 10.2 has much improved rules that support multiple criteria. You can mimic many of Eudora's complex searches by creating a rule that flags messages that match the criteria of your search. You can then select the messages you want to search, use the Apply Rules to Selection command, and then sort by the Flags column to see which messages matched. Of course, you will want to first disable any other rules that you have.

Mail.app's rules don't have a Date criterion, but you can restrict matches to a particular date range by writing an AppleScript that unflags messages outside the desired date range. (Or, if there aren't many matches, you could sort by Date and find the messages you want by inspection.)

Eudora or Mail.app?

Both Eudora and Mail.app can handle large amounts of mail and store it compactly. Eudora is much faster and provides more powerful searching options. Mail.app's iTunes-like search interface is easier to use for quick searches, and if you have trouble remembering the message you're searching for you may find its relevance-ranked searches helpful. In my experience, Eudora sometimes parsed imported mbox files incorrectly, making it impossible to view (or search for) parts of certain messages. Also, it sometimes didn't let me extract the attachments from imported messages. Most people probably won't experience these troubles, but they caused me to switch to Mail.app. Overall, I think Eudora is better suited for e-mail archiving, but you can't go wrong with either program.

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1.   http://www.panic.com/%7Estevenf/emila

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2.   http://www.c-command.com

How to Handle Anything

Hello again and welcome to another installment in our series on how to program your Macintosh using the AppleScript language. Last time we covered the `try` block and the `on error` handler to demonstrate how to gracefully handle errors that may occur while a user runs your software. The `on error` handler is a special kind of construct in AppleScript that is one of a more general set of tools called the handler. This month we're going to take a close look at what handlers are and how you can use them to help you write programs more efficiently.

If you have any experience with other programming languages such as C or Pascal, you'll be familiar with the *procedure* and the *function*. AppleScript handlers serve the same purpose as these constructs. A *handler* is a named grouping of programming code that can be called from elsewhere in the program, can be passed information, and can optionally return a value. When it returns a value it works like a Pascal function. When it doesn't return a value, the handler is operating like a Pascal procedure.

In any given program, there are probably going to be times when the same code needs to be run from different parts of the program. Programmers will take this repeating code and break it out into a separate handler that can be called at any time. This has a number of advantages. If you need to change the way that part of the program works, you only need to do so once rather than every time the code needs to be executed. Also, working with small and easily defined handlers makes debugging much easier, since you can test everything that the handler needs to do separately from the entire program. Once you have the handler working exactly how it should, you can place it in your program and forget about it, dedicating your efforts to other parts of your software.

Let's take a look at a simple example that will present the user with a dialog box that displays the current time.

```
on DisplayCurrentTime()
    display dialog "The current time is " & ¬
        (time string of (current date)) buttons {"OK"}
default button 1
end DisplayCurrentTime
```

If you enter the above handler into Script Editor and run it, nothing will happen. This is because a handler doesn't do anything until it is called elsewhere in the program.

There is an exception to this. Any code in an AppleScript program that doesn't explicitly appear in a handler is actually part of the `on run` handler. In other words, you've been using handlers all along and didn't know it! When you tell Script Editor to run a program, it actually sends a `run` call to the `on run` handler, which includes all the code not contained in another handler. Take a look at the following very simple program.

```
display dialog "Hello!"
```

This program is actually equivalent to, and interpreted by AppleScript as

```
on run
    display dialog "Hello!"
end run
```

However, you can't have statements outside of a handler (like the first example above) and also have statements within a `run` handler. This is because handlers in a program must have a unique name, and when you have statements outside of a handler (which are actually in an implicit `run` handler) and have statements in an explicit `run` handler, you are trying to create two handlers with the same name. Try to compile the following script to see what I mean.

```
display dialog "Implicit run handler"

on run
    display dialog "Explicit run handler"
end run
```

Given this new piece of information (and for reasons that will become clear as we cover more of the special handlers provided by AppleScript), we won't use the implicit `on run` handler any longer, but use the explicit version. So, let's edit our handler demonstration program so that it actually does something.

```
on run
    DisplayCurrentTime()
    display dialog "I just displayed the time." ¬
        buttons {"OK"} default button 1
end run

on DisplayCurrentTime()
    display dialog "The current time is " & ¬
        (time string of (current date)) buttons {"OK"}
default button 1
end DisplayCurrentTime
```

Let's take a closer look at what this program is doing. When we tell AppleScript to run the above program, it sends a `run` message to the program. The program sees that it has an `on run` handler, so it begins executing the code within that handler. The first line in the `on run` handler is `DisplayCurrentTime()`, which is a call to another handler, so execution of the program jumps out of the `on run` handler and begins with the first line of `on DisplayCurrentTime()`. That handler simply displays a dialog box that lets the user know what the current time is. Since there aren't any more instructions to perform in `on DisplayCurrentTime()`, execution returns to the calling portion of the program and executes the next line, which lets the user know that the program had just displayed the time.

Our sample program operates exactly like the following program.

```
display dialog "The current time is " & ¬
    (time string of (current date)) buttons {"OK"} default
button 1
display dialog "I just displayed the time." ¬
    buttons {"OK"} default button 1
```

A few things to note about the above example. First, note how the `on DisplayCurrentTime()` handler is named. There are no spaces or special characters, and it describes what it does. The rules for naming variables that we covered in a previous column apply to naming handlers also. And, just like you would want to name a variable something that describes what it holds, you want to name a handler something that either describes what it does or what it returns.

Second, note the order of execution of lines in the program. It isn't linear. The program jumps around.

Third, we could have written the program like this, reversing the order of the handlers.

```
on DisplayCurrentTime()
    display dialog "The current time is " & ¬
        (time string of (current date)) buttons {"OK"}
default button 1
end DisplayCurrentTime

on run
    DisplayCurrentTime()
     display dialog "I just displayed the time." buttons
{"OK"} default
button 1
end run
```

In fact, some programming languages would require that the handlers be in this order because they won't let you call a handler before the handler appears. AppleScript doesn't care about the order of handlers, however. When a handler call is made, AppleScript will look through the entire code to find where it should go to execute the handler.

Each of the examples I've given begins the handler definition with the word `on`. Handlers can also begin with the word `to`. AppleScript doesn't care which one you use, so you can use the one that makes the most sense for an English interpretation of your program.

Note that each handler is separate. In general, you can't have one handler appear inside of another handler. As with most rules in programming, there are exceptions. The first exception we've already covered: The `on error` handler can appear in other handlers. We won't cover the other exception until we get to script objects in a future column.

Lastly, you may be wondering why the `on DisplayCurrentTime()` handler ends with a pair of parenthesis while the `on run` handler doesn't. The answer is that the `on run` handler is defined by AppleScript and doesn't take any parameters. Parameters are pieces of data that can be passed to a handler by the calling code. When we define our own handlers, such as `on DisplayCurrentTime()`, AppleScript doesn't know in advance whether it takes any parameters or not, so we have to let it know that it doesn't by adding a blank pair of parentheses to the handler. When we call the handler, the parentheses tell AppleScript that we are calling a handler that doesn't take any parameters.

If a handler does receive parameters, the parameters are passed to the handler from the calling code by placing the data between the parentheses. Here's an updated version of the `DisplayCurrentTime()` handler that takes a single parameter, a name.

```
on DisplayCurrentTime( theName )
    display dialog theName & ", the current time is " & ¬
        (time string of (current date)) buttons {"OK"}
default button 1
end DisplayCurrentTime

on run
    DisplayCurrentTime( "Chuck" )
end run
```

Notice that within the `DisplayCurrentTime()` handler, the `theName` parameter acts just like a variable, and we can reference it just like any other variable, as well as change its value.

When passing data to a handler via parameters, you can use a constant (as we did with the constant string `"Chuck"`) or a variable of the type that the function is going to expect. The following script performs exactly the same way as the one above.

```
on DisplayCurrentTime( theName )
    display dialog theName & ", the current time is " & ¬
        (time string of (current date)) buttons {"OK"}
default button 1
end DisplayCurrentTime

on run
    set theName to "Chuck"
    DisplayCurrentTime( theName )
end run
```

Handlers can have as many parameters as you like. When a handler accepts multiple parameters, each one is separated by a comma. Parameter names must conform to the same rules as variable names. Take a look at the next example.

```
on DisplayCurrentTime( firstName, lastName )
    display dialog firstName & " " & lastName & ", the
current time is " & ¬
        (time string of (current date)) buttons {"OK"}
default button 1
end DisplayCurrentTime

on run
    DisplayCurrentTime( "Chuck", "Ross" )
end run
```

Some of you out there who have previous experience with AppleScript may be thinking right about now that this isn't the only way to send parameters to a handler. The method I've been describing here is called *positional parameters*. There's another method of passing parameters to handlers called *labeled parameters*. The rules for labeled parameters are much more complex, but will usually result in code that is more like English. For instance, using named parameters, the call to `DisplayCurrentTime( "Chuck" )` could be written `DisplayCurrentTime for "Chuck"`.

Since we're working with beginning concepts here, I'm going to bypass labeled parameters for the time being. However, if you're interested in finding out how to use them, check out the underlined chapter on handlers[1] from the *AppleScript Language Guide*, or chapter 8[2] from O'Reilly's AppleScript in a Nutshell[3].

Handlers also have the ability to return data back to the calling section of the program. Handlers that don't return any data are often called procedures or subroutines. Handlers that do return data are often called functions. Below is a program that includes a handler to calculate the area of a triangle. When the handler is called, it gets passed the height and width of the triangle, performs the calculation needed, and returns the result. Since the handler returns a result, it can be used anywhere the type of result returned is expected. So if the handler returns a number, anywhere in your code where a number is expected you could place the handler instead, just like a variable.

```
on TriangleArea(height, width)
    return 0.5 * height * width
end TriangleArea

on run
    set height to text returned of (display dialog ¬
        "Enter the triangle height:" default answer ¬
        "" buttons {"OK"} default button 1)
    set width to text returned of (display dialog ¬
        "Enter the triangle width:" default answer ¬
        "" buttons {"OK"} default button 1)
    display dialog "The area of a triangle with height " &
¬
        height & " and width " & width ¬
        & " is " & TriangleArea(height, width) ¬
        buttons {"OK"} default button 1
end run
```

As you can see, the handler passes the results back to the calling code by use of the `return` command. The `return` command can also be used to simply exit the handler without returning a value by placing it on a line by itself with no value to return. As soon as a `return` command is executed, control of the program is returned to the calling portion, even if there are more statements after the `return` command.

One last point about handlers before we integrate the concept into our Sum Numbers program. Handlers can have variables within themselves that are independent of variables in any other handler, even if the variables have the same name. This includes the parameters that are sent to handlers. In our `TriangleArea()` handler, the parameters within it are named `height` and `width`. These are the most obvious names for the parameters. We also use these names in the `run` handler, but changing the values within the handler would have no effect on the values outside the handler. Here's an example to demonstrate this concept.

```
on ChangeNumber()
    set theNumber to 12
    display dialog "Inside ChangeNumber, theNumber is
equal to " & theNumber ¬
        buttons {"OK"} default button 1
end ChangeNumber

on run
    set theNumber to 6
    ChangeNumber()
    display dialog "Inside run, theNumber is equal to " &
theNumber ¬
        buttons {"OK"} default button 1
end run
```

If you run this program, you'll get two dialog boxes. The first tells you that `theNumber` is equal to 12. The second dialog box says that `theNumber` is equal to 6. This is possible because the variable `theNumber` within the `ChangeNumber()` handler has absolutely nothing to do with the variable `theNumber` anywhere else in the program.

This is a good thing. You're able to work with a handler on its own terms without having to worry about what it will affect in the outside world.

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1. http://developer.apple.com/techpubs/macosx/Carbon/interapplicationcomm/
   AppleScript/AppleScriptLangGuide/AppleScript.d8.html#25660
2. http://safari.oreilly.com/
   ?x=1&mode=section&sortKey=title&sortOrder=asc&view=&xmlid=1-56592-
   841-5/aplscptian-CHP-
   8&open=true&catid=opsys.macos&s=1&b=1&f=1&t=1&c=1&u=1&srchText=
3. http://www.atpm.com/7.10/as-nutshell.shtml

As with most things in AppleScript, this rule has an exception. You can create global variables that are accessible from anywhere in a script.

```
global theNumber

on ChangeNumber()
    set theNumber to 12
     display dialog "Inside ChangeNumber, theNumber is
equal to " & theNumber ¬
        buttons {"OK"} default button 1
end ChangeNumber

on run
    set theNumber to 6
    ChangeNumber()
    display dialog "Inside run, theNumber is equal to " &
theNumber ¬
        buttons {"OK"} default button 1
end run
```

In this case the global variable `theNumber` isn't part of an implicitly `run` handler because `global  theNumber` isn't a command but a statement that declares a global variable called `theNumber`. With this program you'll get two dialog boxes, both of which report that `theNumber` is equal to 12. In this case, we've declared that `theNumber` is a global variable, which means that it is the same in every handler there is. So when the `ChangeNumber()` handler sets `theNumber` to a new value, the new value is stored in the same `theNumber` variable found in the `run` handler.

If you have a global variable and you want a handler to use a local version instead, use the local keyword to declare the variable as local to the handler.

```
global theNumber

on ChangeNumber()
    local theNumber
    set theNumber to 12
     display dialog "Inside ChangeNumber, theNumber is
equal to " &
        theNumber buttons {"OK"} default button 1
end ChangeNumber

on run
    set theNumber to 6
    ChangeNumber()
    display dialog "Inside run, theNumber is equal to " &
theNumber ¬
        buttons {"OK"} default button 1
end run
```

This version of the program operates the same way as the first version, with the assignment of a value to `theNumber` within the `ChangeNumber()` handler having no effect on the variable `theNumber` within the `run` handler.

In general, programmers avoid global variables. You might think that globals will make programming easier for you. After all, using global variables would allow you to do away with parameters as a way to get information to a handler. While it may seem easier to you to have a variable be accessible in all parts of a program, the truth is that it becomes quite a mess when you decide that a handler would

be useful in another program. Not only do you need to get the handler over to the other program, but you need to keep track of any global variables that the handler makes reference to. Using global variables will make your code much harder to reuse and maintain.

Well, now that we've covered how to use handlers, let's take a look at integrating them with our existing Sum Numbers program.

```
on run
    -- Get the number to sum up to from the user
    -- and store it in the variable theNumber
    set theNumber to (display dialog ¬
        "Please enter a positive number:" default answer ¬
        "" buttons {"OK"} default button 1)
    -- Assume that invalid data was entered
    set isValidEntry to false
      -- Repeat the following block of statements until
we've made
    -- sure that the user has entered valid data.
    repeat until isValidEntry
        -- If there is a problem with the data entered by
the user...
        if NumberHasProblem(theNumber) then
                -- Set the variable dialogMessage to show
appropriate
            -- feedback to the user.
                                set dialogMessage to
DetermineDialogMessage(theNumber)
            -- Prompt the user to enter valid data, storing
¬
            -- the results in theNumber
            set theNumber to text returned of ¬
                (display dialog dialogMessage & ¬
                    " Please enter a positive integer:"
default answer ¬
                    "" buttons {"OK"} default button 1)
        else
            -- Everything is fine.  ¬
            -- Set isValidEntry to true so we can exit the
loop.
            set isValidEntry to true
             end if --(not IsNumber(theNumber)) or (not
IsInteger(theNumber))
    end repeat -- until isValidEntry
    -- Report the sum to the user.
    display dialog "The sum of the first " & theNumber & ¬
        " numbers is " & SumNumbers(theNumber) & ¬
        "." buttons {"OK"} default button 1
end run

-- Returns true if the parameter passed either
-- isn't a number or isn't an
integer.
on NumberHasProblem(theNumber)
    return IsNumber(theNumber) and IsInteger(theNumber)
end NumberHasProblem

-- Accepts a piece of data and returns true if the data is
a number.
on IsNumber(theVariable)
     -- Enclose an attempt to coerse the data to a number
within a try block..
    try
        -- Try to coerse the data to a number.
        set theVariable to theVariable as number
    on error
        -- If there was a problem with coersing the data,
return false.
        return false
    end try
    -- If no problem occured, return true.
    return true
end IsNumber
```

```
-- Accepts a piece of data and returns true if after ¬
-- coersing the data to a number it is an integer.
on IsInteger(theNumber)
    return (class of (theNumber as number) is integer)
end IsInteger


-- Accepts a piece of data and returns an appropriate
dialog message
-- that depends on the problem the data has.
on DetermineDialogMessage(theVariable)
    -- If the problem is that the data isn't a number...
    if not IsNumber(theVariable) then
        -- Set the dialogMessage variable to report the
appropriate problem..
        return "You have entered text intstead of a
number."
        -- If the problem is that the number isn't an
integer...
    else if not IsInteger(theVariable) then
        -- Set the dialogMessage variable to report the
appropriate problem..
        return "You have entered a number with a fractional
part."
    end if -- not IsNumber(theVariable)
end DetermineDialogMessage


-- Accepts a number as a parameter and returns the ¬
-- sum of the positive integers up to that number.
on SumNumbers(theNumber)
    -- Initialize sum to 0.
    set sum to 0
    -- Sum up the numbers.
    repeat with i from 1 to theNumber
        set sum to sum + i
    end repeat -- with i from 1 to theNumber
    -- Return the results of the process to the user.
    return sum
end SumNumbers
```

Quite a lot has changed with this version of the program, but the functionality of it is the same as it was when we left it [last month](http://www.atpm.com/8.12/roll.shtml)[1]. All that has changed is that we're now using handlers to get some of the work done. Let's go through each of the 6 handlers.

The first one, the run handler, is not actually new, but we're declaring is explicitly this time. We've changed the structure of this handler somewhat since we can now use handlers to do much of the real work. For instance, the try block is nowhere to be seen in the run handler since we have a separate handler that checks if the data entered by the user is valid.

The handler which does that checking is the NumberHasProblem handler. All this handler does is return true if the data entered by the user is both a number and an integer and false if either of those requirements isn't met.

NumberHasProblem actually doesn't do much except call two other handlers. The first is IsNumber, which gets passed a variable and returns true if the variable is a number and false if it doesn't. This handler is where you'll now find our try block. Notice that the IsNumber handler has two return statements, but only one of them will ever get executed. If an error occurs when we attempt to coerce the variable, we immediately enter the on error handler and return false.

Execution within the handler at that point stops and control of the program is returned to the calling portion. If no problem occurred, then IsNumber simply returns true.

NumberHasProblem also calls the IsInteger handler, which returns true if the parameter passed to it is an integer and false otherwise.

I've also broken the portion of the program that determines the custom dialog message into its own handler. The DetermineDialogMessage handler accepts a variable and returns an appropriate text string depending on what the trouble with the variable is.

Lastly, there's the SumNumbers handler, which after we've made sure that we've got an integer to work with, sums up all the numbers up to that integer and returns the result.

Some of the handlers I've created in this new version were broken into their own handler because they might be useful in other circumstances. For instance, I might write another program some day for which the IsNumber, IsInteger, and SumNumbers handlers might be needed. If that's the case, I've already tested these, and can simply copy and paste them into the new program without worrying about the code.

The other two handlers were created for a different reason. The run handler was beginning to get very long and complicated, making it difficult to read and be able to see at a glance what was going on. When a single handler begins to grow lengthy (for me, that usually means more than about 20 lines), I'll often break some of it's code into a separate handler, replacing the code with the handler name, which I make as descriptive as possible. When reading the run handler for the first time, the reader may not really care how DetermineDialogMessage gets its job done, but the reader can see in general what it's supposed to do. This makes the run handler much more manageable.

The NumberHasProblem handler serves much the same purpose. The line of the program that reads:

```
if NumberHasProblem(theNumber) then
```

would have worked just as well as:

```
if (not IsNumber(theNumber)) or (not IsInteger(theNumber))
then
```

But by breaking this out into a separate handler, the code within the run handler reads more cleanly.

• • •

That's it for this month. Before I let you go, let me suggest some improvements you might try making on this program. One other problem that data entered by the user might have is that it could be zero or negative. Add another handler called IsPositive, and call that handler from NumberHasProblem and DetermineDialogMessage to appropriately check for that trouble and appropriately inform the user of that possible problem.

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1.   http://www.atpm.com/8.12/roll.shtml

If this column were being written about 20 years ago (and if you've been with us from the beginning), you would know just about everything about programming to really dive in and begin creating your own programs. You now have the tools to create what are called procedural programs with very simple user interfaces. In recent decades, however, there have been some major advances in programming. Two of those advances are in user interfaces and object oriented programming. In the next column we're going to begin getting into what object oriented programming is and how is can be implemented with AppleScript. Until then, keep the e-mail coming with questions, comments, and gushing praise.

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New Year, More Utilities

OS 9 Lives, at Least 'til June

Well, I hope you all had a great holiday and are ready for more new and improved Macs. By now, I am sure you have all heard that OS 9 is far from dead. It looks like the makers of Quark were able, in their infinite wisdom, to convince Apple that they needed more time on their OS X version of XPress. Since a large percentage of the Mac desktop publishing relies on Quark, Jobs had no choice but to yield. Therefore, I guess we can put the burial shovels away for OS 9, at least for another six months.

ResExcellence

In past articles I have told you how VersionTracker and MacUpdate are excellent sites for keeping up with most commercial, shareware, and freeware releases. Another site you may want to look at is ResExcellence[1]. This site hits areas that you will not find at VersionTracker or MacUpdate. At ResExcellence you can find startup screens, boot screens, login screens, desktop pictures, icons, and much more for OS 9 and X. If you have never gone to this site, give it a try; you'll be amazed at what goodies they offer.

Haxies

Before jumping into the article, I thought I would take one more moment to warn you about haxie utilities. All the utilities I discuss here are for the most part stand-alone applications. They do not modify or have any effect on your system when you install them. Haxies, on the other hand, do modify your system and applications and can do major damage. The problems aren't as bad as with Mac OS 9 extensions, because a conflict will generally only cause a single application to crash. However, when it comes to OS X, you really do not want to allow any third-party software to mess with your system or applications. Another thing to think about is, when you do a system update like the new 10.2.3, how will that altered system react to the upgrade? As usual it just comes down to buyer beware. With that out of the way, let's drain the radiator and pour some new utilities and tips into your Mac.

Customizing the System Preference Toolbar

Did you know that you can customize the toolbar at the top of your System Preferences window just like with your Finder windows? The only difference is that you do not have to use the Customize Toolbar command in the View menu when in the System Preferences window. All you have to do is click and drag any System Preferences icon up to the toolbar. To remove an icon from the toolbar, click and drag that item off the toolbar, and poof, it is gone.

Dockprefs[2] (Freeware)

Dockprefs is the perfect replacement for the System Preferences icon in your dock. It allows you to create a customized menu of the System Preferences that you use the most. First, you select the preferences you want to be included in Dockprefs. Then, the next time you click on the Dockprefs icon, a menu will come up with the System Preferences you selected.

VuScan[3] (Shareware)

If you have been using a Mac as long as I have, you probably have some piece of hardware that just does not work in OS X. The most common item is a SCSI scanner. In most cases, the only way to get these devices to work is by using OS 9 in native form. This is because the programs that run these scanners usually have drivers that were installed into the OS 9 System Folder and these items do not load when you boot into Classic when in OS X. VuScan solves this problem. This program will recognize almost any type of SCSI scanner made for the Mac. It also has all the bells and whistles one would want in a scanning program. The only problem is that this shareware item costs $40. For $20 more, you can go out and buy a new scanner. But, if the scanner you own is a high-end or professional scanner that you do not want to part with, then VuScan is right for you.

Startup Syringe[4] (Freeware)

Are you tired of that dull looking grey apple when you boot up your Mac? I was until I came across Startup Syringe at ResExcellence. I also found a bunch of startup screens to go with Startup Syringe at ResExcellence as well. It turns out that your startup screen in OS X is composed of two files. After

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1. http://www.resexcellence.com
2. http://ksuther.dyndns.org/software/dockprefs/index.html
3. http://www.hamrick.com/vsm.html
4. http://www.ryandesign.com/jagboot/

you download a new startup screen and open its folder, you will see the two files. To install, all you do is select the two files, click, and drag and drop them on the Startup Syringe icon. Startup syringe will then ask you where you want to place the original startup files in case you want to revert to them. Then Startup Syringe will move the files to their new location. At that point, all you have to do is reboot your Mac to see your new startup screen.

EarthGlobe[1] (Freeware)

Back in the September issue[2] of ATPM, I talked about a utility called MoonDock. This program allows you to watch the moon go through its phases from your desktop. EarthGlobe is the compliment to MoonDock. It places an image of Earth on your desktop. You can set the size, the transparency, and which part of Earth you want to face you. Then all you have to do is watch as Earth goes from day to night in real time. The only things lacking from this program are some points of lights when countries move from day into night. Also, do not confuse this utility with EarthDesk[3], another utility that tries to do the same as EarthGlobe, but which I found too intrusive to use.

Blobber[4] (Freeware)

Blobber is a utility that allows you to change your arrow pointer and wait cursor (spinning beachball) in Mac OS X 10.2.3. It comes with several customized pointers and wait cursors. It is also designed so that it can accept plug-ins as they become available. Because it replaces certain core files, it makes you do a backup of them before you use the program. It also includes a tutorial on how to make your own cursor replacements. Because of the safeguards built into this utility, I find Blobber safe to use.

Beachball[5] (Shareware)

This utility is almost identical to Blobber except that it is shareware. I did find more customized icon replacements for your wait cursor. One that I liked, was a spinning hard drive. I installed it and it looks much better than the spinning beachball of death. As with Blobber you can also replace your arrow cursor, and a tutorial is included to help you design your own plug-ins. One word of warning: make sure you take the time to read the notes on the Mac OS X 10.2.3 update. A patch error could occur if you were using Beachball prior to the update. If you are a first-time user of Beachball, then this will not affect you in 10.2.3

Spy[6] (Freeware)

Spy is a simple utility that allows you to view the load on your CPU. It basically places two rotating circles (one within another) in your menu bar. The inner circle represents the system load, while the outer circle is the user load. The more complete each circle is, the greater the load is on your Mac's CPU. You can also bring up a process viewer to see what is eating up valuable CPU time. Another interesting feature is that you can pass the CPU load to the Griffin PowerMate[7] so that the base of the device can pulsate in rhythm with your CPU.

Path Finder[8] (Shareware)

I discovered this utility while I was watching The Screen Savers on Tech TV one day. Path Finder (previously called SNAX) is a Finder substitute for OS X. Some of the features found in Path Finder include: labeling, view invisibles, customizing fonts and colors, the addition of a desktop trash can, create disk image, an Open With menu, enhanced column view, Secure Delete, and so much more. You can also choose if you wish to have it load at startup. This is a well-polished item and well worth taking the time to check out. Apple could really take a few pointers from this utility the next time they choose to update the Finder.

FileXaminer[9] (Shareware)

Back in the September issue[10] of ATPM I talked about a program call Super Get Info[11], a utility that lets you to reassign privileges by bypassing the Get Info command in the Finder. Another major feature was the ability to empty the trash when the Finder refused to do so. FileXaminer picks up where Super Get Info leaves off. Additional features found in FileXaminer include: authenticate as an Administrator to perform all actions, change Unix permissions, alter creation and modification dates, lock and unlock files and folders, super delete as administrator, modify custom icons, and too many more to mention. If you want more control over your Finder, then FileXaminer may be worth checking out. (Also see the ATPM review[12].)

Coolbackground[13] (Freeware)

Coolbackground is a simple utility that lets you run any screen effect on the desktop instead of a still picture or texture. I have tried it with Flurry, Flux, and Marine Aquarium without too much of a hit to the CPU load. Of course, the hit will be much greater on older Macs. Coolbackground does require that you have Mac OS X 10.2

1. http://www.geocities.com/garycmartin/osx/
2. http://www.atpm.com/8.09/under-the-hood.shtml
3. http://www.atpm.com/9.01/earthdesk.shtml
4. http://www.baxtercomputer.com/freeware.html
5. http://users.wpi.edu/%7Ephoenix/
6. http://homepage.mac.com/james_007_bond/
7. http://www.atpm.com/8.04/powermate.shtml
8. http://www.cocoatech.com
9. http://www.gideonsoftworks.com/filexaminer.html
10. http://www.atpm.com/8.09/under-the-hood.shtml
11. http://www.atpm.com/7.10/sgi.shtml
12. http://atpm.com/8.07/filexaminer.shtml
13. http://coolbackground.couthouis.com

and Quartz Extreme running. If you are not sure if Quartz Extreme is running, you can download Quartz Extreme Check (mentioned in a [previous column](http://www.atpm.com/8.11/under-the-hood.shtml)[1]) and check to see if your Mac is taking advantage of graphic acceleration offered by OS X 10.2.

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1. http://www.atpm.com/8.11/under-the-hood.shtml

Last Words

Well, that once again wraps it up for this edition of *What's Under the Hood*. All the utilities I mentioned here have been fully tested on my G4 with Mac OS X 10.2.3. I still must emphasize that I cannot guarantee how any of these utilities will affect your Mac. If you feel nervous about trying out new software, then make sure you back up your data, files, and applications you cannot afford to lose. Whether software is freeware, shareware, or commercial, it still comes down to user beware. End of Line.

Mac Addicts to the Rescue

I am a college student (my second time around). Specifically, I'm studying to become a high school history teacher. I am a student with a lifelong habit, though—Macintosh. I got my first Mac in 1986, a used Mac Plus with 1 MB RAM and a massive 40 MB external hard drive. Since then, I've always had to keep up; first it was the SE, then the IIsi, the PowerBook 140, and from there on, more Macs than you can shake a stick at (I missed the Mac TV). I usually keep my Mac for about six months, and then resell it and move up. I almost always buy used, so don't get any ideas about me being rich.

Since I went back to being a student again, I've been selling Macs more regularly, picking up good deals on used Macs locally and then reselling on eBay. I've been doing this for about two years now; it's relatively easy, takes about an extra hour of my day, and usually pays the rent. In November when the new PowerBooks came out I decided I was going to buy one for myself, to keep—an early Christmas present that would come in handy for taking notes in class and finishing up a presentation I needed to do on the New Orleans school system. The day they were announced I ordered a nice new PowerBook G4 867 and found it on my doorstep only a few days later.

It was a beautiful machine. If you've never played with one in person, you won't believe it. I played with it for a couple of days and took it to school to take notes and do research on. The more I used it, the more I loved it. But it was just too much to be carrying around, $2,300 in my backpack had a tendency to make me a little nervous. I decided maybe I should turn it around and pick up an iBook. My girlfriend and I decided we would use the extra money to donate to some charities for Christmas. On November 19th, up on eBay it went, along with an AirPort Base Station and a bunch of other knickknacks. I set a buy-it-now price on a whim for $2,950.

The next morning I checked my auction, a couple of bids were placed, and so the buy-it-now option was gone. Checking my e-mail I got a couple of questions about the computer and, much to my surprise, an offer to buy it for $2,900 from Steve Matthews, a dad with a lucky son in college who was going to be getting a PowerBook for his birthday. Steve wanted to pay for it COD. No problem; that's actually how I usually sell things. I called him on the phone number he gave me to ask a couple of questions and make sure everything was on the up and up.

He reiterated that he was buying it as a last-minute present for his son and since it was already setup as a package, he thought it was a good deal. Not to mention the Chicago Apple stores were still out of stock. I got home from school, packed up my PowerBook and accessories, and off they went FedEx overnight to Chicago, never to be seen again.

At 10:21 AM on November 21st, a man going by the name of Paul Smith signed for my two packages and gave the driver an official cashier's check from LaSalle Bank for $3,052.78 in return. The check made it back to my doorstep the next morning. I went to the bank, deposited the check, and withdrew enough to go ahead and pay my rent and pick up a couple of household items. I sent an e-mail to Steve to make sure he got everything OK and to check that nothing had been damaged in shipping. No reply. As the old saying goes, no news is good news, right?

My girlfriend and I went away for Thanksgiving, and when we got back on Friday, I had a message from my bank. The branch manager had called to let me know she had a returned item for $3,052.78 and that my account was now in the negative—seriously in the negative. No problem, I thought, I'll just call Steve and see what's up.

So I dialed the number I had. In the back of my mind I expected a "this number has been disconnected message." Instead I got an answer. The voice sounded identical to Steve, so I asked if Steve was there.

"Oh, Steve, yeah, that's my cousin, he's out of town for Thanksgiving you know. He'll be back Tuesday."

"Can I leave a message for him?"

So I left my information and asked that he give me a call. That little voice in the back of my mind let out a sigh and an uh-oh. The voices were the same right? Was I being scammed? Well, if I was, I certainly wasn't going to let the weekend go by without doing a little investigating.

I started off with the information I had: his AOL e-mail address, his phone number, and the address I shipped the computer to. The AOL address didn't yield anything. Doing a reverse lookup on the address (thanks to Whitepages.com) I got three names and phone numbers, none of which matched anything I had. The phone number didn't give me anything. I finally found a way to lookup the exchange on the number to see if it was a cell phone or a landline (Fone Finder). It came back as Nextel and I wanted to scream.

There really isn't anything you can do with a cell phone number. There are no directory services. The cell phone companies won't give out any information. And that's that. I

called Nextel and pleaded with them. The customer service representative I spoke with seemed more confused than anything. He kept asking me what my Nextel phone number was and why I suspected someone was fraudulently billing to my account. I calmly explained at least three times that I was not a Nextel customer, that I was just trying to get an address for another customer I suspected had defrauded me, etc. I finally gave up on Chris from Nextel; I've had customer service reps who don't even speak English who were more helpful.

I was at a dead end. I'd just sent my $2,300 laptop, my AirPort Base Station, and a load of stuff to somebody I didn't know, and all I had to show for it was a bill from FedEx for overnight shipping and a returned cashier's check. It's hard to sleep comfortably knowing some asshole has your Mac and is doing God knows what with it.

Sunday the first of December, I sprang into action full force. I called for help. I knew I wasn't going to get anywhere with this on my own, so I figured I might be able to get some help from some bulletin boards. I posted my tale of woe and call for assistance on every Mac bulletin board I could think of. I hoped that somebody who worked for Nextel, some fellow Mac addict like myself, might be willing to bend the rules a little. I wanted this guy's address and I wanted it bad. I was already pricing flights to Chicago and putting my professors on notice that I might have to miss a few classes. I may have made an error in trusting this person, but I'm not someone you want to have that happen to. I will get you. I will hunt you down, and I will bring a baseball bat with me.

I got more replies than I could keep up with. Everyone wanted to know what they could do to help or at least offer support. Well, everyone except one guy who just wanted to let me know how incredibly stupid he thought I was and that he would never have accepted a counterfeit anything. I think a 102:1 great person to asshole ratio is pretty good. Several people living in Chicago offered their assistance, be it in gathering information or even forming a tough guy squad if necessary.

The most important reply I got was a pointer to an online PI service that does reverse lookups on cell phones (Cell Phone Magic). I was already beyond broke, but I figured $85 more wouldn't kill me. Twelve hours and $85 later, I had a name, an address, and a landline phone number for this guy. The name and his AOL e-mail were eerily close, actually with a last name like Christmas—it would be pretty weird if it didn't match up. I couldn't believe it. A Chicago resident named Melvin Christmas had just ruined my Christmas. I was expecting William Faulkner to come popping out of the pantry at any moment and laugh at me.

I was now ready to call the police. I called the Chicago police department and filed a report. I gave the operator all of my information, including the real name and address I had managed to get. "A detective will contact you within one to two weeks, thank you." One to two weeks?!? I had this guy, I'd

done all the work already, all they had to do was go pick him up. I'd even gone ahead and called FedEx and spoken to the Chicago station manager and was assured that the driver would cooperate in identifying the guy if necessary. All they had to do was pick him up. In one to two weeks he could be gone. And all the while my precious PowerBook is sitting God knows where being used by somebody completely undeserving of a Mac. I know in my heart that Mr. Christmas is really a PC guy.

I was furious. Chicago PD weren't going to do anything about this. If they were anything like the New Orleans PD, one to two weeks was likely to turn into never. I figured I'd call Mr. Christmas myself. Let him know I was going to give him a chance to fix this, and I thought, maybe at least scare him. Let him know he was dealing with someone who would track him down no matter what, even if I had to make a deal with the Prince of Darkness to do it. Mr. Christmas said he didn't even know what e-mail was. Obviously a PC user.

I kept checking the message boards. Maybe someone would have a better idea. I called the local FBI field office. Agent Jones was very understanding, but let me know that even though this crossed state lines, the field office didn't take anything involving less than $5,000. "Try the Chicago PD."

I kept everyone on the Mac boards updated as best I could. On Tuesday I got a useful reply: try the Secret Service; counterfeiting is their jurisdiction. I made my way to the Federal Building being renovated, here in New Orleans. After walking many a dark, scary hallway, I found myself at the door of Agent Keith Lopola. Keith came out and heard my case. I had brought copies of all the e-mails between myself and Steve Matthews/Paul Smith/Mr. Christmas, a copy of the check, and the call journal I had started keeping. Agent Lopola told me the same thing the FBI did, "It falls under our jurisdiction, but we can't take the case." He wanted to let me know that he really felt for me. Thanks. I left the office determined to call and bother him and the Chicago PD everyday for the rest of my life or at least until Mr. Christmas was behind bars.

Finals were fast approaching. It's not very easy to concentrate on school when all you can think about all day is the fact that all of your student loans for the next semester are going to cover this counterfeit check. That and some grubby criminal has your PowerBook. It's enough to drive someone to drink.

Tuesday night I got an e-mail from someone who had seen my story posted on O'Grady's PowerPage, a PowerBook enthusiast site. George Dunbar had seen the story and thought it sounded eerily similar to his. I called him, we compared notes, and it turned out it was the same guy. George forwarded me all of his e-mails. Everything was the same, word for word; it was like Mr. Christmas just copied and pasted and magically made money. George was in it worse than I was though and had completely given up. He was out $6,000 and two computers. He also let me know that

there were more victims. He'd talked to at least three other people who had been taken by the same guy, all of whom had just given up. I was not going to give up. That night I dreamed of Mr. Christmas and a baseball bat, some duct tape, and roofing nails.

Wednesday morning I decided I was going to Chicago. I set up another eBay auction under my girlfriend's account, this time for same computer, different city. Three hours later, lo and behold I received an e-mail from eBay user videopro55 (the same one) asking me if I'd like to sell the computer right now for $2,500. Oh yes, I'd love to sell the computer; I'll even be there when it gets delivered to make sure it gets "setup properly."

He e-mailed me a new address and phone number. The phone number again traced back to the same address for Mr. Christmas. I called the Secret Service and the Chicago PD, pleading that all they had to do was be there when FedEx dropped off the package. It was a guaranteed hit, he'd have another counterfeit cashier's check, all they'd have to do is arrest him. Like shooting fish in a barrel. "Sorry, Detective McDonaugh will be out until next Wednesday, can I take a message?" Fine, if the cops won't do it, I decided I'd just Priceline a ticket and be waiting next door when it got dropped off. So I'd know what kind of neighborhood I was looking at, I asked for help again in the Mac boards. Two Chicago residents replied, and the next morning, courtesy of Tim, I had 23 pictures of the house, the cars in the driveway (with license plate numbers) and the neighborhood. I'd like to see a Dell user do something like that at 4:30 in the morning for a complete stranger a thousand miles away. I started planning my trip. I decided I'd leave on Saturday, have the package delivered on Monday, and make it back just in time to screw up on all my finals.

On Friday, in preparation for flying up, I mapped the new address from the one for Mr. Christmas to see how close it was. As I looked at the map, it hit me. The new address wasn't in Chicago. It was in a suburb, Markham. I googled for the Markham police and five minutes later was talking to a very enthusiastic Sargeant Knapp. I had hit the jackpot; the new drop was outside of Chicago jurisdiction and therefore outside of their inattentiveness as well. Sargeant Knapp informed me he loved this kind of thing; he even had a UPS and FedEx uniform ready. He'd call FedEx and they would set it up for Tuesday. I was certain I was dreaming. After talking to two detectives in Chicago, an FBI field agent, an agent in the New Orleans field office of the Secret Service, an agent with the L.A. Secret Service, and having a conference call with a large group of agents from the Chicago Secret Service, I finally was getting somewhere. And I didn't even have to stand on someone's doorstep with a baseball bat to do it.

I spent the entire weekend on pins and needles. What if Mr. Christmas figured something out between now and Tuesday? All would be lost. I wouldn't even get the chance to confront him on my own. On Monday I spoke with Sgt. Knapp to make sure everything was ready to go. I had sent him a package with all of my documentation (he didn't have e-mail), and I tried to explain what all the e-mail stuff meant as best I could. He had worked everything out with FedEx and they were set for the delivery on Tuesday.

I called my brother in Nashville and had him send the package. I had set everything up to be coming from there so that Mr. Christmas wouldn't get suspicious. I could barely sleep Monday night. All I could think about was something going wrong and my only chance at getting this guy being missed. I wanted to update everyone on the Mac boards, but I had to keep it quiet until I knew something was going to happen.

Tuesday afternoon Sgt. Knapp called. They had tried the delivery but no one was home. I just wanted to scream. The board users kept posting how the suspense was driving them nuts. Well, it was going to give me an aneurism. A million possibilities went through my head. Maybe he had somebody working at FedEx who tipped him off, maybe I worded something in one of my e-mails a little off. Sgt. Knapp called me back to let me know they would try the delivery again tomorrow. He also wanted to let me know that they had intercepted another package that was being sent to the same address. Looks like he'd already struck again, and thankfully the lady from New York will get her computer back. He also told me that he was definitely going to keep pursuing this, and that oddly enough, the address I'd given him was also related to another fraud case, but this one much bigger (hundreds of thousands) involving a certain Chicago franchise I won't mention. So maybe I had led them to something bigger than just some asshole counterfeiting cashier's checks.

Today I had finals all day. I'm a 4.0 honors student. I've had a 4.0 all semester. I'm not sure if I'll keep that after today. I just couldn't sleep last night. All I could think about was Mr. Christmas and the delivery. I couldn't study either. So I winged it. I'll get my grades tomorrow. I called Sgt. Knapp at 2:45. He told me he was on his way back to the house. They'd already made the delivery and arrested the guy. He had more than $10,000 in counterfeit cashier's checks waiting for deliveries.

I got him.

I'm right now waiting for Sgt. Knapp to fax me a copy of his mug shot for posterity. Then I'm going to go celebrate. Sgt. Knapp said the guy was cooperating and he was going to try to recover my laptop. I'm hopeful, but I don't expect it. I might not ever get my computer back, but at least there is one less asshole on the street. When will criminals learn? You just shouldn't mess with Mac people.

For everyone on all the boards who offered their help and encouragement, I thank you. This would have been a lot harder without you. If you're ever in New Orleans, look me up

and I'll buy you a beer. I've still got to figure out how I'm paying for college next semester, but I'll keep some beer money set aside for ya'll.

Oh yeah, and if there are any lawyers in the Chicago area who can file a civil suit against this guy for damages (yeah I know I'm not going to collect) please contact me.

The sites with great users that helped out (you can sign up for the forums and read all about this as it was going on) were MacRumors.com[1], MacNN[2], ThinkSecret[3], and O'Grady's PowerPage[4]. I've also created a Web page that includes updates to this story[5].

1. http://forums.macrumors.com/
2. http://forums.macnn.com/
3. http://www.pstheme.com/cgi-bin/think/ikonboard.cgi
4. http://www.xsorbit4.com/users/powerpage/index.cgi
5. http://www.remodern.com/caught.html

Buying a New Mac

As I write this article it is only a week away from Christmas. By the time you read it the yuletide season will have passed and I will probably have already broken one of my New Year's resolutions. This year I know that the vision of a new iMac, PowerBook, or iPod dancing in my head will probably turn out to be a new sweater or pair of socks. Now, I am very thankful for the many blessings I already have, but Christmas always puts me in a computer-buying mood since I bought my first Apple II more Christmases ago than I care to remember.

I was also put in the computer-purchasing mood by the recent experiences of a Wintel-using coworker. She attended a computer conference recently and got her first good look at an iMac. She was impressed by the sleek, "cool" design and by the unmistakable feeling that it was easier to use than Windows. I bit my tongue and resisted the temptation to say, "See I told you so." Whether you are a Windows user eyeing your first Mac or a Mac head whose presents did not include one of the shiny new toys dreamed up by Santa Steve and the elves at Cupertino, perhaps it's time you bought your own.

Hold on a minute. Before you rush out and buy that spanking new Mac there are a few things you ought to think about. You have to decide which Mac to buy and where to buy it. There have probably been thousands of monitor screens worth of text written about how to choose the right Mac and much of it written by people more qualified than I am to write about such topics. I choose to focus these monitor screens of text on the question of where to buy a Mac.

By now you're wondering why I chose this aspect of purchasing a new Mac. After all, "Aren't there important decisions to be made about the amount of memory, size of the hard drive, and speed of the machine?" Well, these are important decisions but my idea is that if you find the right place to buy a Mac the vendor will help you find the right machine to buy. Find the right place to buy and their primary concern will be getting you in the right machine. The smart computer vendor knows that getting you in the right machine the first time increases the chance that you will be a repeat customer when it's time to purchase accessories, supplies, or a replacement machine.

Over the years my wife and I have purchased an Apple II, two iBooks, a PowerBook, one desktop Mac, and two Windows machines from various outlets. These thoughts are simply a compilation of ideas based upon our experiences. Hopefully they will be of some use to you.

So, What Are My Options

As you look around for a place to purchase your new Mac the landscape seems to be dominated by retail outlets or mail order and Internet outlets. I have deliberately omitted auctions from this discussion because while these are not bad places to buy computer equipment I think they are best reserved for users with some knowledge about the systems they are interested in purchasing. I would like to begin by looking briefly at the advantages and disadvantages of both types of purchases before concluding with some thoughts that seem to be appropriate to both the retail and online and mail order distributors. Let's begin with a look at retail outlets.

Advantages of Retail Outlets

The first Mac I ever had a hand in purchasing was purchased from a local computer store. There are some distinct advantages to this method of purchase. For some computer users, especially those new to computing or new to a platform, retail outlets offer some distinct advantages over other outlets.

For me, the best thing about buying a computer retail is the ability to "kick the tires," so to speak. This is your opportunity to check out the feel of the keyboard, get a good look at the monitor, or mouse around a bit. Everyone seems to have different preferences for how these items should look and feel. This is your chance to find out what look and feel you prefer. These seem like minor points, but the minor irritations in these areas become major annoyances after several hours working at the computer. My wife, for example, has purchased two different keyboards for our Blue and White G3 attempting to duplicate the feel of the Apple Extended Keyboard that was available with the LC II. The same thing is true of monitors. While there are a number of quality monitors available for use with most Macs, the picture is not identical on each monitor nor is the feature set.

As part of the kicking the tires phase of the purchase process, retail outlets also give you a pretty good idea how much physical space the computer and monitor will occupy. Nothing could be worse than buying a 22" monitor only to discover that it does not fit comfortably into the space you have available.

Perhaps the best reason for using a retail outlet is establishing a rapport with someone who may be your first contact in the unlikely event that you need a repair. Some retail vendors offer free or reduced cost classes when you

purchase a new machine. Given how easy it is to learn to use a Mac this may not be necessary, but it's a nice option if you need it. If you're lucky there will be an excellent dealer near you. If you are exceptionally lucky there will be an Apple retail store near you.

The second retailer that I went to was one of the best I have ever encountered. He had no problems with allowing us to "kick the tires." Even though the salesman was a college student working for an academic outlet, he was perhaps one of the best computer salespeople I have ever met. He was also quite knowledgeable about Macs even though he himself was a PC user.

Finally, a local retailer may have an advantage when something needs to be returned. In the unlikely event that something you purchased turns out to be defective it may be more convenient to be able to return it to a local retailer than to pack it up and ship it to a mail order or Internet vendor.

Disadvantages of Retail Outlets

Apple has done a great deal in the last few years to make sure that any authorized Apple retailer that you encounter will provide a positive shopping experience. My first experience in such an outlet was not so positive. When I entered the store the sales person seemed to be determined to push my wife and I into purchasing a PC. Even after we expressed interest in several Mac models he seemed to be almost insist that we purchase a PC. This phenomenon is less common than it was, but if it happens to you run for the nearest exit.

Over the years I have discovered another potential disadvantage of the retail chain. Although most retail vendors work very hard to answer questions and provide customer support I have encountered dealers that for whatever reason were not very good in this aspect of computer sales. The same vendor who pushed us in the direction of a PC would answer questions if I asked them but not answer questions very well if my wife asked them. The primary difference seems to be that I was familiar with Macs and would let him resort to jargon. My wife, on the other hand, has a low tolerance for this behavior and insisted that he explain things in plain English. Once he tried to do this it became apparent that the salesperson neither understood nor liked Macs.

One of the problems that some retail vendors face is the size of their stock. While they generally keep at least one or two of the basic models in stock anything but the most basic modifications often requires a special order.

Perhaps there is no retail Mac outlet, good or bad, near you. You won't be forced to purchase a PC by default—there are other options.

Advantages Mail Order and Internet Outlets

I have grouped these types of outlets together because many of the Internet vendors that are so popular right now are in reality mail order vendors with Web sites. If you are uncomfortable ordering over the Internet, a quick phone call will put you in touch with a real live sales representative.

One of the primary advantages of mail order outlets is the variety of Mac configurations from which to choose. Although they tend to have the same models as local vendors, the mail order and Internet venders tend to be larger and have more configuration options in stock.

Mail order and Internet vendors tend to offer several variations of each Mac model each having different levels of memory, bundled printers, or other perks. The sheer size of some of these venders means that they often have computer configurations, accessories, and supplies that all but the largest retail vendors have to order.

Mail order and Internet venders may also have an advantage when you arrive at the virtual checkout counter. The initial price of equipment may be somewhat lower than your local dealer. Even when the price is comparable you may save some money on sales taxes. Here in the United States mail order and Internet vendors may not be required to collect sales taxes. This is not true in all states and the laws are changing, so before you calculate those savings ask the sales representative whether sales tax will be collected on items shipped to your address. International readers should also check out taxation issues before finalizing the purchase. If you save some money by using a mail order or Internet vendor there are some potential tradeoffs.

Disadvantages of Mail Order and Internet Outlets

One of the disadvantages associated with using mail order and Internet vendors is that some of that "kick the tires" feeling is lost. You can't type on the keyboard, look at the screen, or just mouse around to get the feel of things.

If you're familiar enough with the feel of the hardware you are thinking about purchasing, this may not be a major issue for you.

Mail order and Internet vendors also present some interesting challenges because they generally rely on a third party to ship goods to you. Shipments may take anywhere from a day or two to a week or more depending upon which method of shipment you choose. Although overnight and two-day shipping options are offered for most software and equipment, this convenience comes at a price.

When comparing these vendors' prices with retail prices be sure to include shipping costs.

Returning goods also presents interesting challenges for customers who opt to purchase from mail order venders. Usually you get exactly the goods that you ordered and they arrive in good working order, but sometimes things do go

wrong. Most mail order and Internet vendors have reasonable return policies but you do need to know what these policies are before you make a purchase.

Now that we have looked at some of the advantages and disadvantages for both types of vendors, let's look at some aspects of the buying process that I believe should be the same no matter where you purchase your Mac.

Time to Start Asking Questions

Now it's time to look at some things that should be true no matter what type of vendor you choose. My approach is based on the philosophy that it is your money being spent so you should be in control of the buying process. If at any point you do not feel comfortable with the vendor you have chosen, stop the process until the issues are resolved or you find another vendor. The ideas presented below are not intended to be an exhaustive list and are not in any particular order. You may need to ask additional questions based upon your specific needs.

- How reputable is the vendor you would like to use? Find out how long the vendor has been in business and what their reputation is for customer service and satisfaction. Check with friends, family, and other computer users etc. if necessary, to get as much information as you need.
- If you choose a retail vendor, take the opportunity to try a Mac model or two out. This will also give you an opportunity to see just how fast the machine feels in the kinds of tasks you perform. It doesn't matter how fast some Mac guru says the machine is doing graphics tasks if your primary tasks are word processing and spreadsheets. Most vendors don't mind you doing this within reason.
- What exactly are their purchase and return policies? Which items can be returned and under what circumstances? Some vendors apply a restocking fee to returned goods. Find out if this is the case with the vendor that you choose.
- Consider purchasing the equipment with a major credit card. Most cards have a grace period. Balances paid off during this time generally do not incur interest charges. The card company may be able to assist you in the event there is dispute with the vendor.
- Find out when your credit card will be charged. Most vendors do not charge your card until items have been shipped. Several years ago I lost money because I did not know about this. I ended up paying for a modem I never received. The vendor went out of business sometime between the time my card was charged and the time the back-ordered modem was to be shipped.
- When talking to salespeople, take notes. During this process you may talk to several sales representatives. The only good way to keep track of promises they have made is to write them down.
- Ask as many questions as you like. No matter how much of a novice you are with computers, sales representatives should be able to answer your questions in terms that you can understand. The sales person's attitude should be that there is no such thing as a stupid question. It's your money; you get to decide what is or is not a stupid question.
- When calculating the price of the equipment and trying to decide which vendor provides the most value, be sure to calculate what I call the "door to door cost." How much of your hard earned currency will it take to get the equipment from the vendor's door to your door? Include such costs as taxes, shipping, etc.
- If you choose a vendor that sells both Macs and PCs, don't let that vendor talk you into buying a PC. It's your money. Buy the platform that you want to buy rather than the platform the vendor wants to sell you.
- If you have a friend, co-worker, relative etc. that is a Mac user, consider letting them help with the buying process. It's always a good idea to have little help and friendly advice.
- As a general rule, purchase as much memory and processor speed as you can reasonably afford. In the past, the same thing has been said about hard drives but the currently shipping models have more than enough space for most users.
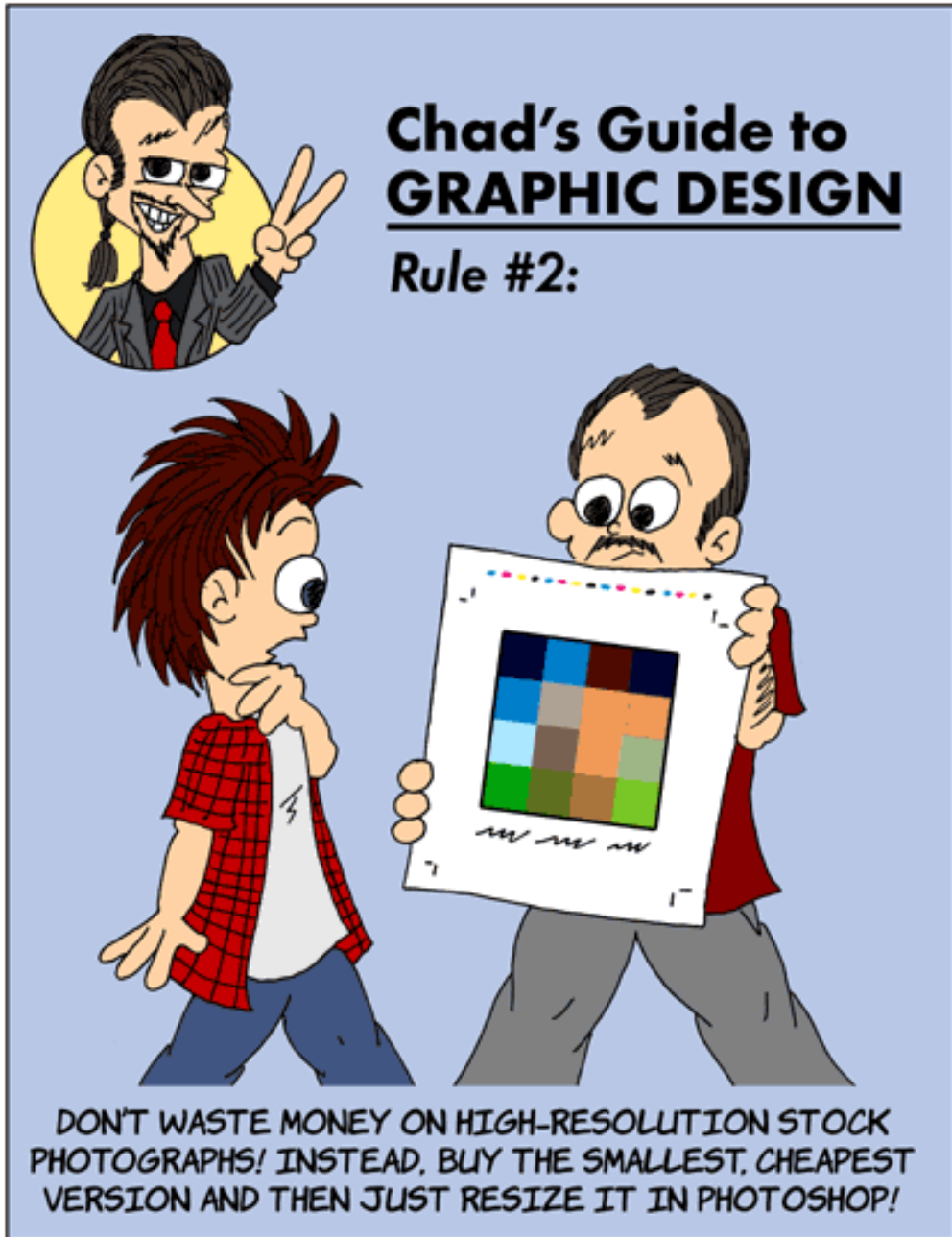
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This is certainly not everything to consider when deciding where to purchase a new Mac, but it should be a good start. Overall, Apple's equipment is a better value than it has ever been and significant efforts have been made to assure that authorized vendors provide good service and support. With their continuing efforts and you establishing a good relationship with your vendor, you're almost guaranteed to have a positive buying experience.

"NOW THAT YOU MENTION IT,
I THINK WE DO NEED A NEW SIGN!"

Tetons

Tetons[1]

This month's desktop pictures were submitted by ATPM reader [Janet Mobley](2). Janet is the editor of the North Coast Mac Users Group, and she took these pictures on a vacation to [Grand Teton National Park](3) in Wyoming.

Previous Months' Desktop Pictures

Pictures from previous months are listed in the [desktop pictures archives](4).

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](5) in issue 5.10 and available for [download](6).

1.
2. mailto:janmobley@mac.com
3. http://www.nps.gov/grte/
4. http://www.atpm.com/Back/desktop-pictures.shtml
5. http://www.atpm.com/5.10/roundup.shtml
6. http://www.peircesw.com/DeskPicture.html

Reading, Writing, and Arithmetic: Educational Tools

Issa 1.0.2

Developer: Stick Software[1]
Price: $10
Requirements: Mac OS X 10.1.5

Ben Haller named this computerized version of the fridge poetry kit after his favorite poet, Kobayashi Issa (1763–1827). This program, although great for frustrated poets, will also help kids click into their creative side. Simply point and click on a word, or group of words, and drag to another word or words to create a haiku poem.

Here's my poetic attempt:

I love reading haiku poems, but just can't write them.

Issa also comes with a really cool feature: Define Tiles. Highlight a word tile and select Define Tiles from the Edit menu. Your browser will open up and go directly to dictionary.reference.com[2] to give you the definition and pronunciation of the word. This is great for helping kids learn the meaning of new words.

Issa comes with three wordlists: Standard, Celebrities, and Harry Potter. Use the Standard wordlist (with verbs, adjectives, articles, etc.) to create poems,, Merge one of the name wordlists, or download even more wordlists.[3] You can also add a new word to a wordlist, as well as change the font, size, and color of the word tiles.

You can also find matching tiles (it's hard to find words that are the same when they're plastered all over your desktop) or make a duplicate of a word.

Issa is really a worthwhile program. It includes Help online[4] and a page to display your poems[5]. However, if you don't like a messy desktop, it might make you a little crazy. Of course, you can place all the word tiles in a neat little pile at the side somewhere, but that might take a while…

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2. http://dictionary.reference.com

1. http://www.sticksoftware.com/software/Issa.html

3. http://www.sticksoftware.com/software/Issa/wordlists.html
4. http://www.sticksoftware.com/software/Issa/IssaManual.html#basics
5. http://www.sticksoftware.com/software/Issa/poems.html

Proofreader 2.1.1

Developer: Mattson Software[1]
Price: $5
Requirements: PowerPC-based Mac with Mac OS 8.6 and CarbonLib or Mac OS X
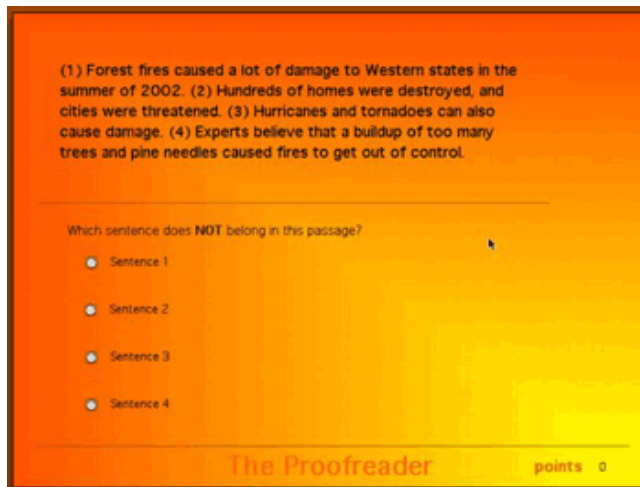
ATPM RATINGS
VERY NICE

Do your kids need help with grammar? Proofreader 2.1.1 is here to help. This program is a fun way to help them brush up on their proofreading and grammar skills. It works in a simple multiple choice format with over 100 examples.

By reading a story, Proofreader goes through the story sentence by sentence offering three options to change something in the sentence that will make it grammatically correct. If you choose the correct selection, an explanation of why it is right appears at the bottom of the screen. You then can move on to the next sentence. If your selection is incorrect, "Try Again" appears at the side of the sentence and you get another go.

In this example below, you are asked to figure out which is the best way to combine the two sentences. Choose from one of the three options.

Again, in the multiple choice format, you are given the "one of these things doesn't belong" option. Below is a four-sentence paragraph, but one of the sentences doesn't fit. Choose the sentence that does not belong.

There is also an "Is It Complete" section, where you have to identify complete and incomplete sentences.

Overall, Proofreader is a great program to help teach kids about spotting grammar mistakes and explaining why the correct answer is correct. (Hey, it might even help clear up some of your own sticky grammar questions.) It's obvious that proofreading is a needed skill in teaching kids to edit their own work and the work of others. Personally, I think it is especially timely since the use of e-mail and Web sites has, in some sense, eradicated any sense of grammar and punctuation.

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1.   http://www.mattsonsoftware.com/proofread.html

FlashMath 1.0

Developer: St. Clair Software[1]
Price: $15
Requirements: Mac OS 8.1 with CarbonLib 1.1.1 or Mac OS X 10.1

This unique flash card game, designed and written by Ben Gotow, teaches basic math skills: multiplication, division, addition, and subtraction. While a student is on the computer, FlashMath "intermittently interrupts their computer play to quiz them on a set of flash cards." The score the student gets on the quiz determines how long he can continue to use the computer before the next quiz.

Although ideally for a classroom setting, it's easy to use when the kids are on the computer at home. You (teacher/parent) set up the questions using a password, so a student can't quit the program or change the questions. Create the questions you want to quiz your kids/students on: just do times tables or have all four operations (+, -, x, /). More than one child at home? Customize the questions for each one as each child logs into her own personal questions. There are also report cards to let you keep track of the child's progress.

Ten questions drop down onto the desktop one by one. Type in the answer and press return. If you make a mistake, but know the correct answer (before you hit Return), just hit the Delete button to erase the incorrect answer and retype. If you answer incorrectly, FlashMath will answer for you (in red) so you know the correct answer. Hit Return and continue to the next question.
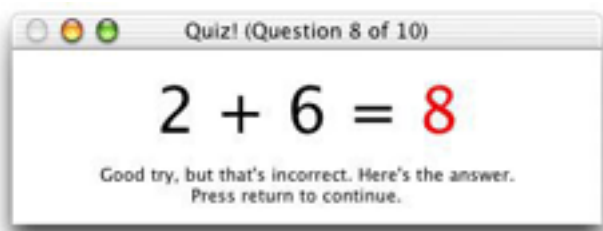
The red number indicates the correct answer. If you get all 10 questions right, the following message appears at the end of the quiz:

"Good Job! You got 10 out of 10 correct! You have 30 minutes until the next quiz."

However, if you get any wrong, there's less time until your next quiz: "Good Job! You got 5 out of 10 correct! You have 15 minutes until the next quiz."

FlashMath is certainly a good way to learn fast math facts, however, there is no timer. I think this game would be ideal if there were a time limit, since most of these number facts must be learned before proceeding to more challenging math, i.e., multiplication should be automatic in order to tackle long division.

Aside from the timer, this computerized version of flashcards beats the way we used to do it: A student would move to each desk (up and down the rows) and whoever answered the fastest would proceed to the next desk. FlashMath is a less competitive way to learn facts and will probably not intimidate students if they have to go peer-to-peer.

Quiz! (Question 8 of 10)

$$2 + 6 = 8$$

Good try, but that's incorrect. Here's the answer.
Press return to continue.

1.   http://www.stclairsw.com/FlashMath/index.html

Review: EarthDesk 1.2.5

by Lee Bennett, lbennett@atpm.com

ATPM RATINGS
VERY NICE

Overview

EarthDesk is the solution for anyone who's ever walked past a Geochron[2] and wanted one of their own until they learned the cost—about $1,500 to $2,500! This much more wallet-friendly utility calculates Earth's current sun and moon illumination, updates it at regular intervals, and displays this image as your desktop wallpaper.

If nothing else, EarthDesk will give you a strong motivation to keep your desktop clear.

Comparing Apples to…Ahem…Apples

I've read comments on VersionTracker from people naming other products they think are better because the other applications have features like current cloud conditions and weather info, and they can zoom in to quite high resolution. All of these comments missed the point. Those applications either run just like most any other application with the graphics in a window floating above your desktop, or they act as a screen saver.

Sure, there are utilities like SaverLab that let you run a screen saver as your wallpaper, but SaverLab can only do this on the newest Macs, it requires Jaguar, and it eliminates your ability to work with icons on the desktop. EarthDesk, on the other hand, is simply a dynamically updating wallpaper image and can run on any Power Mac.

Features

EarthDesk has a database of 10,000 cities you can choose to set as the map's centering point. The preferences menu also includes a popup menu to provide information about a city, such as sunrise and sunset, moonrise and moonset, current local time, coordinates, etc.
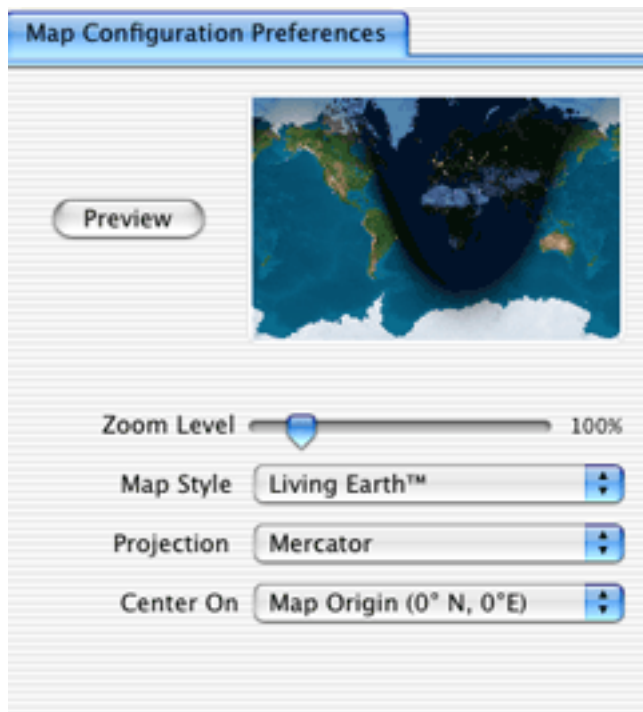

Besides a city, the centering point can also be set as 0° N by 0° E, or it can follow subsolar and sublunar points and antipodes. The map itself can be displayed as one of 11 different projections, including the familiar Mercator projection and a standard globe. You can select a Living Earth mode to simulate a view from space (sans clouds) which even

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2. http://www.geochronusa.com

1. http://www.timepalette.com/earthdesk.html

shows city lights during the night. Alternatively, you can select a political map mode, displaying country and state boundaries.

A feature that surpasses a Geochron—at least the models I've seen—is that EarthDesk shows the region at night where the moon is not yet above the horizon. These areas are shown as solid black regions with only the city lights visible, as opposed to the dimmed night view when you can still make out the land masses.

Conclusion

Other VersionTracker comments I read complained about the $20 price tag. I can understand why some people might find it a tad steep. (Yes, I remember the tightwad days of college.) I certainly wouldn't complain if it were $10 or $12, but I didn't mind the $20. Regardless, my rating of Very Nice instead of Excellent was not based on its price.

What I'd like to see is either a menu bar or System Preferences pane to control this product. Currently, an application must be running (which means its icon is in the OS X dock) for the image to update. The wallpaper does remain visible if you quit the application, but it will no longer stay current. Another helpful addition would be to automate Daylight Saving Time. Currently, you must click a checkbox to toggle it on or off and remember to do so every time you "spring ahead" and "fall behind."

When I inquired about these items, the developer responded (and did *not* take his time doing so) that EarthDesk is a Carbon application so it can run on OS 8.6 through 9.2, and Carbon applications can't be System Preferences panes or menu bar icons. He also indicated that automated Daylight Saving Time is likely to show up in a future release.

Deep Thoughts

By way of a witty closing to this review, I'll leave you with this question. What does it say about you if you don't want to spend four figures on a Geochron, yet you fill your $3,500, 23" Apple Cinema HD Display[1] with the EarthDesk image to give your coworkers even more of a reason to say "wow" when they pass by your desk?

1. http://www.apple.com/displays/acd23/

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Review: iSkin Keyboard Protector

by Christopher Turner, cturner@atpm.com

When you use your PowerBook or iBook as your main Mac, one of your worries is that some sort of physical damage is going to put your beloved system out of commission. Most people think about dropping their iBook, and move to protect their portable with padded cases for traveling. This is an extremely valid concern and more than likely the most common injury for portable Macs.

Another possible danger that is often overlooked by portable users is liquid spillage, especially down through the keyboard. On a desktop system with a detached keyboard, if you spill your morning coffee and short out the keyboard, you're pretty much only killing the keyboard. On your PowerBook, however, you could damage so much more. Beneath an iBook's keyboard lies your AirPort card, your system RAM, your hard drive, and your motherboard. Imagine sitting in the coffee shop working on the Great American Novel, your next killer sales presentation, or the company's quarterly financials, when a careless waitress knocks your arm and your iced espresso ends up coating your open PowerBook. The screen goes wacky, then black. And if you don't have a backup (another article entirely), you are hosed, my friend.

The iSkin Keyboard Protector from acKNOWLEDGE comes to the rescue. Moulded to the keyboard layout of the iBook and all PowerBooks from the 667 MHz model on up, it protects your keyboard: it locks out liquids, dirt, crumbs, pet and human hair, and other nasty stuff that might end up between the keys.

Now, my PowerBook G4 is of the original 500 MHz vintage, and I overlooked the redesign in the keyboard layout amongst the TiBook revisions, but there was one. Andrew Ackloo of acKNOWLEDGE pointed it out to me, and when I received my Protector, I could see precisely where the revision was made. It's really quite simple and in one key row: the F-keys. From the row of number keys to the bottom of the keyboard, the iSkin Protector moulds perfectly to my PowerBook's keys.

However, where the Protector doesn't mould precisely is where there is a gap between the F4 and F5 keys, and the F8 and F9 keys, throwing some of the subsequent F-keys out of alignment with the Protector. Again, this is *not* a flaw of the iSkin Keyboard Protector; rather, I am using the Protector on an earlier revision of the PowerBook G4 that is not officially

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1. http://www.iskinprotect.com/iskin4ibook.html

supported by acKNOWLEDGE. For owners of the PowerBook G4/667 and up, you will have a perfectly moulded cover to your keyboard, as will all iBook users.

The Protector is made out of clear silicone, which makes it pliable and durable, perfect for its intended use. It also means there is no need for any adhesive to get it to stay on your keyboard, so there's no sticky stuff to worry about cleaning off the keys later. And if you do happen to spill something on top of the iSkin Keyboard Protector, you can clean it off with some warm water and soap, then air dry the Protector, and you're back in business.

The silicone also allows for a little PowerBook personalization: colors. In addition to the clear version, called White Frost, which I use, the iSkin Keyboard Protector is available in five colors, or Skin Tones: Blue Mist, Bubble Gum, Creamsicle, Lemonade, and LimeLight. So as to avoid confusion, those would translate as light blue, light pink, light orange, light yellow, and light green.

I was concerned with the iSkin Protector interfering with the PowerBook's heat dissipation, as a lot of heat is convected out through the keyboard. I am pleased to report that I have not experienced any increases in my PowerBook's fan coming on during my normal day-to-day usage, and bear in mind that my PowerBook is my main Mac workhorse.

My only disappointment with the iSkin Keyboard Protector is the price. Twenty-five bucks is a little high for the type of product this is. Fifteen dollars is more in line with my expectations, but then I am not privy to the design and production costs of such an item.

That said, if you're looking to add a simple layer of protection from spills, dust, and dirt to your portable Mac, the iSkin Keyboard Protector fits the bill.

Review: Kinesis Advantage Pro

by Paul Fatula, pfatula@atpm.com

ATPM RATINGS
VERY NICE

One of my favorite computer accessories is the keyboard. Not a boring ordinary flat keyboard but something really eccentric and unconventional-looking, not just for the sake of using something out of the ordinary (though I admit to that, too) but because those strange-looking keyboards that make people who walk into your office and gawk, "What is that?" look that way as a side effect of being designed well, with comfort of use as the first priority.

The Kinesis Advantage Pro is one such keyboard. I've seen Kinesis keyboards on the desks of Windows-using colleagues for years, and with the Advantage line, Kinesis has finally made its strange-shaped keyboard an option for Mac users.

Design

The Kinesis Advantage Pro is a single piece, solidly built (plastic, but it doesn't feel cheap) keyboard, with two concave bowls of vertically-aligned keys, one for each hand. But it's easier to show you than tell you, so have a look:

I'm not really sure where the metallic silver color choice came from; maybe trying to match the TiBook? Anyway this is the only color the Pro version of the keyboard comes in. The regular version, priced at $299, comes in white and black. I'm not nuts about silver, but anything's better than beige.

One thing I noticed right away is that the keyboard is marked with Command keys (one on each side), and even has Eject and Power keys. In fact, the keyboard, which is switchable for Mac or PC use, ships configured for Macintosh. Windows users are the second class citizens here, having to change the keyboard's configuration if they want the thumb keys to work optimally.

Mac key labeling isn't quite perfect, though: the Return key is labeled Enter, which is fine until you find yourself hunting for the Enter key. Confusingly, it's also labeled Enter, and there are actually two of them, one below the home row of the right little finger, and the second below that. The key must be pressed in combination with holding down the keyboard's foot petal (or while "keypad" mode is active) to produce an Enter rather than a character.

The only other thing I disliked, as far as key positions go, is that the spacebar is only available to the thumb of the right hand. The equivalent key on the left hand is backspace. I don't know about you, but I use the spacebar a lot more frequently than I backspace, so that placement seems a little unbalanced. Also, coming from a regular keyboard, I'm

1. http://www.kinesis-ergo.com/advantage_pro.htm

accustomed to hitting space with either thumb. I had a terrible time adjusting to only hitting space with my right thumb; I was constantly deleting rather than spacing, even as far as two weeks into using the keyboard.

The foot pedal is optional; it comes with the Pro but not with the regular version of the keyboard. Its purpose is to let you use number pad keys, when it's held down. (You can also hit the Keypad button to activate those keys for long term use, or if you don't have a foot pedal.) It's solidly enough built to survive life on the floor, and has just the right sensitivity, so you can rest your foot on it without inadvertently activating it. I initially thought I'd be forever getting my foot tangled in the cable, but in practice I've only rarely tripped on it.

Installation

As I wrote above, the keyboard ships configured for a Macintosh. As far as the Mac is concerned, the Kinesis Advantage Pro is just another USB keyboard: no special drivers are required. Programmable macros are handled within the keyboard, which has its own memory, rather than by software put on the computer. So you can plug it in and start typing.

The keyboard has a USB port into which you can plug your mouse, and a strange little telephone wire type cable that is used to connect the foot pedal. Kinesis, like every company except for Apple, is aware that some people don't put their keyboards right on top of their computer, and so they have wisely provided a USB cable long enough to reach your computer without an extension cable.

Getting Used to It

The Kinesis keyboard ships with a small booklet of "Adaptation Exercises" designed to get you going using the keyboard. I don't want to sound harsh, but the exercises are deadly dull:

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afrf aded afrf aded afvf adcd afvf adcd
juj; afad juj; afad kik; fsff kik; fsff
graf olok graf olok bavf kuj; bavf luj;
swsf ljuj swsf ljuj deda lolj deda lokj
```

is really not the most interesting introduction to using a new keyboard. The adaptation exercises are certainly well-intentioned, and good for what they are, with the text between exercises having a friendly and helpful tone, but a few exercises in, I decided I'd had enough.

Typing was slow, at first, but the only real difficulty I had was the backspace/space issue I mentioned above. The Advantage Pro allows you to remap keys, so I knew I could remap backspace to the Delete key beside it, and then remap the Backspace key to act as a second space key. I resisted only because, hey, I'm reviewing this keyboard, I should subject myself to the "out of the box" experience, at least at first. (Eventually, I gave up and remapped the keys.)

It probably took me longer to get up to full typing speed on the keyboard than it would take most users: I use a number of different computers every day, so I wasn't able to use the Kinesis keyboard exclusively. That meant I was un-reinforcing what I was learning about the new keyboard every time I sat down and typed at a traditional one. (That may also be responsible for my inability to adjust to only having a space key under one thumb.)

That said, it took about 3–4 weeks to get up to a comfortable percentage of my flat keyboard typing speed. Only for the first week or so was I thinking of the Kinesis keyboard as a hindrance to my typing, where I really had to force myself to use it rather than switch to another keyboard to hammer out a quick document. Let me add that Kinesis recommends that you not try starting with their keyboard at a time when you're going to have to do lots of work at high speed. That's reasonable; all they're saying is, it'll take a little time to get accustomed to the different keyboard configuration.

Not that it's really that different, at least on paper. All the keys are where you'd expect to find them in a typical QWERTY layout. The difference is that the keys are placed in vertical rows, rather than staggered, and that they are in a kind of a concave bowl, so they aren't quite where your fingers are used to finding them. They're close, but it takes time to adjust to the difference.

Two things I never got used to, and which can't really be helped, are these: First, there's no Enter key on the far right side of the keyboard. With a regular keyboard, I've gotten in the habit of keeping my trackball just to the right of the keyboard, and frequently hit the enter key with my mousing hand, without removing my hand from the trackball. That's something I can no longer do. Also, it's more difficult to type

with just one hand on this keyboard, due to the great separation between the left and right hand keys. If you like to keep one hand on the mouse and type the occasional word with the other hand on the keyboard (as I do when editing documents), you'll find this keyboard requires a lot more arm movement than a conventional keyboard does.

Ergonomics

My perspective on what constitutes an ergonomic keyboard has been forever altered by the [DataHand](http://www.atpm.com/7.05/datahand.shtml)[1], which I reviewed some time ago. Comparisons between that keyboard and this one are as unavoidable as they are unfair: this keyboard costs 1/3 what the Datahand does; it is simply not reasonable to expect that level of ergonomic design from the Advantage Pro.

The key press on this keyboard is wonderful. The pressure required to activate a key feels just right, and a sound (quiet, but there, and you can turn it off if it bothers you) lets you know that you've pressed the key hard enough to activate it (type the letter). From that point, the key can still be pressed what feels like a good distance. That means that you're not pushing your finger into something that won't move: you don't push the key all the way down. There's a lot less stress on my fingers when I use this keyboard, and I can feel it.

The left and right hand keys are separated, which keeps you from having to angle your arms in towards your belly button and turn your wrists out. While that's an improvement over a traditional keyboard, the distance and angle between the two sides of the keyboard are fixed, which is a big negative: not all people are the same size. That means it's likely you'll experience some ulnar deviation, albeit significantly less than on a traditional keyboard.

1.   http://www.atpm.com/7.05/datahand.shtml

The keyboard is higher in the middle than it is on the ends: not by much, but enough to put your thumb about 20 degrees higher than your little finger, according to Kinesis. That's great, because you actually have to twist your hands to get them into the palm-down position keyboards require. I maintain that ideally, a keyboard would be angled at least 60 degrees (i.e., your palms facing more towards each other than towards the floor), but the angle offered by Kinesis Advantage Pro is still an improvement over the flatness of traditional keyboards.

In spite of the placement of the keys in concave bowls, and their vertical alignment, you still have to either stretch your fingers to reach certain keys, or lift your wrists from the wrist rests and move your arm. This is just what you get with a traditional keyboard, only very slightly lessened by the Advantage Pro's design.

The benefit to putting the keys in two concave bowls, in my view, is that it places the keys below the wrists if you rest them on the keyboard. That fights dorsiflexion, or the upwards bending of the wrist. (If you have the "feet" out on your traditional keyboard, please, for your wrists sake, get rid of them. If anything, feet should be at the front of the keyboard, not the back, so the keyboard slopes down away from you.)

Bugs

The only problem I had with this keyboard is awfully minor, and only happened twice. I'd come back to my computer after not using it a while, and the screensaver had kicked in. I hit a key on the keyboard to wake the computer up, and nothing happened. Mouse movements work, though, and the mouse is plugged in through the keyboard, so there isn't a physical connection problem. But it seems as though the keyboard isn't connected to the computer anymore. Unplugging the keyboard and plugging it back in solved the problem both times it occurred.

Conclusion

The Kinesis Advantage Pro keyboard isn't the god of ergonomic keyboards, but it is decidedly more comfortable to use than its traditional brethren, and offers some ergonomic benefits. It is Macintosh-friendly, and programmable, with the ability to remap keys and create macros. If you're looking to avoid developing RSI, or you just want a more pleasant keyboarding experience, the Kinesis Advantage Pro is well worth considering.

Review: Macintosh Troubleshooting Pocket Guide (book)
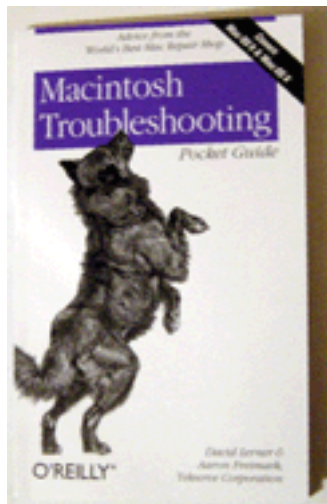
by Paul Fatula, pfatula@atpm.com

It's old news that Macs don't ship with manuals, and we all know about useful tomes such as Mac OS X: The Missing Manual[3]. But the fact is, that book and others like it are hundreds of pages long and most of those pages you may never need. And while it's fine to have a hefty tome of Macly knowledge on your desk or bookshelf, it's really not something laptop users want to throw in their bag and lug around. Yes, Macs ship with built-in help, but anyone who's ever used it will likely agree that it offers far more frustration than assistance. (Plus, if your Mac isn't working, Help might not be accessible.)

That's where the *Macintosh Troubleshooting Pocket Guide* comes in. It's about the size of a cheap trade paperback, with considerably less thickness. If there isn't any room in your laptop bag, you really can stuff it in your jacket pocket. The idea of this book is not to answer every possible question in detail, nor is it to provide you with lots of tips and tricks to make things work better. This book is about getting your Mac to work when it isn't. It covers both OS 9 and OS X, and deals with networking, hardware, and connectivity issues as well as with more general "configuring your OS to do *x*" matters.

If you're an advanced user, you already know everything in this book. If you're relatively new to Macintosh, or just aren't well-versed on the troubleshooting side of things, pick up a copy of this book and you should be able to solve many common problems yourself. Even if you can't solve a particular problem, the book will give you the terminology you need to describe the problem to a professional, and you'll be able to say "I tried that" to one or two initial suggestions.

The *Macintosh Troubleshooting Pocket Guide* is written to be a quick reference for solving common problems. While you can certainly read it cover to cover (I did, to write this review), it's made, and well-made, to let you find the information you need to solve a problem. The book's best feature is its index: 63 pages of text get 10 pages worth of a two-columned index. I put the index to the test on a number of topics and was easily able to find whatever I was looking for.

Of course, an index is only the first step towards solving whatever problem your Mac might be having. Information in the book is presented clearly, using a question and answer format. Under a question, such as "How do I get rid of inactive users? [X]," you'll find a short discussion explaining what to do, or numbered instructions in the case of a more complicated question ("How do I turn on file sharing [9]?"). If there are points where you might run into trouble (damage your data, for instance), you are warned of the risks. Generally, the book will offer some suggestions you can try after providing the warning. Other times, you will be advised to get your computer to a repair shop.

A few sections of this book are useful even for a Mac tech support professional. The Monitors section, for example, includes a list of which kinds of video output ports are available on which Macs, and a diagram showing what each

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3.   http://www.atpm.com/8.03/manual.shtml

1.   http://www.oreilly.com/catalog/mactrblpg/index.html
2.   http://www.tekserve.com/tekreq898.pdf

type of connector looks like for quick identification. Yes, that information is available on the Web, but it's nice to have it at your fingertips when you need it rather than have to consult a search engine and a few bad leads before finding your information.

About the only flaw this book has is its price. I don't want to nitpick; $12.95 is not a lot of money. But if you're only going to buy one Mac book, keep in mind that a few dollars more can get you a much larger volume with a great deal more information.

Also, I wasn't joking when I said in the Trial section above that this book is nearly identical to Tekserve's FAQ, which can be downloaded for free in PDF form from its Web site. There are a (very) few sections that appear in the book but not the PDF, and there is a smaller amount of substantive material that has been omitted from the book (for example, O'Reilly's

book leaves out the authors' recommendation of Peachpit Visual QuickStart Guides when suggesting useful manuals: I'm tempted to rant on this, but I'll spare you). The text seems to have been re-copyedited, since phrasings are slightly different in a number of cases. The index appears only in the book, but with relatively few substantive differences in content between the (free) PDF and the book, you're pretty much paying $13 for a printout with an index.

Well, it's a short book, so it's a short review, and we're already at the end. If you're only going to buy one Macintosh book, this probably isn't the one: you should get something more complete, particularly if you're a desktop user. But if you're looking for a quick reference guide to toss in your laptop bag "just in case," the *Macintosh Troubleshooting Pocket Guide* is made to order.

Review: Phaser 8200

by Evan Trent, etrent@atpm.com

ATPM RATINGS
VERY NICE

As a small business owner whose company[2] is steadily growing, I've recently found my office needing a high-speed color printer. After surveying the choices available, I decided that the Xerox Phaser 8200DP best fit my criteria. My top priority was color print quality because the printer will be used primarily for proofing purposes, and also for printing advertising and marketing materials. As we already have a black and white laser printer, text print quality and speed were not as important to me.
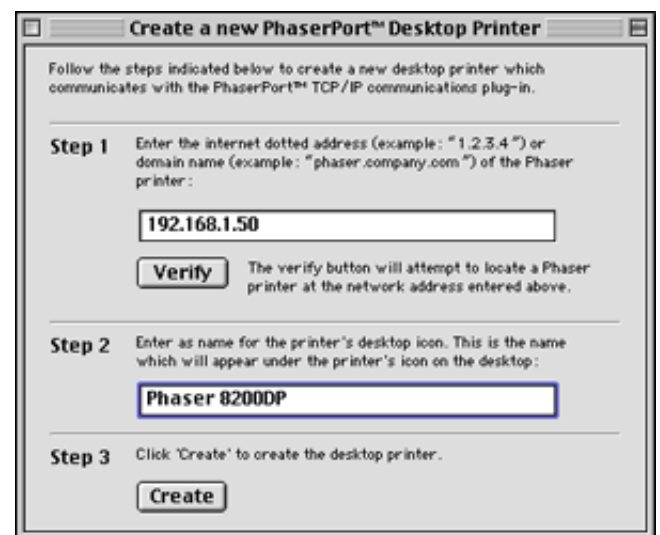

Nevertheless, choosing between the Phaser 6200 (a color laser printer) and the Phaser 8200 (a solid ink printer) was not easy. I had played with both printers in the past at Macworld Expo, and remembered the pros and cons of both print technologies.

The 6200 is faster, offers superior text quality with sharper lines and superior resolution by virtue of its true laser technology, and has more versatile paper handling. In short,

it has all of the qualities we've come to expect with laser printing, plus the added bonus of color output. The output is more durable and immune to scraping and smudging than solid ink, which can be scraped or smeared if exposed to excessive heat.

The 8200 on the other hand boasts superior color print quality with smoother graphics and far more consistent color tones. I like to think of the 6200 as a better workhorse business printer and the 8200 as a better proofer for when accurate and high-quality graphic output is of utmost concern.

I chose the 8200DP specifically over the other 8200 models because it provides the "photo mode" with higher resolution (1200 dpi vs. 1000 dpi) and higher quality output than the 8200B or 8200N. Also important to me was duplex print mode, which can be added to the 8200B or 8200N but comes standard on the 8200DP.
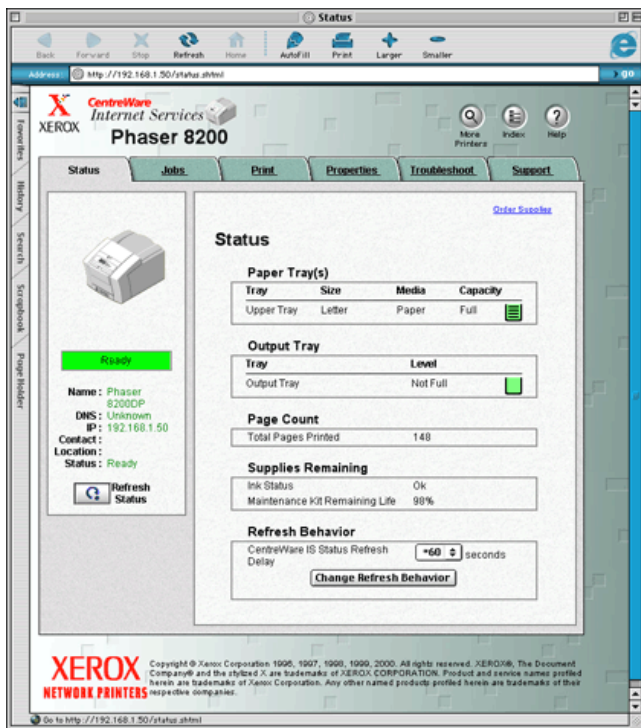

Setup & Installation

Installation of the software using the included CDs was self explanatory and speedy. All models support AppleTalk or TCP/IP printing on the Mac except the 8200B, and unlike

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2.   http://www.symphonysound.com/

1.   http://www.officeprinting.xerox.com/perl-bin/product.pl?product=8200

many other LPR printers the 8200 has a bi-directional LPR AppSocket which enables print job monitoring and other features not ordinarily available via LPR. The AppSocket is not compatible with OS X, however standard LPR printing is still supported. An application entitled PhaserPort is included to enable the creation of an AppSocket LPR under OS 8/9, and the interface is strikingly similar to Apple's Desktop Printer Utility.

The 8200N/DP/DX models all feature USB, Parallel, and 10/100BaseTX connections. Because I planned to print large color images from Photoshop, Quark, and PageMaker, I chose to use a 100BaseTX connection even though I did not need to share the print with any other computers on the network. Configuring the printer's TCP/IP information via the LCD readout and front panel buttons was very simple. While I could have simply connected via AppleTalk, LPR is faster and by configuring TCP on the printer I was able to take advantage of the Web-based admin interface built into the printer.

Physically setting up the printer was similarly straightforward. A handful of solid ink sticks are included with the printer, but I ordered a five pack of each color based on the assumption that the bundled ink wouldn't last very long. Each of the four color ink sticks is shaped slightly differently, with a cutout notch in a different corner so that they cannot be inadvertently installed in the wrong ink path.

Initial Gripes

Let's just get these out of the way. Here are the gripes I had with the printer upon taking it out of its box and setting it up.

Noise: the printer is a little louder when idle than I'm used to. My LaserJet 4000N is virtually silent when idle. The Phaser, on the other hand, makes a low level whirring noise. After a while I got used to it, but if I had my way it would be quieter when not in use. During use it's no louder than average, but I don't mind noise during a print job.

Paper handling: I was disappointed to see that the main paper tray only handles 200 sheets. I read this on the Web but I don't think it ever really sunk in—my eyes just glazed right over that spec. I have been using printers with 500 sheet primary paper trays for so long now that it never really crossed my mind that a printer might have a smaller primary tray. Of course you can add up to two 500 sheet paper trays, giving you a total capacity of 1200 sheets, which admittedly is extremely competitive for a printer that technically isn't laser

technology. Even so my nitpick with the primary tray is a valid gripe considering that each additional 500 sheet tray costs a cool $550.

Another paper handling gripe I have is the manual feed tray. It's a single sheet arrangement. That's right—one sheet at a time. It works flawlessly, feeds consistently, and even has a little motorized "grab" that activates when the page is inserted far enough into the tray, ensuring a good feed. But if you want to print out a series of envelopes, or a couple of glossy sheets or transparencies, it can be a real nuisance to babysit the printer. Even a 15-sheet manual tray would have been nice.

Initial warm up time: when you turn the printer on for the very first time it will take about 15 minutes to go through all sorts of warm up procedures, etc. It will never again take that long, even if you turn it off and turn it back on. However it is not unusual for it to take several minutes to warm up from a cold start. And, when in standby, it can take about a full minute to warm back up. I realize that the print technology requires that the engine heat the ink, and that certain delays are unavoidable; it is however something worth mentioning to those readers who might not otherwise anticipate such delays.
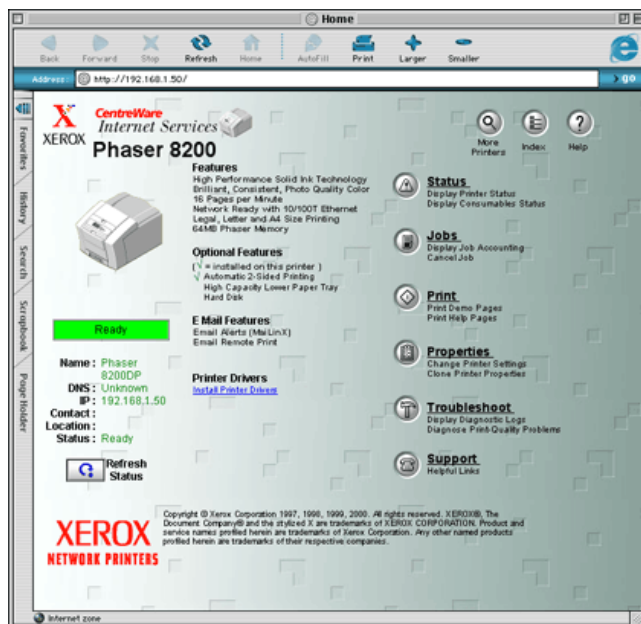
Initial Praise

What I did like right out of the box was how simple it is to install ink, and how easy access paths are to the "guts" of the Phaser. I have not yet experienced a paper jam, but if I do it would be trivial to access any part of the paper path. The printer is very accessible and well constructed.

Setting up the Phaser using the LCD display and front panel button keypad was also a breeze. The display is large and virtually all configurable options may be accessed on the front panel. The printer is also very responsive and can queue new tasks while it is processing old ones.

Most impressive of all to me was the Web-based interface and all the software features that come with it. For example, you can configure the printer to e-mail up to three different

people in case of a jam, or if it runs out of paper, or if another problem arises. For office environments with dedicated IT staff this is invaluable and very smart.

There are all sorts of other impressive features that have been engineered into this printer. If, for example, you configure the printer for TCP with its own IP address, you can send it—via FTP—PostScript files to print. Most importantly, you can control every aspect of the printer (including monitoring of print jobs) from any Web browser with access to the printer's IP address, and I like that a lot. The software front-end is very slick indeed. This is easily the most Internet-savvy printer I've ever encountered.

The most impressive hardware-related feature for me was the incredibly fast "first page" print time for this printer. Initially when I set the printer up I printed some demonstration pages to make sure everything was alright. These pages shot right out of the printer in brilliant color. I admitted to myself that I wasn't being fair as those pages were stored onboard the printer, so I tried some print jobs from my computer.

In large part due to the 100Base-T connection, the pages literally flew out of the printer as soon as I hit the Print button on my G4. The printer may not be the fastest in terms of pages per minute, but the first page comes out quite quickly and the processing time is quite low for all but the most complex documents, even at the highest print quality.

Duplex printing is definitely cool on the 8200 and earns a high score on the "wow" meter. The first page is printed face down and spit out about 90%, then just before it is ejected fully, it is sucked back in and the second page comes out face up. This is all done quite rapidly. The first time I ever witnessed this my jaw literally dropped, and I grabbed an employee who is very computer savvy and brought him in to
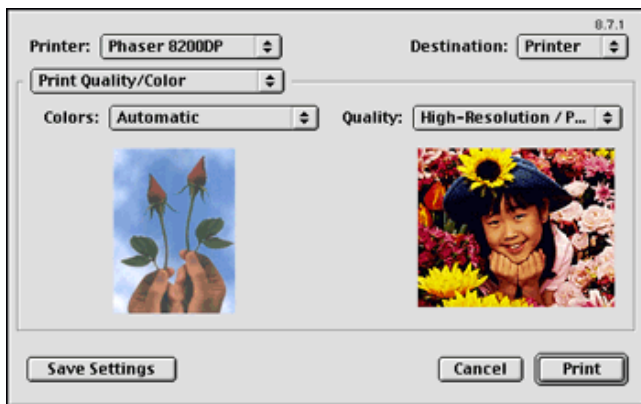
witness. He too was suitably impressed with the show the printer was putting on for us. Something about the speed and quality of the duplexed printing impressed me more than conventional duplexed laser printing. A double-sided full color document generated at such speed does make your spine tingle a little, no matter how jaded a computer user you may be.

Long Term Impressions

Having used the printer for a longer period of time, I have now come to appreciate its strengths and weaknesses more. I'll try to briefly summarize them and characterize the printer in general terms.

Print Quality

The print quality of the Phaser 8200 is overall quite high, but there are some important considerations. First of all, as with most other color printers, every print quality mode except for the highest one (Photo) is useless. The second from the top (Enhanced) is OK for less critical printing but you can pretty much forget the other modes.

I use Photo mode for everything, even though I am probably going through ink more quickly that I would be if I used a lesser quality for printing everyday jobs. Still, everything looks so much better in Photo mode, including text. Lines are sharper, text suffers less from staircasing and jagged edges, and the colors are more vivid. In this mode the printer gets extremely high marks for print quality across the boards. In short, the output is eye candy.

Do not expect text quality to be on a par with the very best laser printers on the market. Even in photo mode the text/line print quality is not as good as my HP LaserJet 4000 in 1200dpi mode; it is however comparable to the HP in 600 dpi mode and that's sufficient for most office printing.

If you are working in an industry where fine lines and typography are truly critical, this is probably not the printer for you. I have a couple of friends who typeset music professionally and the Phaser 8200 would never hold up for them because the use so many fine lines, diagonal lines, and unusual typographic shapes on a day to day basis. On the

other hand, they don't need a color printer for music typesetting! If you don't spend a lot of time with a loop examining staircasing on typographic output, you probably needn't worry about the Phaser in this context.

The graphics output is entirely different from an ink jet printer. I cannot emphasize enough how different the two print technologies are. When you print out a high resolution image on an ink jet printer (such as the Epson Stylus I use at home for occasional color printing) using plain paper, results are less than stellar. Using premium glossy paper however, you can often attain results that might convince the casual observer that the printer had actually produced a photograph. There is a glossy sheen and a ultra-photo-realistic quality to the output of an ink jet on maximum quality. It's almost like a "liquid" image.

The Phaser is another kettle of fish entirely. Its solid ink technology looks almost as good on plain paper as on premium paper. It is true that you can improve the output by using better paper, and glossy paper always gives a professional and snazzy look to printouts; but even on glossy paper the Phaser will not yield output that looks anything like a photograph. It aims for a far more accurate proof, warts and all so to speak.

I for one believe that ink jets have a tendency to gloss over inconsistencies and make everything look great. The Phaser will not do this, and even on a very high resolution document the results were less photo-realistic than on an ink jet. I am not implying that this is a bad thing, and in point of fact it is exactly what I wanted in a color printer, as we have been using it for color proofing and it's critical that any inconsistencies show up before we send the job off to the print shop. Still, if you are expecting the Phaser to give you Epson Stylus lookalike output at high speeds, be advised that the Phaser is not aiming to provide photo-realistic printouts.

Now, does this mean that I am unhappy with the Phaser's print quality? Not at all. It is accurate and the color tones are exceptionally consistent, as advertised. Print a page with large areas of solid colors and it's instantly apparent why solid ink has its benefits over other technologies, particularly color laser. Similarly, the output is much less grainy than color laser and there is no mis-registration of colors.

The solid ink also has a glossy feel to it as it is almost painted onto the surface of the page. People seem to respond very positively to it—I have handed out color prints to many people and they have all stopped to rub their fingers over the output because of the way it jumps off the page and catches the light. There is a wonderful three dimensional quality to the output, and the colors are extremely vivid.

The technology is capable of printing a far wider array of colors in the spectrum than color laser, and this is obvious at first glance. Subtle variations in colors are instantly visible as well, and this is important for proofing. For business printing

color laser may cut the mustard, but for printing anything more than bar graphs and pie charts, solid ink is clearly a superior technology.

There are some software options that can be turned on, such as "image smoothing," which at first I was hesitant to use. For proofing purposes these features will only serve to veil any flaws in the document; if however the goal is to create "prettier" output in the vein of the Epson Stylus as discussed above, this feature does offer some noticeable improvements. Images will be ever so slightly blurred and edges will not be as razor sharp, but for photographic output the results are much more photo-realistic.

For final drafts that are not to be used for proofing it is a feature I would leave on by default (unless I were printing a document which was already a little skimpy on sharpness), because the average Joe is going to prefer the output with image smoothing engaged. The result will look more like a photo and less like a computer-generated image.

Speed

The printer has remarkably fast print times for the first page as has been discussed. For multi-page documents it can be a little sluggish compared to today's faster black and white laser printers. Nor is the Phaser as fast as some high-performance color laser printers in the same price range, namely the HP Color LaserJet series. In spite of this, I have never really found myself wanting for a faster printer.

For those who print long textual documents in black and white I can see the printer causing some frustration as compared to a newer B&W laser printer, and if one is printing 100 copies of a color page I suppose there are printers on the market that will get the job done more speedily. For small scale jobs, however, the Phaser is peppy enough and the quality of the color output is so much higher than anything else I've seen that it seems unfair to complain. You can get a better photo print out of an ink jet, but in the time it takes an Epson Stylus to print one full page at highest quality, the Phaser could have printed dozens upon dozens of copies.

Networking, Compatibility, and Expansion

The Phaser supports all of the major protocols including AppleTalk, LPR, and NetWare among others. It is compatible with virtually every flavor of Unix (including OS X), OS 8 and 9, and Windows. It also sports USB and Parallel ports. In general this printer is pretty well equipped for small- to medium-sized office environments.

The Web admin panel makes life easy, and its Internet savvy software design lets it print jobs from across the globe, just like in those Xerox ads on TV! Also noteworthy is the compatibility with PostScript 3 and the extensive color management options available to the user.

The printer is expandable and scalable as well. A hard drive may be added (or you can purchase the printer with one pre-installed, in the guise of the 8200DX) which opens up a world of possibilities including collated output, stored fonts, stored proofs, and more Internet printing and document exchanges. More RAM can be added too, although it comes well equipped out of the box.

More paper trays can be added, as discussed. Cheaper models can be upgraded to provide duplex functionality, and the 8200B can be fitted with the networking card. However, I am not sure whether either the 8200B or 8200N can be upgraded to provide the 1200 dpi photo print mode that the DP and DX provide.

Cost Per Page

I have not performed a rigorous cost per page analysis of the Phaser 8200 vs. another color print technology. It's quite obvious though that it is considerably cheaper than color ink jet given that one need not purchase expensive premium paper, and the ink sticks last much longer than ink jet ink cartridges.

Compared to color laser, Xerox's own color laser printer supplies cost about the same as the ink sticks for the Phaser 8200 and the estimated page count is almost identical. For example, any one of the four color toner cartridges for the Phaser 6200 will cost you $179.99 and have an estimated life span of 8,000 pages. Five ink sticks of any one color for the Phaser 8200 will cost you $169.99 and have an estimated life span of 7,000 pages. Assuming that Xerox is honest and uses the same life span calculation (in terms of average color density per page, etc.) the cost per page seems quite comparable.

I will say that I have been quite pleasantly surprised by how long the ink sticks seem to last. A lot of the print jobs I have been outputting with the 8200 have had a full page black background and yet the black ink sticks seem to have a remarkably long life span despite my extensive use of black ink on an average page.

On an entirely uncritical note, it can be fun to watch the ink sticks deplete at different rates. I never really gave much thought to how much cyan vs. magenta vs. yellow was on a page before. A quick peek under the lid instantly reveals how much more of a given color you are using on average. The fact that you can reload each color independently, and in small, inexpensive increments, is nice.

Durability of Output

One concern many customers will have is the durability of solid ink output vs. color laser. Laser output is more or less bulletproof. It's hard to smear, scrape, or otherwise mar the output from a laser printer, color or B&W. Ink jet is, by comparison, fairly delicate and smudges very easily, especially when the page first comes out of the printer.

Solid ink output holds up quite well—the pages do not come out of the printer damp nor do they need time to air-dry. Smudging has not proven to be a problem. Excessive exposure to water could possibly cause smudging, but the

real enemy is heat. If you expose solid ink output to excessive heat the ink may melt and run. Heat is how the ink is applied to the page by the printer in the first place, so this comes as no real surprise.

Scraping is also a problem. If you scrape a printed page vigorously you can remove the ink. It's quite easy to do with a sharp knife, but otherwise the ink is smooth and glossy enough to resist scraping from day to day contact with other objects and in general this is not a concern.

Conclusions

Overall, I am extremely satisfied with the Phaser 8200DP. The software end of things is virtually impossible to fault. The front end is well designed and the printer is very sophisticated and clearly brilliantly engineered, insofar as its brains are concerned.

As for its guts, the Phaser 8200 generates beautiful color output at speeds competitive with, but not exceeding, color laser printers. The image quality is substantially higher than laser with marvelous color consistency, depth, and extremely vivid colors. By comparison color laser looks grainy, dull, two dimensional, and artificial.

The Phaser 8200 is a strange printer, however. It's not a laser printer in that it does not offer either the paper handling versatility nor the output speed, nor the razor sharp text and line output. At the same time it will not spit out photo-realistic images at high speeds. But in all fairness to expect it to do either is unfair for it was not designed with either purpose in mind.

The real question, then, is who will the Phaser 8200 appeal to? If you need high speed output and more industrial strength office printing, you should go with color laser. If you are willing to wait ten minutes for a single, costly, page of mouth watering photo-realistic output, you should clearly go with ink jet. But if you are willing to compromise a little on speed, don't mind spending more for additional paper capacity, and what you really want from a color printer is accurate output and the best possible proofs, the Phaser 8200 is almost certainly the printer for you.

Review: StuffIt Deluxe 7.0.1

by Robert Paul Leitao, rleitao@atpm.com

Developer: Aladdin Systems[1]
Price: $79.99; $49.99 (upgrade)
Requirements: PowerPC-based Mac with Mac OS 8.6 or Mac OS X
Trial: None, but you can try StuffIt Standard Edition[2].

StuffIt—Yesterday and Today

Today, Aladdin Systems, the maker of StuffIt, desires to be the cross-platform leader in what the company calls "Access Management" solutions. Aladdin started in business as a maker of niche software and utility products for the Macintosh market.

Years ago, when the "sneaker net" was the most common way for computer users to transfer files, there were many major limitations on the ability of people to share digital information. Back then, personal computer users didn't carry iPods or Zip disks; we carried a cache of floppy disks from computer to computer and from office to home.
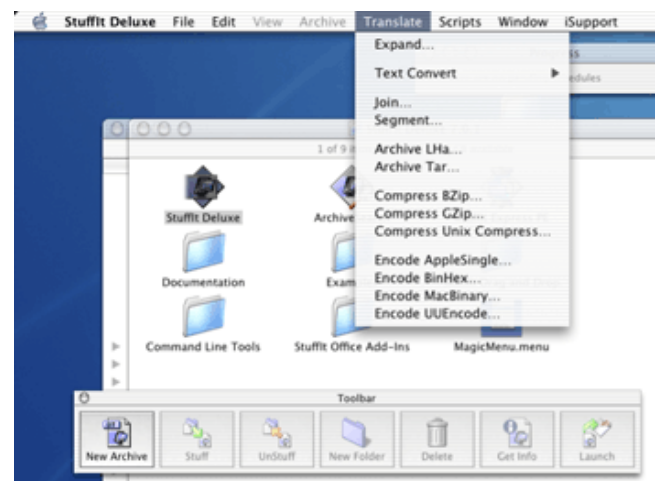
The small amount of storage space available on solutions such as 800K floppy disks made finding a way to put more data on the disks a paramount concern for computer users and software makers. Those of us who can remember what it was like to install a software application via a series of twenty or more floppy disks knew even then that the tedious process was only made possible by software compression technology.

The name that served the compression needs of Mac users in the era of the sneaker net is the same name that serves the compression needs of Mac users in the age of the Internet. That name is StuffIt, the data compression solution developed and marketed by Aladdin Systems. ATPM has previously reviewed StuffIt versions 4.0[3], 4.5[4], 5.1.2[5], 6.0[6], and 6.5[7].

StuffIt Deluxe 7

StuffIt Deluxe 7, the most recent iteration of most popular Macintosh file-shrinking tool, is available at the retail price of $79.99. Registered owners of previous versions of StuffIt Deluxe can upgrade to the newest version for $49.99. StuffIt Deluxe 7 comes in Mac OS X and OS 9 varieties. Aladdin also offers Windows, Linux, and Sun Solaris versions of StuffIt, providing users with the most compatible compression tool for all of the major PC platforms.

New and Enhanced Features

What does a Mac user get for his or her investment in the latest version of Aladdin's flagship product? According to Aladdin, StuffIt Deluxe 7 includes the following new or expanded features:

- The ability to browse StuffIt and Zip file archives.
- Integration with Microsoft Word.
- A new StuffIt X file format, which supports better compression and long filenames.
- 512-bit encryption for serious security.
- Secure Delete for the removal of sensitive files.

After working with StuffIt Deluxe 7 for the past few weeks, it's my view that for investing in the cost of StuffIt Deluxe 7, users get an evolutionary upgrade to this well-known Macintosh product. The new StuffIt X format offers stronger encryption and error correction features that help with file corruption issues and offer unlimited sizes for compressed files. StuffIt Deluxe 7 also provides more advanced Mac users with a

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3. http://www.atpm.com/2.05/reviews205/rev_stuffit.html
4. http://www.atpm.com/4.04/page15.shtml
5. http://www.atpm.com/5.05/stuffit.shtml
6. http://www.atpm.com/7.01/stuffit-deluxe.shtml
7. http://www.atpm.com/7.10/stuffit.shtml

1. http://www.stuffit.com/stuffit/deluxe/
2. http://www.stuffit.com/stuffit/lite/index.html

command-line feature, allowing users to bypass the Mac's graphic user interface and work directly from the Unix terminal window. Mac users who are less ambitious in their pursuits may find the updated tools and features useful for more mundane tasks. However, users who are happy with their current version of StuffIt Deluxe may not have a compelling reason to purchase the upgrade to StuffIt Deluxe 7.

Global Market, Real World Results

I've been a user of StuffIt since the first Aladdin release of its compression product based on the algorithm developed by Raymond Lau. In the years since I first used StuffIt, my compression needs have grown along with the sophistication of my work. In reviewing this product, I looked for the same benefit to my computing life in the era of gigabytes that I found in the era when compression needs were measured in kilobytes.

Over the years I've worked in the technology field in a variety ways. The revitalization of Apple Computer and the Macintosh platform has led to the installation of Macs in places where Macs had previously not been used or where Macs have reemerged as the computer of choice following several years of dormancy.

In schools, offices, and design shops, the newfound popularity of Macs demands cross-platform solutions. Aladdin's focus on cross-platform digital asset management is evident in StuffIt Deluxe 7. StuffIt not only compresses files to the Mac standard .sit format, but it also encodes files for MacBinary, BinHex, and several Unix standards. The Zip compression abilities of StuffIt Deluxe 7 allow Mac users to share compressed files with Windows users and provides common tools in the age of the Internet for compressing files so that they are usable on both sides of the great OS divide.

As a professional Web designer and home moviemaker, I was impressed by the stronger encryption available in the StuffIt X format but was decidedly underwhelmed by StuffIt Deluxe 7's performance on large media files. StuffIt Deluxe 7 repeatedly quit when attempting to compress files over one gigabyte in size. In fairness, other users may achieve different results than what I experienced on my dual-processor G4 running Mac OS X 10.2.3.

Conclusion

In all, StuffIt Deluxe 7 offers users slightly better compression than previous versions of the product and greater integration with the Unix-based Mac OS X. Mac users new to the platform will find StuffIt Deluxe 7 helpful for file management and for the transfer of files to both Mac and Windows users via the Internet. Registered owners of pre–OS X versions of StuffIt Deluxe may find OS X native StuffIt Deluxe 7 a convenience, but the latest version of Aladdin's flagship product offers little in the way of breakthrough features that might otherwise compel registered users of previous versions to rush out and purchase this upgrade to the product.

Strengths

- Stronger encryption.
- More cross-platform compatibility.
- Mac OS X native.

Weaknesses

- Instability with large files on test system.

FAQ: Frequently Asked Questions

What Is ATPM?

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

Are You Looking for New Staff Members?

We currently need several Contributing Editors and a Copy Editor. Please contact us[1] if you're interested.

How Can I Subscribe to ATPM?

Visit the subscriptions page[2].

Which Format Is Best for Me?

The Online Webzine edition is for people who want to view ATPM in their Web browser, while connected to the Internet. It provides sharp text, lots of navigation options, and live links to ATPM back issues and other Web pages. You can use Sherlock to search[3] all of the online issues at once.

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

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

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

What Are Some Tips for Viewing PDFs?

- You can download[4] Adobe Acrobat Reader for free. If you have a Power Macintosh, Acrobat Reader 5 has better quality and performance. ATPM is also compatible with Acrobat Reader 3, for those with 680x0 Macs.
- You can zoom the PDF to full window width and scroll through articles simply by single-clicking anywhere in the article text (except underlined links).
- You can quickly navigate between articles using the bookmarks pane at the left of the main viewing window.
- For best results on small screens, be sure to hide the bookmarks pane; that way you'll be able to see the entire page width at 100%.
- Try turning Font Smoothing on and off in Acrobat Reader's preferences to see which setting you prefer.
- All blue-underlined links are clickable. Links to external Web sites are reproduced in footnotes at the bottoms of pages, in case you are reading from a printed copy.
- You can hold down option while hovering over a link to see where it will lead.
- For best results, turn off Acrobat's "Fit to Page" option before printing.

Why Are Some Links Double-Underlined?

In the PDF editions of ATPM, links that are double-underlined lead to other pages in the same PDF. Links that are single-underlined will open in your Web browser.

What If I Get Errors Decoding ATPM?

ATPM and MacFixIt readers have reported problems decoding MacBinary files using early versions of StuffIt Expander 5.x. If you encounter problems decoding ATPM, we recommend upgrading to StuffIt Expander 5.1.4 or later[5].

How Can I Submit Cover Art?

We enjoy the opportunity to display new, original cover art every month. We're also very proud of the people who have come forward to offer us cover art for each issue. If you're a Macintosh artist and interested in preparing a cover for ATPM, please e-mail us. The way the process works is pretty simple. As soon as we have a topic or theme for the upcoming

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1. editor@atpm.com
2. http://www.atpm.com/subscribe
3. http://www.atpm.com/search

4. http://www.adobe.com/prodindex/acrobat/readstep.html
5. http://www.aladdinsys.com/expander/index.html

issue we let you know about it. Then, it's up to you. We do not pay for cover art but we are an international publication with a broad readership and we give appropriate credit alongside your work. There's space for an e-mail address and a Web page URL, too. Write to editor@atpm.com for more information.

How Can I Send a Letter to the Editor?

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

Do You Answer Technical Support Questions?

Of course. Email our Help Department at help@atpm.com.

How Can I Contribute to ATPM?

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

Segments: Slices from the Macintosh Life

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

Hardware and Software Reviews

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

Shareware Reviews

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

Which Products Have You Reviewed?

Check our reviews index[1] 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.

Can I Sponsor ATPM?

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Where Can I Find Back Issues of ATPM?

Back issues[2] of ATPM, dating since April 1995, are available in DOCMaker stand-alone format. In addition, all issues since ATPM 2.05 (May 1996) are available in HTML format. You can search[3] all of our back issues.

What If My Question Isn't Answered Above?

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

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1. http://www.atpm.com/reviews
2. http://www.atpm.com/Back/
3. http://www.atpm.com/search